ATTACHMENT 1. PROJECT DESCRIPTION

Three Corners Solar, LLC (Applicant), a wholly owned subsidiary of Longroad Energy Holdings, LLC (Longroad), proposes to construct the Three Corners Solar Project (Project), a utility scale solar energy facility in Unity Township (Unity Twp) and the Towns of Clinton and Benton, Maine (Figure 3-1, Attachment 3). The proposed Project solar arrays, consisting of photovoltaic (PV) panels, and supporting infrastructure (i.e., collection substation and operations and maintenance [O&M] building) are located north of Route 139 (Unity Road) between Bessey Lane in Benton and Palmer Road in Unity Twp. The PV panels will have a rated capacity of approximately 110 megawatts alternating current (MWac). Power from the Project will be transmitted to the existing Central Maine Power (CMP) Albion Road substation in Benton, located southwest of the Project, via the construction of an approximately 5.2 mile long 115-kilovolt (kV) generator lead line (Genlead).

The Project area primarily consists of mixed (coniferous and deciduous) forest 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 array areas generally consists of elevations between 170 and 275 feet (ft) above sea level. Topography along the proposed Genlead includes gentle to moderate slopes with elevations between 130 and 275 ft above sea level.

The Project is designed to use PV panels mounted on a tracking system to maximize solar energy production throughout the year. Modules will be mounted on steel frames supported by ground screws or pilings. In compliance with applicable codes and standards, the frames will be capable of withstanding wind speeds of up to 100 miles per hour. The panels will stand up to approximately 7 ft from the ground at their highest point. Based on the 110-MWac capacity, the Project is expected to generate enough clean electricity to power the equivalent of approximately 30,000 Maine homes.

As described in greater detail below, other Project infrastructure will include upgraded existing and new access roads, up to 39 paired central inverters/transformers mounted on skids, a series of overhead and underground 34.5-kV electrical collector lines (Collector) connecting to a new collection substation west of Bessey Lane and south of an existing CMP distribution line, and a new O&M building located between the collection substation and Unity Road. A 7-ft-tall perimeter fence will surround the segments of solar arrays, totaling approximately 688-acres. The total disturbed area associated with the arrays is approximately 860 acres, and the total disturbed area for the Genlead right-of-way (ROW) and access roads is approximately 71 acres. Detailed civil site plans for the solar array area, Collector, collection substation, and O&M building are provided in Attachment 5-1. Genlead site plans are provided in Attachment 5-2.

A substantial road network, primarily consisting of gravel logging roads, currently exists within the Project area and will be utilized to the extent practicable to minimize Project impacts. Approximately 6.7 miles of new or upgraded Project access roads are proposed to provide construction and maintenance access to the Project arrays. Access roads will range between 24-ft-wide primary 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 1.7 miles of 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 trenches adjacent to the Project access roads or interior to proposed solar arrays, with approximately 1.3 miles of above-ground Collector proposed between the eastern and central array areas. Power from the Collector lines 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 115-kV Genlead. The approximate cleared ROW width for the overhead Collector and Genlead is 100 ft. The Albion substation has sufficient capacity to accept power from the Project without substantial upgrades.

As part of the site layout and permitting process, the Applicant has completed studies of the natural resources and wildlife in the Project area. As currently designed, the Project will result in approximately 19.16 acres of wetland impacts, of which approximately 18.63 acres will be indirect impacts associated with vegetation clearing and approximately 0.53 acres will be direct impacts associated with access road crossings, grading within the arrays, and overhead Collector/Genlead poles. No temporary or permanent in-stream impacts are associated with the Project. Project-associated wetland impacts are summarized in Table 1-1 below and impacts to natural resources are further discussed in Attachment 2, Section 2.5.

Table 1-1. Summary of Wetland Impacts

Project Area	Component	Wetland Impacts		
		Permanent Fill/Grading (acres)	**Temporary Fill (mats, acres)**	**Vegetation Clearing (acres)**
Solar Arrays	PV Panels	0.14	0	2.89
	Access Roads	0.39	0	0.19
	Collector	<0.01	0.07	1.31
Genlead	Right-of-Way Access, Poles, Clearing	<0.01	1.32	14.24
TOTAL		**0.53**	**1.39**	**18.63**

Natural resource impacts proposed require approval from the Maine Department of Environmental Protection (MDEP) pursuant to the Natural Resources Protection Act (NRPA) and a 401 Water Quality Certification. This Individual NRPA permit application has been filed to address the proposed wetland, stream, and Significant Wildlife Habitat (SWH) impacts. The Project occurs within SWH including mapped Inland Waterfowl and Wading Bird Habitat (IWWH) and significant vernal pool (SVP) habitat. A separate permit application is being submitted to satisfy the Site Location of Development Act (Site Law) and the Maine Construction General Permit.

ATTACHMENT 2. ALTERNATIVES ANALYSIS

The NRPA wetlands rules (06-096 CMR Chapter 310) require that an applicant evaluate whether a less environmentally damaging practicable alternative to the proposed wetland alteration, which meets the project purpose, exists (06-096 CMR 310.9.A). The Maine regulations define practicable as "available and feasible considering cost, existing technology and logistics based on the overall purpose of the project" (06-096 CMR 310.2.R). This Alternatives Analysis and the information set forth in Section 7.0 of the Project's Site Law permit application demonstrate there are no less environmentally damaging practical alternatives. The following details the process by which the Applicant developed and evaluated various alternatives to arrive at a design solution that meets the Project purpose and need, while avoiding and minimizing environmental impacts to extent practicable.

2.1 PROJECT PURPOSE AND NEED

The purpose of the Project is to construct an approximately 110-MWac solar energy facility located in Benton, Clinton, and Unity Twp, Maine and to deliver the power generated from the facility to the New England Independent System Operator (ISO-NE) electric market. In 2019, Governor Janet Mills and bipartisan majorities of the Maine Legislature passed new laws aimed at improving public health and strengthening the economy by reducing greenhouse gas emissions. The 39-member Maine Climate Council (MCC) was established to create a new Climate Action Plan to provide recommendations for achieving the state's bold climate targets. This facility is intended to meet the needs specified in the December 2020 Maine's *Climate Action Plan* created by the MCC.[1] Additionally, the Project will help achieve goals set forth for the state in the *Climate Action Plan* by: 1) reducing its greenhouse gas emissions by 45% by 2030 and 80% by 2050; and 2) increasing the amount of renewable power generated in Maine that is eligible to meet the goals of the state's Renewable Portfolio Standard from 40% today, increasing to 80% by 2030, with the ultimate goal of 100% renewable energy by 2050.

2.1.1 Economic Benefits

The Project will provide substantial local and regional economic benefits including additional tax revenue for the Towns of Benton and Clinton and Kennebec County; providing local employment opportunities through short-term jobs during construction and long-term positions during the operations and maintenance phase of the Project; and an input of clean and reliable energy to the ISO-NE power grid. Unlike most other forms of development, the Project is expected to place no additional demands on public services. The Project will also be an additional source of economic value for forest landowners, an important consideration as the value derived from timber and fiber production continues to decline. Solar projects are capital intensive to build but have no fuel costs, meaning that leasing space for them can bring major benefits to landowners. Landowners can choose to continue forest management activities and are less inclined to sell parcels of productive forestland for residential development. As such, the Project will create additional value for landowners and will help preserve the larger forest management economy.

[1] Maine Climate Council. 2020. *Maine Won't Wait: A Four-Year Plan For Climate Action*. Available online at: https://climatecouncil.maine.gov/.

2.1.2 Community Benefits

The proposed Project would result in significant community benefits. Under a 2020 memorandum of understanding signed by the Applicant and Unity College, the Project will provide $10,000 per year for the first 10 years of the Project's operation to fund research opportunities to faculty and students in environmental science, natural resources, and other related programs at Unity College. The Applicant has also committed to fund efforts of the Sebasticook Regional Land Trust, which provides community access to over 2,200 acres within the region.

2.1.3 Environmental Benefits

Power from the proposed Project, equivalent to approximately 30,000 Maine homes,[2] will displace more polluting expensive power generation sources. The proposed Project will have long-term benefits related to the use and conservation of energy resources, and as a result, will not contribute to climate change. The operating Project will not require water, discharge wastewater, burn fossil fuels, or emit pollutants, such as mercury and lead, sulfur dioxide (SO_2) and nitrogen oxides (NO_x) (criteria pollutants and precursors to acid rain and ozone), or carbon dioxide (CO_2). Based on the Project generating capacity of 110 MWac, it is estimated that the Project will annually displace approximately 128,533 tons of CO_2—equivalent to removing approximately 27,593 passenger vehicles annually.[3]

2.2 PROJECT SITING AND LAYOUT

Properly siting a solar project is a complex process involving many interrelated criteria such as environmental constraints, engineering design needs, and equipment requirements. Selection of a viable solar energy generation project site is based on several factors, including suitable topography, proximity to transmission infrastructure, compatibility with existing land uses, sufficient land area largely composed of uplands, and landowner interest and coordination. The overall Project design objective was to meet the solar energy generation requirements and minimize environmental impacts.

The first step in identifying a suitable area for siting a solar project is selecting a preferred point of interconnection (POI) to the electrical transmission system that has sufficient capacity to accept the anticipated power generated by a project. The Applicant selected the existing CMP Albion Road substation as the proposed POI in 2017, as the substation and associated transmission system have capacity to accept the power generated by the Project. The Albion Road substation has the space to accept the Project's power without extensive network upgrades or the need to expand beyond the existing substation footprint into adjacent resources, making this POI an ideal location to meet resource avoidance and financial feasibility objectives.

Since 2017, the Applicant has performed due diligence reviews and field surveys to assess over 18,000 acres, including the proposed Project area, in the vicinity of the POI to select a feasible site for the construction of the Project. Five prospective solar array areas were evaluated using publicly accessible screening level data such as SWH, National Wetland Inventory (NWI) data, the National Hydrography

[2] Based on average household use of 570 kilowatt hours per month (EIA-861: schedules 4A-D, EIA-861S, and EIA-816U).
[3] Determined by the EPA Greenhouse Gas Equivalencies Calculator.

Dataset (NHD), Natural Resources Conservation Services soil data, conservation lands, and cultural and scenic resources, along with wetland and waterbody field reconnaissance.

Additionally, the Applicant considered the potential for impacts to surrounding scenic and recreational resources. A search of identified scenic resources[4] located within 5 miles of the Project area was conducted and included resources such as scenic lakes, ponds, or rivers, scenic byways, state or national parks, viewpoints within national forests, or structures on the National Register of Historic Places. The Visual Impact Assessment memo, including the MDEP Visual Checklist, is attached as Appendix A. The full Visual Impact Assessment, including viewshed maps and photo simulations is included in Section 6.0 (Exhibit 6-1) of the Site Law permit application.

2.3 ALTERNATIVES

2.3.1 Prospective Solar Array Areas

The five prospective solar array areas, including the proposed Project area, were identified due to their proximity to the Albion Road substation. Each of the five prospective solar array areas are located within 10 miles of the Albion Road substation. The review criteria for the five prospective solar array areas included property information, required transmission infrastructure and length, natural resources constraints, and visual impacts. Review criteria were assigned a qualitative rank based on potential constraints that would block the Project Purpose and Need (Low to High) to compare the prospective solar array areas. These areas are detailed below, summarized in Table 2-1 below, and depicted on Figure 2-1.

Alternative Area 1

Area 1, totaling approximately 4,355 acres, is located approximately 10 miles west of the Albion Road substation in Fairfield, Oakland, and Smithfield. This area is predominantly comprised of mixed forests and is largely undeveloped with the exception of several residences located on Horn Hill Road. The topography of the area consists of relatively flat wetland complexes and moderate to steep slopes rising to two prominent hills, Green Hill and Horn Hill. Area 1 would require agreements with multiple landowners. The linear distance to the Albion Road substation is approximately 10 miles and would require major crossings of Interstate 95 (I-95), Kennebec River, and Sebasticook River. Identified Deer Wintering Areas (DWA) and IWWH present siting constraints within the southern half of the area and numerous mapped NWI wetlands and NHD streams are mapped within the area. Moderate project visibility would be anticipated due to the prominent hills. Area 1 was deemed an infeasible alternative due to the large number of landowners, transmission infrastructure constraints, and numerous natural resource constraints.

Alternative Area 2

Area 2, totaling approximately 1,065 acres, is located approximately 9.3 miles west of the Albion Road substation in Fairfield. The smallest of the five alternative solar array areas, this area is predominantly comprised of mixed forests and is undeveloped. The topography of the area consists of gentle to moderate slopes reaching a high point on Brooks Ridge. Area 2 would only require an agreement with one landowner.

[4] Scenic resources are defined in Chapter 315 as public natural resources or public lands visited by the general public, in part for the use, observation, enjoyment, and appreciation of natural or cultural visual qualities. The attributes, characteristics, and features of the landscape of a scenic resource provide varying responses from, and varying degrees of benefits to, humans.

The linear distance to the Albion Road substation is approximately 9.3 miles and would require major crossings of I-95, Kennebec River, and Sebasticook River. Mapped NHD streams, DWA, and IWWH present siting constraints within the northern half of the area. Minimal NWI wetlands are mapped within Area 2. Minimal project visibility would be anticipated due to the relatively flat surrounding topography and existing forested landcover. Area 2 was deemed an infeasible alternative due to transmission infrastructure constraints and insufficient acreage to accommodate the Project while avoiding mapped natural resources.

Alternative Area 3

Area 3, consisting of three separate blocks totaling approximately 7,286 acres, is located approximately 4.8 miles northwest of the Albion Road substation in Fairfield, Skowhegan, and Clinton. This area is comprised of mixed forests and existing open fields with adjacent developments (e.g., Kennebec Valley Community College Alfond Campus, Goodwill Hinckley School). The topography of the area consists of relatively flat agricultural areas and upland forests interspersed with mapped streams (e.g., Martin Stream). Area 3 would require agreements with multiple landowners and property interest was not fully available. The linear distance to the Albion Road substation is approximately 4.8 miles and would require major crossings of I-95, Kennebec River, and Sebasticook River. Identified DWA and NHD streams are mapped within the area. Due to the extent of open fields within Area 3, project visibility would likely be significant. Area 3 was deemed an infeasible alternative due to the large number of landowners, transmission infrastructure constraints, and significant anticipated visual impacts.

Alternative Area 4

Area 4, totaling approximately 3,081 acres, is located approximately 3.3 miles east of the Albion Road substation in the Unity Twp and Unity. This area is predominantly comprised of softwood forests and large wetland complexes and is undeveloped. The topography of the area consists of gentle slopes with no prominent hills. Area 4 would only require an agreement with one landowner. The linear distance to the Albion Road substation is approximately 3.3 miles and would not require major river or highway crossings. Identified DWA and IWWH present siting constraints for large portions of the area and numerous NWI wetlands are mapped within the area, limiting the buildable area. Due to the relatively flat surrounding topography and forested landcover, project visibility would likely be low. Area 4 was deemed an infeasible alternative due to the significant natural resource constraints.

Alternative Area 5 (Proposed Project Area)

Area 5, totaling approximately 2,302 acres, is located approximately 3.5 miles to the northeast of the Albion Road substation in Benton, Clinton, and Unity Twp. This area is predominantly comprised of mixed forests managed for timber production and is largely undeveloped, with the exception of several seasonal hunting camps located on outparcels. The topography of the area consists of relatively flat wetland complexes and moderate slopes to low rises. Area 5 would only require an agreement with two landowners. The linear distance to the Albion Road substation is approximately 3.5 miles and would not require major river or highway crossings. Identified DWA and IWWH present siting constraints but are primarily located at the periphery of Area 5 and large upland blocks provide suitable buildable area. Due to the relatively flat surrounding topography and forested landcover, project visibility would likely be low.

Based on this analysis, the Applicant selected Alternative Area 5 as the alternative that meets the Project purpose and minimizes environmental impacts. Alternative Area 1 was not selected because it included locations for which property interest was not feasible, required multiple large transmission crossings, and had limited buildable area due to mapped NWI wetlands and IWWH. Alternative Area 2 was not selected because it required multiple large transmission crossings and insufficient acreage to accommodate the Project while avoiding mapped natural resources. Alternative Area 3 was not selected because it included locations for which property interest was not feasible, required transmission line crossings of significant natural resources or existing infrastructure, and would potentially have significant visibility due to existing open fields. Alternative Area 4 was not selected because of the anticipated greater environmental impacts associated with mapped NWI wetlands, DWA, and IWWH.

Table 2-1. Three Corners Solar Alternative Solar Array Areas Comparison

Selection Criteria	Alternative Area 1	Alternative Area 2	Alternative Area 3	Alternative Area 4	Alternative Area 5 (Preferred)
Property	High • 30+ parcels • 5+ landowners	Low • 9 parcels • 1 landowner	High • 50+ parcels • 20+ landowners	Low • 12 parcels • 2 landowners	Low • 13 parcels • 2 landowners
Transmission Infrastructure / Distance to POI (linear)	High • 10 miles to POI • Kennebec River and Sebasticook River crossing • Required I-95 crossing	High • 9.3 miles to POI • Kennebec River and Sebasticook River crossing • Required I-95 crossing	High • 4.8 miles to POI • Kennebec River and Sebasticook River crossing • Required I-95 crossing	Low • 3.3 miles to POI • Required crossing of Fifteenmile Stream • No interstate or state route crossings	Low • 3.5 miles to POI • Required crossing of Fifteenmile Stream • Route 139 crossing • No interstate crossing
Natural Resource Constraints	Medium to High • Large NWI complexes • Numerous NHD streams • 3 mapped IWWH bisect area • 2 large mapped DWA	Low to Medium • Minimal mapped NWI • Numerous NHD streams • 1 mapped IWWH • 1 small mapped DWA	Low to Medium • Minimal mapped NWI • Numerous NHD streams • 0 mapped IWWH • 3 small mapped DWA	High • Large NWI complexes • Minimal NHD streams • 2 mapped IWWH • 2 large mapped DWA	Low to Medium • NWI complexes at periphery • Minimal NHD streams • 2 mapped IWWH at periphery • 2 large mapped DWA – 1 determined to be low-quality
Visual Impacts	Medium • Moderate anticipated visibility due to prominent rises	Medium • Low to moderate anticipated visibility due to rises	High • Significant anticipated visibility due to existing open fields	Low • Minimal anticipated visibility due to topography and existing forested landcover	Low • Minimal anticipated visibility due to topography and existing forested landcover

2.3.2 Genlead Alternatives

Genlead Review Criteria

Following selection of the preferred solar array area (Figure 2-1), the Applicant evaluated three site review criteria to identify potential Genlead routes that could connect the Project to the ISO-NE market and that could be reasonably constructed while minimizing environmental and landowner impacts. The review criteria included ROW acquisition, landowner impacts, and environmental impacts. The location of the Genlead was based on an evaluation of multiple alternatives, and the Project route is available, feasible, and minimizes overall environmental impacts. The review criteria are described further below, and each was assigned a qualitative rank based on potential constraints that would block the Project Purpose and Need (Low to High) to compare the potential Genlead routes, summarized in Table 2-2.

ROW Acquisition

ROW acquisition refers to the ability to obtain the ROW easements necessary to construct and operate the Project. The Applicant, unlike regulated public utilities, does not have the right of eminent domain and must rely on willing landowners and negotiated agreements to acquire the necessary land interest for any particular route. The specific factors related to this criterion include whether the landowners are willing to convey the necessary land interests and the costs of acquiring such interests. Without entering into negotiations with individual landowners, however, it is difficult to determine whether the necessary land interests can be acquired. It is also difficult to determine the potential costs associated with land acquisitions and the siting conditions the landowner may require. Considerations relevant to this evaluation include the number of parcels, the value of land in the area, and any known information on the willingness of individual landowners to convey the necessary land interests for the particular alternative.

Landowner Impacts

Landowner impacts refer to the potential impacts of locating a Genlead adjacent to abutting landowners (e.g., visual impacts). Specific criteria used to evaluate landowner impacts include the number of parcels crossed by the ROW and impacts to landowners in proximity to the ROW (i.e., residences within 200 ft of the ROW).

Environmental Impacts

Environmental impacts refer to the presence of and/or proximity to natural and cultural resources. Publicly available data sources were used to identify other potential natural resources in proximity to the alternative corridors. The presence of cultural resources including the presence of recreational trails, preservation lands, tribal lands, and historic structures also were considered when selecting the alternative. These resources provide unique social benefits to landowners and residents of the area.

Genlead Site Selection

After evaluating the route selection criteria, the Applicant identified four potential alternatives for siting the Genlead. The initial location of the collection substation was to the east of the proposed collection substation and south of Unity Road. However, each of the Genlead options intersects with the preferred alternative. As such, Genlead Options 1–3 were assessed based on the point at which they diverge from

Option 4 to allow for a uniform analysis. The preferred Genlead route was ultimately selected due to natural resource avoidance and suitability with the final collection substation location off Bessey Lane.

The four generator lead alternatives identified by the Applicant in Benton (Figure 2-1) are:

- Option 1 – Proceeds approximately 1.7 miles west adjacent to existing CMP line and then south across Unity Road before connecting with the Albion Road substation.
- Option 2 – Assumed collocated with Option 4 but proceeds west at 1.5 miles south of the collection substation. Crossings Hanscom Road and East Benton Road routes around existing residential developments before connecting with the Albion Road substation.
- Option 3 – Assumed collocated with Option 4, but with diverges from Option 4 south of Bog Road and includes different proposed road crossings at East Benton Road and Richards Road.
- Option 4 – Similar to Alternative 3, but greater micrositing of the alignment to avoid natural resources and different proposed road crossings at East Benton Road and Richards Road.

The four Genlead alternatives were reviewed with the goal of identifying the least environmentally damaging practicable alternative. The evaluations are provided below and summarized in summarized in Table 2-2 below, and the alternative routes are depicted on Figure 2-1.

ROW Acquisition

Option 1 is located adjacent to existing road or utility corridors for the majority of its distance along Unity Road, which typically facilitates ROW acquisition. However, due to the number of parcels with residential development surrounding portions of the route, the difficulty and cost of ROW acquisition is increased and is infeasible in some locations due to non-participating landowners. Therefore, ROW Acquisition for Option 1 is ranked as high. Option 2 also includes areas of high residential development with multiple parcels; therefore, ROW acquisition is ranked as high. Options 3 is located primarily within commercial timberland, with a relatively low number of landowners. However, because the alignment of Option 3 west of Richards Road did not have full landowner support, ROW acquisition is ranked as medium-high. Option 4 is located primarily within commercial timberland, with a relatively low number of landowners, and ROW acquisition is ranked as medium.

Landowner Impacts

Options 1 and 2 are sited within approximately 200 ft of numerous residences located on Unity Road and Hanscom Road. Given the proximity of existing residential development along these corridors, both Options 1 and 2 are ranked medium. Options 3 and 4 are primarily located in sparsely developed areas and road crossings generally avoid residential developments and are therefore ranked low.

Environmental Impacts

Options 1 and 3 would be expected to have moderate to high environmental impacts, which is in part the result of their comparatively long lengths within IWWH and mapped NWI wetlands in relation to the other options. Options 2 and 4 would be expected to have moderate environmental impacts due to lengths within IWWH, DWA, and mapped NWI wetlands. Although tree clearing would be required for all options, much

of this clearing would occur on parcels managed for timber production. Overall, Option 4 presented the lowest potential impacts to IWWH and second lowest collocation with NWI wetlands.

Based on the analysis provided above, the Applicant selected Option 4 as the least environmentally damaging practicable alternative. Options 1, 2, and 3 were eliminated primarily due to the relatively high environmental impacts (Options 1 and 3) and comparatively high landowner impacts (Options 1 and 2).

Table 2-2. Three Corners Solar Genlead Options Comparison

Selection Criteria	Criteria Components	Option 1	Option 2	Option 3	Option 4 (Preferred)
Total Length	Miles	4.3	4.7	5.3	5.2
Difficulty of ROW Acquisition	Qualitative (Low to High)	High	High	Medium-High	Medium
Landowners	Low Impacts to Landowners	No (31 parcels)	No (26 parcels)	Yes (15 parcels)	Yes (18 parcels)
	Segments within ~200 ft of residences	11	10	2	1
	Visual Impacts	Medium	Medium	Low	Low
Visual	Other than residences	Low	Low	Low	Low
Environmental	Natural Resources	• 1.2 miles within NWI • 0.8 mile within IWWH • 0.4 mile within DWA • 6 stream crossings • Crossing of 1 named stream	• 0.8 mile within NWI • 0.1 mile within IWWH • 0.2 mile within DWA • 9 stream crossings • Crossing of 1 named stream	• 1.4 miles within NWI • 0.1 mile within IWWH • 0.2 mile within DWA • 9 stream crossings • Crossing of 1 named stream	• 1.0 mile within NWI • 0.1 mile within IWWH • 0.2 mile within DWA • 10 stream crossings • Crossing of 1 named stream

2.3.3 No Action Alternative

The “no-action / no-build” alternative refers to not building the Project, which would mean the proposed Project area would not experience the changes associated with the development of a solar energy facility and Genlead, and the area would persist in its current state, as parcels consisting of forested land. Additionally, Maine and the region would miss an opportunity for creation of a substantial new source of clean energy and the economic benefits associated with both the construction and ongoing maintenance of such a project. Lastly, the Towns of Benton and Clinton and Kennebec County would miss out on a substantial, long-term source of incremental tax revenue, expected to last at least 30 years. Additionally, the ”no action” alternative would not displace emissions of pollutants from other power sources as detailed above in Section 2.2.

By comparison, the “no action” alternative would avoid the limited potential short-term construction impacts and long-term clearing impacts but would not create the Project’s identified long-term benefits and would not aid in Maine’s transition to renewable energy and away from air polluting fossil fuel generation. Given the wide array of environmental impacts anticipated from climate change, including the anticipated extinction of many species of birds and other wildlife[5], the environmental benefits anticipated from the proposed Project will outweigh the impacts.

2.4 AVOIDANCE AND MINIMIZATION EFFORTS

Due to various constraints, the Project cannot be wholly located within upland portions of the properties, while also meeting the contractual requirements for solar energy generation capacity. Primary site constraints include:

- Large wetland complexes to surrounding the proposed arrays;
- Several smaller wetlands to the west of the proposed arrays, as well as between the arrays;
- SVPs adjacent to the western and central arrays and along the Genlead;
- Outparcels internal to the western array area;
- IWWH to the west and east of the central array and west of the Genlead;
- DWAs located with the array area and adjacent to the Genlead; and
- Landowner constraints on the Genlead alignment.

Furthermore, a key component of a solar energy generation facility is access to direct sunlight. To achieve energy generation requirements, panels cannot be obscured or shaded by vegetation. The Project’s solar arrays will require a cleared buffer on all sides of the arrays to prevent vegetation from shading the panels. As a result of these constraints, it is not possible to design the Project to achieve a rated capacity of 110 MWac without wetland impacts.

[5] National Audubon Society. 2021. Audubon’s Survival by Degrees – 389 Species on the Brink. Available at: https://www.audubon.org/climate/survivalbydegrees. Accessed September 9, 2021.

The Project layout (see Attachments 5-1 and 5-2) was developed in consideration of the factors described above. Various configurations of solar arrays and associated equipment were evaluated with the goal of identifying a layout that meets the Project purpose with the least environmental impact. Avoidance and minimization efforts included:

- Using existing logging road corridors for Project access roads to reduce the amount of disturbance required and minimize overall Project impacts;
- Installing the Collector underground within or adjacent to the footprint of Project access roads;
- Utilizing jack and bore crossing methodology for an underground Collector crossing of wetland W-MR-01;
- Installing the Project access road and Collector to the westernmost array through a narrow portion of the wetland to minimize wetland impacts associated with the crossing;
- Fencing the array areas separately to avoid additional clearing impacts in wetlands and to provide corridors for wildlife movement through the Project area;
- Avoiding ground disturbance to significant vernal pool depressions and minimizing vegetation clearing in the critical terrestrial habitat (CTH) within 250 ft of the eight SVPs and five potentially significant vernal pools (PSVP). A minimum of 75% of the CTH for SVPs and PSVPs will be maintained in its current state. Impacts to SVP CTH are further detailed in Section 2.6.2.
- Minimizing the impacts associated with the proposed Genlead span of SVP SAD-VP-3. Impacts to the SVP will be minimized through the use of significantly taller poles on either side of the SVP and associated CTH buffer. By significantly increasing the pole heights, the SVP and associated habitats will remain intact, with only select tree cutting and tree topping. Complete avoidance of the SVP depression was not feasible due to landowner restrictions on the Genlead alignment at this location.
- Adjusting the Genlead alignment to further avoid mapped IWWH and implementing seasonal timing restrictions on construction activities to avoid the sensitive nesting period.
- Utilizing existing logging road corridors for proposed array area access roads within DWA and consolidating the array layout to avoid use of several areas within this DWA (DWA ID 021043), totaling over 18 acres, that were included in the Project's 2019 zoning application to the Land Use Planning Commission.
- Adjusting the Genlead alignment to avoid DWA to the extent practicable. As designed, 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 has will practice restrictive vegetation management practices (i.e., maintaining scrub-shrub vegetation and selective cutting to favor softwood species) to preserve cover to the extent practicable. These vegetation maintenance practices are further detailed in Exhibit 10-1 (Section 10.0) of the Site Law permit application.
- Wetland clearing practices that minimize soil disturbance outside of Project grading limits (e.g., no vegetative grubbing in wetlands, clearing during dry or frozen ground conditions).

- Vegetated buffers and vegetation maintenance timing restrictions detailed in Section 10.0 (Exhibit 10-1) of the Site Law permit application.

2.5 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. Environmental resource impacts as a result of construction and operation of the Project are summarized in Table 2-3. 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 a permit from the MDEP pursuant to the NRPA. To address the proposed impacts, this Individual NRPA permit application has been completed for the Project.

Table 2-3. Summary of Potential 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 of the Site Law permit application).
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 development (e.g., PV panels, clearing) will not exceed 25% of the CTH within a 250-foot radius of the vernal pool depressions. Impacts to vernal pool CTH.
IWWH	The Genlead crosses the edge of one IWWH (IWWH ID 204095) south of Route 139 (Attachment 5-2, Sheet 5). The Project limits of disturbance intersect 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 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 and 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.
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 lack 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).

2.5.1 Wetland Impacts

Thirty wetlands are anticipated to be impacted by Project construction resulting in approximately 18.63 acres of proposed indirect wetland impacts from vegetation clearing in wetlands, and approximately 0.53 acres of proposed direct wetland impacts from fill or grading. Proposed wetland impacts include direct and indirect impacts in 17 Wetland of Special Significance (WOSS). Impacts proposed in WOSS are associated with Project access road crossings or overhead Collector and Genlead ROW clearing. Wetland impacts for the solar array areas and Genlead are summarized in Tables 2-4 and 2-5, respectively. The locations of grading and vegetation cutting in wetlands proposed for the Project are shown on the civil site plans (Attachments 5-1 and 5-2). 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 of the Project's Site Law permit application.

Table 2-4. Summary of Wetland Impacts, Solar Array Areas

Wetland ID	WOSS[1]	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	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)	**0.53**	**4.39**	**0.07**

[1] Wetlands 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 2-5. 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.
[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.

2.5.2 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 (e.g., maintaining a minimum 25-ft-wide scrub-shrub stream buffer) is anticipated for construction of Genlead ROW stream crossings.

2.5.3 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 and are detailed below.

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 (Table 2-6). 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 MDIFW and the Applicant will continue to consult with MDIFW regarding vernal pools. Nine vernal pools that are not regulated by the MDEP as they do not meet MDEP criteria for significance are located with the Project area. Fill or grading impacts are anticipated to five of the non-significant vernal pools, none of which are located within delineated wetlands. Impacts associated with vegetation clearing, without stumping or grubbing, are anticipated in the other four non-significant vernal pools located within delineated wetlands. Impacts to SVPs and PSVPs are further detail in below.

The Genlead will cross over one SVP depression (SAD-VP-3) (Attachment 5-2, 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 by using significantly taller poles to either side of the SVP and associated CTH buffer. By significantly increasing the pole heights, the SVP and associated habitats will remain intact, with only select tree cutting and tree topping occurring within a 75 ft buffer of the SVP depression. Tree clearing will taper out to the full 100-ft ROW width from this 75-ft setback to further preserve CTH.

Table 2-6. Summary of SVP and PSVP CTH Impacts

Project Area	SVP / PSVP ID[1]	Origin	Project Activities	CTH Impact Area (sf)	Percent of Total CTH Impacted
Solar Array Area	SAD-VP-116	Natural	Clearing, Perimeter Fence, Arrays	44,020	18.2%
	SAD-VP-103	Natural	Clearing, Access Road	13,881	4.6%
	SAD-VP-106	Natural-modified	Clearing, Perimeter Fence, Arrays	65,533	21.9%
	SAD-VP-9 / SAD-VP-10	Natural	Clearing, Perimeter Fence, Arrays	74,868	18.1%
	SAD-VP-7 / SAD-VP-8	Natural (SAD-VP-7) / Natural-modified (SAD-VP-8)	Clearing, Perimeter Fence, Arrays, Access Road	140,257	23.4%
Genlead	SAD-VP-3 / PSVP11	Natural	Clearing, Temporary Access Road	37,744	6.7%
	PSVP03	Natural	Clearing, Pole	41,677	13.3%
	PSVP06	Natural	Clearing, Pole	35,593	14.6%
	PSVP07	Natural	Clearing, Temporary Access Road	8,773	3.6%
	PSVP09	Natural-modified	Clearing, Pole	45,532	19.4%

[1] Where impacts occur to adjacent SVP/PSVP buffers, the combined SVP/PSVP buffer was used to calculate the percentage of CTH impacted.

Inland Waterfowl and Wading Bird Habitat

The Genlead will cross the edge of one IWWH (IWWH ID 204095) south of Route 139 (Attachment 5-2, Sheet 5). The Project limits of disturbance coincides with 1.1 acres of this mapped IWWH, representing 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 the 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.

Deer Wintering Areas

The DWAs that intersect the Project area are mapped as indeterminate and, therefore, are not considered SWH under the NRPA.[6] 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

[6] 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.

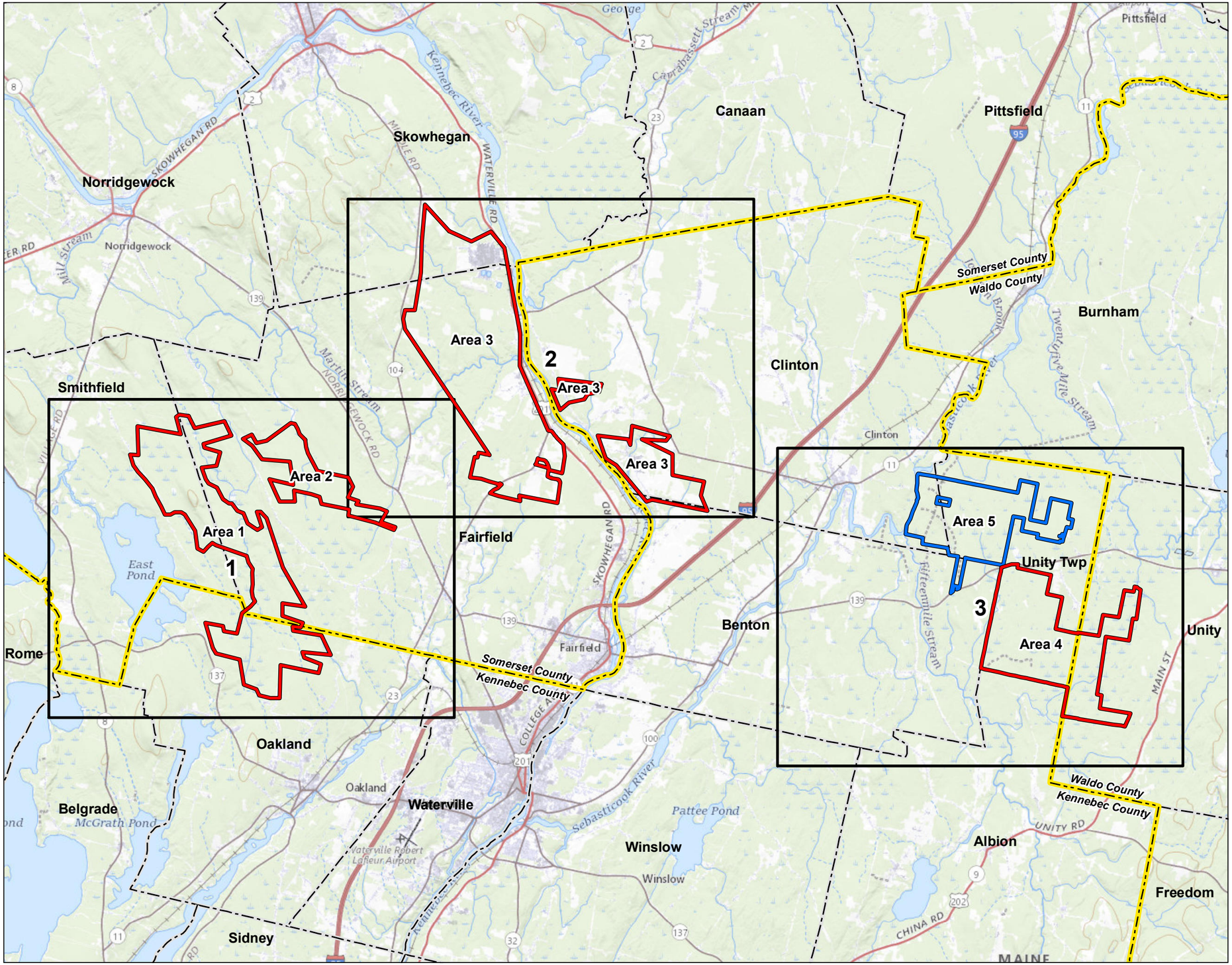
approximately 159 acres of mapped DWA. Based on site visits with MDIFW (see Exhibit 7-2), MDIFW determined that suitable cover to provide winter shelter for deer is lacking from approximately 89.1 acres of DWA area occurring within the array area near Bessey Lane (DWA ID 020323). Due to various constraints, 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.

Figure 2-1

Alternatives Analysis Mapping



Stantec

Legend

- Alternative Analysis Sheet Index
- Prospective Solar Array Area
- Preferred Solar Array
- Municipal Boundary
- County Boundary

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Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. Background: The USGS National Map

Project Location
Benton, Clinton, Unity Twp, Maine

Prepared by GC on 2022-01-20
Reviewed by EB on 2022-01-21

Client/Project
Three Corners Solar Project

195601453

Figure No.
2-1

Title
Alternative Analysis Sheet Index

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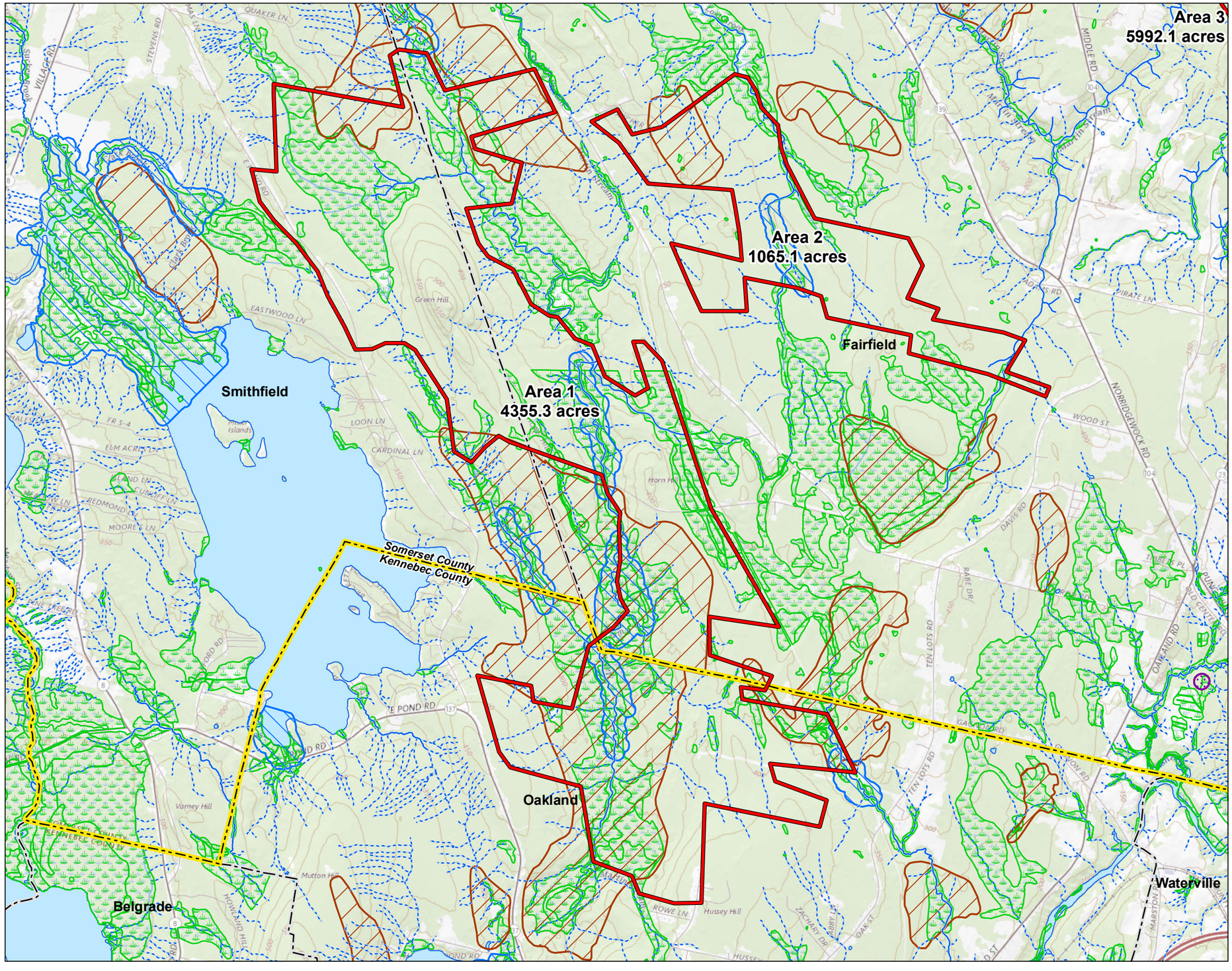

Stantec

Legend

- Prospective Solar Array Area

National Hydrography Dataset (NHD) Stream

- Perennial Stream
- Intermittent Stream
- NHD River/Waterbody
- Significant Vernal Pool 250' Habitat Zone
- Deer Winter Area
- Inland Waterfowl and Wading Bird Habitat
- NWI Wetland
- County Boundary
- Municipal Boundary

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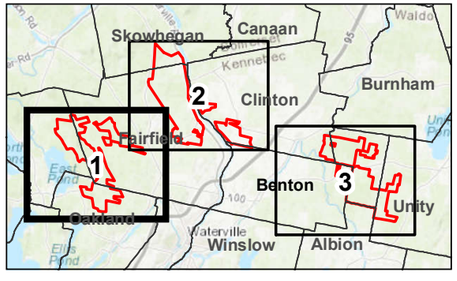
Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. Sources: MEIFW, USFWS, MEGIS
3. Background: The USGS National Map



Project Location
Benton, Clinton, Unity Twp, Maine

Prepared by GC on 2022-01-11
Reviewed by EB on 2022-01-12

Client/Project
Three Corners Solar Project

195601453

Figure No.
2-1

Title
Alternative Analysis – Solar Array Area
Sheet 1 of 3

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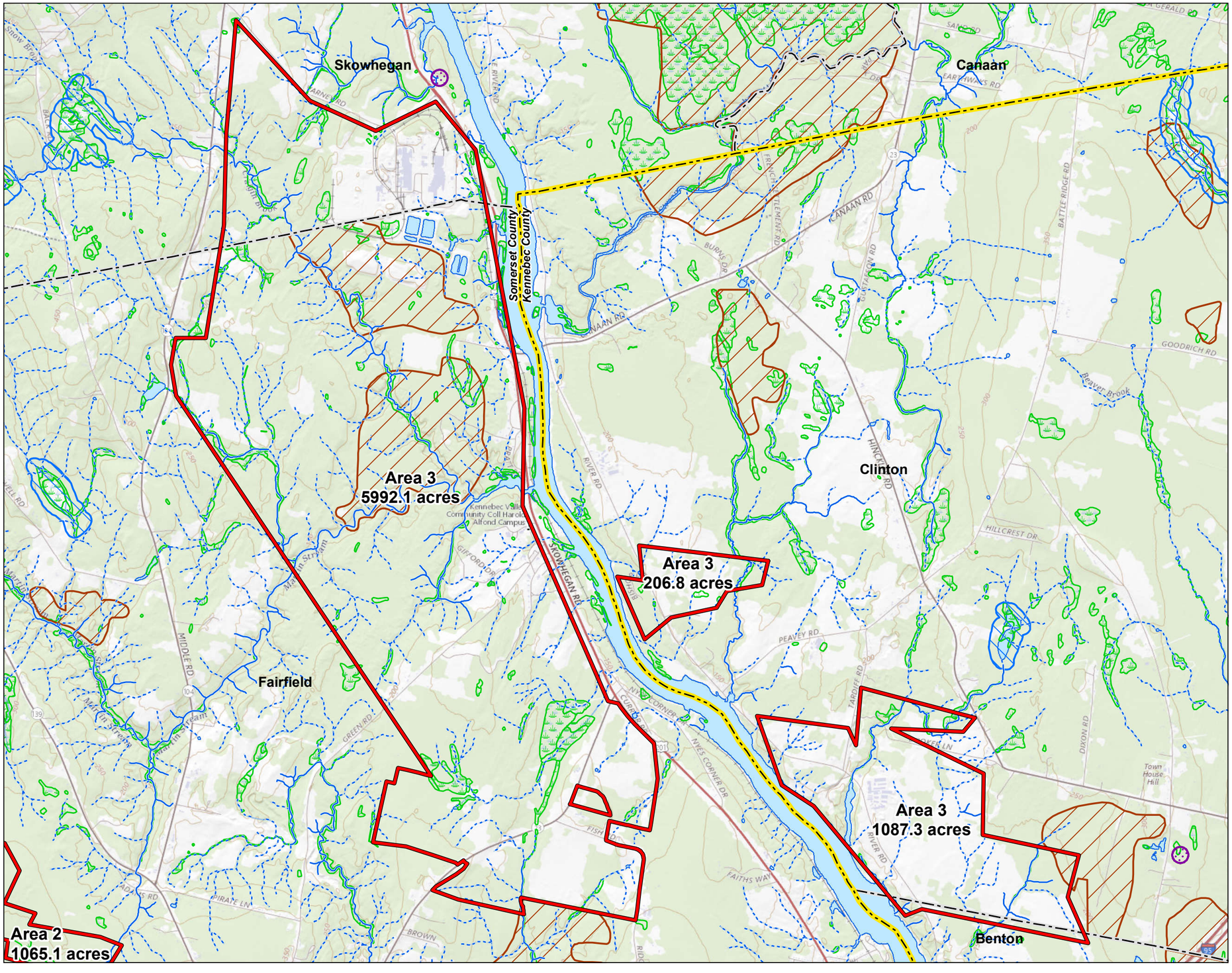

Stantec

Legend

- Prospective Solar Array Area

National Hydrography Dataset (NHD) Stream

- Perennial Stream
- Intermittent Stream
- NHD River/Waterbody
- Significant Vernal Pool 250' Habitat Zone
- Deer Winter Area
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- NWI Wetland
- County Boundary
- Municipal Boundary

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Notes
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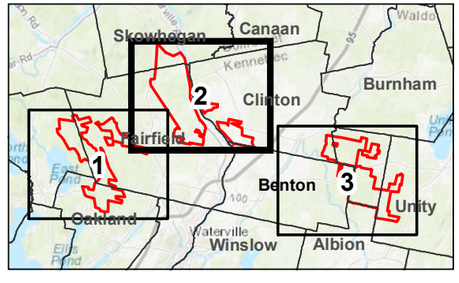
2. Sources: MEIFW, USFWS, MEGIS
3. Background: The USGS National Map



Project Location
Benton, Clinton, Unity Twp, Maine

Prepared by GC on 2022-01-11
Reviewed by EB on 2022-01-12

Client/Project
Three Corners Solar Project

195601453

Figure No.
2-1

Title
Alternative Analysis – Solar Array Area
Sheet 2 of 3

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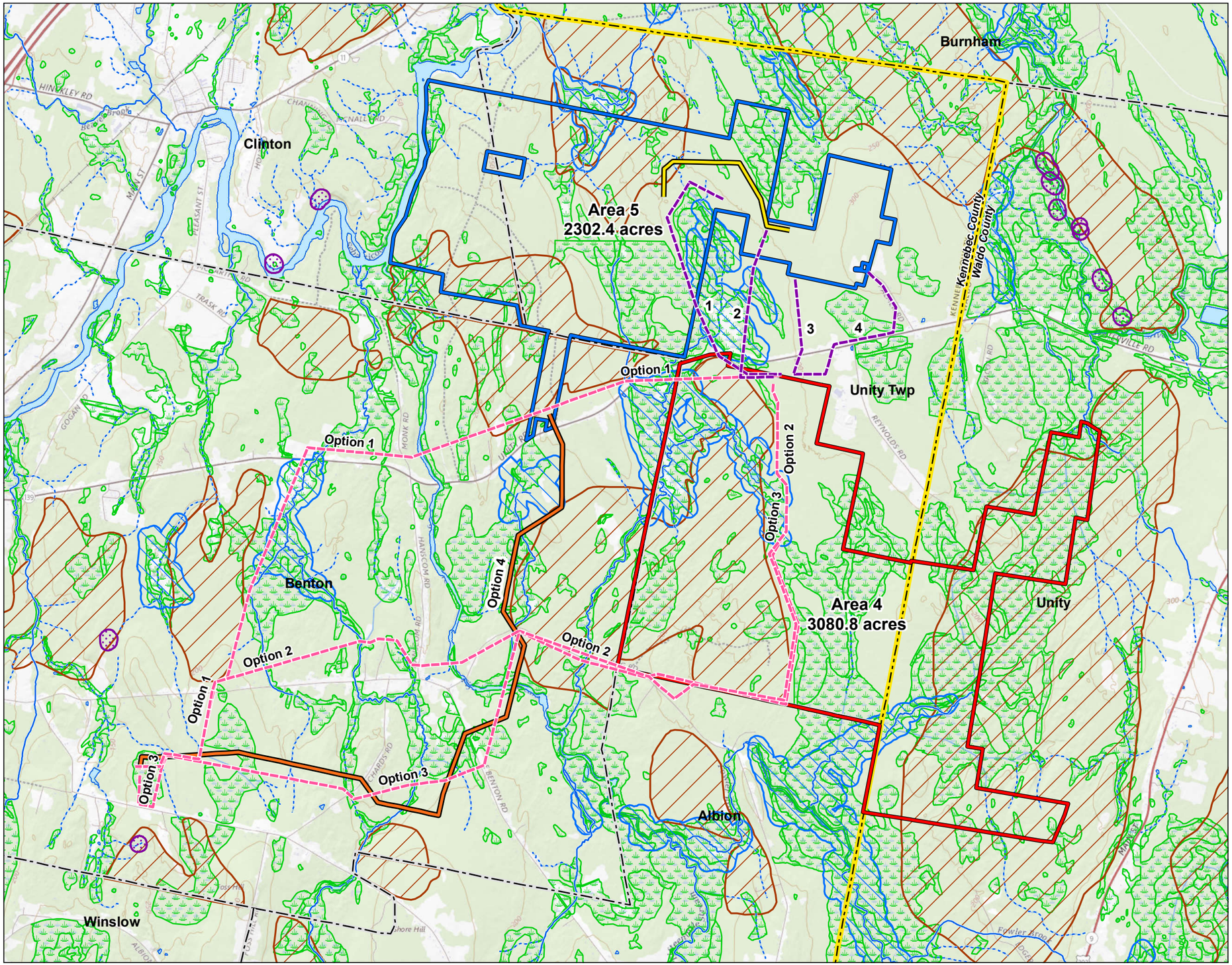

Stantec

Legend

- Prospective Collector Route
- Prospective Generator Lead Route
- Preferred Generator Lead Route
- Preferred Collector Route
- Prospective Solar Array Area
- Preferred Solar Array Area

National Hydrography Dataset (NHD) Stream

- Perennial Stream
- Intermittent Stream
- NHD River/Waterbody
- Significant Vernal Pool 250' Habitat Zone
- Deer Winter Area
- Inland Waterfowl and Wading Bird Habitat
- NWI Wetland
- County Boundary
- Municipal Boundary

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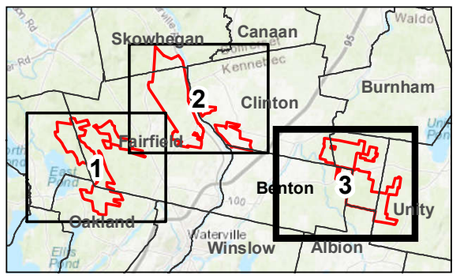
Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. Sources: MEIFW, USFWS, MEGIS
3. Background: The USGS National Map



Project Location
Benton, Clinton, Unity Twp, Maine

Prepared by GC on 2022-01-11
Reviewed by EB on 2022-01-12

Client/Project
Three Corners Solar Project

195601453

Figure No.
2-1

Title
Alternative Analysis – Solar Array Area
Sheet 3 of 3

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Attachment 2-1

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:	image001.jpg

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

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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

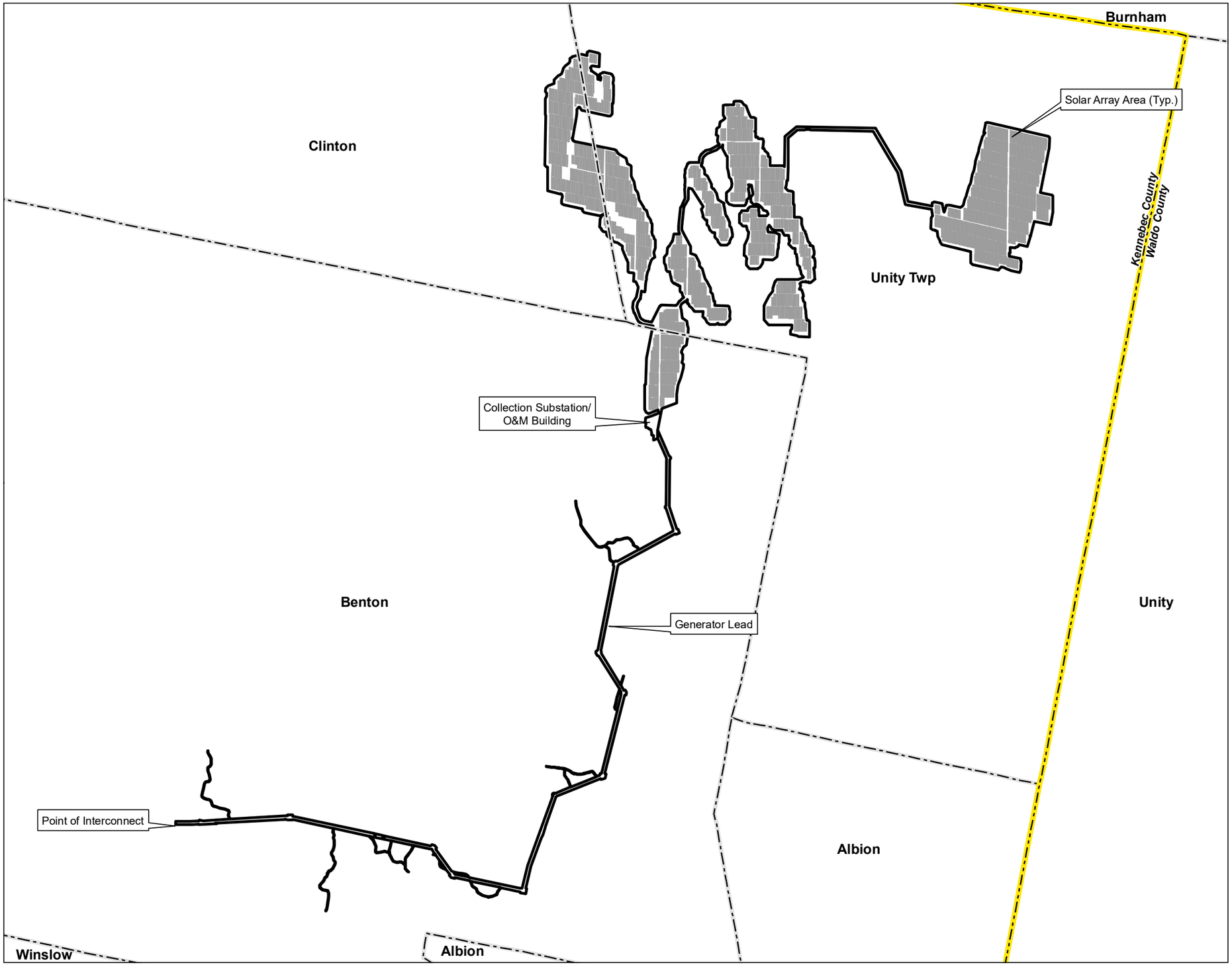
Office: 207.416.1233
Cell: 207.570.9462
www.KleinschmidtGroup.com
*Providing **practical** solutions for **complex** problems affecting energy, water, and the environment*

ATTACHMENT 3. TOPOGRAPHIC MAP

The Project location map is included as Figure 3-1.

Figure 3-1

Project Location Map



Stantec

Legend

- Solar Array
- Project Area
- Municipal Boundary
- County Boundary

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(At original document size of 11x17)
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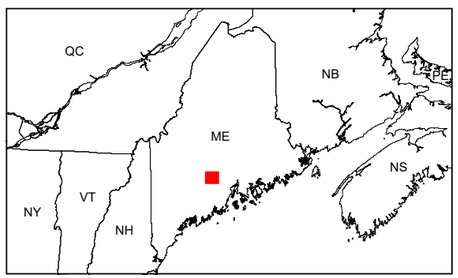
Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. Background: The USGS National Map



Project Location
Benton, Clinton, Unity Twp, Maine

Prepared by HT on 2022-01-06
TR Review by GC on 2022-01-07
IR Review by EB on 2022-01-10

Client/Project
Three Corners Solar Project

195601453

Figure No.
3-1

Title
Project Location Map

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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 responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

ATTACHMENT 4. PHOTOGRAPHS OF IMPACT AREAS

4.1 WETLAND IMPACT AREAS

4.1.1 Solar Array Area

Photo 1. View of wetland W-CF-11, taken 7/21/2020, BRI.

Photo 2. View of wetland W-CF-14, taken 8/3/2020, BRI.

Photo 3. View of wetland W-NS-01, taken 6/30/2020, BRI.

Photo 4. View of wetland W-NS-10, taken 8/4/2020, BRI.

Photo 5. View of wetland W-NS-11, taken 7/13/2020, BRI.

Photo 6. View of wetland W-NS-16, taken 7/14/2020, BRI.

Photo 7. View of wetland W-MR-01, taken 7/22/2020, BRI.

Photo 8. View of wetland W-MR-27, taken 7/23/2020, BRI.

Photo 9. View of wetland W-SK-05, taken 7/13/2020, BRI.

4.1.2 Genlead

Photo 10. View of wetland W07, taken 7/27/2020, Stantec.

Photo 11. View of wetland W09, PEM portion, taken 7/27/2020, Stantec.

Photo 12. View of wetland W09, PSS portion, taken 7/27/2020, Stantec.

Photo 13. View of wetland W09, PFO portion, taken 7/27/2020, Stantec.

Photo 14. View of wetland W14, taken 7/27/2020, Stantec.

Photo 15. View of wetland W15, taken 7/27/2020, Stantec.

Photo 16. View of wetland W22, taken 7/28/2020, Stantec.

Photo 17. View of wetland W27, taken 7/28/2020, Stantec.

Photo 18. View of wetland W28, taken 7/28/2020, Stantec.

Photo 19. View of wetland W32, taken 7/28/2020, Stantec.

Photo 20. View of wetland W35, taken 7/29/2020, Stantec.

Photo 21. View of wetland W36, taken 7/29/2020, Stantec.

Photo 22. View of wetland W42, PFO portion, taken 7/29/2020, Stantec.

Photo 23. View of wetland W43, PFO portion, taken 7/29/2020, Stantec.

Photo 24. View of wetland W43, PEM and PSS portions, taken 7/29/2020, Stantec.

Photo 25. View of wetland W50, PUB section, taken 7/30/2020, Stantec. Clearing impacts are anticipated along the PFO edge of wetland W50.

Photo 26. View of wetland W51, PFO portion, taken 7/30/2020, Stantec.

Photo 27. View of wetland W52, taken 7/30/2020, Stantec.

Photo 28. View of wetland W56, taken 7/30/2020, Stantec.

Photo 29. View of wetland W57, taken 7/30/2020, Stantec.

Photo 30. View of wetland W58, taken 7/31/2020, Stantec.

Photo 31. View of wetland W59, taken 7/31/2020, Stantec.

4.2 STREAMS

Photo 32. View of perennial stream S01, taken 7/27/2020, Stantec.

Photo 33. View of perennial stream S02, taken 7/28/2020, Stantec.

Photo 34. View of perennial stream S05 near proposed Genlead crossing, taken 7/28/2020, Stantec.

Photo 35. View of perennial stream S05 near proposed temporary access crossing, taken 7/28/2020, Stantec.

Photo 36. View of intermittent stream S06 downstream of proposed temporary access crossing, taken 7/29/2020, Stantec.

Photo 37. View of perennial stream S07 (Fifteen Mile Stream) near proposed Genlead crossing, taken 7/29/2020, Stantec.

Photo 38. View of perennial stream S08 near proposed Genlead crossing, taken 7/30/2020, Stantec.

Photo 39. View of perennial stream S09 near proposed Genlead crossing, taken 7/30/2020, Stantec.

Photo 40. View of perennial stream S11 near proposed Genlead crossing, taken 7/30/2020, Stantec.

4.3 VERNAL POOLS

Photo 41. View of significant vernal pool SAD-VP-116, taken 4/30/2020, Kleinschmidt.

Photo 42. View of significant vernal pool SAD-VP-103, taken 4/28/2020, Kleinschmidt.

Photo 43. View of significant vernal pool SAD-VP-106, taken 4/28/2020, Kleinschmidt.

Photo 44. View of significant vernal pool SAD-VP-7, taken 5/1/2020, Kleinschmidt.

Photo 45. View of significant vernal pool SAD-VP-8, taken 5/1/2020, Kleinschmidt.

Photo 46. View of significant vernal pool SAD-VP-9, taken 5/2/2020, Kleinschmidt.

Photo 47. View of significant vernal pool SAD-VP-10, taken 5/2/2020, Kleinschmidt.

Photo 48. View of significant vernal pool SAD-VP-3, taken 4/29/2019, Kleinschmidt.

Photo 49. View of potential significant vernal pool PSVP03, taken 7/28/2020, Stantec.

Photo 50. View of potential significant vernal pool PSVP06, taken 7/30/2020, Stantec.

Photo 51. View of potential significant vernal pool PSVP07, taken 7/30/2020, Stantec.

Photo 52. View of potential significant vernal pool PSVP09, taken 7/31/2020, Stantec.

Photo 53. View of potential significant vernal pool PSVP11, taken 11/24/2021, Stantec.

ATTACHMENT 5. CIVIL DESIGN PLANS AND EROSION AND SEDIMENTATION CONTROL PLANS

Detailed civil site plans for the solar array area, Collector, collection substation, and O&M building are provided in Attachment 5-1. Genlead civil site plans are provided in Attachment 5-2.

Attachment 5-1

Civil Site Plans: Solar Array Areas, Collector, Collection Substation, and O&M Building

Attachment 5-2

Civil Site Plans: Genlead

ATTACHMENT 6. ADDITIONAL PLANS

Additional plans are not required for the proposed Project.

ATTACHMENT 7. CONSTRUCTION PLAN

The Applicant's owners have extensive experience constructing solar energy facilities, with numerous projects currently in operation. The Applicant is committed to constructing facilities that minimize environmental impacts and comply with regulatory requirements and best management practices (BMPs).

Clearing for construction is projected to commence in August 2022, with the goal of Project completion set for February 2024. The sequence of Project construction will generally adhere to the timeline detailed below (Table 7-1), although adjustments may be necessary to accommodate seasonality and weather conditions.

Prior to initiating earthwork activities, resource areas will be flagged and/or fenced for protection and erosion and sediment control measures will be installed in accordance with regulatory requirements and BMPs. The array area with forested cover will be cleared of trees, stumping and grubbing where necessary, and earthwork to upgrade and build the access roads will commence. The Genlead and overhead Collector ROWs will be cleared of trees without stumping or grubbing. The array areas will be accessed via existing and upgraded access roads (Bessey Lane and Palmer Road) originating from Unity Road. Once site preparation is completed, the Collector, Genlead, and solar racking systems will be installed. Panel racking will be installed using ground screws or pilings. Panels and ancillary equipment will be delivered to the site and temporarily staged within construction laydown areas identified on the civil site plans provided in Attachment 5-1.

Substation and O&M building construction will likely occur concurrently with other work on site. The substation and O&M sites will be prepared to provide sub-grade or final-grade for foundation construction. Once foundations are constructed, structural steel will be installed to support the substation. Other control buildings, as needed, within the fenced substation yard will either be constructed on site or pre-fabricated and delivered. If necessary, the substation will be energized for back feeding the site collection system and the solar arrays for final testing and commissioning. Final site restoration activities are anticipated during the spring of 2024.

Table 7-1. Estimated Construction Activity Timeline

Three Corners Solar Schedule	2022					2023												2024					
Activity	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
Mobilization / Layout & Staking																							
Site Clearing (PV Array & Substation)																							
Civil & Structural (PV Array)																							
Electrical (Plant)																							
Substation																							
Site Clearing (Transmission Line)																							
Transmission Line																							
Trial Ops & Testing & Commissioning																							
Energize Facility																							
In-Service Date																							
						WINTER		THAW										WINTER		THAW			

Note: Green Cells indicate active work periods; black cells indicate thaw period inactive periods; and the red cell indicates Project commissioning

ATTACHMENT 8. EROSION CONTROL PLAN

8.1 INTRODUCTION

The following plan has been developed to provide a strategy for erosion and sediment control associated with the Project both during and after site construction. The Project is a proposed utility scale solar energy facility located in Benton, Clinton, and Unity Twp, Maine, and the scope of work includes:

- Installation of approximately PV panels with an estimated rated capacity of 110 MWac and associated support structures;
- Upgrades to and/or construction of 24- to 16-ft-wide Project access roads;
- Construction of 12-ft-wide access roads to allow access to several outparcels located interior to the Project;
- Installation of up to 39 paired central inverters/transformers on skids;
- Installation of the Collector and Genlead; and
- Installation of an O&M building and collection substation adjacent to Bessey Lane.

This plan is based upon sound conservation practices, including as applicable, those outlined in the "Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers" (BMP Manual) published by the Bureau of Land and Water Quality, MDEP (October 2016).

Details of erosion and sediment control during the construction of the Project are located in the civil site plans for the solar array area, including supporting infrastructure (Attachment 5-1), and the Genlead (Attachment 5-2).

8.1.1 Stormwater Management Measures

Additional measures may be required to protect new stormwater conveyance or management systems due to changes in actual site conditions. For more information on stormwater management, see Section 12.0 of the Project's Site Law permit application. For additional information on stormwater management and buffers, the contractor shall reference the Maine Stormwater Best Management Practices Manual, Volume III: BMP Technical Design Manual (revised May 2016).

8.1.2 Definitions

The following definitions are for terms commonly used throughout this plan.

Acceptance – As used herein shall mean verification that the specific erosion control measure or device to be accepted is adequately constructed, performs satisfactorily as intended, and is complete. Acceptance of a measure or device shall be based upon visual observations and inspection and is not a warranty of compliance, compaction, structural integrity, workmanship, or other construction-related or qualitative factors that may require testing or other means of certification of compliance.

BMP Manual – Refers to the "Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers".

Buffer strips – Natural, undisturbed strips of natural vegetation or reseeded strips of close-growing vegetation adjacent to and downslope of developed areas.

Clearing – Includes cutting and removing of vegetative cover. It does not include grubbing. Limited cutting, thinning, use of heavy equipment, and other clearing restrictions will apply to sensitive areas (e.g., wetlands).

Earthwork – Consists of the movement of soil by mechanical means including excavation, filling, grading, trenching, and shaping.

Erosion and Sediment Controls – Defined as the installation of silt fence, bales, erosion control berms, rip-rap, mulching, erosion control matting or netting, check dams, inlet protection, reinforced turf, erosion control mix, construction entrances, diversions, level spreaders, and any other temporary or permanent measures required herein.

Grubbing – The removal of grass, stumps, roots, and scrub required to begin earthwork. Grubbing is the initial clearing action that exposes soil to erosive forces (wind, rain).

Interim Period – A period of time that an un-vegetated area sits un-worked, awaiting the next phase of work.

Permanent or Final – As used herein, shall refer to the use or placement of erosion or sedimentation controls, seeding, or other measures, which will remain through final Project completion.

Seasons – The following dates define the seasons as referred to herein:

Seasons	**Dates** *(Seasonal dates may vary from year-to-year)*
Winter	November 1 to April 15
Mud-Season	March 16 to April 30
Spring	May 1 to June 14
Summer	June 15 to September 15
Fall	September 16 to October 31

Temporary – As used herein shall refer to the use or placement of erosion or sedimentation controls, seeding, or other measures intended to be either removed, replaced, reworked, reseeded, or followed with permanent measures.

8.2 CONSTRUCTION CALENDAR

The contractor is required to give special attention to the sections pertaining to fall and winter construction, as well as to sensitive areas and requirements for temporary seeding, dormant seeding, and mulching.

8.2.1 Schedule of Activities

The following construction activities, erosion and sediment control measures, or other items are required for the construction of this Project or require specific measures or scheduling of activities to be conducted or restricted during the various construction seasons as defined above.

Clearing – Clearing is anticipated to occur during the late summer through fall 2022 and winter 2023.

Erosion and Sediment Controls Installation – Erosion and sediment control measures shall be installed prior to commencement of disturbance activities and throughout the duration of active construction as applicable to each erosion control measure. See civil site plans for locations and installation procedures (Attachments 5-1 and 5-2).

Access Road Construction – This construction is anticipated to occur in the late summer 2022 through early winter 2023.

8.3 EROSION AND SEDIMENT CONTROL MEASURES

Construction of the Project may require or incorporate the following erosion and sediment control measures or practices as needed or applicable. No more than 10 acres of disturbed soils will be open at one time without erosion and sediment control measures (e.g., mulch) in place on the disturbed soil. Additional measures not shown or discussed here may be needed to protect natural resources and/or off-site properties from erosion and sediment runoff. The following information is being provided at a minimum, with supporting more-detailed information available in the BMP Manual and the civil site plans for the solar array area (Attachment 5-1) and the Genlead (Attachment 5-2)

Bales – Straw (or hay) bales may be required in addition to silt fencing or other measures in sensitive areas. Bales are to be embedded at a minimum of four inches into the existing soil and staked with ends tightly abutting adjacent bales. At least two stakes per bale are to be driven into the ground for anchoring. Where staking and embedding of bales is impractical due to excessive roots, ledge, or other construction hazards, bale barriers may be substituted with erosion control mix berms provided they are not installed in locations with concentrated flow. Refer to Section B-6 of the BMP Manual.

Construction Entrance/Exit – A crushed stone-stabilized construction entrance will be installed as shown on the civil site plans. Stone entrances/exits shall be placed on geotextile fabric and shall include a minimum 10-foot by 10-foot taper (or as needed to support large construction/delivery vehicles) on both sides of the entrance to allow for turning vehicles. Refer to Section A-2 in the BMP Manual.

Dust Control – As necessary, the contractor shall take steps to control blowing and airborne movement of dust from exposed soil surfaces. Maintaining natural or temporary vegetation and/or mulching shall be used where practical. Mechanical sweepers shall be used where necessary to prevent and remove dust buildup on paved surfaces. Regularly traveled soil surfaces shall be maintained to minimize dust by periodically moistening bare areas with adequate water to prevent dust. Calcium Chloride may be used in areas experiencing significant dust problems and to reduce frequency of watering. Repetitive treatment shall be applied as necessary to accomplish adequate dust control. Refer to Section A-1 in the BMP Manual.

Erosion Control Mix Berms – May be installed in locations that do not have a concentrated flow. Erosion control mix berms are an approved alternative to silt fence provided they are not located in sensitive areas described above. Refer to Section B-2 of the BMP Manual. Erosion control mix may be manufactured on or offsite and shall follow the guidelines outlined in Section D-3 in the BMP Manual. The composition specification outlined in Section D-3 should be used as a guideline, but the actual mix design will be performance based.

Level Lip Spreader – Level lip spreader lengths are stone-lined ponded areas discharging over a level berm through a well vegetated buffer area. If needed, these spreaders will function to disperse channelized flow

into shallow sheet flow. Construction and length of level lip spreaders shall be as detailed on the final design plans. Refer to Section G-4 and I-2 of the BMP Manual.

Matting (or Erosion Control Blankets) – Shall consist of straw, coconut or excelsior sandwiched between photodegradable netting. Matting may be substituted with sod where desired. Matting shall be used on all steep constructed slopes as indicated on the design plans or where mulching has proven to be ineffective in the field. Refer to Section D-2 of the BMP Manual.

Outlet Protection – Riprap outlets (aprons or plunge pools) shall be placed in locations where indicated on the final design plans, and in locations where flared end sections have proven to be inadequate to prevent scouring at the pipe outlet in the field. Refer to Section H-2 of the BMP Manual.

Permanent Mulching (Erosion Control Mix) and Revegetation – Permanent mulch is long-term cover that provides a good buffer on and around disturbed areas. Permanent mulching with erosion control mix can be used as a permanent ground cover, as an overwinter stabilization mulch, or left to naturalize and revegetate to near natural conditions. It is not used to support grassy vegetation, but legumes or woody vegetation may be established if allowed to revert to natural conditions. Permanent mulch must not be used in areas of concentrated water flows, and any evidence of groundwater seepage on slopes may require the erosion control mix to be replaced with riprap. Erosion control mix can be manufactured on or off the Project site. It shall consist primarily of organic material, separated at the point of generation and may include shredded bark, stump grindings, composted bark, or flume grit and fragmented wood generated from water-flume log handling systems. Wood chips, ground construction debris, reprocessed wood products, or bark chips will not be acceptable as the organic component of the mix. Erosion control mix composition shall be in accordance with Section D-3 of the BMP Manual. Erosion control mix must be free of refuse, physical contaminants, and material toxic to plant growth.

Riprap – Shall be used in swales, steep slopes, and outlets as necessary to protect soils from excessive flow velocities. Riprap may be required at locations where revegetation matting, high velocity ditch lining or soft armor is proven to be ineffective in the field. Refer to Sections F-3 (slopes) and G-2 (channels) of the BMP Manual.

Sediment Controls – Sediment controls are installed down gradient of disturbed earth with the purpose of reducing runoff velocity and allowing for soil settlement (see Section B of the BMP Manual). A sediment controls include silt fence, erosion control mix berm, filter socks, stone check dams, storm drain inlet protection, and hay bales that are intended to be used where:

- Sedimentation can pollute or degrade a wetland or other water resource;
- Sedimentation will reduce the capacity of storm drainage systems or adversely flood adjacent areas; and
- Sediment barriers cannot be used in areas of concentrated flows. *Under no circumstances* should erosion control mix sediment barriers be constructed in streams or in swales.

Silt Fence – Silt fence may be required as warranted or determined by field conditions. Silt fence may also be required in addition to bales or other measures in sensitive areas as shown on the design plans. Where staking and embedding fabric is impractical due to excessive roots, ledge, or other construction hazards, silt fence may be substituted with erosion control mix berms or placement of 6 inches of suitable non-organic material along fabric flap on upslope side of fence, in lieu of burying fabric in trench. Refer to Section B-1 of the BMP Manual.

Stone Check Dams – Shall be installed in existing and proposed swales or at culvert inlets as necessary. These check dams serve to reduce flow velocities in swales thus helping to reduce rilling. Check dams shall be constructed to prevent breaching and scour at the outer edges along the sides of the ditch. Refer to Section B-4 of the BMP Manual.

Temporary Mulching – Shall consist of spreading of straw (or hay) mulch or erosion control mix over bare or disturbed areas. It shall be applied at the rates described in the *Temporary Seeding and Mulching Schedule* described below. Mulching shall be substituted with matting in locations where it has proven to be ineffective in the field. Refer to Section D-1 of the BMP Manual.

8.4 EROSION AND SEDIMENT CONTROL EXECUTION

8.4.1 General Construction Phase

The following general practices will be used to minimize the potential for erosion and control sediment runoff during construction of the Project. Applications and installation methods will be further detailed in the final design plans. If the contractor is unclear regarding the use, location, installation, intended performance, or maintenance of any prescribed erosion control measures, the contractor shall refer to the BMP Manual for detailed procedures.

NOTE: Locations of erosion and sediment control measures are shown on design plans as typical for general purposes only to indicate the intent. Final locations of erosion and sediment control measures should be selected based on actual field conditions and as site conditions warrant.

Construction Traffic – Construction traffic will be directed over the stabilized construction entrance/exit and proposed roads. The crushed stone construction entrance/exit shall be maintained with the addition of more crushed stone as needed or as the voids become filled. The public roadway shall be swept as soon as possible should mud be tracked onto it.

Erosion Control Installation – Prior to the start of grubbing, silt fence, bales, erosion control mix berms, stabilized construction entrances, or other appropriate measures shall be installed adjacent to construction areas, at the toe of slopes, or as otherwise required to protect against construction related erosion. Double rows of sediment barrier will be installed prior to winter construction. Immediately following construction of culverts and swales, any necessary stone check dams, and ditch linings shall be installed. Prior to start of construction there will be a mandatory pre-construction meeting to discuss the construction schedule and the erosion and sedimentation control plan.

Following Clearing – Only those areas under active construction shall be left in an untreated or unvegetated condition.

Grading – Grading will be held to a maximum 2:1 slope where practical. Finish-graded areas shall be stabilized with permanent seeding and mulching or other accepted means immediately after final grading is complete. If final grading will not be completed immediately, refer to the *Temporary Seeding and Mulching Schedule* detailed below. It is understood that immediately means within five days of the completion of work. For time periods longer than five days, refer to *Permanent Seeding and Mulching Plan* below. **No more than 10 acres of disturbed area will be left unstabilized at any time.**

Housekeeping – Rubbish, trash, garbage, litter, or other such materials shall be deposited into sealed containers. Materials shall be prevented from leaving the premises through the action of wind or stormwater drainage into drainage ditches or waters of the State.

Monitoring Schedule – The contractor shall be responsible for installing, monitoring, maintaining, repairing, replacing and/or removing the temporary erosion and sedimentation controls as specified herein, or shall appoint a qualified subcontractor to do so, as follows:

- The contractor or approved designated Inspector shall perform weekly inspections of the site until the site is stabilized. Inspections may be performed on a bi-weekly schedule when work has abated for more than one week.

- Maintenance measures will be performed as needed during the entire construction cycle. After each rainfall, and *prior to* predicted significant rainfall events (> 1 inch), a visual inspection of erosion and sediment controls will be made by the contractor or approved designated Inspector to confirm their continuing function as designed.

- Stone check dams, bale barriers, drop inlet barriers, erosion control mix berms, silt fence, and mulch shall be inspected and repaired once a week or immediately following any significant rainfall. Sediment trapped behind these barriers shall be removed when it reaches a depth of 6 inches (or 1/2 the height of the dam for check dams) and redistributed to areas undergoing final grading.

- Near completion of the construction and after the site is reseeded and stabilized, the contractor shall inspect, clean, maintain, repair, restabilize, or revegetate all drainage structures, storm drains, culverts, level spreaders and ditches prior to acceptance by the Applicant.

Permanent Seeding and Mulching Plan – The following general practices will be used to re-establish final vegetation.

- Loam or reclaimed topsoil will be spread over disturbed areas and graded to a uniform depth and a natural appearance.

- Final seeding shall be completed immediately (within 7 days) following final any necessary grading. All final fertilizing and seeding shall adhere to these specifications.

- Areas shall be mulched immediately after seeding. Immediately upon first signs of any evidence of significant erosion occurring, the contractor shall repair and mulch all such areas until the area is stabilized. Mulching shall consist of hay mulch, hydro-mulch, or any suitable substitute. Mulching shall be monitored according to the *Monitoring Schedule* above. Should mulching prove to be ineffective, netting or matting shall be used in its place.

- Straw mulch or hay shall be applied at the rate of 2 tons per acre (90 pounds or 2 bales/1,000 square feet) unless otherwise specified.

- Hydro-mulch shall consist of a mixture of tackifier, wood fiber or paper fiber and water sprayed over a seeded area. Hydro-mulch shall not be used during the fall, winter, or mud season.

- Dormant seeding, between first frost and snowfall, will be applied at twice the standard rate and heavily mulched.

- Erosion control mix utilized for permanent stabilization and to promote natural revegetation may be used in lieu of loaming and seeding.

Temporary Seeding and Mulching Schedule – During construction, all disturbed areas shall adhere to the schedules specified in Tables 8-1 and 8-2. Refer to *Permanent Seeding and Mulching Plan* above for permanent seeding and mulching requirements.

- The contractor shall be responsible for monitoring daily weather reports when working in identified sensitive areas and for monitoring weekly reports in all other areas. The contractor shall adjust the work schedule in anticipation of rains and shall stabilize the site as indicated or required.

- All completed areas that have been loamed and/or finish graded shall be permanently reseeded in accordance with the *Permanent Seeding and Mulching Plan* above.

- Temporary mulching and/or seeding shall commence immediately following initial fine grading of any area expected to remain bare for an interim period of more than 7 days. Stabilization or seeding requirements shall be determined in accordance with Tables 14-1 and 14-2 and shall be implemented at the beginning of the expected interim period.

- Exposed or bare soil in these areas shall be mulched at the completion of work, each day, if significant rainfall is predicted or imminent.

- Mulch application rate shall be doubled during winter construction. Where practicable, mulch should be applied at the end of each day's work for areas that have been fine graded or if snow is predicted or eminent. In no case shall any areas be left bare for more than 15 days during winter construction.

- Temporary seeding and mulch shall be inspected and maintained or repaired weekly. At a minimum, 75% of the soil surface should be covered by vegetation. If any evidence of erosion or sedimentation is apparent, repairs shall be made and other temporary measures used in the interim (e.g., mulch, filter barriers, check dams, bales). Mulch shall be reapplied as necessary to completely cover soil.

- Areas within 75 feet of a wetland or waterbody will be stabilized with a double row of sediment barriers within 48 hours of the initial disturbance or prior to any storm event, whichever comes first (Maine Construction General Permit, Appendix A (3)).

Table 8-1. Stabilization Schedule

Maximum Expected Interim Period (Days)	Temporary Mulching (Hay)	Temporary Seeding
0–7	None	None
7–30	2-bales/1,000 square feet	None
30–60	2-bales/1,000 square feet	(per Table 14-2: Temporary Seeding Schedule)
More than 7 days during winter season	4-bales/1,000 square feet	Dormant seeding only

Table 8-2. Temporary Seeding Schedule

Typical Seed	Seeding Rate (lbs/acre – lbs/1,000 sf)	Recommended Seeding Dates
Winter Rye Grass	112 – 2.6	8/15 to 10/1
Oats	80 – 1.8	4/1 to 7/1 8/15 to 9/15
Annual Rye Grass	40 – 0.9	4/1 to 7/1
Sudangrass	40 – 0.9	5/15 to 8/15
Perennial Rye Grass	40 – 0.9	8/15 to 9/15

Topsoil – Any necessary topsoil will be stockpiled on-site in areas that have minimum potential for erosion, such as flat slopes or on-site borrow pits, and will be kept as far as possible from existing drainage areas. Stockpiles expected to remain longer than 15 days shall be encircled with bales, erosion control mix berms, or silt fence at the down gradient sides of the stockpile and mulched with a second application of hay mulch and anchored with biodegradable netting, as necessary (Maine Construction General Permit, Appendix A (6) a-d).

Winter Construction – For any work proposed during the winter season, the contractor shall adhere to the following practices.

- Limit the exposed area to those areas in which work is to occur during the following 15 days and that can be mulched in one day prior to any snow event.
- Where required, installation of silt fence may be modified from detail on design plans to substitute 6 inches of suitable non-organic material over the bottom of the silt fence in lieu of trenching and backfilling fabric or erosion control mix berm/barrier.
- Double rows of sediment barriers will be installed prior to winter construction where required within 100 feet of wetlands and waterbodies.

- Mulching and seeding rates shall adhere to the *Temporary Seeding and Mulching Schedule* above. Note that all mulching rates shall be doubled as shown in the above table.

8.4.2 Erosion Control Measure Removal

Removal of temporary erosion and sediment control measures shall be the responsibility of the contractor. Erosion and sediment controls shall remain in place and will be maintained by the contractor until all related construction is complete and the area has been stabilized.

An area is considered stable if an 85% cover of vegetation has been established or riprap or other permanent measures are in place and functioning properly.

Bales and silt fence shall be removed within 30 days of final stabilization. The bales and silt fence shall be disposed of appropriately in an off-site location. Sediment trapped behind these controls shall be distributed to an upland area undergoing final grading and graded in an aesthetic manner to conform to the topography, and fertilized, seeded and mulched, or otherwise stabilized, in accordance with the BMP Manual.

The sediment trapped behind/around/in stone check dams will be removed and transported off-site, or to an upslope area undergoing final grading. The sediment trapped by stone check dam devices will not be regraded locally since they exist in drainage ways.

8.5 FIELD ADJUSTMENTS

The Applicant expects that minor adjustments will be made during final design work and during construction based on conditions encountered in the field, such as vegetation clearing outside of resources. As described below, the Applicant has identified changes that do not require a permit modification and that may be made (a) without advance notice to MDEP or, (b) that require prior approval by MDEP staff.

As reflected in notes to the Project plans, the Applicant understands that the following field and/or final design adjustments are authorized under the permit provided they do not result in new impacts to protected natural resources as defined under the NRPA (38 MRSA Section 480-B(8)); do not increase overall Project clearing; do not impact a new landowner without authorization; and meet the requirements of MDEP Chapter 500 Stormwater Management Standards. These adjustments will be reflected in the final as-built drawings.

(a) Examples of adjustments that may be made during construction and/or final design without advance notice to MDEP:

- Reduction in clearing, impervious surface, or size of structure; elimination of a structure; or relocation of a structure;
- Location, dimension, or addition of drainage culverts, level spreaders, rock sandwiches, or other stormwater infrastructure, provided that the culvert does not convey a regulated stream

and that the hydraulic capacity of the modified stormwater infrastructure meets design standards; and

- Changes to ground screw locations for the panel racking system.

(b) May be made upon prior approval by MDEP staff:

- Changes other than those identified in (a) and that do not otherwise require a permit amendment, as determined by MDEP.

8.6 CONCLUSION

If constructed in conformance with these basic standards, the Project is not expected to result in significant erosion or sedimentation either on or off the site

ATTACHMENT 9. NATURAL RESOURCES REPORT

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

9.1 SURVEY RESULTS

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

9.1.1 Wetlands and Streams

Solar Array Area

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

Genlead

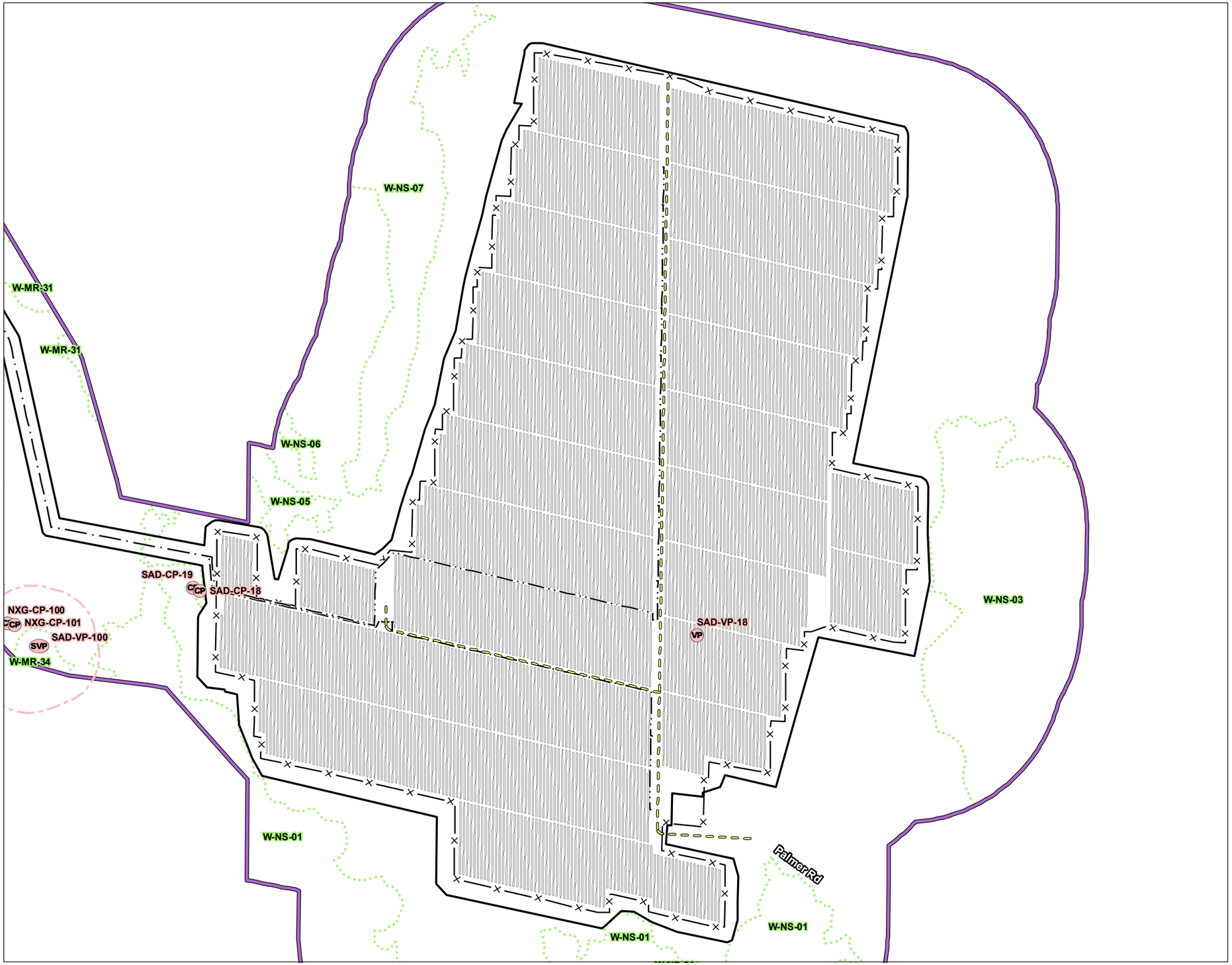
Stantec identified a total of 62 wetlands, 10 streams, and 1 waterbody (i.e., pond) within the Project Genlead area. Wetlands observed were primarily forested wetlands, often combined with areas of scrub-shrub communities. Portions of several wetlands have wet meadow wetland habitat (e.g., W03) as they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

9.1.2 Vernal Pools

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

Figure 9-1

Natural Resources Overview Maps



Stantec

Legend

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

Rare Plant Population (1 location)

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

Proposed Infrastructure

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

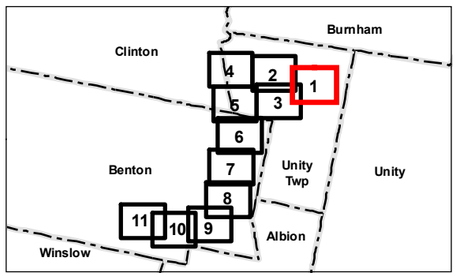
N

0 500 Feet

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

Notes

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



Project Location
Benton, Clinton, Unity Twp, Maine

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

Client/Project
Three Corners Solar Project

195601453

Figure No.
9-1

Title
Natural Resource Maps
Sheet 1 of 11

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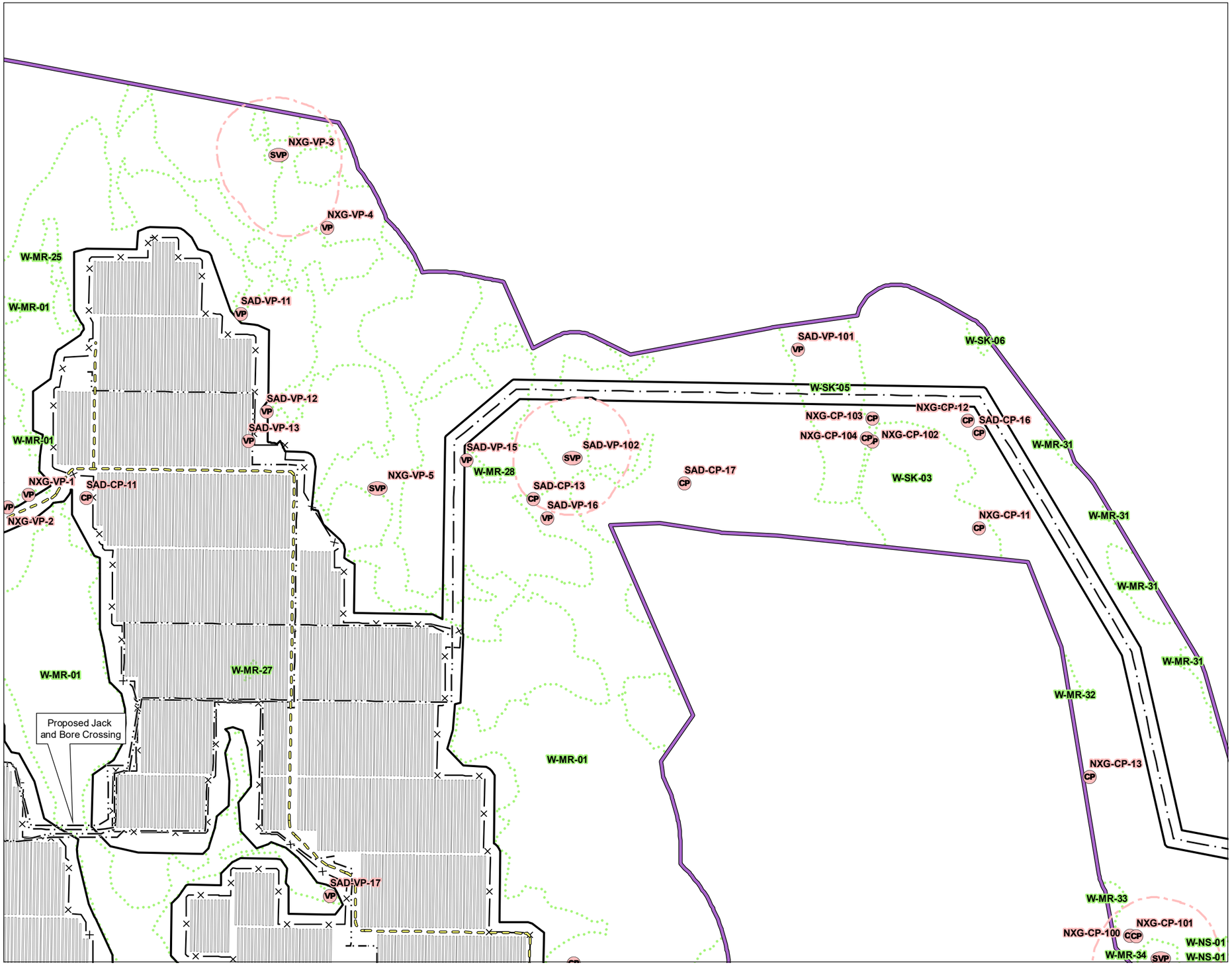

Stantec

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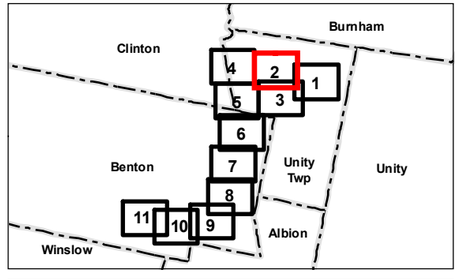

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Prepared by GC on 2022-01-07
Reviewed by EB on 2022-01-10

Client/Project
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195601453

Figure No.
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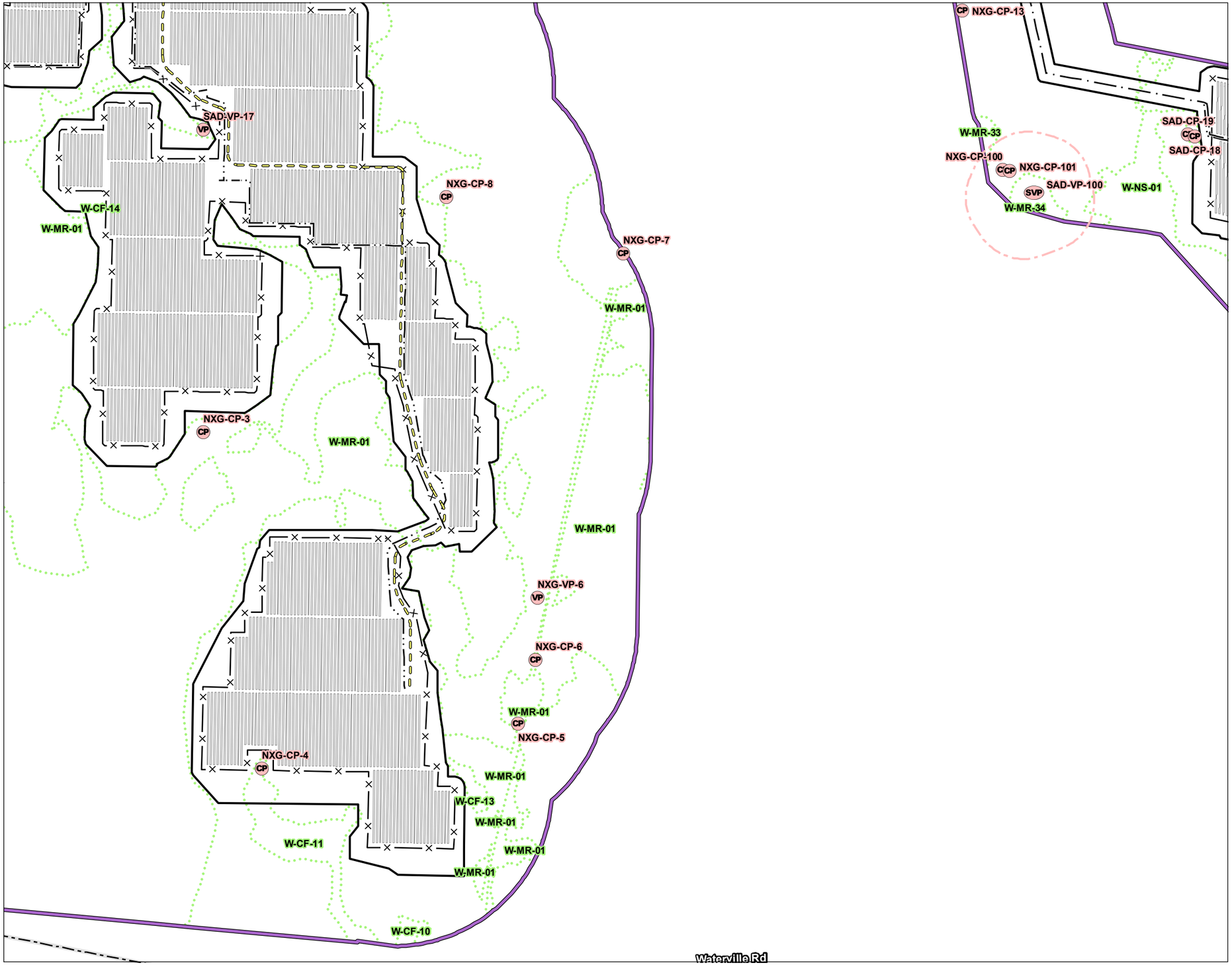

Stantec

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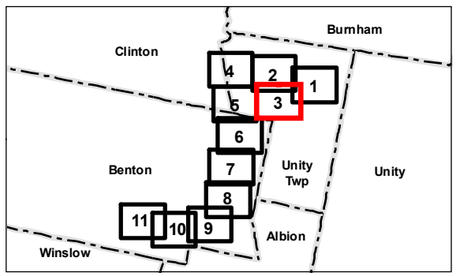

Project Location
Benton, Clinton, Unity Twp, Maine

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

Client/Project
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195601453

Figure No.
9-1

Title
Natural Resource Maps
Sheet 3 of 11

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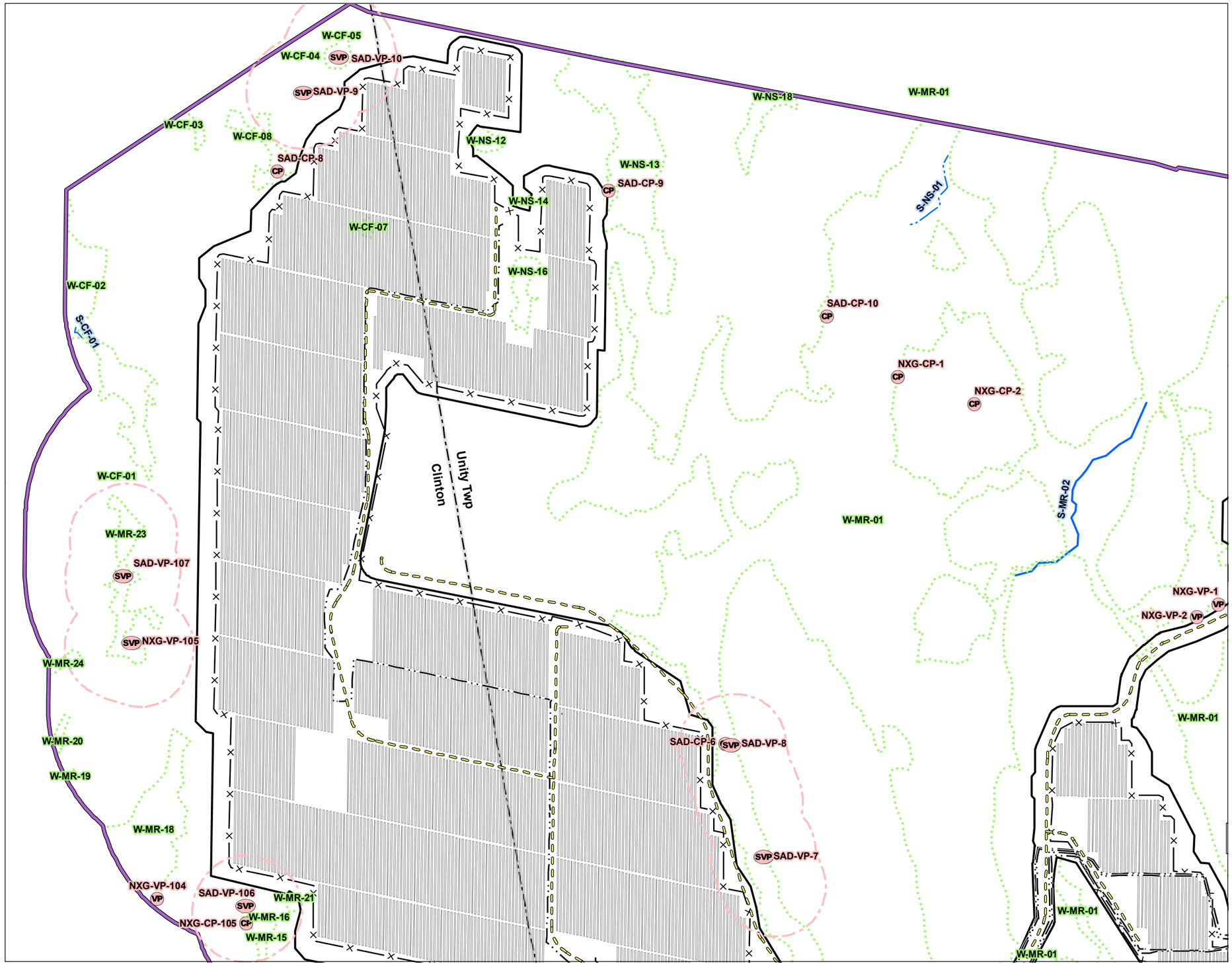

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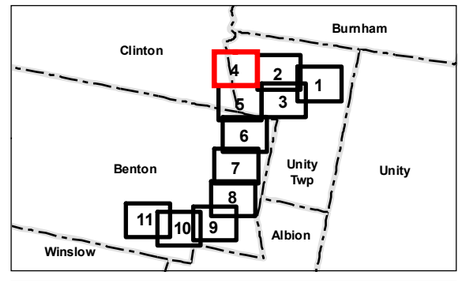

Project Location
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Client/Project
Three Corners Solar Project

195601453

Figure No.
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Title
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Sheet 4 of 11

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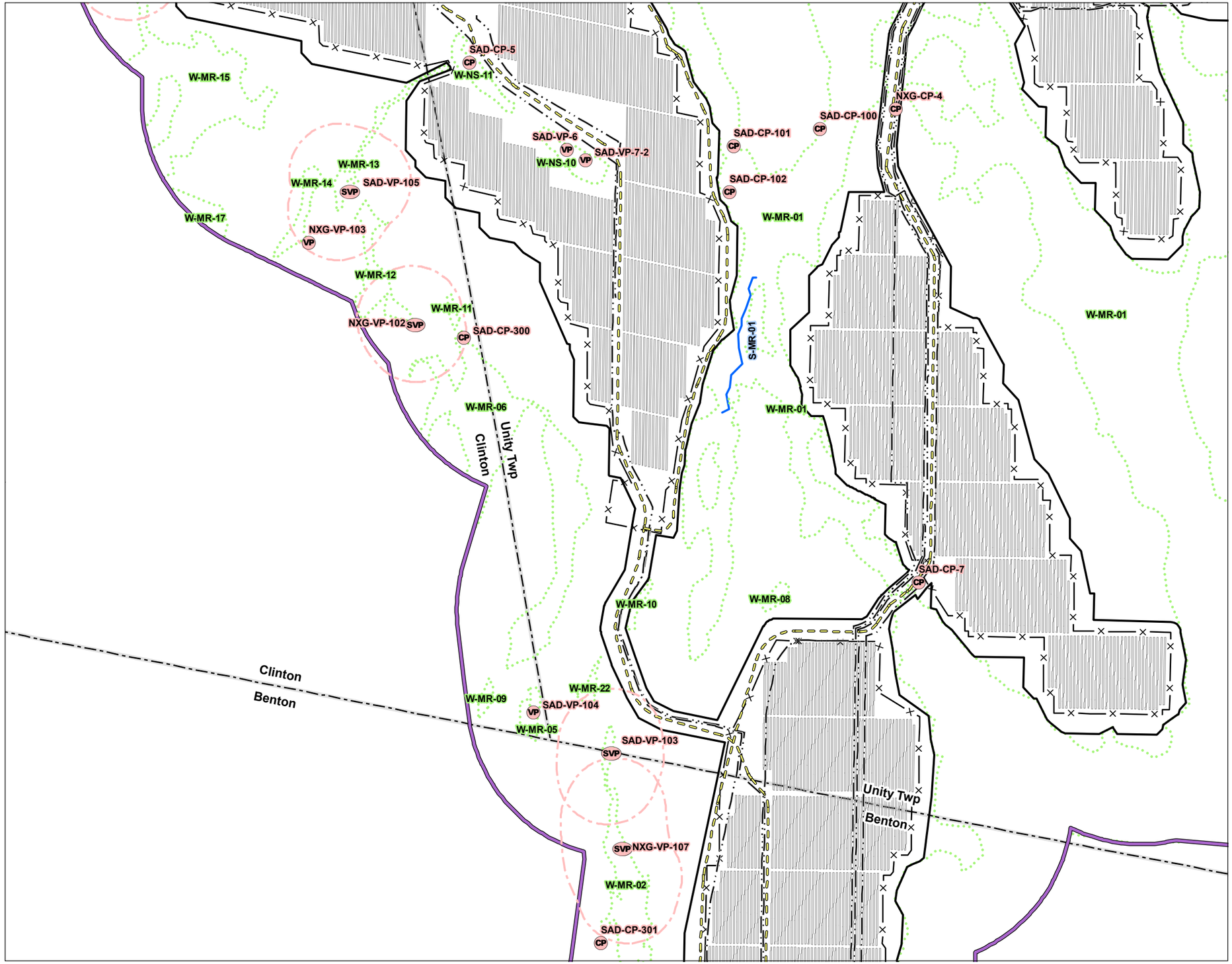

Stantec

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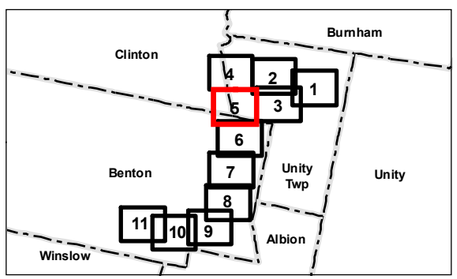

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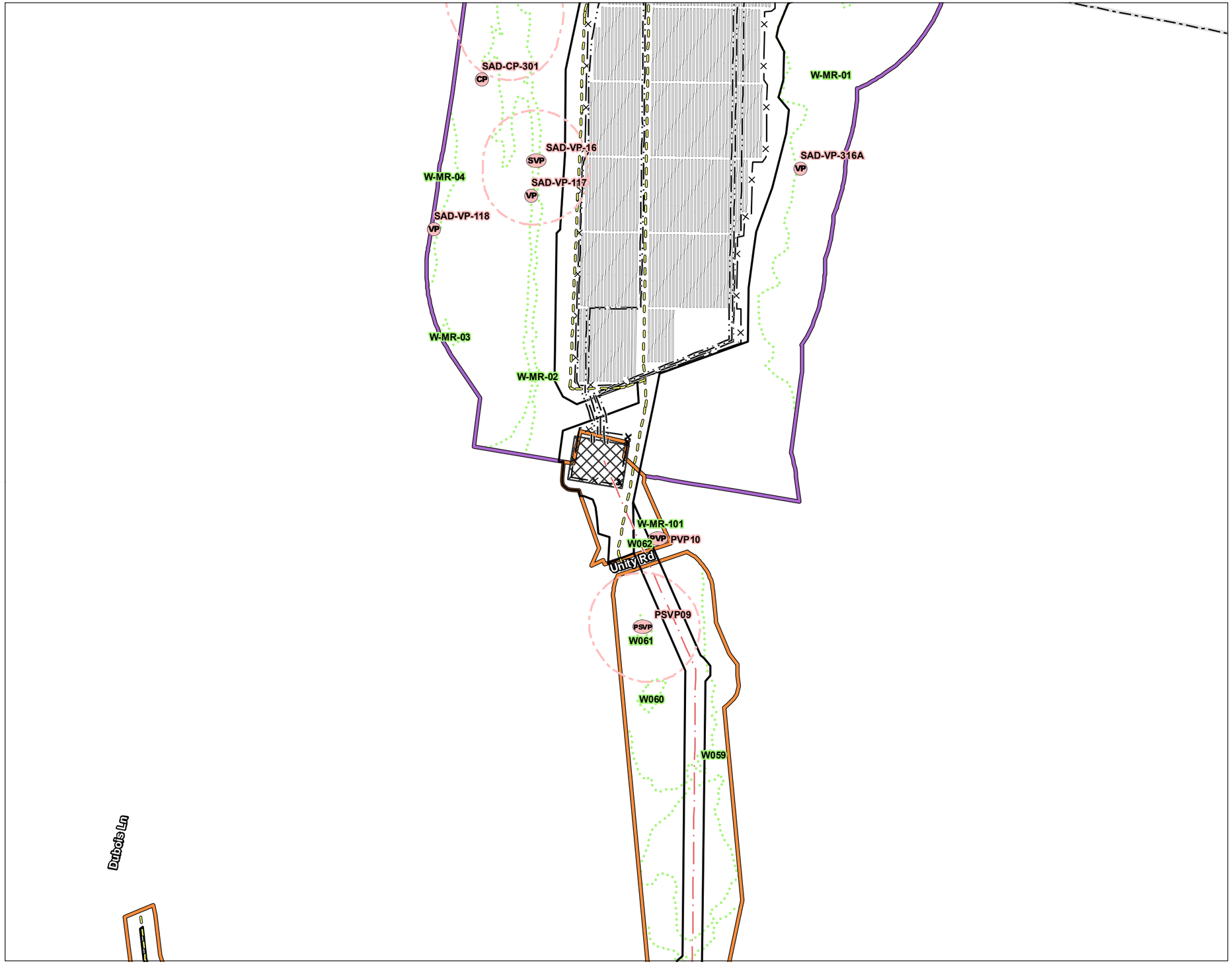

Stantec

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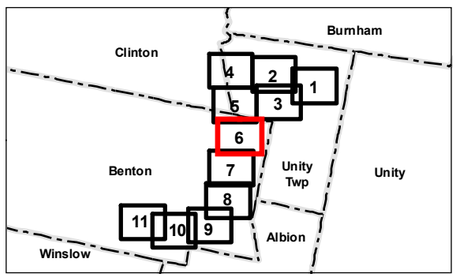

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Figure No.
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Natural Resource Maps
Sheet 6 of 11

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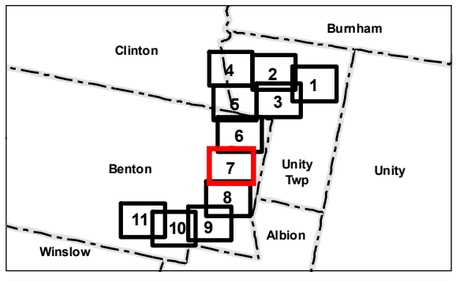

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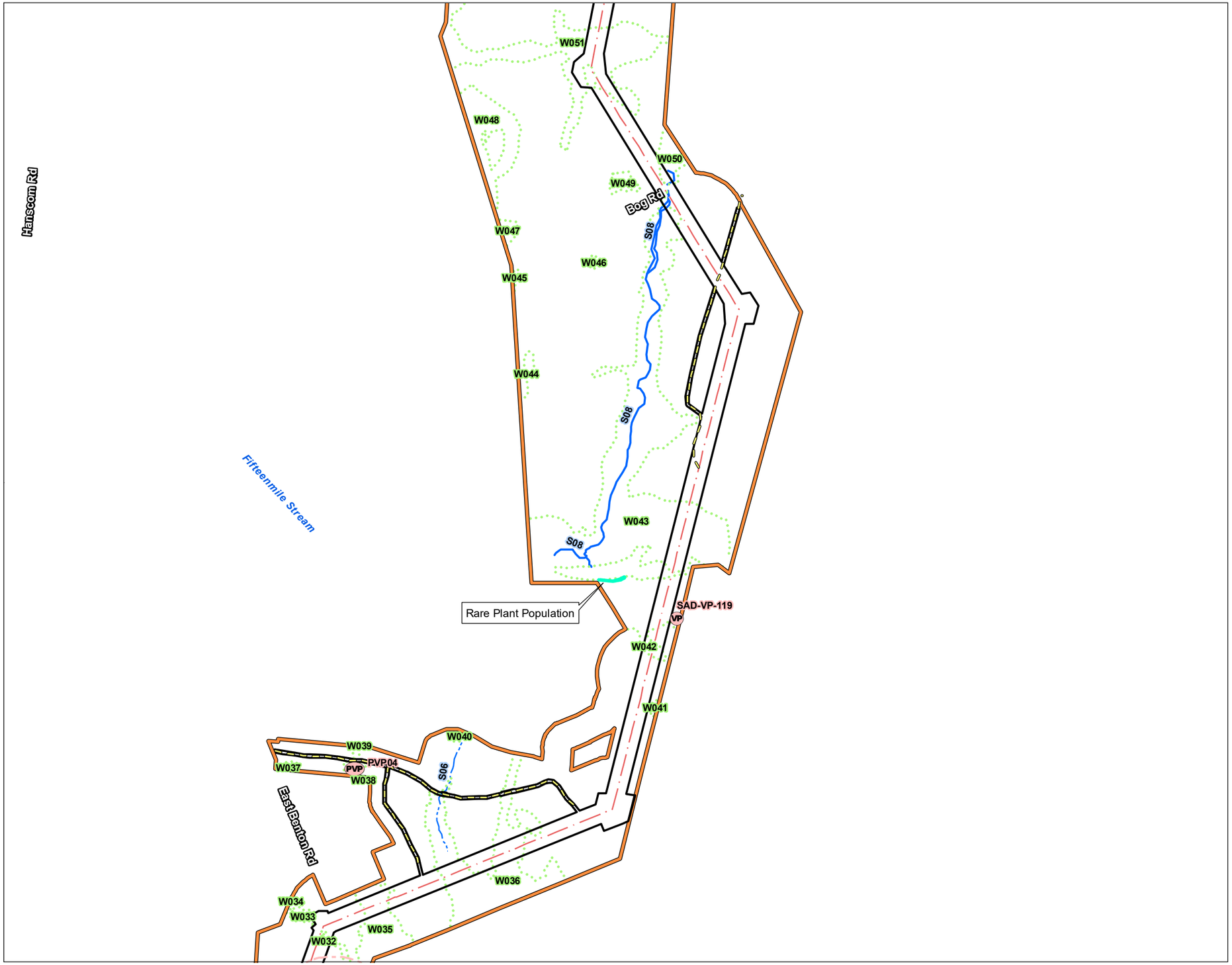

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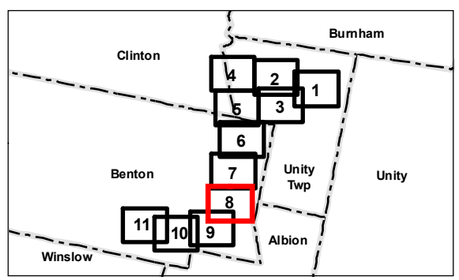

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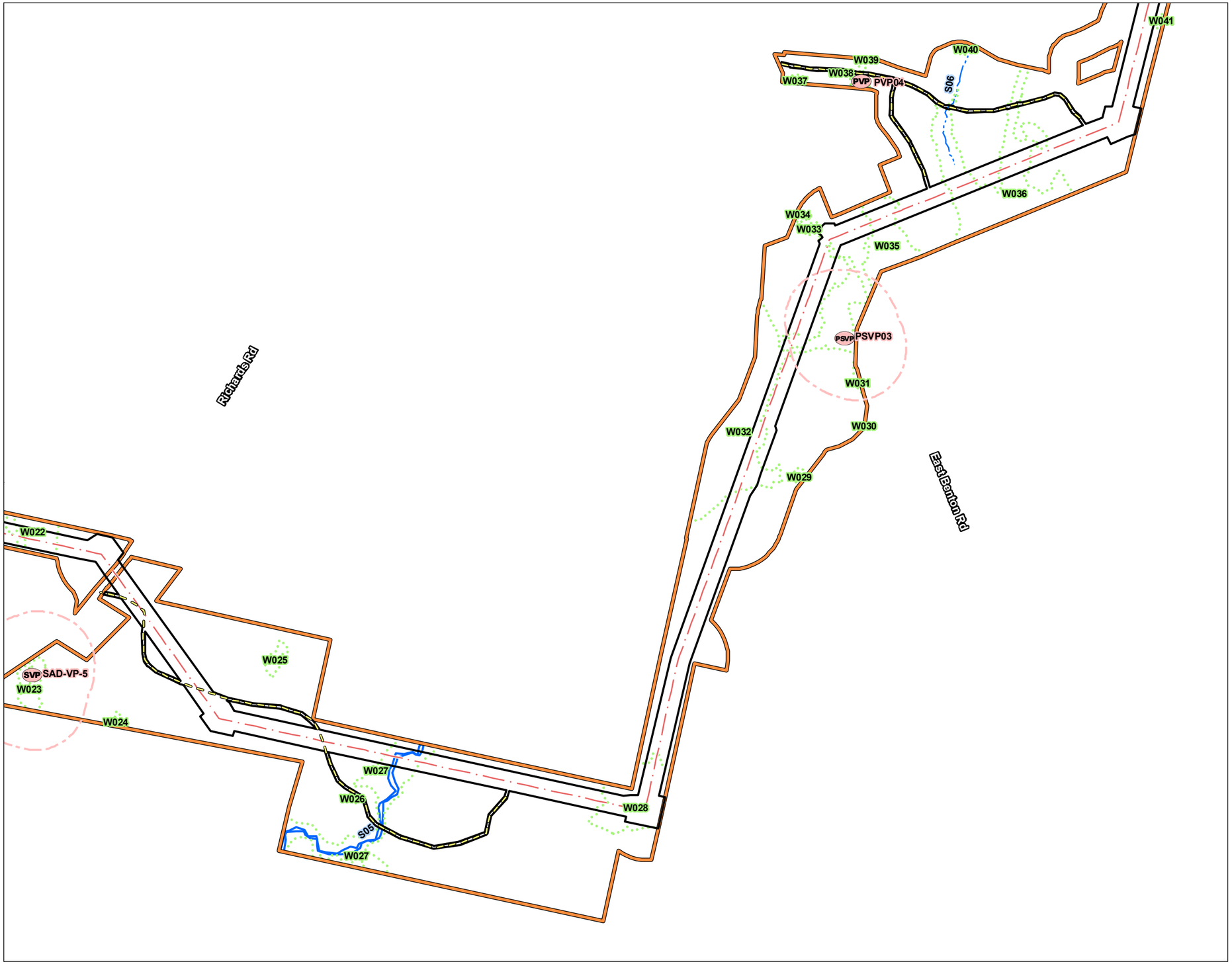

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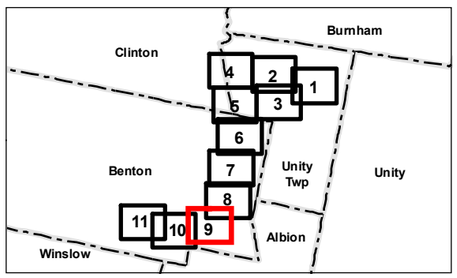

Project Location
Benton, Clinton, Unity Twp, Maine

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

Client/Project
Three Corners Solar Project

195601453

Figure No.
9-1

Title
Natural Resource Maps
Sheet 9 of 11

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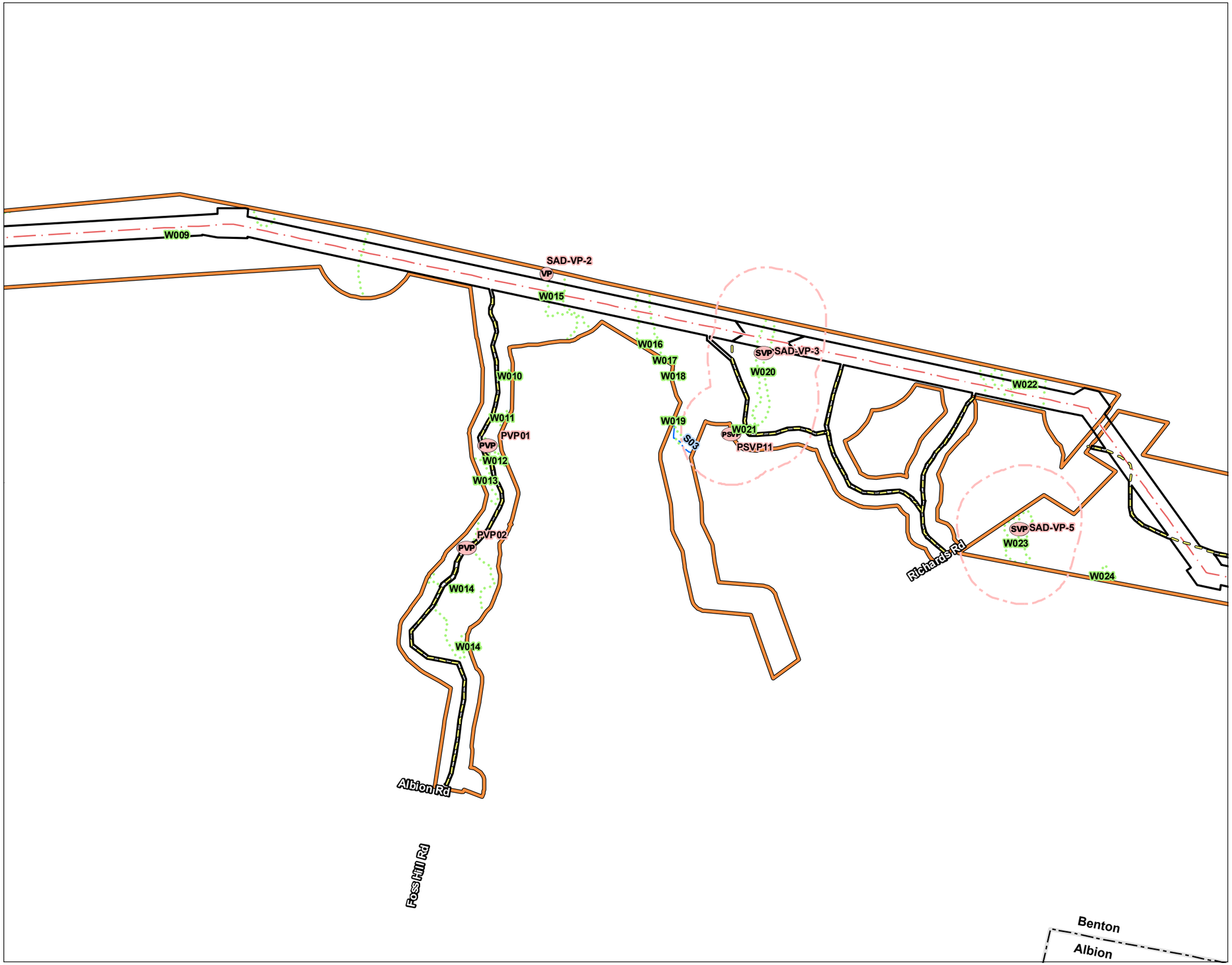


Stantec

Legend

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

Rare Plant Population (1 location)

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

Proposed Infrastructure

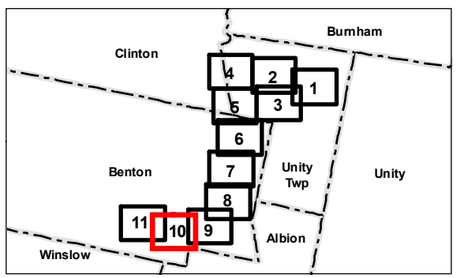
- Access Road
- Overhead Collection Line
- Underground Collection Line
- Overhead Transmission Line
- Solar Panel Array
- Fence
- Substation
- Project Area

N

0 500 Feet

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

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



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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

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Figure No.
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Natural Resource Maps
Sheet 10 of 11

\\N1950\active\195601453\03_data\gis_cad\gis\MXDs_Permit\Jan2021\DEP\NRPA01453_9-1_Wetlands.mxd Revised: 2022-01-27 By: gcarpentier

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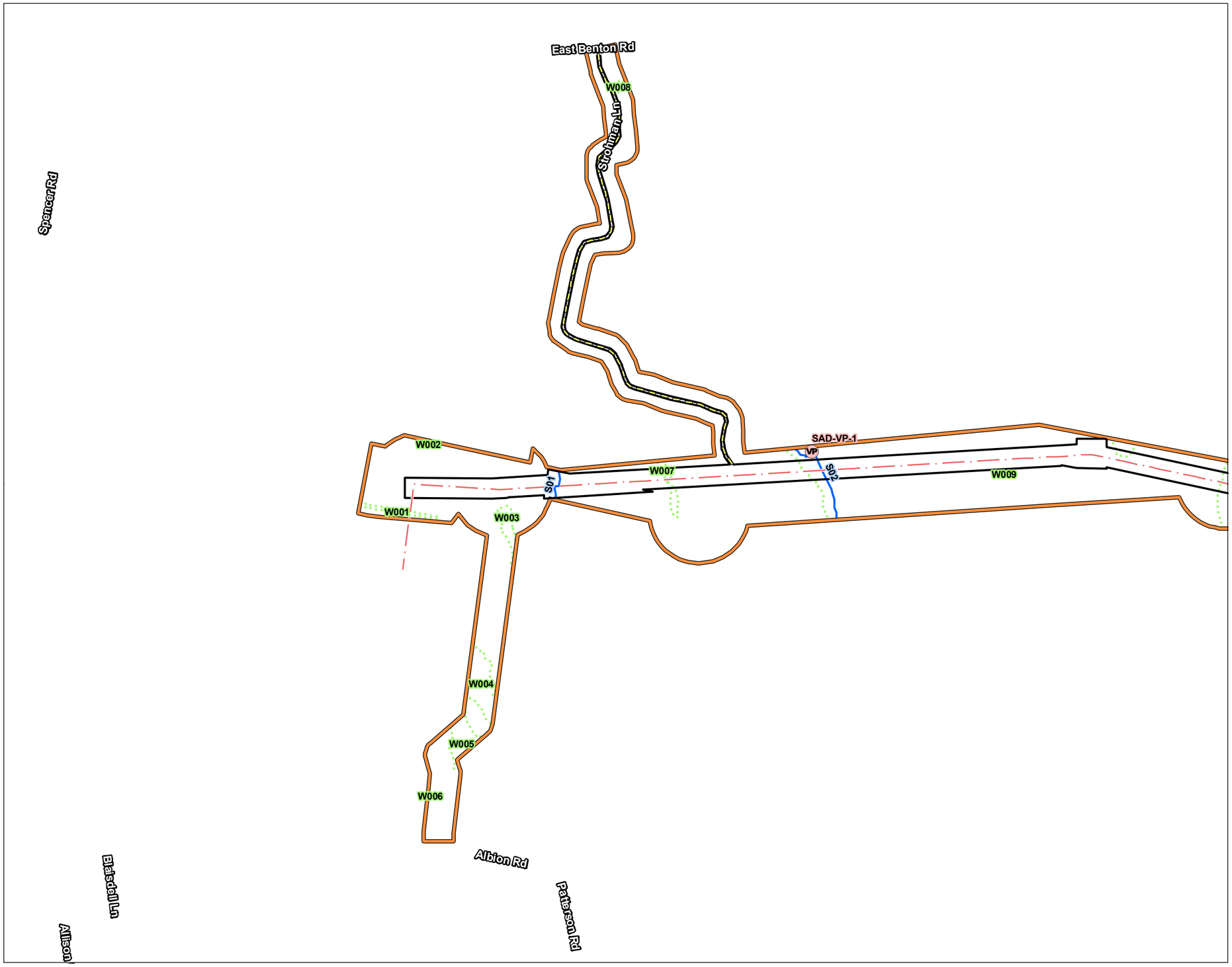

Stantec

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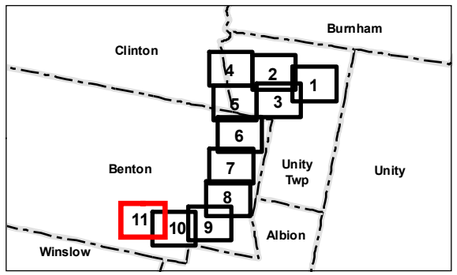

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Attachment 9-1

Natural Resources Report: Solar Array Area

Natural Resources Report

Three Corners Solar Project

Prepared by BRI Environmental

December 2021

longroad ENERGY

bri
BIODIVERSITY RESEARCH INSTITUTE

Contents

1.0 Introduction 2
2.0 Geographic Setting 2
3.0 Methods 3
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4.5 Wildlife 11
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6.0 Agency Consultation 13
7.0 Discussion 13

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

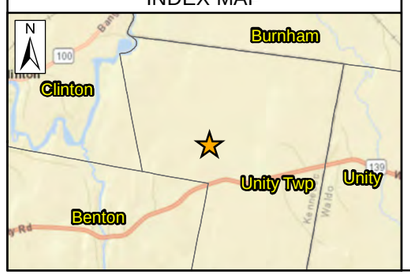
The Site is generally characterized by regenerating uplands and wetlands that are actively managed for timber. The Site is surrounded by limited residential development and more working forest. The nearest waterbody is the Sebasticook River, which is approximately 0.4 miles to the north, and Unity Pond,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

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

INDEX MAP



LEGEND

Project Survey Boundary

BIODIVERSITY RESEARCH INSTITUTE
innovative wildlife science

longroad ENERGY

SCALE:

0 1,500 3,000 Feet

1 inch = 1,500 feet

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

JANUARY 13, 2022

3.0 Methods

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

3.1 Wetland Delineation

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

3.2 Stream Identification

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

3.3 Function and Values

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

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

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

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

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

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

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

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

4.0 Results

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

4.1 Upland Habitats

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

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

Table 1. NRCS Soil Summary Table

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

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

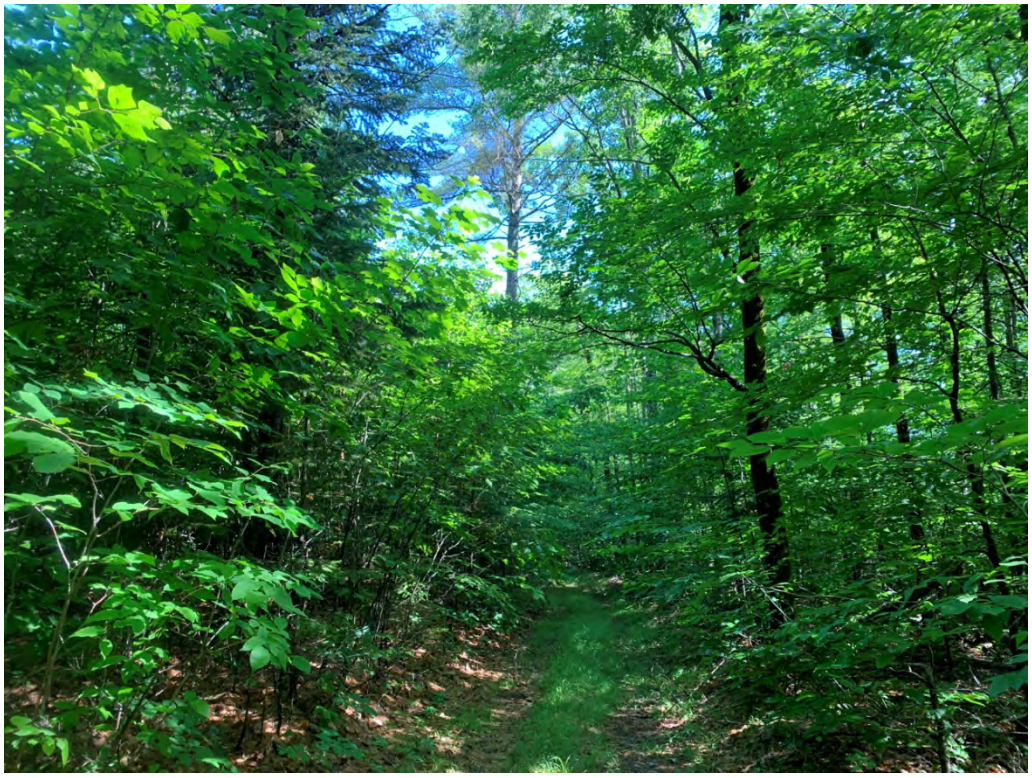


Photo 1. Representative view of a forested upland on site.

4.2 Wetland Habitats

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

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

Table 2. Wetland Summary Table

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

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

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

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

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

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

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

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

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

4.3 Streams and Aquatic Habitats

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

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

Table 2. Stream Summary Table

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

4.5 Wildlife

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

[11] Title 38 §480-B. Definitions

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

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

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

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

5.0 Functions and Values

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

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

6.0 Agency Consultation

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

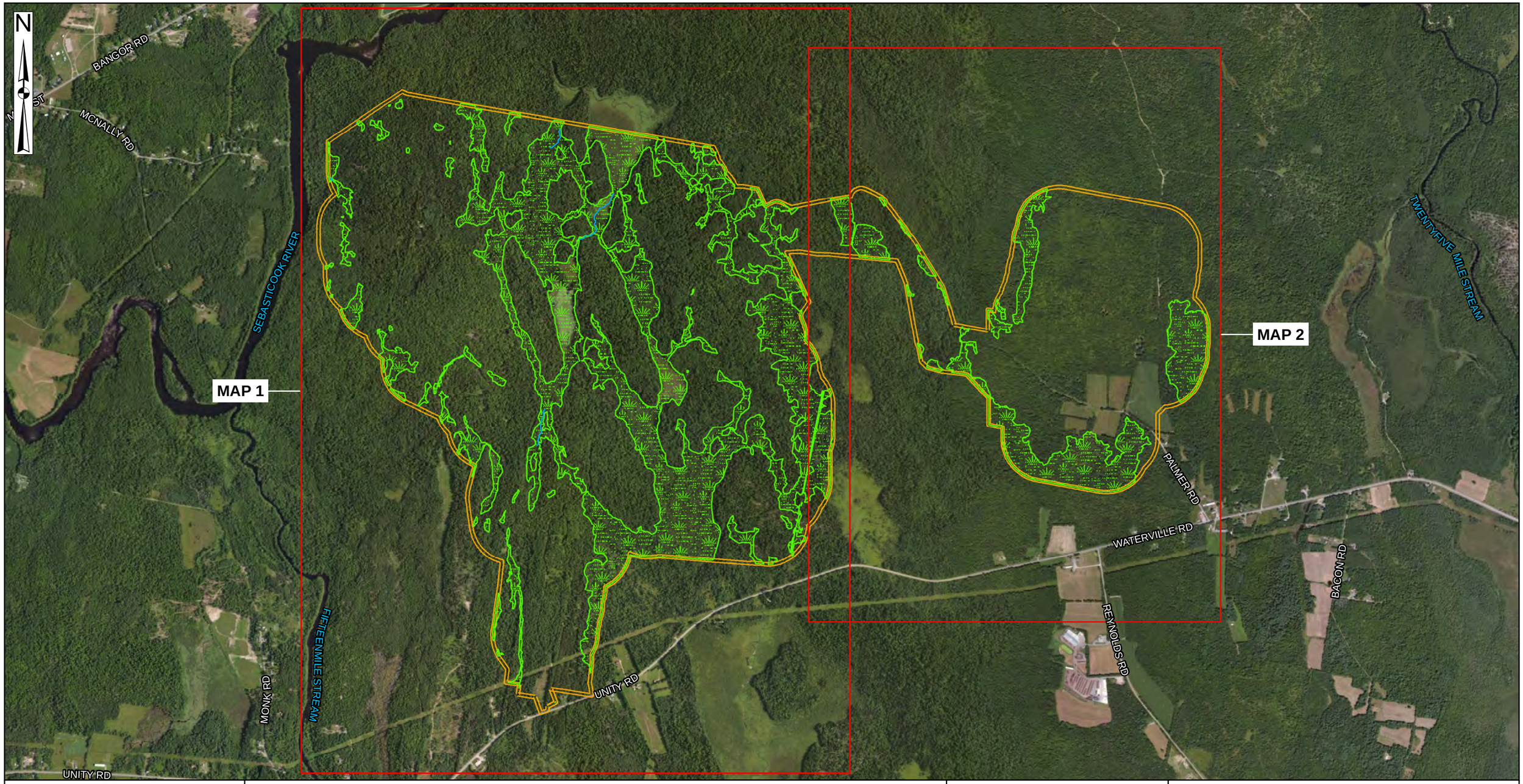
7.0 Discussion

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

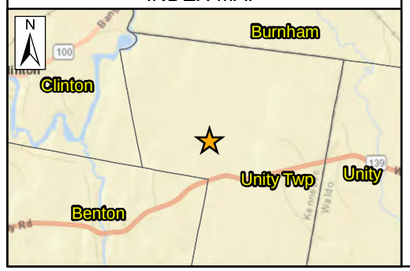
The larger wetlands and those identified as WOSS have special protections under the NRPA. Protections include limits on development within these wetlands, setbacks, and additional requirements related to development. Areas identified as DWA also may have additional protections, based on the quality of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

Exhibit A:

Resources Map



INDEX MAP



LEGEND

- Stream
- Wetland
- Project Survey Boundary

BIODIVERSITY RESEARCH INSTITUTE
innovative wildlife science

longroad ENERGY

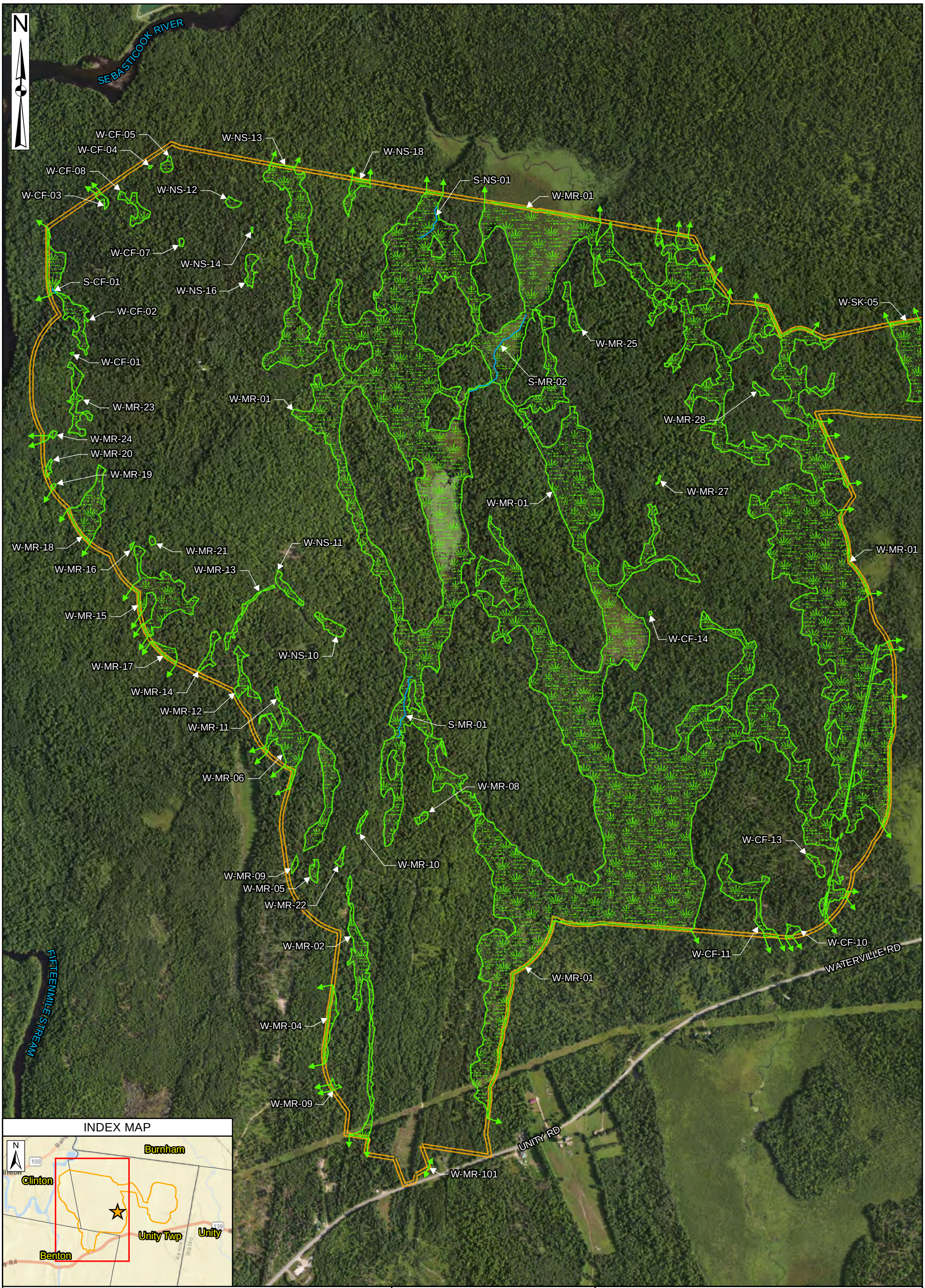
SCALE:

0 1,750 3,500 Feet

1 inch = 1,750 feet

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

JANUARY 13, 2022



LEGEND

- Stream
- Wetland
- Project Survey Boundary

BIODIVERSITY RESEARCH INSTITUTE
innovative wildlife science

longroad ENERGY

SCALE:

0 1,000 2,000 Feet

1 inch = 1,000 feet

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

JANUARY 13, 2022

N

W-SK-05

W-SK-06

W-MR-31

W-SK-03

W-MR-32

W-NS-07

W-NS-06

W-NS-05

W-NS-03

W-MR-33

W-MR-34

W-NS-01

W-MR-01

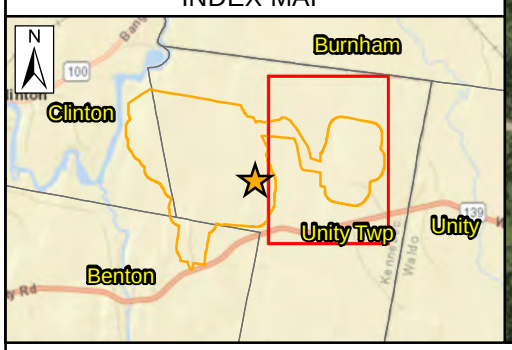
PALMER RD

WATERVILLE RD

WATERVILLE RD

REYNOLDS RD

INDEX MAP



LEGEND

- Stream
- Wetland
- Project Survey Boundary

Biodiversity Research Institute
innovative wildlife science

longroad ENERGY

SCALE:

0 750 1,500 Feet

1 inch = 750 feet

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

JANUARY 13, 2022

Exhibit B:

Resources Photos

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Exhibit C:

NRCS Soil Map

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Kennebec County, Maine

August 25, 2020

Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

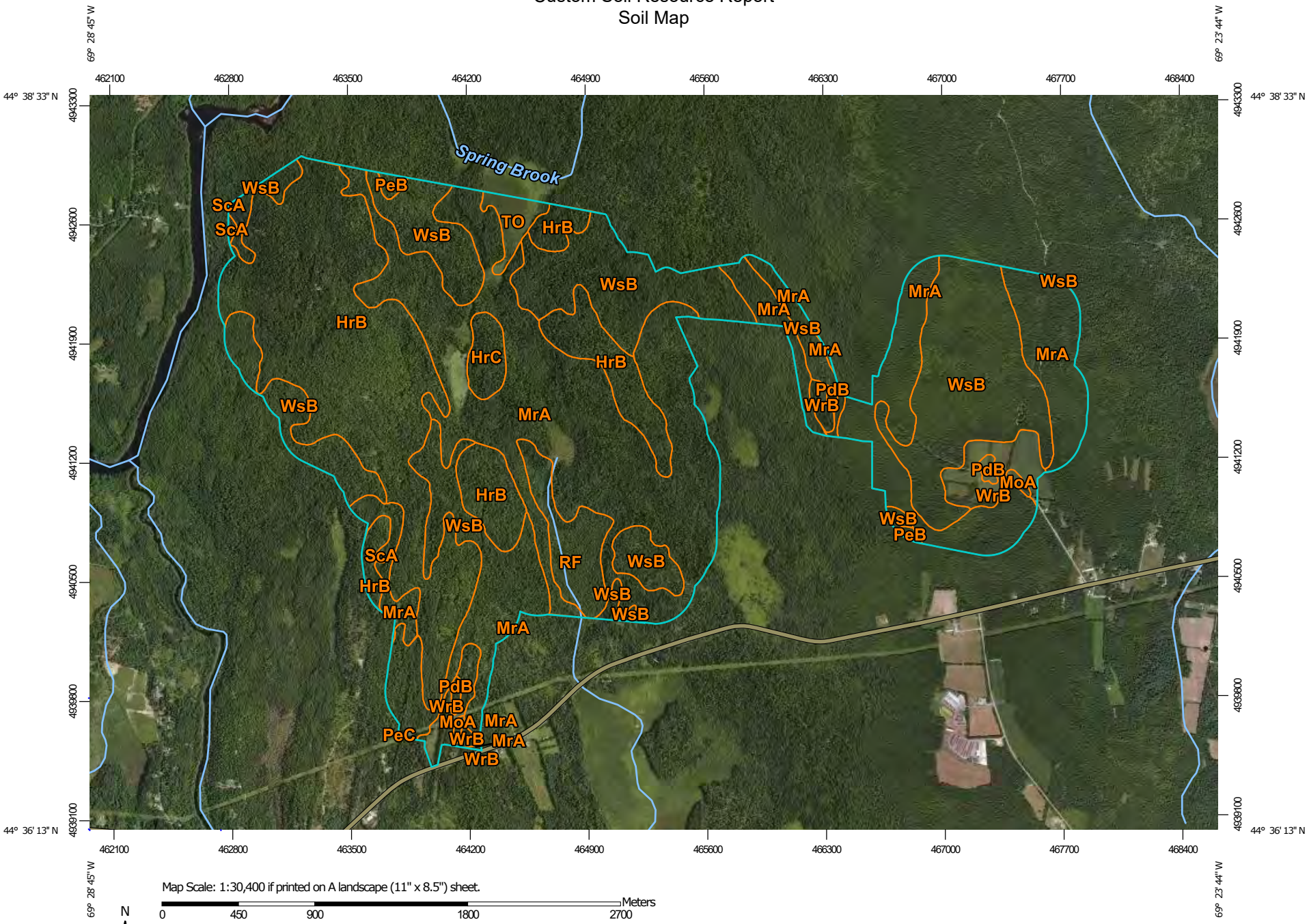
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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

Soil Map

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

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

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

Special Point Features

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

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

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

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

Map Unit Legend

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

Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

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

Kennebec County, Maine

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

Map Unit Setting

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

Map Unit Composition

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

Description of Lyman

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Hydric soil rating: No

Description of Tunbridge

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Ragmuff

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

Abram

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

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

Peru

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

Rock outcrop

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

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

Map Unit Setting

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

Map Unit Composition

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

Description of Lyman

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Description of Tunbridge

Setting

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

Typical profile

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

Properties and qualities

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

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

Interpretive groups

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

Minor Components

Ragmuff

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

Abram

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

Peru

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

Rock outcrop

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

MoA—Monarda silt loam, 0 to 3 percent slopes

Map Unit Setting

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

Map Unit Composition

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

Description of Monarda

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Telos

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

Ragmuff

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

Monarda, stone cover > .1 percent

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

Burnham, stone cover > .1 percent

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

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

Map Unit Setting

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

Map Unit Composition

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

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

Description of Monarda

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Telos

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

Burnham

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

Wonsqueak

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

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

Chesuncook

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

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

Map Unit Setting

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

Map Unit Composition

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

Description of Paxton

Setting

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

Typical profile

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

Properties and qualities

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

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

Interpretive groups

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

Description of Charlton

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Woodbridge

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

Hollis

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

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

Tunbridge

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

Paxton, > 8% slopes

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

Ridgebury

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

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

Map Unit Setting

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

Map Unit Composition

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

Description of Paxton

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Description of Charlton

Setting

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

Typical profile

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

Properties and qualities

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

Available water capacity: Low (about 5.8 inches)

Interpretive groups

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

Minor Components

Woodbridge

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

Tunbridge

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

Ridgebury

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

Hollis

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

Paxton, > 8% slopes

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

Paxton, > 3% stone cover

Percent of map unit: 1 percent
Landform: Till plains

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

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

Map Unit Setting

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

Map Unit Composition

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

Description of Paxton

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Description of Charlton

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Woodbridge

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

Tunbridge

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

Hollis

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

Paxton, > 3% stone cover

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

Paxton, > 15 percent slopes

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

Paxton, < 8 percent slopes

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

Ridgebury

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

RF—Rifle mucky peat

Map Unit Setting

National map unit symbol: 9k18

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

Map Unit Composition

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

Description of Rifle

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Peacham

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

Saco

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

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

Rifle, < 51 inches of organic

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

Ridgebury

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

ScA—Scantic silt loam, 0 to 3 percent slopes

Map Unit Setting

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

Map Unit Composition

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

Description of Scantic

Setting

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

Typical profile

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

Cg - 29 to 65 inches: silty clay

Properties and qualities

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

Interpretive groups

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

Minor Components

Lamoine

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

Biddeford

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

Buxton

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

Roundabout

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

TO—Togus fibrous peat

Map Unit Setting

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

Map Unit Composition

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

Description of Togus

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Peacham

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

Scarboro

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

Ridgebury

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

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

Map Unit Setting

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

Map Unit Composition

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

Description of Woodbridge

Setting

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

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Hollis

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

Tunbridge

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

Paxton

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

Woodbridge, > 8% slopes

Percent of map unit: 2 percent
Landform: Till plains

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

Ridgebury

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

Charlton

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

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

Map Unit Setting

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

Map Unit Composition

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

Description of Woodbridge

Setting

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

Typical profile

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

H3 - 22 to 65 inches: fine sandy loam

Properties and qualities

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

Interpretive groups

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

Minor Components

Paxton

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

Tunbridge

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

Charlton

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

Hollis

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

Ridgebury

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

Woodbridge, > 3% stone cover

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

Woodbridge, > 8% slopes

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

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Exhibit D:

USACE Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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

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

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

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

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

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

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

Field Observations:

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

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

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

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

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

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

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

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

Woody Vine Stratum (Plot size: _____)

_____ = Total Cover

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☑

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

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

Remarks:
Refusal at 10 inches on rock

Location:

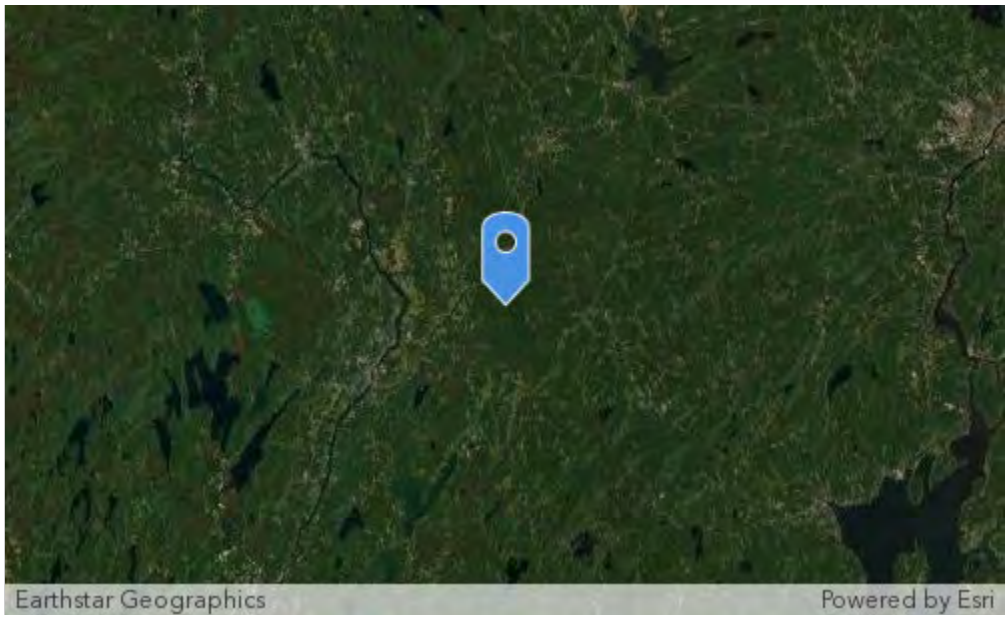

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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

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

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

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

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

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

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

Field Observations:

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

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

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

(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

VEGETATION – Use scientific names of plants.

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

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

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

Remarks:

Location:

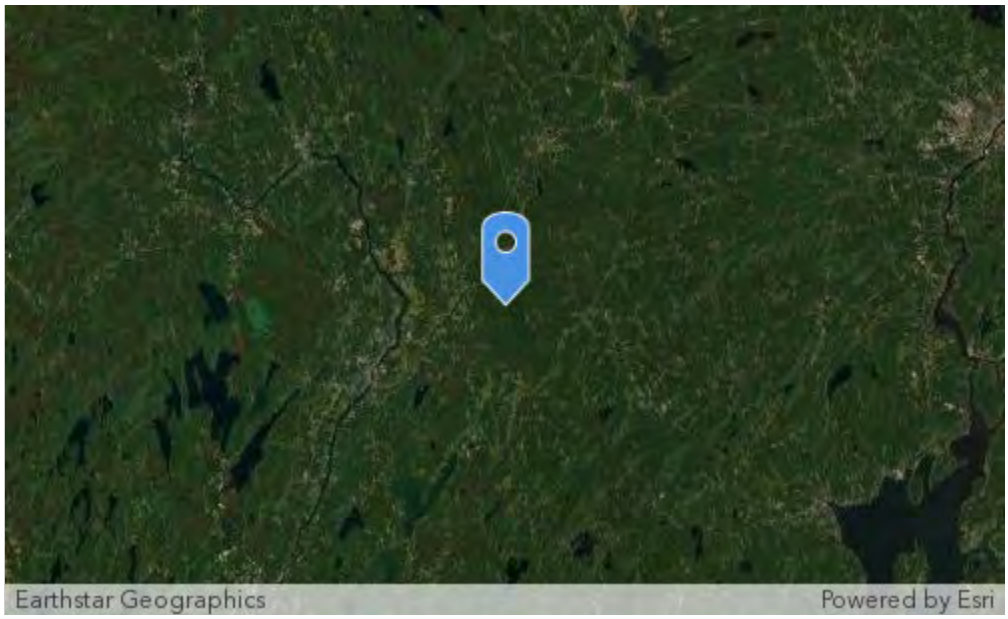

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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

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

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

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

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

Soil Map Unit Name: MONARDA NWI Classification: PFO

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

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

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

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

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

Woody Vine Stratum (Plot size:)

= Total Cover

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 4.75

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☑

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

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

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

Remarks:

Location:

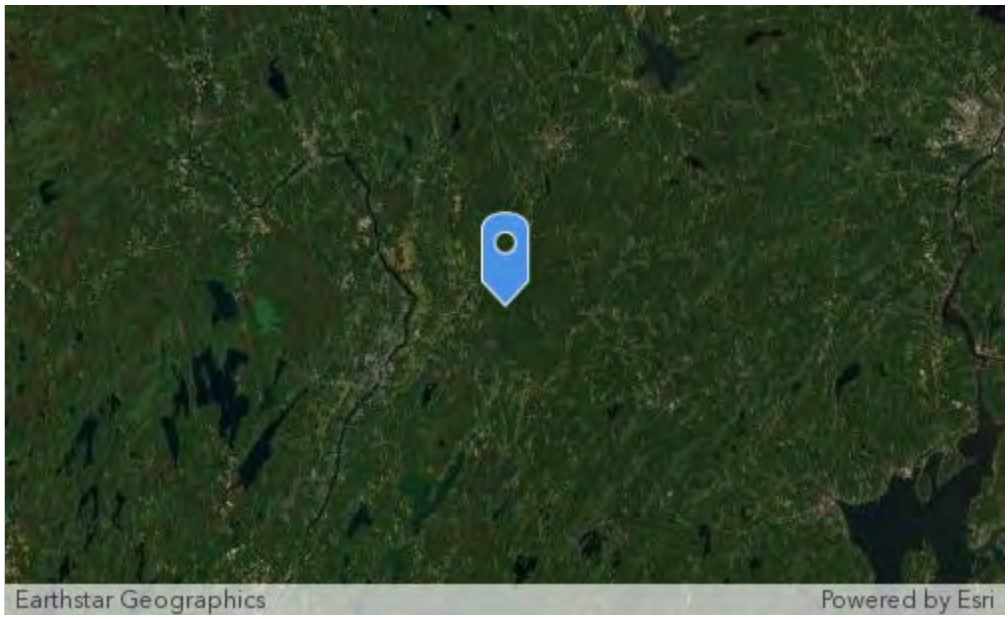

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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

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

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

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

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

Soil Map Unit Name: MONARDA NWI Classification: PFO

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

Field Observations:

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

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

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

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Tsuga canadensis (Eastern Hemlock) (FACU)	10	YES	FACU
Acer rubrum (Red Maple) (FAC)	25	YES	FAC
Betula alleghaniensis (Yellow Birch) (FAC)	5	YES	FAC
Abies balsamea (Balsam Fir) (FAC)	2	YES	FAC
Fraxinus nigra (Black Ash) (FACW)	10	YES	FACW
Pinus strobus (Eastern White Pine) (FACU)	3	YES	FACU
	55 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Acer rubrum (Red Maple) (FAC)	20	YES	FAC
Abies balsamea (Balsam Fir) (FAC)	30	YES	FAC
Ilex verticillata (Common Winterberry) (FACW)	15	NO	
	65 = Total Cover		
Herb Stratum (Plot size: 5 foot radius)			
Trientalis borealis (Maystar) (FAC)	2	NO	
Osmundastrum cinnamomeum (Cinnamon Fern) (FACW)	20	YES	FACW
Osmunda spectabilis (Royal Fern) (OBL)	5	NO	
Onoclea sensibilis (Sensitive Fern) (FACW)	2	NO	
	29 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
	_____ = Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: ROCK

Depth (inches): 30

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

Remarks:

Location:

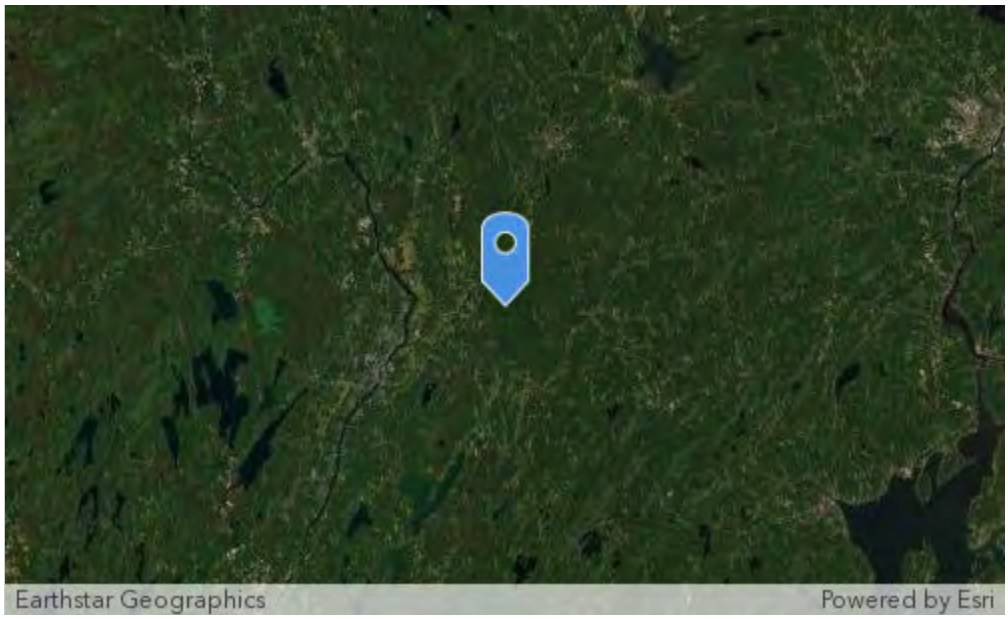

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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

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

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

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

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

Soil Map Unit Name: MONARDA NWI Classification: PFO

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

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

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

97 = Total Cover

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

13 = Total Cover

Herb Stratum (Plot size: 5 foot radius)

_____ = Total Cover

Woody Vine Stratum (Plot size: _____)

_____ = Total Cover

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☑

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

Sampling Point: PLOT-W-MR-7–UP-1

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

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

Remarks:

Location:

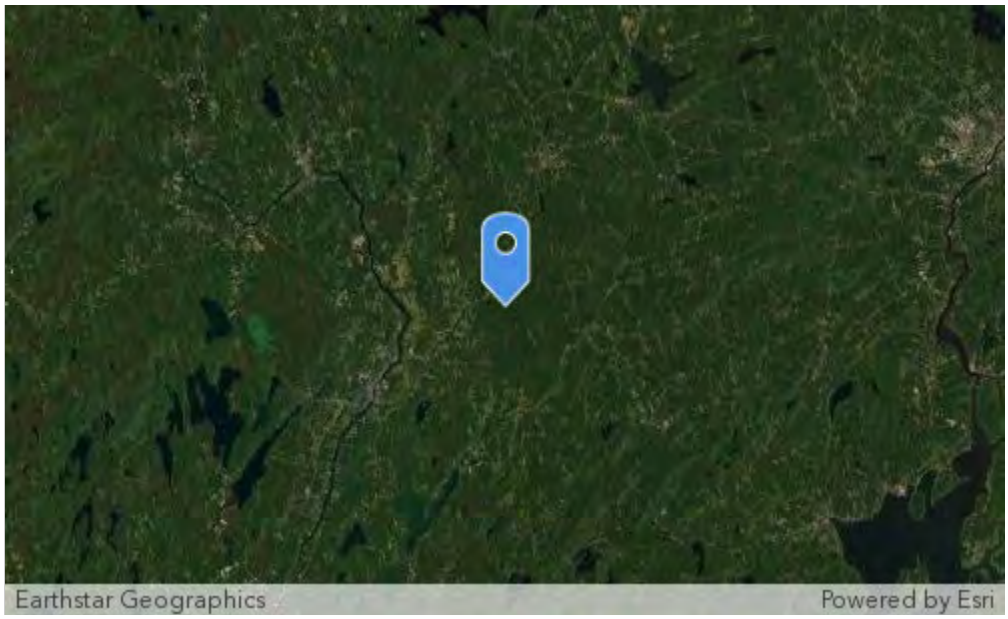

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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

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

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

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

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

Soil Map Unit Name: WOODBRIDGE NWI Classification: PFO

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:
NO HYDRO

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

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 3.45

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☑

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

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

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

Remarks:

Location:

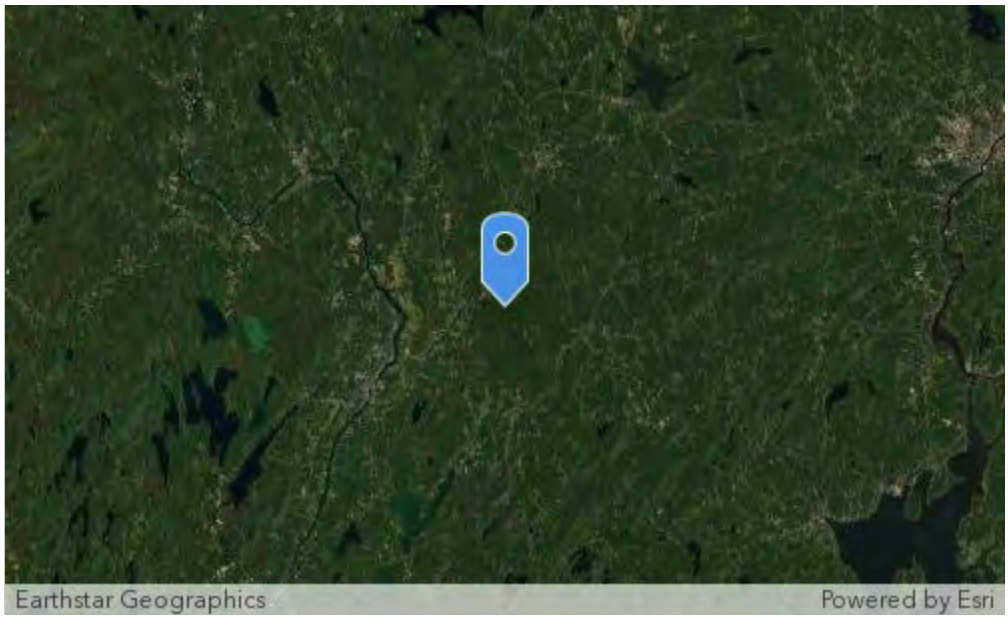

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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

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

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

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

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

Soil Map Unit Name: TOGUS NWI Classification: PSS

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

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

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

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

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

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

Remarks:

Location:

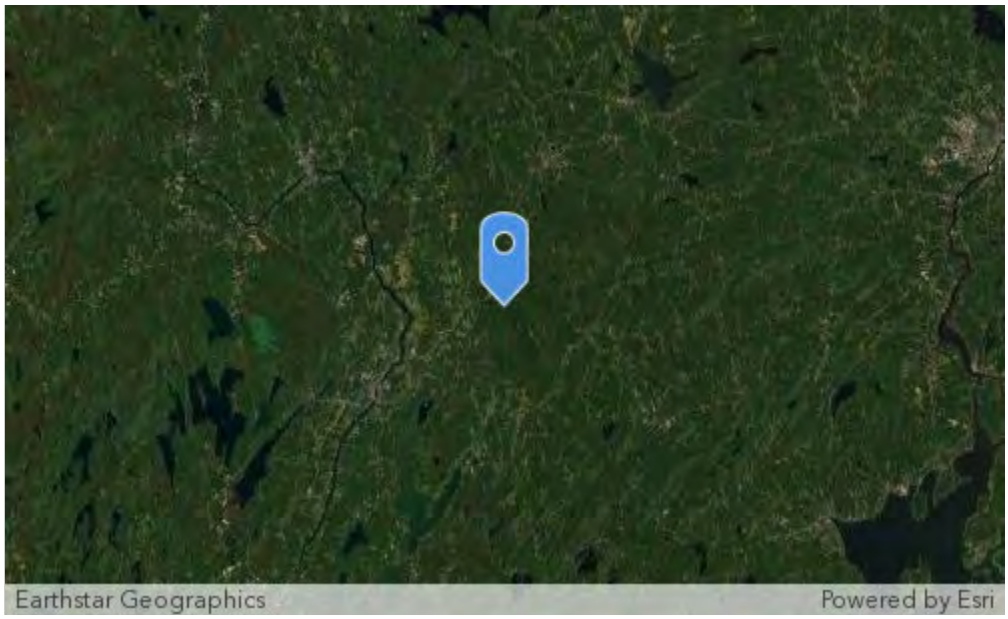

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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

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

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

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

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

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

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

VEGETATION – Use scientific names of plants.

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

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

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

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

Woody Vine Stratum (Plot size: _____)

_____ = Total Cover

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

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

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: DEGRADED BEDROCK

Depth (inches): 28

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

Remarks:

Location:

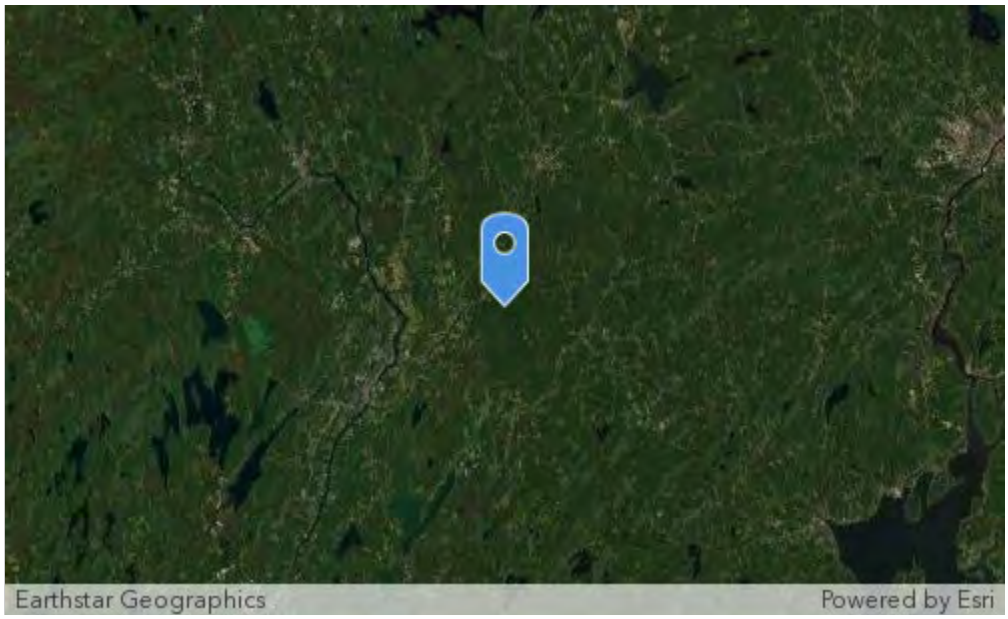

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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

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

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

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

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

Soil Map Unit Name: WOODBRIDGE NWI Classification: PFO

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

VEGETATION – Use scientific names of plants.

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

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Tsuga canadensis (Eastern Hemlock) (FACU)	60	YES	FACU
Betula populifolia (Gray Birch) (FAC)	20	YES	FAC
Thuja occidentalis (Eastern Arborvitae) (FACW)	8	NO	
	88	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Fagus grandifolia (American Beech) (FACU)	10	YES	FACU
Abies balsamea (Balsam Fir) (FAC)	8	YES	FAC
	18	= Total Cover	

Herb Stratum (Plot size: 5 foot radius)			
Maianthemum canadense (False Lily-of-the-Valley) (FACU)	3	YES	FACU
Clintonia borealis (Yellow Bluebead-Lily) (FAC)	2	YES	FAC
	5	= Total Cover	

Woody Vine Stratum (Plot size: _____)

_____ = Total Cover

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

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

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: ROCKS

Depth (inches): 16

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

Remarks:

Location:

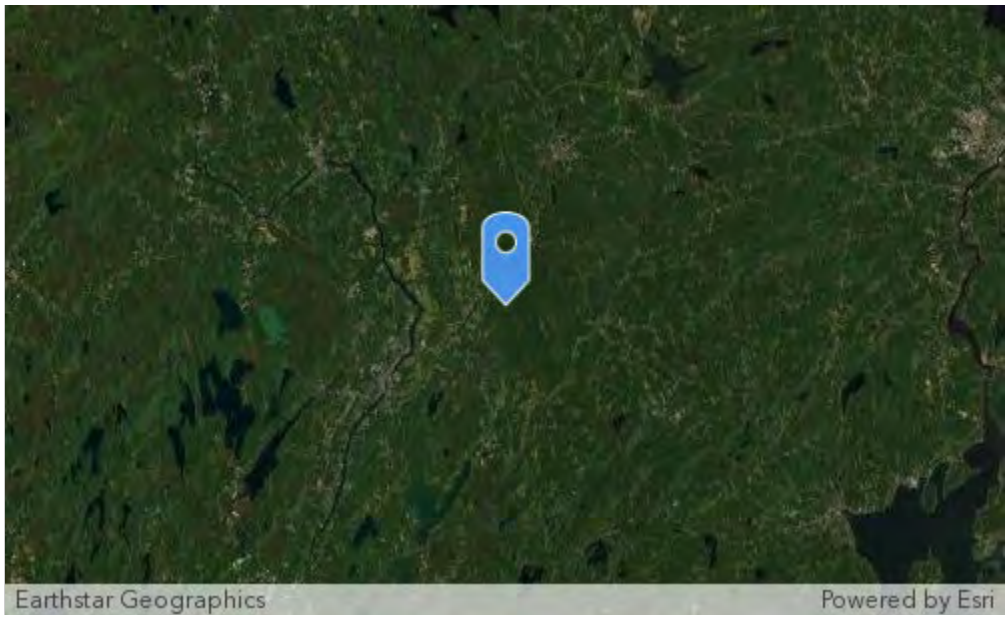

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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

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

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

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

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

Soil Map Unit Name: WOODBRIDGE NWI Classification: PFO

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

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

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

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

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

Woody Vine Stratum (Plot size:)

= Total Cover

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

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

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

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

Remarks:

Location:

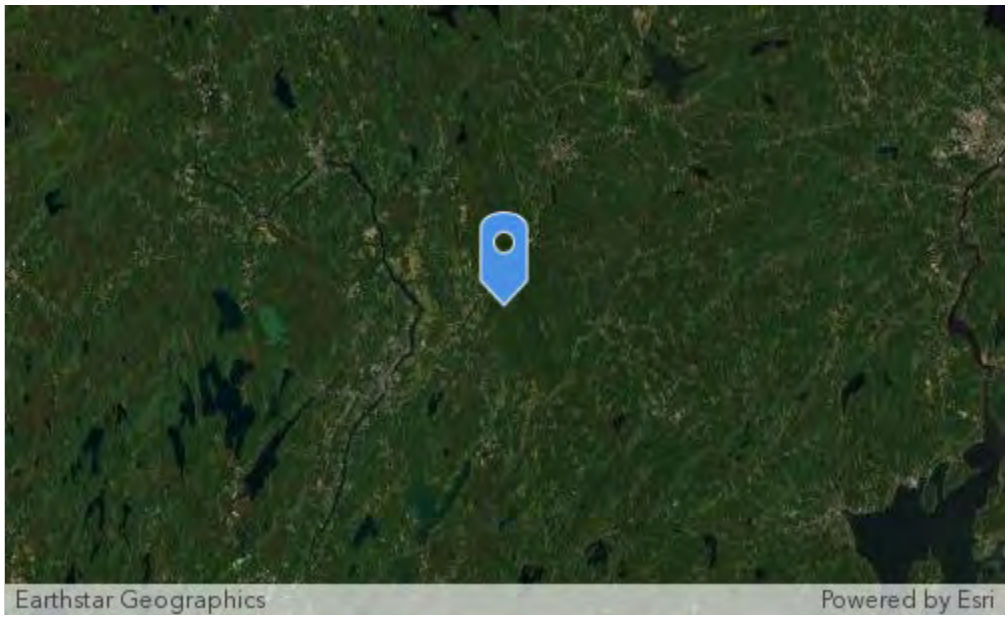

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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

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

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

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

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

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

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

Field Observations:

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

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

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

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

VEGETATION – Use scientific names of plants.

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

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 3.4

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL

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

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

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

Remarks:

Location:

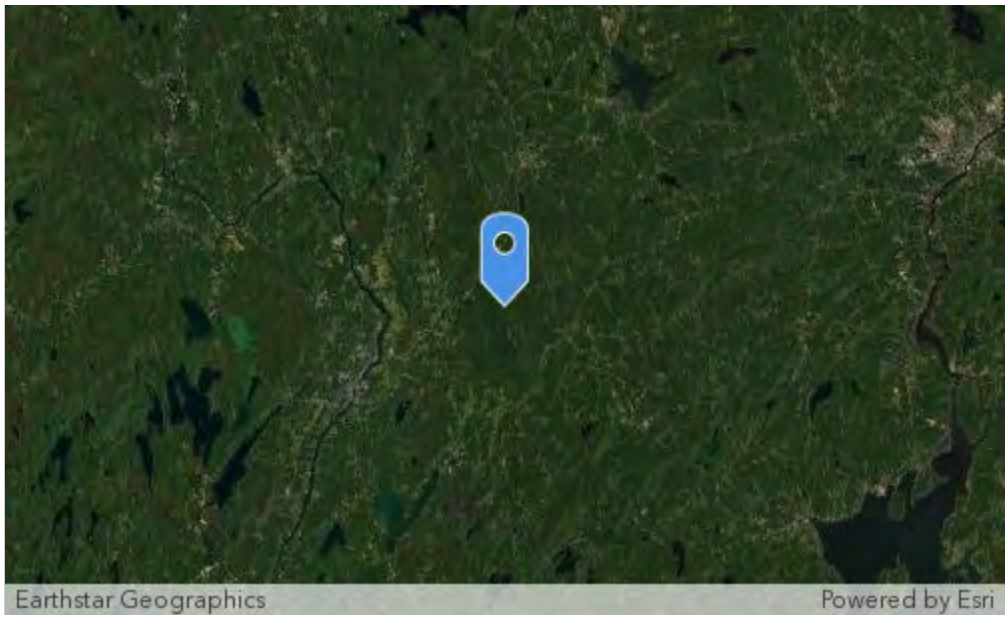

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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

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

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

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

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

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

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

VEGETATION – Use scientific names of plants.

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

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum (Red Maple) (FAC)	35	YES	FAC
Abies balsamea (Balsam Fir) (FAC)	10	YES	FAC
Thuja occidentalis (Eastern Arborvitae) (FACW)	1	NO	
Fraxinus nigra (Black Ash) (FACW)	3	NO	
	49 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Alnus incana (Speckled Alder) (FACW)	25	YES	FACW
Spiraea alba (White Meadowsweet) (FACW)	3	NO	
Ilex verticillata (Common Winterberry) (FACW)	1	NO	
	29 = Total Cover		
Herb Stratum (Plot size: 5 foot radius)			
Calamagrostis canadensis (Bluejoint) (OBL)	5	NO	
Osmundastrum cinnamomeum (Cinnamon Fern) (FACW)	7	NO	
Equisetum pratense (Meadow Horsetail) (FACW)	15	NO	
Onoclea sensibilis (Sensitive Fern) (FACW)	10	NO	
Rubus hispidoides (Bog Dewberry) (FACW)	1	NO	
Carex hystericina (Porcupine Sedge) (OBL)	2	NO	
Carex intumescens (Greater Bladder Sedge) (FACW)	1	NO	
Glyceria striata (Fowl Manna Grass) (OBL)	1	NO	
Scirpus expansus (Woodland Bulrush) (OBL)	80	YES	OBL
	122 = Total Cover		
Woody Vine Stratum (Plot size: 30 foot radius)			
Toxicodendron radicans (Eastern Poison Ivy) (FAC)	2	YES	FAC
	2 = Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (Include photo numbers here or on a separate sheet.)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1						SL	
2-16	10YR 4/1		7.5YR 5/8	10	C	M	SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☑ Depleted Below Dark Surface (A11)
- ☑ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR R, MLRA 149B)
- ☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ☐ Thin Dark Surface (S9) (LRR R, MLRA
- ☐ Loamy Mucky Mineral (F1) (LRR K, L)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Location:

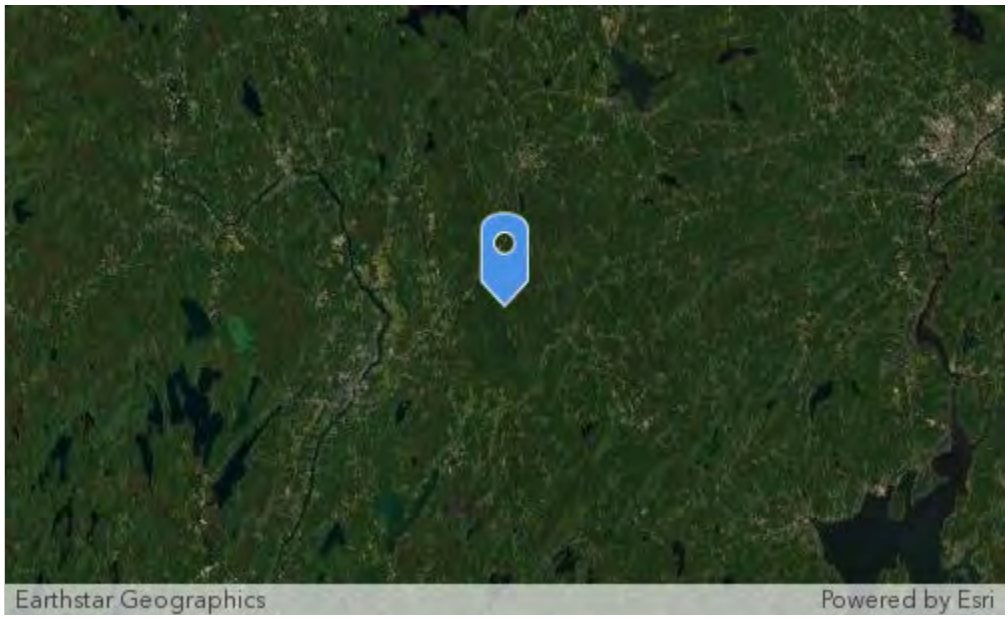

Photo:

BIODIVERSITY RESEARCH INSTITUTE

Exhibit E:

MDIFW Vernal Pool Memo Submittal

BIODIVERSITY RESEARCH INSTITUTE
innovative wildlife science

January 13, 2022

Maine Department of Inland Fisheries and Wildlife
41 State House Station Lane
Augusta, ME 04333-0041

RE: Three Corners Solar Project Vernal Pool Review

Dear Becca,

Kleinschmidt Associates surveyed the Three Corners Project site (see Attachment A) for vernal pools during appropriate seasonal conditions in the spring of 2019 and 2020. During fieldwork a total of 80 features were identified (Attachment B). Based on field collected data, 39 of these features were determined to be of Unnatural origin (i.e., skidder ruts within wetlands). For these features, which are clearly un-natural ruts, data forms were not completed. However, egg mass counts are included in the summary table (Attachment B) and photographs of these features are provided in the download link. Forty-one (41) of the pools were identified as Natural or Natural Modified in origin and data forms were completed for all of these pools. Eighteen (18) of these Natural or Natural Modified pools were determined to be potentially significant, based on state criteria.

As a result of the survey completed in 2020, 12 of the potentially significant pools dried out prior to July 15, 2020. Dry-out dates are descried in Chapter 335 as a means of determining potential significance. Chapter 335 states that "*When a vernal pool habitat has not previously been determined to be significant, and the department or the Maine Department of Inland Fisheries & Wildlife (IF&W) makes a determination concerning whether the vernal pool habitat is significant, either department may determine that the vernal pool habitat is not significant if (b) The vernal pool is located in southern Maine and dries out after filling and before July 15th.*" Given that these pools had completely dried prior to July 15, 2020 we recommend they be classified as non-significant at this time. In the table in Attachment B, pools that dried prior to July 15, 2020 are identified as "potentially significant".

The remaining six (6) pools we have classified as Significant. Attachment B includes a summary of all potentially significant pools identified.

Photographs and data forms collected during fieldwork have been provided as a separate download link, due to the number of photographs and file size. At the request of Longroad Energy, Biodiversity Research Institute is submitting the data collected in 2019 and 2020 for the Maine Department of Inland Fisheries and Wildlife to review, as required for review of collected vernal pool data as well as to confirm determinations made in the field. If you have any questions please contact me at steve.knapp@brienvironmental.org or at 207-570-9462.

Respectfully submitted,

Steve Knapp
Senior Environmental Scientist
BRI Environmental

CC: Jason Czapiga

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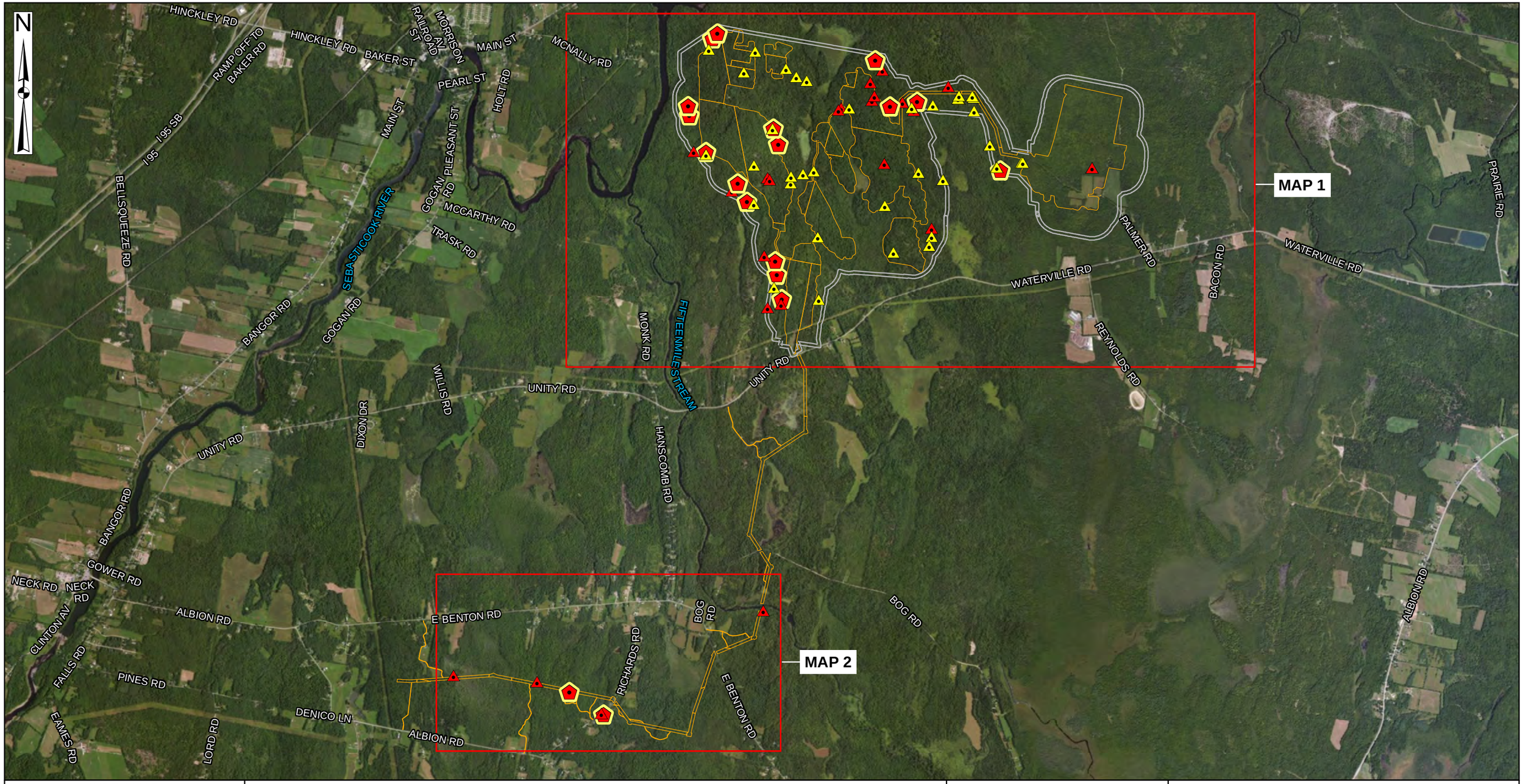
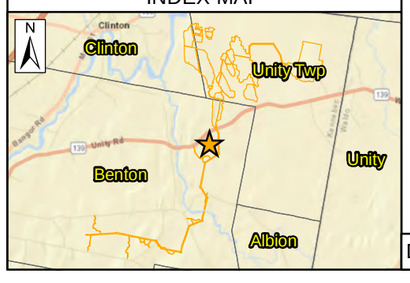
ATTACHMENT A: OVERVIEW MAP



INDEX MAP



LEGEND

- CP - USACE Jurisdictional Pool
- VP - Vernal Pool
- SVP - Potentially Significant Vernal Pool
- Project Survey Boundary
- Project Limit of Disturbance

Data Collected by Kleinschmidt Associates 2019; 2020

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longroad ENERGY

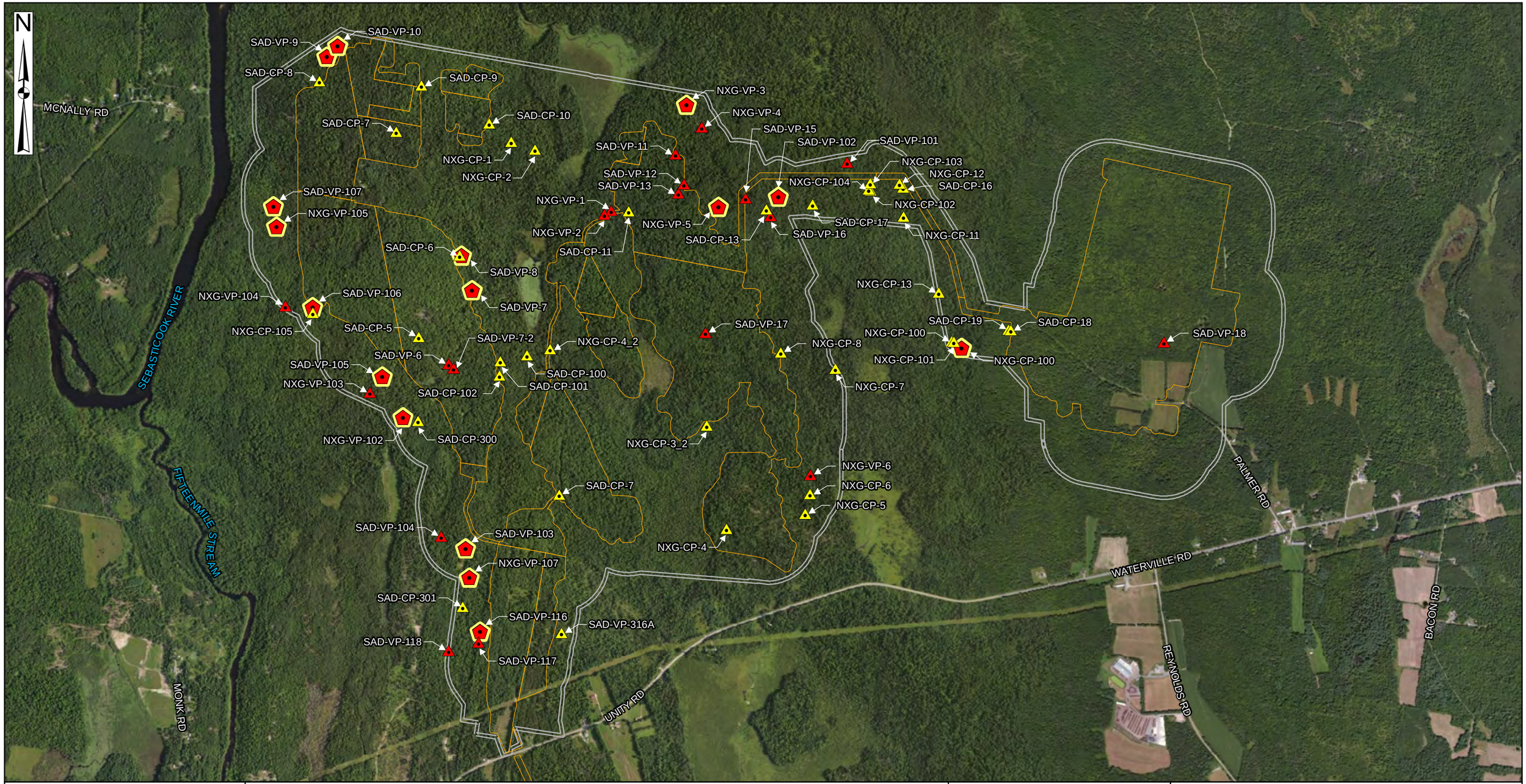
SCALE:

0 3,300 6,600 Feet

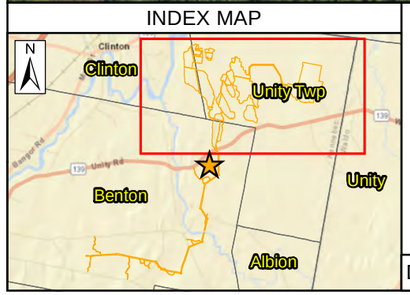
1 inch = 3,300 feet

VERNAL POOL MAP KEY
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

JANUARY 12, 2022



INDEX MAP



LEGEND

- CP - USACE Jurisdictional Pool
- VP - Vernal Pool
- SVP - Potentially Significant Vernal Pool
- Project Survey Boundary
- Project Limit of Disturbance

Data Collected by Kleinschmidt Associates 2019; 2020

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innovative wildlife science

longroad ENERGY

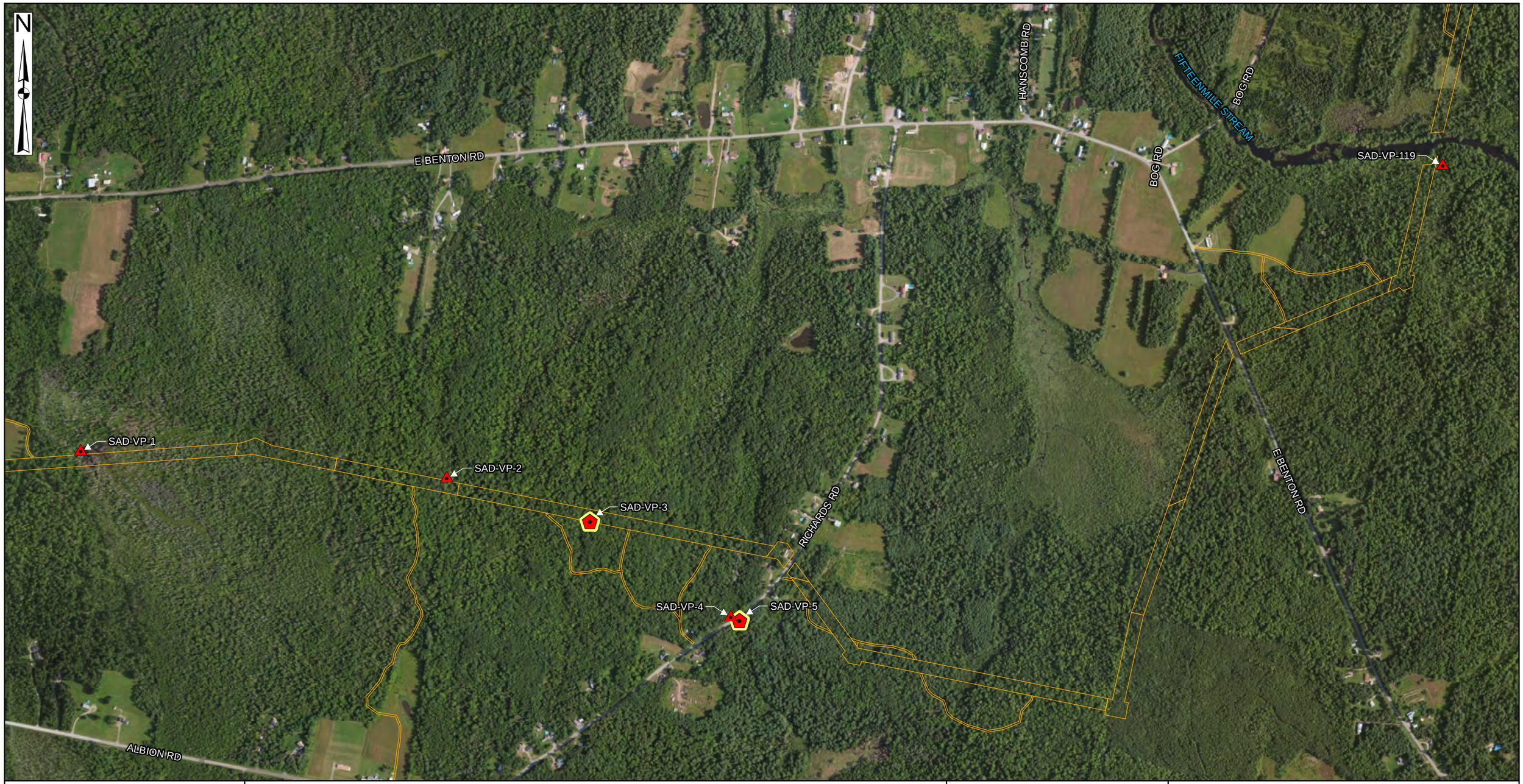
SCALE:

0 1,500 3,000 Feet

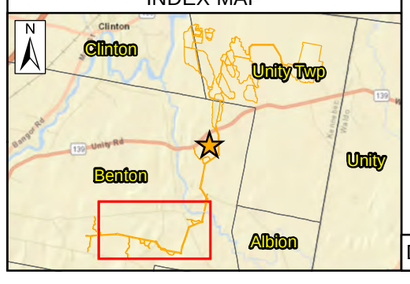
1 inch = 1,500 feet

VERNAL POOL MAP 1 OF 2
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

JANUARY 12, 2022



INDEX MAP



LEGEND

- CP - USACE Jurisdictional Pool
- VP - Vernal Pool
- SVP - Potentially Significant Vernal Pool
- Project Survey Boundary
- Project Limit of Disturbance

Data Collected by Kleinschmidt Associates 2019; 2020

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longroad ENERGY

SCALE:

0 750 1,500 Feet

1 inch = 750 feet

VERNAL POOL MAP 2 OF 2
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

JANUARY 12, 2022

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ATTACHMENT B: SUMMARY TABLE

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Pool ID	Origin	Dried by 7/15/2020	Egg Mass Counts											Fairy Shrimp	SVP
			Wood Frog			Spotted Salamander				Blue-Spotted					
			Visit 1 2019	Visit 1 2020	Visit 2 2020	Visit 1 2019	Visit 2 2019	Visit 1 2020	Visit 2 2020	Visit 1 2019	Visit 2 2019	Visit 1 2020	Visit 2 2020		
NXG-CP-1	U	Yes		6				4							No
NXG-CP-100	U	Yes		3				4							No
NXG-CP-101	U	Yes		1				2							No
NXG-CP-102	U	Yes		32											No
NXG-CP-103	U	Yes						2							No
NXG-CP-104	U	Yes		60				17							No
NXG-CP-105	U	Yes		4				81							No
NXG-CP-11	U	Yes		10											No
NXG-CP-12	U	Yes		30				4							No
NXG-CP-13	U	Yes		15				3							No
NXG-CP-2	U	Yes						2							No
NXG-CP-3_2	U	Yes		1											No
NXG-CP-4	U	No		4				5							No
NXG-CP-4_2	U	No						2							No
NXG-CP-5	U	No		5				3							No
NXG-CP-6	U	Yes		5				3							No
NXG-CP-7	U	Yes		1											No
NXG-CP-8	U	Yes						1							No
NXG-VP-1	NM	No		2				2							No
NXG-VP-102	**N**	**Yes**		**52**				**28**							**Potentially**
NXG-VP-103	N	No						8	9						No
NXG-VP-104	NM	Yes		4	1			16	17						No
NXG-VP-105	**N**	**Yes**		**38**										**Yes**	**Potentially**

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Pool ID	Origin	Dried by	Egg Mass Counts												SVP
NXG-VP-107	**N**	**Yes**		**31**				**22**							**Potentially**
NXG-VP-2	NM	No		3				3				3			No
NXG-VP-3	**N**	**Yes**		**46**				**5**							**Potentially**
NXG-VP-4	N	Yes						1	3						No
NXG-VP-5	**N**	**Yes**						**4**	**19**						**Potentially**
NXG-VP-6	NM	Yes		32	1				6						No
SAD-CP-10	U	Yes		30											No
SAD-CP-100	U	Yes				3									No
SAD-CP-101	U	No				5		1							No
SAD-CP-102	U	No				2		3							No
SAD-CP-11	U	Yes				2									No
SAD-CP-13	U	Yes		8		3		11							No
SAD-CP-16	U	Yes	3	39				30							No
SAD-CP-17	U	Yes				1		1							No
SAD-CP-18	U	NA	3												No
SAD-CP-19	U	NA				3									No
SAD-CP-19a	U	NA				6									No
SAD-CP-2	U	No				3		11							No
SAD-CP-300	U	No		16				26							No
SAD-CP-301	U	No		1				16							No
SAD-CP-316A	U	No		0				5							No
SAD-CP-5	U	Yes		21				5							No
SAD-CP-6	U	No		1				20							No
SAD-CP-7	U	No				2									No
SAD-CP-8	U	NA				2									No
SAD-CP-9	U	No		14		9									No
SAD-CP-9a	U	NA				30									No

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Pool ID	Origin	Dried by	Egg Mass Counts												SVP
SAD-VP-1	N	No	6					4	3	7					No
SAD-VP-10	**N**	**Yes**	**6**	**26**		**31**		**35**				**20**			**Potentially**
SAD-VP-100	**N**	**Yes**		**82**											**Potentially**
SAD-VP-101	N	Yes		6					2						No
SAD-VP-102	**N**	**Yes**		**42**											**Potentially**
SAD-VP-103	**N**	**Yes**		**25**	**1**			**5**	**9**				**25**		**Potentially**
SAD-VP-104	N	Yes		17	1			10	8						No
SAD-VP-105	**N**	**No**		**22**				**89**							**Yes**
SAD-VP-106	**NM**	**Yes**		**1**				**37**							**Potentially**
SAD-VP-107	**N**	**Yes**		**48**				**73**							**Potentially**
SAD-VP-11	N	Yes	6	11	12	7		5	15		4				No
SAD-VP-116	**N**	**No**		**0**				**37**							**Yes**
SAD-VP-117	N	No		0	2			2	1						No
SAD-VP-118	NM	No		0				1							No
SAD-VP-119	N	No						16	14						No
SAD-VP-12	N	Yes	1	0		4		4							No
SAD-VP-13	N	No		0		1									No
SAD-VP-15	N	Yes	5	8				2							No
SAD-VP-16	N	No	1						1						No
SAD-VP-17	NM	Yes	3	1	2	1			8						No
SAD-VP-18	N	Yes	10	3				11	18						No
SAD-VP-2	N	No					4	1	9	10					No
SAD-VP-3	**N**	**No**	**27**		**1**		**24**		**25**						**Yes**
SAD-VP-4	N	No	10	1	1		5			3					No
SAD-VP-5	**NM**	**No**	**67**		**40**		**7**	**3**	**26**	**11**					**Yes**
SAD-VP-6	N	No				2	1								No
SAD-VP-7	**N**	**No**		**1**	**1**	**12**	**6**	**23**	**26**		**1**				**Yes**
SAD-VP-7-2	NM	No				2									No
SAD-VP-8	**NM**	**No**	**36**	**2**		**49**		**59**							**Yes**

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Pool ID	Origin	Dried by	Egg Mass Counts												SVP
SAD-VP-9	N	Yes	20	36		20		45							Potentially

Attachment 9-2

Wetland and Watercourse Delineation and Potential Vernal Pool Survey Report: Genlead

Wetland and Watercourse Delineation and Potential Vernal Pool Survey Report

Proposed Transmission Line and Construction Access Routes: Benton, Maine

December 29, 2021

Prepared for:

Three Corners Solar, LLC
30 Danforth Street, Suite 201
Portland, Maine 04101

Prepared by:

Stantec Consulting Services Inc.
30 Park Drive
Topsham, ME 04086

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1.0 INTRODUCTION

Three Corners Solar, LLC (Three Corners) contracted Stantec Consulting Services Inc. (Stantec) to perform wetland and watercourse delineations of a proposed transmission line and access routes in Benton, Maine (Project Site) (Appendix A: Figure 1. Project Location Map). Three Corners intends to develop a solar project in Benton, Clinton and Unity Township (Project). Stantec performed the wetland and watercourse delineation for the proposed transmission line and several proposed construction access routes in Benton from July 27 to 31, 2020 and on October 27, 2020. Concurrent with the wetland and watercourse delineation, potential vernal pools (PVPs) were recorded within the Project Site. Several additional areas, totaling approximately 9 acres, adjacent to the Project limits of disturbance were delineated on November 23, 2021. This report summarizes the methods and results of the wetland and watercourse delineation and potential vernal pool survey. Delineated resources are depicted on the attached Wetland and Watercourse Delineation Maps (Appendix A: Figures 2-5).

2.0 METHODS

2.1 WETLAND AND WATERCOURSE DELINEATION

Wetlands and watercourses within the Project Site were identified in accordance with the definitions detailed in Maine State Statute 38 M.R.S.A. Sec. 480-B of the Natural Resources Protection Act[1]. Wetland boundaries were determined using the technical criteria described in the United States Army Corps of Engineers (Corps) *Corps of Engineers Wetlands Delineation Manual*[2] and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*[3]. Wetland communities were classified according to the *Classification of Wetlands and Deepwater Habitats of the United States*[4]. Hydric soil determinations were made in accordance with the Corps wetland delineation manuals and the *Field Indicators for Identifying Hydric Soils in New England (Version 4)*[5]. Wetlands of Special Significance (WoSS) were identified based on criteria in Chapter 310

[1] Title 38: Waters and Navigation, Chapter 3: Protection and Improvement of Waters, Subchapter 1: Environmental Protection Board, Article 5-a: Natural Resources Protection Act

[2] Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.

[3] U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0),* ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

[4] *Federal Geographic Data Committee. 2013. Classification of Wetlands and Deepwater Habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.*

[5] New England Hydric Soils Technical Committee. 2017. Field Indicators for Identifying Hydric Soils in New England (Version 4).

of the Maine Natural Resources Protection Act (NRPA)[6] and Chapter 335 Significant Wildlife Habitat[7]. Identification of WoSS was limited to observable conditions within the Project Site. Wetland delineations were conducted under seasonally appropriate conditions.

Delineated watercourses (e.g., river, stream, or brook) were identified based on the technical guidance available from the Corps on the identification of an Ordinary High Water Mark (OHWM)[8], definition of a tributary as described in the Clean Water Act (CWA)[9], and as detailed in the Maine Department of Environmental Protection (MDEP) watercourse identification guidance document[10]. Data was collected on flow regime, bankfull and OHWM width, dominant substrates, and evidence of biological use.

2.2 POTENTIAL VERNAL POOL SURVEY

A seasonally appropriate vernal pool survey was performed for portions of the Project Site in 2020 by Kleinschmidt Associates (KA) prior to the Stantec wetland delineation fieldwork. While performing the wetland delineation Stantec collected potential vernal pool (PVP) data for site features in areas not surveyed by KA that appear to have the capacity to function as a vernal pool based on field observations. On June 14, 2021, Stantec collected the approximate boundaries of PVPs observed in 2020. This PVP survey was conducted in accordance with the Maine Association of Wetland Scientists' 2014 Vernal Pool Survey Protocol (April 2014), as well as the definitions set forth in Chapter 335, Significant Wildlife Habitat, of the NRPA and the Corps General Permit (GP). These results are considered "potential" because the timing of the survey was not seasonally appropriate to determine vernal pool functionality or significance.

2.3 DATA COLLECTION

Each delineated resource was assigned a unique alpha-numeric code. A Global Positioning System receiver capable of sub-meter accuracy was used to locate the wetland boundaries and watercourse features. Wetland boundaries and watercourses were not flagged in the field. Representative photographs were taken of each feature and are included in Appendix B.

[6] Maine Department of Environmental Protection. 26 January 2009. Natural Resources Protection Act Chapter 310: Wetlands and Waterbodies Protection Rules. Bureau of Land and Water Quality, DEPLW0297-D2009.
[7] Maine Department of Environmental Protection. 7 January 2014. Natural Resources Protection Act Chapter 335: Significant Wildlife Habitat.
[8] U.S. Army Corps of Engineers. 2005. Regulatory Guidance Letter: Ordinary High Water Mark Identification. December 8, 2005. No. 05-05.
[9] U.S. Army Corps of Engineers. 2015. 33 Code of Federal Regulations, Part 328, Waters of the United States. June 29, 2015.
[10] Danielson, T. J. 2018. Natural Resource Protection Act Streams, Rivers, and Brooks. Maine Department of Environmental Protection, Augusta, ME.

3.0 RESULTS

3.1 GENERAL SITE DESCRIPTION

The Project Site is wholly located in Benton, Maine and encompasses approximately 405-acres. It begins at the Albion Road Substation and generally extends to the east approximately 2-miles before turning north for approximately 2.8-miles to its end near an existing transmission line north of Unity Road (State Route 139). The Project Site crosses Richards Road, East Benton Road, Bog Road, Unity Road, and Bessey Lane. Fifteenmile Stream flows from west to east across the central portion of the Project Site.

The topography undulates throughout the Project Site, consisting of numerous knolls and valleys, with elevations ranging from approximately 130-feet (ft) at Fifteenmile Stream to approximately 300-ft in the southeastern corner of the Project Site. Elevations at the southern and northern Project Site terminus are approximately 220-ft.

The Project Site is within a rural setting that is primarily forested, except for a few fields, and rural areas in proximity to streets. Several of the potential access roads are also associated with existing aggregate base, improved roads used to gain access to back land for camps, timber harvest, and agriculture. There are also several large open water and emergent marsh wetland complexes that overlap with the Project Site.

Forested areas are dominated by balsam fir (*Abies balsamea*), red maple (*Acer rubrum*), eastern arborvitae (*Thuja occidentalis*), red spruce (*Picea rubens*), eastern hemlock (*Tsuga canadensis*), eastern white pine (*Pinus strobus*), green ash (*Fraxinus pennsylvanica*), and yellow birch (*Betula alleghaniensis*). Some areas of recent timber harvests have resulted in early successional and regenerating forest communities consisting of saplings and seedlings of the previously listed tree species as well as quaking aspen (*Populus tremuloides*), speckled alder (*Alnus incana*), and red raspberry (*Rubus idaeus*). The herbaceous layer includes bracken fern (*Pteridium aquilinum*), hay scented fern (*Dennstaedtia punctilobula*), lowbush blueberry (*Vaccinium angustifolium*), and Canadian bunchberry (*Cornus canadensis*).

The U.S. Department of Agriculture Soil Survey of Kennebec County, Maine[11] depicts 13 map units within the Project Site. Soil consistent and/or similar to these map units were observed on-site.

3.2 WETLAND/WATERCOURSE DELINEATION AND POTENTIAL VERNAL POOL SURVEY

The wetland and watercourse delineation was conducted in July and October 2020 and November 2021. The ground was free of snow and frost and late season vegetation was identifiable during the October 2020 and November 2021 field efforts. During the on-site delineation fieldwork, Stantec wetland scientists delineated 62 wetlands, 11 watercourses, and 10 PVPs within the Project Site. These results are characterized in Tables 1, 2, and 3, respectively. Delineated wetlands, watercourse, and PVPs are

[11] Web Soil Survey, Natural Resources Conservation Service, United States Department of Agriculture. Available at: http://websoilsurvey.nrcs.usda.gov/. Accessed June 29, 2020.

depicted on the attached Wetland and Watercourse Delineation Maps (Appendix A: Figures 2-5). For reference, the vernal pools identified by KA are presented in Figures 2-5. Summary data and Maine State Vernal Pool Assessment Forms are presented under separate cover by others. Representative photographs of identified natural resources are included in Appendix B. Appendix C includes representative Corps Wetland Determination Data Forms.

Table 1. Summary of Delineated Wetlands

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W01	01CFA	PEM	Trees: none Shrub/Saplings: gray willow (*Salix bebbiana*) Herbs: broad-leaf cat-tail (*Typha latifolia*), fringed sedge (*Carex crinita*), common fox sedge (*Carex vulpinoidea*), Canadian goldenrod (*Solidago canadensis*), lamp rush (*Juncus effusus*)	A1: Histosol	Surface Water (A1), High Water Table (A2), Saturation (A3)	No	Small, man-made ditch located north of the Albion Road substation. The wetland extends offsite into large wetland complex to the west.
W02	01CFB	PFO	Trees: balsam fir (*Abies balsamea*), eastern hemlock (*Tsuga canadensis*), red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*) Shrub/Saplings: balsam fir, Morrow's honeysuckle (*Lonicera morrowii*) Herbs: sensitive fern (*Onoclea sensibilis*), interrupted fern (*Osmunda claytonia*), royal fern (*Osmunda spectabilis*)	F3: Depleted Matrix	Saturation (A3), Drainage Patterns (B10)	No	Small portion of larger wetland complex located north of the Albion Road substation.
W03	01RKD/01CFC	PFO/PEM	Trees: balsam fir, red maple, green ash Shrub/Saplings: balsam fir Herbs: sensitive fern, evergreen wood fern (*Dryopteris intermedia*), broad-leaf cat-tail, pointed broom sedge (*Carex scoparia*), yellow green sedge (*Carex flava*), fowl manna grass (*Glyceria striata*), common marsh bedstraw (*Galium palustre*), lamp rush, spotted touch-me-not (*Impatiens capensis*), bluejoint (*Calamagrostis canadensis*), simpler's joy (*Verbena hastata*), eastern poison ivy (*Toxicodendron radicans*), interrupted fern	A11a: Depleted Below Dark Surface	Water Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4)	No	The wetland is located east of the Albion Road substation and is bisected by an existing transmission line. The wetland is forested in the natural setting and primarily PEM in the cleared section, with small pockets of shrubs.
W04	01RKC	PFO/PEM	Trees: balsam fir, red maple, green ash Shrub/Saplings: balsam fir Herbs: sensitive fern, evergreen wood fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, simpler's joy, eastern poison ivy, Interrupted fern	A11a: Depleted Below Dark Surface	Water Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4)	No	The wetland is located east of the Albion Road substation access road and is bisected by an existing transmission line. The wetland is forested in the natural setting and primarily PEM in the cleared section, with small pockets of shrubs.
W05	01RKB	PFO/PEM	Trees: balsam fir, red maple, green ash Shrubs/Saplings: balsam fir Herbs: sensitive fern, evergreen wood fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, simpler's joy	A11a: Depleted Below Dark Surface	Water Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4)	No	The wetland is located east of the Albion Road substation access road and is bisected by an existing transmission line. The wetland is forested in the natural setting and primarily PEM in the cleared section, with small pockets of shrubs.
W06	01RKA	PFO	Trees: balsam fir, red maple Shrub/Saplings: balsam fir Herbs: sensitive fern, evergreen wood fern	A11a: Depleted Below Dark Surface	Water Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4)	No	Small, isolated, forested wetland located between the Albion Road substation access road and an existing transmission line to the west. The wetland is upslope of and connects to the access road constructed drainage ditch.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W07	01CFD	PFO	Trees: balsam fir, red maple, green ash Shrub/Saplings: balsam fir, red maple, green ash, speckled alder (*Alnus incana*) Herbs: sensitive fern, cinnamon fern (*Osmundastrum cinnamomeum*), fringed sedge, three-seed sedge (*Carex trisperma*)	F3: Depleted Matrix	Saturation (A3), Drainage Patterns (B10)	No	Linear wetland drainage extends north off-site.
W08	01CFE	PSS/PEM	Trees: red maple Shrub/Saplings: red maple, gray willow, common winterberry (*Ilex verticillata*), broad-leaved meadowsweet (*Spiraea latifolia*) Herbs: sensitive fern, reed canary grass (*Phalaris arundinacea*)	F3: Depleted Matrix	Saturation (A3)	No	Isolated wetland located along proposed access road off East Benton Road.
W09	01RKE	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, (*Fraxinus nigra*), yellow birch, eastern arborvitae Shrub/Saplings: balsam fir, speckled alder, common winterberry, alternate-leaf dogwood (*Cornus alterniflora*), broad-leaved meadowsweet, steeplebush (*Spiraea tomentosa*) Herbs: sensitive fern, evergreen wood fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, simpler's joy, eastern poison ivy, interrupted fern, three-seed sedge, late goldenrod, (*Solidago gigantia*), eastern marsh fern (*Thelypteris palustris*), cottongrass bulrush (*Scirpus cyperinus*), pickerelweed (*Pontederia cordata*), northern water-horehound (*Lycopus uniflorus*), European bur-reed (*Sparganium emersum*), common duckweed (*Lemna minor*), rice cut grass (*Leersia oryzoides*), arrow-leaf tearthumb (*Persicaria sagittata*), coon's-tail (*Ceratophyllum demersum*), three-leaf goldthread (*Coptis trifolia*), bristly dewberry (*Rubus hispidus*), wrinkle-leaf goldenrod (*Solidago rugosa*), royal fern	A11a: Depleted Below Dark Surface	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturations Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: portions within 25-feet (ft) of a watercourse	This is a large wetland that is a complex of interspersed pockets of emergent, forest and dense shrub thickets, fringed by forested wetland. The wetland contains S02 which flows northerly across the western edge and contains VP01.
W10	01CFI	PSS	Trees: none Shrub/Saplings: red maple, gray willow, quaking aspen (*Populus tremuloides*), gray birch Herbs: broad-leaf cat-tail, fringed sedge	S5: Sandy Redox	Saturation (A3)	No	Wetland is dominated by shrubs on-site within an area recently harvested by logging operations and located along proposed access road north of Albion Road.
W11, W12	01CFH	PSS	Trees: red maple, American larch (*Larix laricina*) Shrub/Saplings: red maple, American larch, gray birch, gray willow, quaking aspen, broad-leaved meadowsweet Herbs: broad-leaf cat-tail, fringed sedge, dark green bulrush (*Scirpus atrovirens*), shallow sedge (*Carex lurida*), Canadian rush (*Juncus canadensis*)	S5: Sandy Redox	Saturation (A3), Water Stained Leaves (B9)	No	Wetland is dominated by shrubs on-site within an area recently harvested by logging operations and located along proposed access road north of Albion Road. Contains PVP01.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W13, W14	01CFG/01GPA	PSS/PUB	Trees: red maple, American larch Shrub/Saplings: red maple, American larch, gray birch, gray willow, quaking aspen, broad-leaved meadowsweet Herbs: broad-leaf cat-tail, fringed sedge, dark green bulrush, shallow sedge, Canadian rush	S5: Sandy Redox	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Stained Leaves (B9), Presence of Reduced Iron (C4)	No	Wetland is dominated by shrubs on-site within an area recently harvested by logging operations and located along proposed access road north of Albion Road. A portion of the wetland contains PVP02. Wetland extends northeast across the corridor into large complex. A farm pond (PUB component) has been created in the field along the eastern edge of the wetland just outside the survey area.
W15	01RKF	PFO	Trees: balsam fir, red maple, black ash, yellow birch, eastern arborvitae Shrub/Saplings: speckled alder Herbs: sensitive fern, broad-leaf cat-tail, eastern poison ivy, three-seed sedge, cottongrass bulrush, common red raspberry (*Rubus idaeus*), royal fern, cinnamon fern	A11a: Depleted Below Dark Surface	Surface Water (A1), High Water Table (A2), Saturation (A3), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This is a forested swale that extends across the site from south to north. The wetland contains a VP02.
W16, W17, W18, W19	01RKG	PFO	Trees: balsam fir, red maple, black ash, yellow birch, eastern arborvitae Shrub/Saplings: speckled alder Herbs: sensitive fern, three-seed sedge, dwarf red raspberry (*Rubus pubescens*), royal fern, cinnamon fern, eastern marsh fern, yellow green sedge, woodland horsetail (*Equisetum sylvaticum*)	A2: Histic Epipedon	High Water Table (A2), Saturation (A3), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Moss Trim LIne s (B16), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: portions within 25-ft of a watercourse	This is a forested swale that extends across the site from south to north. The wetland contains S03.
W20	01RKH	PFO	Trees: balsam fir, red maple, black ash Shrub/Saplings: common winterberry Herbs: cinnamon fern, eastern marsh fern, eastern poison ivy, stinging nettle (*Urtica dioica*)	A11a: Depleted Below Dark Surface	Saturation (A3), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Moss Trim LIne s (B16), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains SVP03	This is a forested swale that extends across the site from south to north. The wetland contains SVP03.
W21	01EBA	PFO	Trees: eastern arborvitae, balsam fir, black ash Shrub/Saplings: balsam fir, broad-leaved meadowsweet Herbs: sensitive fern, parasol white top (*Doelingeria umbellata*), royal fern, dwarf red raspberry, cinnamon fern	A1: Histosol	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Stained Leaves (B9), Presence of Reduced Iron (C4)	Potentially: contains PSVP11	Wetland depression extending south off-site and containing PSVP11.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W22	01RKI	PFO	Trees: balsam fir, yellow birch, American elm (*Ulmus americana*) Shrub/Saplings: common winterberry, speckled alder, steeplebush Herbs: sensitive fern, broad-leaf cat-tail, yellow green sedge, fowl manna grass, spotted touch-me-not, eastern poison ivy, three-seed sedge, bristly dewberry, interrupted fern, eastern poison ivy, slender wood reed (*Cinna latifolia*)	A11a: Depleted Below Dark Surface	Saturation (A3), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Moss Trim 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 (*Viburnum recognitum*) Herbs: sensitive fern, broad-leaf cat-tail, royal fern, water-horehound, wrinkle-leaf goldenrod, broad-leaved meadowsweet, touch-me-not, bluejoint, interrupted fern	A2: Histic Epipedon	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturations Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains SVP05	This is a forested wetland located along the east side of Richards Road and extends off-site to the south. The wetland contains an apparently man-made pond, S04.
W24	01CFM	PSS	Trees: none Shrub/Saplings: quaking aspen, balsam fir Herbs: sensitive fern, fringed sedge, broad-leaf cat-tail	F3: Depleted Matrix	Saturation (A3)	No	Isolated wetland on south side of survey area east of Richards Road.
W25	01CFJ	PFO	Trees: red maple, balsam fir Shrub/Saplings: red maple, balsam fir, quaking aspen Herbs: sensitive fern, royal fern, interrupted fern, fringed sedge, wrinkle-leaf goldenrod	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Isolated forested wetland located east of Richards Road.
W26	01CFL	PSS	Trees: none Shrub/Saplings: green ash, quaking aspen, balsam fir, speckled alder Herbs: sensitive fern, dark green bulrush, reed canary grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Isolated wetland along old roadbed to an existing camp located east of Richards Road.
W27	01CFK	PSS/PFO	Trees: red maple, balsam fir, yellow birch, eastern arborvitae Shrub/Saplings: red maple, balsam fir, yellow birch, eastern arborvitae, speckled alder Herbs: bluejoint, shallow sedge, lakebank sedge (*Carex lacutris*), cinnamon fern, European bur-reed, stinging nettle, cut-leaf water-horehound (*Lycopus americanus*)	S4: Sandy Gleyed Matrix, S5: Sandy Redox	Saturation (A3)	Yes, portions within 25-ft of a watercourse	Wetland complex containing S05.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W28	01CFN	PFO	Trees: eastern arborvitae, black ash, gray birch, yellow birch, quaking aspen, balsam fir, red maple Shrub/Saplings: eastern arborvitae, black ash, gray birch, yellow birch, quaking aspen, balsam fir, red maple Herbs: sensitive fern, interrupted fern, fringed sedge, three-seed sedge, fowl manna grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9), Drainage Patterns (B10)	No	Portion of large forested wetland complex that extends off-site to the northeast and southwest.
W29, W30, W31, W32	01RKL	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, yellow birch, eastern arborvitae Shrub/Saplings: balsam fir, speckled alder, common winterberry Herbs: dwarf red raspberry, three-seed sedge, northern water-horehound, sensitive fern, interrupted fern, woodland horsetail, fowl manna grass, swamp candles (*Lysimachia terrestris*), bluejoint, broad-leaf cat-tail, royal fern, broad-leaved meadowsweet, yellow green sedge	A2: Histic Epipedon	Surface Water (A1), High Water Table (A2), Saturation (A3), Sediment Deposits (B2), Algae Mat or Crust (B4), Inundation Visible on Aerial Imagery (B8), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 square feet (sf) of emergent marsh and PSVP03	This is a large wetland that is a complex of interspersed pockets of emergent, forest and dense shrub thickets, fringed by forested wetland. The wetland begins along the west side of East Benton Road and extends westerly to the large wetland complex off-site. Also contains PSVP03. Note: Two portions of this wetland are small isolated wetlands along the eastern edge of the survey area.
W33, W34	01RKK	PFO	Trees: balsam fir, red maple, black ash Shrub/Saplings: balsam fir Herbs: sensitive fern, eastern poison ivy, dwarf red raspberry, interrupted fern	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This is a forested wetland located east of East Benton Road. Small portion of wetland that extends off-site to the east.
W35	01RKM	PFO	Trees: balsam fir, red maple, black ash, green ash, eastern arborvitae Shrub/Saplings: balsam fir, speckled alder, common winterberry Herbs: sensitive fern, royal fern, broad-leaf cat-tail, eastern poison ivy	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This is a large forested wetland with areas of dense shrub understory. The wetland is located along the east side of East Benton Road and extends off-site to the north and south. Connected to W36 off-site to the south.
W36	01RKN/01RKO/ 01CFU/01CFQ/ 01CFS/01CFT	PFO	Trees: balsam fir, red maple, black ash, green ash, eastern arborvitae Shrub/Saplings: balsam fir, speckled alder, common winterberry Herbs: sensitive fern, royal fern, broad-leaf cat-tail, eastern poison ivy	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes, portions within 25-ft of a watercourse	This is a large forested wetland with areas of dense shrub understory. The wetland is located east of East Benton Road and extends off-site to the north and south. Contains S06.
W37	01CFO	PSS	Trees: none Shrub/Saplings: speckled alder, broad-leaved meadowsweet, gray willow, red osier dogwood (*Cornus alba*) Herbs: sensitive fern, common fox sedge, wrinkled-leaf goldenrod	F3: Depleted Matrix, F6: Redox Dark Surface	Saturation (A3)	No	Portion of wetland located east of East Benton Road along proposed access road.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W38	01CFP	PFO	Trees: red maple, green ash Shrub/Saplings: red maple, green ash, black ash, common winterberry Herbs: sensitive fern	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Wetland is located east of East Benton Road along south side of proposed access road and contains PVP04.
W39	01CFQ	PFO	Trees: red maple, green ash Shrub/Saplings: red maple, green ash, black ash, common winterberry Herbs: sensitive fern	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Wetland is located east of East Benton Road along north side of proposed access road.
W40	01CFR	PFO	Trees: black ash, balsam fir, quaking aspen Shrub/Saplings: black ash, balsam fir, speckled alder Herbs: sensitive fern, common fox sedge, fringed sedge	A2: Histic Epipedon, F3: Depleted Matrix	Saturation (A3), Drainage Patterns (B10)	Yes, portions within 25-ft of a watercourse	Wetland is located east of East Benton Road along proposed access road and contains S06.
W41	01RKP	PFO	Tree: balsam fir, yellow birch, green ash Shrub/Saplings: balsam fir, yellow birch Herbs: sensitive fern, wrinkle-leaf goldenrod, three-seed sedge, late goldenrod, woodland horsetail	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This a s narrow side slope groundwater discharge swale that is a portion of a larger wetland that extends off-site to the east.
W42, W43	01RKQ/01RKR/ 01CFV/01CFW	PFO/PSS/PEM/PUB	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch (*Betula populifolia*) Shrub/Saplings: speckled alder, common winterberry Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, simpler's joy, eastern poison ivy, interrupted fern, broad-leaved meadowsweet, three-seed sedge, late goldenrod, steeplebush, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge (*Dulichium arundinaceum*), lesser bladder sedge (*Carex vesicaria*), shallow sedge, variegated scouring rush (*Equisetum variegatum*), fringed sedge	A2: Histic Epipedon	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh; and portions within 25-ft of a watercourse	This is a large wetland complex riparian to Fifteenmile Stream (S07) and another perennial stream (S08). It is connected to W50 and S09 by a culvert at Bog Road. These are large complexes of interspersed emergent and open water, forested patches, dense shrub thickets, and fringed by forested wetland. The wetland extends off-site to the east and west along Fifteenmile Stream. This wetland contains VP06, south of Fifteenmile Stream.
W44	01RKS	PFO/PSS	Trees: balsam fir, gray birch Shurb/Saplings: speckled alder Herbs: sensitive fern, dwarf red raspberry, fringed sedge	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This wetland is a portion of a larger wetland complex that extends off-site to the west; located east of Bog Road. This a groundwater discharge wetland situated at the base of a slope.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W45	01RKT	PSS/PFO	Trees: balsam fir, gray birch Shurb/Saplings: speckled alder Herbs: sensitive fern, dwarf red raspberry, fringed sedge	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This wetland is a portion of a larger wetland complex that extends off-site to the west; located along the east side of Bog Road.
W46	01RKU	PSS	Trees: none Shrub/Saplings: speckled alder Herbs: sensitive fern	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This wetland is a small, isolated wetland in a saddle at the top of a slope, located east of Bog Road.
W47	02CFA	PFO	Trees: balsam fir, red maple, gray birch, eastern white pine Shrub/Saplings: balsam fir, red maple, gray birch, speckled alder Herbs: sensitive fern, fowl manna grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9), Drainage Patterns (B10)	No	Portion of larger wetland complex along west side of survey area north of Bog Road. Wetland extends northwest off-site.
W48	02CFA	PFO	Trees: balsam fir, red maple, gray birch, eastern white pine Shrub/Saplings: balsam fir, red maple, gray birch, speckled alder Herbs: sensitive fern, fowl manna grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9), Drainage Patterns (B10)	No	Portion of larger wetland complex along west side of survey area north of Bog Road. Wetland extends northwest off-site.
W49	01CFZ	PFO	Trees: balsam fir, gray birch, eastern white pine Shrub/Saplings: balsam fir, speckled alder Herbs: sensitive fern, dwarf red raspberry, evergreen wood fern	F6: Redox Dark Surface	Oxidized Rhizospheres on Living Roots (C3), Drainage Patterns	No	Isolated wetland located north of Bog Road.
W50	02CFY	PFO/PEM/PUB	Trees: balsam fir, red maple, yellow birch, gray birch Shrub/Saplings: balsam fir, red maple, yellow birch, gray birch, speckled alder Herbs: broad-leaf cat-tail, bluejoint, sensitive fern, fringed sedge, lakebank sedge, royal fern	A1: Histosol	Surface Water (A1), High Water Table (A2), Saturation (A3), Inundation Visible on Aerial Imagery (B7), Drainage Patterns (B10)	Yes, contains >20,000 sf of emergent marsh; and portions within 25-ft of a watercourse	Wetland is located north of Bog Road and contains S09 and area of open water and emergent vegetation that extends off-site to the northeast.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W51	02RKA/02RKB/ 02RKC/02RKD/ 02RKE/02RKF/ 02RKG/02CFB/ 02CFD	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch Shrub/Saplings: speckled alder, common winterberry Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, eastern poison ivy, interrupted fern, broad-leaved meadowsweet, three-seed sedge, late goldenrod, steeplebush, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge, lesser bladder sedge, shallow sedge, variegated scouring rush, fringed sedge	A2: Histic Epipedon	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh and PSVP06	This is a large wetland complex that is located north of Bog Road and extends off-site to the east and west. It is primarily forested on-site, however sections were recently part of an area involved in a timber harvest resulting in harvest roads and open patches within the wetland. Contains PSVP06. On aerial photos it is observed off-site to continue southerly to where it connects to S08/S09 and ultimately Fifteenmile Stream.
W52	02CFB	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch Shrub/Saplings: speckled alder, common winterberry Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, eastern poison ivy, interrupted fern, broad-leaved meadowsweet, three-seed sedge, late goldenrod, steeplebush, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge, lesser bladder sedge, shallow sedge, variegated scouring rush, fringed sedge	A2: Histic Epipedon	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh (off-site)	This is a portion of a large wetland complex that is located north of Bog Road and extends off-site to the east and west. It is primarily forested on-site.
W53	02CFE	PFO	Trees: balsam fir, red maple Shrub/Saplings: balsam fir, red maple Herbs: cinnamon fern	A2: Histic Epipedon, F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Isolated wetland located north of Bog Road surrounded by area of recent logging activities.
W54	01RKV	PEM/PSS	Trees: none Shrub/Saplings: common winterberry, broad-leaved meadowsweet Herbs: cinnamon fern	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Moss Trim Lines (B16), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Potentially, contains PSVP07	This wetland is a small, isolated wetland in a saddle near the top of a slope. It is located south of Unity Road and adjacent to an aggregate base timber harvest road within a proposed access road area. This feature is also the boundary of PSVP07.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W55	01RKW	PFO	Trees: balsam fir, red maple Shrub/Saplings: speckled alder, broad-leaved meadowsweet Herbs: bluejoint, dwarf red raspberry, cottongrass bulrush, cinnamon fern, pointed broom sedge, broad-leaf cat-tail, woodland horsetail, sensitive fern	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh	This wetland is a portion of a large wetland complex that extends off-site to the north. It is located south of Unity Road and adjacent to an aggregate base timber harvest road within a proposed access road area. A timber harvest road separates this wetland from W51.
W56	01RKZ/01RKY	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch Shrub/Saplings: speckled alder, common winterberry, broad-leaved meadowseet, steeplebush Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, eastern poison ivy, interrupted fern, three-seed sedge, late goldenrod, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge, lesser bladder sedge, shallow sedge, variegated scouring rush, fringed sedge	A1: Histosol, F2: Loamy Gleyed Matrix	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh; and portions within 25-ft of a watercourse	This is a large wetland complex riparian to S11. On aerial photos it is observed to continue off-site southerly to where it connects to watercourse S08/S09 and ultimately Fifteenmile Stream. These are large complexes of interspersed emergent and open water, forested patches, dense shrub thickets, and fringed by forested wetland. A timber harvest road separates this wetland from W57.
W57	01RKX	PFO	Trees: balsam fir, red maple Shrub/Saplings: speckled alder, broad-leaved meadowsweet Herbs: bluejoint, dwarf red raspberry, cottongrass bulrush, cinnamon fern, pointed broom sedge, broad-leaf cat-tail, woodland horsetail, sensitive fern	F3: Depleted Matrix	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Drift Deposits (B3), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh; and portions within 25-ft of a watercourse	This riparian wetland is a small portion of a large wetland complex that extends off-site to the north. It is located south of Unity Road and adjacent to an aggregate base timber harvest road within a proposed access road area. The timber harvest road separates this wetland from W56. S10 flows from the large emergent marsh complex southerly through this wetland, under the timber harvest road through culverts and through wetland W56 as watercourse S11.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W58, W59	02RKH/02RKI/02CFG/02CFH	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch Shrubs/Saplings: speckled alder, common winterberry, broad-leaved meadowsweet, steeplebush Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, eastern poison ivy, interrupted fern, three-seed sedge, late goldenrod, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge, lesser bladder sedge, shallow sedge, variegated scouring rush, fringed sedge	F2: Loamy Gleyed Matrix, F3: Depleted Matrix	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh	This is a large wetland complex that is located south of Unity Road and extends off-site to the northeast and southwest. It is primarily forested on-site, however these are large complexes of interspersed emergent and open water, forested patches, dense shrub thickets, and fringed by forested wetland. Also contains a heron rookery.
W60	02CFI	PFO	Trees: balsam fir, red maple Shrub/Saplings: balsam fir, red maple, gray birch, speckled alder Herbs: broad-leaf cat-tail, fringed sedge, sensitive fern, fowl manna grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9), Drainage Patterns (B10)	No	Isolated wetland south side of Unity Road.
W61	02RKJ	PSS	Trees: red maple, gray birch Shrub/Saplings: common winterberry, broad-leaved meadowsweet Herbs: sensitive fern, royal fern	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Potentially, contains PSVP09	Small, isolated wetland located south of Unity Road. Contains PSVP09.
W62	02CFF	PFO	Trees: balsam fir, red maple, quaking aspen, gray birch Shrub/Saplings: red maple, green ash, common winterberry Herbs: sensitive fern, dwarf red raspberry	F6: Redox Dark Surface	Algal Mat or Crust (B4), Water Stained Leaves (B9), Oxidized Rhizospheres on Living Roots (C3)	No	Isolated wetland depression located north side of Unity Road. Contains a PVP10.

[1] Wetland classification follows Federal Geographic Data Committee. (2013): PFO = Palustrine Forested, PSS = Palustrine Scrub-Shrub, PEM = Palustrine Emergent, PUB = Palustrine Unconsolidated Bottom

Table 2. Summary of Delineated Watercourses

Figure Identifier	Watercourse /Waterbody Field Designation	Flow Type	Bankfull Width (ft)	Ordinary High Water Mark Width (ft)	Dominant Substrates	Jurisdiction	Additional Comments
S01	S01RK	Perennial	8	8	Bedrock, stones, sand	MDEP, Corps	Located east of the Albion Road Substation and flows northerly across the site. Not associated with a wetland on-site. Water striders observed.
S02	S02RK	Perennial	4	4	Sand, stone	MDEP, Corps	Located east of the Albion Road Substation and flows northerly through the western side of wetland W09. Water striders observed.
S03	S03RK	Intermittent	4	4	Stone, gravel	MDEP, Corps	Located east of the Albion Road Substation and flows northerly across a proposed access road into wetland W19.
S04	S04RK	Pond	50	40	Muck, sand	MDEP, Corps	Apparent man-made pond adjacent to the east side of Richards Road. Located in wetland W23 (01RKJ).
S05	S01CF	Perennial	12-24	8-16	Boulder, cobble, gravel, sand	MDEP, Corps	Located east of Richards Road and flows northeast across survey area within wetland W27. Fish and invertebrates were observed within the watercourse at the time of the survey.
S06	S02CF	Intermittent	4-8	3-6	Cobble, gravel, sand	MDEP, Corps	Located east of East Benton Road along proposed access road. Watercourse flows north across survey area from wetland W36 (01CFR) through wetland (01CFS). Invertebrates observed at time of survey.
S07	none	Perennial	50-60	50-60	Silt, boulder	MDEP, Corps	Fifteenmile Stream flows west to east across site through wetlands W42 and W43. Fish observed.
S08	S04RK S03CF	Perennial	5-12	8	Sand, stone, gravel, muck	MDEP, Corps	Begins as a culvert outlet on the north side of Bog Road, flowing southerly within wetland W43. Becomes diffuse in open water habitat along Fifteenmile Stream. Water striders observed.
S09	S03CF	Perennial	6-8	4-6	Muck, gravel, boulder	MDEP, Corps	Perennial stream segment flowing south from ponded area created by beaver activity within watercourse. Open water and emergent wetland W50 extends northeast off-site.
S10	S05RK	Perennial	8	5	Silt, stone	MDEP, Corps	Located southeast of Unity Road and crosses under the existing timber harvest road, and through a proposed access road area. Flows southerly from a large open water/emergent marsh wetland through wetland W57 and into a culvert inlet. The culvert outlet is watercourse S11 and wetland W56. Water striders observed.
S11	S06RK S07RK	Perennial	8-10	4-5	Silt, stone, muck	MDEP, Corps	Located southeast of the Unity Road and crosses under the existing timber harvest road, and through a proposed access road area. Flows southerly from a culvert outlet. The culvert inlet is watercourse S10 and the stream flows through wetland W56. Water striders and fish observed.

Table 3. Summary of Potential Vernal Pools

Figure Identifier	Potential Vernal Pool Field Designation	MDEP Significant Vernal Pool	Origin	Hydrology	Additional Comments
PVP01	PVP02CF	No	Non-natural	Ephemeral	Depression created by logging activities. Located north of Albion Road along proposed access road in wetland W12.
PVP02	PVP01CF	No	Non-natural	Ephemeral	Depression created by logging activities. Located north of Albion Road along proposed access road in wetland W14.
PSVP03	PSVP01RK	Potentially	Natural	Ephemeral	Natural depression located in forested and scrub shrub wetland W32. Considered potentially significant due to natural origin, and ponded water and frog species were observed during the survey.
PVP04	PVP03CF	No	Non-natural	Ephemeral	Impounded by field road. Located within wetland W37 along proposed access road off East Benton Road.
PSVP06	PSVP04RK	Potentially	Natural	Ephemeral	Natural, isolated wetland depression situated. Located south of Unity Road. Also mapped in wetland W51. Considered potentially significant due to natural origin.
PSVP07	PSVP02RK	Potentially	Natural	Ephemeral	Natural, isolated wetland depression situated in forested upland. Located adjacent to timber harvest road in a potential access area south of Unity Road. The pool basin is predominantly devoid of vegetation. Also mapped as wetland W54. Considered potentially significant due to natural origin.
PVP08	PVP03RK	No	Non-natural: borrow pit/excavation	Permanent	Old borrow pit excavation situated in forested upland. Located adjacent to timber harvest road in a potential access area south of Unity Road. Not considered potentially significant due to non-natural origin.
PSVP09	PSVP05RK	Potentially	Natural/Modified	Ephemeral	Isolated wetland depression located in wetland W61 that has been modified by logging activities.
PVP10	PVP05CF	No	Non-natural	Ephemeral	Impounded depression next to Unity Road.
PSVP11	PSVP01EB	Potentially	Natural	Ephemeral	Natural depression located in forested wetland W21. Considered potentially significant due to natural origin and ponded water. No inlet or outlet.

4.0 REGULATORY DISCUSSION

4.1 FEDERAL AND STATE WETLANDS AND WATERCOURSES

The Corps and MDEP regulate the wetlands and watercourses (e.g., streams) identified within the Project Site under the provisions of Section 404 of the CWA. The Corps (Federal Register 1982) and the U.S. Environmental Protection Agency (EPA; Federal Register 1980) jointly define wetlands as:

> "*Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas*".

The diagnostic environmental characteristics that are used to identify a wetland are encompassed by a three-factor system: including predominance of hydrophytic vegetation, hydric soil and evidence of wetland hydrology. In Maine, both the Corps and the MDEP utilize this approach to define and identifying wetlands.

4.1.1 Federal Wetland and Watercourse Regulations

On April 21, 2020, the EPA and the Corps published the Navigable Waters Protection Rule to define "waters of the United States" (WoTUS) in the *Federal Register*, which took effect on June 22, 2020. This Rule excludes federal jurisdiction to regulate impact to isolated wetlands, wetlands that do not have a surficial connection to a navigable water (adjacent), or ephemeral watercourses. The Corps regulates dredging or filling of WoTUS, which include Traditional Navigable Waters (TNW) and their tributaries, wetlands abutting TNW and their tributaries, and other waters or wetlands where degradation or destruction could affect interstate or foreign commerce. The Corps issued a GP for the State of Maine that merges the federal and state permit review process for many applications. The delineated wetlands are assumed to be within the Corps jurisdiction however that status can be verified by submitting a formal Jurisdictional Determination to the Corps for individual wetlands.

Under the Corps GP, wetland alterations less than 15,000 square feet (sf) may be eligible for a Corps Category 1 Self Verification Notification Form (SVNF) submittal, provided the project meets the conditions of the GP for SVNF eligibility. If there are wetland impacts and tree clearing is required as part of the project, a Corps Category 2 Pre-Construction Notification (PCN) under the GP will likely be required due to potential impact to northern long-eared bat (*Myotis septentrionalis*), a species listed under the federal Endangered Species Act. Alterations that affect between 15,000 and 43,560 sf (1 acre) of freshwater wetlands are typically eligible for a Corps PCN and require wetland compensation. Projects that do not meet the conditions of the Corps GP may require an Individual Corps Permit.

4.1.2 Maine Wetland and Watercourse Regulations

In Maine, wetlands and waterbodies, as well as other protected natural resources, are regulated by the MDEP under 38 M.R.S.A. §§ 480-A – 480-JJ, the NRPA. Regulated activities include impacts that are in, over, and in some cases adjacent to wetlands, watercourses, and waterbodies. Activities that do not

impact a wetland or that impact less than 4,300 sf of wetland are usually exempt from NRPA Tier permitting requirements. This exemption does not apply if the impact is:

1. In, on, or over a coastal wetland, great pond, river, stream, or brook;
2. Within 25 ft of those resources identified above, or is more than 25 ft and no erosion control is used;
3. In a shoreland zone or a wetland protected by the shoreland zone;
4. Part of a wetland with more than 20,000 sf of open water or emergent vegetation, except artificial impoundments;
5. In a peatland;
6. Part of a larger project; or
7. In Significant Wildlife Habitat.

Typically, projects with cumulative impacts to freshwater wetlands between 4,300 but less 15,000 sf are eligible for review under the NRPA Tier 1 process. Alterations that affect between 15,000 and 43,560 sf (1 acre) of freshwater wetlands are eligible for the NRPA Tier 2 review process, and Projects within this Tier that result in direct wetland impact typically require wetland compensation. Direct impacts do not include shading or indirect impacts. Cumulative freshwater wetland impacts that exceed 1 acre typically require a NRPA Tier 3 review. Impacts to WoSS, rivers, streams and brooks, great ponds, and Significant Wildlife Habitat typically require an Individual NRPA Permit.

4.2 FEDERAL AND STATE VERNAL POOLS

Maine NRPA Chapter 335, Significant Wildlife Habitat, regulates Significant Vernal Pools (SVPs) as Significant Wildlife Habitat. Chapter 335 details specific definitions and standards regarding characterization and protection of SVPs in Maine. Based on KA's data, there are two SVPs, SVP03 and SVP05, located within the Project Site. Four Potentially Significant Vernal Pools (PSVP03, PSVP06, PSVP07, and PSVP09) were identified by Stantec within the Project Site. All SVPs and PSVPs are preliminarily presumed to be SVPs and portions of the associated 250-foot Critical Terrestrial Habitat, as defined by the NRPA, are located within the Project Site. Final determination of significance status will require formal vernal pool season surveys for the PSVPs and submission of Maine State Vernal Pool Assessment forms to MDIFW (PSVPs and SVPs).

Certain development projects in Maine may also be regulated under Chapter 375, Site Location of Development (Site Law). Under Site Law, MDEP may regulate vernal pools that are ecologically significant on a landscape level but do not meet the definition of a SVP. Under some circumstances, MDEP will review and possibly limit development within or beyond 250 feet of these high-functioning vernal pools.

The Corps update to the Maine GP, which went into effect in October 2020, indicates that the Corps would only regulate impacts to vernal pools if the pool is (a) located within a jurisdictional wetland and (b) there is a discharge of dredged or fill material proposed for the vernal pool depression. Only in the case that both (a) and (b) are met would compensatory mitigation potentially be required.

Based on Stantec's vernal pool survey, the identified potential vernal pools meet the Corps' definition of a vernal pool. Pending seasonally appropriate vernal pool surveys, the Corps may regulate impacts to

these potential vernal pools if the vernal pool depression is impacted by dredge or fill activities and the wetland is determined to be a WoTUS.

4.3 LOCAL REGULATIONS

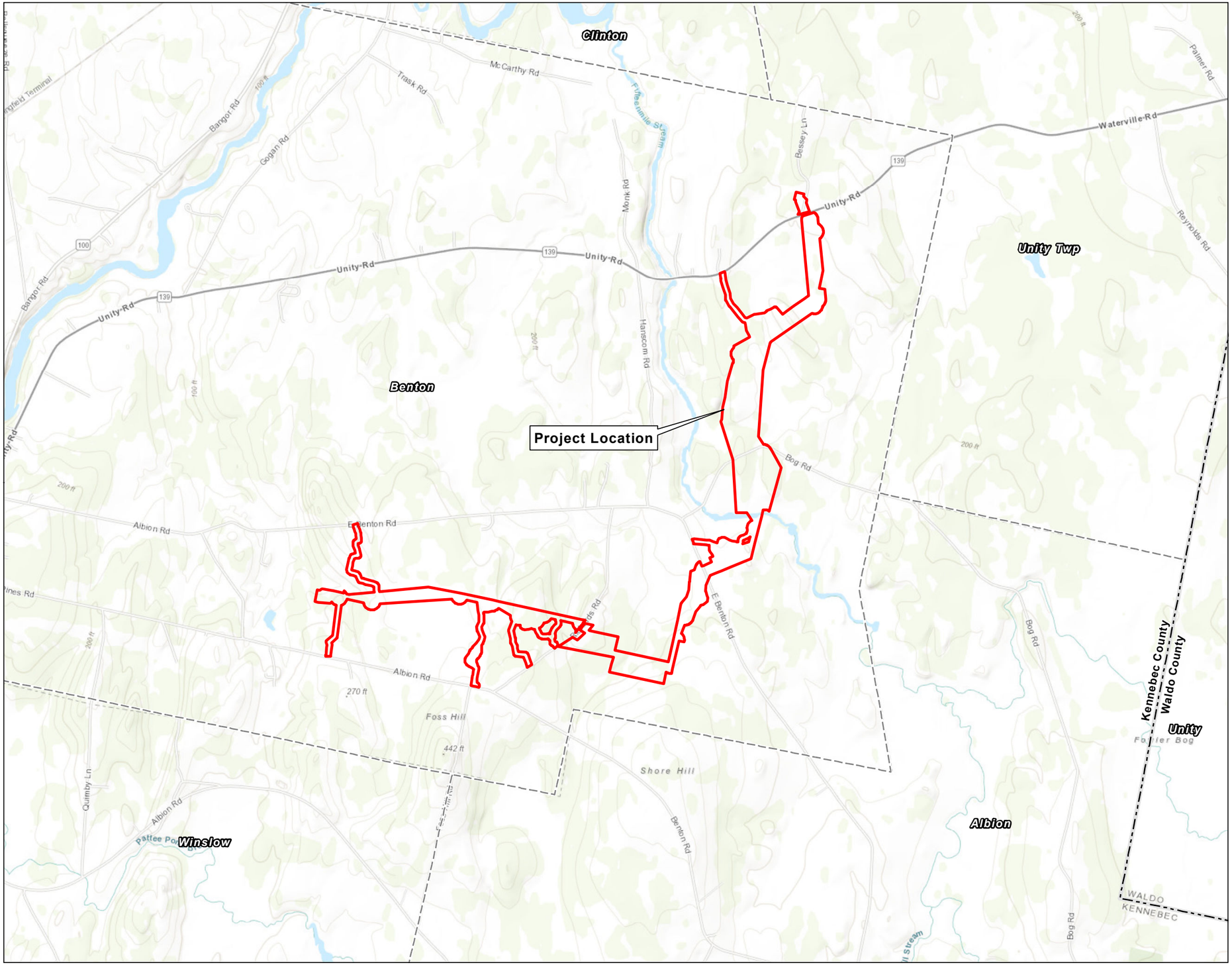
Stantec reviewed the list of ordinances on the municipal website on September 25, 2020 and determined the environmental protection related Town of Benton ordinances is limited to the "Shoreland Zoning Ordinance for the Town of Benton". Watercourses and some wetlands delineated on-site meet the definitions of a "freshwater wetland" and/or "stream" that have a shoreland zone, and therefore, meet the local permitting requirements specific to environmental resources located in mapped shoreland zones.

The Town of Benton Shoreland Zone Ordinance "*applies to all land areas within 250 feet, horizontal distance, of the normal high-water line of great ponds; within 250 feet, horizontal distance, of the normal high-water line of rivers; within 250 feet, horizontal distance, of the upland edge of a freshwater wetland; and within 75 feet, horizontal distance, of the normal high-water line of a stream. This Ordinance also applies to any structure built on, over or abutting a dock, wharf or pier, or other structure extending or located below the normal high-water line of a water body or within a wetland*."

Transmission lines may be allowable as an "Essential Service". Once a transmission layout is established, Stantec recommends further consultation with the Town Code Enforcement Officer to determine what restrictions would be placed on the proposed development within the Project Site.

APPENDICES

APPENDIX A FIGURES



Stantec

Legend

- Project Locaton
- Municipal Boundary
- County Boundary

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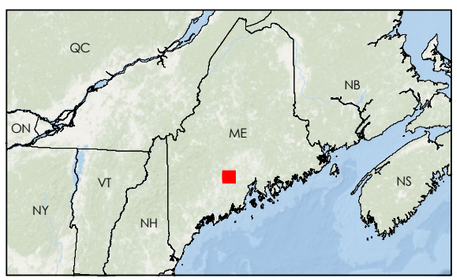
Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. Data Sources: Base features obtained from MEGIS
3. Background: ESRI World Topographic Base Map



Project Location
Benton, Maine

Prepared by GC on 2021-11-30
Reviewed by EB on 2021-11-30

Client/Project
195601453
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

Figure No.
1

Title
USGS Location Map

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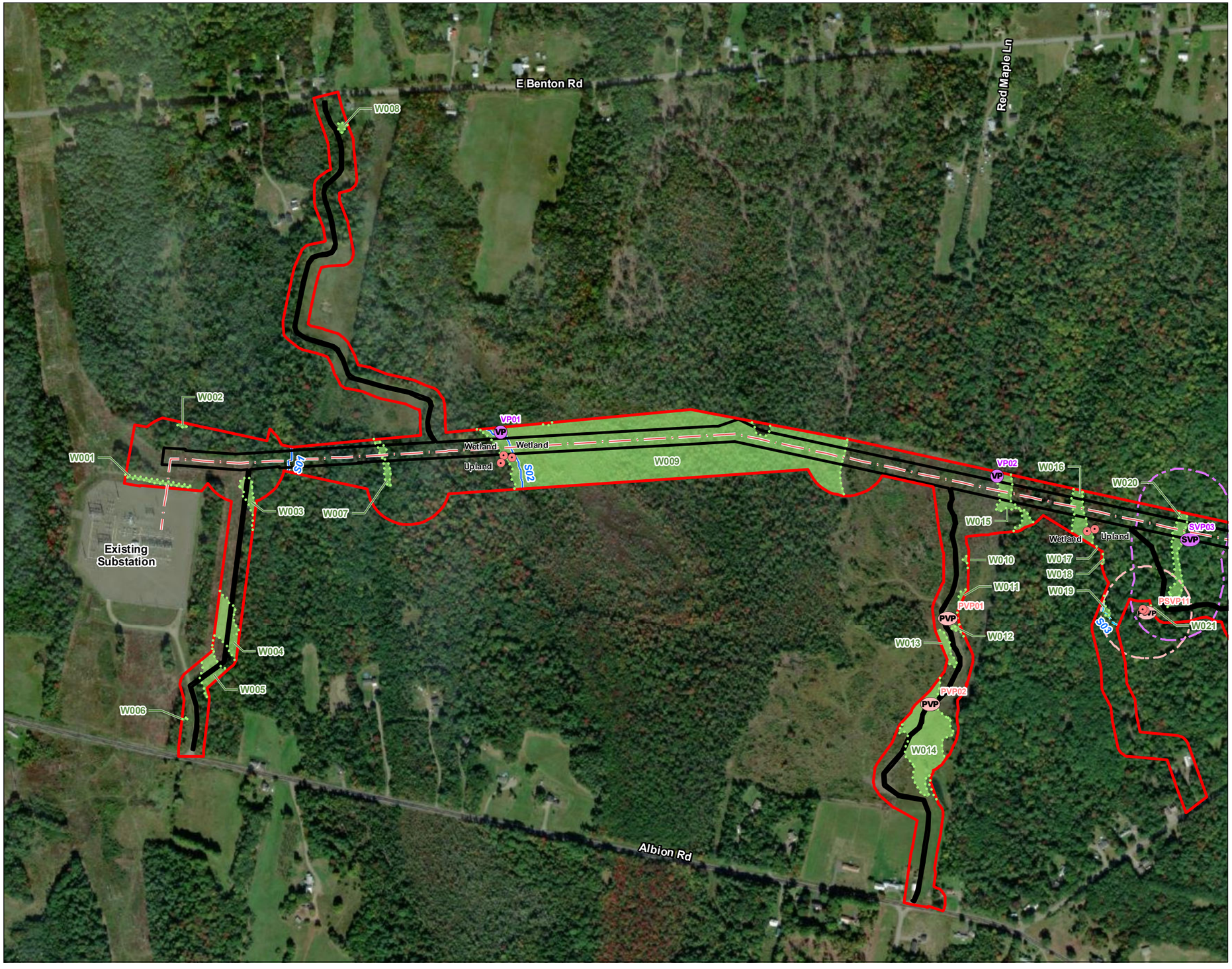

Stantec

Legend

- Army Corps Location Plot
- Potential Significant Vernal Pool
- Potential Vernal Pool
- Delineated Intermittent Stream
- Delineated Perennial Stream
- 250' Significant Vernal Pool Critical Terrestrial Habtat
- 250' Potential Significant Vernal Pool Critical Terrestrial Habtat
- Delineated Wetland
- Open Water Feature
- Delineation Limits
- Limit of Disturbance
- Overhead Transmission Line

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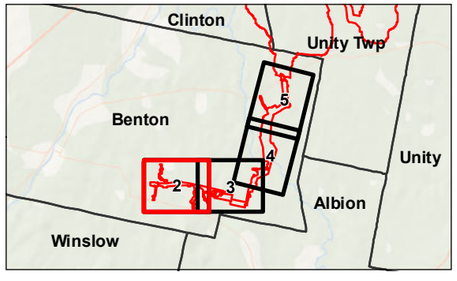
Notes

1. Wetland boundaries delineated in accordance with USACE Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regional Supplement (Version 2.0).
2. Wetland boundaries and streams were located utilizing a Trimble GeoExplorer Series Receiver. Expected accuracy of GPS data is within 1 meter of actual position.
3. Coordinate System: NAD 1983 UTM Zone 19N FT
4. Data Sources: Base features obtained from MEGIS.
5. Vernal pool data collected by Kleinschmidt and Associates, 2019 and 2020.
6. Background: Aerial imagery provided by ArcGIS Online World Imagery Mapping Services.



Project Location
Benton, Maine

Prepared by GC on 2021-12-16
Reviewed by EB on 2021-12-16

Client/Project
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

195601453

Figure No.
2 of 5

Title
Wetland and Watercourse Delineation and Vernal Pool Survey Results

V:\1956\active\195601453\03_data\gis_cad\gis\MXD\sTlineWetland\s01453_01_ThreeCornersWetDelin.mxd Revised: 2021-12-29 By: gcarpentier

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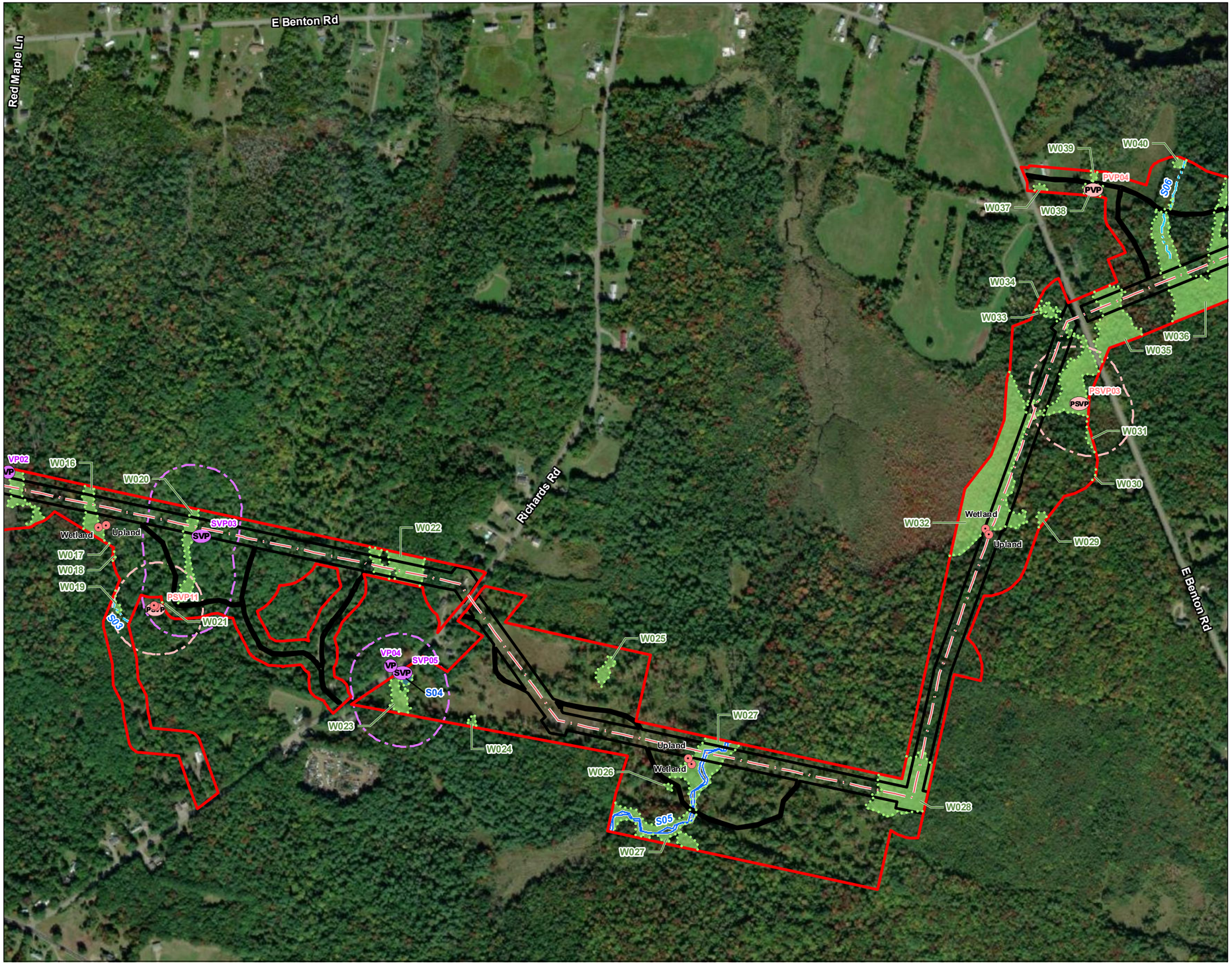

Stantec

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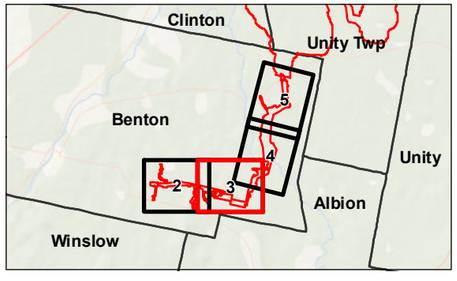

Project Location
Benton, Maine

Prepared by GC on 2021-12-16
Reviewed by EB on 2021-12-16

Client/Project
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

195601453

Figure No.
3 of 5

Title
Wetland and Watercourse Delineation and Vernal Pool Survey Results

V:\1956\active\195601453\03_data\gis_cad\gis\MXD\sITlineWetland\s01453_01_ThreeCornersWetDelin.mxd Revised: 2021-12-29 By: gcarpentier

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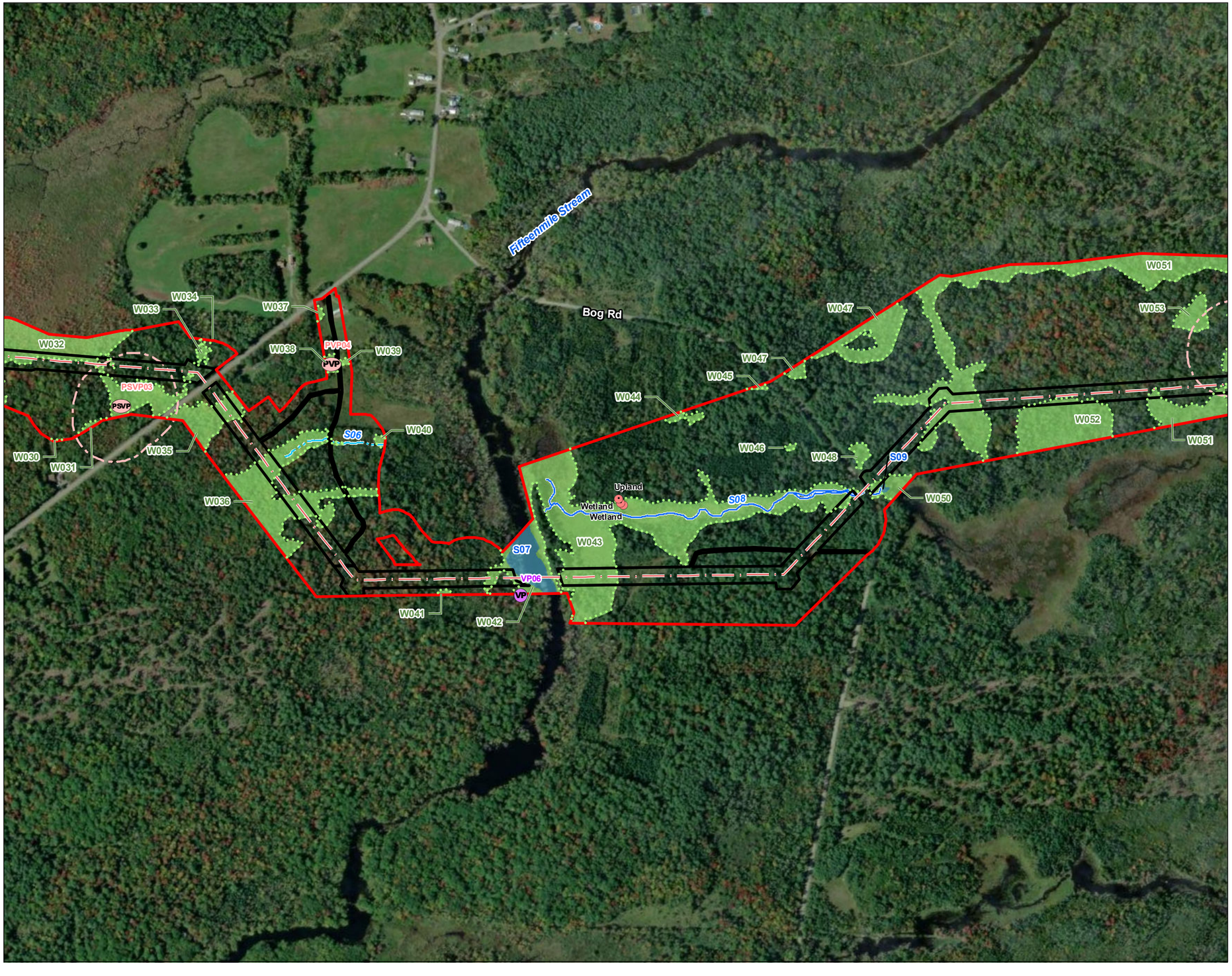

Stantec

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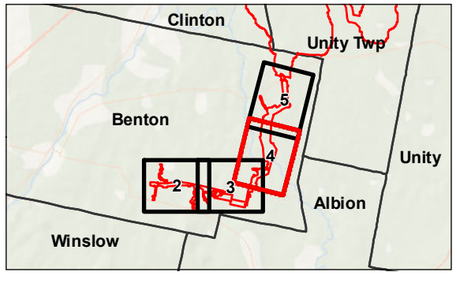
5. Vernal pool data collected by Kleinschmidt and Associates, 2019 and 2020.
6. Background: Aerial imagery provided by ArcGIS Online World Imagery Mapping Services.



Project Location
Benton, Maine

Prepared by GC on 2021-12-16
Reviewed by EB on 2021-12-16

Client/Project
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

195601453

Figure No.
4 of 5

Title
Wetland and Watercourse Delineation and Vernal Pool Survey Results

V:\195601453\active\195601453\03_data\gis_cad\gis\MXDs\ThreeWetlands\01453_01_ThreeCornersWetDelin.mxd Revised: 2021-12-29 By: gcarpentier

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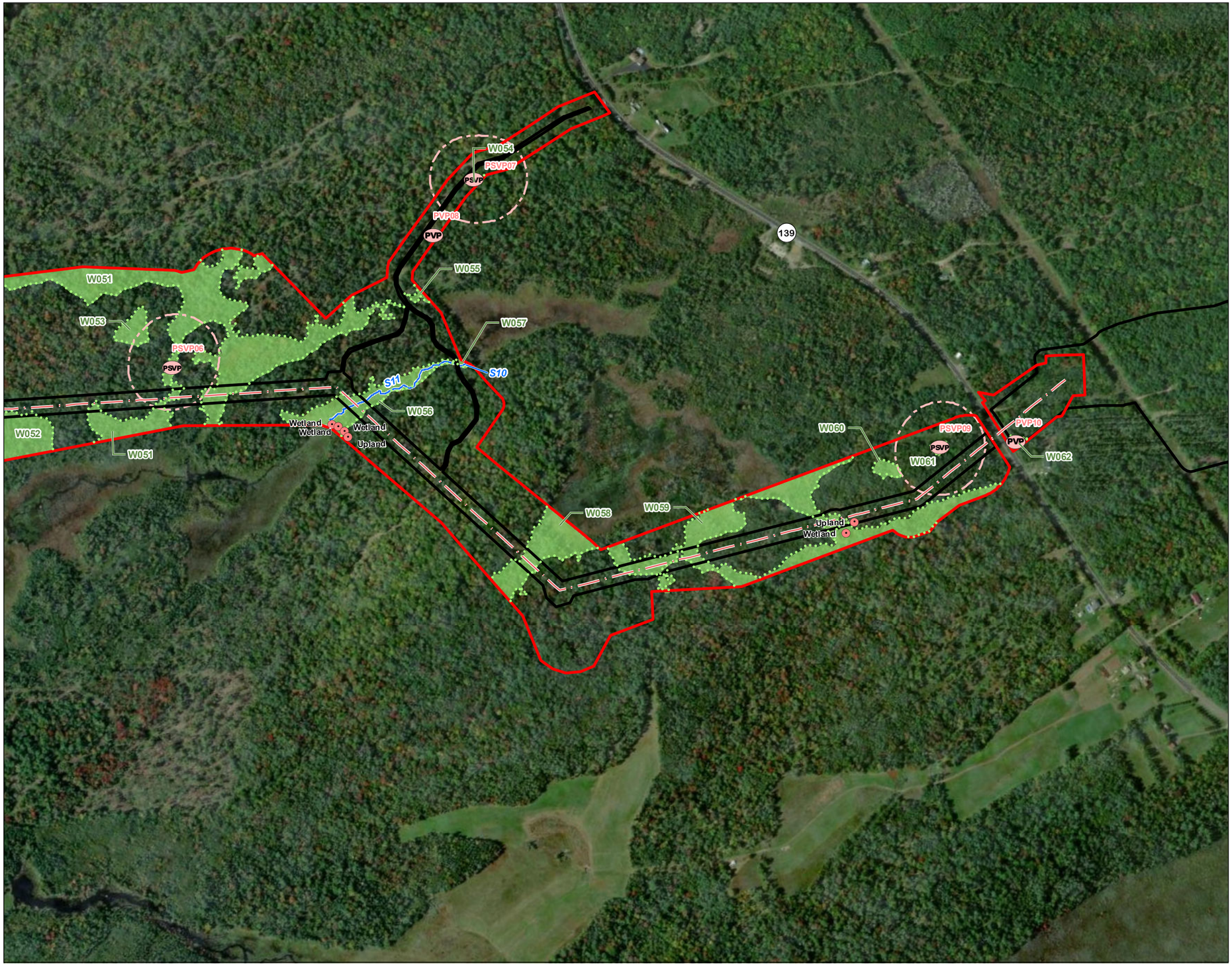


Stantec

Legend

- Army Corps Location Plot
- Potential Significant Vernal Pool
- Potential Vernal Pool
- Delineated Intermittent Stream
- Delineated Perennial Stream
- 250' Significant Vernal Pool Critical Terrestrial Habtat
- 250' Potential Significant Vernal Pool Critical Terrestrial Habtat
- Delineated Wetland
- Open Water Feature
- Delineation Limits
- Limit of Disturbance
- Overhead Transmission Line

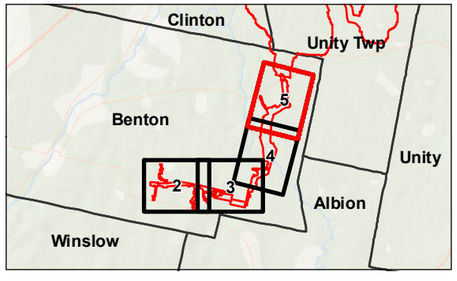
N

0 300 600 Feet

(At original document size of 11x17)
1:7,200

Notes

1. Wetland boundaries delineated in accordance with USACE Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regional Supplement (Version 2.0).
2. Wetland boundaries and streams were located utilizing a Trimble GeoExplorer Series Receiver. Expected accuracy of GPS data is within 1 meter of actual position.
3. Coordinate System: NAD 1983 UTM Zone 19N FT
4. Data Sources: Base features obtained from MEGIS.
5. Vernal pool data collected by Kleinschmidt and Associates, 2019 and 2020.
6. Background: Aerial imagery provided by ArcGIS Online World Imagery Mapping Services.



Project Location
Benton, Maine

Prepared by GC on 2021-12-16
Reviewed by EB on 2021-12-16

Client/Project
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

195601453

Figure No.
5 of 5

Title
Wetland and Watercourse Delineation and Vernal Pool Survey Results

V:\1956\active\195601453\03_data\gis_cad\gis\MXD\sTlineWetland\s01453_01_ThreeCornersWetDelin.mxd Revised: 2021-12-29 By: gcarpentier

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 responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no 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 Local relief (concave, convex, none): Concave Slope (%) 3 - 8

Subregion (LRR or MLRA): LRR R Lat: 44.575404 Long: -69.500771 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present? Yes No X	if yes, optional Wetland Site ID:
Wetland Hydrology Present? Yes No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsley Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible in Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Surface Water Present? Yes No X Depth (inches)	Wetland Hydrology Present? Yes No X
Water Table Present? Yes No X Depth (inches)	
Saturation Present? Yes No X Depth (inches)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W09**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	50	X	FAC
Acer rubrum	30	X	FAC
Thuja occidentalis	10		FACW
Betula alleghaniensis	10		FAC
	100	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	25	X	FAC
Betula alleghaniensis	2		FAC
	27	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Maianthemum canadense	5	X	FACU
Aralia nudicaulis	3	X	FACU
Dendrolycopodium obscurum	2	X	FACU
	10	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	10	x 2	20	
FAC species	117	x 3	351	
FACU species	10	x 4	40	
UPL species	0	x 5	0	
Column Totals	137	(A)	411	(B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Upland-W09**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-2	7.5YR 2.5/2	100					Peat	
2-3	7.5YR 5/2	100					Sandy Loam	Stony
3-12	7.5YR 3/4	100					Sandy Loam	Stony
12-16	10YR 4/6	100					Sandy Loam	Stony
16-18	2.5Y 4/4	100					Sandy Loam	Stony
18-20	2.5Y 4/4	98	10YR 4/6	2	C	M	Sandy Loam	Stony

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/27/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W09

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.575502 Long: -69.500534 Datum: NAD83

Soil Map Unit Name: NWI Classification: PEM

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present? Yes X No	if yes, optional Wetland Site ID: W10
Wetland Hydrology Present? Yes X No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsley Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- X Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible in Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Surface Water Present? Yes No X Depth (inches)	Wetland Hydrology Present? Yes X No
Water Table Present? Yes No X Depth (inches)	
Saturation Present? Yes X No Depth (inches) 0	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W09**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	10	X	FAC
Fraxinus nigra	2		FACW
	12	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ilex verticillata	5	X	FACW
	5	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Spiraea latifolia	25	X	FACW
Solidago gigantea	25	X	FACW
Carex trisperma	20	X	OBL
Spiraea tomentosa	20	X	FACW
Glyceria striata	15		OBL
Thelypteris palustris	10		FACW
Carex lurida	3		OBL
Scirpus cyperinus	3		OBL
Typha latifolia	2		OBL
	123	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	43	x 1	43	
FACW species	87	x 2	174	
FAC species	10	x 3	30	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	140	(A)	247	(B)

Prevalence Index = B/A = 1.76

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-W09**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-5	10YR 2.5/1	100					Muck	Very Stony
5-14	2.5Y 4/2	95	10YR 4/6	5	C	M	Sandy Loam	Very Stony

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Stony

Depth (inches): 14

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/27/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W09

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Footslope Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.575534 Long: -69.500712 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present? Yes X No	if yes, optional Wetland Site ID: W10
Wetland Hydrology Present? Yes X No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsley Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- X Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible in Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Surface Water Present? Yes No X Depth (inches)	Wetland Hydrology Present? Yes X No
Water Table Present? Yes No X Depth (inches)	
Saturation Present? Yes X No Depth (inches) 0	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W09**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	50	X	FAC
Fraxinus nigra	15	X	FACW
Acer rubrum	5		FAC
Betula alleghaniensis	5		FAC
	75	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	15	X	FAC
Cornus alternifolia	5	X	FACU
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago rugosa	20	X	FAC
Rubus hispidus	15	X	FACW
Coptis trifolia	15	X	FACW
Osmunda spectabilis	10		OBL
Spiraea latifolia	2		FACW
	62	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	47	x 2	94	
FAC species	95	x 3	285	
FACU species	5	x 4	20	
UPL species	0	x 5	0	
Column Totals	157	(A)	409	(B)

Prevalence Index = B/A = 2.61

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-W09**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-5	10YR 2.5/1	100					Muck	Very Stony
5-14	2.5Y 4/2	95	10YR 4/6	5	C	M	Sandy Loam	Very Stony

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock/Till

Depth (inches): 14

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/28/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Upland-W16

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Convex Slope (%) 8 - 15

Subregion (LRR or MLRA): LRR R Lat: 44.574370 Long: -69.487125 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes ____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsley Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Water Table Present?	Yes ____	No X	Depth (inches) ____	
Saturation Present?	Yes ____	No X	Depth (inches) ____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W16**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	45	X	FAC
Acer rubrum	25	X	FAC
Fagus grandifolia	20	X	FACU
Populus tremuloides	10		FACU
	100	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	25	X	FAC
Fagus grandifolia	10	X	FACU
	35	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Maianthemum canadense	4	X	FACU
Aralia nudicaulis	3	X	FACU
Maianthemum racemosum	3	X	FACU
	10	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	95	x 3	285	
FACU species	50	x 4	200	
UPL species	0	x 5	0	
Column Totals	145	(A)	485	(B)

Prevalence Index = B/A = 3.34

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test For Hydrophytic Vegetation

_____ 2- Dominance Test is > 50%

_____ 3- Prevalence Index is =< 3.0

_____ 4- Morphological Adaptations

_____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Upland-W16**

Depth (inches)	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-2	7.5YR 2.5/2	100					Peat	
2-3	7.5YR 3/4	100					Fine Sandy Loam	
3-14	7.5YR 4/4	100					Fine Sandy Loam	
14-24	10YR 4/6	100					Sandy Loam	
24-30	10YR 4/6	100					Loamy Sand	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/28/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W16

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Convex Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.574336 Long: -69.487306 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W15
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

	Surface Water (A1)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Fauna (B13)	X	Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)	X	Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)	X	Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
X	Sparsley Vegetated Concave Surface (B8)			X	Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Surface Water Present? Yes No X Depth (inches)

Water Table Present? Yes X No Depth (inches) 0

Saturation Present? Yes X No Depth (inches) 0

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W16**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Betula alleghaniensis	30	X	FAC
Abies balsamea	25	X	FAC
Fraxinus nigra	15		FACW
Acer rubrum	15		FAC
Thuja occidentalis	10		FACW
	95	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	25	X	FAC
Thuja occidentalis	5		FACW
Betula alleghaniensis	3		FAC
Fraxinus nigra	2		FACW
	35	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex trisperma	50	X	OBL
Rubus pubescens	15		FACW
Osmundastrum cinnamomeum	13		FACW
Thelypteris palustris	7		FACW
Onoclea sensibilis	5		FACW
Carex lurida	3		OBL
Equisetum sylvaticum	2		FACW
	95	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	53	x 1	53	
FACW species	74	x 2	148	
FAC species	98	x 3	294	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	225	(A)	495	(B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-W16**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-8	7.5YR 2.5/1	100					Muck	
8-11	2.5Y 5/1	100					Loamy Sand	
11-24	5Y 5/1	100					Loamy Sand	
24-30	5Y 5/1	100					Sand	

Hydric Soil Indicators:

- ___ Histosol (A1)
- X Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/28/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Upland-W27

Investigator(s): Charles Ferris Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Convex Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR R Lat: 44.570590 Long: -69.473700 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	if yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsley Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible in Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Surface Water Present?	Yes	No X	Depth (inches)	
Water Table Present?	Yes	No X	Depth (inches)	Wetland Hydrology Present? Yes No X
Saturation Present?	Yes	No X	Depth (inches)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W27**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	45	X	FAC
Abies balsamea	15	X	FAC
	60	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	30	X	FAC
Acer rubrum	15	X	FAC
	45	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Dennstaedtia punctilobula	40	X	UPL
	40	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	105	x 3	315	
FACU species	0	x 4	0	
UPL species	40	x 5	200	
Column Totals	145	(A)	515	(B)
Prevalence Index = B/A =			3.55	

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [ ] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Upland-W27**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-10	10YR 5/4	100					Fine Sandy Loam	
10-20	10YR 5/3	100					Fine Sandy Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/28/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W27

Investigator(s): Charles Ferris Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%) 1 - 1

Subregion (LRR or MLRA): LRR R Lat: 44.570500 Long: -69.473600 Datum: NAD83

Soil Map Unit Name: NWI Classification: PSS

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present? Yes X No	if yes, optional Wetland Site ID: W22
Wetland Hydrology Present? Yes X No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- X Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsley Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible in Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Surface Water Present? Yes No X Depth (inches)	Wetland Hydrology Present? Yes X No
Water Table Present? Yes No X Depth (inches)	
Saturation Present? Yes X No Depth (inches) 0	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W27**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	15	X	FAC
Abies balsamea	10	X	FAC
	25	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alnus incana	40	X	FACW
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex lacustris	90	X	OBL
Lycopus americanus	3		OBL
	93	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	93	x 1	93	
FACW species	40	x 2	80	
FAC species	25	x 3	75	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	158	(A)	248	(B)

Prevalence Index = B/A = 1.57

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-W27**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-4	10YR 2/1	100					Loam	
4-12	10YR 5/2	95	7.5YR 5/6	5	RM	PL	Fine Sandy Loam	
12-20	10Y 5/10Y	90	7.5YR 5/6	10	C	M	Sandy Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/29/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Upland-W32

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Linear Slope (%) 3 - 8

Subregion (LRR or MLRA): LRR R Lat: 45.574321 Long: -69.466865 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	if yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsley Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible in Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Surface Water Present?	Yes	No X	Depth (inches)
Water Table Present?	Yes	No X	Depth (inches)
Saturation Present?	Yes	No X	Depth (inches)

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W32**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Tsuga canadensis	30	X	FACU
Thuja occidentalis	25	X	FACW
Betula alleghaniensis	20	X	FAC
Abies balsamea	10		FAC
Acer rubrum	10		FAC
	95	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	40	X	FAC
Betula alleghaniensis	5		FAC
	45	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Coptis trifolia	30	X	FACW
Maianthemum canadense	25	X	FACU
Trientalis borealis	15	X	FAC
Aralia nudicaulis	5		FACU
	75	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	55	x 2	110	
FAC species	100	x 3	300	
FACU species	60	x 4	240	
UPL species	0	x 5	0	
Column Totals	215	(A)	650	(B)

Prevalence Index = B/A = 3.02

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [ ] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Upland-W32**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-1	7.5YR 2.5/2	100					Peat	
1-2	10YR 5/2	100					Sandy Loam	Very Stony
2-8	10YR 4/4	100					Sandy Loam	Very Stony
8-12	2.5Y 4/4	95	2.5Y 5/2	5	D	M	Sandy Loam	Very Stony

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/29/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W32

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Footslope Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.574401 Long: -69.466934 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W24
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

Surface Water (A1)	Water-Stained Leaves (B9)	
X High Water Table (A2)	Aquatic Fauna (B13)	
X Saturation (A3)	Marl Deposits (B15)	
Water Marks (B1)	X Hydrogen Sulfide Odor (C1)	
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	
Drift Deposits (B3)	X Presence of Reduced Iron (C4)	
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	
Iron Deposits (B5)	Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	
Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

Surface Soil Cracks (B6)	
Drainage Patterns (B10)	
X Moss Trim Lines (B16)	
Dry-Season Water Table (C2)	
Crayfish Burrows (C8)	
X Saturation Visible in Aerial Imagery (C9)	
Stunted or Stressed Plants (D1)	
X Geomorphic Position (D2)	
X Shallow Aquitard (D3)	
X Microtopographic Relief (D4)	
X FAC-Neutral Test (D5)	

Surface Water Present?	Yes	No X	Depth (inches)
Water Table Present?	Yes X	No	Depth (inches) 0
Saturation Present?	Yes X	No	Depth (inches) 0

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W32**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Thuja occidentalis	45	X	FACW
Fraxinus nigra	25	X	FACW
Betula alleghaniensis	20	X	FAC
	90	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alnus incana	15	X	FACW
	15	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Onoclea sensibilis	35	X	FACW
Osmunda claytoniana	25	X	FAC
Equisetum sylvaticum	15		FACW
Carex trisperma	10		OBL
Lycopus uniflorus	10		OBL
Glyceria striata	3		OBL
Lysimachia terrestris	2		OBL
	100	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	25	x 1	25	
FACW species	135	x 2	270	
FAC species	45	x 3	135	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	205	(A)	430	(B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-W32**

Depth (inches)	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Type	Loc	Texture	Remarks
0-8	7.5YR 2.5/1	100					Muck	
8-12	5G 5/1	100					Silt Loam	
12-16	5GY 5/1	100					Loamy Fine Sand	
16-20	5GY 5/1	100					Silty Clay Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- X Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/29/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Upland-W43

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Linear Slope (%) 3 - 8

Subregion (LRR or MLRA): LRR R Lat: 44.583980 Long: -69.459841 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	if yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsley Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible in Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Surface Water Present?	Yes	No X	Depth (inches)	
Water Table Present?	Yes	No X	Depth (inches)	Wetland Hydrology Present? Yes No X
Saturation Present?	Yes	No X	Depth (inches)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W43**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	50	X	FAC
Pinus strobus	35	X	FACU
Prunus serotina	5		FACU
Acer rubrum	5		FAC
	95	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	5	X	FAC
	5	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Veronica officinalis	8	X	FACU
Maianthemum canadense	5	X	FACU
Acer rubrum	2		FAC
	15	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	62	x 3	186	
FACU species	53	x 4	212	
UPL species	0	x 5	0	
Column Totals	115	(A)	398	(B)

Prevalence Index = B/A = 3.46

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test For Hydrophytic Vegetation

_____ 2- Dominance Test is > 50%

_____ 3- Prevalence Index is =< 3.0

_____ 4- Morphological Adaptations

_____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Upland-W43**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-1	10YR 2.5/1	100					Peat	
1-8	2.5Y 5/3	100					Silt Loam	
8-14	5Y 6/2	95	2.5Y 4/6	5	C	M	Silt Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Bedrock

Depth (inches): 14

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/29/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W43

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.584041 Long: -69.459674 Datum: NAD83

Soil Map Unit Name: NWI Classification: PEM

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W35
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Fauna (B13)	X	Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)	X	Presence of Reduced Iron (C4)	X	Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
X	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)	X	Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
				X	FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X No	Depth (inches) 2
Water Table Present?	Yes X No	Depth (inches) 0
Saturation Present?	Yes X No	Depth (inches) 0

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W43**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Betula populifolia	10	X	FAC
Abies balsamea	10	X	FAC
	20	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alnus incana	10	X	FACW
	10	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Equisetum laevigatum	40	X	FACW
Carex vesicaria	40	X	OBL
Dulichium arundinaceum	30	X	OBL
Pontederia cordata	15		OBL
Typha latifolia	10		OBL
Carex lurida	10		OBL
	145	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	105	x 1	105	
FACW species	50	x 2	100	
FAC species	20	x 3	60	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	175	(A)	265	(B)

Prevalence Index = B/A = 1.51

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-W43**

Depth (inches)	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-14	7.5YR 2.5/1	100					Muck	
14-20	10Y 5/1	100					Silty Clay Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- X Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/29/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W43

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.584003 Long: -69.460418 Datum: NAD83

Soil Map Unit Name: NWI Classification: PSS

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W35
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

Surface Water (A1)	Water-Stained Leaves (B9)	
X High Water Table (A2)	Aquatic Fauna (B13)	
X Saturation (A3)	Marl Deposits (B15)	
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	
Drift Deposits (B3)	X Presence of Reduced Iron (C4)	
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	
Iron Deposits (B5)	Thin Muck Surface (C7)	
X Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	
Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

Surface Soil Cracks (B6)	
X Drainage Patterns (B10)	
Moss Trim Lines (B16)	
Dry-Season Water Table (C2)	
Crayfish Burrows (C8)	
X Saturation Visible in Aerial Imagery (C9)	
Stunted or Stressed Plants (D1)	
X Geomorphic Position (D2)	
X Shallow Aquitard (D3)	
Microtopographic Relief (D4)	
X FAC-Neutral Test (D5)	

Surface Water Present?	Yes	No X	Depth (inches)
Water Table Present?	Yes X	No	Depth (inches) 0
Saturation Present?	Yes X	No	Depth (inches) 0

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W43**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	20	X	FAC
Betula populifolia	10	X	FAC
	30	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alnus incana	45	X	FACW
	45	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex vesicaria	75	X	OBL
Urtica dioica	20	X	FAC
Spiraea latifolia	3		FACW
Glyceria canadensis	2		OBL
	100	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	77	x 1	77	
FACW species	48	x 2	96	
FAC species	50	x 3	150	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	175	(A)	323	(B)

Prevalence Index = B/A = 1.85

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-W43**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-3	7.5YR 2.5/1	100					Muck	
3-10	10Y 5/1	100					Silty Clay Loam	
10-15	10Y 5/1	90	10YR 4/6	10	C	M	Silty Clay Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/31/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Upland-W56

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Convex Slope (%) 8 - 15

Subregion (LRR or MLRA): LRR R Lat: 44.596821 Long: -69.456920 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	if yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsley Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible in Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Surface Water Present?	Yes	No X	Depth (inches)	
Water Table Present?	Yes	No X	Depth (inches)	Wetland Hydrology Present? Yes No X
Saturation Present?	Yes	No X	Depth (inches)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W56**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	50	X	FAC
Abies balsamea	40	X	FAC
Populus tremuloides	5		FACU
Betula populifolia	5		FAC
	100	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	15	X	FAC
	15	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Maianthemum canadense	15	X	FACU
Trientalis borealis	15	X	FAC
Parathelypteris noveboracensis	10	X	FAC
Gymnocarpium dryopteris	5		FACU
	45	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	135	x 3	405	
FACU species	25	x 4	100	
UPL species	0	x 5	0	
Column Totals	160	(A)	505	(B)

Prevalence Index = B/A = 3.16

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [ ] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Upland-W56**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-1	7.5YR 2.5/1	100					Peaty Muck	
1-4	7.5YR 5/2	100					Sandy Loam	Very Stony
4-10	10YR 4/3	100					Sandy Loam	Very Stony
10-12	2.5Y 5/3	98	10YR 4/4	2	C	M	Sandy Loam	Very Stony

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/31/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W56

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.596620 Long: -69.457286 Datum: NAD83

Soil Map Unit Name: NWI Classification: PEM

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W50
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

Surface Water (A1)	Water-Stained Leaves (B9)	
X High Water Table (A2)	Aquatic Fauna (B13)	
X Saturation (A3)	Marl Deposits (B15)	
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	
Drift Deposits (B3)	X Presence of Reduced Iron (C4)	
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	
Iron Deposits (B5)	Thin Muck Surface (C7)	
X Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	
Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

Surface Soil Cracks (B6)	
Drainage Patterns (B10)	
Moss Trim Lines (B16)	
X Dry-Season Water Table (C2)	
Crayfish Burrows (C8)	
X Saturation Visible in Aerial Imagery (C9)	
Stunted or Stressed Plants (D1)	
X Geomorphic Position (D2)	
X Shallow Aquitard (D3)	
Microtopographic Relief (D4)	
X FAC-Neutral Test (D5)	

Surface Water Present?	Yes	No X	Depth (inches)
Water Table Present?	Yes X	No	Depth (inches) 0
Saturation Present?	Yes X	No	Depth (inches) 0

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W56**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alnus incana	15	X	FACW
	15 = Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Calamagrostis canadensis	90	X	OBL
Urtica dioica	10		FAC
	100 = Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	90	x 1	90	
FACW species	15	x 2	30	
FAC species	10	x 3	30	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	115	(A)	150	(B)

Prevalence Index = B/A = 1.3

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-W56**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-3	10YR 2.5/1	100					Muck	
3-9	5Y 5/1	90	10YR 4/4	10	C	M	Silt Loam	
9-15	5GY 5/1	80	7.5YR 4/6	20	C	M	Silty Clay Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/31/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W56

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Footslope Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.596799 Long: -69.457070 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W50
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

Surface Water (A1)	X Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required)
High Water Table (A2)	Aquatic Fauna (B13)	Surface Soil Cracks (B6)
X Saturation (A3)	Marl Deposits (B15)	X Drainage Patterns (B10)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	X Dry-Season Water Table (C2)
Drift Deposits (B3)	X Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Saturation Visible in Aerial Imagery (C9)
Iron Deposits (B5)	Thin Muck Surface (C7)	X Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	X Geomorphic Position (D2)
Sparsley Vegetated Concave Surface (B8)		X Shallow Aquitard (D3)
		X Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Surface Water Present?	Yes	No X	Depth (inches)
Water Table Present?	Yes	No X	Depth (inches)
Saturation Present?	Yes X	No	Depth (inches) 0

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W56**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	50	X	FAC
Acer rubrum	30	X	FAC
Betula populifolia	17		FAC
Picea mariana	3		FACW
	100	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	15	X	FAC
Abies balsamea	10	X	FAC
	25	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Maianthemum canadense	25	X	FACU
Cinna latifolia	20	X	FACW
Equisetum sylvaticum	17	X	FACW
Parathelypteris noveboracensis	5		FAC
Trientalis borealis	3		FAC
	70	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	40	x 2	80	
FAC species	130	x 3	390	
FACU species	25	x 4	100	
UPL species	0	x 5	0	
Column Totals	195	(A)	570	(B)

Prevalence Index = B/A = 2.92

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-W56**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-3	7.5YR 2.5/1	100					Loam	Stony
3-9	10YR 5/1	100					Silt Loam	
9-12	5Y 5/1	100					Silty Clay Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/31/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W56

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.596711 Long: -69.456948 Datum: NAD83

Soil Map Unit Name: NWI Classification: PSS

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W50
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

Surface Water (A1)	Water-Stained Leaves (B9)	
X High Water Table (A2)	Aquatic Fauna (B13)	
X Saturation (A3)	Marl Deposits (B15)	
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	
Drift Deposits (B3)	X Presence of Reduced Iron (C4)	
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	
Iron Deposits (B5)	Thin Muck Surface (C7)	
X Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	
Sparsley Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

Surface Soil Cracks (B6)	
Drainage Patterns (B10)	
Moss Trim Lines (B16)	
X Dry-Season Water Table (C2)	
Crayfish Burrows (C8)	
X Saturation Visible in Aerial Imagery (C9)	
Stunted or Stressed Plants (D1)	
X Geomorphic Position (D2)	
X Shallow Aquitard (D3)	
Microtopographic Relief (D4)	
X FAC-Neutral Test (D5)	

Surface Water Present?	Yes	No X	Depth (inches)
Water Table Present?	Yes X	No	Depth (inches) 0
Saturation Present?	Yes X	No	Depth (inches) 0

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W56**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Picea mariana	5	X	FACW
Abies balsamea	5	X	FAC
Acer rubrum	5	X	FAC
	15	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alnus incana	60	X	FACW
	60	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Calamagrostis canadensis	80	X	OBL
Urtica dioica	7		FAC
Lysimachia terrestris	3		OBL
	90	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	83	x 1	83	
FACW species	65	x 2	130	
FAC species	17	x 3	51	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	165	(A)	264	(B)

Prevalence Index = B/A = 1.6

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-W56**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-3	10YR 2/1	100					Muck	
3-6	10YR 2/1	100					Silt Loam	
6-16	5G 5/1	100					Silty Clay Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/31/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Upland-W59

Investigator(s): Charles Ferris Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Convex Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.604514 Long: -69.452082 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	if yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsley Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible in Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Surface Water Present?	Yes	No X	Depth (inches)	
Water Table Present?	Yes	No X	Depth (inches)	Wetland Hydrology Present? Yes No X
Saturation Present?	Yes	No X	Depth (inches)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W59**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	10	X	FAC
Fraxinus pennsylvanica	5	X	FACW
	15	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ostrya virginiana	35	X	FACU
Fraxinus pennsylvanica	25	X	FACW
Lonicera morrowii	15		FACU
Abies balsamea	5		FAC
	80	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	2	X	FACW
Solidago rugosa	2	X	FAC
Polystichum acrostichoides	2	X	FACU
	6	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	32	x 2	64	
FAC species	17	x 3	51	
FACU species	52	x 4	208	
UPL species	0	x 5	0	
Column Totals	101	(A)	323	(B)

Prevalence Index = B/A = 3.2

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [ ] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Upland-W59**

Depth (inches)	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Type	Loc	Texture	Remarks
0-1	10YR 2/2	100					Loam	
1-12	10YR 5/3	100					Fine Sandy Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock/Till

Depth (inches): 12

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/31/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W59

Investigator(s): Charles Ferris Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Concave Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.604336 Long: -69.451880 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W55
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

Surface Water (A1)	X Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required)
High Water Table (A2)	Aquatic Fauna (B13)	Surface Soil Cracks (B6)
X Saturation (A3)	Marl Deposits (B15)	X Drainage Patterns (B10)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Saturation Visible in Aerial Imagery (C9)
Iron Deposits (B5)	Thin Muck Surface (C7)	Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Geomorphic Position (D2)
Sparsley Vegetated Concave Surface (B8)		Shallow Aquitard (D3)
		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Surface Water Present?	Yes	No X	Depth (inches)
Water Table Present?	Yes	No X	Depth (inches)
Saturation Present?	Yes X	No	Depth (inches) 0

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W59**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	20	X	FAC
Abies balsamea	15	X	FAC
Populus tremuloides	10	X	FACU
	45	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	15	X	FAC
Abies balsamea	10	X	FAC
Ostrya virginiana	10	X	FACU
	35	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Onoclea sensibilis	60	X	FACW
Carex crinita	15		OBL
Glyceria striata	15		OBL
	90	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet:

OBL species	30	x 1	30	
FACW species	60	x 2	120	
FAC species	60	x 3	180	
FACU species	20	x 4	80	
UPL species	0	x 5	0	
Column Totals	170	(A)	410	(B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-W59**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-12	10YR 2/2	100					Silt Loam	
12-20	10YR 5/2	95	7.5YR 5/6	5	C	M	Sandy Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Attachment 9-3

Vernal Pool Data Submission to MDIFW

BIODIVERSITY RESEARCH INSTITUTE
innovative wildlife science

January 13, 2022

Maine Department of Inland Fisheries and Wildlife
41 State House Station Lane
Augusta, ME 04333-0041

RE: Three Corners Solar Project Vernal Pool Review

Dear Becca,

Kleinschmidt Associates surveyed the Three Corners Project site (see Attachment A) for vernal pools during appropriate seasonal conditions in the spring of 2019 and 2020. During fieldwork a total of 80 features were identified (Attachment B). Based on field collected data, 39 of these features were determined to be of Unnatural origin (i.e., skidder ruts within wetlands). For these features, which are clearly un-natural ruts, data forms were not completed. However, egg mass counts are included in the summary table (Attachment B) and photographs of these features are provided in the download link. Forty-one (41) of the pools were identified as Natural or Natural Modified in origin and data forms were completed for all of these pools. Eighteen (18) of these Natural or Natural Modified pools were determined to be potentially significant, based on state criteria.

As a result of the survey completed in 2020, 12 of the potentially significant pools dried out prior to July 15, 2020. Dry-out dates are descried in Chapter 335 as a means of determining potential significance. Chapter 335 states that "*When a vernal pool habitat has not previously been determined to be significant, and the department or the Maine Department of Inland Fisheries & Wildlife (IF&W) makes a determination concerning whether the vernal pool habitat is significant, either department may determine that the vernal pool habitat is not significant if (b) The vernal pool is located in southern Maine and dries out after filling and before July 15th.*" Given that these pools had completely dried prior to July 15, 2020 we recommend they be classified as non-significant at this time. In the table in Attachment B, pools that dried prior to July 15, 2020 are identified as "potentially significant".

The remaining six (6) pools we have classified as Significant. Attachment B includes a summary of all potentially significant pools identified.

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Photographs and data forms collected during fieldwork have been provided as a separate download link, due to the number of photographs and file size. At the request of Longroad Energy, Biodiversity Research Institute is submitting the data collected in 2019 and 2020 for the Maine Department of Inland Fisheries and Wildlife to review, as required for review of collected vernal pool data as well as to confirm determinations made in the field. If you have any questions please contact me at steve.knapp@brienvironmental.org or at 207-570-9462.

Respectfully submitted,

Steve Knapp
Senior Environmental Scientist
BRI Environmental

CC: Jason Czapiga

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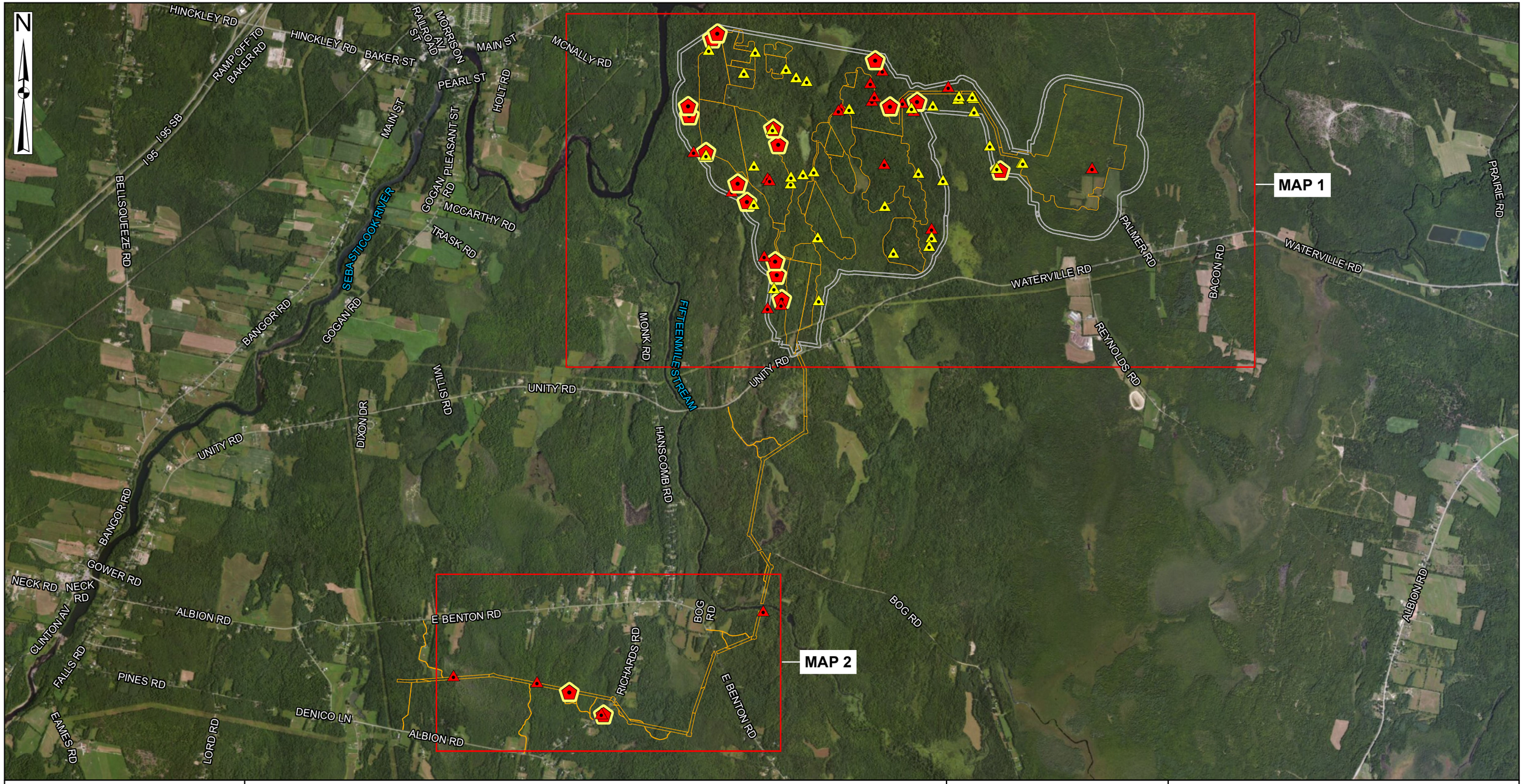
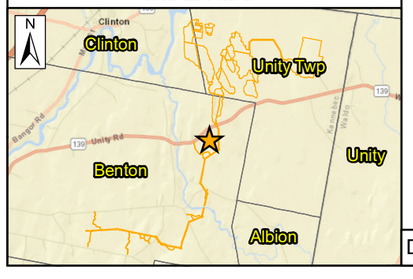
ATTACHMENT A: OVERVIEW MAP



INDEX MAP



LEGEND

- CP - USACE Jurisdictional Pool
- VP - Vernal Pool
- SVP - Potentially Significant Vernal Pool
- Project Survey Boundary
- Project Limit of Disturbance

Data Collected by Kleinschmidt Associates 2019; 2020

bri
Biodiversity Research Institute
innovative wildlife science

longroad ENERGY

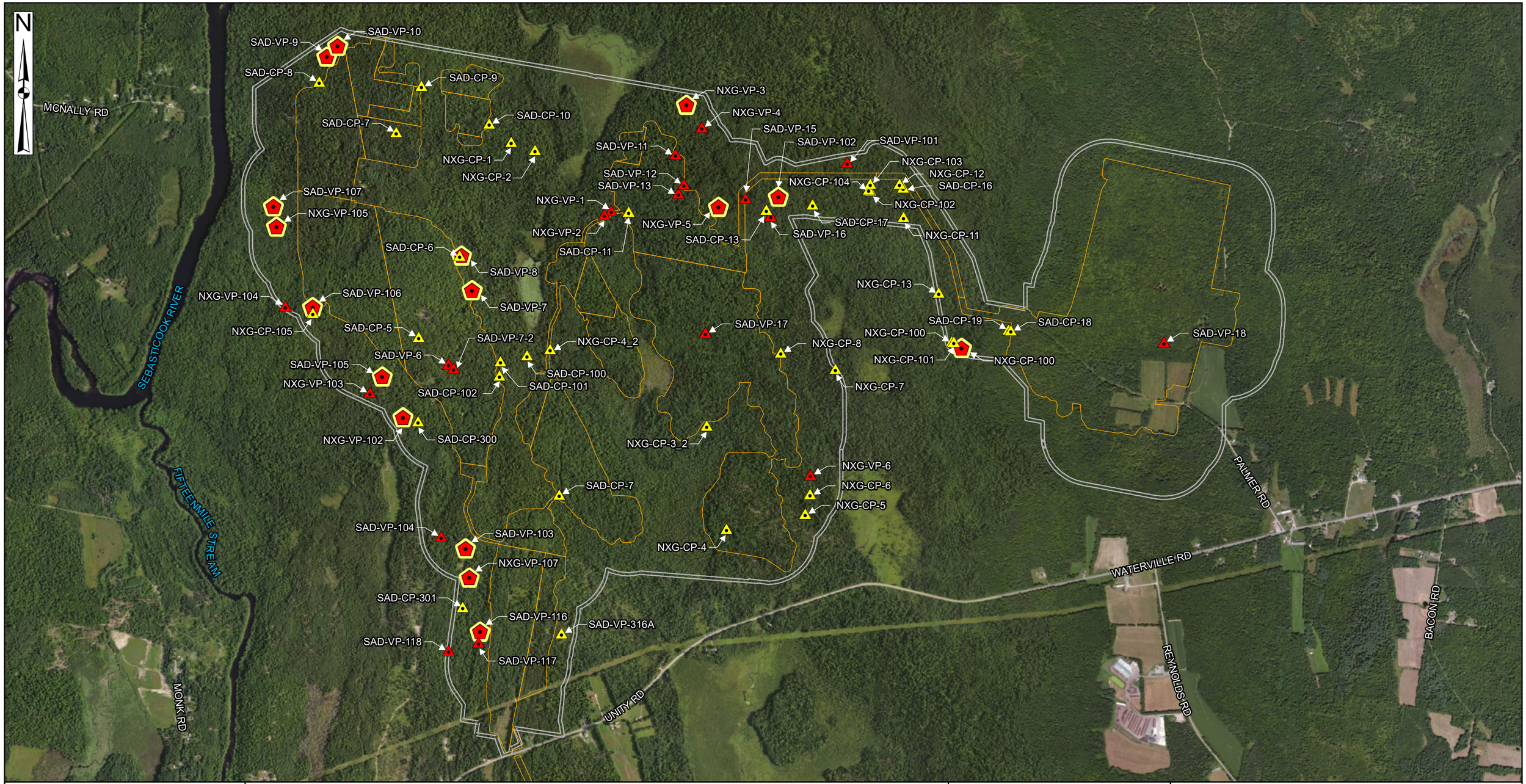
SCALE:

0 3,300 6,600 Feet

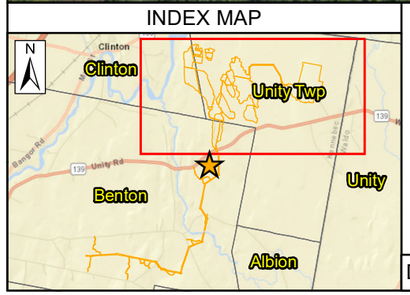
1 inch = 3,300 feet

VERNAL POOL MAP KEY
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

JANUARY 12, 2022



INDEX MAP



LEGEND

- CP - USACE Jurisdictional Pool
- VP - Vernal Pool
- SVP - Potentially Significant Vernal Pool
- Project Survey Boundary
- Project Limit of Disturbance

Data Collected by Kleinschmidt Associates 2019; 2020

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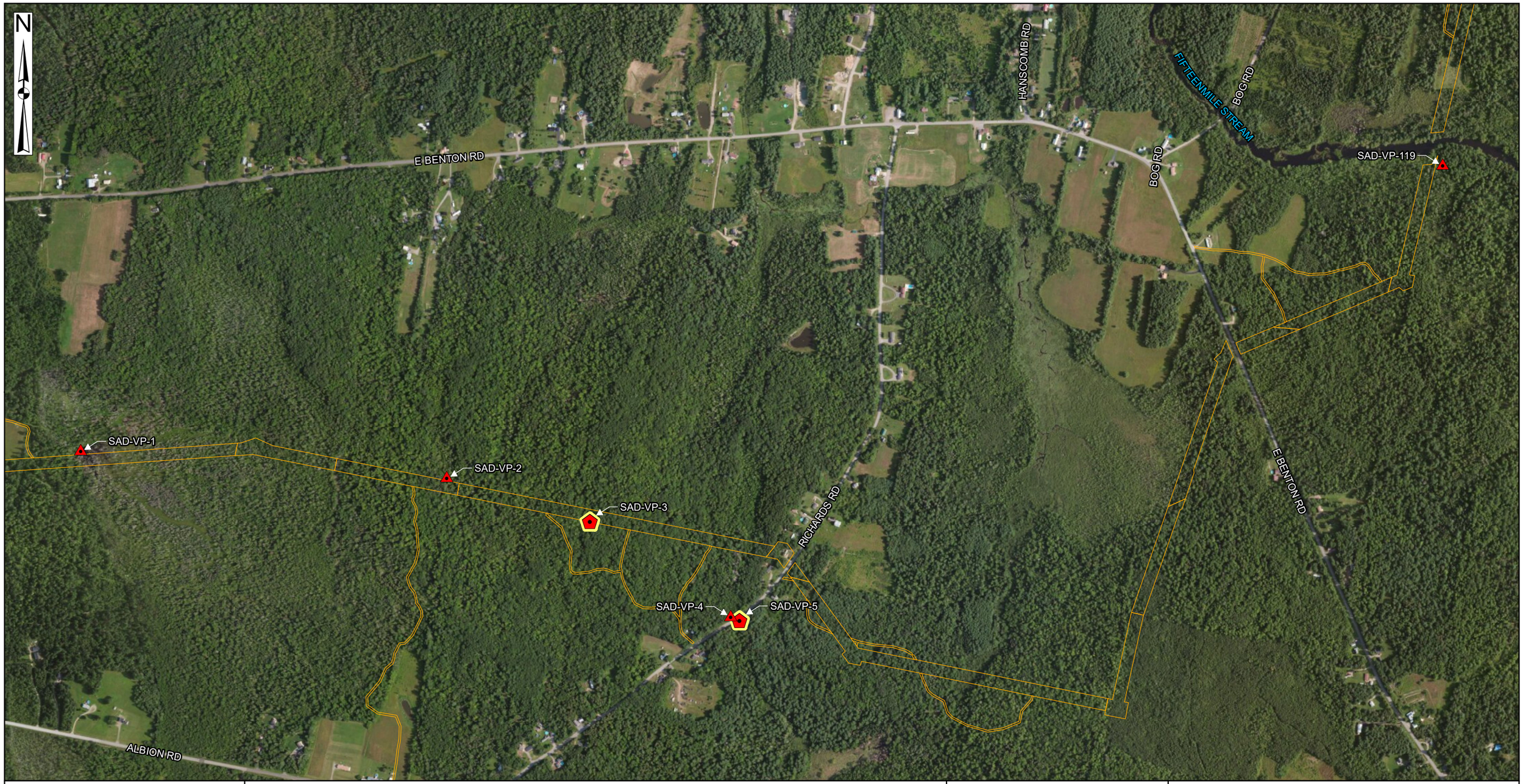
longroad ENERGY

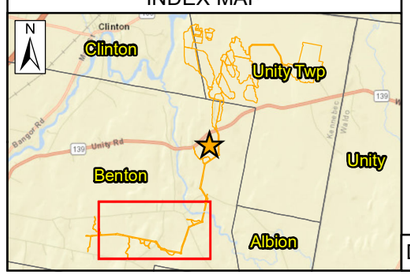
SCALE:
0 1,500 3,000 Feet
1 inch = 1,500 feet

VERNAL POOL MAP 1 OF 2
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

JANUARY 12, 2022



INDEX MAP



LEGEND

- CP - USACE Jurisdictional Pool
- VP - Vernal Pool
- SVP - Potentially Significant Vernal Pool
- Project Survey Boundary
- Project Limit of Disturbance

Data Collected by Kleinschmidt Associates 2019; 2020

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SCALE:

0 750 1,500 Feet

1 inch = 750 feet

VERNAL POOL MAP 2 OF 2
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

JANUARY 12, 2022

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ATTACHMENT B: SUMMARY TABLE

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Pool ID	Origin	Dried by 7/15/2020	Egg Mass Counts											Fairy Shrimp	SVP
			Wood Frog			Spotted Salamander				Blue-Spotted					
			Visit 1 2019	Visit 1 2020	Visit 2 2020	Visit 1 2019	Visit 2 2019	Visit 1 2020	Visit 2 2020	Visit 1 2019	Visit 2 2019	Visit 1 2020	Visit 2 2020		
NXG-CP-1	U	Yes		6				4							No
NXG-CP-100	U	Yes		3				4							No
NXG-CP-101	U	Yes		1				2							No
NXG-CP-102	U	Yes		32											No
NXG-CP-103	U	Yes						2							No
NXG-CP-104	U	Yes		60				17							No
NXG-CP-105	U	Yes		4				81							No
NXG-CP-11	U	Yes		10											No
NXG-CP-12	U	Yes		30				4							No
NXG-CP-13	U	Yes		15				3							No
NXG-CP-2	U	Yes						2							No
NXG-CP-3_2	U	Yes		1											No
NXG-CP-4	U	No		4				5							No
NXG-CP-4_2	U	No						2							No
NXG-CP-5	U	No		5				3							No
NXG-CP-6	U	Yes		5				3							No
NXG-CP-7	U	Yes		1											No
NXG-CP-8	U	Yes						1							No
NXG-VP-1	NM	No		2				2							No
NXG-VP-102	**N**	**Yes**		**52**				**28**							**Potentially**
NXG-VP-103	N	No						8	9						No
NXG-VP-104	NM	Yes		4	1			16	17						No
NXG-VP-105	**N**	**Yes**		**38**										**Yes**	**Potentially**

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Pool ID	Origin	Dried by	Egg Mass Counts												SVP
NXG-VP-107	**N**	**Yes**		**31**				**22**							**Potentially**
NXG-VP-2	NM	No		3				3				3			No
NXG-VP-3	**N**	**Yes**		**46**				**5**							**Potentially**
NXG-VP-4	N	Yes						1	3						No
NXG-VP-5	**N**	**Yes**						**4**	**19**						**Potentially**
NXG-VP-6	NM	Yes		32	1				6						No
SAD-CP-10	U	Yes		30											No
SAD-CP-100	U	Yes				3									No
SAD-CP-101	U	No				5		1							No
SAD-CP-102	U	No				2		3							No
SAD-CP-11	U	Yes				2									No
SAD-CP-13	U	Yes		8		3		11							No
SAD-CP-16	U	Yes	3	39				30							No
SAD-CP-17	U	Yes				1		1							No
SAD-CP-18	U	NA	3												No
SAD-CP-19	U	NA				3									No
SAD-CP-19a	U	NA				6									No
SAD-CP-2	U	No				3		11							No
SAD-CP-300	U	No		16				26							No
SAD-CP-301	U	No		1				16							No
SAD-CP-316A	U	No		0				5							No
SAD-CP-5	U	Yes		21				5							No
SAD-CP-6	U	No		1				20							No
SAD-CP-7	U	No				2									No
SAD-CP-8	U	NA				2									No
SAD-CP-9	U	No		14		9									No
SAD-CP-9a	U	NA				30									No

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Pool ID	Origin	Dried by	Egg Mass Counts												SVP
SAD-VP-1	N	No	6					4	3	7					No
SAD-VP-10	**N**	**Yes**	**6**	**26**		**31**		**35**				**20**			**Potentially**
SAD-VP-100	**N**	**Yes**		**82**											**Potentially**
SAD-VP-101	N	Yes		6					2						No
SAD-VP-102	**N**	**Yes**		**42**											**Potentially**
SAD-VP-103	**N**	**Yes**		**25**	**1**			**5**	**9**				**25**		**Potentially**
SAD-VP-104	N	Yes		17	1			10	8						No
SAD-VP-105	**N**	**No**		**22**				**89**							**Yes**
SAD-VP-106	**NM**	**Yes**		**1**				**37**							**Potentially**
SAD-VP-107	**N**	**Yes**		**48**				**73**							**Potentially**
SAD-VP-11	N	Yes	6	11	12	7		5	15		4				No
SAD-VP-116	**N**	**No**		**0**				**37**							**Yes**
SAD-VP-117	N	No		0	2			2	1						No
SAD-VP-118	NM	No		0				1							No
SAD-VP-119	N	No						16	14						No
SAD-VP-12	N	Yes	1	0		4		4							No
SAD-VP-13	N	No		0		1									No
SAD-VP-15	N	Yes	5	8				2							No
SAD-VP-16	N	No	1						1						No
SAD-VP-17	NM	Yes	3	1	2	1			8						No
SAD-VP-18	N	Yes	10	3				11	18						No
SAD-VP-2	N	No					4	1	9	10					No
SAD-VP-3	**N**	**No**	**27**		**1**		**24**		**25**						**Yes**
SAD-VP-4	N	No	10	1	1		5			3					No
SAD-VP-5	**NM**	**No**	**67**		**40**		**7**	**3**	**26**	**11**					**Yes**
SAD-VP-6	N	No				2	1								No
SAD-VP-7	**N**	**No**		**1**	**1**	**12**	**6**	**23**	**26**		**1**				**Yes**
SAD-VP-7-2	NM	No				2									No
SAD-VP-8	**NM**	**No**	**36**	**2**		**49**		**59**							**Yes**

BIODIVERSITY RESEARCH INSTITUTE
innovative wildlife science

Pool ID	Origin	Dried by	Egg Mass Counts												SVP
SAD-VP-9	N	Yes	20	36		20		45							Potentially

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: NXG-VP-3 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahozal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊘ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ○ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longmad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊘ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Township

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.458325 Latitude/Northing: 44.582045

Coordinate system: WGS 84

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ☒ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ☒ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter bottom

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ☒ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ☒ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

NXG-VP-3

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/22/2020; 7

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	46			2			M								
Spotted Salamander	5			2			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool dried up by 7/13/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:____ Initials:____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: UXG-VP-4 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahozal / Nick Gabrezda

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached maps

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.446255 Latitude/Northing: 44.631304

Coordinate system: WGS 84

Check one:

⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊗ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ⊗ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/22/2020; 5/13/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ◯ Yes ◯ No
- Was the entire pool surveyed for egg masses? ◯ Yes ◯ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	1	3		3	3		M	M							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool associated w/ large forested wetland

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ◯ does not meet biological criteria. ◯ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: NXG-VP-5 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Prichard

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ○ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: _____

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Township

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: _____ Latitude/Northing: _____

Coordinate system: _____

Check one:
- ○ GIS shapefile
  - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
- ○ The pool perimeter is delineated by multiple GPS points. (Excellent)
  - Include map or spreadsheet with coordinates.
- ○ The above GPS point is at the center of the pool. (Good)
- ○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊗ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ⊗ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

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Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/22/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	4	19		1	1		M	A							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool associated w/ large forested wetland
Pool dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: NXG-VP-6 **MDIFW Pool** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dechovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊘ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity township

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: _____ Latitude/Northing: _____

Coordinate system: _____

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☒ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Pool impounded by woods road

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊗ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊗ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊗ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ⊗ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

NXG - VP-6

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020 ; 5/13/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊗ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	32	1		1	2		M								
Spotted Salamander	~~0~~	6			2										
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

large pool that is impounded by woods road
Pool dried up by 7/13/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ Significant ☐ Potentially Significant but lacking critical data ☐ Not Significant due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: NJG VP102 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Nicholas Gabrzda / Sarah Drahozal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 774 Stevenson Rd. City: Unity State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: ~~Unity~~ Clinton

Brief site directions to the pool (using mapped landmarks):

Between Fifteenmile Stream & Bessey Ln, just west of Bessey Ln, Unity

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.460672 Latitude/Northing: 44.622137

Coordinate system: WGS 84

Check one:

⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

⊗ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

2f sal 52 wf

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ☒ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ☒ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Not particularly deep, isolated from other wetlands

■ Maximum depth at survey: ☒ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 25 ○ m ☒ ft Length: 75 ○ m ☒ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ☒ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ☒ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊗ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	52														
Spotted Salamander	28														
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

far from roads, most eggs concentrated in one section of pool. Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: NXG VP103 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Nicholas Gabuzda / Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ☒ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ☒ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ☒ No If no, was landowner permission obtained for survey? ☒ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: ~~[illegible]~~ Clinton

Brief site directions to the pool (using mapped landmarks):

Between fifteenmile stream & Bessey Ln.
Just west of Bessey Ln, ~~Unity~~ Clinton

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.462043 Latitude/Northing: 44.623204

Coordinate system: WGS 84

Check one: ☒ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

☒ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): 6/1

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- [x] Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- [x] Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: [x] Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- [x] Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Small in size + depth, isolated from wetland

■ Maximum depth at survey: [x] 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 20 ○ m [x] ft Length: 30 ○ m [x] ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- [x] Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- [x] Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- [x] No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020, 5/12/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ☒ No
- Was the entire pool surveyed for egg masses? ☒ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	8	9													
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Relatively small, wooded

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: [redacted] NXG VP104 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Nicholas Galuzka / Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: [redacted] Clinton

Brief site directions to the pool (using mapped landmarks):

Between Bessey Ln and Sebasticook River

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.467375 Latitude/Northing: 44.627113

Coordinate system: WGS 84

Check one: ○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

⊗ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

By wf 16 5

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

○ Isolated depression ○ Pool associated with larger wetland complex
○ Floodplain depression ○ Other: _____

■ Check all wetland types that best apply to this pool:

☒ Forested swamp	☐ Wet meadow	☐ Slow stream	☐ Dug pond or borrow pit
☐ Shrub swamp	☐ Lake or pond cove	☐ Floodplain	
☐ Peatland (fen or bog)	☐ Abandoned beaver flowage	☐ Mostly unvegetated pool	☐ Roadside ditch
☐ Emergent marsh	☐ Active beaver flowage	☒ ATV or skidder rut	☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ☒ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Definitely natural, but old logging road runs through it.

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

○ Permanent ☒ Semi-permanent (drying partially in all years and completely in drought years) ○ Ephemeral (drying out completely in most years) ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ☒ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 50 ○ m ☒ ft Length: 100 ○ m ☒ ft

■ Predominate substrate in order of increasing hydroperiod:

○ Mineral soil (bare, leaf-litter bottom, or upland mosses present) ☒ Organic matter (peat/muck) shallow or restricted to deepest portion
○ Mineral soil (sphagnum moss present) ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
☐ Sphagnum moss (anchored or suspended)
☐ Wet site ferns (e.g. royal fern, marsh fern)
☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
☐ No vegetation in pool

■ Faunal indicators (check all that apply):

☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

☒ No inlet or outlet ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
○ Intermittent inlet or outlet ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020; 5/12/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊗ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	4	1													
Spotted Salamander	16	17													
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: NXG VP105 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Nicholas Gabuzda / Sarah Drahozal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ○ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Clinton

Brief site directions to the pool (using mapped landmarks):

East of Sebasticook River, just northwest of Bessey Ln

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: _____ Latitude/Northing: _____

Coordinate system: _____

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ☒ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☒ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Very wetland like, behaves more like a wetland, very shallow

■ Maximum depth at survey: ☒ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 30 ○ m ☒ ft Length: 200 ○ m ☒ ft

■ Predominate substrate in order of increasing hydroperiod:

- ☒ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ☒ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ☒ No
- Was the entire pool surveyed for egg masses? ☒ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	38														
Blue-spotted Salamander															
Fairy Shrimp[3]	X														

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: NXG-VP-107 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahovzal / Nick Gabuzda

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ☒ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ☒ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Long

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.456038 Latitude/Northing: 44.614879

Coordinate system: WGS 84

Check one: ☒ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ⊗ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊘ No
- Was the entire pool surveyed for egg masses? ⊘ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	22			M											
Spotted Salamander	31			M											
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: (Prov 2 pics) SAD-VP-1 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahozal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longread (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.500735 Latitude/Northing: 44.575922

Coordinate system: WGS84

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

⊗ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-1

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☒ Shrub swamp
- ☒ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☒ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊗ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Part of wetland complex near intermittent stream

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊗ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 15 ○ m ⊗ ft Length: 30 ○ m ⊗ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ⊗ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☒ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD - VP-1

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/29/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ◉ No
- Was the entire pool surveyed for egg masses? ☒ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	6			3			M			Ø					
Spotted Salamander		4		3			A								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Green frog Revisits 2020; 5/6: ØWFEM 35SEM
5/19: ØWFEM 75SEM

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-2 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dronhowski

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊘ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: _____ Latitude/Northing: _____

Coordinate system: _____

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAP-VP-2

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊘ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊘ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Pool located on the edge of a wetland adjacent to recent clear cut

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊘ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Pool part of forested wetland

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 5 ○ m ⊘ ft Length: 3 ○ m ⊘ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ⊘ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☒ No vegetation in pool
- ☐ Other: _____

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ⊘ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-2

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/29/2019 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊗ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	⊗			⊗			⊗								
Spotted Salamander	4	1		3	3		M	A							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool found in sunny area on the edge of forested wetland
2020 Revisits: 5/6: 0 WFEM 9SSEM 5/19: 0WFEM 10SSEM

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SAD-VP-3 SUP

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP3 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Draharz

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See Attached Maps

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: _____ Latitude/Northing: _____

Coordinate system: _____

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-3

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- (X) Isolated depression (w/in wetland to South)
- ( ) Floodplain depression
- ( ) Pool associated with larger wetland complex
- ( ) Other: _____

■ Check all wetland types that best apply to this pool:

- [X] Forested swamp
- [ ] Shrub swamp
- [ ] Peatland (fen or bog)
- [ ] Emergent marsh
- [ ] Wet meadow
- [ ] Lake or pond cove
- [ ] Abandoned beaver flowage
- [ ] Active beaver flowage
- [X] Slow stream
- [ ] Floodplain
- [ ] Mostly unvegetated pool
- [ ] ATV or skidder rut
- [ ] Dug pond or borrow pit
- [ ] Roadside ditch
- [ ] Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: (X) Natural ( ) Natural-Modified ( ) Unnatural ( ) Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ( ) Permanent
- (X) Semi-permanent (drying partially in all years and completely in drought years)
- ( ) Ephemeral (drying out completely in most years)
- ( ) Unknown

Explain:

~ 3 ft @ deepest part

■ Maximum depth at survey: ( ) 0-12" (0-1 ft.) (X) 12-36" (1-3 ft.) ( ) 36-60" (3-5 ft.) ( ) >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 30 (X) m ( ) ft Length: >9 (X) m ( ) ft

■ Predominate substrate in order of increasing hydroperiod:

- (X) Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ( ) Mineral soil (sphagnum moss present)
- ( ) Organic matter (peat/muck) shallow or restricted to deepest portion
- ( ) Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- [X] Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- [X] Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- [ ] Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- [ ] Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- [ ] Sphagnum moss (anchored or suspended)
- [ ] Wet site ferns (e.g. royal fern, marsh fern)
- [ ] Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- [ ] Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- [ ] Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- [ ] Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- [X] No vegetation in pool

■ Faunal indicators (check all that apply):

- [ ] Fish
- [ ] Bullfrog or Green Frog tadpoles
- [X] Other: Newt

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ( ) No inlet or outlet
- ( ) Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- (X) Intermittent inlet or outlet
- (X) Other or Unknown (explain): pool extends outside boundary

SAD-VP-3

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/29/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ⊘ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ⊘ No; what % of entire pool surveyed? ~70
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	27			1			M			Ø					
Spotted Salamander	24			1			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Intermittent inlet on southern side of VP flow [illegible] through forested wetland into VP surrounded by upland

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-4 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ☒ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ☒ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ☒ Yes

c. Project Name: Longroad (3 Corners Solar Project)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ☒ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. **GPS location of vernal pool (use Datum NAD83 / WGS84)**

Longitude/Easting: -69.480413 Latitude/Northing: 44.572347

Coordinate system: _____

Check one: ☒ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-4

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Forested wetland impounded by road

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Shallow hollows filled w/ water - impounded by rd

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 30 ⊗ m ○ ft Length: 80 ⊗ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☒ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-4

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/29/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ⊗ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ⊗ No; what % of entire pool surveyed? 80
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	10	Ø		1	1		M								
Spotted Salamander	5	Ø		1	1		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool w/i in forest wetland. Impounded by road w/ intermittent inlet from drainage from wetland.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:_____ Initials:_____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-5 (5A) **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drohovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊘ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊘ No If no, was landowner permission obtained for survey? ⊘ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.480173 Latitude/Northing: 44.571888

Coordinate system: _____

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-5 (SA)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ⊗ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☒ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Pool impounded by Richard Road

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊗ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Deep pool ~4 feet @ max depth

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ⊗ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 40 ○ m ⊗ ft Length: 30 ○ m ⊗ ft

■ Predominate substrate in order of increasing hydroperiod:

- ⊗ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☒ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ⊗ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-5 (5A)

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/29/19 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊘ No
- Was the entire pool surveyed for egg masses? ⊘ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	67 (32 VP-5A)			2	2		A								
Spotted Salamander	7 (1 VP-5A)	3 (VP-5)		2	2		M	A							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Deep pool impounded by road
VP5 - VP5A Connected hydrologically by ditch along road

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:____ Initials:____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SAD-VP-6 No eggs in 2020

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-6 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longreed (3 Corners Solar Project)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bussey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.457129 Latitude/Northing: 44.624515

Coordinate system: _____

Check one:

⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-6

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Pool located in wetland in recently logged forest

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Shallow forest pool

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 30 ○ m ⊗ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊗ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☒ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☒ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: 0

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ⊗ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-6

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/1/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊘ No
- Was the entire pool surveyed for egg masses? ⊘ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	0	0													
Spotted Salamander	2	1		3	3		M	A							
Blue-spotted Salamander	0														
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool is shallow & will likely dry up in a few weeks

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: ____ Initials: ____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-7 **MDIFW Pool ID:**

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ○ same as observer ○ other

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ⊗ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.455584 Latitude/Northing: 44.62759

Coordinate system: WGS 84

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-7

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Shallow water

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ⊗ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ⊗ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-7-

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/1/2019 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	12	6		2			M	A							
Blue-spotted Salamander	1	1		2				M							
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Could hear wood frogs calling in nearby wetland. Still some snow on the edge of the wetland

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:____ Initials:____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SAD-VP-7-2

No eggs in 2020

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-7-2 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dubord

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longpond

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.456775 Latitude/Northing: 44.624376

Coordinate system: _____

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-F-2

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Pool within forested wetland. Pool area possibly caused by old logging road

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Shallow pool w/ leaf litter

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 35 ○ m ⊗ ft Length: 15 ○ m ⊗ ft

■ Predominate substrate in order of increasing hydroperiod:

- ⊗ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☒ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ⊗ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-7-2

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/1/2019 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	2	Ø		3	3		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SVP

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP 8 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊘ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊘ No If no, was landowner permission obtained for survey? ⊘ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp.

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.4569 Latitude/Northing: 44.628853

Coordinate system: _____

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-8

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Road at N end of impounding wetland

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 30 ○ m ⊗ ft Length: 100 ○ m ⊗ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ⊗ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☒ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-8

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/1/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ☒ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	36			2			M								
Spotted Salamander	49			2			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife: Same unit Complex as SAD-VP-7

Pool impounded by road Separated by small berm. ~ 8" of water in road w/ 27 SS & 50 WF egg masses, Still some snow covering part of open water

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SVP

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-9 **MDIFW Pool ID:**

1. PRIMARY OBSERVER INFORMATION

a. Observer name: SEK/SAD

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd City: Hickley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Clinton

Brief site directions to the pool (using mapped landmarks):

See attached maps

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.464547 Latitude/Northing: 44.638161

Coordinate system: WGS 84

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

⊗ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-9

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): 5/2

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ◉ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ◉ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ◉ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ◉ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 56 ○ m ◉ ft Length: 40 ○ m ◉ ft

■ Predominate substrate in order of increasing hydroperiod:

- ◉ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ◉ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-9

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/2/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ◉ No
- Was the entire pool surveyed for egg masses? ◉ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	20			3			A								
Spotted Salamander	20			3			F/M								
Blue-spotted Salamander	Ø														
Fairy Shrimp[3]	Ø														

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Caddis fly's observed eating egg masses.
Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: ____ Initials: ____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SVP

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-10 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: SCK/SAD

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longreach (3 Corners Solar Project)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Clinton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.463877 Latitude/Northing: 44.6386 ft

Coordinate system: WGS 84

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

⊗ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-10

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ◉ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ◉ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ◉ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ◉ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 100 ○ m ◉ ft Length: 165 ○ m ◉ ft

■ Predominate substrate in order of increasing hydroperiod:

- ◉ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ◉ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ◉ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-10

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/2/2019; 4/28/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ◉ No
- Was the entire pool surveyed for egg masses? ◉ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	6	26		3	3		F								
Spotted Salamander	31	31		3	3		F/M								
Blue-spotted Salamander	Ø	Ø													
Fairy Shrimp[3]	Ø	Ø													

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

◉ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-11 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dubord

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ☒ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ☒ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners Solar Project)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hickley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity twp

Brief site directions to the pool (using mapped landmarks):

See attached maps

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.442918 Latitude/Northing: 44.633697

Coordinate system: WGS 84

Check one:

- ○ GIS shapefile
  - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
- ○ The pool perimeter is delineated by multiple GPS points. (Excellent)
  - Include map or spreadsheet with coordinates.
- ☒ The above GPS point is at the center of the pool. (Good)
- ○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-11

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ☒ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/6/2019 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	6			3			M								
Spotted Salamander	7			3			M								
Blue-spotted Salamander		4			3			M							
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:____ Initials:____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-12 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊘ No If no, was landowner permission obtained for survey? ⊘ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp.

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.442326 Latitude/Northing: 44.632419

Coordinate system: WGS 84

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter bottom

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ⊗ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ⊗ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/6/2019 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	1	0		3	3		M								
Spotted Salamander	4	9		3	3		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

No eggs 2020

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-13 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: E. D. Bessey & Son Phone: (207) 453-7388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.442643 Latitude/Northing: 44.632026

Coordinate system: WGS 84

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

⊗ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊗ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ⊗ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/6/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	1	0		3	3		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-15 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drakovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.4385 Latitude/Northing: 44.631733

Coordinate system: WGS84

Check one:
- ○ GIS shapefile
  - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
- ○ The pool perimeter is delineated by multiple GPS points. (Excellent)
  - Include map or spreadsheet with coordinates.
- ○ The above GPS point is at the center of the pool. (Good)
- ○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ☒ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ☒ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ☒ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ☒ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ☒ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☒ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ☒ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/6/2019 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊗ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	5	Ø		1	1		M								
Spotted Salamander															
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Revisits 2020: 4/22: 8 WFEM 2 SSEM 5/13: Ø
Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-16 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Draharzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊘ No If no, was landowner permission obtained for survey? ⊘ Yes ○ No

b. Landowner's contact information (required)

Name: E.D Rossey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd City: Hinckley State: Me Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.437059 Latitude/Northing: 44.63087

Coordinate system: WGS84

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

⊘ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊘ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊘ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊘ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain: leaf litter bottom

■ Maximum depth at survey: ⊘ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊘ Mineral soil (sphagnum moss present)
- ⊘ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☒ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊘ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/8/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	1	Ø		3	3		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Revisits 2020: 4/22/2020: Ø 5/12/2020: 1 SSEM

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-17 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dahuzl

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ☒ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ☒ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ☒ No If no, was landowner permission obtained for survey? ☒ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.441131 Latitude/Northing: 44.625715

Coordinate system: _____

Check one:

☒ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

☒ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

○ Isolated depression ⊗ Pool associated with larger wetland complex
○ Floodplain depression ○ Other: _____

■ Check all wetland types that best apply to this pool:

☒ Forested swamp	☐ Wet meadow	☐ Slow stream	☐ Dug pond or borrow pit
☐ Shrub swamp	☐ Lake or pond cove	☐ Floodplain	
☐ Peatland (fen or bog)	☐ Abandoned beaver flowage	☐ Mostly unvegetated pool	☐ Roadside ditch
☐ Emergent marsh	☐ Active beaver flowage	☐ ATV or skidder rut	☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

○ Permanent ○ Semi-permanent (drying partially in all years and completely in drought years) ⊗ Ephemeral (drying out completely in most years) ○ Unknown

Explain:

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
⊗ Mineral soil (sphagnum moss present)
○ Organic matter (peat/muck) shallow or restricted to deepest portion
○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
☒ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
☒ Sphagnum moss (anchored or suspended)
☐ Wet site ferns (e.g. royal fern, marsh fern)
☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
☒ No vegetation in pool

■ Faunal indicators (check all that apply):

☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

○ No inlet or outlet ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
⊗ Intermittent inlet or outlet ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/6/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	3	Ø		2	2		A								
Spotted Salamander	1	Ø		2	2		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Results 2020: 4/22: 1 WFEM, 1 SSEM 5/13/2020: 2 WFEM, 8 SSEM
Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ Significant ☐ Potentially Significant but lacking critical data ☐ Not Significant due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-18 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Draharzel

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ○ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners Solar Project)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 774 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.412608 Latitude/Northing: 44.625192

Coordinate system: WGS 84

Check one:

⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

⊗ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Shallow w/ leaf-litter bottom; unvegetated

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ⊗ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ⊗ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☒ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☒ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/9/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	10	0		3	3		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Revisits 2020: 9/24/20: 3 WFEM, 11 SSEM 5/13/2020 0 WFEM/8 SSEM
Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-100 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahozal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E. D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Stockhegan Rd City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Township

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.432721 Latitude/Northing: 44.633257

Coordinate system: WGS 84

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Pool found in industrial forest adjacent to recently cut area

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊗ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

leaf litter & bare both

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊗ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊗ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD - VP-100

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/24/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	82			2			M								
Spotted Salamander															
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☒ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/13/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-101 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drabovzel

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hartley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Township

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.43221 Latitude/Northing: 44.633257

Coordinate system: WGS 84

Check one:
- ○ GIS shapefile
  - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
- ○ The pool perimeter is delineated by multiple GPS points. (Excellent)
  - Include map or spreadsheet with coordinates.
- ○ The above GPS point is at the center of the pool. (Good)
- ○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

leaf litter

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊗ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-101

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/24/2020, 5/12/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊗ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	6	0		3			M								
Spotted Salamander	0	2			3			M							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ Significant ☐ Potentially Significant but lacking critical data ☐ Not Significant due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-102 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dabouzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hickley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.436581 Latitude/Northing: 44.631797

Coordinate system: WGS 84

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ☒ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ☒ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ☒ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ☒ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-102

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/24/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	42			2			M								
Spotted Salamander															
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

VP associated w/ forested wet

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-103 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dabovral

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Projects

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 771 Skowhegan Rd. City: Hartley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton / Unity

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.45629 Latitude/Northing: 44.616228

Coordinate system: WGS 84

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ☒ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ☒ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ☒ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ☒ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-103

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020 ; 5/14/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	28	1		2			M								
Spotted Salamander	5	9		2			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☒ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-104 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dahowski

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ○ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 771 Skowhegan Rd. City: Hickley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Clinton

Brief site directions to the pool (using mapped landmarks):

See attached maps

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.457718 Latitude/Northing: 44.616833

Coordinate system: WGS 84

Check one:
- ○ GIS shapefile
  - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
- ○ The pool perimeter is delineated by multiple GPS points. (Excellent)
  - Include map or spreadsheet with coordinates.
- ○ The above GPS point is at the center of the pool. (Good)
- ○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊘ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊘ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊘ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊘ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊘ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊘ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-109

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/29/2020 ; 5/14/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	17	1		2	2		M	A							
Spotted Salamander	10	8		2	2		M	M							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☒ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-105 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dahar[illegible]

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ◉ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ◉ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ◉ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E. D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Stowhegan Rd. City: Hickley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Clifton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.461326 Latitude/Northing: 44.624046

Coordinate system: WGS 84

Check one: ◉ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ☒ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ☒ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ☒ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ☒ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-105

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ◉ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	22			2			A								
Spotted Salamander	8			2			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP 106 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Donoval

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ● Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ● same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ● No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Clinton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.465551 Latitude/Northing: 44.626983

Coordinate system: WGS 84

Check one: ● GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Impounded by Woods road. Culvert from road flows to pond

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊗ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): Culvert

- ○ No inlet or outlet
- ○ Intermittent inlet or outlet
- ⊗ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP 106

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	1			A											
Spotted Salamander	37			M											
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Impounded by road
Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:____ Initials:____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SAD-VP-107

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: 220 SAD-VP-107 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dahora/

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 771 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Clinton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.767014 Latitude/Northing: 44.631657

Coordinate system: WGS 84

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☒ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: SAD-VP-107

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	48			2			A								
Spotted Salamander	~~5~~ 73			2			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

X from NVA-VP-101

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-11c **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dahorzel

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ◉ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ◉ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ◉ No If no, was landowner permission obtained for survey? ◉ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 774 Stonehenge Rd. City: Hickley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.455359 Latitude/Northing: 44.612445

Coordinate system: WGS 84

Check one: ◉ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain: Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/30/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ◉ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	37			2			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:____ Initials:____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-117 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Draheval

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ◉ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ◉ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ◉ No If no, was landowner permission obtained for survey? ◉ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hickley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.455362 Latitude/Northing: 44.612042

Coordinate system: WGS 84

Check one:

◉ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊘ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊘ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊘ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ⊘ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊘ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-117

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/30/2020, 5/14/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ◉ No
- Was the entire pool surveyed for egg masses? ◉ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog		2													
Spotted Salamander	2	1					M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☑ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-119 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dahovzl

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊘ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊘ No If no, was landowner permission obtained for survey? ⊘ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.457307 Latitude/Northing: 44.611589

Coordinate system: WGS 84

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Woods road running through VP

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊗ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ⊗ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-118

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/30/2020, 5/14/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog		0													
Spotted Salamander	1	0		M											
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Duck nest Nearby

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: ____ Initials: ____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD- VP- 119 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dahorzel

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: [redacted] Phone: [redacted]

Street Address: [redacted] City: [redacted] State: [redacted] Zip: [redacted]

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached maps

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.458335 Latitude/Northing: 44.582045

Coordinate system: WGS 84

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☒ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊗ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ⊗ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ○ Intermittent inlet or outlet
- ⊗ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/5/2020, 5/19/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	16	14		2			M	A							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Part of active beaver flowage. Several (5) of the egg masses were above waterline (5/5/2020)

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 1. Unnatural vernal pool NXG-CP-1, 4/21/20.

Photo 2. Unnatural vernal pool NXG-CP-1, 4/21/20.

Photo 3. Spotted salamander (*Ambystoma maculatum*) egg mass in unnatural vernal pool NXG-CP-1, 4/21/20.

Photo 4. Spotted salamander egg mass in unnatural vernal pool NXG-CP-1, 4/21/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

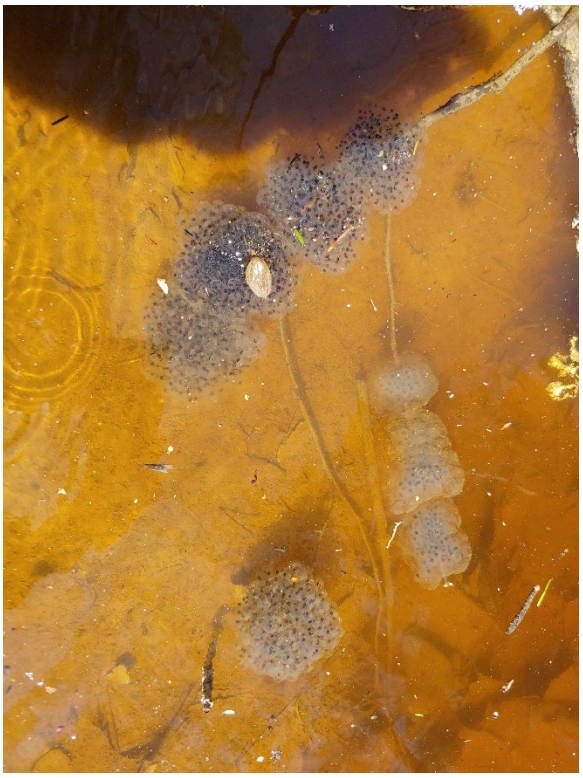

Photo 5. Wood frog (*Lithobates sylvaticus*) egg masses in unnatural vernal pool NXG-CP-1, 4/21/20.

Photo 6. Unnatural vernal pool NXG-CP-6, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 7. Wood frog egg masses in unnatural vernal pool NXG-CP-6, 4/23/20.

Photo 8. Unnatural vernal pool NXG-CP-7, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 9. Unnatural vernal pool NXG-CP-11, 4/23/20.

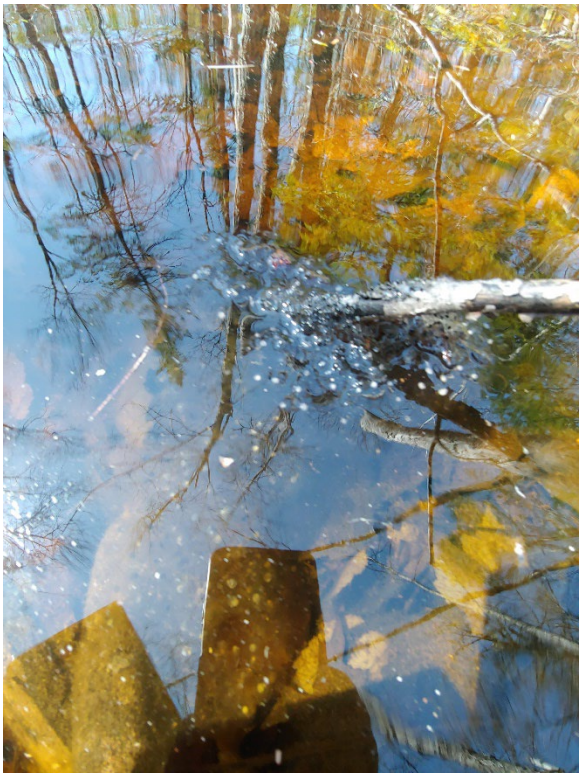

Photo 10. Wood frog egg masses in unnatural vernal pool NXG-CP-11, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 11. Unnatural vernal pool NXG-CP-12, 4/23/20.

Photo 12. Spotted salamander egg mass in unnatural vernal pool NXG-CP-12, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

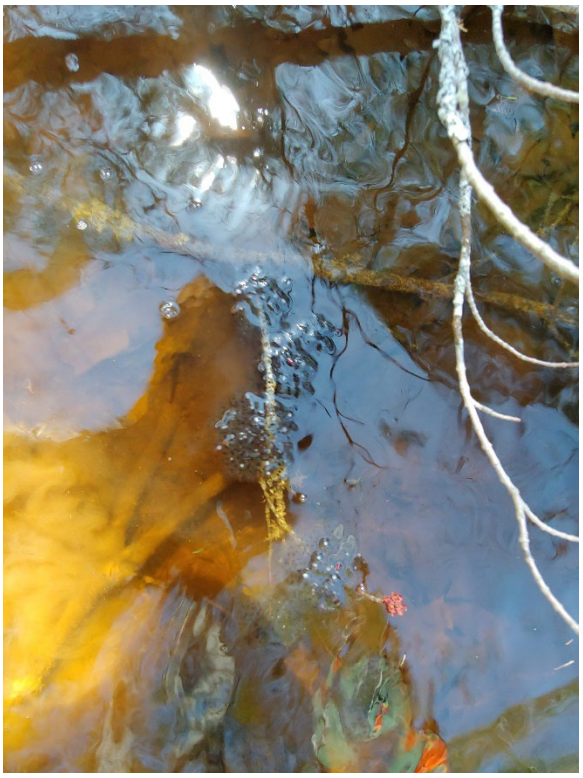

Photo 13. Wood frog egg masses in unnatural vernal pool NXG-CP-12, 4/23/20.

Photo 14. Unnatural vernal pool NXG-CP-13, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 15. Spotted salamander egg masses in unnatural vernal pool NXG-CP-13, 4/23/20.

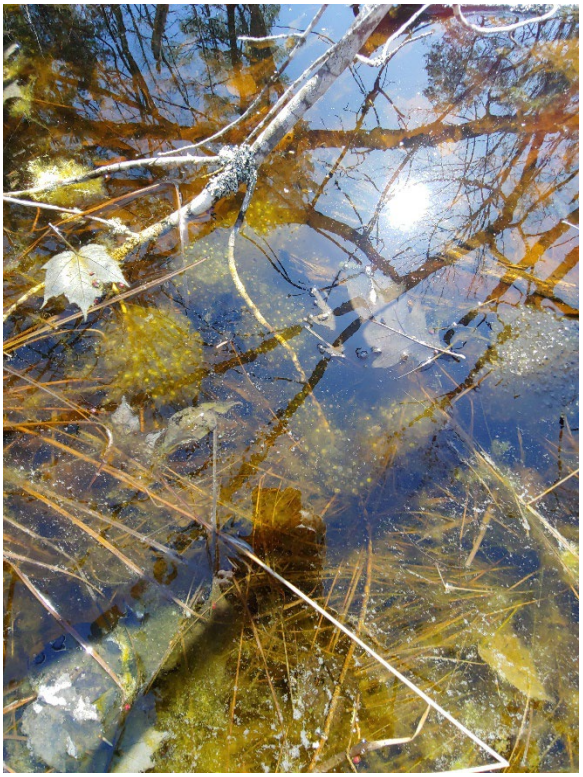

Photo 16. Wood frog egg masses in unnatural vernal pool NXG-CP-13, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 17. Natural vernal pool NXG-VP-3, 4/22/20.

Photo 18. Natural vernal pool NXG-VP-3, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 19. Natural vernal pool NXG-VP-3, 4/22/20.

Photo 20. Natural vernal pool NXG-VP-3, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 21. Spotted salamander egg mass in natural vernal pool NXG-VP-3, 4/22/20.

Photo 20. Wood frog egg mass in natural vernal pool NXG-VP-3, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

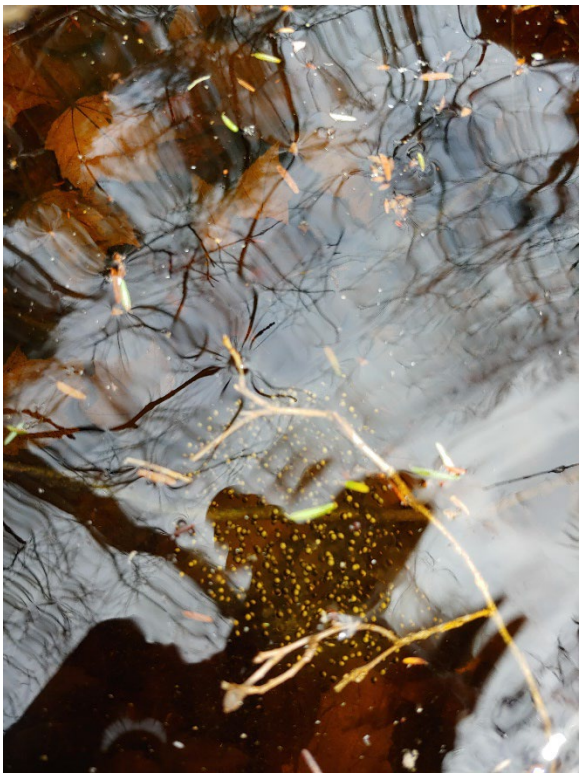

Photo 21. Wood frog egg masses in natural vernal pool NXG-VP-3, 4/22/20.

Photo 22. Wood frog egg masses in natural vernal pool NXG-VP-3, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

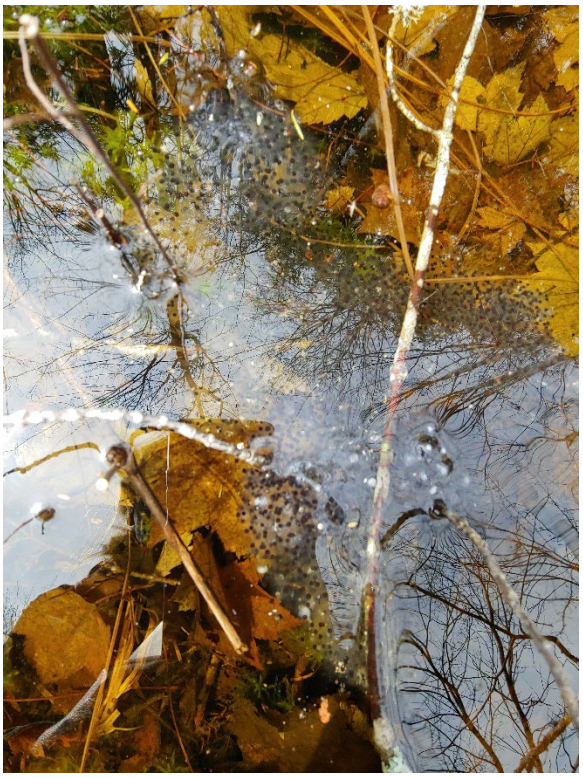

Photo 23. Wood frog egg masses in natural vernal pool NXG-VP-3, 4/22/20.

Photo 24. Natural vernal pool NXG-VP-4, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 25. Spotted salamander egg masses in natural vernal pool NXG-VP-4, 4/22/20.

Photo 26. Natural vernal pool NXG-VP-5, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 27. Natural vernal pool NXG-VP-5, 4/22/20.

Photo 28. Natural vernal pool NXG-VP-5, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 29. Spotted salamander egg mass in natural vernal pool NXG-VP-5, 4/22/20.

Photo 30. Unnatural vernal pool NXG-VP-11, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 31. Natural vernal pool NXG-VP-102, 4/28/20.

Photo 32. Spotted salamander egg mass in natural vernal pool NXG-VP-102, 4/28/20.

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.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

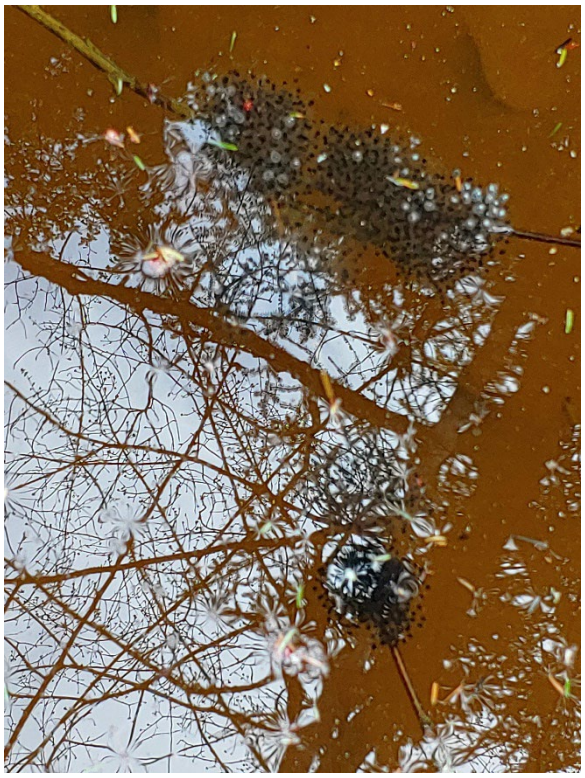

Photo 39. Wood frog egg masses in unnatural vernal pool SAD-CP-12, 4/22/20.

Photo 40. Unnatural vernal pool SAD-CP-13, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

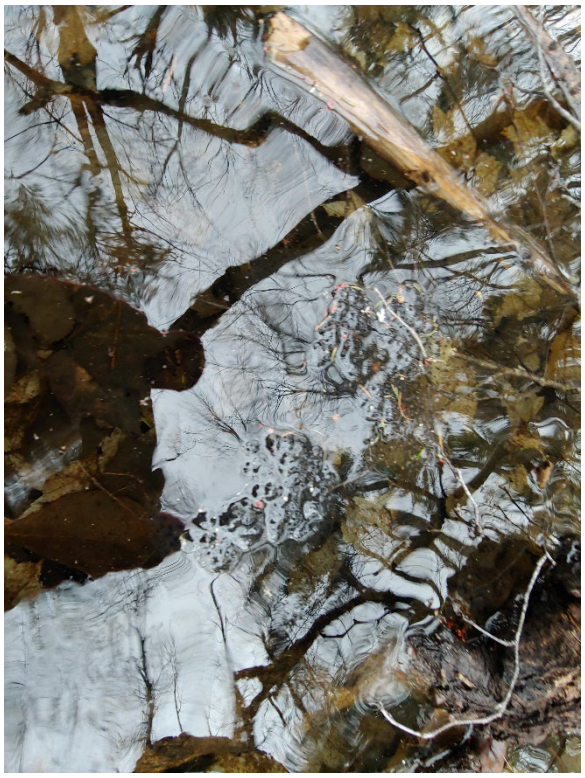

Photo 41. Wood frog egg masses in unnatural vernal pool SAD-CP-13, 4/22/20.

Photo 42. Unnatural vernal pool SAD-CP-16, 4/23/20.

Photo 43. Wood frog egg masses in unnatural vernal pool SAD-CP-16, 4/23/20.

Photo 44. Wood frog egg masses in unnatural vernal pool SAD-CP-16, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 45. Unnatural vernal pool SAD-CP-17, 4/23/20.

Photo 46. Unnatural vernal pool SAD-CP-18, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 47. Unnatural vernal pool SAD-CP-19, 4/24/20.

Photo 48. Natural vernal pool SAD-VP-1, 5/6/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 49. Spotted salamander egg mass in natural vernal pool SAD-VP-1, 5/6/20.

Photo 50. Spotted salamander egg mass in natural vernal pool SAD-VP-1, 5/6/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 51. Natural vernal pool SAD-VP-6, 4/21/20.

Photo 52. Natural vernal pool SAD-VP-7, 4/21/20.

Photo 53. Spotted salamander egg masses in natural vernal pool SAD-VP-7, 4/21/20.

Photo 54. Wood frog egg masses in natural vernal pool SAD-VP-7, 4/21/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 55. Wood frog egg masses in natural vernal pool SAD-VP-9, 4/28/20.

Photo 56. Wood frog egg mass in natural vernal pool SAD-VP-9, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 57. Spotted salamander egg masses in natural vernal pool SAD-VP-9, 4/28/20.

Photo 58. Spotted salamander egg mass in natural vernal pool SAD-VP-9, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

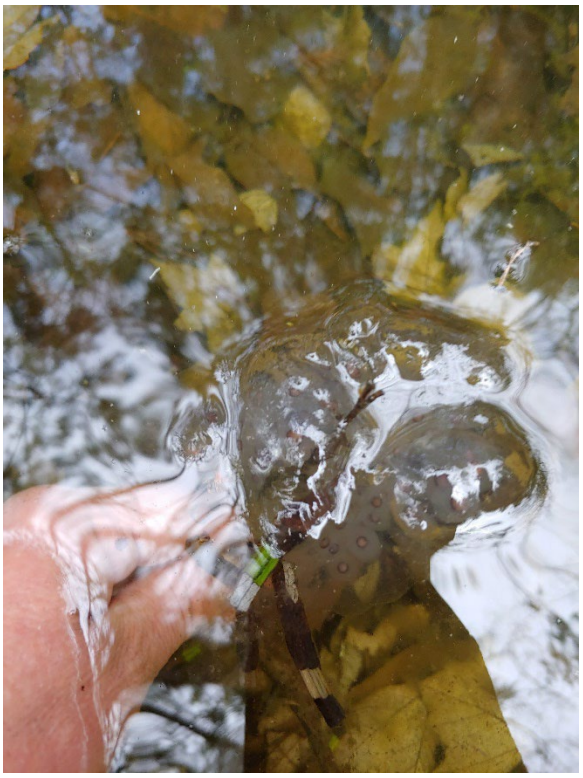

Photo 59. Spotted salamander egg mass in natural vernal pool SAD-VP-9, 4/28/20.

Photo 60. Natural vernal pool SAD-VP-10, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 61. Natural vernal pool SAD-VP-10, 4/28/20.

Photo 62. Natural vernal pool SAD-VP-10, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 63. Natural vernal pool SAD-VP-10, 4/28/20.

Photo 64. Blue spotted salamander (*Ambystoma laterale*) egg masses in natural vernal pool SAD-VP-10, 4/28/20.

Photo 65. Blue spotted salamander (*Ambystoma laterale*) egg masses in natural vernal pool SAD-VP-10, 4/28/20.

Photo 66. Blue spotted salamander egg masses in natural vernal pool SAD-VP-10, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

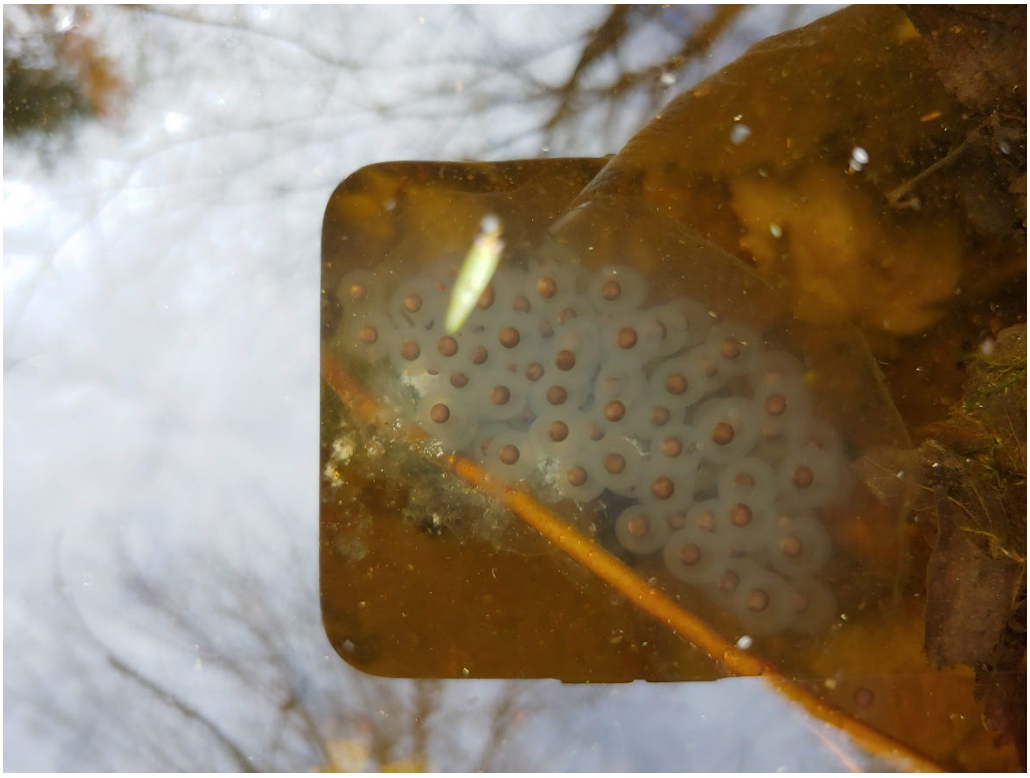

Photo 67. Spotted salamander egg mass in natural vernal pool SAD-VP-10, 4/28/20.

Photo 68. Wood frog egg masses in natural vernal pool SAD-VP-10, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 69. Spotted salamander egg mass in natural vernal pool SAD-VP-11, 4/22/20.

Photo 70. Wood frog egg masses in natural vernal pool SAD-VP-11, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 71. Natural vernal pool SAD-VP-13, 4/22/20.

Photo 72. Spotted salamander egg mass in natural vernal pool SAD-VP-15, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

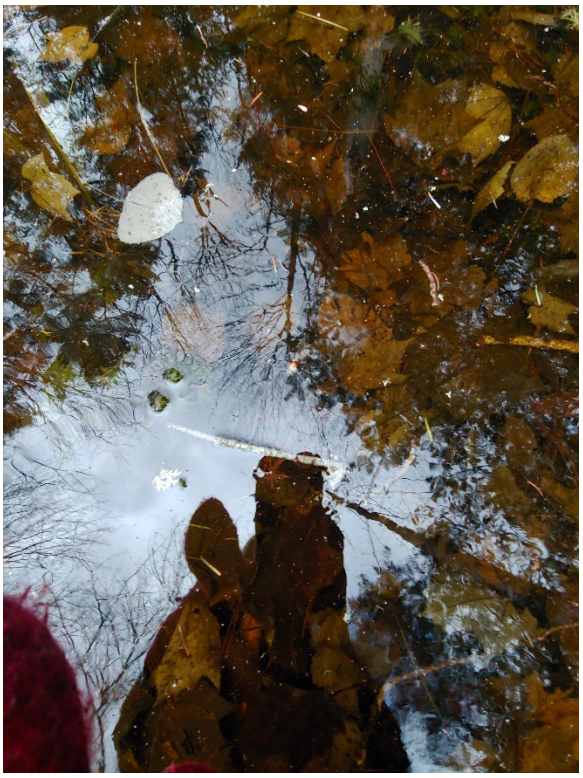

Photo 73. Wood frog egg masses in natural vernal pool SAD-VP-15, 4/22/20.

Photo 74. Natural vernal pool SAD-VP-16, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 75. Natural-modified vernal pool SAD-VP-17, 4/22/20.

Photo 76. Wood frog egg mass in natural-modified vernal pool SAD-VP-17, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 77. Spotted salamander frog egg masses in natural vernal pool SAD-VP-18, 4/24/20.

Photo 78. Natural vernal pool SAD-VP-101, 4/25/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 79. Wood frog egg mass in natural vernal pool SAD-VP-101, 4/24/20.

Photo 80. Wood frog egg mass in natural vernal pool SAD-VP-101, 4/24/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 81. Natural vernal pool SAD-VP-102, 4/25/20.

Photo 82. Natural vernal pool SAD-VP-102, 4/25/20.

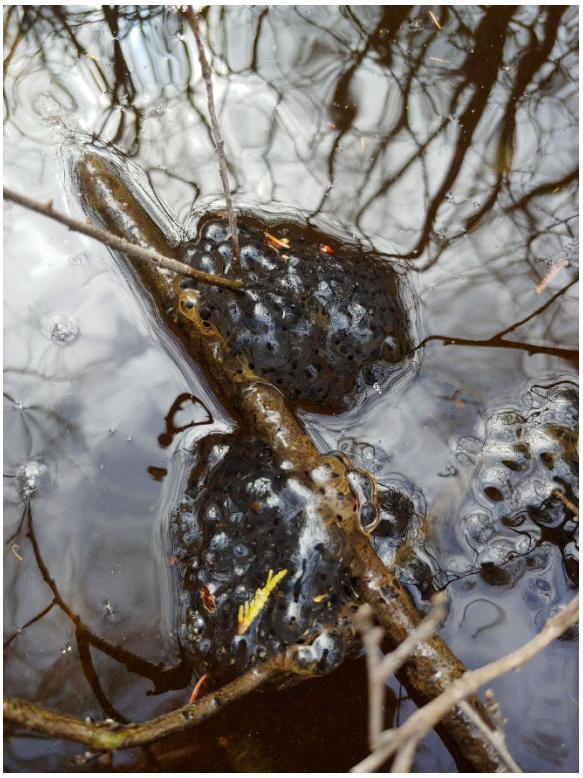

Photo 83. Wood frog egg masses in natural vernal pool SAD-VP-102, 4/25/20.

Photo 84. Wood frog egg masses in natural vernal pool SAD-VP-102, 4/25/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 85. Natural vernal pool SAD-VP-103, 4/28/20.

Photo 86. Spotted salamander egg masses in natural vernal pool SAD-VP-103, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 87. Wood frog egg masses in natural vernal pool SAD-VP-103, 4/28/20.

Photo 88. Natural vernal pool SAD-VP-104, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 89. Spotted salamander egg mass in natural vernal pool SAD-VP-104, 4/28/20.

Photo 90. Wood frog egg masses in natural vernal pool SAD-VP-104, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 91. Wood frog egg mass in natural vernal pool SAD-VP-104, 4/28/20.

Photo 92. Natural vernal pool SAD-VP-105, 4/29/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 93. Natural vernal pool SAD-VP-105, 4/29/20.

Photo 94. Natural vernal pool SAD-VP-105, 4/29/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 95. Natural vernal pool SAD-VP-105, 4/29/20.

Photo 96. Spotted salamander egg mass natural vernal pool SAD-VP-105, 4/29/20.

Photo 97. Wood frog egg masses natural vernal pool SAD-VP-105, 4/29/20.

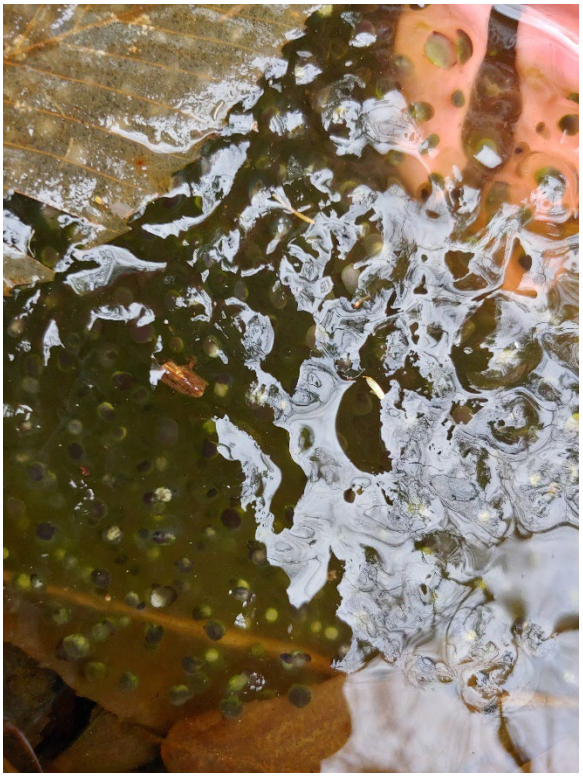

Photo 98. Wood frog egg masses natural vernal pool SAD-VP-105, 4/29/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 99. Natural-modified vernal pool SAD-VP-106, 4/28/20.

Photo 100. Natural-modified vernal pool SAD-VP-106, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 101. Natural-modified vernal pool SAD-VP-106, 4/28/20.

Photo 102. Natural-modified vernal pool SAD-VP-106, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 103. Spotted salamander egg masses in natural-modified vernal pool SAD-VP-106, 4/28/20.

Photo 104. Wood frog egg masses in natural-modified vernal pool SAD-VP-106, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

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Photo 106. Natural vernal pool SAD-VP-107, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 107. Spotted salamander egg masses in natural vernal pool SAD-VP-107, 4/28/20.

Photo 108. Spotted salamander egg masses in natural vernal pool SAD-VP-107, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

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Photo 110. Wood frog egg masses in natural vernal pool SAD-VP-107, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 111. Natural vernal pool SAD-VP-119, 5/5/20.

Photo 112. Natural vernal pool SAD-VP-119, 5/5/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 113. Spotted salamander egg masses in natural vernal pool SAD-VP-119, 5/5/20.

Photo 114. Spotted salamander egg masses in natural vernal pool SAD-VP-119, 5/5/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 115. Unnatural vernal pool SAD-CP-102, 4/21/20.

Photo 116. Natural vernal pool SAD-VP-2, 5/6/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

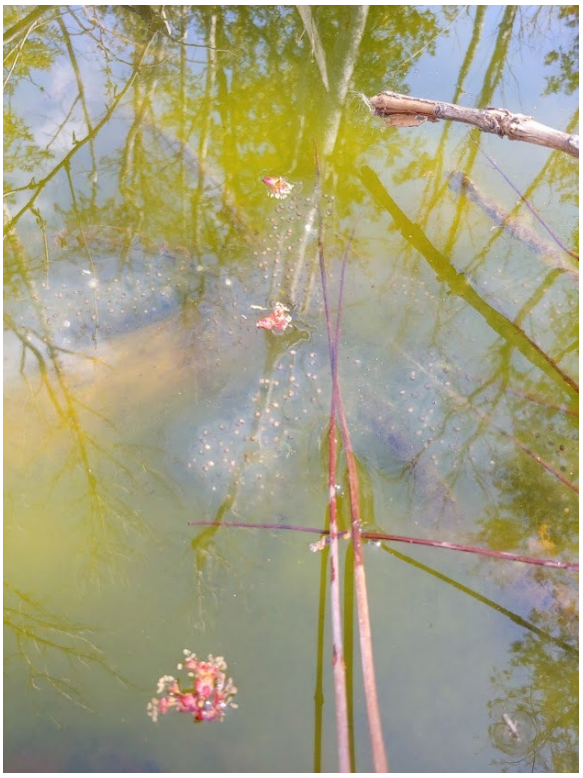

Photo 117. Spotted salamander egg masses in natural vernal pool SAD-VP-2, 5/6/20.

Photo 118. Natural vernal pool SAD-VP-3, 5/6/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

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Photo 120. Natural vernal pool SAD-VP-4, 5/6/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 121. Natural-modified vernal pool SAD-VP-5, 5/6/20.

Photo 122. Spotted salamander egg mass in natural-modified vernal pool SAD-VP-5, 5/6/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 123. Natural-modified vernal pool SAD-VP-8, 4/21/20.

Photo 124. Spotted salamander egg masses in natural-modified vernal pool SAD-VP-8, 4/21/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 125. Wood frog egg mass in natural-modified vernal pool SAD-VP-8, 4/21/20.

Photo 126. Natural vernal pool SAD-VP-9, 4/28/20.

Photo 127. Spotted salamander egg masses in natural vernal pool SAD-VP-9, 4/28/20.

Photo 128. Wood frog egg mass in natural vernal pool SAD-VP-9, 4/28/20.

Photo 129. Spotted salamander egg masses in natural vernal pool SAD-VP-13, 4/22/20.

Photo 130. Spotted salamander egg masses in natural vernal pool SAD-VP-16, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 131. Natural vernal pool SAD-VP-116, 4/30/20.

Photo 132. Spotted salamander egg masses in natural vernal pool SAD-VP-116, 4/30/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 133. Natural vernal pool SAD-VP-117, 4/30/20.

Photo 134. Spotted salamander egg mass in natural vernal pool SAD-VP-117, 4/30/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 135. Natural-modified vernal pool SAD-VP-118, 4/30/20.

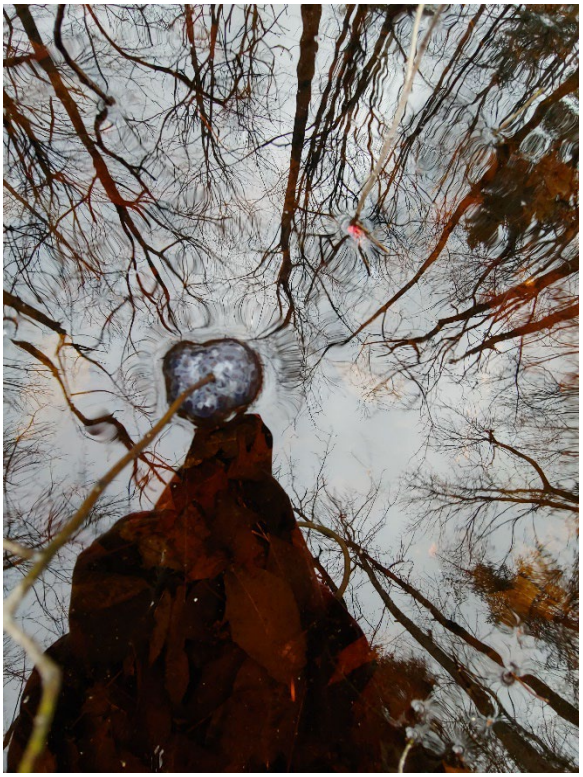


Photo 136. Spotted salamander egg mass in natural-modified vernal pool SAD-VP-118, 4/30/20.

ATTACHMENT 10. PUBLIC NOTICE

On January 13, 2022, a combined Notice of Public Informational Meeting and MDEP/Land Use Planning Commission (LUPC) Notice of Intent to File (notice) was sent to abutters, the Towns of Benton and Clinton, and additional LUPC recipients by Certificate of Mailing. The notice was also published in the Waterville Morning Sentinel and Kennebec Journal on January 14, 2022. See Exhibit C for the notice mailing list, a copy of the public notice, as sent to abutters and as published, and the signed Public Notice Filing and Certification form.

Due to the COVID-19 pandemic, the Public Informational Meeting was held virtually on the evening of January 25, 2022. The Applicant consulted with MDEP on the format of the meeting prior to scheduling, which included both telephone and online participation options. The Applicant presented background information on the Project, impacts to environmental resources, cultural resources, visibility, noise, and economics. The Applicant answered questions about the Project and discussed the Project with landowners, abutters, and other interested parties and members of the public. An overview informing the public of means to participate in MDEP's licensing process and the required state, local, and federal licenses necessary for the Project was provided in the meeting and was available via the Project's website[7] prior to the meeting. Public participation information and the Project's anticipated environmental impacts were posted to the Applicant's website in advance of the meeting. Eight members of the public were in attendance. Attendees were primarily interested in details regarding Project noise and any potential changes at the Albion Road substation.

[7] Three Corners Solar Project - https://www.longroadenergy.com/three-corners-solar-project/

ATTACHMENT 11. MHPC NOTIFICATION

11.1 MHPC AND TRIBAL CORRESPONDENCE

The Applicant received an information request response from the Maine Historic Preservation Commission (MHPC) on March 26, 2019, regarding any known prehistoric archaeological sites, historic sites, or architectural resources within the proposed Project area (Appendix B). Based on recommendations by the MHPC, Phase I architectural and archaeological surveys were conducted for the Project area in 2021 and 2022.

In 2018 and 2021, consultation was initiated with the Tribal Historic Preservation Officers (THPOs) for each of the federally recognized Maine tribes (Penobscot, Maliseet, Passamaquoddy, and Mi'kmaq) to confirm the absence or presence of known or likely cultural or archaeological sites within the Project area. Responses have been received from all four THPOs confirming that there are no known cultural or archaeological sites within the Project area. Tribal correspondence is included as Appendix B.

11.2 PHASE I ARCHITECUTRAL AND ARCHAEOLOGICAL SURVEYS

In August 2020, SEARCH conducted background research and reconnaissance surveys to support the preparation of Phase I archaeological and architectural surveys for the Project. Phase I architectural and archaeological field surveys for the Project were completed between October 2021 and January 2022. One historic architectural resource, a segment of the Maine Central Railroad in Clinton located approximately 2.3 miles northeast of the Project, was identified as a historic resource eligible for listing on the National Register of Historic Places. Minimal Project visibility at this resource is anticipated due to the relatively flat surrounding topography and existing forested landcover. As such, no adverse effect to this resource is anticipated as a result of the Project. Three post-contact archaeological areas were identified that may qualify for historic resource protection. The sites consist of mid-19th century homesteads and associated activities. The Project will avoid impacts to these resources through hand or reach-in clearing of vegetation within these resources, presence of an archaeological monitor with stop work authority present when construction is within 82 ft (25 meters) of these and, permanent fencing will be maintained around these resources while the Project is operational. The Historical Architectural Survey Report and Phase I Archaeological Survey Report are included in Section 8.0 of the Project's Site Law permit application and the reports have been provided to the MHPC for review.

ATTACHMENT 12. FUNCTIONAL ASSESSMENT

BRI and Stantec have evaluated wetland functions and values using the U.S. Army Corps of Engineers Highway Methodology.[8] Functions and values are assessed based on characteristics observed within the field as well as a review of pertinent desktop and publicly available information. A summary of the Project area wetland functions and values are described below. The complete wetland functions and values assessments are included as Attachment 12-1 (Solar Array Area) and Attachment 12-2 (Genlead).

12.1 SOLAR ARRAY AREAS

Important functions provided by all wetlands on within the solar array areas include Wildlife Habitat, as evidenced by wildlife signs (i.e., tracks and scat) as well as direct observations of wildlife. In addition, water quality improvements (i.e., Sediment/Toxicant/Pathogen Retention and sediment stabilization) are provided several wetlands. Larger wetlands (e.g., W-MR-01, which include areas of open water and large emergent fringe marshes, provide Floodflow Alteration as well as Fish and Shellfish Habitat. A In addition, wetlands associated with streams provide some Sediment/Shoreline Stabilization functions as well as limited Floodflow Alteration. Larger wetlands provide limited Recreation values from hunting opportunities. Additional recreational opportunities are limited due to private land.

12.2 GENLEAD

In general, all the wetlands evaluated within the Project Genlead area provide Floodflow Alteration, Sediment/Toxicant/Pathogen Retention, Nutrient Removal/Retention/Transformation, Production Export, and Wildlife Habitat functions. Wildlife Habitat, Floodflow Alteration, Sediment/Toxicant/Pathogen Retention, and Nutrient Removal/Retention/Transformation are principal functions for many wetlands. Most of the wetlands evaluated also provide Groundwater Recharge/Discharge. The wetlands associated with watercourses also provide Fish and Shellfish Habitat and Sediment/Shoreline Stabilization functions. Larger wetlands provided limited Recreation values from hunting opportunities, and Fifteenmile Stream provides boating recreational opportunities. Additional recreational opportunities are limited due to private land. Endangered Species Habitat is provided by the wetlands associated with Fifteenmile Stream (i.e., W43), due to the presence of wild garlic (*Allium canadense*), a species listed as Special Concern by the Maine Natural Areas Program, and wetlands W58 and W59 due to the presence of a great blue heron (*Ardea herodias*) rookery. Great blue heron is listed as Special Concern by the MDIFW.

12.3 PROPOSED PROJECT IMPACTS

The proposed tree clearing (solar array shade management areas, Collector and Genlead corridors) and temporary fill from construction mats are not expected to measurably change the capacity of the affected wetlands to provide their current functions. Functions such as Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant/Pathogen Retention, and Nutrient Removal/Retention/Transformation will remain unaffected as there will be no reduction in the amount of wetland area. Functions such as Wildlife Habitat and Production Export could experience shifts due to the conversion of forested wetlands to open

[8] U.S. Army Corps of Engineers. 1999. *The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach.* U.S. Army Corps of Engineers. New England Division. 32pp. NAEEP-360-1-30a.

wetlands. For instance, there may be a shift in wildlife use from those species with affinities for forested wetlands to those with affinities for open shrub and herb-dominated wetlands. In addition, conversion of forested wetlands to scrub-shrub communities is likely to increase the vegetation diversity and shrub cover due to the increased sunlight availability and could enhance wildlife habitat by providing edge habitat, a greater diversity of food sources, and potentially increasing availability of shelter. Production Export functions could also shift from forested wetlands providing commercial timber products to open wetlands that provide a greater abundance of flowering and fruiting plants for wildlife food sources.

Aquatic functions such as Fish and Shellfish Habitat and Sediment/Shoreline Stabilization functions will remain unaffected. Construction will not result in in-water activities and riparian areas will be protected to maintain stream bank integrity and riparian zone understory vegetation. Stream crossings have been minimized and temporary crossings using full-span bridges are proposed where crossings are unavoidable to maintain aquatic habitats and natural hydrology.

Recreation, in the form of hunting where allowed by the landowners, will continue to be provided by the wetlands. The conversion of forested wetlands to open wetlands are not anticipated to adversely affect recreation values. The Project perimeter fence, a National Electric Code safety requirement, will restrict access to portions of the solar array area parcels. However, wetland areas within the fence line are small in comparison with the wetland areas outside of the proposed fence line, which will remain accessible.

Endangered species habitat will also not be affected by the proposed Project. Occurrences of wild garlic will be avoided along Fifteenmile Stream during construction and seasonal timing of construction activities will be implemented to avoid sensitive periods of the great blue heron nesting period.

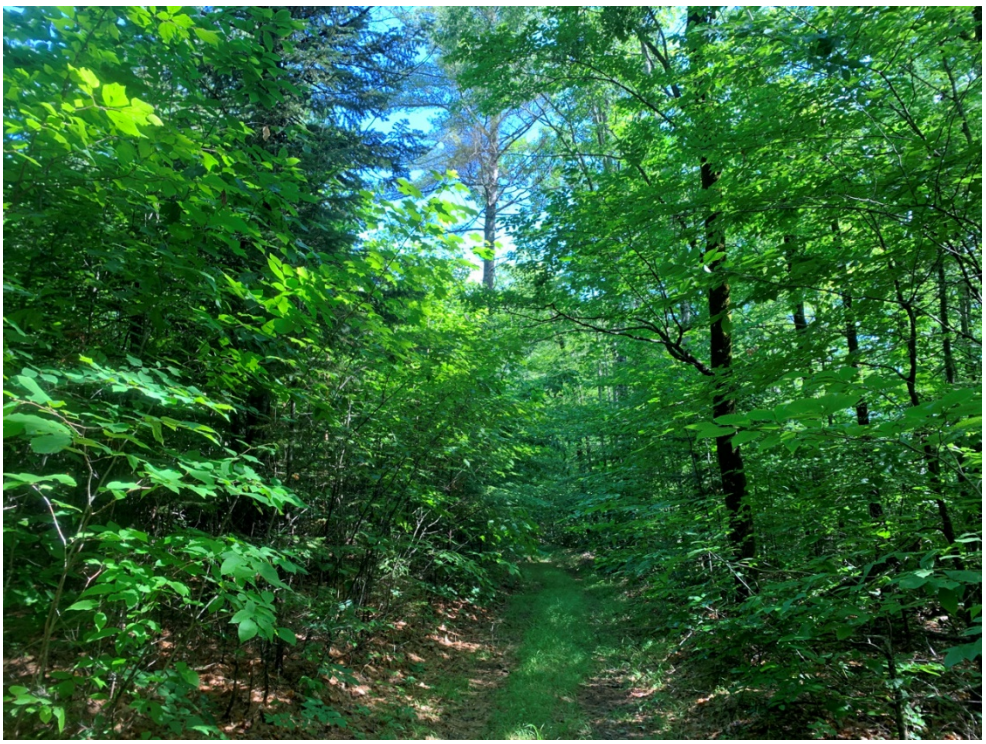
In discrete locations (i.e., access road fill/grading), some localized functions may be lost. However, overall, the wetlands are anticipated to continue to provide principal functions and values at a high-level following Project construction due to the primary location of impacts along wetland edges and the passive nature of Project operation. Two small, isolated forested wetlands (totaling 0.14 acre) within the solar array area are anticipated to be cleared and graded, as necessary, resulting in lost wetland functions. The Applicant intends to address lost, diminished, or changed functions and values through the Project's compensation plan (see Attachment 13).

Attachment 12-1

Wetland Functions and Values Assessment: Solar Array Area

Wetland Functions and Values Assessment

Three Corners Solar Project



Prepared by BRI Environmental

January 2022

longroad ENERGY

bri
BIODIVERSITY RESEARCH INSTITUTE

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Exhibits

Exhibit A: Functions and Values Worksheets

1.0 Introduction

Biodiversity Research Institute (BRI) was retained by Longroad Energy (Longroad) to complete natural resource delineations on an approximately 2,146-acre area located off Bessey Lane in Unity Township, Maine (Site). Subsequent to the field surveys, Longroad requested that BRI complete a more detailed analysis of functions and values for the wetlands proposed to be impacted by the Three Corners Solar Project (Project) layout to be used to support permitting by Longroad or others.

2.0 Methods

All wetlands were evaluated using the U.S. Army Corps of Engineers (USACE) Highway Methodology[1]. 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. Based on a review of the proposed site plan, BRI developed a more detailed analysis of functions and values provided by those wetlands that are proposed to be altered by the Project. The functions and values assessed are based on those found in the USACE Highway Methodology. A brief description of the functions and values being assessed is provided below. Each of these were assessed using field and desktop data.

Groundwater Recharge/Discharge

This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Flood-flow Alteration

This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas.

Fish and Shellfish Habitat

This function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant Retention

This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

[1] USACE Highway Methodology
https://www.nae.usace.army.mil/Portals/74/docs/regulatory/Forms/HighwaySupplement6Apr2015.pdf

Nutrient Removal

This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

Production Export

This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization

This function considers the effectiveness of a wetland to stabilize streambanks and shorelines against erosion.

Wildlife Habitat

This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered. Species lists of observed and potential animals should be included in the wetland assessment report.

Recreation

This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting, and other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals, or other resources that are intrinsic to the wetland. Non-consumptive opportunities do not consume or diminish these resources of the wetland.

Educational/Scientific Value

This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage

This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation, and habitat diversity.

Visual Quality/Aesthetics

This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat

This value considers the suitability of the wetland to support threatened or endangered species.

3.0 Results

As part of the initial wetland delineation, BRI evaluated wetland functions and values using the USACE Highway Methodology during fieldwork. Functions and values are assessed based on characteristics observed within the field as well as a review of pertinent desktop and publicly available information. Important functions provided by all wetlands on the Site include wildlife habitat, as evidenced by wildlife signs (i.e., tracks and scat) as well as direct observations of wildlife. In addition, water quality improvements (i.e., sediment and toxicant retention and

sediment stabilization) are provided by all wetlands. The proposed Project (see **Attachment 5-1 NRPA Application**) results in direct and indirect impacts to ten wetlands resulting from either conversion or fill needed to construct the array, removing shading, or constructing access roads or transmission interconnection lines. Indirect impacts result from conversion of wetland areas to prevent shading of solar panels and racking over wetland areas. Table 1 includes a summary of functions and values for each of the impacted wetlands. **Exhibit A** includes the functions and values sheets that have been completed for each impacted wetland.

The Site is predominantly forested, however, it has been partially cut for timber with numerous tote roads present throughout the property. In some cases, wetlands have been impacted by historic timber harvesting practices and skidder ruts. Soil disturbance is present throughout the Site. Soils onsite are diverse and include Lyman-Tunbridge complex, Monarda silt loam, and Woodbridge very stony fine sandy loam. 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.

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.

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).

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 majority of impacted wetland are small in size. These wetlands are all forested wetlands 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*). Most of these wetlands have been impacted by both ground disturbance as well as timber harvesting. The majority of the impacted wetlands provide primarily wildlife habitat. There are some limited water quality functions provided by these small wetlands, however most are isolated and these functions are localized. Recreation value does occur, as there is access by permission, however the lands are privately owned, which limits public value of these resources.

A large wetland complex (W-MR-01) is impacted by the proposed Project. This large wetland includes several wetland types (i.e., open water, emergent, and scrub-shrub), however impacts are limited to areas of forested wetland. The Project has avoided impacts within emergent and open water portions. Species in this large complex within forested areas are similar to those described above. Open water and emergent sections include occasional red maple and northern white cedar. The 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 tomentosa*), common red raspberry (*Rubus idaeus*), swampcandles (*Lysimachia terrestris*), and uptight sedge (*Carex stricta*). Areas of open water also include non-persistent aquatic vegetation such as white-water lily (*Nymphea odorata*), pickerel weed (*Pontederia cordata*), and yellow water lily (*Nuphar lutea*). This wetland is a large and very functional resource providing high quality habitat and water quality functions. It is important to note that the

impacted areas are all restricted to the outer fringe and peripheral areas of the wetland complex. These areas are forested and provide primarily wildlife habitat. Portions of the wetland complex which provide additional functions (i.e., flood storage and water quality) are present within areas outside of the disturbance and will remain unchanged following construction.

Table 1. Pre-Construction Wetland Functions and Values Table

Wetland ID	Groundwater Recharge/Discharge	Flood-flow Alteration	Fish and Shellfish Habitat	Sediment/Toxicant Retention	Nutrient Removal	Production Export	Sediment/Shoreline Stabilization	Wildlife Habitat	Recreation	Educational/Scientific Value	Uniqueness/Heritage	Visual Quality/Aesthetics	Endangered Species Habitat
W-CF-11				p	p			**P**					
W-CF-14				p	p			**P**					
W-NS-10				p	p			**P**					
W-NS-11				p	p			**P**					
W-NS-16				p	p			**P**					
W-CF-07				p	p			**P**					
W-MR-27				p	p			**P**					
W-MR-01	**P**	**P**	p	**P**	**P**	p		**P**	p		p		
W-SK-05				p	p			**P**					
W-NS-01		p		P	**P**			**P**	p				

P=Principal function or value; p=Secondary function or value (i.e., present but not at a principal level)

4.0 Discussion

The proposed Project results in both permanent (i.e., fill wetlands) and indirect (i.e., conversion to remove shading) impacts to wetlands on the Site. The most significant alterations occur in wetland W-CF-07 and W-MR-27. Impacts to these wetlands result from permanent fill needed to construct the array. While these wetlands are isolated features, the proposed impact will result in a loss of some wildlife habitat (NRPA Section 2.5 Table 2-4). However, these wetlands have also been previously degraded by historic land-use (i.e., timber harvest) and ground disturbance. Impacts to wetland W-MR-01 and W-SK-05 include both conversion and permanent fill. There will be some loss of wildlife function in areas which will be filled, however these impacts are concentrated on the edges of these large wetland complexes and therefore the majority of functions (both wildlife and water quality) will remain following the construction of the proposed Project.

The remaining wetland impacts are all indirect and result from conversion to remove shading vegetation. These areas will require conversion of forested areas, but will remain either emergent or scrub-shrub wetlands. In most cases, these impacts are limited only to the fringe of wetlands and overall functions and values provided will not be significantly reduced as a result of the proposed development. Overall, these wetlands will continue to provide principal functions and values at a high-level following construction of the proposed development. In the case of wildlife usage, there will likely be some transition to species that prioritize open meadow, emergent, and scrub-shrub habitats in areas that are to be converted form forested habitats. It is important to note, that the vast majority of converted forested wetlands will remain scrub-shrub habitats. Table 2 includes a summary of anticipated post-construction functions provided by impacted wetlands.

Table 2. Post Construction Wetland Functions and Values Table

Wetland ID	Groundwater Recharge/Discharge	Flood-flow Alteration	Fish and Shellfish Habitat	Sediment/Toxicant Retention	Nutrient Removal	Production Export	Sediment/Shoreline Stabilization	Wildlife Habitat	Recreation	Educational/Scientific Value	Uniqueness/Heritage	Visual Quality/Aesthetics	Endangered Species Habitat
W-CF-11				p	p			**P**					
W-CF-14				p	p			**P**					
W-NS-10				p	p			**P**					
W-NS-11				p	p			**P**					
W-NS-16				p	p			**P**					
W-CF-07				p	p			**L**					
W-MR-27				p	p			**L**					
W-MR-01	**P**	**P**	p	**P**	**P**	p		**P/M**	p		p		
W-SK-05				p	p			**P**					
W-NS-01		p		P	**P**			**P**	p				

L= Function Lost by Activity; **M=** Function Modified by Activity; **P**=Principal function or value; p=Secondary function or value (i.e., present but not at a principal level)

Exhibit A:

Functions and Values Worksheets

Wetland Function-Value Evaluation Form

Total area of wetland 3.5 acres Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Forested Distance to nearest roadway or other development 540 Feet

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-CF-11

Latitude 44°47'13.67"N Longitude 69°21'53.56"W

Prepared by: BRI Date 1/24/2022

Wetland Impact:
Type Clearing Area 24,002 sq ft

Evaluation based on:
Office YES Field YES

Corps manual wetland delineation completed? Y YES N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	N	9,12		
Floodflow Alteration	N	5,9		
Fish and Shellfish Habitat	N	1,2		
Sediment/Toxicant Retention	Y	3,4,5,8		
Nutrient Removal	Y	3,5,7,8		
Production Export	N	1,4		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1,4,5,7,8	X	See resource report for wildlife
Recreation	N	2,3		Private Land, but access allowed by permission.
Educational/Scientific Value	N	N/A Private Land		
Uniqueness/Heritage	N	N/A Private Land		
Visual Quality/Aesthetics	N	N/A Private Land		
ES Endangered Species Habitat	N	None		
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.02 acres Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Forested Distance to nearest roadway or other development 4,000 Feet

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-CF-14

Latitude 44°37'28.89"N Longitude 69°26'35.03"W

Prepared by: BRI Date 1/24/2022

Wetland Impact:
Type Clearing Area 871 sq ft

Evaluation based on:
Office YES Field YES

Corps manual wetland delineation completed? Y YES N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	N			
Floodflow Alteration	N	5,9		
Fish and Shellfish Habitat	Y	1		
Sediment/Toxicant Retention	Y	4		
Nutrient Removal	Y	7		
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1,4,5,7,8	X	See resource report for wildlife
Recreation	N	3		Private Land, but access allowed by permission.
Educational/Scientific Value	N	N/A Private Land		
Uniqueness/Heritage	N	N/A Private Land		
Visual Quality/Aesthetics	N	N/A Private Land		
ES Endangered Species Habitat	N	None		
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.9 acres Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Forested Distance to nearest roadway or other development 100 Feet

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NS-10

Latitude 44°37'27.75"N Longitude 69°27'25.10"W

Prepared by: BRI Date 1/25/2022

Wetland Impact:
Type Clearing Area 37,897 sq ft

Evaluation based on:
Office YES Field YES

Corps manual wetland delineation completed? Y YES N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	N			
Floodflow Alteration	N	5,9		
Fish and Shellfish Habitat	N	1		
Sediment/Toxicant Retention	Y	1,4		
Nutrient Removal	Y	7		
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	4,5,7,8	X	See resource report for wildlife
Recreation	N	3		Private Land, but access allowed by permission.
Educational/Scientific Value	N	N/A Private Land		
Uniqueness/Heritage	N	N/A Private Land		
Visual Quality/Aesthetics	N	N/A Private Land		
ES Endangered Species Habitat	N	None		
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.7 acres Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Forested Distance to nearest roadway or other development 100 Feet

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NS-11

Latitude 44°37'31.67"N Longitude 69°27'31.61"W

Prepared by: BRI Date 1/25/2022

Wetland Impact:
Type Clearing Area 31,581 sq ft

Evaluation based on:
Office YES Field YES

Corps manual wetland delineation completed? Y YES N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	N			
Floodflow Alteration	N	5,9		
Fish and Shellfish Habitat	N	1		
Sediment/Toxicant Retention	Y	1,4		
Nutrient Removal	Y	7		
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	4,5,7,8	X	See resource report for wildlife
Recreation	N	3		Private Land, but access allowed by permission.
Educational/Scientific Value	N	N/A Private Land		
Uniqueness/Heritage	N	N/A Private Land		
Visual Quality/Aesthetics	N	N/A Private Land		
ES Endangered Species Habitat	N	None		
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.7 acres Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Forested Distance to nearest roadway or other development 1,200 Feet

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NS-16

Latitude 44°38'7.64"N Longitude 69°27'37.43"W

Prepared by: BRI Date 1/25/2022

Wetland Impact:
Type Clearing Area 31,450 sq ft

Evaluation based on:
Office YES Field YES

Corps manual wetland delineation completed? Y YES N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	N			
Floodflow Alteration	N	5,9		
Fish and Shellfish Habitat	N	1		
Sediment/Toxicant Retention	Y	1,4		
Nutrient Removal	Y	7		
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	4,5,7,8	X	See resource report for wildlife
Recreation	N	3		Private Land, but access allowed by permission.
Educational/Scientific Value	N	N/A Private Land		
Uniqueness/Heritage	N	N/A Private Land		
Visual Quality/Aesthetics	N	N/A Private Land		
ES Endangered Species Habitat	N	None		
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.1 acres Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Forested Distance to nearest roadway or other development 4,000 Feet

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-CF-07

Latitude 44°38'10.68"N Longitude 69°27'47.91"W

Prepared by: BRI Date 1/25/2022

Wetland Impact:
Type Grading Area 4,182 sq ft

Evaluation based on:
Office YES Field YES

Corps manual wetland delineation completed? Y YES N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	N			
Floodflow Alteration	N	5,9		
Fish and Shellfish Habitat	N	1		
Sediment/Toxicant Retention	Y	4		
Nutrient Removal	Y	7		
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	4,5,7,8	X	See resource report for wildlife
Recreation	N	3		Private Land, but access allowed by permission.
Educational/Scientific Value	N	N/A Private Land		
Uniqueness/Heritage	N	N/A Private Land		
Visual Quality/Aesthetics	N	N/A Private Land		
ES Endangered Species Habitat	N	None		
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.04 acres Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Forested Distance to nearest roadway or other development 2,000 Feet

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-MR-27

Latitude 44°37'43.93"N Longitude 69°26'33.49"W

Prepared by: BRI Date 1/25/2022

Wetland Impact:
Type Grading Area 1,917 sq ft

Evaluation based on:
Office YES Field YES

Corps manual wetland delineation completed? Y YES N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	N			
Floodflow Alteration	N	5,9		
Fish and Shellfish Habitat	N	1		
Sediment/Toxicant Retention	Y	4		
Nutrient Removal	Y	7		
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	4,5,7,8	X	See resource report for wildlife
Recreation	N	3		Private Land, but access allowed by permission.
Educational/Scientific Value	N	N/A Private Land		
Uniqueness/Heritage	N	N/A Private Land		
Visual Quality/Aesthetics	N	N/A Private Land		
ES Endangered Species Habitat	N	None		
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland ~300 acres Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Forested Distance to nearest roadway or other development 2,000 Feet

Dominant wetland systems present PFO/PEM/PSS Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-MR-01/07

Latitude 44°37'1.72"N Longitude 44°37'1.72"N

Prepared by: BRI Date 1/25/2022

Wetland Impact:
Type Grading/Clearing Area 55,326 sq ft

Evaluation based on:
Office YES Field YES

Corps manual wetland delineation completed? Y YES N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	1,7,9,12	X	
Floodflow Alteration	Y	1,5,6,7,8,9,10,13,18	X	
Fish and Shellfish Habitat	Y	1,2,3,4,8,14		Wetland areas associated with watercourses not impacted by proposed development.
Sediment/Toxicant Retention	Y	1,3,4,5,6,8,10,12,14,15,16	X	
Nutrient Removal	Y	1,2,3,5,6,9,10,12,13,14	X	
Production Export	Y	1,2,4,6,7,9,12		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1,3,4,5,6,7,8,9,10,11,12,13,14,15,16	X	See resource report for wildlife
Recreation	Y	2,3,5,6		Private Land, but access allowed by permission.
Educational/Scientific Value	N			Private Land, but access allowed by permission.
Uniqueness/Heritage	Y	3,4,5,6	X	Private Land, but access allowed by permission.
Visual Quality/Aesthetics	N	7,8		Private Land, but access allowed by permission.
ES Endangered Species Habitat	N	None		
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 5.8 acres Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Forested Distance to nearest roadway or other development Adjacent

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-SK-05

Latitude 44°37'57.14"N Longitude 44°37'57.14"N

Prepared by: BRI Date 1/25/2022

Wetland Impact:
Type Clearing/Fill Area 31,457 sq ft

Evaluation based on:
Office YES Field YES

Corps manual wetland delineation completed? Y YES N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	N	9,12		
Floodflow Alteration	N	5,9		
Fish and Shellfish Habitat	N	1,2		
Sediment/Toxicant Retention	Y	3,4,5,8		
Nutrient Removal	Y	3,5,7,8		
Production Export	N	1,4		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1,4,5,7,8	X	See resource report for wildlife
Recreation	N	2,3		Private Land, but access allowed by permission.
Educational/Scientific Value	N	N/A Private Land		
Uniqueness/Heritage	N	N/A Private Land		
Visual Quality/Aesthetics	N	N/A Private Land		
ES Endangered Species Habitat	N	None		
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland ~300 acres Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Forested Distance to nearest roadway or other development 2,000 Feet

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W-NS-01

Latitude 44°37'33.30"N Longitude 69°25'22.86"W

Prepared by: BRI Date 1/25/2022

Wetland Impact:
Type Clearing Area 1,437 sq ft

Evaluation based on:
Office YES Field YES

Corps manual wetland delineation completed? Y YES N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	N	1		
Floodflow Alteration	Y	1,5,9		
Fish and Shellfish Habitat	N	1		
Sediment/Toxicant Retention	Y	1,2,3,4,5,6,8	X	
Nutrient Removal	Y	1,3,4,5,6,10	X	
Production Export	N	1,4,7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	1,6,7,8,11,13,14,15,16	X	See resource report for wildlife
Recreation	Y	3,5		Private Land, but access allowed by permission.
Educational/Scientific Value	N			Private Land, but access allowed by permission.
Uniqueness/Heritage	N			Private Land, but access allowed by permission.
Visual Quality/Aesthetics	N			Private Land, but access allowed by permission.
ES Endangered Species Habitat	N	None		
Other				

Notes:

* Refer to backup list of numbered considerations.

Attachment 12-2

Wetland Functions and Values Assessment: Genlead

Three Corners Solar Transmission Line Project: Wetland Function and Value Assessment Report

Benton, Maine

December 29, 2021

Prepared for:

Three Corners Solar, LLC
30 Danforth Street, Suite 201
Portland, ME 04101

Prepared by:

Stantec Consulting Services Inc.
30 Park Drive
Topsham, ME 04086

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1.0 INTRODUCTION

Three Corners Solar, LLC (Three Corners) intends to develop a solar project in Benton, Clinton, and Unity Township (Project). In 2020 and 2021, Stantec Consulting Services Inc. (Stantec) conducted wetland and watercourse delineations along the proposed transmission line (Figure 1) that extends approximately 5 miles from the south end of the proposed solar array on Route 139 (Unity Road) south and then west to an existing substation north of Albion Road in Benton (see Figures 2 – 5). Wetland and watercourse delineations and functions and values assessments for the proposed solar array area has been conducted by others and is provided under separate cover. As proposed, the transmission line construction will result in unavoidable impacts to wetland resources regulated under the Maine Natural Resources Protection Act as well as the federal Clean Water Act. As such, a function and value assessment was conducted of the affected natural resources along the proposed transmission line. This report summarizes this assessment.

2.0 METHODOLOGY

Wetland functions and values of the affected wetlands were evaluated by a Professional Wetland Scientist using *The Highway Methodology Workbook Supplement*.[1] This method bases function and value determinations on the presence or absence of criteria for each of 13 wetland functions and values typically considered by the Maine Department of Environmental Protection and the U.S. Army Corps of Engineers during the wetland permitting process. The criteria are assessed through direct field observations and a review of existing public data sources. As part of the evaluation, the "principal" (i.e., most important) functions and values associated with the subject wetland are identified and described. In addition, the ecological integrity of the wetland is evaluated based on the existing and past levels of disturbance and the overall significance of that wetland within the local watershed. This descriptive and qualitative approach integrates wetland science with subjective value judgments made by wetland professionals.

The following are the 13 wetland functions and values considered in the assessment.

Groundwater Interchange (Recharge/Discharge)

This function considers the potential for a wetland to serve as groundwater recharge and/or discharge areas. It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

[1] U.S. Army Corps of Engineers. 1999. *The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach.* U.S. Army Corps of Engineers. New England Division. 32pp. NAEEP-360-1-30a.

Floodwater Alteration (Storage and Desynchronization)

This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation and the gradual release of floodwaters.

Fish and Shellfish Habitat

This function considers the effectiveness of seasonal or permanent waterbodies associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant Retention

This function relates to a wetland's ability to reduce or prevent degradation of surface water and groundwater quality by trapping sediments, toxicants, or pathogens that may enter the wetland. A wetland's effectiveness in performing this function is typically related to factors such as soil type, vegetation type and density, and the position in the landscape.

Nutrient Removal/Retention/Transformation

This wetland function relates to the effectiveness of the wetland to assimilate nutrients and prevent or reduce the adverse effects of excess nutrients on aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

Production Export

This function relates to the effectiveness of the wetland to produce and export food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization

This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion, primarily through the presence of persistent, well-rooted vegetation.

Wildlife Habitat

This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and migrating species are considered.

Recreation (Consumptive and Non-Consumptive)

This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting, and other active or passive recreational activities.

Educational/Scientific Value

This value considers the effectiveness of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage

This value relates to the effectiveness of the wetland or its associated waterbodies to provide certain special values such as archaeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geologic features.

Visual Quality/Aesthetics

This value relates to the visual and aesthetic qualities of the wetland.

Endangered Species Habitat

This value considers the suitability of the wetland to support threatened or endangered species.

3.0 RESULTS

The results of the function and value assessment are summarized in Table 1 below. Representative photographs of the affected wetland resources are provided in Appendix A and completed Wetland Function-Value Data Forms are provided in Appendix B. In general, all the wetlands evaluated provide Floodflow Alteration, Sediment / Toxicant / Pathogen Retention, Nutrient Removal / Retention / Transformation, Production Export, and Wildlife Habitat functions. Wildlife Habitat, Floodflow Alteration, Sediment / Toxicant / Pathogen Retention, and Nutrient Removal / Retention / Transformation are principal functions for many wetlands. Most of the wetlands evaluated also provide Groundwater Recharge / Discharge. The wetlands associated with watercourses also provide Fish and Shellfish Habitat and Sediment / Shoreline Stabilization functions. Larger wetlands provided limited Recreation values and are limited to hunting opportunities. Fifteenmile Stream provides additional boating recreational opportunities. Additional recreational opportunities are limited due to private land. Endangered Species Habitat is provided by the wetlands associated with Fifteenmile Stream (i.e., W43), due to the presence of wild garlic (*Allium canadense*), a species listed as Special Concern by the Maine Natural Areas Program, and wetlands W58 and W59 due to the presence of a great blue heron (*Ardea herodias*) rookery. Great blue heron is listed as Special Concern by the Maine Department of Inland Fisheries and Wildlife.

The proposed tree clearing and temporary fill from construction mats are not expected to measurably change the capacity of the affected wetlands to provide their current functions. Functions such as Groundwater Recharge / Discharge, Floodflow Alteration, Sediment / Toxicant / Pathogen Retention, and Nutrient Removal / Retention / Transformation will remain unaffected as there will be no reduction in the amount of wetland area. Functions such as Wildlife Habitat and Production Export could experience shifts due to the conversion of forested wetlands to open wetlands. For instance, there may be a shift in wildlife

use from those species with affinities for forested wetlands to those with affinities for open shrub and herb-dominated wetlands. In addition, conversion of forested wetlands to scrub-shrub communities is likely to increase the vegetation diversity and shrub cover due to the increased sunlight availability and could enhance wildlife habitat by providing a greater diversity of food sources, as well as increasing availability of shelter. Production Export functions could also shift from forested wetlands providing commercial timber products to open wetlands that provide a greater abundance of flowering and fruiting plants for wildlife food sources.

Aquatic functions such as Fish and Shellfish Habitat and Sediment / Shoreline Stabilization functions will remain unaffected. Construction will not result in in-water activities and riparian areas will be protected to maintain stream bank integrity and riparian zone understory vegetation. Stream crossings have been minimized and temporary crossings using full-span bridges are proposed where crossings are unavoidable to maintain aquatic habitats and natural hydrology.

Recreation, in the form of hunting where allowed by the landowners, will continue to be provided by the wetlands. The conversion of forested wetlands to open wetlands are not anticipated to adversely affect recreation values.

Endangered Species Habitat will also not be affected by the proposed Project. Occurrences of wild garlic will be avoided along Fifteenmile Stream during construction and seasonal timing of construction activities will be implemented to avoid sensitive periods of the great blue heron nesting period.

Table 1. Summary of Wetland Functions and Values

	Wetland Functions and Values												
Wetland Resource Identifier	**Groundwater Recharge/ Discharge**	**Floodflow Alteration**	**Fish and Shellfish Habitat**	**Sediment/ Toxicant/ Pathogen Retention**	**Nutrient Removal/ Retention/ Transformation**	**Production Export**	**Sediment/ Shoreline Stabilization**	**Wildlife Habitat**	**Recreation**	**Education/ Scientific Value**	**Uniqueness/ Heritage**	**Visual Quality/ Aesthetics**	**Endangered Species Habitat**
W03	Y	Y	N	Y	P	Y	N	P	Y	N	N	N	N
W04	Y	Y	N	Y	P	Y	N	P	Y	N	N	N	N
W05	Y	Y	N	Y	P	Y	N	P	Y	N	N	N	N
W07	N	Y	N	Y	Y	Y	N	Y	N	N	N	N	N
W09	Y	P	Y	Y	P	P	Y	P	Y	N	Y	N	N
W14	P	P	N	P	P	P	N	Y	Y	N	N	N	N
W15	Y	Y	N	Y	P	Y	N	P	Y	N	N	N	N
W16	Y	Y	N	Y	P	Y	N	P	Y	N	N	N	N
W22	Y	Y	N	Y	P	Y	N	P	Y	N	N	N	N
W27	Y	P	Y	P	P	Y	P	P	Y	N	N	N	N
W28	Y	Y	N	Y	Y	Y	N	P	Y	N	N	N	N
W32	Y	P	N	Y	P	Y	N	P	Y	Y	Y	Y	N
W35	Y	Y	N	Y	P	Y	N	P	Y	N	N	Y	N
W26	Y	Y	N	Y	P	Y	N	P	Y	N	N	N	N
W42	Y	P	P	P	P	P	P	P	Y	Y	Y	Y	N
W43	Y	P	P	P	P	P	P	P	Y	Y	Y	Y	Y
W50	Y	P	Y	P	P	P	Y	P	Y	N	N	N	N
W51	Y	P	N	P	P	P	N	P	Y	N	N	N	N
W52	Y	P	N	P	P	P	N	P	Y	N	N	N	N
W56	Y	P	Y	P	P	P	Y	P	Y	N	N	N	N
W57	Y	P	Y	P	P	P	Y	P	Y	N	N	N	N
W58	Y	P	Y	Y	P	Y	Y	P	Y	Y	Y	Y	Y
W59	Y	P	Y	Y	P	Y	Y	P	Y	Y	Y	Y	Y

Y = Yes, N = No, P = Principal

4.0 SUMMARY OF PROPOSED PROJECT IMPACTS

Construction of the proposed transmission line will result in direct and indirect impacts to 20 wetland areas, totaling approximately 14.2 acres of impact (Table 2). The primary impact types include wetland community conversion due to creating and maintaining an open transmission line corridor, and temporary fill due to use of temporary construction mats for equipment access during installation of the transmission line components.

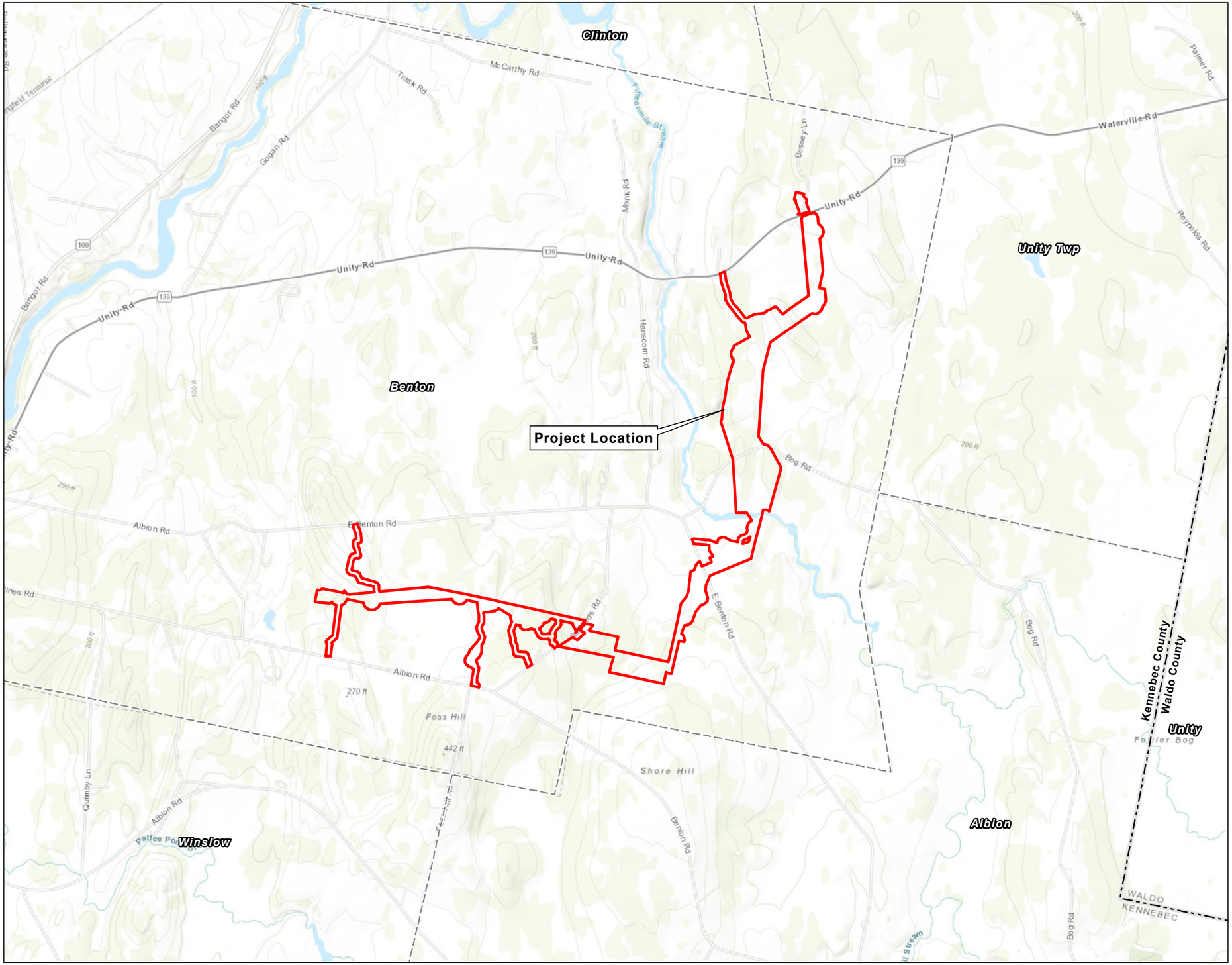
The need to create and maintain an open transmission line corridor that is free of tree species capable of reaching the wire zone will require tree removal in forested wetlands. These actions will transform forested wetland communities to open scrub-shrub and emergent wetland communities for the lifecycle of the transmission line. A shift in vegetation diversity from shade-tolerant species characteristic of the forested wetland understory to species associated with full sun habitats is anticipated. While tree removal will result in a shift in wetland community types, there will be no substantial changes to the hydrology of the wetland areas and no permanent loss of wetland area is anticipated.

Temporary construction matting will be placed in areas to allow equipment access into the wetland communities to avoid and minimize rutting and other soil disturbances such as compaction. The construction mats will be in place for less than one growing season and will be removed upon completion of the work associated with the wetland area. Installation of construction mats will result in temporary disturbance to above ground vegetation such as the removal of shrub stems and compaction of herbaceous stems. Annual re-growth of existing vegetation following the removal of the construction mats will contribute to the natural restoration of the wetland areas. The temporary wetland fill will not result in permanent changes to the wetland hydrology or permanent loss of wetland areas.

Table 2. Summary of Wetland Impacts

Wetland Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Proposed Wetland Impacts (acres)
W07	01CFD	PFO	0.07
W09	01RKE	PFO/PSS/PEM	4.94
W14	01CFG	PSS	0.14
W15	01RKF	PFO	0.18
W16	01RKG	PFO	0.16
W22	01RKI	PFO	0.59
W27	01CFK	PSS/PFO	0.39
W28	01CFN	PFO	1.31
W32	01RKL	PFO/PSS/PEM	1.05
W35	01RKM	PFO	0.31
W36	01RKN/01RKO/01CFU	PFO	0.76
W42	01RKQ/01CFV	PFO/PEM	0.30
W43	01CFW/01RKR	PFO/PSS/PEM	0.93
W50	01CFY	PFO/PEM/PUB	0.08
W51	02RKC/02RKD/02RKE/02RKF/02RKG/02CFB/02CFD	PFO/PSS/PEM	1.50
W52	02CFB	PFO/PSS/PEM	0.17
W56	01RKZ	PFO/PSS/PEM	0.35
W57	01RKX	PFO/PEM	<0.01
W58	02RKH	PFO/PSS/PEM	0.33
W59	02CFH/02RKH/02RKI	PFO/PSS/PEM	0.69

FIGURES



Stantec

Legend

- Project Locaton
- Municipal Boundary
- County Boundary

N

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(At original document size of 11x17)
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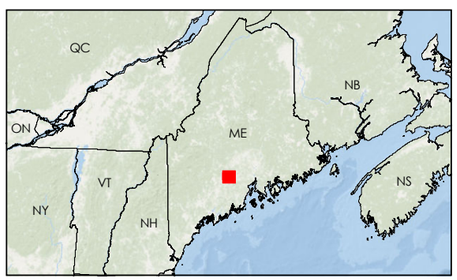
Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. Data Sources: Base features obtained from MEGIS
3. Background: ESRI World Topographic Base Map



Project Location
Benton, Maine

Prepared by GC on 2021-11-30
Reviewed by EB on 2021-11-30

Client/Project
195601453
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

Figure No.
1

Title
USGS Location Map

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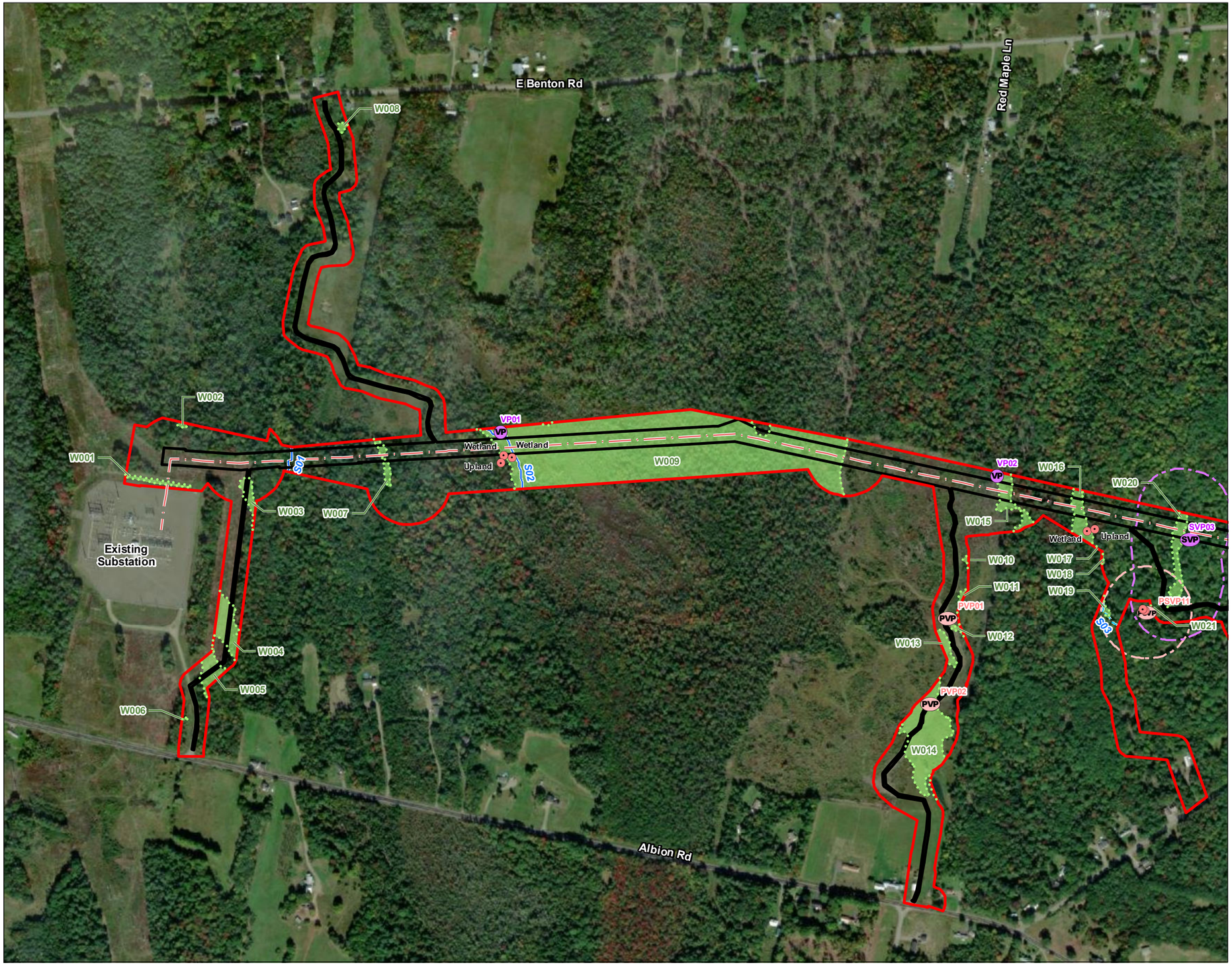

Stantec

Legend

- Army Corps Location Plot
- Potential Significant Vernal Pool
- Potential Vernal Pool
- Delineated Intermittent Stream
- Delineated Perennial Stream
- 250' Significant Vernal Pool Critical Terrestrial Habtat
- 250' Potential Significant Vernal Pool Critical Terrestrial Habtat
- Delineated Wetland
- Open Water Feature
- Delineation Limits
- Limit of Disturbance
- Overhead Transmission Line

N

0 300 600 Feet
(At original document size of 11x17)
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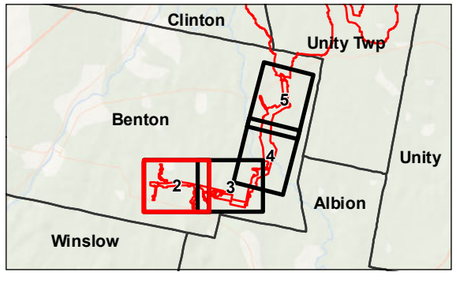
Notes

1. Wetland boundaries delineated in accordance with USACE Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regional Supplement (Version 2.0).
2. Wetland boundaries and streams were located utilizing a Trimble GeoExplorer Series Receiver. Expected accuracy of GPS data is within 1 meter of actual position.
3. Coordinate System: NAD 1983 UTM Zone 19N FT
4. Data Sources: Base features obtained from MEGIS.
5. Vernal pool data collected by Kleinschmidt and Associates, 2019 and 2020.
6. Background: Aerial imagery provided by ArcGIS Online World Imagery Mapping Services.



Project Location
Benton, Maine

Prepared by GC on 2021-12-16
Reviewed by EB on 2021-12-16

Client/Project
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

195601453

Figure No.
2 of 5

Title
Wetland and Watercourse Delineation and Vernal Pool Survey Results

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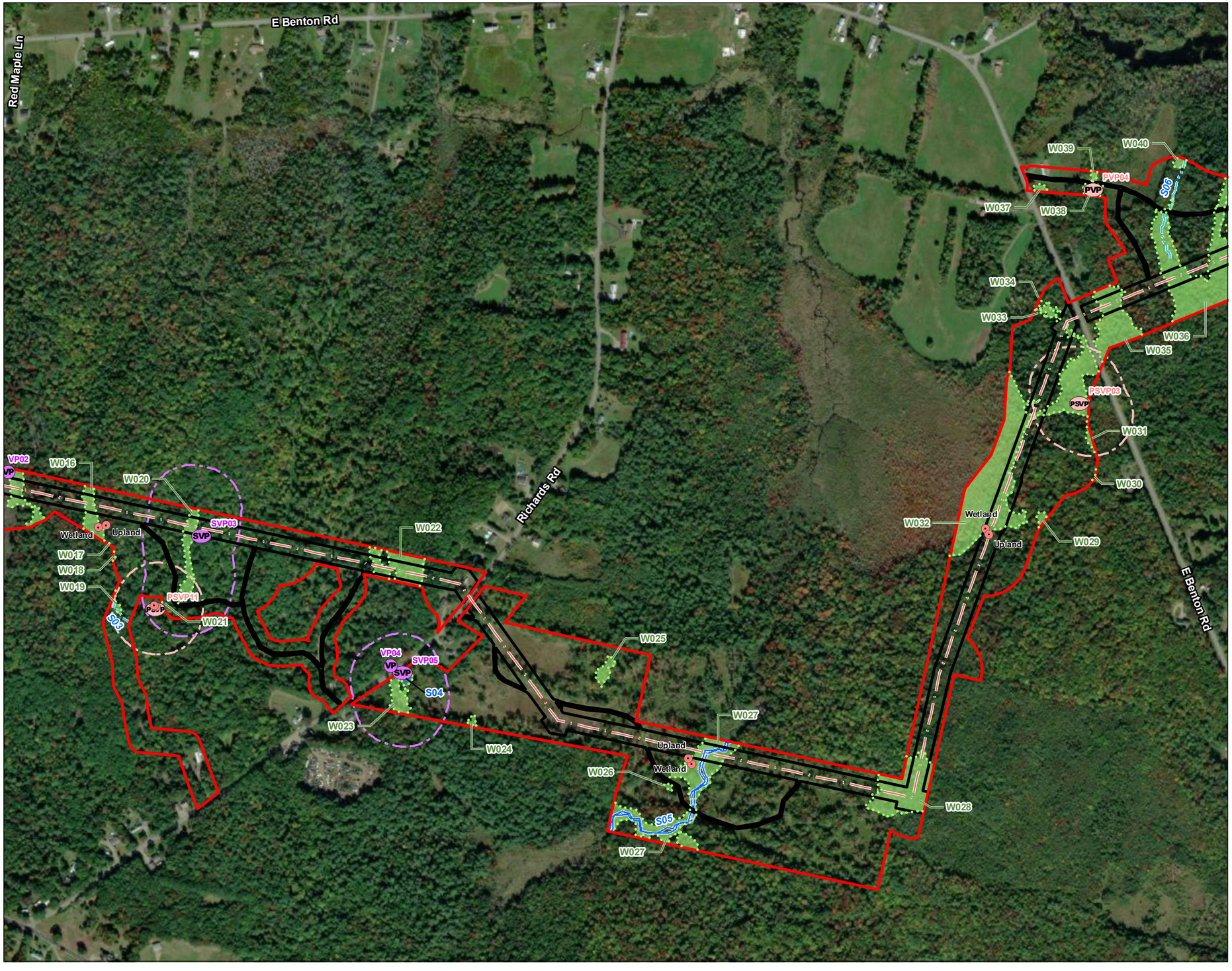

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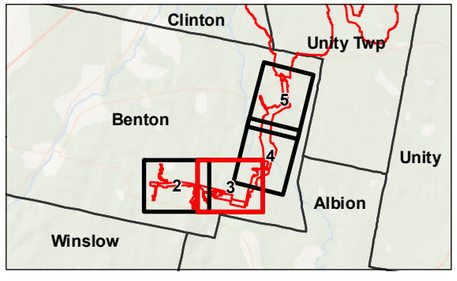

Project Location
Benton, Maine

Prepared by GC on 2021-12-16
Reviewed by EB on 2021-12-16

Client/Project
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

195601453

Figure No.
3 of 5

Title
Wetland and Watercourse Delineation and Vernal Pool Survey Results

V:\1956\active\195601453\03_data\gis_cad\gis\MXD\sITlineWetland\s01453_01_ThreeCornersWetDelin.mxd Revised: 2021-12-29 By: gcarpentier

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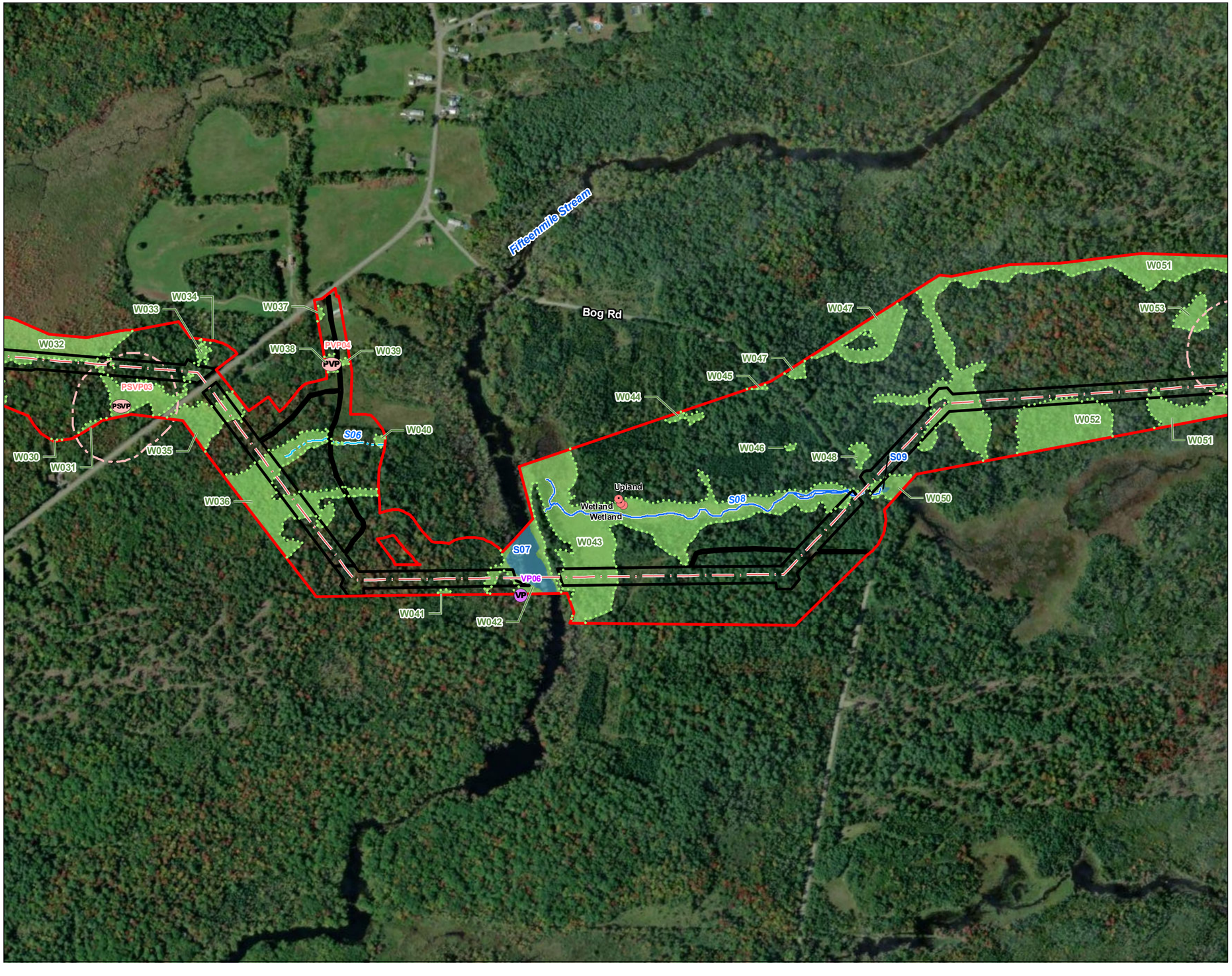

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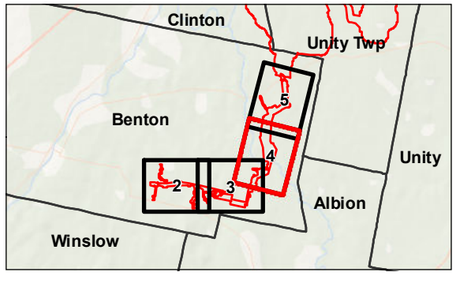

Project Location
Benton, Maine

Prepared by GC on 2021-12-16
Reviewed by EB on 2021-12-16

Client/Project
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

195601453

Figure No.
4 of 5

Title
Wetland and Watercourse Delineation and Vernal Pool Survey Results

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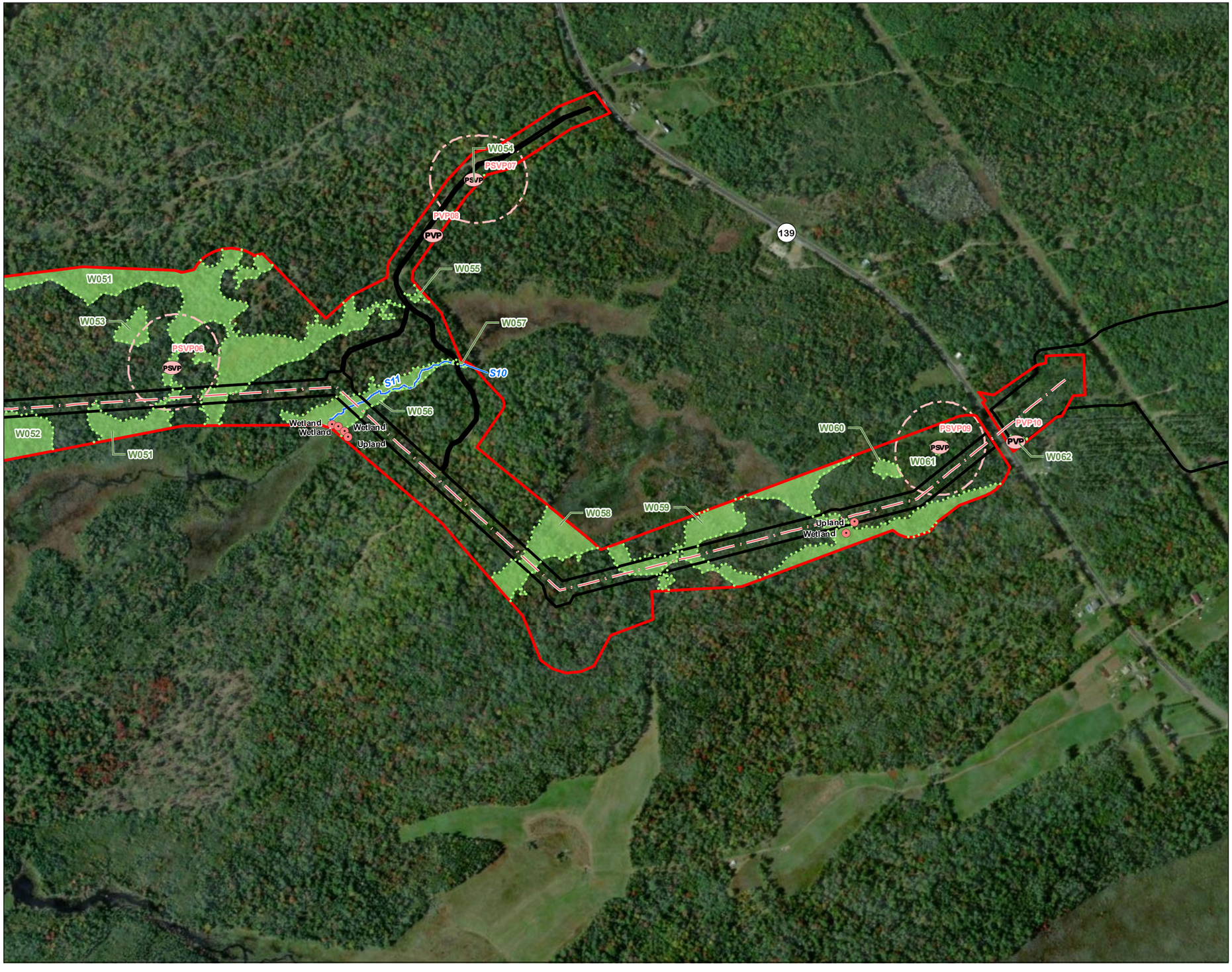

Stantec

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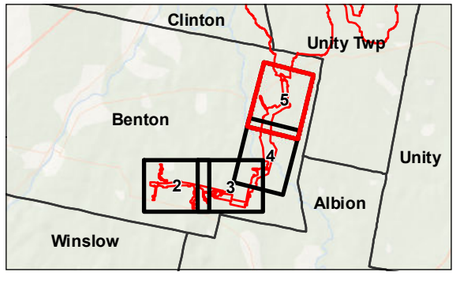

Project Location
Benton, Maine

Prepared by GC on 2021-12-16
Reviewed by EB on 2021-12-16

Client/Project
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

195601453

Figure No.
5 of 5

Title
Wetland and Watercourse Delineation and Vernal Pool Survey Results

V:\1956\active\195601453\03_data\gis_cad\gis\MXD\sTlineWetland\s01453_01_ThreeCornersWetDelin.mxd Revised: 2021-12-29 By: gcarpentier

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APPENDICES

Appendix A REPRESENTATIVE PHOTOGRAPHS

Photo 1: Wetland W03 (01RKD/01CFC). Stantec. July 27, 2020.

Photo 2. Wetland W04 (01RKC). Stantec. July 27, 2020.

Photo 3. Wetland W05 (01RKB). Stantec. July 27, 2020.

Photo 4: Wetland W07 (01CFD). Stantec. July 27, 2020.

Photo 5. Wetland W09 (01RKE). Stantec. July 27, 2020.

Photo 6. Wetland W14 (01CFG). Stantec. July 27, 2020.

Photo 7. Wetland W15 (01RKF). Stantec. July 27, 2020.

Photo 8. Wetland W16 (01RKG). Stantec. July 27, 2020.

Photo 9. Wetland W22 (01RKI). Stantec. July 28, 2020.

Photo 10: Wetland W27 (01CFK), forested portion. Stantec. July 28, 2020.

Photo 11: Wetland W28 (01CFN). Stantec. July 28, 2020.

Photo 12. Wetland W32 (01RKL). Stantec. July 28, 2020.

Photo 13. Wetland W35 (01RKM). Stantec. July 29, 2020.

Photo 14. Wetland W36 (01RKN/01RKO/01CFU). Stantec. July 29, 2020.

Photo 15: Wetland W42 (01CFV/RKQ), forested portion. Stantec. July 29, 2020.

Photo 16: Wetland W42 (01CFV/RKQ), emergent portion along south side of Fifteenmile Stream. Stantec. July 29, 2020.

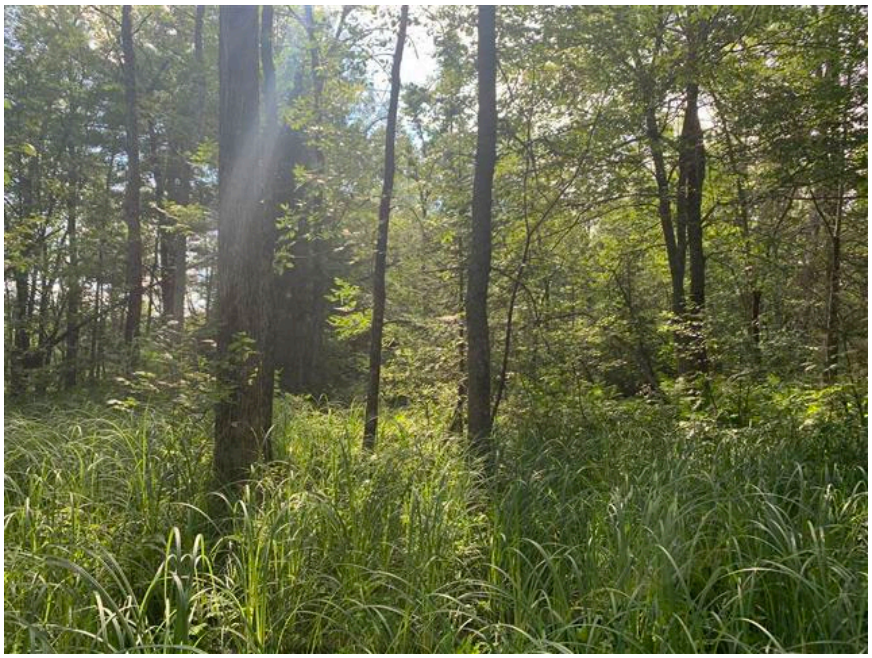


Photo 17: Wetland W43 (01CFW/01RQR), forested portion, north side of Fifteenmile Stream. Stantec. July 29, 2020.

Photo 18: Wetland W43 (01CFW/01RQR), scrub-shrub and emergent portion, north side Fifteenmile Stream. Stantec. July 29, 2020.

Photo 19. Wetland 50 (01CFY) open water and emergent component. Stantec. July 30, 2020.

Photo 20. Wetland W51 (02RKC). Stantec. July 30, 2020.

Photo 21. Wetland W51 (02RKD) recently forested portion. Stantec. July 30, 2020.

Photo 22. Wetland W52 (02CFB). Stantec. July 30, 2020.

Photo 23. Wetland W56 (01RKZ), scrub-shrub portion. Stantec. July 31, 2021.

Photo 24. Wetland W57 (01RKX), forested portion. Stantec. July 30, 2021.

Photo 25. Wetland W58 (02RKH) forested portion. Stantec. July 31, 2021.

Photo 26. Wetland W58 (02RKH) emergent portion. Stantec. July 31, 2021.

Photo 27. Wetland W59 (02CFH/02RHK/02RKI) forested portion. Stantec. July 31, 2021.

Photo 28. Wetland W59 great blue heron rookery emergent area. Stantec. July 31, 2020.

Appendix B FUNCTIONAL ASSESSMENT DATA FORMS

Wetland Function – Value Evaluation Form

Wetland Description: emergent wetland in existing transmission line ROW that transitions to larger forested wetland off site. Wetland contains a diverse herbaceous flora within the cleared ROW	File number: 195601453	
	Wetland identifier: W3	
	Latitude: 44.574839	Longitude: -69.506574
	Preparer(s): Matt Arsenault	
	Date: 12/14/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Large wetland system; presumed some level of groundwater exchange occurring. Qualifiers: 2	N
Floodwater Alteration	X		Large wetland system is able to attenuate surface water runoff. Qualifiers: 1, 2, 5, 9	N
Fish and Shellfish Habitat		X	No streams or watercourses associated with the wetland within project area	
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 4, 6, 8, 9	N
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 1, 3, 4, 5, 7, 10, 11	Y
Production Export	X		Wetland has been historically harvested for timber; wildlife feed on vegetation within wetland. Qualifiers: 1, 2, 3, 4, 5, 12	N
Sediment/Shoreline Stabilization		X	No streams or watercourses associated with the wetland within project area	
Wildlife Habitat	X		Wetland may provide habitat for a variety of wetland-associated species. Qualifiers: 5, 6, 7, 8, 13, 15, 19	Y
Recreation	X		Wetland is associated with private property but hunting may be allowed. Qualifiers: 3	N
Education/Scientific Value		X	Wetland is associated with private property	
Uniqueness/Heritage		X	Wetland is a common community type that is dominated by common species of flora and fauna	
Visual Quality/Aesthetics		X	Wetland is associated with private property	
ES Endangered Species Habitat		X	Wetland is not known to support threatened or endangered species based on available information	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: emergent wetland in existing transmission line ROW that transitions to larger forested wetland off site. Wetland contains a diverse herbaceous flora within the cleared ROW	File number: 195601453	
	Wetland identifier: W4	
	Latitude: 44.572662	Longitude: -69.507071
	Preparer(s): Matt Arsenault	
	Date: 12/14/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Large wetland system; presumed some level of groundwater exchange occurring. Qualifiers: 2	N
Floodwater Alteration	X		Large wetland system is able to attenuate surface water runoff. Qualifiers: 1, 2, 5, 9	N
Fish and Shellfish Habitat		X	No streams or watercourses associated with the wetland within project area	
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 4, 6, 8, 9	N
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 1, 3, 4, 5, 7, 10, 11	Y
Production Export	X		Wetland has been historically harvested for timber; wildlife feed on vegetation within wetland. Qualifiers: 1, 2, 3, 4, 5, 12	N
Sediment/Shoreline Stabilization		X	No streams or watercourses associated with the wetland within project area	
Wildlife Habitat	X		Wetland may provide habitat for a variety of wetland-associated species. Qualifiers: 5, 6, 7, 8, 13, 15, 19	Y
Recreation	X		Wetland is associated with private property but hunting may be allowed. Qualifiers: 3	N
Education/Scientific Value		X	Wetland is associated with private property	
Uniqueness/Heritage		X	Wetland is a common community type that is dominated by common species of flora and fauna	
Visual Quality/Aesthetics		X	Wetland is associated with private property	
ES Endangered Species Habitat		X	Wetland is not known to support threatened or endangered species based on available information	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: emergent wetland in existing transmission line ROW that transitions to larger forested wetland off site. Wetland contains a diverse herbaceous flora within the cleared ROW	File number: 195601453	
	Wetland identifier: W5	
	Latitude: 44.571966	Longitude: -69.507437
	Preparer(s): Matt Arsenault	
	Date: 12/14/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Large wetland system; presumed some level of groundwater exchange occurring. Qualifiers: 2	N
Floodwater Alteration	X		Large wetland system is able to attenuate surface water runoff. Qualifiers: 1, 2, 5, 9	N
Fish and Shellfish Habitat		X	No streams or watercourses associated with the wetland within project area	
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 4, 6, 8, 9	N
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 1, 3, 4, 5, 7, 10, 11	Y
Production Export	X		Wetland has been historically harvested for timber; wildlife feed on vegetation within wetland. Qualifiers: 1, 2, 3, 4, 5, 12	N
Sediment/Shoreline Stabilization		X	No streams or watercourses associated with the wetland within project area	
Wildlife Habitat	X		Wetland may provide habitat for a variety of wetland-associated species. Qualifiers: 5, 6, 7, 8, 13, 15, 19	Y
Recreation	X		Wetland is associated with private property but hunting may be allowed. Qualifiers: 3	N
Education/Scientific Value		X	Wetland is associated with private property	
Uniqueness/Heritage		X	Wetland is a common community type that is dominated by common species of flora and fauna	
Visual Quality/Aesthetics		X	Wetland is associated with private property	
ES Endangered Species Habitat		X	Wetland is not known to support threatened or endangered species based on available information	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: Narrow forested drainage dominated by *Acer rubrum, Fraxinus pennsylvanica,* and *Abies balsamea* trees. Understory plants include	File number: 195601453	
Abies balsamea, Acer rubrum, Alnus incana, Onoclea sensibilis, Osmundastrum cinnamomeum, Carex crinita, and *Carex trisperma*	Wetland identifier: W7	
	Latitude: 44.575519	Longitude: -69.503498
	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge		X	No signs of groundwater discharge observed within the wetland.	
Floodwater Alteration	X		Narrow drainage feature able to attenuate surface water runoff from upland areas. Qualifiers: 5, 9	N
Fish and Shellfish Habitat		X	No streams or watercourses associated with the wetland	
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 3, 4, 8	N
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 3, 4, 7, 8, 10	N
Production Export	X		Wetland has been historically harvested for timber; wildlife feed on vegetation within wetland. Qualifiers: 1, 2, 3, 4, 5, 12	N
Sediment/Shoreline Stabilization		X	No streams or watercourses associated with the wetland	
Wildlife Habitat	X		Wetland may provide habitat for a variety of forest-associated species. Qualifiers: 1, 3, 4, 5, 7, 8	Y
Recreation		X	Wetland is associated with private property	
Education/Scientific Value		X	Wetland is associated with private property	
Uniqueness/Heritage		X	Wetland is a common community type that is dominated by common species of flora and fauna	
Visual Quality/Aesthetics		X	Wetland is associated with private property	
ES Endangered Species Habitat		X	Wetland is not known to support threatened or endangered species based on available information	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: Large peatland wetland complex containing interspersed emergent, scrub-shrub, and forested wetland communities; wetland	File number: 195601453	
Includes vernal pools and small watercourse. Vegetation is diverse	Wetland identifier: W09	
	Latitude: 44.575794	Longitude: -69.497104
	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Large wetland areas with likely interface with groundwater. Qualifiers: 2, 7, 5	N
Floodwater Alteration	X		Large wetland area able to attenuate surface water runoff from upland areas. Qualifiers: 1, 3, 5, 6, 7, 8, 10, 13, 14, 18	Y
Fish and Shellfish Habitat	X		Small stream present within wetland, limited fish habitat. Qualifiers: 10	N
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 5, 8, 10, 12, 13, 16	N
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 1, 3, 4, 5, 6, 8, 9, 10	Y
Production Export	X		Wildlife feed on vegetation within wetland. Qualifiers: 1, 2, 4, 7, 8, 12	Y
Sediment/Shoreline Stabilization	X		Wetland provides shoreline stabilization for small stream. Qualifiers: 7, 12, 15	N
Wildlife Habitat	X		Large wetland provides habitat for a variety of wetland-associated species. Qualifiers: 1, 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 18, 19, 20	Y
Recreation	X		Wetland may be used for hunting but is on private property: Qualifiers: 3, 5	N
Education/Scientific Value		X	Wetland is associated with private property	
Uniqueness/Heritage	X		Large peatland complex with diverse vegetation and wildlife habitat. Qualifiers: 4, 7,	N
Visual Quality/Aesthetics		X	Wetland is associated with private property	
ES Endangered Species Habitat		X	Wetland is not known to support threatened or endangered species based on available information	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: wetland area part of a large wetland complex that extends northwesterly beyond the project area. Wetland has been recently	File number: 195601453	
harvested for timber. Vegetation consists of early successional species as a result of recent forest harvests. A potential verna pool is present in ruts created	Wetland identifier: W14	
by forest harvest equipment	Latitude: 44.571037	Longitude: -69.491043
	Preparer(s): Matt Arsenault	
	Date: 12/14/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Seepage wetland with evidence of groundwater discharge from side slope areas. Qualifiers: 2, 13	Y
Floodwater Alteration	X		Large wetland system is able to attenuate surface water runoff. Qualifiers: 1, 2, 5, 9	Y
Fish and Shellfish Habitat		X	No streams or watercourses associated with the wetland within project area	
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland; recent forest harvests have created opportunities for sediment and toxicant movement. Qualifiers: 1, 2, 4, 5, 6, 8	Y
Nutrient Removal	X		Runoff from nearby uplands may enter wetland; recent forest harvests have created opportunity for nutrient movement. Qualifiers: 1, 3, 4, 5, 10, 11	Y
Production Export	X		Wetland has been harvested for timber; wildlife feed on vegetation within wetland. Qualifiers: 1, 2, 3, 4, 5, 12	Y
Sediment/Shoreline Stabilization		X	No streams or watercourses associated with the wetland within project area	
Wildlife Habitat	X		Wetland may provide habitat for a variety of wetland-associated species. Qualifiers: 4, 5, 7, 8, 18, 19	N
Recreation	X		Wetland is associated with private property but hunting may be allowed. Qualifiers: 3	N
Education/Scientific Value		X	Wetland is associated with private property	
Uniqueness/Heritage		X	Wetland is a common community type that is dominated by common species of flora and fauna	
Visual Quality/Aesthetics		X	Wetland is associated with private property	
ES Endangered Species Habitat		X	Wetland is not known to support threatened or endangered species based on available information	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: Forested wetland swale with a vernal pool. Includes common vegetation associates such as *Abies balsamea, Acer rubrum, Fraxinus*	File number: 195601453	
nigra, Thuja occidentalis, Alnus incana, Onoclea sensibilis, Typha latifolia, Toxicodendron radicans, Carex tripserma, Osmundastrum cinnamomeum,	Wetland identifier: W15	
and *Osmunda spectabilis*	Latitude: 44.574952	Longitude: -69.489187
	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Small areas of seepage are present. Qualifiers: 2, 5, 13	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas. Qualifiers: 3, 5, 9	N
Fish and Shellfish Habitat		X	Wetland is not associated with a watercourse	
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 4, 5, 8	N
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 3, , 5, 6, 7, 8, 10	Y
Production Export	X		Wildlife feed on vegetation within wetland, historic timber harvests. Qualifiers: 1, 2, 3, 4, 7, 12	N
Sediment/Shoreline Stabilization		X	Wetland is not associated with a watercourse	N
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species. Qualifiers: 1, 3, 4, 5, 7, 8, 15, `6, 18, 19, 20	Y
Recreation	X		Wetland may be used for hunting but is on private property: Qualifiers: 3	N
Education/Scientific Value		X	Wetland is associated with private property	
Uniqueness/Heritage		X	Common wetland community type	
Visual Quality/Aesthetics		X	Wetland is associated with private property	
ES Endangered Species Habitat		X	Wetland is not known to support threatened or endangered species based on available information	
Other				

Notes: * Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: Forested wetland swale with a small intermittent stream. Includes common vegetation associates such as *Abies balsamea, Acer*	File number: 195601453	
Rubrum, Fraxinus nigra, Thuja occidentalis, Alnus incana, Onoclea sensibilis, Carex trisperma, Rubus pubescens, Osmundastrum cinnamomeum,	Wetland identifier: W16	
Thelypteris palustris, Equisetum sylvaticum	Latitude: 44.574696	Longitude: -69.487511
	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Small areas of seepage are present. Qualifiers: 2, 5, 13	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas. Qualifiers: 3, 5, 9	N
Fish and Shellfish Habitat		X	Wetland is not associated with a watercourse on site but likely supports this function off site.	
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 4, 5, 8	N
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 3, 5, 6, 7, 8, 10	Y
Production Export	X		Wildlife feed on vegetation within wetland, historic timber harvests. Qualifiers: 1, 2, 3, 4, 7, 12	N
Sediment/Shoreline Stabilization		X	Wetland is not associated with a watercourse on site but likely supports this function off site.	N
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species. Qualifiers: 1, 3, 4, 5, 7, 8, 15, `6, 18, 19	Y
Recreation	X		Wetland may be used for hunting but is on private property: Qualifiers: 3	N
Education/Scientific Value		X	Wetland is associated with private property	
Uniqueness/Heritage		X	Common wetland community type	
Visual Quality/Aesthetics		X	Wetland is associated with private property	
ES Endangered Species Habitat		X	Wetland is not known to support threatened or endangered species based on available information	
Other				

Notes: * Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: Forested wetland swale. Includes common vegetation associates such as *Abies balsamea, Acer rubrum, Ulmus americana*	File number: 195601453	
Spiraea latifolia, Ilex verticillata, Alnus incana, Onoclea sensibilis, Carex trisperma, Typha latifolia, Glyceris striata, Impatiens capensis, Rubus	Wetland identifier: W22	
hispidus, Osmunda claytoniana, Toxicodendron radicans, Cinna latifolia	Latitude: 44.573649	Longitude: -69.480342
	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Small areas of seepage are present. Qualifiers: 2, 5, 13	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas. Qualifiers: 3, 5, 9	N
Fish and Shellfish Habitat		X	Wetland is not associated with a watercourse	
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 4, 5, 8	N
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 3, 5, 6, 7, 8, 10	Y
Production Export	X		Wildlife feed on vegetation within wetland, historic timber harvests. Qualifiers: 1, 2, 3, 4, 7, 12	N
Sediment/Shoreline Stabilization		X	Wetland is not associated with a watercourse	
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species. Qualifiers: 1, 3, 4, 5, 7, 8, 15, 16, 18, 19	Y
Recreation	X		Wetland may be used for hunting but is on private property: Qualifiers: 3	N
Education/Scientific Value		X	Wetland is associated with private property	
Uniqueness/Heritage		X	Common wetland community type	
Visual Quality/Aesthetics		X	Wetland is associated with private property	
ES Endangered Species Habitat		X	Wetland is not known to support threatened or endangered species based on available information	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: Forested and scrub-shrub wetland bordering perennial stream. Wetland contains a diversity of common wetland associates	File number: 195601453	
such as *Acer rubrum, Abies balsamea, Betula alleghaniensis, Thuja occidentalis, Alnus incana, Calamagrostis canadensis, Carex lacustris, Carex lurida,*	Wetland identifier: W27	
and *Sparganium* spp.	Latitude: 44.570677	Longitude: -69.473229
	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Wetland and watercourse have groundwater interface. Qualifiers: 2, 4, 7, 13	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas and watercourse, mapped floodplain. Qualifiers: 1, 5, 6, 7, 9, 10, , 13, 14, 18	Y
Fish and Shellfish Habitat	X		Watercourse likely contains small populations of fish. Qualifiers: 1, 4, 6, 8, 10, 14, 16, 17	N
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 3, 5, 8, 9, 10, 16	Y
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 1, 3, 4, 5, 8, 10, 11, 13, 14	Y
Production Export	X		Wildlife feed on vegetation within wetland, historic timber harvests, beaver activity present. Qualifiers: 1, 2, 3, 4, 6, 7, 10, 11, 12	N
Sediment/Shoreline Stabilization	X		Wetland provides shoreline stabilization of stream. Qualifiers: 2, 3, 7, 9, 12, 13, 15	Y
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species. Qualifiers: 1, 3, 4, 5, 6, 7, 8, 15, 16, 17, 18, 19, 20	Y
Recreation	X		Wetland may be used for hunting but is on private property: Qualifiers: 3	N
Education/Scientific Value		X	Wetland is associated with private property	
Uniqueness/Heritage		X	Common wetland community type	
Visual Quality/Aesthetics		X	Wetland is associated with private property	
ES Endangered Species Habitat		X	Wetland is not known to support threatened or endangered species based on available information	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: Side-slope seepage forested wetland part of a larger wetland complex to northwest. Dominated by common vegetation types	File number: 195601453	
including: *Thuja occidentalis, Fraxinus nigra, Betula populifolia, Betula alleghaniensis, Abies balsamea, Populus tremuloides, Acer rubrum, Onoclea*	Wetland identifier: W28	
sensibilis, Osmunda claytoniana, Carex crinita, Carex trisperma, Glyceria striata.	Latitude: 44.569973	Longitude: -69.468625
	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Seepage wetland with groundwater interface. Qualifiers: 2, 4, 13	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas. Qualifiers: 2, 5, 9	N
Fish and Shellfish Habitat		X	Wetland is not associated with a watercourse	
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 6, 8, 9	N
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 3, 4, 10	N
Production Export	X		Wildlife feed on vegetation within wetland, historic timber harvests. Qualifiers: 1, 2, 3, 12	N
Sediment/Shoreline Stabilization		X	Wetland is not associated with a watercourse	
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species. Qualifiers: 3, 4, 5, 6, 7, 8	Y
Recreation	X		Wetland may be used for hunting but is on private property: Qualifiers: 3	N
Education/Scientific Value		X	Wetland is associated with private property	
Uniqueness/Heritage		X	Common wetland community type	
Visual Quality/Aesthetics		X	Wetland is associated with private property	
ES Endangered Species Habitat		X	Wetland is not known to support threatened or endangered species based on available information	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: large wetland complex consisting of forested, scrub-shrub, and emergent wetland types. Past timber harvests have occurred in	File number: 195601453	
forested portions of the wetland. Wetland contains a potential vernal pool. Vegetation includes common wetland associates including	Wetland identifier: W32	
Abies balsamea, Acer rubrum, Betula alleghaniensis, Thuja occidentalis, Fraxinus nigra, Alnus incana, Ilex verticillata, Rubus	Latitude: 44.575114	Longitude: -69.466424
pubescens, Glyceria striata, Osmunda claytoniana, Calamagrostis canadensis	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Seepage wetland with groundwater interface. Qualifiers: 2, 13	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas, mapped floodplain off-site. Qualifiers: 1, 2, 5, 6, 9, 18	Y
Fish and Shellfish Habitat		X	Wetland is not associated with a watercourse on-site	
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 6, 8, 9	N
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 1, 3, 4, 5, 6, 8, 10	Y
Production Export	X		Wildlife feed on vegetation within wetland, historic timber harvests. Qualifiers: 1, 2, 3, 4, 5, 7	N
Sediment/Shoreline Stabilization		X	Wetland is not associated with a watercourse on site	
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species, potential vernal pool. Qualifiers: 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 16, 17, 18, 19, 20, 21	Y
Recreation	X		Wetland may be used for hunting but is on private property: Qualifiers: 3	N
Education/Scientific Value	X		Wetland is associated with private property but provides valuable wildlife habitat. Qualifiers: 5	N
Uniqueness/Heritage	X		Common wetland community type but large size and wildlife habitat provide values. Qualifiers: 4, 19	N
Visual Quality/Aesthetics	X		Open wetland community off-site. Qualifiers: 8	N
ES Endangered Species Habitat		X	Endangered species are not known to utilize this wetland.	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: large forested wetland system with dense shrub understory; adjacent to road. Contains typical vegetation associates including	File number: 195601453	
Abies balsamea, Acer rubrum, Fraxinus nigra, Thuja occidentalis, Ilex verticillata, Alnus incana, Onoclea sensibilis, Osmunda regalis, Typha latifolia	Wetland identifier: W35	
	Latitude: 44.578105	Longitude: -69.464093
	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	Y		Wetland likely has interface with groundwater. Qualifiers: 2, 6	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas. Qualifiers: 1, 2, 5, 6, 8, 9	N
Fish and Shellfish Habitat		X	Wetland is not associated with a watercourse on-site	
Sediment/Toxicant Retention	X		Runoff from nearby uplands and roadway may enter wetland. Qualifiers: 2, 4, 5, 8, 9	N
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 3, 4, 5, 7, 8, 10, 11	Y
Production Export	X		Wildlife feed on vegetation within wetland, historic timber harvests. Qualifiers: 1, 2, 3, 4, 7	N
Sediment/Shoreline Stabilization		X	Wetland is not associated with a watercourse on site	
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species. Qualifiers: 5, 7, 8, 13, 15, 16, 18, 19	Y
Recreation	X		Wetland may be used for hunting but is on private property: Qualifiers: 3	N
Education/Scientific Value		X	Wetland is on private property and consists of common wetland community types	
Uniqueness/Heritage		X	Wetland is on private property and consists of common wetland community types	
Visual Quality/Aesthetics	X		Wetland is adjacent to public road; abundance of Ilex verticillata provides vibrant fall color. Qualifiers: 4, 9	N
ES Endangered Species Habitat		X	Threatened and endangered species are not known to utilize wetland.	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: large forested wetland with dense shrub understory; extends off site. Contains common vegetation associates including *Acer rubrum, Abies balsamea, Fraxinus nigra, Thuja occidentalis, Alnus incana, Ilex verticillata, Onoclea sensibils, Osmunda spectablils*	File number: 195601453	
	Wetland identifier: W36	
	Latitude: 44.578760	Longitude: -69.461717
	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	Y		Wetland likely has interface with groundwater. Qualifiers: 2, 6	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas. Qualifiers: 1, 2, 5, 6, 8, 9	N
Fish and Shellfish Habitat		X	Wetland is not associated with a watercourse on-site	
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 4, 5, 8, 9	N
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 3, 4, 5, 7, 8, 10, 11	Y
Production Export	X		Wildlife feed on vegetation within wetland, historic timber harvests. Qualifiers: 1, 2, 3, 4, 7	N
Sediment/Shoreline Stabilization		X	Wetland is not associated with a watercourse on site	
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species. Qualifiers: 5, 7, 8, 13, 15, 16, 18, 19	Y
Recreation	X		Wetland may be used for hunting but is on private property: Qualifiers: 3	N
Education/Scientific Value		X	Wetland is on private property and consists of common wetland community types	
Uniqueness/Heritage		X	Wetland is on private property and consists of common wetland community types	
Visual Quality/Aesthetics		X	Wetland is on private property and consists of common wetland community types	
ES Endangered Species Habitat		X	Threatened and endangered species are not known to utilize wetland.	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: large wetland complex associated with riparian habitats of Fifteenmile Stream. Includes forested and emergent wetland types.	File number: 195601453	
Vegetation is diverse and consists of abundance of common species.	Wetland identifier: W42	
	Latitude: 44.582912	Longitude: -69.458353
	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Wetland has interface with groundwater. Qualifiers: 2, 7	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas and associated stream; mapped floodplain. Qualifiers: 1, 5, 6, 8, 9, 10, 13, 17	Y
Fish and Shellfish Habitat	X		Wetland is associated with Fifteenmile Stream. Qualifiers: 1, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 17	Y
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 3, 5, 8, 9, 10, 12, 13, 15, 16	Y
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 1, 2, 3, 4, 5, 8, 9, 10. 11, 14	Y
Production Export	X		Wetland contains wildlife food sources, flushing of detritus. Qualifiers: 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12	Y
Sediment/Shoreline Stabilization	X		Wetland is associated with Fifteenmile Stream. Qualifiers: 4, 10, 11, 12, 13, 14, 15	Y
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species. Qualifiers: 1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21	Y
Recreation	X		Wetland may be used for hunting; Fifteenmile Stream is popular for canoes and kayaks. Qualifiers: 2, 3, 5, 6, 7, 8	N
Education/Scientific Value	X		Wetland is accessible via Fifteenmile Stream, contains valuable wildlife habitat, and rare species. Qualifiers: 1, 5	N
Uniqueness/Heritage	X		Wetland provides important habitat, including habitat for rare species. Qualifiers: 4, 5, 7, 27, 28	N
Visual Quality/Aesthetics	X		Wetland is visible from Fifteenmile Stream. Qualifiers: 1, 3, 5, 7, 8, 10, 11	N
ES Endangered Species Habitat		X	Endangered species are not known to utilize this wetland.	N
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: large wetland complex associated with riparian habitats of Fifteenmile Stream. Includes forested, emergent, scrub-shrub, and	File number: 195601453	
open water wetland types. Vegetation is diverse and consists of abundance of common species with localized occurrences of state-listed species	Wetland identifier: W43	
	Latitude: 44.582912	Longitude: -69.458353
	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Wetland has interface with groundwater. Qualifiers: 2, 7	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas and associated stream; mapped floodplain. Qualifiers: 1, 5, 6, 8, 9, 10, 13, 17	Y
Fish and Shellfish Habitat	X		Wetland is associated with Fifteenmile Stream. Qualifiers: 1, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 17	Y
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 3, 5, 8, 9, 10, 12, 13, 15, 16	Y
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 1, 2, 3, 4, 5, 8, 9, 10. 11, 14	Y
Production Export	X		Wetland contains wildlife food sources, flushing of detritus. Qualifiers: 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12	Y
Sediment/Shoreline Stabilization	X		Wetland is associated with Fifteenmile Stream. Qualifiers: 4, 10, 11, 12, 13, 14, 15	Y
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species. Qualifiers: 1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21	Y
Recreation	X		Wetland may be used for hunting; Fifteenmile Stream is popular for canoes and kayaks. Qualifiers: 2, 3, 5, 6, 7, 8	N
Education/Scientific Value	X		Wetland is accessible via Fifteenmile Stream, contains valuable wildlife habitat, and rare species. Qualifiers: 1, 5	N
Uniqueness/Heritage	X		Wetland provides important habitat, including habitat for rare species. Qualifiers: 4, 5, 7, 27, 28	N
Visual Quality/Aesthetics	X		Wetland is visible from Fifteenmile Stream. Qualifiers: 1, 3, 5, 7, 8, 10, 11	N
ES Endangered Species Habitat	X		Wetland supports *Allium candense*, a species listed as Special Concern in Maine. Qualifiers:	N
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: wetland is located adjacent to Bog Road along an unnamed tributary of Fifteenmile Stream. Wetland is part of large wetland	File number: 195601453	
complex that extends off-site and includes forested, emergent, and open water community types.	Wetland identifier: W50	
	Latitude: 44.588096	Longitude: -69.458626
	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Wetland has interface with groundwater. Qualifiers: 2, 7	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas and associated stream; mapped floodplain. Qualifiers: 1, 5, 6, 8, 9, 10, 13, 15, 17	Y
Fish and Shellfish Habitat	X		Wetland is associated a tributary of Fifteenmile Stream. Qualifiers: 1, 2, 4, 8, 10, 14, 17	N
Sediment/Toxicant Retention	X		Runoff from nearby uplands and road may enter wetland. Qualifiers: 1, 2, 3, 4, 5, 8, 10, 12, 16	Y
Nutrient Removal	X		Runoff from nearby uplands and road may enter wetland. Qualifiers: 1, 3, 4, 5, 7, 9, 11, 13, 14	Y
Production Export	X		Wetland contains wildlife food sources, flushing of detritus. Qualifiers: 1, 2, 4, 7, 10, 11, 12	Y
Sediment/Shoreline Stabilization	X		Wetland is associated with unnamed tributary Fifteenmile Stream. Qualifiers: 3, 7, 12	N
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species. Qualifiers: 4, 5, 6, 7, 8, 9, 10, 13, 14, 19, 20, 21	Y
Recreation	X		Wetland may be used for hunting. Qualifiers: 3, 9	N
Education/Scientific Value		X	Wetland is on private property	
Uniqueness/Heritage		X	Wetland consists of common community types and vegetation associations	
Visual Quality/Aesthetics		X	Wetland is on private property	
ES Endangered Species Habitat		X	Wetland is not known to support listed species.	
Other				

Notes: * Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: large wetland complex located north of Bog Road and extends off site to east and west. It is primarily forested but recent timber	File number: 195601453	
harvests have opened portions of the wetland canopy. Wetland includes a potential vernal pool. Vegetation is diverse, containing common hydrophytes.	Wetland identifier: W51	
Wetland is contiguous with large wetland complex associated with Fifteenmile Stream.	Latitude: 44.589815	Longitude: -69.460054
	Preparer(s): Matt Arsenault	
	Date: 12/7/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Wetland has interface with groundwater. Qualifiers: 2, 7	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas. Qualifiers: 1, 2, 5, 6	Y
Fish and Shellfish Habitat		X	Wetland is not associated with a watercourse on site	
Sediment/Toxicant Retention	X		Runoff from nearby uplands and road may enter wetland. Qualifiers: 1, 2, 3, 4, 8	Y
Nutrient Removal	X		Runoff from nearby uplands and road may enter wetland. Qualifiers: 1, 3, 4, 5, 7, 11	Y
Production Export	X		Wetland contains wildlife food sources, wetlands harvested for timber. Qualifiers: 1, 2, 4, 7, 12	Y
Sediment/Shoreline Stabilization		X	Wetland is not associated with a watercourse on site	
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species, includes potential vernal pool. Qualifiers: 4, 5, 6, 7, 8, 11, 13, 14, 15, 19, 20	Y
Recreation	X		Wetland may be used for hunting but is on private property. Qualifiers: 3	N
Education/Scientific Value		X	Wetland is on private property	
Uniqueness/Heritage		X	Wetland consists of common community types and vegetation associations, recent timber harvests	
Visual Quality/Aesthetics		X	Wetland is on private property	
ES Endangered Species Habitat		X	Wetland is not known to support listed species.	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: portion of large wetland complex that extends to east off site and is associated with unnamed tributary of Fifteenmile Stream.	File number: 195601453	
On-site wetland community is primarily forested and dominated by *Acer rubrum, Abies balsamea, Betula alleghaniensis, Thuja occidentalis,*	Wetland identifier: W52	
Betula populifolia, and *Fraxinus nigra* trees. Understory contains *Alnus incana* and *Ilex verticillata* shrubs with a diverse herbaceous flora.	Latitude: 44.591493	Longitude: -69.459413
	Preparer(s): Matt Arsenault	
	Date: 12/7/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Wetland has interface with groundwater. Qualifiers: 2, 7	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas. Qualifiers: 1, 2, 5, 6	Y
Fish and Shellfish Habitat		X	Wetland is not associated with a watercourse on site but likely supports this function off site.	
Sediment/Toxicant Retention	X		Runoff from nearby uplands and road may enter wetland. Qualifiers: 1, 2, 3, 4, 8	Y
Nutrient Removal	X		Runoff from nearby uplands and road may enter wetland. Qualifiers: 1, 3, 4, 5, 7, 11	Y
Production Export	X		Wetland contains wildlife food sources, wetlands harvested for timber. Qualifiers: 1, 2, 4, 7, 12	Y
Sediment/Shoreline Stabilization		X	Wetland is not associated with a watercourse on site but supports this function off site	
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species, includes potential vernal pool. Qualifiers: 4, 5, 6, 7, 8, 11, 13, 14, 15, 19, 20	Y
Recreation	X		Wetland may be used for hunting but is on private property. Qualifiers: 3	N
Education/Scientific Value		X	Wetland is on private property	
Uniqueness/Heritage		X	Wetland consists of common community types and vegetation associations, recent timber harvests	
Visual Quality/Aesthetics		X	Wetland is on private property	
ES Endangered Species Habitat		X	Wetland is not known to support listed species.	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: portion of large wetland complex associated with an unnamed tributary of Fifteenmile Stream. Wetland is mostly forested and shrub-dominated on site but transitions to a large emergent and shrub riparian wetland to the south. *Abies balsamea, Acer rubrum, Betula alleghaniensis,* and *Thuja occidentalis* are the characteristic tree species. *Alnus incana, Ilex verticillata, Spiraea latiflolia,* and *Spiraea tomentosa* are characteristic shrubs. The herbaceous stratus is diverse with graminoids and forbs.	File number: 195601453	
	Wetland identifier: W56	
	Latitude: 44.597059	Longitude: -69.457608
	Preparer(s): Matt Arsenault	
	Date: 12/7/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Wetland has interface with groundwater. Qualifiers: 2, 7, 9	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas. Qualifiers: 1, 2, 5, 6, 8, 9, 10, 14, 16	Y
Fish and Shellfish Habitat	X		Watercourse likely supports small fish populations. Qualifiers: 1, 2, 4, 6, 7, 8, 10, 14, 15, 16, 17	N
Sediment/Toxicant Retention	X		Runoff from nearby uplands and road may enter wetland. Qualifiers: 1, 2, 3, 4, 5, 8, 9, 10, 12, 13, 14, 15, 16	Y
Nutrient Removal	X		Runoff from nearby uplands and road may enter wetland. Qualifiers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	Y
Production Export	X		Wetland contains wildlife food sources, wetlands harvested for timber. Qualifiers: 1, 2, 3, 4, 6, 7, 10, 11, 12	Y
Sediment/Shoreline Stabilization	X		Wetland borders perennial stream. Qualifiers: 3, 7, 12, 13, 15	N
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species. Qualifiers: 1, 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 18, 19, 20, 21	Y
Recreation	X		Wetland may be used for hunting but is on private property. Qualifiers: 3	N
Education/Scientific Value		X	Wetland is on private property	
Uniqueness/Heritage		X	Wetland consists of common community types and vegetation associations, recent timber harvests	
Visual Quality/Aesthetics		X	Wetland is on private property	
ES Endangered Species Habitat		X	Wetland is not known to support listed species.	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: the portion of the wetland within the project area is a forested wetland that is part of a much larger wetland complex that extends	File number: 195601453	
northerly off site. The wetland is associated with a small perennial stream. The wetland is bisected by a forest equipment trail.	Wetland identifier: W57	
	Latitude: 44.598921	Longitude: -69.457916
	Preparer(s): Matt Arsenault	
	Date: 12/14/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Groundwater exchange occurs within the wetland. Qualifiers: 22, 7	N
Floodwater Alteration	X		Large wetland system is able to attenuate surface water runoff. Qualifiers: 1, , 5, 6, 8, 9, 10, 13, 14, 15, 17	Y
Fish and Shellfish Habitat	X		A perennial watercourse flows through the wetland. Qualifiers: 1, 4, 8, 14, 17	N
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland; recent forest harvests have created opportunities for sediment and toxicant movement. Qualifiers: 1, 2, 4, 5, 6, 8, 10, 12, 14, 15	Y
Nutrient Removal	X		Runoff from nearby uplands may enter wetland; recent forest harvests have created opportunity for nutrient movement. Qualifiers: 1, 2, 3, 4, 5, 10, 12, 13, 14	Y
Production Export	X		Wildlife food sources present in wetland. Qualifiers: 1, 2, 4, 7, 10, 11, 12	Y
Sediment/Shoreline Stabilization	X		A perennial watercourse flows through the wetland. Qualifiers: 2, 3, 4, 7, 15	N
Wildlife Habitat	X		Large wetland system with opportunities for an abundance of wildlife. Qualifiers: 1, 3, 4, 5, 6, 7, 8, 9, 11, 19, 20, 21	P
Recreation	X		Wetland is associated with private property but hunting may be allowed. Qualifiers: 3	N
Education/Scientific Value		X	Wetland is associated with private property	
Uniqueness/Heritage		X	Wetland is a common community type that is dominated by common species of flora and fauna	
Visual Quality/Aesthetics		X	Wetland is associated with private property	
ES Endangered Species Habitat		X	Wetland is not known to support threatened or endangered species based on available information	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: large wetland complex consisting of forested, scrub-shrub, emergent, and open water wetland types. Past timber harvests have	File number: 195601453	
occurred in forested portions of the wetland on site. Wetland contains a great blue heron rookery off-site. Vegetation includes common	Wetland identifier: W58	
wetland associates including *Abies balsamea, Acer rubrum, Betula alleghaniensis, Thuja occidentalis,* and *Fraxinus nigra* trees, *Alnus incana, Ilex, verticillata, Spiraea latifolia,* and *Spiraea tomentosa* shrubs; and a diverse herbaceous flora.	Latitude: 44.599165	Longitude: -69.453108
	Preparer(s): Matt Arsenault	
	Date: 12/7/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Seepage wetland with groundwater interface. Qualifiers: 2, 7	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas. Qualifiers: 1, 2, 5, 6, 8, 9, 18	Y
Fish and Shellfish Habitat	X		Impounded portion of wetland adjacent to site likely supports fish. Qualifiers: 1, 2, 10, 14, 16	N
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 3, 4, 8, 9, 10, 12, 15	Y
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 1, 2, 3, 4, 5, 6, 8, 9, 10, 13, 14	Y
Production Export	X		Wildlife feed on vegetation within wetland, historic timber harvests. Qualifiers: 1, 2, 3, 4, 5, 6, 7, 12	N
Sediment/Shoreline Stabilization	X		Wetland is associated with impounded wetland. Qualifiers: 3, 7, 12, 13	N
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species, great blue heron rookery present. Qualifiers: 3, 4, 5, 6, 7, 8, 9, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22	Y
Recreation	X		Wetland may be used for hunting but is on private property: Qualifiers: 3	N
Education/Scientific Value	X		Wetland is associated with private property but provides valuable wildlife habitat. Qualifiers: 5	N
Uniqueness/Heritage	X		Common wetland community type but large size and wildlife habitat provide values. Qualifiers: 4, 19, 28	N
Visual Quality/Aesthetics	X		Open wetland community off-site. Qualifiers: 8	N
ES Endangered Species Habitat	X		Wetland supports a great blue heron rookery adjacent to site; great blue heron is listed as Special Concern in Maine. Qualifiers: 1	N
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: large wetland complex consisting of forested, scrub-shrub, emergent, and open water wetland types. Past timber harvests have	File number: 195601453	
occurred in forested portions of the wetland on site. Wetland contains a great blue heron rookery off-site. Vegetation includes common	Wetland identifier: W59	
wetland associates including *Abies balsamea, Acer rubrum, Betula alleghaniensis, Thuja occidentalis,* and *Fraxinus nigra* trees, *Alnus incana, Ilex, verticillata, Spiraea latifolia,* and *Spiraea tomentosa* shrubs; and a diverse herbaceous flora.	Latitude: 44.601198	Longitude: -69.452215
	Preparer(s): Matt Arsenault	
	Date: 12/7/2021	

Function/Value	Capability Y	Capability N	Summary	Principal Yes/No
Groundwater Recharge/Discharge	X		Seepage wetland with groundwater interface. Qualifiers: 2, 7	N
Floodwater Alteration	X		Wetland area is able to attenuate surface water runoff from upland areas. Qualifiers: 1, 2, 5, 6, 8, 9, 18	Y
Fish and Shellfish Habitat	X		Impounded portion of wetland adjacent to site likely supports fish. Qualifiers: 1, 2, 10, 14, 16	N
Sediment/Toxicant Retention	X		Runoff from nearby uplands may enter wetland. Qualifiers: 2, 3, 4, 8, 9, 10, 12, 15	Y
Nutrient Removal	X		Runoff from nearby uplands may enter wetland. Qualifiers: 1, 2, 3, 4, 5, 6, 8, 9, 10, 13, 14	Y
Production Export	X		Wildlife feed on vegetation within wetland, historic timber harvests. Qualifiers: 1, 2, 3, 4, 5, 6, 7, 12	N
Sediment/Shoreline Stabilization	X		Wetland is associated with impounded wetland. Qualifiers: 3, 7, 12, 13	N
Wildlife Habitat	X		Wetland provides habitat for a variety of wetland-associated species, great blue heron rookery present. Qualifiers: 3, 4, 5, 6, 7, 8, 9, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22	Y
Recreation	X		Wetland may be used for hunting but is on private property: Qualifiers: 3	N
Education/Scientific Value	X		Wetland is associated with private property but provides valuable wildlife habitat. Qualifiers: 5	N
Uniqueness/Heritage	X		Common wetland community type but large size and wildlife habitat provide values. Qualifiers: 4, 19, 28	N
Visual Quality/Aesthetics	X		Open wetland community off-site. Qualifiers: 8	N
ES Endangered Species Habitat	X		Wetland supports a great blue heron rookery adjacent to site; great blue heron is listed as Special Concern in Maine. Qualifiers: 1	N
Other				

Notes:

* Attach list of considerations.

ATTACHMENT 13. COMPENSATION PLAN

13.1 AVOIDANCE AND MINIMIZATION

Through the evaluation of Project area and layout alternatives, avoidance and minimization measures, and consultations with various state and federal agencies, the Applicant has avoided and minimized impacts to natural resources to the extent practicable. Project needs relating to generating capacity and technical feasibility were evaluated in conjunction with natural resource impacts to produce the Project layout. The layout presented in this application is the culmination of a comprehensive investigation intended to accommodate the Project purpose while incorporating avoidance and minimization measures. Specific avoidance and minimization measures that were incorporated into the proposed Project design are described in the Alternatives Analysis (see Attachment 2).

13.2 PROTECTED NATURAL RESOURCE IMPACTS

The Project is proposing MDEP jurisdictional impacts to 31 identified wetlands resulting in 23,066 sf (0.53 acres) of direct wetland impacts and 811,242 sf (18.63 acres) of indirect wetland impacts. Eleven of the wetlands proposed to be impacted are WOSS that contain more than 20,000 sf of emergent marsh or open water or SWH. Impacts to WOSS are associated with Project access roads or overhead Collector and Genlead ROWs. Indirect wetland impacts consist of vegetative clearing of forested and scrub-shrub wetlands and these wetlands are anticipated to revert to scrub-shrub wetland communities following initial clearing. Although no wetland community conversion is anticipated in scrub-shrub wetlands, the Applicant is conservatively proposing compensation for these indirect impacts. Please see Attachment 2, Section 2.5 for further details of proposed natural resource impacts.

13.3 PROPOSED MITIGATION

The Applicant proposes to mitigate for the wetland alterations associated with the Project through the MDEP in-lieu fee (ILF) compensation program. ILF mitigation was calculated using the current compensation rates for Kennebec County:

- Natural Resource Enhancement & Restoration Cost/sf = $5.05
- Average Assessed Land Value/sf = $0.18

Per MDEP's Guidance for Evaluating Wetland Conversion Impacts (dated September 1, 2021), the Applicant proposes ILF mitigation for all direct and indirect wetland impacts. Based on the wetland functions and values assessment (see Attachments 12-1 and 12-2), the Applicant is proposing compensation for indirect impacts associated with conversion at a rate of 15%. This rate is consistent with the established U.S. Army Corps of Engineers rate of compensation for conversion from forested wetlands to scrub-shrub wetlands. Per the MDEP's ILF Fact Sheet, effective January 1, 2022, through December 31, 2023, a resource multiplier of two has been incorporated into the Project's ILF mitigation for impacts to wetlands that contain more than 20,000 sf of aquatic vegetation, emergent marsh vegetation, or open water; IWWH; or an SVP. No additional compensation is proposed for upland SVP/PSVP impacts as more than 75% of undeveloped CTH for these pools will be maintained in its current state following Project construction. No

additional compensation is proposed for IWWH impacts as the Applicant with use utilize constructions BMPs, restrictive clearing practices, construction timing restrictions, and the establishment of buffers to minimize impacts to IWWH. Mitigation for impacts to field determined moderate-quality DWA will be determined through consultation with MDIFW. The proposed ILF mitigation table for wetland impacts is included as Table 13-1 below. Payment of the wetland compensation fee will be provided prior to starting Project construction.

Table 13-1. In Lieu Fee Mitigation for the Three Corners Solar Project

Project Area	Wetland ID	Wetland Type[1]	Impact Type	Impact (sf)	Resource Multiplier[3]	Compensation Percentage[4]	In-Lieu Fee Payment
SOLAR ARRAY	W-CF-11	PFO	Vegetation Clearing	24,006	1	15%	$18,833
	W-CF-14	PFO	Vegetation Clearing	890	1	15%	$698
	W-NS-10	PFO	Vegetation Clearing	37,911	1	15%	$29,741
	W-NS-11	PFO	Vegetation Clearing	31,593	1	15%	$24,785
	W-NS-16	PFO	Vegetation Clearing	31,462	1	15%	$24,682
	W-CF-07	PFO	Fill/Grading	4,189	1	100%	$21,908
	W-MR-27	PFO	Fill/Grading	1,911	1	100%	$9,995
	W-MR-01	PFO	Fill/Grading	16,917	2	100%	$176,952
			Vegetation Clearing	32,352	2	15%	$50,760
	W-SK-05	PFO	Fill	7	2	100%	$73
			Vegetation Clearing	31,437	2	15%	$49,325
	W-NS-01	PFO	Vegetation Clearing	1,458	1	15%	$1,144
GENLEAD	W07	PFO	Vegetation Clearing	2,941	1	15%	$2,307
	W09	PFO/PSS/PEM	Vegetation Clearing	215,001	1	15%	$168,668
			Fill	35	1	100%	$183
	W14	PSS	Vegetation Clearing	6,159	1	15%	$4,832
	W15	PFO	Vegetation Clearing	7,754	1	15%	$6,083
	W16	PFO	Vegetation Clearing	6,794	1	15%	$5,330
	W22	PFO	Vegetation Clearing	25,759	1	15%	$20,208
	W27	PSS/PFO	Vegetation Clearing	17,119	1	15%	$13,430
	W28	PFO	Vegetation Clearing	56,846	1	15%	$44,596
			Fill	7	1	100%	$37

Project Area	Wetland ID	Wetland Type[1]	Impact Type	Impact (sf)	Resource Multiplier[3]	Compensation Percentage[4]	In-Lieu Fee Payment
GENLEAD	W32	PFO	Vegetation Clearing	45,851	2	15%	$71,940
	W35	PFO	Vegetation Clearing	13,669	1	15%	$10,723
	W36	PFO	Vegetation Clearing	32,921	1	15%	$25,827
	W42	PFO	Vegetation Clearing	13,246	1	15%	$10,391
	W43	PFO	Vegetation Clearing	40,405	1	15%	$31,698
	W50	PFO	Vegetation Clearing	3,314	2	15%	$5,200
	W51	PFO	Vegetation Clearing	65,283	2	15%	$102,429
	W52	PFO	Vegetation Clearing	7,591	2	15%	$11,910
	W56	PFO	Vegetation Clearing	15,086	2	15%	$23,670
	W57	PFO	Vegetation Clearing	115	2	15%	$180
	W58	PFO	Vegetation Clearing	14,200	2	15%	$22,280
	W59	PFO	Vegetation Clearing	30,079	2	15%	$47,194
Total Impacts				**834,308**			**$1,038,011**

[1] Wetland type is based on the existing conditions within the proposed impact area.

[2] The Wetland Compensation Formula is based off the values for Kennebec County in the MDEP Fact Sheet In Lieu Fee Compensation Program, effective January 1, 2022 through December 31, 2023.

[3] Includes wetlands containing 20,000 square feet of aquatic vegetation, emergent marsh vegetation, or open water; IWWH; and/or SVP habitat.

[4] Reductions are based on the U.S. Army Corps of Engineers New England District's 2020 Recommended Compensatory Mitigation for Temporary and/or Secondary Impacts and the Project's wetland functions and values assessments.

Appendix A

Visual Impact Assessment Memo

T.J. BOYLE ASSOCIATES
LANDSCAPE ARCHITECTURE & PLANNING

MEMORANDUM

To: Stantec – Attn: Krista Clark

From: Michael Buscher and Jeremy Owens

Date: January 31, 2022

Re: Three Corners Solar Project – Aesthetic Review

I. Introduction

T. J. Boyle Associates, LLC ("TJBA"), a landscape architecture and planning firm located in Burlington, Vermont, was retained by Stantec to conduct an aesthetic analysis to evaluate potential impacts due to the proposed Three Corners Solar Project (the "Project") located in Unity Township, as well as the Towns of Clinton and Benton, Maine. The Project is a proposed utility scale solar energy facility consisting of photovoltaic ("PV") panels, with a total installed capacity of 110 megawatts of alternating current ("AC"). The proposed Project solar arrays and supporting infrastructure (electrical equipment, collection substation and operations and maintenance building), are located north of Route 139 (Unity Road).

Power from the Project will be transmitted to the existing Central Maine Power ("CMP") Albion Road substation in Benton, located southwest of the Project, via the construction of an approximately 5.2 mile long 115-kilovolt generator lead line. This memo is prepared in response to Maine's regulatory requirements concerning scenic impacts:

- Natural Resources Protection Act (NRPA) 38 MSRA § 480-D (1) requires that "The activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses."

- Chapter 315: Assessing and Mitigating Impacts to Existing Scenic and Aesthetic Uses "describes the process for evaluating impacts to existing scenic and aesthetic uses resulting from activities in, on, over, or adjacent to protected natural resources subject to the Natural Resources Protection Act."

- Standards for Development (Site Location Law) 38 MSRA § 484(3) requires that "The developer has made adequate provision for fitting the development harmoniously into the existing natural environment and that the development will not adversely affect existing uses, [or] scenic character."

- Chapter 375.14 is the Site Location Law's regulation describing the evidence that the Environmental Board uses for "determining whether the proposed development will have an unreasonable adverse effect on the scenic character of the surrounding area."

II. Project Description

Three Corners Solar is proposing the development and operation of the Project located within Unity Township and the Towns of Clinton and Benton, which are within Kennebec County. The proposed Project will be located on undeveloped areas of previously harvested forest and cleared land starting approximately 1.8 miles east of the center of Clinton.

The Project will consist of three main components:

1) Project Solar Array Areas

   The Project will be split between 8 fenced array areas. Fences will be a minimum of 7 feet tall to meet safety requirements. Arrays will consist of rows of photovoltaic modules mounted on single-axis tracker racking units fixed to the ground. Rows of panels generally run north-south and track the sun from east to west throughout the day. Solar panel modules would be configured in a single portrait orientation and have a maximum tilt of 52-degrees. Racking systems would be roughly 2 meters (6.6 feet) tall on the high side at maximum tilt. A series of collection lines would connect the separate arrays together and ultimately bring electricity being generated to the Project substation. Most of the collection lines are proposed in an underground configuration. However, the collection line that will connect the easternmost array area to the western portions of the Project are proposed in an overhead configuration on structures with above ground heights expected to be approximately 55 feet high. Other components of the arrays include internal access roads, stormwater management facilities, foundations for the racking systems, and other electrical equipment, such as inverter units to convert electricity from direct current (DC) to alternating current (AC).

2) The Project Substation & Operations Building

   Electricity produced by the arrays would be collected at a proposed Project substation where electricity would be 'stepped up' to from 34.5 kV to 115 kV to be fed to the generator lead line. Immediately adjacent to the substation is a proposed operations building, with storage for the Project. The substation includes a fenced substation yard of approximately 250 feet by 250 feet. Within the yard there would be typical electrical transmission infrastructure, including a control building. The tallest components of the substation would be lightening protection, including lightening masts which will be approximately 85 feet tall. The operations building would be immediately south of the substation, with a rough footprint of 25 feet by 50 feet.

3) 115 kV Generator Lead Line

   An approximately 5.2 mile long 115 kV overhead generator lead line would deliver electricity from the Project substation to CMP's Albion Road substation. The 115 kV generator lead line is composed of approximately 65 single-pole and three-pole structures, with heights above ground that range from approximately 60 feet up to about 100 feet. The line will cross four roadways as it proceeds south and then west to the existing Albion Road Substation, including Route 139, Bog Road, East Benton Road, and Richards Road. Additionally, the line will cross over Fifteenmile Stream at a point roughly halfway along its route to the substation.

The general arrangement of the Project is illustrated in Figure 1.

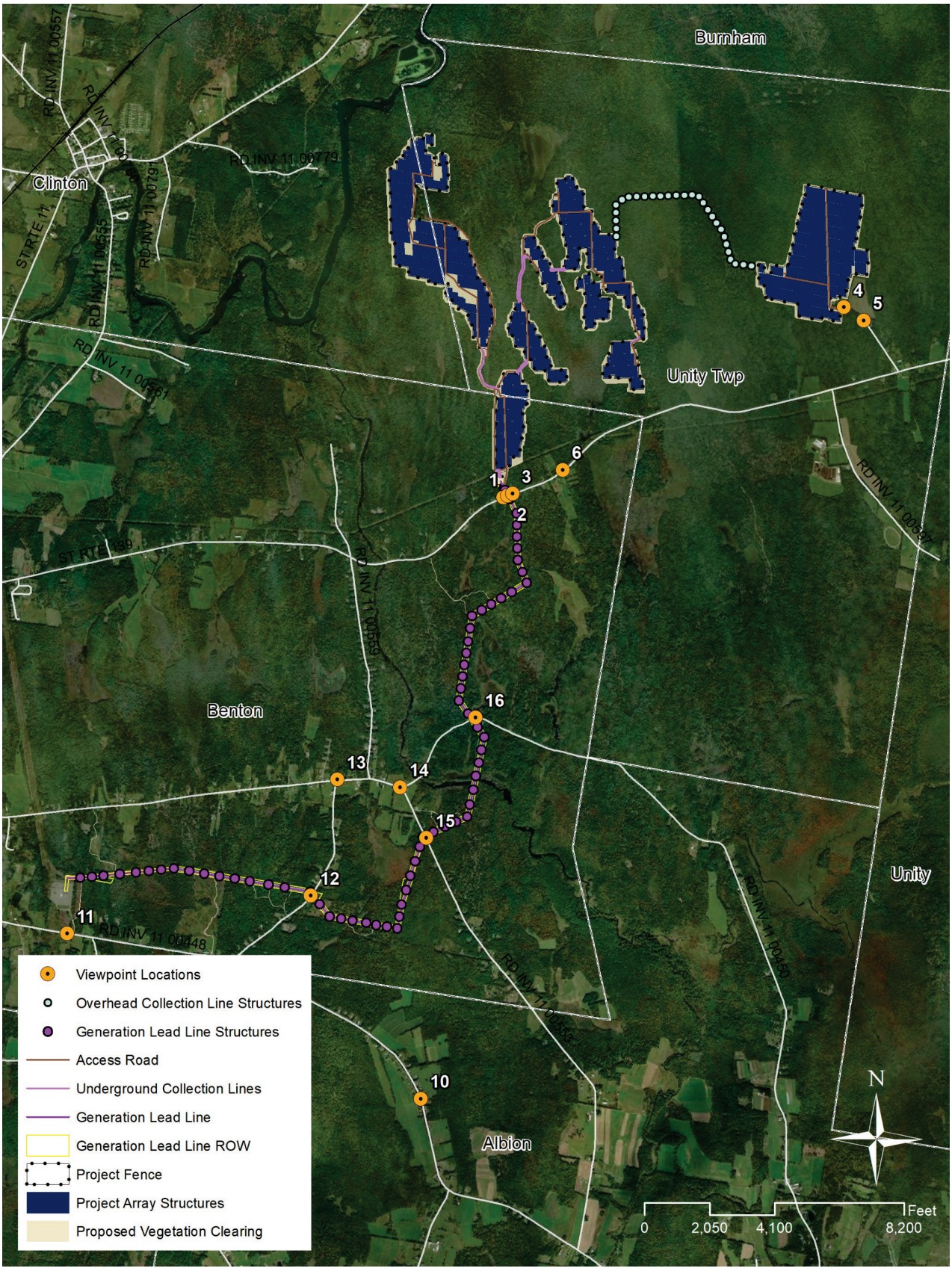


Figure 1: General arrangement and detailed aerial photo of the Project site and surrounding area.

The majority of the Project will be constructed primarily on existing forested land north of Route 139. Two access points will be constructed: one at Bessey Lane at the southwest corner of the array near the proposed collection substation, and one at the end of Palmer Road at the eastern extent of the array. No substantive development currently exists on the site. Other nearby existing infrastructure includes an existing communications tower at the north end of Palmer Road, a transmission line that runs roughly northeast and generally follows Route 139, and low-density residential uses (mainly along roadways) primarily in the vicinity of the proposed 115 kV generator lead line.

Project site selection involved an intensive site assessment undertaken by Three Corners Solar. The Project location is suitable for a utility-scale solar development because it is in close proximity to existing electrical transmission infrastructure (CMP's Albion Road substation is approximately 3.5 miles to the southwest), and due to the surrounding vegetation, the Project will generally have low visibility from public rights-of-way and private residences.

III. Methodology

Our study area for visibility and potential adverse impacts to the scenic character of the area extends to five miles from the proposed project location. This distance tells us whether the proposed project components are, or are not, visible from prominent or protected locations in the study area, or, perhaps more importantly, if a project itself is in a prominent or highly visible location. Five miles is an appropriate study area size because of the low-profile of the array and Project components. Visibility beyond 5 miles would have a negligible scenic impact.

In conducting the impact analysis and preparing this report, four distinct methods have been used: (1) background data collection, (2) GIS viewshed analysis mapping, (3) field investigation, and (4) Project visualization. The GIS viewshed mapping and field investigation are used to identify areas with potential visibility of the Project and to identify scenic resources within the area. The background data and field investigation are used to characterize the study area. For the Project visualization, photo simulations are prepared to accurately depict changes within particular views where visibility will potentially be possible. All four methods are used to evaluate whether there are in fact 'adverse' impacts and if so, whether those impacts could be considered 'unreasonable.'

(1) **Background Data Collection.** Standard data that can help describe the landscape of the Project site, the surrounding area, and the Project are assembled. These data include available Project plans and details, aerial photography, topographical maps, Geographical Information System ("GIS") data including digital elevation model data, water and land cover information, transportation data and primary building data (public, commercial, residential), and applicable regulations such as the town plan and the regional plan.

(2) **GIS Viewshed Analysis.** Following the background data collection, ESRI ArcGIS software is used to calculate a GIS viewshed or visibility analysis of potential visibility of the Project. Viewshed analysis can identify areas that have potential views of a project, and when mapped it shows the project viewshed.

The analysis applies a line-of-sight method from a prescribed point or points representing the Project (such as the top of an upright solar tracker, substation equipment, or power line

structure), to all other locations within a designated study area. Figure 2 illustrates how line-of-sight determines visibility. The analysis results (portrayed as two viewshed maps), and background data review form the basis for organizing the field investigation.

a. A "Terrain Viewshed" map (see Appendix A, Map 2 & Map 4) represents how landform may block views of Project upgrades. This analysis only accounts for intervening landform and does not incorporate how vegetation, buildings, hedgerows, street trees or any other vegetation or buildings will screen visibility of the Project.

However, to facilitate interpretation of the results, the map differentiates between areas with and without forest cover, since there will be no distant views if one is standing in the forest. This map represents the maximum area from which the Project could be visible, and in almost every case overstates the probable visibility.

b. A "Vegetated Viewshed" Map (see Appendix A) represents how vegetation, buildings and other obstructions in the landscape, in addition to landform, may block views to the Project. Within 2 miles of the Project, data used to identify obstructions is based on LiDAR data available from the Maine Office of GIS. Lidar data allows a much more accurate Vegetated Viewshed, because data include specific structure and vegetation heights. This map is a more realistic representation of the area from which the Project is potentially visible.

When properly taken into consideration, these maps indicate areas most likely to have views, indicating areas vulnerable to the greatest impacts, while also identifying areas that are unlikely to have views. The assumptions used to calculate these maps are conservative and tend to over-estimate Project visibility. These maps are considered a preliminary determination of potential visibility that is then verified through field investigation, which more fully evaluates the landscape context, views, and potential impacts. Therefore, it is inappropriate to use these maps as the only basis to evaluate visual extent and impacts. Figure 2 is a cross section showing the difference between the Terrain Viewshed and the Vegetated Viewshed maps.

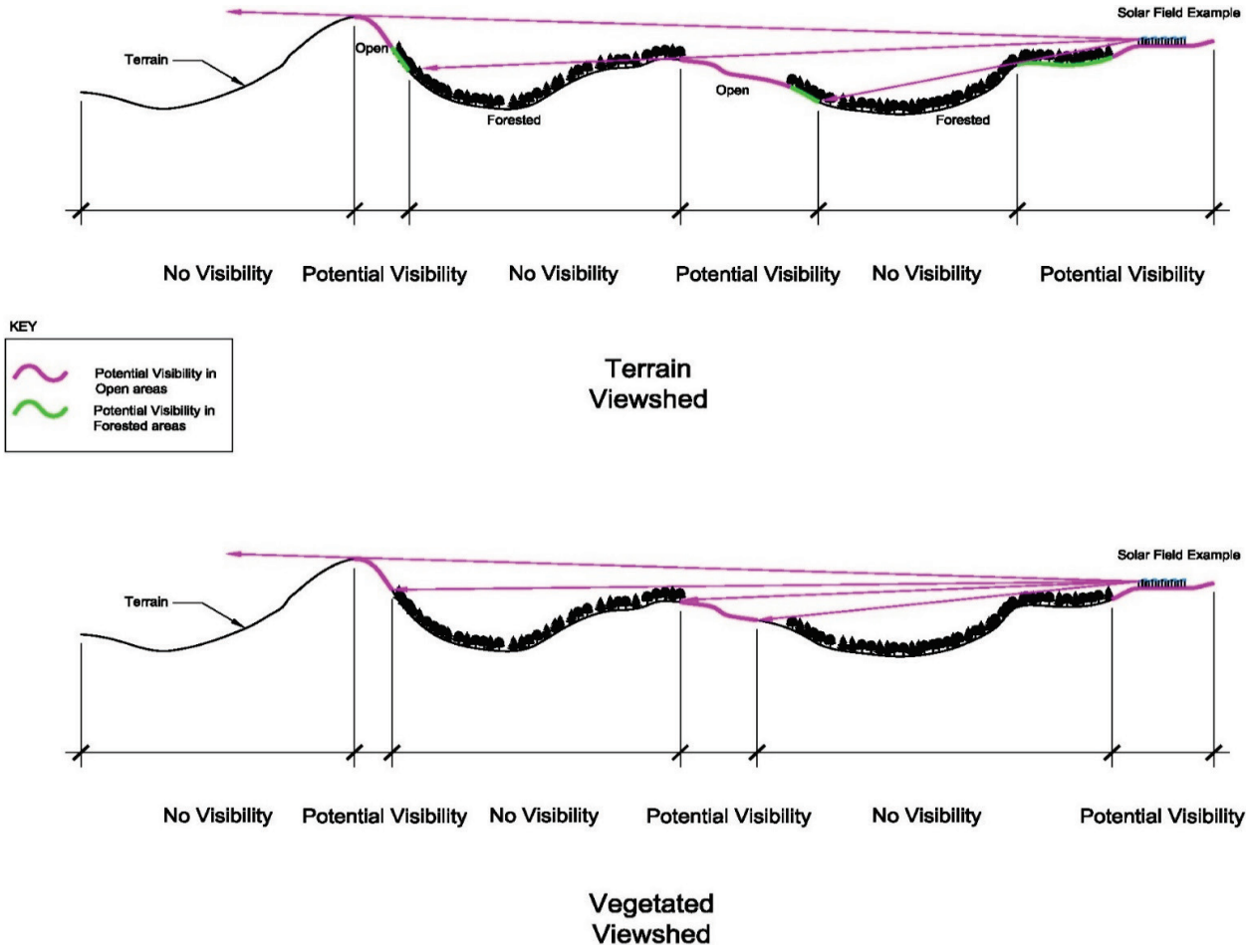


Figure 2. Terrain Viewshed and Vegetated Viewshed Diagrams. (Please note this diagram is for illustrative purposes only to portray the results of a GIS Viewshed analysis and is not representative of the proposed Project.)

(3) Field Investigation. The viewshed maps are used to focus the field investigation on areas most likely to have views of the Project. The purpose of the field investigation is to:

a. Verify potential visibility as indicated on the viewshed maps

b. Photograph views toward the Project

c. Photographically document the landscape's visual character within the study area

d. Record notes concerning each viewpoint where photographs are taken

e. Identify location of photograph viewpoints using a global positioning system ("GPS") unit

On completion of the field investigation, the GPS data is transferred to a GIS database and synchronization of the data and photograph locations are verified. Photo locations and the actual photos are coordinated through indexed viewpoint numbers. Documentation of the field investigation is then prepared, which includes: (1) mapping of the routes traveled and locations of photograph viewpoints, displayed on mapping within Appendix A and a catalog of photography, included as Appendix B, Photographic Inventory. Unless otherwise noted, all photographs were taken with a Nikon Z6II camera with a Nikkor Z 24-70mm lens, with a

focal length set to 50mm. This is approximately equivalent to 50mm on a 35mm film or FX digital single lens reflex camera, also known as a 'normal lens'.

(4) Project Visualization. It is normally helpful to create visualizations as an aid to evaluate visual impacts. In many situations, GIS information prepared with the viewshed analysis also can be used to create a three-dimensional (3D) model. The model can help to better understand the visual relationship of the basic landscape features to the Project elements. The advantage of this approach is the ease in representing the view from any viewpoint; the disadvantage is the relative coarseness of the data and the schematic quality of the image.

Photos captured during field investigation also can be used to create realistic photographic quality simulations of a Project. The specific selection of a simulation viewpoint is based on the extent of the Project's visibility, the probable frequency and sensitivity of viewers, and the availability of a suitable photograph from the field investigation. There may be more than one viewpoint for a particular Project component. However, each simulation attempts to illustrate the most visible condition from a publicly accessible viewpoint for the area it represents. The following process is used to create the simulation.

a. Three-dimensional computer-aided design ("CAD") drawings of the proposed Project elements and site plan are obtained or created.

b. The CAD data and aerial photographs of the area are georeferenced and overlaid. Reference markers representing fixed landscape elements visible in the photograph (i.e., existing buildings, utility poles) are added to the CAD data based on their location in the aerial photograph.

c. A viewpoint or camera view is created within the CAD drawing based on the camera, viewpoint and other characteristics of the photograph. A perspective drawing of the proposed Project is produced that coincides with the perspective of the photograph.

d. A digital image file for the simulation is created that includes separate layers for the perspective drawing and the simulation photograph. The reference markers are used to evaluate the accuracy of the perspective drawing's camera view. The perspective drawing settings are fine-tuned to ensure the reference markers coincide with the photograph.

e. Elements of the perspective drawing that will be visible are rendered into the photograph using texture and colors that occur on the site or are specified in the Project documents or from other similar project materials.

TJBA evaluates data from the steps above and compares existing conditions with plans for the proposed Project. The following sections of this report describe in detail the collection and evaluation of data and the resulting conclusions.

IV. Evaluation of Visibility

The Project is located within the Central Maine Embayment sub-region of the Acadian Plains and Hills ecoregion, a diverse region of rolling plains with hills and some high hills.[1] The Project is also near, but not adjacent to, the Sebasticook River. In general, the study area can be characterized as a relatively flat landscape, with gently rolling hills. Other than at the northeast extent of the Project, where some existing

[1] http://ecologicalregions.info/data/vt/new_eng_front.pdf

agricultural/cleared fields exist at the northwestern extent of Palmer Road, the Project is located within a forested area. Roadways in the area include a mix of scattered residential development along the roads. The lack of significant variation in terrain helps reduce potential visibility of the Project and allows existing surrounding vegetation to screen most views of the Project.

TJBA conducted a field investigation site visit on January 4, 2022. As indicated by the viewshed mapping, field investigation found that visibility to the Project site is significantly obstructed from the surrounding area. Observations were made from roadways adjacent to the proposed Project and roadways adjacent to open agricultural fields or clearings within the surrounding 5-mile study area.

The closest location with visibility of the Project elements along Route 139 (Unity Road) at the Bessey Lane entrance to the Project site (see Appendix B, Viewpoints 1 through 3). For this stretch of roadway (approximately 250' in length), clearing of the vegetation for the proposed array, substation, and generator lead line will allow brief visibility of Project elements as travelers proceed in either direction along the road. A 115 kV generator lead line structure is proposed approximately 40' north of the road. To further understand visibility of the Project from this location, a photographic simulation was prepared from this location (see Appendix C, Simulation 1).

At the east extent of the Project, a second entrance will access the Project at the northwestern extent of Palmer Road. Palmer Road provides access to several residential homes, as well as an existing communications tower and agricultural fields (see Appendix B, Viewpoints 4 and 5). Due to the low profile of the proposed array structures, existing vegetation will significantly screen the proposed Project array from Palmer Road and the nearby residential uses.

There will be a view of the eastern Project array from Route 139 at a location approximately 2,100' east of the Bessey Lane entrance (see Appendix B, Viewpoint 6). From this location, travelers heading northeast will have a view of the array as it ascends a low background hill, and will be visible when heading in this direction for a distance of approximately 750'. To further understand visibility from this location, a photographic simulation was prepared from this location (see Appendix C, Simulation 2).

Further from the array, some visibility of the proposed array and associated generation lead line structures will be possible from US Route 202 (Albion Road), in two general areas southeast of the Project site at a distance of approximately 3.4 miles (see Viewpoint 7) and 3.1 miles (see Viewpoint 8). At approximately 4.5 miles away, the western extent of Town Farm Road will also have potential visibility (see Viewpoint 9). To the south, a view of the Project array will be possible from Benton Road at a distance of approximately 3.8 miles away. There are also a few areas of visibility to the northwest along Upper Bellsqueeze Road (4.85 miles away, see Viewpoint 17), Hill Road at the intersection with Rogers Road (4.6 miles away, see Viewpoint 18), and Hill Road (3.7 miles away, see Viewpoint 19).

To further understand Project visibility from these distances, a photographic simulation was prepared from Viewpoint 7 (see Appendix C, Simulation 3). As can be seen in the simulation, at these distances the Project components will be visible in the far middleground of the landscape, and are not expected to be significantly visible due to the low profile of the Project array structures and limited visibility of the tops of generator lead line structures.

Lastly, a series of Viewpoints were documented along the proposed 115 kV generator lead line route, which crosses four roadways as it proceeds approximately 5.2 miles from the Project substation to CMP's existing Albion Road substation. The interconnection with CMP's existing substation will occur on the substation's north side, which is well screened from public view due to intervening vegetation and existing electrical infrastructure (see Viewpoint 11). Proceeding east from the Albion Road substation, the line will cross

Richards Road, and will require the removal of an existing mobile home to make room for a new three-pole angle structure and associated guy wires (see Viewpoint 12). The line then proceeds east and then north towards East Benton Road, and some of the tops of proposed structures will be visible from East Benton Road at the intersections with Richards Road (see Viewpoint 13) and Bog Road (see Viewpoint 14). Where the lead line crosses East Benton Road in an otherwise forested area, an angle structure and associated guy wires will be approximately 50' from the roadway (see Viewpoint 15).

Roughly halfway along the route to the Project's substation, the generator lead line crosses Fifteenmile Stream where the river makes a large 'S' bend. The river crossing is located in a relatively inaccessible area, and no significant visibility is expected. Further north, the line crosses Bog Road in a forested area with scattered wetlands (see Viewpoint 15), and the line continues through a similar setting until it crosses Route 139 (Viewpoints 1, 2 and 3) and connects to the Project substation.

Considering the large study area and size of the Project, visibility of the proposed array from surrounding areas will be highly limited. Most visibility will be from Route 139 near the Project substation (Viewpoints 1, 2, 3 and 6), with minor visibility of the array from the Project's east entrance, as well as some visibility from much further distances to the southeast (Viewpoints 7 through 9), south (Viewpoint 10), and northwest (Viewpoints 17 through 19). As can be seen in Appendix A, Map 3 Solar Vegetated Viewshed, visibility from other areas is highly limited due to intervening vegetation and terrain.

Significant visibility of the proposed overhead collection line is not anticipated from other locations in the study area due to the expected size of the structures (55' tall or less) and the mature vegetation that will remain alongside this alignment (see Appendix A, Map 4 Collection Vegetated Viewshed).

Visibility of the proposed substation will likewise be minor, with most visibility being from the adjacent portion of Route 139 (Viewpoints 1 and 2). Adjacent vegetation will provide significant screening of the substation infrastructure (see Appendix A, Map 5 Substation Vegetated Viewshed).

Lastly, the 115 kV generation lead line will have some visibility from surrounding areas, particularly at locations where the line crosses roadways, but also at further distances. In particular, the tops of the proposed 115 kV structures will be visible, but at less than 100', these structures will be consistent with the height of adjacent mature vegetation.

V. Inventory and Analysis of Scenic Resources

NRPA applications are required to complete the MDEP Visual Evaluation Field Survey Checklist, which requires the identification of scenic resources with potential visibility of the Project. Potential visibility is determined using the Terrain and Vegetated Visibility maps, supplemented with field verification. Scenic resources as defined in Chapter 315.10 have been identified within 5 miles of the Project.

Several conservation easement areas were identified as potentially having limited visibility, particularly visibility of the tops of proposed poles of the generator lead line. These would be viewed from a distance and, where visible, would appear similar to other distribution and transmission structures in the landscape. Many of these conservation easements do not include information about legal public access or whether scenery of or from the site is part of the conservation agreement. All of these are all listed as "private".

VI. MDEP Visual Evaluation Field Survey Checklist

(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Three Corners Solar, LLC

Application Type: MDEP Site Location of Development Act / NRPA

Activity Type: (brief activity description): Construction and Operation of a 110-Megawatt Solar Energy Generation Project.

Activity Location: Town: Unity Township, Towns of Benton and Clinton **County:** Kennebec

GIS Coordinates, if known: See Project Plans and Location Maps

Date of Survey: January 4, 2022 **Observers:** Michael Buscher & Danielle Ade, T.J. Boyle Associates LLC **Phone:** (802) 658-3555.

	Distance Between the Proposed Visibility Activity and Resource (in Miles)		
1. Would the activity be visible from:	**0-¼**	**¼-1**	**1+**
A. National Natural Landmark or other outstanding natural feature?	☑	☑	☑

There are no known National Natural Landmarks within the study area that have visibility of the Project.

Unity Wetlands: Although not a National Natural Landmark, Unity Wetlands is noted as a focus area of Statewide Ecological Significance. It includes over 42,000 acres of land within portions of the towns Albion, Benton, Burnham, Clinton, Freedom, Unity, and all of Unity Township. The Project site is within Unity Wetlands, and as such visibility of the Project will be possible.

Unity Wetlands is significant because of the diversity of natural features, especially wetland and riparian-associated species and habitats. It encompasses a large expanse of wetlands and uplands and is one of the largest remaining unfragmented blocks of land in central Maine. However, there are no known conserved areas or locations with designated public access within the Project. While scenic value is an attribute of the focus area (it "Provides scenic vistas and open space that raise property values"), scenery it is not the cause for conservation and protection of the area.[2] At the most, it is anticipated that use of the Project area specifically as part of the Unity Wetlands is extremely low, and overall visibility of the Project from other areas is limited. It is anticipated that the Project will have little if any impact to any use or visibility of the Unity Wetlands resource.

B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge?	☐	☐	☐

There are no known State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge within the study area that have visibility of the Project.

[2] https://www.maine.gov/dacf/mnap/focusarea/unity_wetlands_focus_area.pdf

C. A state or federal trail? ☐ ☐ ☐

There are no known state or federal trails within the study that have visibility of the Project.

D. A public site or structure listed on the National Register of Historic Places? ☐ ☐ ☐

There are no known public sites or structures listed on the National Register of Historic Places within the study that have visibility of the Project.

E. A National or State Park? ☐ ☐ ☐

There are no known National or State Parks within the study that have visibility of the Project.

F. *1) A municipal park or public open space?* ☐ ☐ ☐

There are no known municipal or public parks within the study that have visibility of the Project.

2) A publicly owned land visited, in part, for the use, observation, enjoyment and appreciation of natural or man-made visual qualities? ☐ ☐ ☐

There are no known publicly owned lands visited, in part, for the use, observation, enjoyment and appreciation of natural or man-made visual qualities within the study that have visibility of the Project.

3) A public resource, such as the Atlantic Ocean, a great pond or a navigable river?

☑ ☑ ☑

Fifteenmile Stream:

The proposed 115 kV generator lead line crosses Fifteenmile Stream south of Bog Road. While the river may be navigable, there are no entries for canoeing or scenic attribute fields in the Scenic River GIS database for Fifteenmile Stream.

Visibility of the Project will likely be limited to the generator lead line crossing and associated nearby pole structures. Some visibility of other Project elements such as the array vary as paddlers navigate along the Project site but is considered highly unlikely due to the low elevation of the stream, low profile of other Project elements, and prevalence of vegetation along the stream.

The Project is anticipated to have a low to moderate visual impact along portions of the stream adjacent to the lead line crossing and structures. Views towards the generator lead line will be significantly limited or softened by existing vegetation, particularly during leaf-on conditions, and will only likely occur at or near the crossing.

2. What is the closest estimated distance to a similar activity? ☐ ☐ ☑

There is an existing 76.5-MW solar facility, approximately 33 miles to the west of the Project in the Town of Farmington, Maine. There are several additional solar projects also being planned within the state.

3. What is the closest distance to a public facility intended for a similar use? ☐ ☐ ☐

It is unknown whether there are comparable publicly owned solar facilities within Maine.

4. Is the visibility of the activity seasonal? (i.e., screened by summer foliage, but visible during other seasons) ☐ **Yes** ☑ **No**

Although summer foliage will significantly decrease the extent of visibility of the Project at locations were views will be possible, such as along Route 139, summer foliage will not entirely screen visibility.

5. Are any of the resources checked in question 1 used by the public during the time of year during which the activity will be visible? ☑ **Yes** ☐ **No**

Chapter 375.14 notes that the DEP shall take into consideration "whether the proposed development will have an unreasonable adverse effect on the scenic character of the surrounding area." Generally, we assume this statement incorporates the areas beyond the specific resources noted in Chapter 315. Areas with potential visibility are described in Section IV. above, and generally include roadways and non-forested areas at high elevation. While the Project will be visible, it is generally only visible near the proposed Bessey Lane entrance, when near the generator lead line road crossings, or from a few locations to the southeast and northwest at distances further than 3 miles. When visible at long distances, such as 3 miles or more, the Project is not likely to be readily apparent in the landscape. The vast majority of the 5-mile study area will not have visibility of the Project components.

Based on the general lack of visibility, and specifically the forested landscape that will remain around the proposed Project array, substation, generator lead line and other elements, the proposed Project will not have an unreasonable adverse effect on the scenic character of the surrounding area.

VII. Findings and Conclusions

Overall, T.J. Boyle Associates found the proposed Project will have very limited visibility within the 5-mile study area. Public views will be restricted to short-duration views along nearby roadways, and brief distant views where the Project is not likely to be readily apparent. The general lack of visibility can be attributed to careful planning and siting in the selection of the Project site, Project design that incorporates infrastructure that is low in profile, and the surrounding existing vegetation that will screen the Project.

We conclude that the Project meets the Standards for Development, pursuant to 38 MSRA § 484(3) insofar that "the developer has made adequate provision for fitting the development harmoniously into the existing natural environment and that the development will not adversely affect the existing uses, [and] scenic character" of the area. Pursuant to 38 MSRA § 480-D, the proposed "activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses."

Appendix B

MHPC and Tribal Correspondence

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JANET T. MILLS
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

March 26, 2019

Mr. Steve Knapp
Kleinschmidt
PO Box 650
Pittsfield, ME 04967

Project: MHPC #0326-19 — Long Road Energy; Three Corners Solar Project
Proposed 85-125 MW Solar Project

Town: Unity Twp, ME

Dear Mr. Knapp:

In response to your recent request, I have reviewed the information received March 12, 2019 to initiate consultation on the above referenced project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended.

An architectural survey is recommended to identify and record information on all resources within the area of potential effect (APE) that are at least 50 years old. Survey must be completed according to our "Revised Above Ground Cultural Resource Survey Manual Project Review Specific." All surveys must be submitted electronically via our on-line CARMA database. See our website for more information: http://www.maine.gov/mhpc/architectural_survey/survey-guidelines.html.

A list of historic preservation consultants who are qualified to conduct architectural survey and have been trained in the use of the CARMA database may be found at the following page of our website: http://www.maine.gov/mhpc/project_review/consultants/carma_trained_consultants.shtml

With regards to archaeological resources, a Phase I archaeological survey for potentially significant historic and prehistoric archaeological sites is recommended for the project area. There are many potential historic archaeological sites in the Area of Interest as shown by named structures on the enclosed 1861 map copy. No prehistoric archaeological survey has been done in the Area of Interest, but there are dozens of sites along the Sebasticook River where archaeological survey has been done. At a minimum, prehistoric archaeological survey is recommended within 100 yards of any river, stream or bog margin.

A list of qualified prehistoric archaeologists has been can be found on our website: http://www.maine.gov/mhpc/project_review/consultants/prehistoric_archaeology.shtml.

If you have any questions regarding archaeology, please contact Dr. Arthur Spiess of this office at Arthur.Spiess@maine.gov.

Please contact Megan M. Rideout of our staff at 287-2992 or megan.m.rideout@maine.gov if you have any questions regarding above ground resources.

Sincerely,

Kirk F. Mohney

Kirk F. Mohney
State Historic Preservation Officer

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JANET T. MILLS
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

Archaeological Survey Guidelines

Updated: June 10, 2002

This document is provided as background information to agencies, corporations, professional consultants or individuals needing contract archaeological services (also known as Cultural Resources Management archaeology) in Maine. These guidelines are based on state rules (94-089 Chapter 812).

Project Types

The vast majority of contract archaeology survey work falls into one of three categories.

Phase I surveys are designed to determine whether or not archaeological sites exist on a particular piece of land. Such work involves checking records of previous archaeology in the area, walking over the landscape to inspect land forms and look for surface exposures of soil and possible archaeological material, and the excavation of shovel test pits in areas of high probability.

Phase II surveys are designed to focus on one or more sites that are already known to exist, find site limits by digging test pits, and determine site content and preservation. Information from Phase II survey work is used by the Maine Historic Preservation Commission (MHPC) to determine site significance (eligibility for listing in the National Register of Historic Places). Phase III archaeological work, often called data recovery, is careful excavation of a significant archaeological site to recover the artifacts and information it contains in advance of construction or other disturbance.

Archaeological sites are further divided into two broad categories of culture, prehistoric (or Native American), and historic (or European-American). Different archaeological specialists are usually needed for prehistoric or historic sites because the nature of content and preservation and site locations are quite different.

Scope of Work

In responding to a project submission, the MHPC may issue a letter specifying which type of archaeological survey is needed (prehistoric, historic or both) and at what level (Phase I, II, or III). Often the response letter contains further information, such as the suspected presence of an historic site of a certain age, or a statement that only a portion of the project parcel in question is sensitive for prehistoric sites and only that portion needs archaeological survey.

Once the project applicant has one or more scopes of work (proposals) from appropriate archaeologists (see below), the applicant should submit their preferred proposal (without attached financial information or bid total) to the MHPC for approval. MHPC will not comment upon cost, but will comment on the appropriateness of the scale and scope of the work. An approval from MHPC of the scope of work is the applicant's guarantee that, if the field and laboratory work are done according to the scope, and appropriately described in writing, the results will be accepted by MHPC.

The final written report on the project must also be submitted to MHPC for review and comment.

PHONE: (207) 287-2132

FAX: (207) 287-2335

Finding an Archaeologist

At the time that MHPC issues a letter requiring archaeological survey work, MHPC will also supply one (or more) lists of archaeologists (Levels 1 and/or 2, historic or prehistoric) appropriate to the type of work (Phase I, II, III, historic or prehistoric). Archaeologists on the Level 2 Approved Lists can do projects of any level, including Phase I archaeological survey projects. Level 1 archaeologists are restricted to doing Phase I surveys, and certain planning projects for municipal governments.

MHPC maintains lists of archaeologists interested in working in different geographic areas of Maine, and those who are qualified in different types of work. The archaeologists themselves indicate their availability (except for short-term absence) to MHPC on a periodic basis, so archaeologists on the list can be expected to respond to inquiries. The applicant should solicit proposals or bids for work from archaeologists whose names appear on the list supplied by MHPC.

These archaeologists' names are taken from lists of archaeologists approved for work in Maine by MHPC under a set of rules establishing minimal qualifications, such as previous supervisory experience in northern New England, and an appropriate graduate degree. However, the inclusion of an archaeologist on one of these lists should not be interpreted as an endorsement by the MHPC beyond these limited qualification criteria. Moreover, the MHPC cannot recommend the services of an individual archaeologist.

Project Final Report

Whatever the archaeological survey result, a final report on the project should be submitted by the applicant to the MHPC. The MHPC will review the report, and issue further guidance or issue a "clearance" letter for the project.

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JANET T. MILLS
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

Prehistoric Archaeologists Approved List: Review and Compliance Consulting/Contracting (Active)

LEVEL 2 (Phase I, II, III, data recovery, all phases of survey)

LEVEL 2

Dr Richard Will (207-667-4055)
TRC/Northeast Cultural Resources
71 Oak St
Ellsworth ME 04605
FAX: 207-667-0485
rwill@trcsolutions.com

Karen Mack (207-667-4055)
TRC/Northeast Cultural Resources
71 Oak St
Ellsworth ME 04605
FAX: 207-667-0485
kemack@trcsolutions.com

Dr Stuart Eldridge (207-869-1261)
Power Engineers, Inc.
303 US Rte 1
Freeport ME 04032
Stuart.Eldridge@powereng.com

Mr. Jacob A. Freedman
SEARCH, INC
P.O. Box 1080
Portsmouth, NH 03802
603-319-6939
www.searchinc.com
Jacob@searchinc.com

Robert N Bartone (207-860-4032)
Northeast Archaeology Research Center
382 Fairbanks Rd
Farmington ME 04938
bartone@nearchaeology.com

Dr Victoria Bunker (603-776-4306)
PO Box 16
New Durham NH 03809-0016
vbi@worldpath.net

Dr Nathan Hamilton (207-780-5324)
Dept of Geography & Anthropology
University of Southern Maine
Gorham ME 04038
casco@usm.maine.edu

David Putnam (207-762-6078)
47 Hilltop Rd
Chapman ME 04757
putnamd@umpi.edu

Dr. Robert Goodby (603-563-8123)
Monadnock Archaeological Consulting
144 Greenwood Road
Dublin, NH 03444
rgoodby@monadarch.com
www.monadarch.com

Dr. Dianna Doucette
Public Archaeology Laboratory
26 Main Street
Pawtucket, RI 02860
ddoucette@palinc.com

Dr William R Belcher
US Army CILHI
310 Worchester Ave Bldg 45
Hickam AFB HI 96853-5530
wbelcher@msn.com

Dr. Daniel F. Cassedy, AECOM
791 Corporate Center Drive
Raleigh, NC 27607
919-854-6207
Daniel.cassedy@aecom.com

Dr. Gemma-Jayne Hudgell
Northeast Archaeology Research Center
382 Fairbanks Road
Farmington, Maine 04938
207-850-4032
hudgell@nearchaeology.com

Gabriel Hrynick
UNB, Anthropology
PO Box 4400
Fredericton, NB Canada E3B 5A3
506-458-7405
Gabriel.hrynick@unb.ca

Dr. Chris Clement
SEARCH, Inc.
2 Dayton Drive
Hanover, NH 03755
803-360-0035
Chris.clement@searchinc.com

Dr. Arthur Spiess, Ex officio
Me Historic Preservation Commission
55 Capitol Street
65 State House Station
Augusta, Maine 04333
207-287-2789
arthur.spiess@maine.gov
(Not available for contract work)

LEVEL 1 (Phase I and reconnaissance survey only)
LEVEL 1

Dr. Christopher Donta (413-256-0202)
SWCA Environmental Consultants
15 Research Drive
Amherst, MA 01002
Christopher.donta@swca.com

James A Clark (207-930-0543)
PO 815
Belfast, Maine 04915
clark.ja@gmail.com

Ora Elquist
Public Archaeology Laboratory
26 Main Street
Pawtucket, RI 02860
401-728-8780
oelquist@palinc.com

Ms. Sarah Haugh (207-879-9496 x238)
Tetra Tech
451 Presumpscot St
Portland ME 04103
sarah.haugh@tetratech.com

Mark Penney (518-432-9545)
The Louis Berger Group Inc.
20 Corporate Woods Blvd.
Albany, NY 12211-2370
mpenney@louisberger.com

Mr. Jacob Tumelaire
Independent Archaeological Consulting
801 Islington St. Suite 31
Portsmouth, NH 03801
jtumelaire@iac-llc.net

Mary Lynne Rainey
RGA Cultural Resource Consultants
1376 Kingstown Road
Wakefield, RI 02789
marylynne.rainey@verizon.net

Inactive, Retired, No longer doing fieldwork, no longer at address given

Mr Brian Valimont (603-560-8720)
New England Archaeology Co LLC
128R Main St.
Plaistow, NH 03865
Newarch1@comcast.net

Ms Edna Feighner (603-228-8091)
5 Thomas Street, Apt 3.
Concord NH 03301
Edna.Feighner@dcr.nh.gov

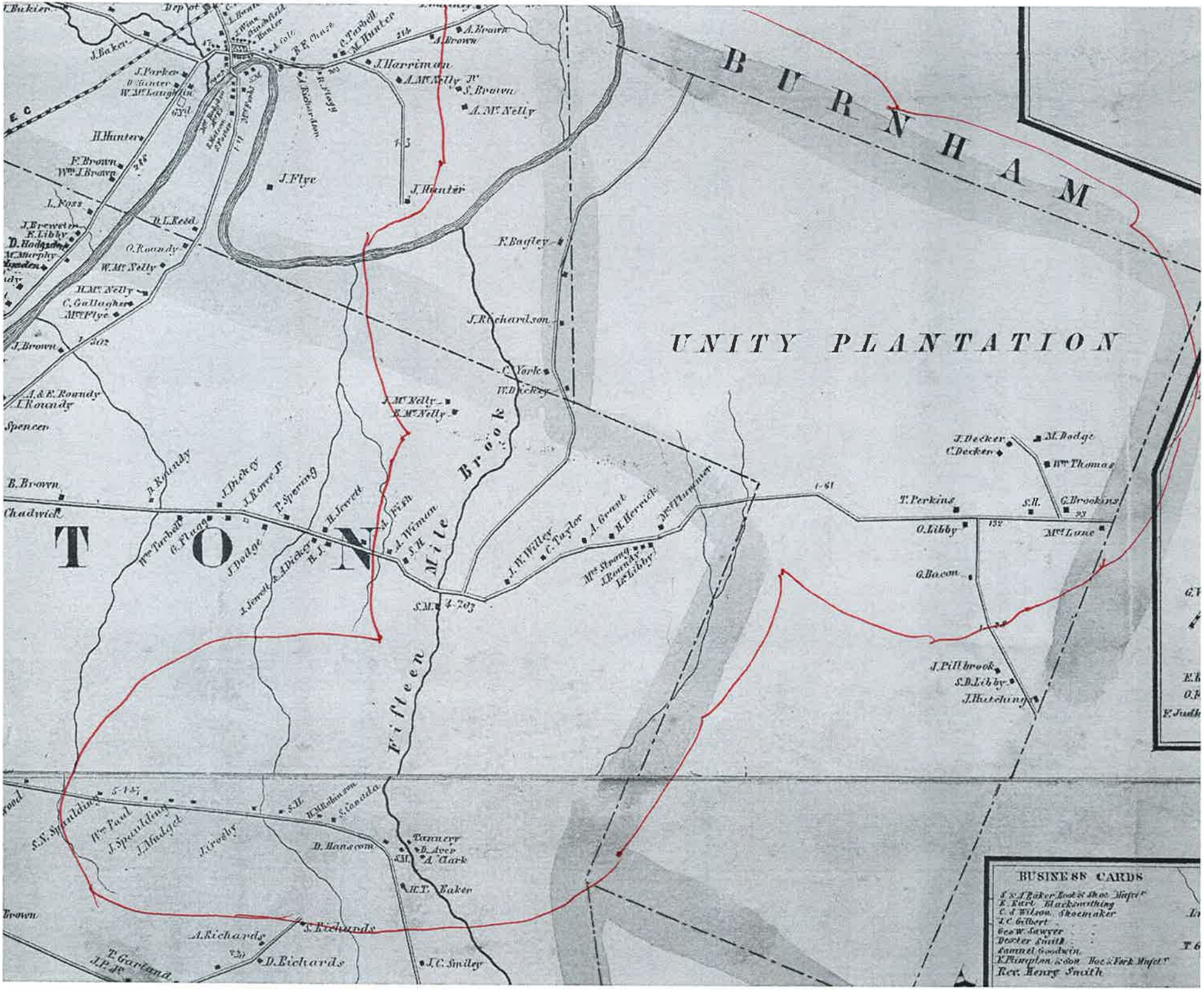
Dr Bruce J Bourque (207-287-3909)
Maine State Museum
83 State House Station
Augusta ME 04333-0083
bbourque@abacus.bates.edu

Edward Moore
TRC/Northeast Cultural Resources
71 Oak St
Ellsworth ME 04605
FAX: 207-667-0485

Geraldine Baldwin (914-271-0897)
4 Dickson Ln
Bedford Corners NY 10549
GeraldineBaldwin@aol.com

Dr Ellen Cowie (207-860-4032)
Northeast Archaeology Research Center
382 Fairbanks Rd
Farmington ME 04938
cowie@nearchaeology.com

1861


BURNHAM
UNITY PLANTATION
TON
Fifteen Mile Brook
J. Harriman
A. McNelly
S. Brown
A. McNelly
J. Flye
J. Hunter
F. Bagley
J. Richardson
C. York
W. Dickey
J. McNelly
E. McNelly
J. Decker
C. Decker
M. Dodge
Wm Thomas
T. Perkins
S.H.
G. Brookins
O. Libby
Mrs Lane
G. Bacon
J. Pillbrook
S.D. Libby
J. Hutchings
J. Parker
W. McLaughlin
H. Hunter
F. Brown
Wm J. Brown
L. Foss
J. Brewster
E. Libby
D. Hodgsdon
O. Roundy
W. McNelly
H. McNelly
C. Gallagher
Mrs Flye
J. Brown
A. & E. Roundy
J. Roundy
Spencer
B. Brown
Chadwick
D. Roundy
J. Dickey
J. Rowe Jr
P. Spering
H. Jewett
Wm Turbell
G. Flagg
J. Dodge
J. Jewett
A. Dickey
H. J.
A. Fish
A. Wiman
S.H.
J. W. Willey
C. Taylor
A. Grant
H. Herrick
Mrs Strong
J. Roundy
Lt Libby
S.M. 4-203
S.N. Spaulding
Wm Paul
J. Spaulding
J. Mudget
J. Crosby
S.H.
H. M. Robinson
S. Canada
D. Hanscom
Tannery
D. Ayer
A. Clark
H.T. Baker
S. Richards
A. Richards
D. Richards
J.C. Smiley
T. Garland
J.P. Jr
Brown
BUSINESS CARDS
S. & J. Baker Boot & Shoe Mnfctr
E. Earl Blacksmithing
C. J. Wilson Shoemaker
J.C. Gilbert
Geo W. Sawyer
Dexter Smith
Samuel Goodwin
E. Plimpton & Son Hoe & Fork Mnfctr
Rev. Henry Smith

PENOBSCOT NATION
CULTURAL & HISTORIC PRESERVATION
12 WABANAKI WAY, INDIAN ISLAND, ME 04468

CHRIS SOCKALEXIS – TRIBAL HISTORIC PRESERVATION OFFICER
E-MAIL: chris.sockalexis@penobscotnation.org

NAME	Steve Knapp
ADDRESS	Kleinschmidt Associates 141 Main Street PO Box 650 Pittsfield, ME 04967
OWNER'S NAME	Longroad Energy
TELEPHONE	(207) 487-3328
EMAIL	steve.knapp@kleinschmidtgroup.com
PROJECT NAME	Three-Corners Solar Project – Solar Array & Transmission Line
PROJECT SITE	Unity Township-Benton, ME
DATE OF REQUEST	November 20, 2018
DATE REVIEWED	December 7, 2018

Thank you for the opportunity to comment on the above referenced project. This project appears to have no impact on a structure or site of historic, architectural or archaeological significance to the Penobscot Nation as defined by the National Historic Preservation Act of 1966, as amended.

If Native American cultural materials are encountered during the course of the project, please contact my office at (207) 817-7471. Thank you for consulting with the Penobscot Nation Tribal Historic Preservation Office with this project.

Chris Sockalexis, THPO
Penobscot Nation

From: Sue Young
To: Steve Knapp
Subject: Three Corners Solar Project
Date: Wednesday, November 21, 2018 9:32:09 AM
Attachments: image001.jpg

Mr. Knapp,

We do not have an immediate concern with your project or project site, and do not currently have the resources to fully investigate same. Should any human remains, archaelogical properties or other items of historical importance be unearthed while working on this project, we recommend that you stop your project and report your findings to the appropriate authorities including the Houlton Band of Maliseet Indians.

Please submit all future requests/permit applications to my attention via fax or email to the number or email address below. Thank you.

<><><><><><><><><><><>

Susan Young

Tribal Historic Preservation Officer
Natural Resources Director
Houlton Band of Maliseet Indians
88 Bell Road
Littleton, ME 04730
207-532-4273 ext. 202
fax 207-532-6883

ogs1@maliseets.com
www.maliseets.com

Tribal Historic Preservation Office
Mi'kmaq Nation (Formerly known as the Aroostook Band of Micmac)
Kendyl Reis
Tribal Historic Preservation Officer
7 Northern Road
Presque Isle, ME 04769
Phone: (207)764-1972 ext. 161
Fax: (207)764-7667
Email: kreis@micmac-nsn.gov

Three Corners Solar LLC Project

Unity Township, Benton, and Clinton, Maine
January 5th, 2022

Thank you for the opportunity to review the above-referenced project for compliance with National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA), or other, requirements.

Based on the project description, we do not have knowledge of any specific sites or cultural features that exist at the proposed project location. However, this geographic area does constitute traditional areas that were historically utilized by members of the Mi'kmaq Nation and the other Wabanaki Tribes. Therefore, we respectfully request that if during the course of excavation/construction activities, human remains, artifacts, or any other evidence of Native American presence is discovered, that site activities in the vicinity of the discovery immediately cease, pending notification to us.

In addition, if this project results in wetland disturbances requiring mitigation, we are requesting that you utilize the black ash (Fraginus nigra) as the principal wetland species for wetland restoration activities. The black ash tree has special significance in the culture of the northeastern Tribes and is used extensively for weaving baskets and other Native American crafts. The black ash tree also provides valuable food and habitat for migratory waterfowl and other wildlife. Unfortunately, however, this species has been selected against by foresters and landowners who favor other tree species. As a result of this, and other environmental factors, the black ash tree is in serious decline in Maine. The Mi'kmaq Nation has completed several black ash wetland restoration projects and have a dependable source for highly-quality seedlings, and the experience and expertise to assist you with black ash wetland restoration projects.

On the subject of human remains, artifacts, or any other evidence of Native American presence is discovered. The human remains will be reburied with the appropriate respect for the remains that is required at a distinctive and respectable site. The artifacts and other evidence of Native American discovery will be documented with appropriate detail. The items will be analyzed for the precise period of the items' distinctive period and will be documented by the Tribal Historic Preservation Officer for the Mi'kmaq Nation.

If you have any questions or comments, please feel free to contact me.

Sincerely,

Kendyl Reis
Tribal Historic Preservation Officer

Tribal Historic Preservation Office

Passamaquoddy Tribe
PO Box 159 Princeton, Me. 04668
207-214-4051

January 14, 2022

Stantec
30 Park Drive
Topsham ME 04086-1737

Re: Unity, Benton & Clinton _ three corner Solar Project

Dear Eben;

The Passamaquoddy THPO has reviewed the following applications regarding the historic properties and significant religious and cultural properties in accordance with NHPA, NEPA, AIRFA, NAGPRA, ARPA, Executive Order 13007 Indian Sacred Sites, Executive Order 13175 Consultation and Coordination with Indian Tribal Governments, and Executive Order 12898 Environmental Justice.

The Projects listed above will not have any impact on cultural and historical concerns of the Passamaquoddy Tribe, but if any archeological material is found please contact this office.

Sincerely;

Donald Soctomah
Soctomah@gmail.com
THPO
Passamaquoddy Tribe

Exhibit A

Evidence of Good Standing

MAINE
Department of the Secretary of State
Bureau of Corporations, Elections and Commissions

Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Wed Jan 05 2022 11:02:05. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
THREE CORNERS SOLAR, LLC	20180849FC	LIMITED LIABILITY COMPANY (FOREIGN)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
04/10/2018	N/A	DELAWARE

Other Names	(A=Assumed ; F=Former)
NONE	

Clerk/Registered Agent

CORPORATION SERVICE COMPANY
45 MEMORIAL CIRCLE
AUGUSTA, ME 04330

Exhibit B

Title, Right, or Interest

Three Corners Solar Project
MDEP Natural Resources Protection Act Permit Application
EXHIBIT B. TITLE, RIGHT, OR INTEREST

The Applicant has Lease Agreements for portions of the parcels in Benton, Clinton, and Unity Twp that are associated with the proposed solar arrays, Collector, and O&M and collection substation. The Applicant has Lease, License, Purchase, or Easement Agreements with the landowners of the parcels in Benton that are associated with the proposed Genlead. Three Corners Land Holdings, LLC (Three Corners LH) and Three Corners Solar, LLC are both subsidiaries of Longroad Energy Holdings, LLC, and have purchased portions of lands on Lots 28, 28-2, and 42.1 (Tax Map 4) in Benton. The Applicant or Three Corners LHs interest in Project parcels is summarized in Table 1 below. Exhibit B-1 includes the supporting documents for the referenced agreements. Exhibit B-2 includes documentation describing the legal relationship between Three Corners Solar Land Holdings, LLC, and the Applicant.

Table 2. Title, Right, or Interest records

Current Owner	Location	Tax Map/Plan and Lot	Three Corners Solar Interest
Bessey Development Company	Unity Twp.	Plan 01, Lots 7, 8, 9, 10, 11, 12, 14, 17, 18, 19, 20, 22, and 23	Option to Lease
	Clinton	Map 04, Lots 49 and 51	Option to Lease
	Benton	Map 08, Lot 10	Option to Lease
		Map 4, Lot 52 Map 8, Lots 23, 24	Option to Lease
Russel & Darcie Thompson	Benton	Map 08, Lot 14	Option to Lease (array), Option to Purchase Easement (Genlead)
Gerald Thompson	Benton	Map 08, Lot 11	Option to Purchase Easement
Three Corners Land Holdings, LLC (fka Henry Martin, Jr. & Patricia Martin, Julia Martin Estate)	Benton	Map 04, Lots 28 and 28-2	Fee (owned by affiliate of Applicant)
Russell & Lisa Violette	Benton	Map 04, Lot 30.2	Option to Purchase Easement
William Robinson	Benton	Map 04, Lot 30.1	Option to Purchase Easement
Three Corners Solar, LLC (fka Timothy & Emily Ryan)	Benton	Map 04, Lot 42.1	Fee
David Bagley	Benton	Map 04, Lot 3-1	Option to Purchase
Randall Richards	Benton	Map 04, Lot 4	Option to Purchase
Joel Littlefield & Jennifer King	Benton	Map 03, Lot 82	Option to Purchase Easement
Virginia Richards Living Trust	Benton	Map 03, Lot 81	Option to Purchase Easement
Dustin Wright (fka Jan Alexander)	Benton	Map 03, Lot 55	Option to Purchase Easement
Central Maine Power Company	Benton	Map 03, Lots 11, 49	License Agreement
Ben & Ami Newell	Benton	Map 03, Lot 50	Option to Purchase Easement

Exhibit B-1

Title, Right, or Interest Documentation

BK12861 PGS 325 - 329 03/20/2018 08:17:17 AM
INSTR#: 2018005206 ATTEST: BEVERLY BUSTIN-HATHEWAY
RECEIVED KENNEBEC SS REGISTER OF DEEDS
eRecorded Document

MEMORANDUM OF LEASE OPTION AGREEMENT

1.	Optionor:	**BESSEY DEVELOPMENT COMPANY** PO Box 96 Hinckley, ME 04944
2.	Optionee:	**LSH LAND HOLDINGS, LLC**, its successors or assigns 133 Federal Street, Suite 1202 Boston, MA 02110
3.	Effective Date of Option:	March 15, 2018
4.	Description of Option Premises:	SEE SCHEDULE A
5.	Term of Option:	Forty-eight (48) months from Effective Date, to March 15, 2022.

15th IN WITNESS WHEREOF, the undersigned have executed this Memorandum as of this day of March, 2018.

WITNESS:

Christine Lewis

Bessey Development Company

By: _____

Name: Ethan Bessey

Title: President

STATE OF MAINE
COUNTY OF Somerset

Then personally appeared the above-named Ethan Bessey, as President of Bessey Development Company, and acknowledged the foregoing instrument to be his/her free act and deed in said capacity and the free act and deed of said Bessey Development Company.

Christine Lewis
Notary Public
My Commission Expires: _____

CHRISTINE LEWIS
Notary Public-Maine
My Commission Expires
May 22, 2024

SCHEDULE A

Option Premises

Certain parcels of land in Unity Township and the Town of Albion, Kennebec County, and the Town of Unity, Waldo County, Maine, generally depicted on the attached Site Plan and shown as the following Tax Lots:

Unity Township, Kennebec County, Maine:

- Tax Map/Lot 01-07
- Tax Map/Lot 01-08
- Tax Map/Lot 01-09
- Tax Map/Lot 01-10
- Tax Map/Lot 01-20
- Tax Map/Lot 01-21
- Tax Map/Lot 01-22
- Tax Map/Lot 01-23
- Tax Map/Lot 01-33
- Tax Map/Lot 01-55
- Tax Map/Lot 01-56
- Tax Map/Lot 01-57

Town of Albion, Kennebec County, Maine:

- Tax Map/Lot 15-01
- Tax Map/Lot 15-35

Town of Unity, Waldo County, Maine:

- Tax Map/Lot 04-01

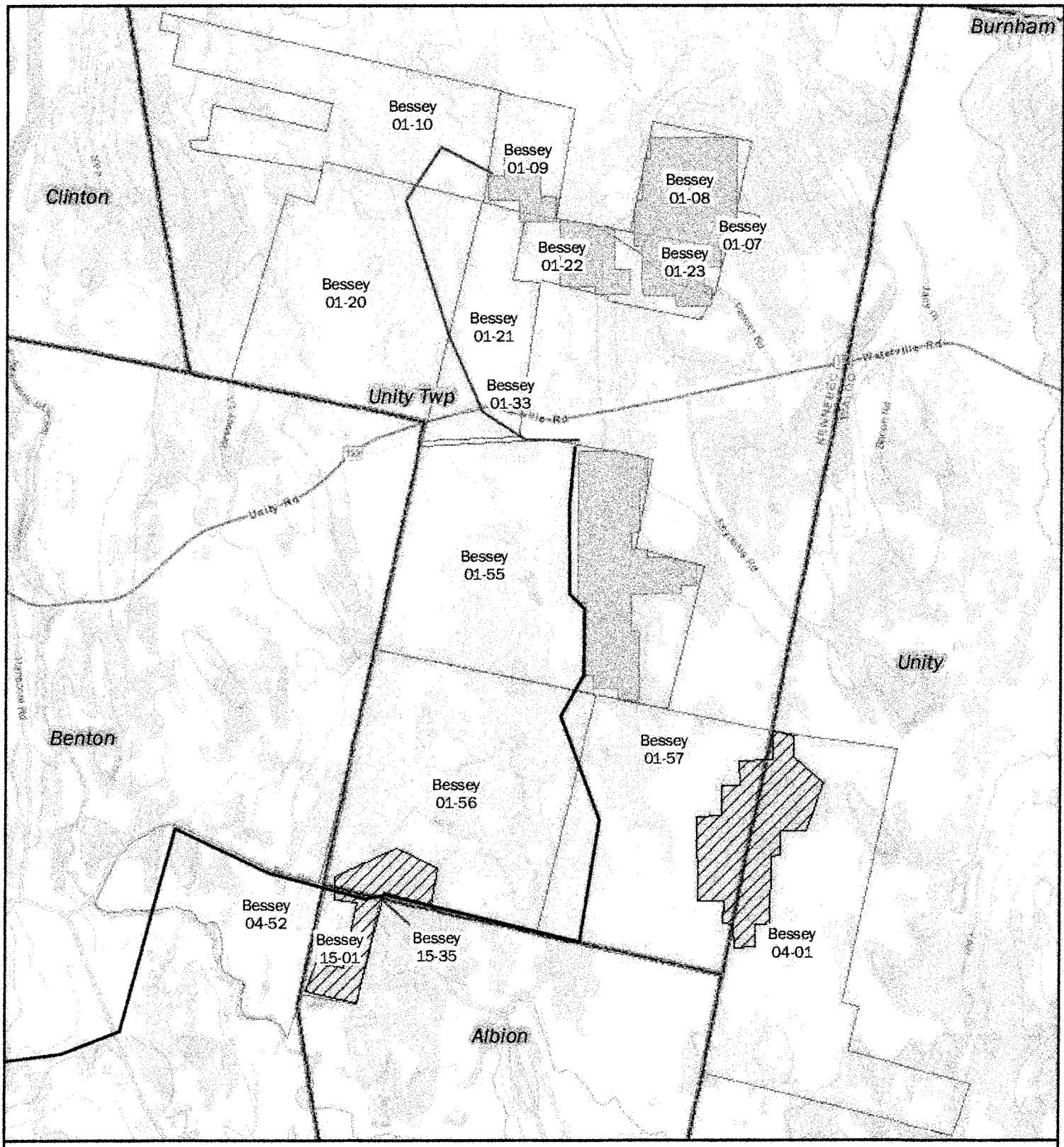
Reference is made to the following recorded instruments:

Grantor	Book	Page	Date
State of Maine	Kenn. 936	430	8/24/1953
Diamond Int'l	Waldo 715	1189	6/5/1974
	Kenn. 1744	18	6/5/1974
Dead River Co.	Kenn.1230	27	
Ruben Dodge	Kenn. 1249	413	12/27/1961
Maynard Cooley	Kenn. 1262	352	4/28/1962
C. Plummer	Kenn. 1279	378	

Ervin Martin	Kenn. 1289	134	
Lottie McNally	Kenn. 1315	271	8/28/1963
Merle Mosher	Kenn. 1382	87	6/18/1965
Herbert York	Kenn. 1365	52	12/29/1964
Leroy Richardson	Kenn. 1431	551	11/14/1966
Gerald Spencer	Kenn. 1439	635	
Arthur Steeves	Kenn. 1445	893	6/26/1967
Eliz. Snow	Kenn. 1455	890	11/1/1967
James Shores	Kenn. 1464	126	3/28/1968
Roy French	Kenn. 1466	284	5/1/1968
Winter Scientific Institutions	Kenn 1644	294	5/24/1973
Leroy Young	Kenn. 1790	219	1/16/1975
George Tibbetts	Kenn. 2061	236	11/18/1977
Richard Trott	Kenn. 853	313	
John Eaton	Kenn. 3073	116	
Clyde Youing	Kenn. 3122	147	
Judgment	Waldo 3925	333	

EXHIBIT

Plan of Premises



Three Corners Solar

Site Plan

- 115 kv Gen Lead
- 34.5 kv Collector
- Occupied Property - 452 ac
- Contingency Property - 256 acres
- Township Boundaries

BK12887 PGS 103 - 104 04/20/2018 08:11:39 AM
INSTR#: 2018007367 ATTEST: BEVERLY BUSTIN-HATHEWAY
RECEIVED KENNEBEC SS REGISTER OF DEEDS
eRecorded Document

ASSIGNMENT AND ASSUMPTION OF LEASE OPTION AGREEMENT

THIS ASSIGNMENT AND ASSUMPTION OF LEASE OPTION AGREEMENT is made effective as of April 18, 2018 (the "Effective Date"), by **LSH LAND HOLDINGS, LLC**, a Delaware limited liability company having a mailing address of c/o Longroad Development Company, LLC, 133 Federal Street, Suite 1202, Boston, MA 02110 ("Assignor"), and **THREE CORNERS SOLAR, LLC**, a Delaware limited liability company having a mailing address of c/o Longroad Development Company, LLC, 133 Federal Street, Suite 1202, Boston, MA 02110 ("Assignee").

WHEREAS, Bessey Development Company (as Landowner/Optionor) and Assignor (as Developer/Optionee) are parties to a certain Lease Option Agreement dated March 15, 2018 (the "Lease Option"), relating to certain "Premises" located in Unity Township and the Town of Albion, Kennebec County, and the Town of Unity, Waldo County, Maine, more particularly described in the Lease Option;

WHEREAS, record notice of the Lease Option has been made by Memorandum of Lease Option Agreement recorded at the Kennebec County Registry of Deeds in **Book 12861, Page 325**, and at the Waldo County Registry of Deeds in **Book 4252 Page 32**; and

WHEREAS, Assignor desires to assign its interest in the Lease Option to Assignee;

NOW THEREFORE, as of the Effective Date: (a) Assignor hereby assigns, transfers and conveys all of its right, title and interest in and to the Lease Option to Assignor; and (b) Assignee hereby accepts the assignment of Assignor's right, title and interest in and to the Lease Option, and assumes performance of all of the obligations of the Developer/Optionee under the Lease Option.

WITNESS:

LSH LAND HOLDINGS, LLC

By:
Print Name: PETER KLEE
Title: CFO

WITNESS:

THREE CORNERS SOLAR, LLC

By:
Print Name: PETER KLEE
Title: CFO

COMMONWEALTH OF MASSACHUSETTS
COUNTY OF SUFFOLK

April 18, 2018

Then personally appeared the above-named Peter Keal in his above-stated capacity, and acknowledged the foregoing instrument to be his free act and deed in said capacity and the free act and deed of LSH Land Holdings, LLC.

SEAN M. FLYNN
Notary Public
Commonwealth of Massachusetts
My Commission Expires
October 4, 2024

Sean M. Flynn
Print Name: Sean M. Flynn
Notary Public

COMMONWEALTH OF MASSACHUSETTS
COUNTY OF SUFFOLK

April 18, 2018

Then personally appeared the above-named Peter Keal in his above-stated capacity, and acknowledged the foregoing instrument to be his free act and deed in said capacity and the free act and deed of Three Corners Solar, LLC.

SEAN M. FLYNN
Notary Public
Commonwealth of Massachusetts
My Commission Expires
October 4, 2024

Sean M. Flynn
Print Name: Sean M. Flynn
Notary Public

OPR BK 13184 PGS 55 - 62 04/10/2019 11:39:41 AM
INSTR # 2019006444 # OF PAGES 8
ATTEST: BEVERLY BUSTIN-HATHEWAY
REGISTER OF DEEDS KENNEBEC COUNTY, ME

AMENDMENT TO LEASE OPTION AGREEMENT

THIS AMENDMENT TO LEASE OPTION AGREEMENT (this "Amendment") is made as of the 2 day of April, 2019, by and between **BESSEY DEVELOPMENT COMPANY**, a Maine corporation having a mailing address of P.O. Box 96, Hinckley, Maine 04944 ("Optionor"), and **THREE CORNERS SOLAR, LLC**, a Delaware limited liability company having a mailing address of c/o Longroad Energy, 133 Federal Street, Suite 1202, Boston, MA 02110 ("Developer").

WHEREAS, Optionor and LSH Land Holdings, LLC ("Original Developer") entered into a certain option agreement (the "Lease Option Agreement") dated March 15, 2018, a memorandum of which was recorded at the Kennebec County Registry of Deeds in Book 12861, Page 325 and at the Waldo County Registry of Deeds in Book 4252 Page 32 (the "Memorandum");

WHEREAS, the Lease Option Agreement and Memorandum are affected by an Assignment and Assumption of Lease Option Agreement dated as of April 18, 2018 and recorded at the Kennebec County Registry of Deeds in Book 12887, Page 103 and at the Waldo County Registry of Deeds in Book 4259 Page 225, pursuant to which Original Developer assigned its interest in the Lease Option Agreement to Developer;

WHEREAS, the Lease Option Agreement and Memorandum relate to certain real property located in Unity Township, Kennebec County, the Town of Albion, Kennebec County, and the Town of Unity, Waldo County, Maine, all as more particularly defined and described therein as the "Premises"; and

WHEREAS, the parties wish to amend and modify the real property that is subject to the Lease Option Agreement and described therein and in the Memorandum;

NOW THEREFORE, Optionor and Developer hereby agree as follows:

1. Modified Premises. The "Premises" subject to the Lease Option Agreement, as amended by this Amendment, shall hereafter be the real property in Unity Township and the Towns of Clinton and Benton, Kennebec County, Maine, described on Schedule A attached to this Amendment and generally depicted on the Site Plan attached to this Amendment as Exhibit C. All references in the Lease Option Agreement to "Exhibit C"

Bernstein Shur

shall hereafter be to the Site Plan attached to this Amendment as Exhibit C. All parcels of land of Landowner, previously included within the defined "Premises" under the Lease Option Agreement by reference to tax lots, but which are not described by reference to the tax lots listed on Schedule A attached to this Amendment and generally depicted on the Site Plan attached to this Amendment as Exhibit C, are hereby released from the Lease Option Agreement.

2. Ratification. The Lease Option Agreement, as amended by this Amendment, remains in full force and effect, and is hereby ratified and affirmed by Optionor and Developer. This Amendment shall be recorded at the Kennebec and Waldo County Registries of Deeds, and, upon such recording, shall serve to amend and modify, but not replace, the above referenced Memorandum.

3. Counterparts. This Amendment may be signed in multiple counterparts on separate signature pages which when assembled shall comprise a single instrument.

[Intentional end of page. Signatures and acknowledgments follow on next pages.]

WITNESS:

BESSEY DEVELOPMENT COMPANY

By _____
Ethan Bessey
President

STATE OF Maine
COUNTY OF Somerset

03/29, 2019

Then personally appeared the above-named Ethan Bessey, President of Bessey Development Company, and acknowledged the foregoing instrument to be his free act and deed in said capacity and the free act and deed of said corporation.

Before me,

CHRISTINE LEWIS
Notary Public-Maine
My Commission Expires
May 22, 2024

Christine Lewis

Print Name: _____
Notary Public/Attorney at Law
My commission expires:

WITNESS:

THREE CORNERS SOLAR, LLC

By:_____
Print Name: Michael U. Alvarez
Title: Chief Operating Officer

STATE OF _____
COUNTY OF _____

_____, 2019

Then personally appeared the above-named _____ in his/her above-stated capacity, and acknowledged the foregoing instrument to be his/her free act and deed in said capacity and the free act and deed of Three Corners Solar, LLC.

Before me,

_____
Print Name:_____
Notary Public

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of San Francisco)

On April 2, 2019 before me, Lis Q. Ungareti - Notary Public
(insert name and title of the officer)

personally appeared Michael V. Alvarez,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she~~/~~they~~ executed the same in his/~~her/their~~ authorized capacity(ies), and that by his/~~her~~/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Lis Ungareti (Seal)

LIS Q. UNGARETI
Notary Public - California
San Francisco County
Commission # 2250087
My Comm. Expires Jul 15, 2022

SCHEDULE A

Option Premises

Certain parcels of land in Unity Township, Kennebec County, Maine, and the Towns of Benton and Clinton, Kennebec County, generally depicted on the Site Plan attached hereto as Exhibit C as the following tax lots:

Unity Township, Kennebec County, Maine:

- Tax Map/Lot 01-07
- Tax Map/Lot 01-08
- Tax Map/Lot 01-09
- Tax Map/Lot 01-10
- Tax Map/Lot 01-11
- Tax Map/Lot 01-12
- Tax Map/Lot 01-14
- Tax Map/Lot 01-17
- Tax Map/Lot 01-18
- Tax Map/Lot 01-19
- Tax Map/Lot 01-20
- Tax Map/Lot 01-22
- Tax Map/Lot 01-23

Town of Benton, Kennebec County, Maine:

- Tax Map/Lot 8-10
- Tax Map/Lot 8-23
- Tax Map/Lot 4-52

Town of Clinton, Kennebec County, Maine:

- Tax Map/Lot 4-49
- Tax Map/Lot 4-51

For Landowner's source of title to the above-referenced tax lots, reference is hereby made to the instruments listed on the spreadsheet attached hereto as Schedule B.

SCHEDULE B

REFERENCE IS MADE TO THE FOLLOWING RECORDED INSTRUMENTS:

Grantor	County	Book	Page	Date
State of Maine	Kennebec	936	430	8/24/1953
Diamond International Corporation	Waldo Kennebec	715 1744	1189 18	6/5/1974 6/5/1974
Dead River Company	Kennebec	1230	27	6/26/1961
Ruben Dodge	Kennebec	1249	413	12/27/1961
Maynard W. Cooley	Kennebec	1262	352	4/28/1962
C. Plummer	Kennebec	1279	378	
Ervin Martin	Kennebec	1289	134	
Lottie W. McNally	Kennebec	1315	271	8/28/1963
Merle Mosher	Kennebec	1382	87	6/18/1965
Herbert L. York	Kennebec	1365	52	12/29/1964
Leroy Richardson	Kennebec	1431	551	11/14/1966
Gerald Spencer	Kennebec	1439	635	
Arthur Steeves	Kennebec	1445	893	6/26/1967
Elizabeth C. Snow	Kennebec	1455	890	11/1/1967
James Shores, et al.	Kennebec	1464	126	3/28/1968
Roy French	Kennebec	1466	284	5/1/1968
Winter Scientific Institutions	Kennebec	1644	294	5/24/1973
Leroy Young	Kennebec	1790	219	1/16/1975
George W. Tibbetts et al	Kennebec	2061	236	11/18/1977
Richard Trott	Kennebec	853	313	
John C. Eaton III	Kennebec	3073	116	11/18/1986
Clyde Young, et al	Kennebec	3122	147	3/24/1987
Judgment	Kennebec	3925	333	5/16/1991

EXHIBIT C

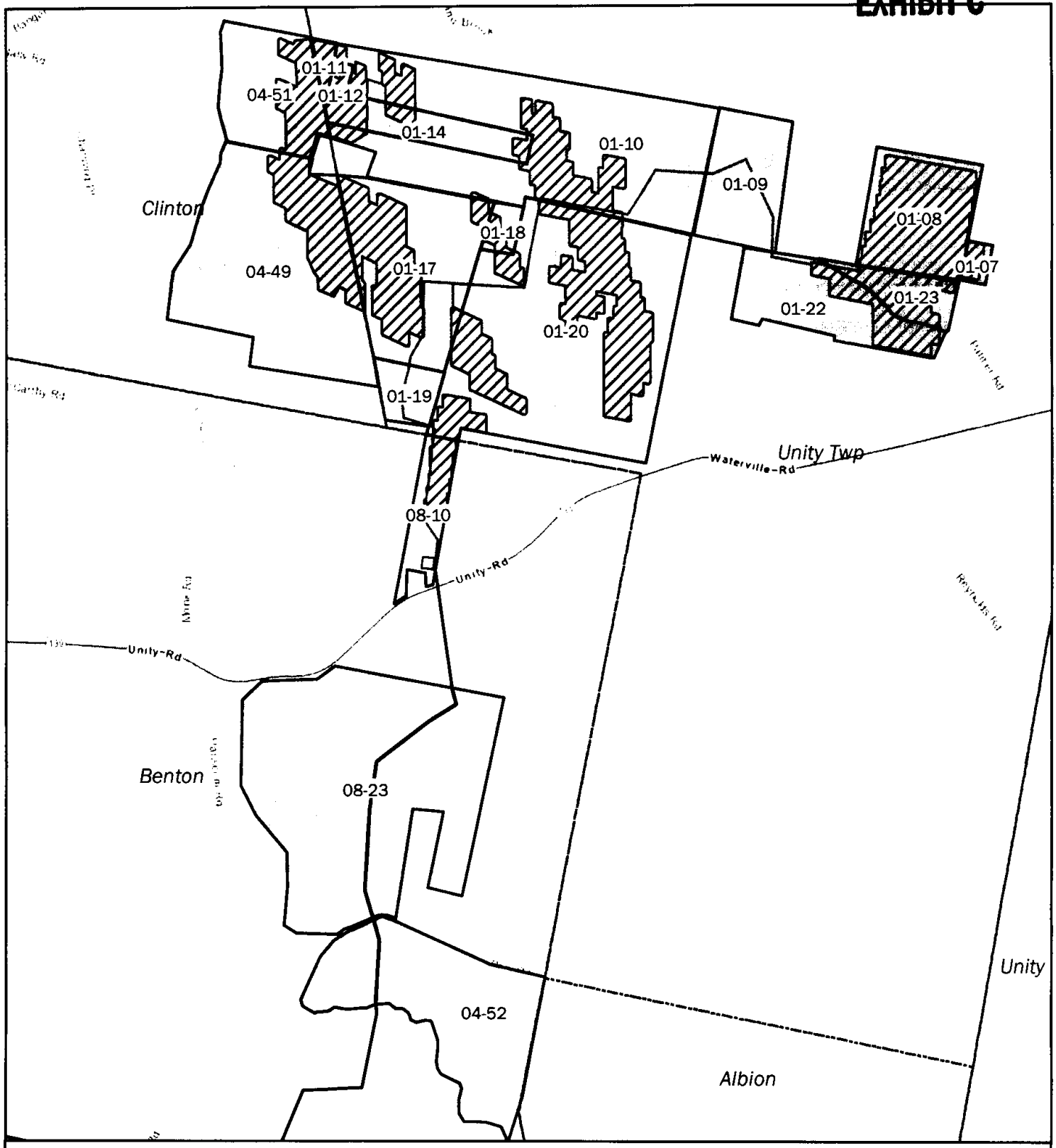


Exhibit C

- 34.5 Collector
- 115kV Gen Lead Centerline
- Project Substation & O&M
- Maine Townships
- Occupied Property - 730 acres
- Premises

Date - 3/29/2019
Creator - tmulcahy

Miles 0 0.

longroad ENERGY

BK14324 PGS 333 - 338 01/19/2022 09:20:00 AM
INSTR#: 2022001378 ATTEST: DIANE WILSON
RECEIVED KENNEBEC SS ACTING REGISTER OF DEEDS
eRecorded Document

After recording return to:
Three Corners Solar, LLC
Attn: Vanessa Kwong
735 Montgomery Street, Suite 480
San Francisco, CA 94111

AMENDMENT TO MEMORANDUM OF LEASE OPTION AGREEMENT

This AMENDMENT TO MEMORANDUM OF LEASE OPTION AGREEMENT (this "Memorandum") is entered into as of the 11 day of January, 2022 by and between Bessey Development Company ("Owner") and Three Corners Solar, LLC, a Delaware limited liability company, a Delaware limited liability company (as assignee of LSH Land Holdings, LLC pursuant to that certain Assignment and Assumption Agreement of Lease Option Agreement dated as of April 18, 2018 and recorded at the Kennebec Registry of Deeds in Book 12887, Page 103 and at the Waldo County Registry of Deeds in Book 4259, Page 225) ("Optionee"). Owner and Optionee are sometimes referred to herein individually as a "Party" and collectively as the "Parties."

RECITALS

A. Owner and Optionee previously entered into an Option to Lease dated March 15, 2018, a Memorandum of which was recorded at the Kennebec County Registry of Deeds in Book 12861, Page 325 and at the Waldo County Registry of Deeds in Book 4252, Page 32, as amended by that certain Amendment to Lease Option Agreement dated as of April 2, 2019, recorded at the Kennebec County Registry of Deeds in Book 13184, Page 55, and further amended by that certain Amendment to Letter Agreement dated as of December 23, 2020 (collectively, the "Agreement") providing Developer with an exclusive option to lease certain real property situated in the County of Kennebec, State of Maine, more particularly described on Schedule A attached hereto and made a part hereof (the "Premises"), on the terms and conditions set forth in the Agreement.

B. The Parties have amended the Agreement pursuant to a Third Amendment to Option to Lease dated as of January 11, 2022 (the "Amendment") to amend certain terms of the Agreement as further described below, among other terms. The Parties desire to execute this Memorandum to put the public on notice of certain terms of the Amendment.

NOW, THEREFORE, in consideration of the mutual promises set forth in the Agreement and the Amendment, and of other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. **Amendments.**

The Amendment extends Optionee's right to extend the Option Term by an additional twelve (12) months, to expire on March 15, 2023.

2. **Miscellaneous.**

i. Interpretation. Nothing contained in this Memorandum or the Amendment shall be construed as modifying the Agreement except as specifically provided pursuant to the Amendment. Capitalized terms used but not otherwise defined in the Amendment shall have the same meanings assigned to them in the Agreement. The purpose of this Memorandum is to give public notice of the existence of the Amendment. In the event of any inconsistency between this Memorandum and the terms and conditions of the Amendment, the Amendment shall prevail.

ii. Counterparts. This Memorandum may be executed in multiple counterparts, all of which shall be considered one and the same agreement and each of which shall be deemed an original.

[*Signature pages follow*]

IN WITNESS WHEREOF, the parties have executed this Memorandum to be effective as of the date first set forth above.

OWNER:

BESSEY DEVELOPMENT COMPANY,

A Maine corporation

By: _____

Name: Ethan Bessey
Title: President

STATE OF Maine §

COUNTY OF Somerset §

I, the undersigned Notary Public, hereby certify that Ethan Bessey, whose name is signed to the foregoing conveyance, and who is known to me or proved to me on the basis of satisfactory evidence, acknowledged before me on this day that, being informed of the contents of the conveyance, he/she executed the same voluntarily on the same date the same bears date.

Given under my hand this 11 day of Jan, 2022.

[seal of Notary]

Christine Lewis

Notary Public

[*Signature pages continue*]

CHRISTINE LEWIS
Notary Public-Maine
My Commission Expires
May 22, 2024

OPTIONEE:

THREE CORNERS SOLAR, LLC,

a Delaware limited liability company

By:_____

Name: Michael U. Alvarez
Title: Chief Operating Officer

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of San Francisco

On JANUARY 14, 2022, before me, Jocelyn Koo, Notary Public, personally appeared Michael U. Alvarez, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JOCELYN KOO
Commission No. 2302816
NOTARY PUBLIC-CALIFORNIA
ALAMEDA COUNTY
My Comm. Expires SEPTEMBER 19, 2023

Signature_____ (Seal)

SCHEDULE A

Option Premises

Certain parcels of land in Unity Township, Kennebec County, Maine, and the Towns of Benton and Clinton, Kennebec County

Unity Township, Kennebec County, Maine:

- Tax Map/Lot 01-07
- Tax Map/Lot 01-08
- Tax Map/Lot 01-09
- Tax Map/Lot 01-10
- Tax Map/Lot 01-11
- Tax Map/Lot 01-12
- Tax Map/Lot 01-14
- Tax Map/Lot 01-17
- Tax Map/Lot 01-18
- Tax Map/Lot 01-19
- Tax Map/Lot 01-20
- Tax Map/Lot 01-22
- Tax Map/Lot 01-23

Town of Benton, Kennebec County, Maine:

- Tax Map/Lot 8-10
- Tax Map/Lot 8-23
- Tax Map/Lot 4-52

Town of Clinton, Kennebec County, Maine:

- Tax Map/Lot 4-49
- Tax Map/Lot 4-51

For Landowner's source of title to the above-referenced tax lots, reference is hereby made to the instruments listed on the spreadsheet attached hereto as Schedule B.

SCHEDULE B

REFERENCE IS MADE TO THE FOLLOWING RECORDED INSTRUMENTS:

Grantor	County	Book	Page	Date
State of Maine	Kennebec	936	430	8/24/1953
Diamond International Corporation	Waldo Kennebec	715 1744	1189 18	6/5/1974 6/5/1974
Dead River Company	Kennebec	1230	27	6/26/1961
Ruben Dodge	Kennebec	1249	413	12/27/1961
Maynard W. Cooley	Kennebec	1262	352	4/28/1962
C. Plummer	Kennebec	1279	378	
Ervin Martin	Kennebec	1289	134	
Lottie W. McNally	Kennebec	1315	271	8/28/1963
Merle Mosher	Kennebec	1382	87	6/18/1965
Herbert L. York	Kennebec	1365	52	12/29/1964
Leroy Richardson	Kennebec	1431	551	11/14/1966
Gerald Spencer	Kennebec	1439	635	
Arthur Steeves	Kennebec	1445	893	6/26/1967
Elizabeth C. Snow	Kennebec	1455	890	11/1/1967
James Shores, et al.	Kennebec	1464	126	3/28/1968
Roy French	Kennebec	1466	284	5/1/1968
Winter Scientific Institutions	Kennebec	1644	294	5/24/1973
Leroy Young	Kennebec	1790	219	1/16/1975
George W. Tibbetts et al	Kennebec	2061	236	11/18/1977
Richard Trott	Kennebec	853	313	
John C. Eaton III	Kennebec	3073	116	11/18/1986
Clyde Young, et al	Kennebec	3122	147	3/24/1987
Judgment	Kennebec	3925	333	5/16/1991

After recording return to:
Three Corners Solar, LLC
Attn: Vanessa Kwong
735 Montgomery Street, Suite 480
San Francisco, CA 94111

AMENDMENT TO MEMORANDUM OF LEASE OPTION AGREEMENT

This AMENDMENT TO MEMORANDUM OF LEASE OPTION AGREEMENT (this "Memorandum") is entered into as of the 26 day of January, 2022 by and between Bessey Development Company ("Owner") and Three Corners Solar, LLC, a Delaware limited liability company, a Delaware limited liability company (as assignee of LSH Land Holdings, LLC pursuant to that certain Assignment and Assumption Agreement of Lease Option Agreement dated as of April 18, 2018 and recorded at the Kennebec Registry of Deeds in Book 12887, Page 103 and at the Waldo County Registry of Deeds in Book 4259, Page 225) ("Optionee"). Owner and Optionee are sometimes referred to herein individually as a "Party" and collectively as the "Parties."

RECITALS

A. Owner and Optionee previously entered into an Option to Lease dated March 15, 2018, a Memorandum of which was recorded at the Kennebec County Registry of Deeds in Book 12861, Page 325 and at the Waldo County Registry of Deeds in Book 4252, Page 32, as amended by that certain Amendment to Lease Option Agreement dated as of April 2, 2019, recorded at the Kennebec County Registry of Deeds in Book 13184, Page 55, further amended by that certain Amendment to Letter Agreement dated as of December 23, 2020 and further amended by that certain Third Amendment to Option to Lease dated as of January 11, 2022, a Memorandum of which was recorded at the Kennebec County Registry of Deeds on January 19, 2022 in Book 14324, Page 333 and at the Waldo County Registry of Deeds on January 18, 2022 in Book 4757, Page 340 (collectively, the "Agreement") providing Optionee with an exclusive option to lease certain real property situated in the County of Kennebec, State of Maine, more particularly described on Schedule A attached hereto and made a part hereof (the "Premises"), on the terms and conditions set forth in the Agreement.

B. The Parties have amended the Agreement pursuant to a Fourth Amendment to Option to Lease dated as of January 26, 2022 (the "Amendment") to amend certain terms of the Agreement as further described below, among other terms. The Parties desire to execute this Memorandum to put the public on notice of certain terms of the Amendment.

NOW, THEREFORE, in consideration of the mutual promises set forth in the Agreement and the Amendment, and of other good and valuable consideration, the receipt and sufficiency of

which is hereby acknowledged, the Parties agree as follows:

1. **Amendments.**

   The Amendment amends the Option Premises in Schedule A, which is deleted in its entirety and replaced with Schedule A attached hereto .

2. **Miscellaneous.**

i. Interpretation. Nothing contained in this Memorandum or the Amendment shall be construed as modifying the Agreement except as specifically provided pursuant to the Amendment. Capitalized terms used but not otherwise defined in the Amendment shall have the same meanings assigned to them in the Agreement. The purpose of this Memorandum is to give public notice of the existence of the Amendment. In the event of any inconsistency between this Memorandum and the terms and conditions of the Amendment, the Amendment shall prevail.

ii. Counterparts. This Memorandum may be executed in multiple counterparts, all of which shall be considered one and the same agreement and each of which shall be deemed an original.

[*Signature pages follow*]

IN WITNESS WHEREOF, the parties have executed this Memorandum to be effective as of the date first set forth above.

OWNER:

BESSEY DEVELOPMENT COMPANY,

A Maine corporation

By: _____

Name: Ethan Bessey
Title: President

STATE OF Maine §

COUNTY OF Somerset §

I, the undersigned Notary Public, hereby certify that Ethan Bessey, whose name is signed to the foregoing conveyance, and who is known to me or proved to me on the basis of satisfactory evidence, acknowledged before me on this day that, being informed of the contents of the conveyance, he/she executed the same voluntarily on the same date the same bears date.

Given under my hand this 28 day of January 2022.

[seal of Notary]

Christine Lewis

Notary Public

[*Signature pages continue*]

OPTIONEE:

THREE CORNERS SOLAR, LLC,

a Delaware limited liability company

By:_____

Name: Charles Spiliotis
Title: Chief Investment Officer

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of San Francisco

On January 27, 2022, before me, Jocelyn Koo, Notary Public, personally appeared Charles Spiliotis, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JOCELYN KOO
Commission No. 2302816
NOTARY PUBLIC-CALIFORNIA
ALAMEDA COUNTY
My Comm. Expires SEPTEMBER 19, 2023

Signature_____ (Seal)

SCHEDULE A

Option Premises

Certain parcels of land in Unity Township, Kennebec County, Maine, and the Towns of Benton and Clinton, Kennebec County, Maine.

Unity Township, Kennebec County, Maine:

- Tax Map/Lot 01-07
- Tax Map/Lot 01-08
- Tax Map/Lot 01-09
- Tax Map/Lot 01-10
- Tax Map/Lot 01-11
- Tax Map/Lot 01-12
- Tax Map/Lot 01-14
- Tax Map/Lot 01-17
- Tax Map/Lot 01-18
- Tax Map/Lot 01-19
- Tax Map/Lot 01-20
- Tax Map/Lot 01-22
- Tax Map/Lot 01-23

Town of Benton, Kennebec County, Maine:

- Tax Map/Lot 08-10
- Tax Map/Lot 08-23
- Tax Map/Lot 08-24
- Tax Map/Lot 04-52

Town of Clinton, Kennebec County, Maine:

- Tax Map/Lot 04-49
- Tax Map/Lot 04-51

For Landowner's source of title to the above-referenced tax lots, reference is hereby made to the instruments listed on the spreadsheet attached hereto as Schedule B.

SCHEDULE B

REFERENCE IS MADE TO THE FOLLOWING RECORDED INSTRUMENTS:

Grantor	County	Book	Page	Date
State of Maine	Kennebec	936	430	8/24/1953
Diamond International Corporation	Waldo Kennebec	715 1744	1189 18	6/5/1974 6/5/1974
Dead River Company	Kennebec	1230	27	6/26/1961
Ruben Dodge	Kennebec	1249	413	12/27/1961
Maynard W. Cooley	Kennebec	1262	352	4/28/1962
C. Plummer	Kennebec	1279	378	
Ervin Martin	Kennebec	1289	134	
Lottie W. McNally	Kennebec	1315	271	8/28/1963
Merle Mosher	Kennebec	1382	87	6/18/1965
Herbert L. York	Kennebec	1365	52	12/29/1964
Leroy Richardson	Kennebec	1431	551	11/14/1966
Gerald Spencer	Kennebec	1439	635	
Arthur Steeves	Kennebec	1445	893	6/26/1967
Elizabeth C. Snow	Kennebec	1455	890	11/1/1967
James Shores, et al.	Kennebec	1464	126	3/28/1968
Roy French	Kennebec	1466	284	5/1/1968
Winter Scientific Institutions	Kennebec	1644	294	5/24/1973
Leroy Young	Kennebec	1790	219	1/16/1975
George W. Tibbetts et al	Kennebec	2061	236	11/18/1977
Richard Trott	Kennebec	853	313	
John C. Eaton III	Kennebec	3073	116	11/18/1986
Clyde Young, et al	Kennebec	3122	147	3/24/1987
Judgment	Kennebec	3925	333	5/16/1991

BK13778 PGS 53 - 57 11/06/2020 11:44:50 AM
INSTR#: 2020028736 ATTEST: BEVERLY BUSTIN-HATHEWAY
RECEIVED KENNEBEC SS REGISTER OF DEEDS
eRecorded Document

RECORDING REQUESTED BY
AND WHEN RECORDED RETURN TO:

Three Corners Solar, LLC
c/o Longroad Development Company, LLC
735 Montgomery Street, Suite 480
San Francisco, CA 94111

County of Kennebec
Tax Parcel ID No(s): Town of Benton , Map 8, Lot14 ; .

MEMORANDUM OF OPTION TO LEASE

By this Memorandum of Option to Lease (this "Memorandum"), Russell N. Thompson & Darcie Thompson ("Owner"), a married couple, evidences that it has entered into an Option to Lease Agreement dated June 25, 2020 (the "Agreement") with Three Corners Solar, LLC, a Delaware limited liability company ("Optionee") granting the Optionee an exclusive option to lease and an easement over those certain real properties situated in the County of Kennebec, State of Maine, more particularly described on Exhibit 'A' attached hereto and made a part hereof (the "Properties"), on the terms and conditions set forth in the Agreement.

The term of the option commenced on June 25, 2020 and shall expire, unless earlier terminated, on 12:01 on June 25, 2022, with an option to extend for an additional one year period until June 25, 2023 (the "Expiration Date"). Unless this Memorandum has been terminated prior to the Expiration Date by the recordation of a Release of Option in the Official Records of the County of Kennebec, State of Maine, signed by Optionee and specifically referencing this Memorandum, this Memorandum shall automatically cease to impart constructive notice of the Agreement from and after the Expiration Date.

The parties have executed and recorded this instrument for the purpose of imparting notice to all third parties of the Agreement.

This Memorandum and the Agreement shall bind and inure to the benefit of the parties and their respective heirs, successors and assigns.

This Memorandum and the Agreement are governed by Maine law.

This Memorandum may be executed in counterparts, all of which together shall constitute one instrument.

RT

The addresses of Owner and Optionee for purposes of notice are:

Optionee:	Owner:
Three Corners Solar, LLC	Russell N. & Darcie Thompson
330 Congress St., 6th Floor	1140 Unity Road
Boston, MA 02210	Benton, ME. 04901
contracts@longroadenergy.com	

IN WITNESS WHEREOF, Owner and Optionee have executed this Memorandum as of the dates of the notary acknowledgements below.

OWNER

Russell Thompson

By: Darcie Thompson

Russell Thompson

Darcie Thompson

STATE OF MAINE §
§
COUNTY OF Kennebec §

I, the undersigned Notary Public, hereby certify that Russell Thompson & Darcie Thompson, whose name is signed to the foregoing conveyance, and who is known to me or proved to me on the basis of satisfactory evidence, acknowledged before me on this day that, being informed of the contents of the conveyance, he/she executed the same voluntarily on the day the same bears date.

Given under my hand this 19th day of June, 2020.

Neil R. Postlewaite

(Seal)

Neil R. Postlewaite
Notary Public

My Commission Expires: _____

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

RT

OPTIONEE

Three Corners Solar, LLC

By: _____
Michael U. Alvarez
Chief Operating Officer

STATE OF MAINE §
§
COUNTY OF _____ §

I, the undersigned Notary Public, hereby certify that Michael U. Alvarez, as Chief Operating Officer of Three Corners Solar, LLC, a Delaware limited liability company, whose name is signed to the foregoing conveyance, and who is known to me, acknowledged before me on this day that, being informed of the contents of the conveyance on behalf of said entity, that he executed the same voluntarily on the day the same bears date.

Given under my hand this _____ day of _____, 2020

(Seal)

See Attached CA Notarial Language for Public Notary:
Kyle Eisenberg
Commission # 2238120
_____
Notary Public
My Commission Expires: _____

RT

GOLDEN GATE NOTARY & APOSTILLE

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of SAN FRANCISCO)

On 07 / 10 / 2020 before me, Kyle Devin Eisenberg, Notary Public,
Date *Here Insert Name and Title of the Officer*

personally appeared MICHAEL U. ALVAREZ
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

KYLE DEVIN EISENBERG COMM. 2238120 NOTARY PUBLIC CALIFORNIA SAN FRANCISCO COUNTY MY COMM. EXPIRES 05-10-2022

Place Notary Seal Above

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____
Signature of Notary Public

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____
Document Date: _____ Number of Pages: _____
Signer(s) Other Than Named Above: _____

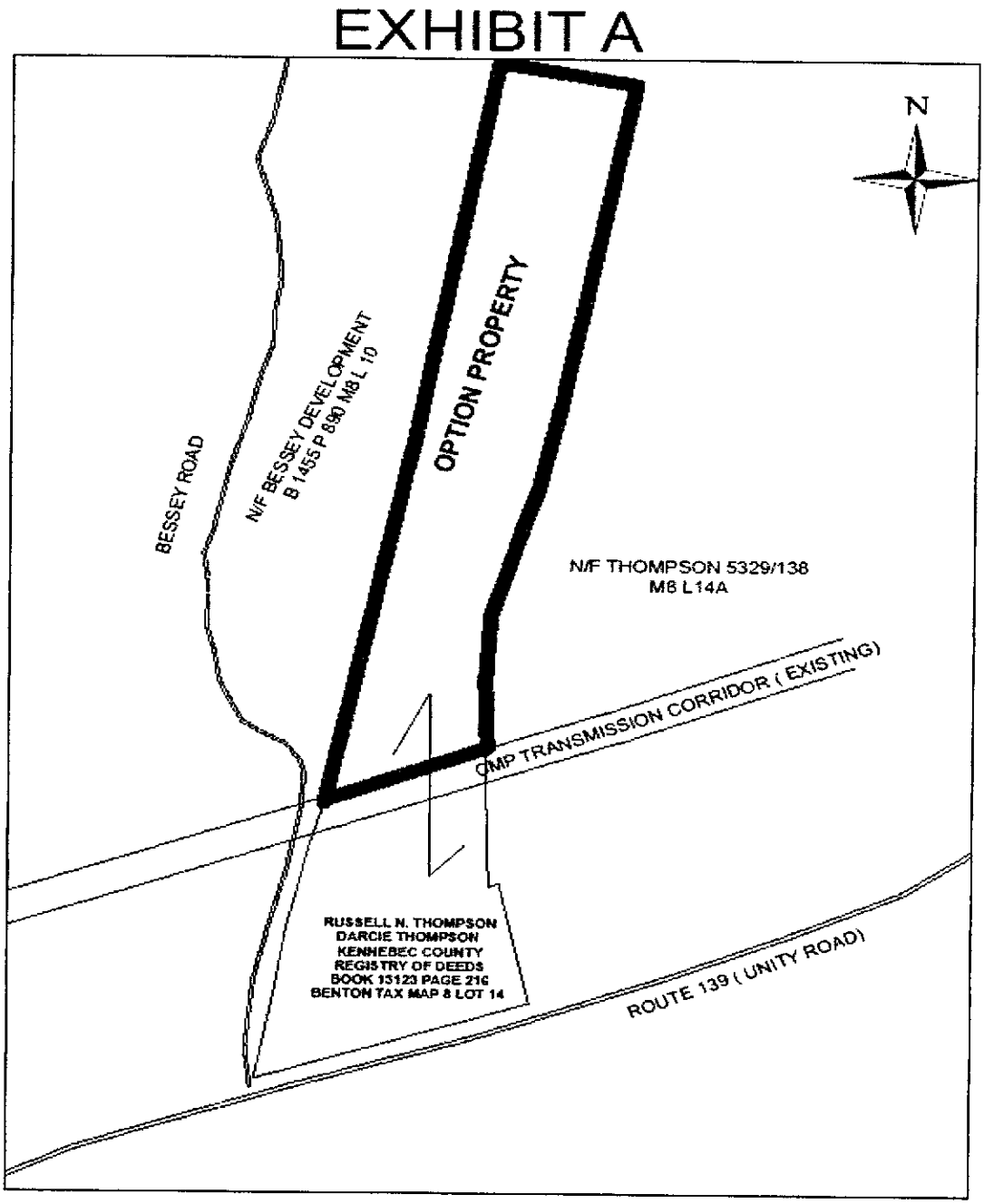
Capacity(ies) Claimed by Signer(s)

Signer's Name: _____	Signer's Name: _____
☐ Corporate Officer — Title(s): _____	☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General	☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator	☐ Trustee ☐ Guardian or Conservator
☐ Other: _____	☐ Other: _____
Signer Is Representing: _____	Signer Is Representing: _____

EXHIBIT 'A'

All that real property situated in Kennebec County, State of Maine, described as follows:

The real property depicted on the Town of Benton Tax Map 8 as Lot14 (comprised of approximately 19 acres) which is further illustrated below as the areas within the bold lines and marked "Option Property":



OPR BK 13139 PGS 162 - 166 01/30/2019 01:37:32 PM
INSTR # 2019001948 # OF PAGES 5
ATTEST: BEVERLY BUSTIN-HATHEWAY
REGISTER OF DEEDS KENNEBEC COUNTY, ME

MEMORANDUM OF OPTION TO PURCHASE EASEMENT

1.	Owner:	**Russell Norman Thompson** 1140 Unity Road Benton, Maine 04901
2.	Grantee:	**THREE CORNERS SOLAR, LLC** its successors or assigns c/o Longroad Development Company 133 Federal Street, Suite 1202 Boston, MA 02110
3.	Effective Date of Option:	9/27/18, 2018
4.	Description of Easement Area:	An approximately 1 acre portion of Owner's land located in the Town of Benton, Kennebec County, Maine, shown as Tax Map 8 Lot 14 of the Tax Maps of the Town of Benton and being more particularly described in the deed to Owner dated May 31, 2001 and recorded at the Kennebec County Registry of Deeds in Book 6517, Page 147, said Easement Area being preliminarily located as shown on the attached Exhibit.
5.	Option Period:	Three (3) years from Effective Date; provided that Grantee shall have the right to extend the Option Period for one (1) additional period of one (1) year.
6.	Counterparts:	This Memorandum may be signed in multiple counterparts on separate signature pages, which when assembled shall comprise a single instrument.

[Intentional end of page. Signatures follow on next page(s).]

RT

(5) Bernstein Shur
Portland

IN WITNESS WHEREOF, the undersigned have executed this Memorandum as of this 27 day of September, 2018.

WITNESS:

Dana Thompson

OWNER:

Russell N Thompson
Russell Norman Thompson

GRANTEE:

THREE CORNERS SOLAR, LLC

By: _____
Name:
Title:

STATE OF MAINE
COUNTY OF Kennebec

Dated: Sept 27, 2018

Then personally appeared the above-named Russell Norman Thompson and acknowledged the foregoing instrument to be his free act and deed.

Neil Postlewaite
Notary Public
My Commission Expires:

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

STATE OF MAINE
COUNTY OF _____

Dated: _____, 2018

Then personally appeared the above-named _____, as _____ of Three Corners Solar, LLC_____, and acknowledged the foregoing instrument to be his/her free act and deed in said capacity and the free act and deed of said limited liability company.

_____
Notary Public
My Commission Expires:_____

IN WITNESS WHEREOF, the undersigned have executed this Memorandum as of this 27 day of September, 2018.

WITNESS:

Dana Thompson

OWNER:

Russell N Thompson
Russell Norman Thompson

GRANTEE:

THREE CORNERS SOLAR, LLC

By: Michael U Alv
Name: MICHAEL U. ALVAREZ
Title: CHIEF OPERATING OFFICER

STATE OF MAINE
COUNTY OF Kennebec

Dated: Sept 27, 2018

Then personally appeared the above-named Russell Norman Thompson and acknowledged the foregoing instrument to be his free act and deed.

Neil Postlewaite
Notary Public
My Commission Expires:

Notary Public, State of Maine
My Commission Expires July 10, 2022

STATE OF MAINE
COUNTY OF _____

Dated: _____, 2018

Then personally appeared the above-named _____, as _____ of Three Corners Solar, LLC _____, and acknowledged the foregoing instrument to be his/her free act and deed in said capacity and the free act and deed of said limited liability company.

_____
Notary Public
My Commission Expires: _____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of San Francisco }

On January 18, 2019 before me, Lis Q. Ungareti - Notary Public,
Date *Here Insert Name and Title of the Officer*

personally appeared Michael U. Alvarez
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(ies), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

LIS Q. UNGARETI
Notary Public - California
San Francisco County
Commission # 2250087
My Comm. Expires Jul 15, 2022

Place Notary Seal and/or Stamp Above

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Lis Ungareti
Signature of Notary Public

OPTIONAL

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: MEMO OF OPTION TO PURCHASE EASEMENT

Document Date: 09/27/18 Number of Pages: 3

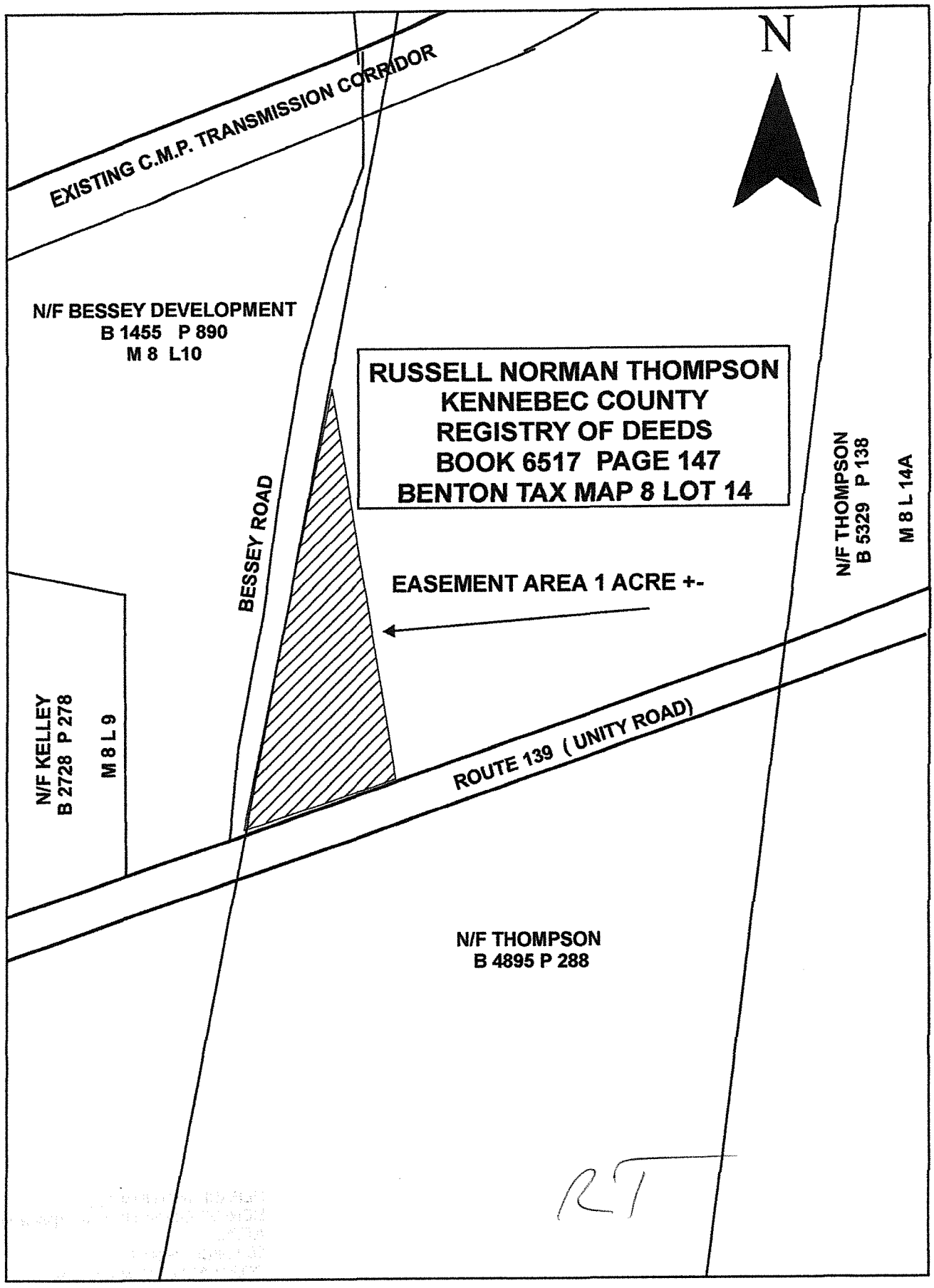
Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____	Signer's Name: _____
☐ Corporate Officer – Title(s): _____	☐ Corporate Officer – Title(s): _____
☐ Partner – ☐ Limited ☐ General	☐ Partner – ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian of Conservator	☐ Trustee ☐ Guardian of Conservator
☐ Other: _____	☐ Other: _____
Signer is Representing: _____	Signer is Representing: _____

©2017 National Notary Association

EXHIBIT


N
EXISTING C.M.P. TRANSMISSION CORRIDOR
N/F BESSEY DEVELOPMENT
B 1455 P 890
M 8 L10
RUSSELL NORMAN THOMPSON
KENNEBEC COUNTY
REGISTRY OF DEEDS
BOOK 6517 PAGE 147
BENTON TAX MAP 8 LOT 14
BESSEY ROAD
EASEMENT AREA 1 ACRE +-
N/F THOMPSON
B 5329 P 138
M 8 L 14A
N/F KELLEY
B 2728 P 278
M 8 L 9
ROUTE 139 (UNITY ROAD)
N/F THOMPSON
B 4895 P 288
RT

OPR BK 13034 PGS 140 - 142 09/25/2018 09:36:19 AM
INSTR # 2018022272 # OF PAGES 3
ATTEST: BEVERLY BUSTIN-HATHEWAY
REGISTER OF DEEDS KENNEBEC COUNTY, ME

MEMORANDUM OF OPTION TO PURCHASE EASEMENT

1. Owner: **Gerald W. Thompson &**
June A. Thompson
40 Sebasticook River Bridge Road
Benton, Maine 04901

2. Grantee: **THREE CORNERS SOLAR, LLC**
its successors or assigns
c/o Longroad Development Company
133 Federal Street, Suite 1202
Boston, MA 02110

3. Effective Date of Option: September 14, 2018

4. Description of Easement Area: An approximately 8 +- acre portion of Owner's land located in the Town of Benton , Kennebec County, Maine, shown as Tax Map 8 Lot11of the Tax Maps of the Town of Benton and being more particularly described in the deed to Owner dated May 19, 1995 and recorded at the Kennebec County Registry of Deeds in Book 4895, Page 288, said Easement Area being preliminarily located as shown on the attached SCHEDULE.

5. Option Period: Three (3) years from Effective Date; provided that Grantee shall have the right to extend the Option Period for one (1) additional period of one (1) year.

IN WITNESS WHEREOF, the undersigned have executed this Memorandum as of this 14th day of September, 2018.

WITNESS: Neil Postlewaite

By: _____
Gerald W. Thompson

WITNESS: Neil Postlewaite

By: _____
June A. Thompson

(3) Neil Postlewaite

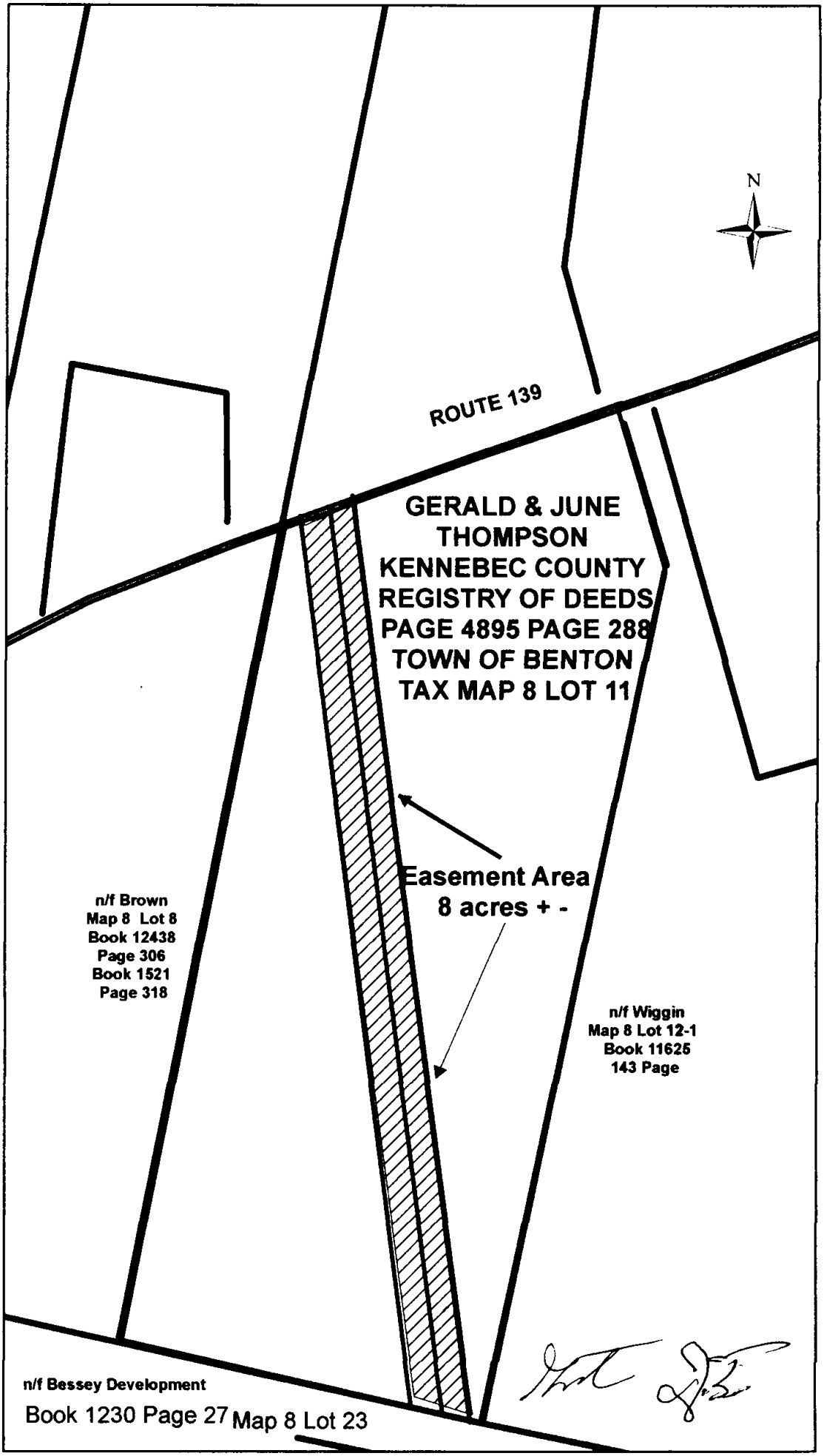
STATE OF MAINE
COUNTY OF Kennebec

Then personally appeared the above-named Gerald W. Thompson and June A. Thompson and acknowledged the foregoing instrument to be their free act and deed.

Neil Postlewaite
Notary Public
My Commission Expires:_____

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

Schedule - Preliminary Depiction of Easement Parcel



Document Path: G:\Longroad Energy\Landowners\Thompson, Gerald and June\SCHEDULE 2\r tHOMPSON.mxd

BK14329 PGS 255 - 260 01/21/2022 02:50:05 PM
INSTR#: 2022001805 ATTEST: DIANE WILSON
RECEIVED KENNEBEC SS ACTING REGISTER OF DEEDS
eRecorded Document

After recording return to:
Three Corners Solar, LLC
Attn: Vanessa Kwong
735 Montgomery Street, Suite 480
San Francisco, CA 94111

AMENDMENT TO MEMORANDUM OF OPTION TO PURCHASE EASEMENT

This AMENDMENT TO MEMORANDUM OF OPTION TO PURCHASE EASEMENT (this "Memorandum") is entered into as of the 14th day of January, 2022 by and between Gerald W. Thompson and June A. Thompson ("Owner") and Three Corners Solar, LLC, a Delaware limited liability company, a Delaware limited liability company ("Optionee"). Owner and Optionee are sometimes referred to herein individually as a "Party" and collectively as the "Parties."

RECITALS

A. Owner and Optionee previously entered into an Option to Purchase Easement dated September 14, 2018, a Memorandum of which was recorded on September 25, 2018 at the Kennebec County Registry of Deeds in Book 13034, Page 140 (the "Agreement") providing Developer with an exclusive option to purchase an easement on certain real property situated in the County of Kennebec, State of Maine, more particularly described on the attached Schedule 2 attached hereto and made a part hereof (the "Premises"), on the terms and conditions set forth in the Agreement.

B. The Parties have amended the Agreement pursuant to an Amendment to Option to Purchase Easement dated as of January 14, 2022 (the "Amendment") to amend certain terms of the Agreement as further described below, among other terms. The Parties desire to execute this Memorandum to put the public on notice of certain terms of the Amendment.

NOW, THEREFORE, in consideration of the mutual promises set forth in the Agreement and the Amendment, and of other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. **Amendments.**

The Amendment amends the Easement Parcel Location in Schedule 2.

2. **Miscellaneous.**

i. Interpretation. Nothing contained in this Memorandum or the Amendment shall be construed as modifying the Agreement except as specifically provided pursuant to the Amendment. Capitalized terms used but not otherwise defined in the Amendment shall have the same meanings assigned to them in the Agreement. The purpose of this Memorandum is to give public notice of the existence of the Amendment. In the event of any inconsistency between this Memorandum and the terms and conditions of the Amendment, the Amendment shall prevail.

ii. Counterparts. This Memorandum may be executed in multiple counterparts, all of which shall be considered one and the same agreement and each of which shall be deemed an original.

[*Signature pages follow*]

IN WITNESS WHEREOF, the parties have executed this Memorandum to be effective as of the date first set forth above.

OWNER:

x By: _____
Gerald W. Thompson

x By: _____
June A. Thompson

STATE OF §

COUNTY OF Kennebec §

I, the undersigned Notary Public, hereby certify that Gerald W. Thompson, whose name is signed to the foregoing conveyance, and who is known to me or proved to me on the basis of satisfactory evidence, acknowledged before me on this day that, being informed of the contents of the conveyance, he/she executed the same voluntarily on the same date the same bears date.

Given under my hand this 14 day of Jan., 2022.

[seal of Notary]

_____
Notary Public

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

STATE OF §

COUNTY OF Kennebec §

I, the undersigned Notary Public, hereby certify that June A. Thompson, whose name is signed to the foregoing conveyance, and who is known to me or proved to me on the basis of satisfactory evidence, acknowledged before me on this day that, being informed of the contents of the conveyance, he/she executed the same voluntarily on the same date the same bears date.

Given under my hand this 14 day of Jan., 2022.

[seal of Notary]

Neil Postlewaite

Notary Public

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

[*Signature pages continue*]

OPTIONEE:

THREE CORNERS SOLAR, LLC,

a Delaware limited liability company

By:_____

Name: Michael U. Alvarez
Title: Chief Operating Officer

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of San Francisco

On JANUARY 14, 2022, before me, Jocelyn Koo, Notary Public, personally appeared Michael U. Alvarez, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

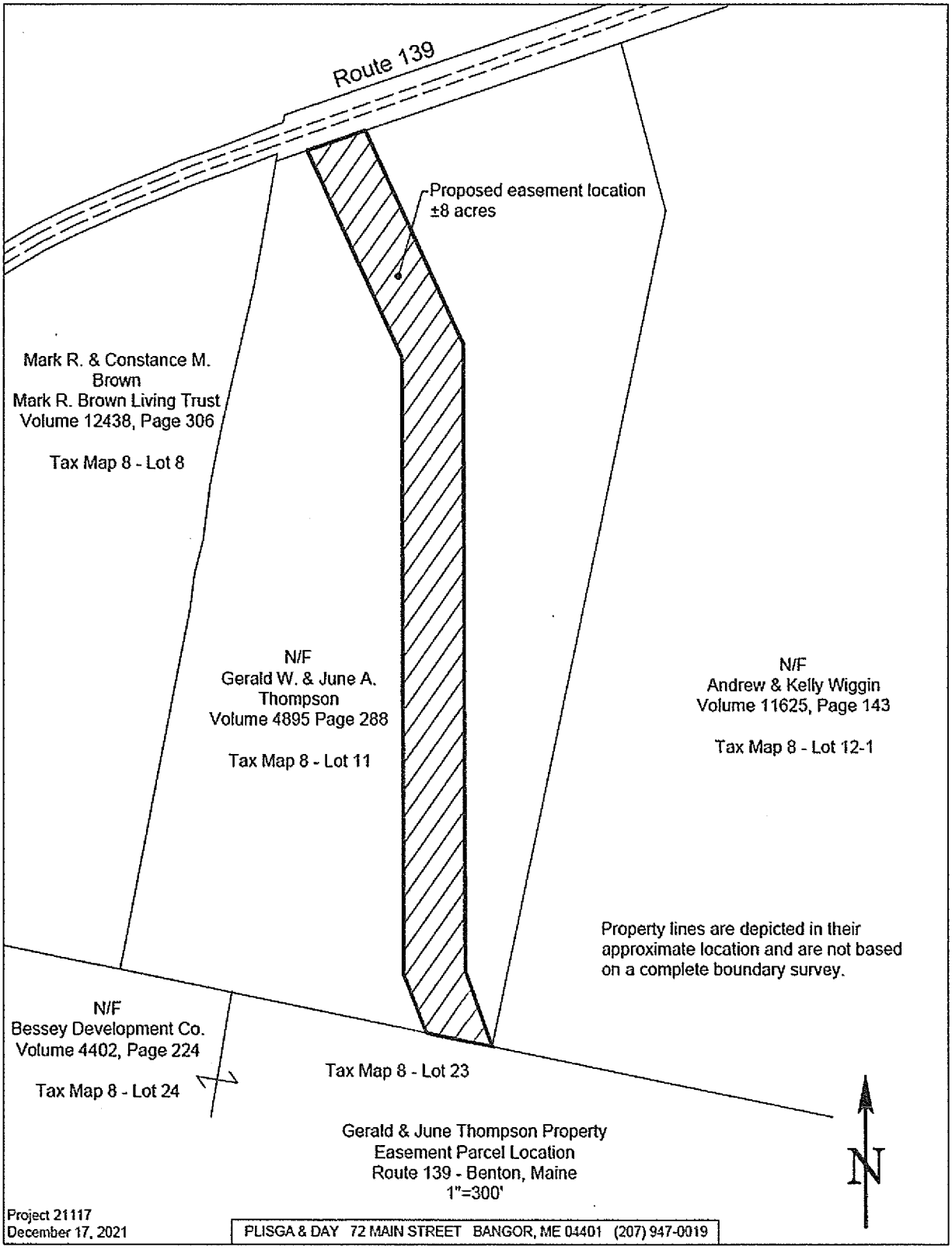
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JOCELYN KOO
Commission No. 2302816
NOTARY PUBLIC-CALIFORNIA
ALAMEDA COUNTY
My Comm. Expires SEPTEMBER 19, 2023

Signature_____ (Seal)

Schedule 2


Route 139
Proposed easement location
±8 acres
Mark R. & Constance M. Brown
Mark R. Brown Living Trust
Volume 12438, Page 306
Tax Map 8 - Lot 8
N/F
Gerald W. & June A. Thompson
Volume 4895 Page 288
Tax Map 8 - Lot 11
N/F
Andrew & Kelly Wiggin
Volume 11625, Page 143
Tax Map 8 - Lot 12-1
Property lines are depicted in their approximate location and are not based on a complete boundary survey.
N/F
Bessey Development Co.
Volume 4402, Page 224
Tax Map 8 - Lot 24
Tax Map 8 - Lot 23
Gerald & June Thompson Property
Easement Parcel Location
Route 139 - Benton, Maine
1"=300'
N
Project 21117
December 17, 2021
PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

This document has been recorded electronically
on 2. 10. 20 at 8:49 am.
Please see the attached copy to view the
Recorder's Stamp as it now appears in the public record.
State: Maine Jurisdiction: Kennebec County
Instrument # 2020002521
Book: 13469 Page: 301
Submitted by Monument Title Company

BK13482 PGS 279 - 281 02/24/2020 01:11:51 PM
INSTR#: 2020003829 ATTEST: BEVERLY BUSTIN-HATHEWAY
RECEIVED KENNEBEC SS REGISTER OF DEEDS
eRecorded Document

DLN: 1002040086766

SHORT FORM DEED OF SALE BY PERSONAL REPRESENTATIVE (TESTATE)
(CORRECTIVE DEED) *

Kathleen M. Humphrey of Benton, Maine, duly appointed and acting **Personal Representative of the Estate of Julia F. Martin**, deceased (testate), as shown by the probate records of Kennebec County, Maine (and having given notice to each person succeeding to an interest in the real property described below at least ten (10) days prior to the sale), by the power conferred by the Probate Code, and every other power, FOR CONSIDERATION PAID, grants to **Three Corners Solar, LLC**, a Delaware limited liability company doing business in Maine, with a mailing address of c/o Longroad Development Company, LLC, 330 Congress Street, 6th Floor, Boston, MA 02210, certain real property, together with any improvements thereon, located in Benton, Kennebec County, Maine and more particularly described on Exhibit A attached hereto and made a part hereof.

WITNESS my hand and seal this 3 day of February, 2020.

WITNESSETH:

JoAnn C Austin
Name:

Kathleen M. Humphrey
Kathleen M. Humphrey
Personal Representative,
Estate of Julia F. Martin

State of Maine
County of Kennebec

February 3, 2020

PERSONALLY APPEARED the above-named Kathleen M. Humphrey, Personal Representative as aforesaid, and acknowledged the foregoing instrument to be her free act and deed in her said capacity.

Before me,

JoAnn C. Austin
Name: JOANN C AUSTIN
Title: Notary Public
My commission expires 10/25/2021

*The purpose of this Corrective Deed is to correct a scrivener's error in the deed recorded in said Registry of Deeds in Book 13469, Page 301.

EXHIBIT A

A certain lot or parcel of land situated easterly of and adjacent to East Benton Road in the Town of Benton, Kennebec County, State of Maine bounded and described as follows:

Beginning at a 5/8" rebar marked PLS 351 set on the easterly sideline of East Benson Road at the northwesterly corner of land now or formerly of Cookson Homestead Trust (KCRD Book 12952, Page 257) said rebar being the Point of Beginning;

Thence, N 22°27'40" W along the said easterly sideline of East Benton Road, a distance of one thousand two hundred sixty-three and 78/100 hundredths (1263.78') feet to a 5/8" rebar marked PLS 2251 found and land now or formerly of Danica J. Martin (KCRD Book 8520, Page 100);

Thence, N 67°30'50" E along the said land of Danica J. Martin, a distance of two hundred fifty-one and 98/100 hundredths (251.98') feet to a 5/8" rebar marked PLS 2251 found and land now or formerly of the Estate of Julia Martin, the herein Grantor;

Thence, S 84°12'48" E along the said land of the herein Grantor, a distance of nine hundred thirty-seven and 75/100 hundredths (937.75') feet to a 5/8" rebar marked PLS 351 set;

Thence, N 14°15'19" E continuing along the said remaining land of the herein Grantor, a distance of one thousand three hundred seventy-seven and 87/100 hundredths (1377.87') feet to a 5/8" rebar marked PLS 351 set;

Thence, N 14°15'19" E continuing along the said remaining land of the herein Grantor, a distance of twenty (20') feet more or less to the southerly shoreline of Fifteen Mile Stream;

Thence, easterly along the said southerly shoreline of Fifteen Mile Stream, a distance of three hundred sixty-one (361') feet more or less to a point and land now or formerly of Richard and Sandra L. Lawrence (KCRD Book 2118, Page 36);

Thence, S 14°15'19" W along the said land of Richard and Sandra L. Lawrence, a distance of three (3') feet more or less to a 5/8" rebar marked PLS 351 found, said rebar lies N 49°40'45" E, a distance of three hundred ten and 55/100 hundredths (310.55') feet from the previously herein described 5/8" rebar;

Thence, S 14°15'19" W continuing along the said land of Richard and Sandra L. Lawrence, a distance of one thousand six hundred four and 13/100 hundredths (1603.13') feet 1/2" rebar marked PLS 1182 found and land now or formerly of Matthew M. and Krista A. Gomola (KCRD Book 12733, Page 167);

Thence, S 11°57'23" W along the said land of Matthew M. and Krista A. Gomola, a distance of one thousand one hundred ninety-six and 29/100 hundredths (1196.29') feet to a 5/8" rebar marked PLS 351 set and said land of Cookson Homestead Trust;

Thence, N 88°14'19" W along the said land of Cookson Homestead Trust, a distance of six hundred sixteen and 48/100 hundredths (616.48') feet to the Point of Beginning.

Said parcel containing 33.89 acres.

All bearings are Grid North.

The above-described premises are shown on a survey entitled "Proposed Conveyances to Three Corners Solar, LLC Site Location: East Benton Road, Benton, Maine" dated January 20, 2020 prepared by Boynton & Pickett L.L.C. Professional Land Surveyor.

Said parcel being a portion and a portion only of the property conveyed by warranty deed from Henry H. Martin, Sr. to Henry H. Martin, Sr. and Julia Martin, as joint tenants, dated September 30, 1981 and recorded in the Kennebec County Registry of Deeds in Book 2425 Page 191. Henry H. Martin, Sr. died on November 28, 2004 leaving Julia Martin as surviving joint tenant. Julia F. Martin died testate on January 2, 2017. Reference is hereby made to a Certificate and Abstract of Probate dated June 18, 2018 recorded at Kennebec County Registry of Deeds in Book 12941, Page 339 appointing Kathleen M. Humphrey as Personal Representative of the Estate of Julia F. Martin.

OPR BK 13754 PGS 102 - 103 10/20/2020 03:26:17 PM
INSTR # 2020027020 # OF PAGES 2
ATTEST: BEVERLY BUSTIN-HATHEWAY
REGISTER OF DEEDS KENNEBEC COUNTY, ME

TRANSFER
TAX
PAID

QUITCLAIM DEED WITH COVENANT

HENRY H. MARTIN, JR. and PATRICIA M. MARTIN (collectively, "Grantors"), a married couple whose mailing address is PO Box 302, Albion, Maine 04910, for consideration paid, grant to **THREE CORNERS LAND HOLDINGS, LLC**, a Delaware limited liability company ("Grantee"), which has a mailing address c/o Longroad Development Company, LLC, 330 Congress Street, 6th Floor, Boston, Massachusetts 02210, WITH QUITCLAIM COVENANT, certain real property in the Town of Benton, County of Kennebec and State of Maine, more particularly described on Exhibit "A" attached hereto and made a part hereof (the "Premises").

IN WITNESS WHEREOF, Grantors have executed this instrument, effective the 20th day of October, 2020.

WITNESSETH:

Neil R Postlewaite
Name:

Henry H. Martin Jr.
Henry H. Martin, Jr.

Neil R Postlewaite
Name:

Patricia M. Martin
Patricia M. Martin

STATE OF MAINE)
COUNTY OF KENNEBEC)

October 20, 2020

PERSONALLY APPEARED the above-named Henry H. Martin, Jr. and Patricia M. Martin and acknowledged the foregoing instrument to be their free act and deed.

Before me,
Neil Postlewaite
Notary Public/Attorney at Law
Printed Name:
My Commission Expires:

(2)

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

Exhibit A

A certain lot or parcel of land situated easterly but not and adjacent to East Benton Road in the Town of Benton, Kennebec County, State of Maine bounded and described as follows:

Beginning at a 5/8" rebar marked PLS 315 found at the southwesterly corner of land of the herein Grantor and the southeasterly corner of land now or formerly of Danica J. Martin (KCRD Book 8520, Page 100) and land of the herein Grantee;

Thence, N 67° 30' 50" E, a distance of one thousand one hundred fifty-seven and 47/100 hundredths (1157.47) feet to a point and said land now or formerly of the herein Grantee;

Thence, S 14° 15' 20" W, along said land of the herein Grantee, a distance of five hundred fifty-four and 30/100 hundredths (554.30') feet to a 5/8" rebar marked PLS 315 found point;

Thence, N 84° 12' 48" W continuing along the said land of the herein Grantee, a distance of nine hundred thirty-seven and 75/100 hundredths (937.75') feet to the Point of Beginning.

Said parcel contains 5.90 acres.

Said parcel being a portion and a portion only of the property conveyed to the herein Grantors by deed of Henry H. Martin, Jr. dated February 8, 2020 and recorded in the Kennebec County Registry of Deeds in Book 13484, Page 46.

All bearings are Grid North.

BK13785 PGS 310 - 313 11/13/2020 09:20:35 AM
INSTR#: 2020029327 ATTEST: BEVERLY BUSTIN-HATHEWAY
RECEIVED KENNEBEC SS REGISTER OF DEEDS
eRecorded Document

NO REAL ESTATE TRANSFER TAX PAID

QUITCLAIM DEED WITH COVENANT

DLN #1002040120327

THREE CORNERS SOLAR, LLC, a Delaware limited liability company ("Grantor"), which has mailing address c/o Longroad Development Company, LLC, 330 Congress Street, 6th Floor, Boston, Massachusetts 02210, for consideration paid, grants to **THREE CORNERS LAND HOLDINGS, LLC**, a Delaware limited liability company ("Grantee"), which has a mailing address c/o Longroad Development Company, LLC, 330 Congress Street, 6th Floor, Boston, Massachusetts 02210, WITH QUITCLAIM COVENANT, certain real property in the Town of Benton, County of Kennebec and State of Maine, more particularly described on Exhibit "A" attached hereto and made a part hereof (the "Premises").

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed by its duly authorized representative, effective the 6th day of November, 2020.

WITNESSETH:

Name: Vanessa Kwong

THREE CORNERS SOLAR, LLC

By: _____
Name: Charles Spiliotis
Title: Chief Investment Officer

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA

COUNTY OF SAN FRANCISCO

On 11/06/2020 before me, KYLE DEVIN EISENBERG Notary Public

personally appeared CHARLES SPINOTIS, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature

NRO1 KYLE DEVIN EISENBERG COMM. #2238120 Notary Public · California San Francisco County My Comm. Expires May 10, 2022 NRO1

Exhibit A

(Three Corners Solar, LLC to Three Corners Land Holdings, LLC)

A certain lot or parcel of land situated easterly of and adjacent to East Benton Road in the Town of Benton, Kennebec County, State of Maine bounded and described as follows:

Beginning at a 5/8" rebar marked PLS 2251 found on the easterly sideline of East Benson Road at the southwesterly corner of land now or formerly of Danica J. Martin (KCRD Book 8520, Page 100) said rebar being the Point of Beginning;

Thence, N 67°30'50" E along the said land of Danica J. Martin, a distance of two hundred fifty-one and 98/100 hundredths (251.98') feet to a 5/8" rebar marked PLS 2251 found and land now or formerly of Henry H. Martin, Jr. and Patricia M. Martin (KCRD Book 13484, Page 44), such rebar marking the southwesterly corner of land conveyed by Henry H. Martin, Jr. and Patricia M. Martin to Three Corners Land Holdings, LLC (KCRD Book 13754, Page 102);

Thence, S 84°12'48" E along the said land of Three Corners Land Holdings, LLC, a distance of nine hundred thirty-seven and 75/100 hundredths (937.75') feet to a 5/8" rebar marked PLS 351 set;

Thence, N 14°15'19" E continuing along the said land of Three Corners Land Holdings, LLC and remaining land of Martin, a distance of one thousand three hundred seventy-seven and 87/100 hundredths (1377.87') feet to a 5/8" rebar marked PLS 351 set;

Thence, N 14°15'19" E continuing along the said land of Martin, a distance of twenty (20') feet more or less to the southerly shoreline of Fifteen Mile Stream;

Thence, easterly along the said southerly shoreline of Fifteen Mile Stream, a distance of three hundred sixty-one (361') feet more or less to a point and land now or formerly of Richard and Sandra L. Lawrence (KCRD Book 2118, Page 36);

Thence, S 14°15'19" W along the said land of Richard and Sandra L. Lawrence, a distance of three (3') feet more or less to a 5/8" rebar marked PLS 351 found, said rebar lies N 49°40'45" E, a distance of three hundred ten and 55/100 hundredths (310.55') feet from the previously herein described 5/8" rebar; land of Cookson Homestead Trust;

Thence, S 14°15'19" W continuing along the said land of Richard and Sandra L. Lawrence, a distance of one thousand six hundred four and 13/100 hundredths (1604.13') feet 1/2" rebar marked PLS 1182 found and land now or formerly of Matthew M. and Krista A. Gomola (KCRD Book 12733, Page 167)

Thence, S 11°57'23" W along the said land of Matthew M. and Krista A. Gomola, a distance of sixty-five and 56/100 hundredths (65.56') feet to a 5/8" rebar marked PLS 351 set;

Thence, S 85°54'32" W, a distance of one thousand two hundred sixty-five and 82/100 hundredths (1265.82') feet to a 5/8" rebar marked PLS 351 set on the said easterly sideline of East Benton Road;

Thence, N 22°27'40" W along the said easterly sideline of East Benton Road, a distance of one hundred eighty-five and 00/100 hundredths (185.00') feet to the Point of Beginning.

Said parcel to contain 11.14 acres.

Said parcel being a portion and a portion only of the property conveyed by Kathleen M. Humphrey, Personal Representative of the Estate of Julia F. Martin, to Three Corners Solar, LLC by deed dated February 3, 2020 and recorded February 10, 2020 in the Kennebec County Registry of Deeds in Book 13469, Page 301.

All bearings are Grid North.

It is the intent of Grantor and Grantee that the above-described premises shall merge with Grantee's abutting land described in a Quitclaim Deed with Covenant from Henry H. Martin, Jr. and Patricia M. Martin to Three Corners Land Holdings, LLC recorded October 20, 2020 in the Kennebec County Registry of Deeds in Book 13754, Page 102 (the "Abutting Land"), such that it constitutes a conveyance to an abutter within the meaning of 30-A M.R.S. Section 4401(4)(D-6). Grantee shall not transfer or convey the above-described premises or the Abutting Land, or any portion thereof, separately from all of the merged land within five (5) years of the date of this deed unless Grantee shall first obtain final subdivision approval from the Town of Benton Planning Board.

OPR BK 13139 PGS 152 - 156 01/30/2019 01:37:30 PM
INSTR # 2019001946 # OF PAGES 5
ATTEST: BEVERLY BUSTIN-HATHEWAY
REGISTER OF DEEDS KENNEBEC COUNTY, ME

MEMORANDUM OF OPTION TO PURCHASE EASEMENT

1.	Owner:	**JAMES A. DENNIS II** 915 Unity Road Benton, Maine 04901
2.	Grantee:	**THREE CORNERS SOLAR, LLC** its successors or assigns c/o Longroad Development Company 133 Federal Street, Suite 1202 Boston, MA 02110
3.	Effective Date of Option:	10/15, 2018
4.	Description of Easement Area:	An approximately 5+/- acre portion of Owner's land located in the Town of Benton, Kennebec County, Maine, shown as Tax Map 4 Lot 30-2 of the Tax Maps of the Town of Benton and being more particularly described in the deed to Owner dated February 23, 2012 and recorded at the Kennebec County Registry of Deeds in Book 11189, Page 92, said Easement Area being preliminarily located as shown on the attached Exhibit B.
5.	Option Period:	Three (3) years from Effective Date; provided that Grantee shall have the right to extend the Option Period for one (1) additional period of one (1) year.
6.	Counterparts:	This Memorandum may be signed in multiple counterparts on separate signature pages, which when assembled shall comprise a single instrument.

[Intentional end of page. Signatures follow on next page(s).]

(5) Bernstein Shur Portland

IN WITNESS WHEREOF, the undersigned have executed this Memorandum as of this 7th day of October, 2018.

WITNESS:

OWNER:

James A. Dennis II

GRANTEE:

THREE CORNERS SOLAR, LLC

By: _____
Name:
Title:

STATE OF MAINE
COUNTY OF Kennebec Dated: Oct 7, 2018

Then personally appeared the above-named James A. Dennis II and acknowledged the foregoing instrument to be his free act and deed.

Notary Public
Micheal K. Laflin
My Commission Expires:

MICHAEL K. LAFLIN
Notary Public, State of Maine
My Commission Expires 9/8/2022

STATE OF MAINE
COUNTY OF _____ Dated: _____, 2018

Then personally appeared the above-named _____, as _____ of Three Corners Solar, LLC_____, and acknowledged the foregoing instrument to be his/her free act and deed in said capacity and the free act and deed of said limited liability company.

_____
Notary Public
My Commission Expires:_____

IN WITNESS WHEREOF, the undersigned have executed this Memorandum as of this 7th day of October, 2018.

WITNESS:

OWNER:

James A. Dennis II

GRANTEE:

THREE CORNERS SOLAR, LLC

By: _____
Name: Michael U. Alvarez
Title: Chief Operating Officer

STATE OF MAINE
COUNTY OF Kennebec

Dated: Oct 7, 2018

Then personally appeared the above-named James A. Dennis II and acknowledged the foregoing instrument to be his free act and deed.

Notary Public
Micheal K. Laflin
My Commission Expires

MICHAEL K. LAFLIN
Notary Public, State of Maine
My Commission Expires 9/8/2022

STATE OF MAINE
COUNTY OF _____

Dated: _____, 2018

Then personally appeared the above-named _____, as _____ of Three Corners Solar, LLC_____, and acknowledged the foregoing instrument to be his/her free act and deed in said capacity and the free act and deed of said limited liability company.

Notary Public
My Commission Expires:_____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of San Francisco }

On January 18, 2019 *Date* before me, Lis Q. Ungareti - Notary Public *Here Insert Name and Title of the Officer*,

personally appeared Michael V. Alvarez *Name(s) of Signer(s)*

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she~~/~~they~~ executed the same in his/~~her~~/~~their~~ authorized capacity(ies), and that by his/~~her~~/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

LIS Q. UNGARETI
Notary Public - California
San Francisco County
Commission # 2250087
My Comm. Expires Jul 15, 2022

Place Notary Seal and/or Stamp Above

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Lis Ungareti *Signature of Notary Public*

OPTIONAL

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: Memo of Option to Purchase Easement

Document Date: 10/15/18 Number of Pages: 3

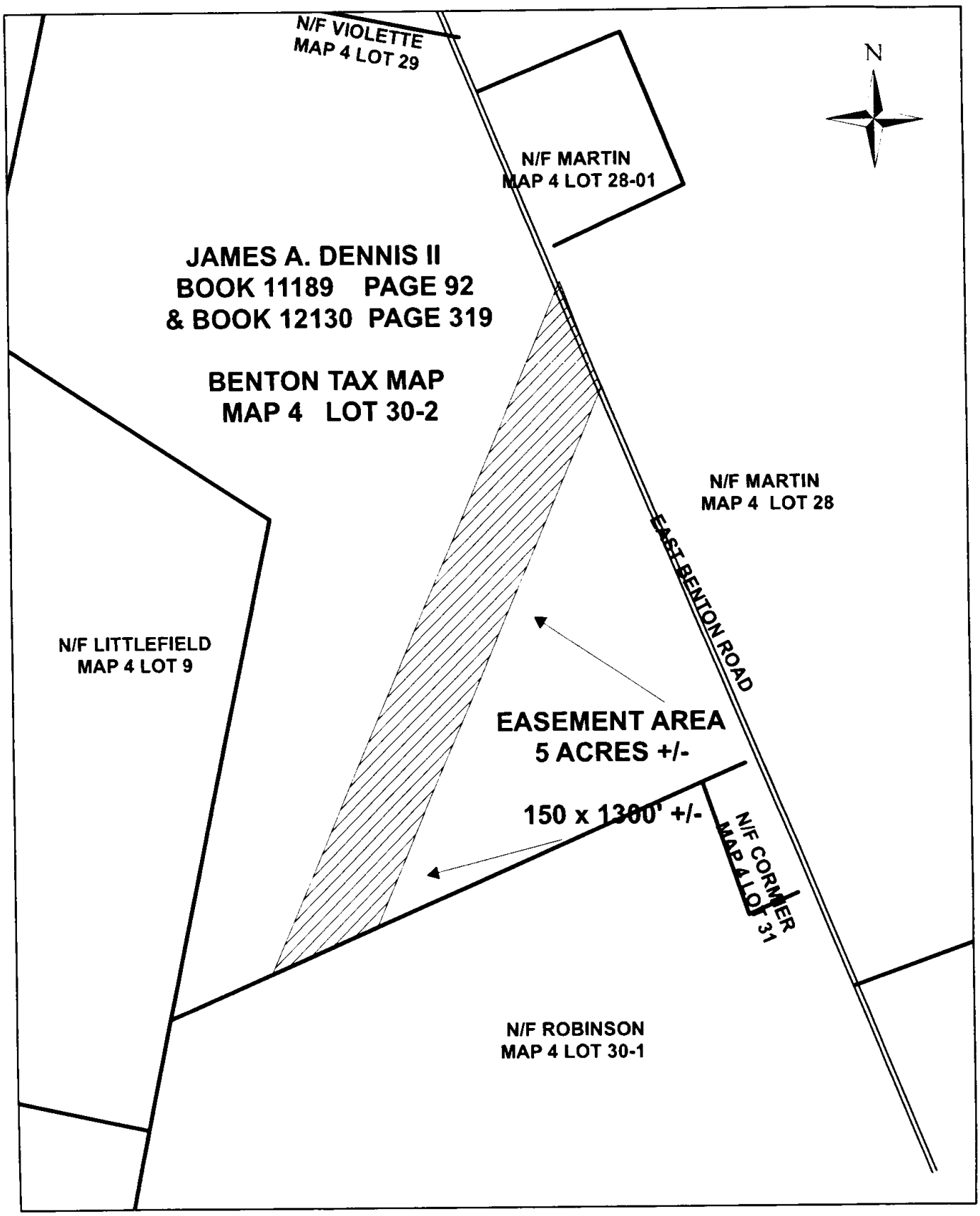
Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____	Signer's Name: _____
☐ Corporate Officer – Title(s): _____	☐ Corporate Officer – Title(s): _____
☐ Partner – ☐ Limited ☐ General	☐ Partner – ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian of Conservator	☐ Trustee ☐ Guardian of Conservator
☐ Other: _____	☐ Other: _____
Signer is Representing: _____	Signer is Representing: _____

©2017 National Notary Association

EXHIBIT B


N/F VIOLETTE
MAP 4 LOT 29
N
N/F MARTIN
MAP 4 LOT 28-01
JAMES A. DENNIS II
BOOK 11189 PAGE 92
& BOOK 12130 PAGE 319
BENTON TAX MAP
MAP 4 LOT 30-2
N/F MARTIN
MAP 4 LOT 28
EAST BENTON ROAD
N/F LITTLEFIELD
MAP 4 LOT 9
EASEMENT AREA
5 ACRES +/-
150 x 1300' +/-
N/F CORNER
MAP 4 LOT 31
N/F ROBINSON
MAP 4 LOT 30-1

MAINE REAL ESTATE TRANSFER TAX PAID

BK14144 PGS 88 - 90 08/24/2021 10:47:16 AM
INSTR#: 2021024498 ATTEST: BEVERLY BUSTIN-HATHEWAY
RECEIVED KENNEBEC SS REGISTER OF DEEDS
eRecorded Document

DLN: 1002140159144

WARRANTY DEED

(Joint Tenancy)

KNOW ALL BY THESE PRESENTS, that **JAMES A. DENNIS, II**, of Benton, County of Kennebec and State of Maine, in consideration of one dollar and other valuable consideration paid by **RUSSELL S. VIOLETTE and LISA M. VIOLETTE**, of Benton, County of Kennebec and State of Maine, the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said Russell S. Violette and Lisa M. Violette, their heirs and assigns forever, **as joint tenants and not as tenants in common,** a certain lot or parcel of land, together with any buildings located thereon, situated in the Town of Benton, County of Kennebec and State of Maine, bounded and described as follows:

Beginning at a #5 capped found on the easterly sideline of East Benton Road in the Town of Benton, Kennebec County, Maine. Said corner being the southeast corner of the now or formerly Russell S. Violette (Bk. 3697 Pg. 285) parcel, shown as Lot 29 on the Town of Benton Tax Map 4. Thence from said #5 re-rod found in the westerly sideline of East Benton Road which is the southeast corner of Violette; thence from said #5 re-rod found south six degrees five minutes east (S 06°05' E) along the westerly sideline of East Benton Road a distance of one thousand four hundred seventy-seven and one tenth of a foot (1,477.1") to #5 capped (2364) re-rod set, said #5 capped (#2364) re-rod set is the northeasterly corner of the now or formerly Bernard & Cindy Cormier (Bk. 4186 Pg. 104) parcel; thence from said #5 capped (#2364) re-rod set south eighty-three degrees thirty-two minutes west (S 83°32' W) along the northerly line of Cormier and other land of this grantor Edith Robinson (Bk. 8373 Pg. 162) a distance of one thousand one hundred seventy and four tenths of a foot (1,170.4') to a #5 capped (#2364) re-rod set in the line of now or formerly Joel B. Littlefield (Bk. 6440 Pg. 176); thence from said #5 capped (#2364) re-rod set north twenty-eight degrees eighteen minutes east (N 28°18' E) along the easterly line of Littlefield a distance of eight hundred thirty-one and six tenths of a foot (831.6') to a #5 capped (#2364) re-rod set; thence from said #5 capped (#2364) re-rod set north thirty-six degrees forty-five minutes west (N 36°45' W) along the northerly line of Littlefield a distance of seven hundred seventy-one and nine tenths of a foot (771.9') to a #5 capped (#2364) re-rod set; thence from said #5 capped (#2364) re-rod set north twenty-six degrees fifty-six minutes east (N 26°56' E) along the easterly line of Littlefield and a partial wall a distance of one hundred eighty-seven feet (187.0')

to a #5 capped (#2364) re-rod set in a wall and the southerly line of now or formerly Donald Goodale (Bk. 8508 Pg. 264); thence from said #5 capped (#2364) re-rod set south sixty-one degrees nineteen minutes east (S 61°19' E) along the southerly line of Goodale a distance of sixty-seven and nine tenths of a foot (67.9') to a #5 capped (#2364) re-rod set in the southeast corner Goodale; thence from said #5 capped (#2364) re-rod set north twenty-nine degrees one minute east (N 29°01' E) along the easterly line of Goodale and a stone wall a distance of seven hundred one and six tenths (701.6') to a #5 capped (#2364) re-rod set in the intersection of walls; thence from said #5 capped (#2364) re-rod set south sixty degrees forty-eight minutes east (S 60°48' E) along the line remaining land of Robinson and a stone wall a distance of two hundred fifty-nine feet (259.0') to the northwesterly corner of Violette and a 1" pipe found; thence from said 1" pipe found south two degrees fifty-three minutes east (S 02°53' E) along the westerly line of Violette a distance of one hundred eighty-five feet (185.0') to a point which is the southwest corner of Violette; thence from said point south sixty-two degrees eleven minutes east (S 62°11' E) along the southerly line of Violette a distance of four hundred feet (400.0') to a #5 capped found being the Point of Beginning and containing thirty-seven and two tenths of an acres (37.2 acres±).

Meaning and intending to convey the northerly portion of the Edith Robinson parcel which is located on the southerly side of East Benton Road.

A detailed survey of the premises being conveyed herein entitled "Lot Split Survey of the Edith Robinson Property located on East Benton Road, Benton, Kennebec County, ME", by Falla & Sons Land Surveys, Inc., dated January 21, 2012, is marked as Exhibit (1) and is attached hereto.

The above-described premises is subject to an Option Agreement to Purchase Easement by and between James A. Dennis II and Three Corners Solar, LLC as further described in a Memorandum of Option to Purchase Easement dated October 15, 2018 and recorded in the Kennebec County Registry of Deeds in Book 13139, Page 152.

MEANING AND INTENDING to convey the same premises as conveyed to James A. Dennis, II by Quitclaim Deed Without Covenant of Edith Robinson dated February 23, 2012 and recorded in the Kennebec County Registry of Deeds in Book 11189, Page 92.

TO HAVE AND TO HOLD the aforegranted and bargained premises, with all privileges and appurtenances thereof, to the said Russell S. Violette and Lisa M. Violette, their heirs and assigns, to them and their use and behoof forever.

AND I do covenant with the said Grantees, their heirs and assigns, that I am lawfully seized in fee of the premises; that they are free of all encumbrances; that I have good right to sell and convey to the said Grantees to hold as aforesaid; and that I and my heirs, shall and will warrant and defend the same to the said Russell S. Violette and Lisa M. Violette, their heirs and assigns forever, against the lawful claims and demands of all persons.

IN WITNESS WHEREOF, I, the said **JAMES A. DENNIS, II**, have hereunto set my hand and seal this 20th day of August, 2021.

Signed, Sealed and Delivered
in presence of

JAMES A. DENNIS, II

STATE OF MAINE
Kennebec, ss.

8/20, 2021

Personally appeared the above named **JAMES A. DENNIS, II** and acknowledged the foregoing instrument to be his free act and deed.

Before me,

Notary Public/Attorney at Law

MARK J. NALE
Notary Public, Maine
My Commission Expires November 6, 2024

Three Corners Solar, LLC
c/o Longroad Development Company, LLC
330 Congress Street, 6th Floor
Boston, MA 02210

VIA FEDEX

October 12, 2021

Russell S. Violette and Lisa M. Violette
619 E. Benton Road
Benton, ME 04901

RE: Option Agreement to Purchase Easement Extension

Dear Russell and Lisa Violette:

This notice is delivered pursuant to Section A of that certain Option Agreement to Purchase Easement, dated as of October 15, 2018, by and between Three Corners Solar, LLC ("Grantee") and Russell S. Violette and Lisa M. Violette (as assignee of James A. Dennis II pursuant to that certain Assignment and Assumption of Contracts, dated August 20, 2021, by and between James A. Dennis II and Russell S. Violette and Lisa M. Violette) ("Owner") (the "Contract"). Unless otherwise defined herein or the context otherwise requires, capitalized terms used herein shall have the meanings set forth in the Contract.

Grantee shall have the right to extend the Option Period for one (1) additional period of one (1) year, in exchange for the payment of Extension Consideration in the amount of Two Thousand Seventy dollars ($2,070.00) for such extension, to be on all the same terms and conditions provided herein. Grantee hereby extends the Option Period for one (1) additional period of one (1) year, effective October 15, 2021, with an expiration date of October 15, 2022; provided however, Owner acknowledges that due to Grantee's payment in error to the former owner, the Extension Consideration shall be paid on or about October 21, 2021. Owner and Grantee both acknowledge that the Option Period expires on October 15, 2022.

Sincerely,

THREE CORNERS SOLAR, LLC

By: Michael U. Alvarez
Name: Michael U. Alvarez
Title: COO

ACKNOWLEDGED AND AGREED:

_____
Russell S. Violette

_____
Lisa M. Violette

BK14335 PGS 340 - 345 01/27/2022 12:30:58 PM
INSTR#: 2022002251 ATTEST: DIANE WILSON
RECEIVED KENNEBEC SS ACTING REGISTER OF DEEDS
eRecorded Document

After recording return to:
Three Corners Solar, LLC
Attn: Vanessa Kwong
735 Montgomery Street, Suite 480
San Francisco, CA 94111

AMENDMENT TO MEMORANDUM OF OPTION AGREEMENT TO PURCHASE EASEMENT

This AMENDMENT TO MEMORANDUM OF OPTION AGREEMENT TO PURCHASE EASEMENT (this "Memorandum") is entered into as of the 18th day of January, 2022 by and between Russell S. Violette and Lisa M. Violette (as assignee of James A. Dennis II pursuant to that certain Assignment and Assumption of Contracts dated as of August 20, 2021) ("Owner") and Three Corners Solar, LLC, a Delaware limited liability company, a Delaware limited liability company ("Optionee"). Owner and Optionee are sometimes referred to herein individually as a "Party" and collectively as the "Parties."

RECITALS

A. Owner and Optionee previously entered into an Option to Purchase Easement dated October 15, 2018, a Memorandum of which was recorded on January 30, 2019 at the Kennebec County Registry of Deeds in Book 13139, Page 152 (the "Agreement") providing Developer with an exclusive option to purchase an easement on certain real property situated in the County of Kennebec, State of Maine, more particularly described on the attached Exhibit B attached hereto and made a part hereof (the "Premises"), on the terms and conditions set forth in the Agreement.

B. The Parties have amended the Agreement pursuant to an Amendment to Option to Purchase Easement dated as of Jan. 18th, 2022 (the "Amendment") to amend certain terms of the Agreement as further described below, among other terms. The Parties desire to execute this Memorandum to put the public on notice of certain terms of the Amendment.

NOW, THEREFORE, in consideration of the mutual promises set forth in the Agreement and the Amendment, and of other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. **Amendments.**

The Amendment amends the Easement Parcel Location in Exhibit B.

2. **Miscellaneous.**

i. Interpretation. Nothing contained in this Memorandum or the Amendment shall be construed as modifying the Agreement except as specifically provided pursuant to the Amendment. Capitalized terms used but not otherwise defined in the Amendment shall have the same meanings assigned to them in the Agreement. The purpose of this Memorandum is to give public notice of the existence of the Amendment. In the event of any inconsistency between this Memorandum and the terms and conditions of the Amendment, the Amendment shall prevail.

ii. Counterparts. This Memorandum may be executed in multiple counterparts, all of which shall be considered one and the same agreement and each of which shall be deemed an original.

[*Signature pages follow*]

IN WITNESS WHEREOF, the parties have executed this Memorandum to be effective as of the date first set forth above.

OWNER:

By: _____
Russell S. Violette

By: _____
Lisa M. Violette

STATE OF Maine §

COUNTY OF Kennebec §

I, the undersigned Notary Public, hereby certify that Russell S. Violette, whose name is signed to the foregoing conveyance, and who is known to me or proved to me on the basis of satisfactory evidence, acknowledged before me on this day that, being informed of the contents of the conveyance, he/she executed the same voluntarily on the same date the same bears date.

Given under my hand this 18th day of Jan, 2022.

[seal of Notary]

_____
Notary Public

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

STATE OF Maine §
COUNTY OF Kennebec §

I, the undersigned Notary Public, hereby certify that Lisa M. Violette, whose name is signed to the foregoing conveyance, and who is known to me or proved to me on the basis of satisfactory evidence, acknowledged before me on this day that, being informed of the contents of the conveyance, he/she executed the same voluntarily on the same date the same bears date.

Given under my hand this 18 day of Jan, 2022.

[seal of Notary]

Neil Postlewaite

Notary Public

[*Signature pages continue*]

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

OPTIONEE:

THREE CORNERS SOLAR, LLC,

a Delaware limited liability company

By:_____

Name: Michael U. Alvarez
Title: Chief Operating Officer

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of San Francisco

On JANUARY 14, 2022, before me, Jocelyn Koo, Notary Public, personally appeared Michael U. Alvarez, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

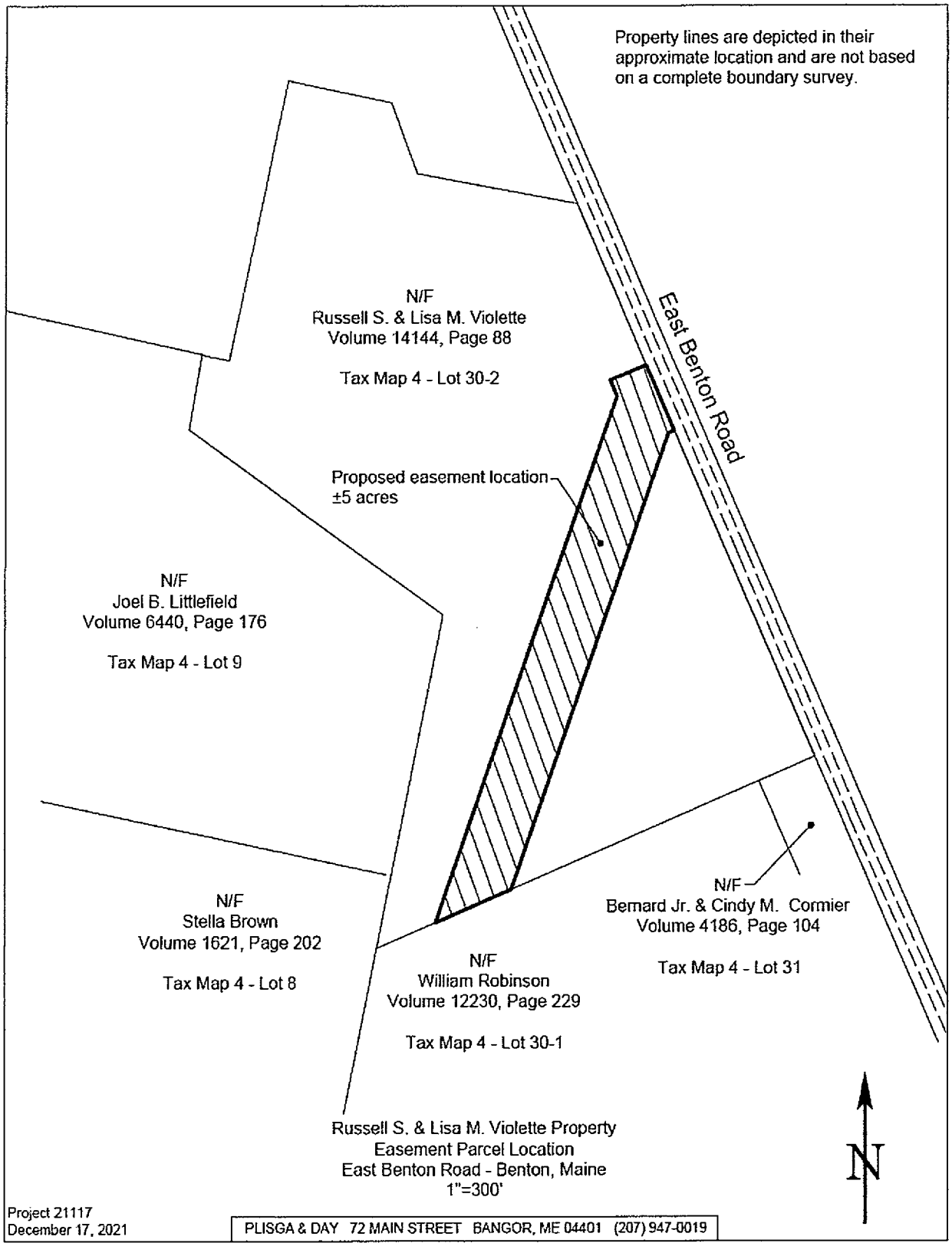
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (Seal)

JOCELYN KOO
Commission No. 2302816
NOTARY PUBLIC-CALIFORNIA
ALAMEDA COUNTY
My Comm. Expires SEPTEMBER 19, 2023

Exhibit B


Property lines are depicted in their approximate location and are not based on a complete boundary survey.
East Benton Road
N/F
Russell S. & Lisa M. Violette
Volume 14144, Page 88
Tax Map 4 - Lot 30-2
Proposed easement location
±5 acres
N/F
Joel B. Littlefield
Volume 6440, Page 176
Tax Map 4 - Lot 9
N/F
Stella Brown
Volume 1621, Page 202
Tax Map 4 - Lot 8
N/F
William Robinson
Volume 12230, Page 229
Tax Map 4 - Lot 30-1
N/F
Bernard Jr. & Cindy M. Cormier
Volume 4186, Page 104
Tax Map 4 - Lot 31
Russell S. & Lisa M. Violette Property
Easement Parcel Location
East Benton Road - Benton, Maine
1"=300'
N
Project 21117
December 17, 2021
PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

OPR BK 13139 PGS 142 - 146 01/30/2019 01:37:28 PM
INSTR # 2019001944 # OF PAGES 5
ATTEST: BEVERLY BUSTIN-HATHEWAY
REGISTER OF DEEDS KENNEBEC COUNTY, ME

MEMORANDUM OF OPTION TO PURCHASE EASEMENT

1.	Owner:	**WILLIAM ROBINSON** 556 East Benton Benton, Maine 04901
2.	Grantee:	**THREE CORNERS SOLAR, LLC** its successors or assigns c/o Longroad Development Company 133 Federal Street, Suite 1202 Boston, MA 02110
3.	Effective Date of Option:	10/24/, 2018
4.	Description of Easement Area:	An approximately 5.5+/- acre portion of Owner's land located in the Town of Benton, Kennebec County, Maine, shown as Tax Map 4 Lot 30-1 of the Tax Maps of the Town of Benton and being more particularly described in the deed to Owner dated February 17, 2016 and recorded at the Kennebec County Registry of Deeds in Book 12230, Page 229, said Easement Area being preliminarily located as shown on the attached Exhibit B.
5.	Option Period:	Three (3) years from Effective Date; provided that Grantee shall have the right to extend the Option Period for one (1) additional period of one (1) year.
6.	Counterparts:	This Memorandum may be signed in multiple counterparts on separate signature pages, which when assembled shall comprise a single instrument.

[Intentional end of page. Signatures follow on next page(s).]

WR

(5) Bernstein Shur Portland

IN WITNESS WHEREOF, the undersigned has executed this Memorandum as of this 24th day of October, 2018.

WITNESS:

OWNER:

William Robinson

STATE OF MAINE
COUNTY OF KENNEBEC

Dated: October 24, 2018

Then personally appeared the above-named William Robinson and acknowledged the foregoing instrument to be his free act and deed.

Notary Public
Micheal K. Laflin
My Commission Expires:

MICHAEL K. LAFLIN
Notary Public, State of Maine
My Commission Expires 9/8/2022

GRANTEE:

THREE CORNERS SOLAR, LLC

By: _____
Name:
Title:

STATE OF MAINE
COUNTY OF _____

Dated: _____, 2018

Then personally appeared the above-named _____, as _____ of Three Corners Solar, LLC_____, and acknowledged the foregoing instrument to be his/her free act and deed in said capacity and the free act and deed of said limited liability company.

_____
Notary Public
My Commission Expires:_____

IN WITNESS WHEREOF, the undersigned has executed this Memorandum as of this 24th day of October, 2018.

WITNESS:

OWNER:

William Robinson

STATE OF MAINE
COUNTY OF KENNEBEC

Dated: October 24, 2018

Then personally appeared the above-named William Robinson and acknowledged the foregoing instrument to be his free act and deed.

Notary Public
Micheal K. Laflin
My Commission Expires:

MICHAEL K. LAFLIN
Notary Public, State of Maine
My Commission Expires 9/8/2022

GRANTEE:

THREE CORNERS SOLAR, LLC

By: _____
Name: Michael U. Alvarez
Title: Chief Operating Officer

STATE OF MAINE
COUNTY OF _____

Dated: _____, 2018

Then personally appeared the above-named _____, as _____ of Three Corners Solar, LLC_____, and acknowledged the foregoing instrument to be his/her free act and deed in said capacity and the free act and deed of said limited liability company.

_____
Notary Public
My Commission Expires:_____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of SAN FRANCISCO }

On OCTOBER 24, 2018 before me, LIS Q. UNGARETI - NOTARY PUBLIC,
Date *Here Insert Name and Title of the Officer*

personally appeared MICHAEL U. ALVAREZ
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(ies), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

LIS Q. UNGARETI
Notary Public - California
San Francisco County
Commission # 2250087
My Comm. Expires Jul 15, 2022

Place Notary Seal and/or Stamp Above

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Lis Ungareti
Signature of Notary Public

OPTIONAL

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: OPTION AGREEMENT TO PURCHASE EASEMENT

Document Date: _____ Number of Pages: _____

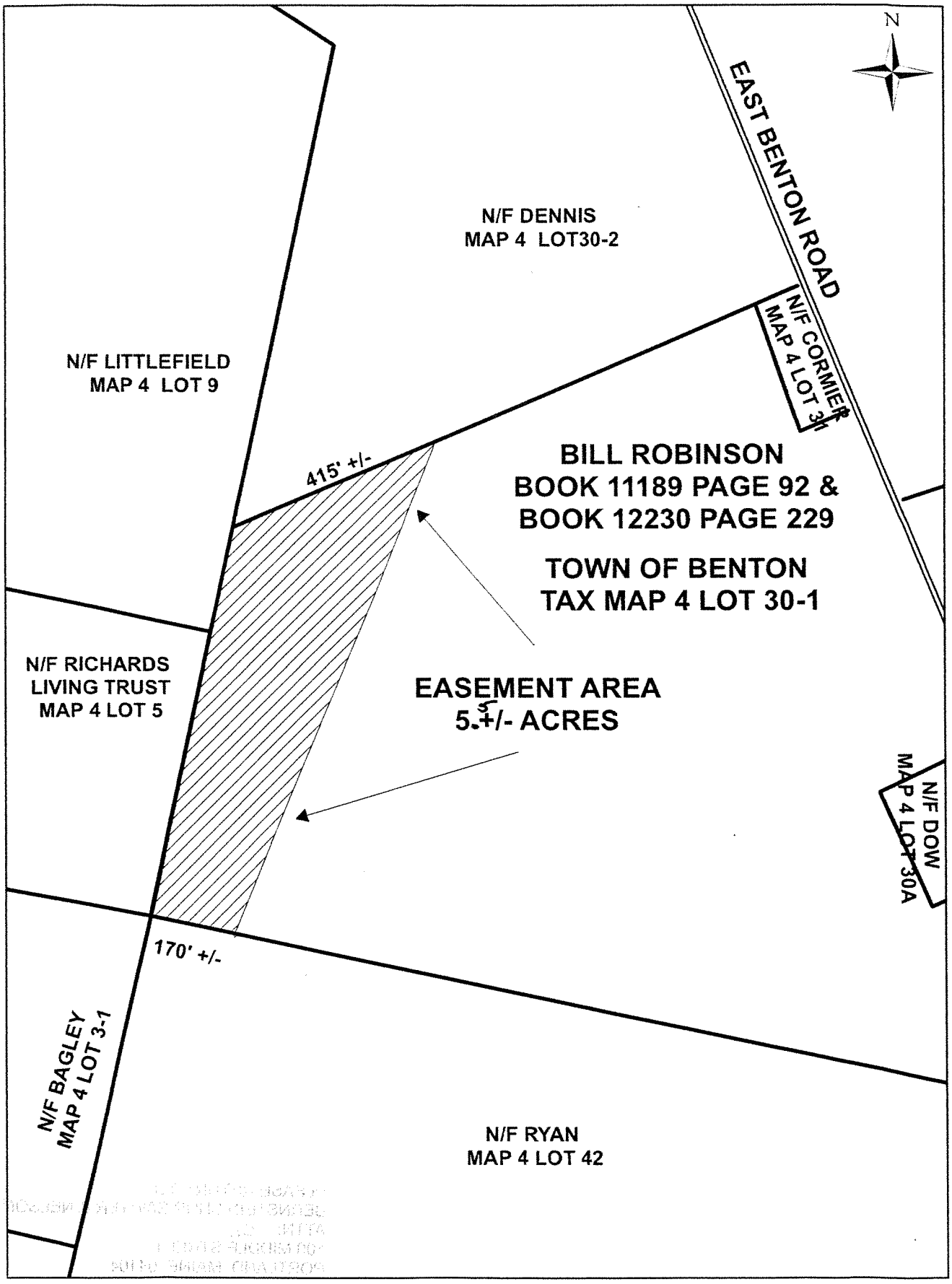
Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____	Signer's Name: _____
☐ Corporate Officer – Title(s): _____	☐ Corporate Officer – Title(s): _____
☐ Partner – ☐ Limited ☐ General	☐ Partner – ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian of Conservator	☐ Trustee ☐ Guardian of Conservator
☐ Other: _____	☐ Other: _____
Signer is Representing: _____	Signer is Representing: _____

©2017 National Notary Association

EXHIBIT B


N
EAST BENTON ROAD
N/F DENNIS
MAP 4 LOT30-2
N/F LITTLEFIELD
MAP 4 LOT 9
N/F CORMIER
MAP 4 LOT 31
415' +/-
BILL ROBINSON
BOOK 11189 PAGE 92 &
BOOK 12230 PAGE 229
TOWN OF BENTON
TAX MAP 4 LOT 30-1
N/F RICHARDS
LIVING TRUST
MAP 4 LOT 5
EASEMENT AREA
5.5 +/- ACRES
N/F DOW
MAP 4 LOT 30A
170' +/-
N/F BAGLEY
MAP 4 LOT 3-1
N/F RYAN
MAP 4 LOT 42

WR

longroad ENERGY

Three Corners Solar, LLC
c/o Longroad Development Company, LLC
330 Congress Street, 6th Floor
Boston, MA 02210

VIA FEDEX

October 12, 2021

William Robinson
556 East Benton Road
Benton, ME 04901

RE: Option Agreement to Purchase Easement Extension

Dear Mr. Robinson:

This notice is delivered pursuant to Section A of that certain Option Agreement to Purchase Easement, dated as of October 24, 2018, by and between Three Corners Solar, LLC ("Grantee") and William Robinson ("Owner") (the "Contract"). Unless otherwise defined herein or the context otherwise requires, capitalized terms used herein shall have the meanings set forth in the Contract.

Grantee shall have the right to extend the Option Period for one (1) additional period of one (1) year, in exchange for the payment of Extension Consideration in the amount of [redacted] for such extension, such extension to be exercised by notice (accompanied by payment) given prior to the expiration of the Option Period, and to be on all the same terms and conditions provided herein. Grantee will pay the Extension Consideration on or about October 21, 2021 and therefore Grantee hereby extends the Option Period for one (1) additional period of one (1) year, with an expiration date of October 24, 2022. This letter serves as the written notice of extension of the Option Period.

Sincerely,

THREE CORNERS SOLAR, LLC

By: Michael U. Alvarez
Name: Michael U. Alvarez
Title: COO

OPR BK 14328 PGS 337 - 338 01/21/2022 11:36:35 AM
INSTR # 2022001739 # OF PAGES 2
ATTEST: DIANE WILSON
ACTING REGISTER OF DEEDS KENNEBEC COUNTY, ME

CORRECTIVE

SHORT FORM WARRANTY DEED

TIMOTHY J. RYAN and EMILY M. RYAN, being married, both of 823 East Benton Road, Benton, Maine 04901 ("Grantors"), FOR CONSIDERATION PAID, grant to THREE CORNERS SOLAR, LLC, a Delaware limited liability company with a mailing address of 133 Federal Street, Suite 1202, Boston, MA 02110 ("Grantee"), with WARRANTY COVENANTS, certain real property, together with any improvements thereon, located at Benton, Kennebec County, Maine, and more particularly described on Exhibit A attached hereto and made a part hereof.

WITNESS our hands and seals this 20 day of January, 2022.

WITNESSETH:

Neil R Postlewaite

Timothy J. Ryan

Neil R Postlewaite

Emily M. Ryan

State of Maine
County of Kennebec, ss. January 20, 2022

PERSONALLY APPEARED the above-named Timothy J. Ryan and Emily M. Ryan and acknowledged the foregoing instrument to be their free acts and deeds.

Before me,

Neil Postlewaite

Notary Public / Maine Attorney at Law
Printed Name:
Commission Expiration/ME Bar No.:

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

(2) Neil Postlewaite

Exhibit A

A certain lot or parcel of land situated in Town of Benton, County of Kennebec, State of Maine bounded and described as follows:

Beginning at a point marked with a 5/8th inch iron rebar and cap #2251, said point being the southwesterly corner of land of, now or formerly, William Robinson, with reference to deed recorded in the Kennebec County Registry of Deeds in Book 12230 Page 229, said point also being the northwesterly corner of land of the herein Grantors,

Thence S 77°18'41" E along the southerly line of land of said Robinson, a distance of 170.00 feet to a point marked with a 5/8th inch iron rebar and cap #351,

Thence S 12°16'34" W along the line of land being retained by the herein Grantors, a distance of 1352.93 feet to a point marked with a 5/8th inch iron rebar and cap #351, said point being on the northerly line of land of, now or formerly, Ronald S. & Nancy D. Hayward, with reference to deed recorded in said Registry in Book 2503 Page 202,

Thence N 78°32'10" W along the northerly line of land of said Hayward, a distance of 170.00 feet to a point marked with a 5/8th inch iron rebar and cap #351, said point being the southwesterly corner of land of the herein Grantors, said point also being the southeasterly corner of land of, now or formerly, David T. & Shirley A. Bagley, with reference to deed recorded in said Registry in Book 5464 Page 209,

Thence N 12°16'34" E along the easterly line of land of said Bagley, and the easterly line of land of, now or formerly, Virginia E. Richards Living Trust, with reference to deed recorded in said Registry in Book 10307 Page 230, a distance of 1356.56 feet to the point of beginning.

Said parcel to contain 5.29 acres.

Said parcel being a portion and a portion only of the same property conveyed to the herein Grantors by deed dated October 18, 2017 and recorded in the Kennebec County Registry of Deeds in Book 12754 Page 265.

All bearings are Grid North

All 5/8" rebar set are inscribed John M. Pickett PLS 351.

No access across the retained premises of Grantors is conveyed by this deed.

This instrument corrects the directional course in the fourth paragraph of Exhibit A of the Warranty Deed dated April 1, 2019, recorded in Book 13191 Page 332 of the Kennebec County Registry of Deeds.

OPR BK 12982 PGS 71 - 74 08/01/2018 01:57:43 PM
INSTR # 2018016952 # OF PAGES 4
ATTEST: BEVERLY BUSTIN-HATHEWAY
REGISTER OF DEEDS KENNEBEC COUNTY, ME

MEMORANDUM OF OPTION OF SALE & PURCHASE AGREEMENT

By this Memorandum, David T. Bagley and Shirley A. Bagley ("Owner") hereby evidences that it entered an Option of Sale & Purchase Agreement (the "Agreement") by and between Three Corners Solar LLC, a Delaware limited liability company ("Optionee") encumbering that certain real property situated in the County of Kennebec, State of Maine, as more particularly described on Exhibit A attached hereto (the "Property") and made a part hereof, on terms and conditions set forth in the Agreement dated even date herewith between Owner and Optionee.

The term of the Agreement commenced on July 25, 2018 and shall expire, unless earlier terminated, at midnight on July 25, 2021 (the "Option Term"). Optionee has the right to extend the Option Term for one (1) additional period of one (1) year.

The parties have executed and recorded this instrument for the purpose of imparting notice to all third parties of the Agreement.

This Memorandum and the Agreement shall bind and inure to the benefit of the parties and their respective heirs, successors and assigns.

This Memorandum and the Agreement are governed by Maine law.

This Memorandum may be executed in counterparts, all of which together shall constitute one instrument.

Notices: The addresses for notice are:

Notice to Owner:
David and Shirley Bagley
211 Knights Road
Albion, Maine 04910

Notice To Optionee:
Longroad Land Holdings, L.L.C.
Boston, Ma. 02110

IN WITNESS WHEREOF, Owner and Optionee have executed this Memorandum as of the dates of the notary acknowledgements below.

Owner

By: David T Bagley
David T. Bagley

By: Shirley A. Bagley
Shirley A. Bagley

4 Neil Postlewaite
P.O.B. 21
No. Vassalboro,
Maine 04962

STATE OF MAINE §
§
COUNTY OF Kennebec §

This instrument was acknowledged before me on July 25, 2018, by David T. Bagley & Shirley A. Bagley, known to me to be the person who signed herein executed the same for the purposes and consideration therein expresses.

Neil Postlewaite
Notary Public

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

My Commission Expires: _____

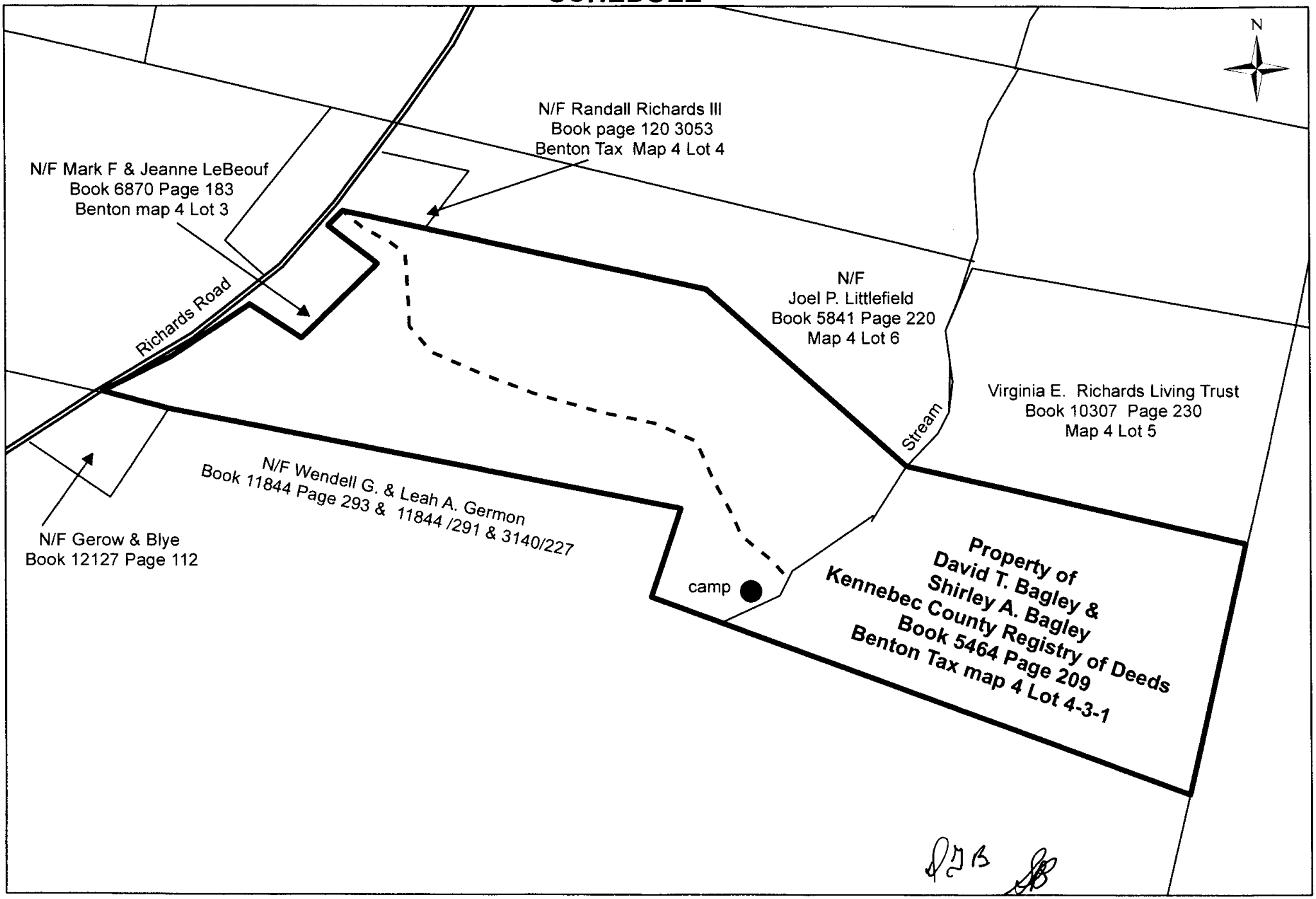
EXHIBIT A

All that Real Property situated in Benton, Kennebec County, State of Maine, described in the following deed to Owner:

All of the property as described in a deed from Eileen J. Pottle to David T. Bagley and Shirley A. Bagley, recorded in the Kennebec County Registry of Deeds Book 5464, Page 209 ,dated August 28, 1997.

Approximately 45 acres

SCHEDULE



OPR BK 12982 Page 74 INSTR#: 2018016952 LAST PAGE OF DOCUMENT

Document Path: G:\PATRIOT\Longroad Energy\Landowners\Bagley, David & Shirley\Bagleey Schedule.mxd

longroad ENERGY

Three Corners Solar, LLC
c/o Longroad Development Company, LLC
330 Congress Street, 6th Floor
Boston, MA 02210

VIA HAND DELIVERY

September 21, 2021

David T. Bagley and Shirley A. Bagley
211 Knights Road
Albion, ME 04901

RE: Option Agreement to Purchase Easement Extension

Dear David and Shirley Bagley:

This notice is delivered pursuant to Section 1(e) of that certain Option Agreement for Sale & Purchase of Real Property, dated as of July 25, 2018, by and between Three Corners Solar, LLC ("Optionee") and David T. Bagley and Shirley A. Bagley ("Owner") (the "Contract"). Unless otherwise defined herein or the context otherwise requires, capitalized terms used herein shall have the meanings set forth in the Contract.

Optionee shall have the right to extend the Option Term for one (1) additional period of one (1) year, in exchange for the payment of extension consideration in the amount of [redacted] for such extension, such extension to be exercised by notice (accompanied by payment) given prior to the expiration of the Option Term, and to be on all the same terms and conditions provided herein. Optionee hereby extends the Option Term for one (1) additional period of one (1) year, effective July 25, 2021, with an expiration date of July 25, 2022. This letter serves as the written notice of extension of the Option Term.

Sincerely,

THREE CORNERS SOLAR, LLC

By: Michael U. Alvarez
Name: Michael U. Alvarez
Title: COO

BK13889 PGS 125 - 131 02/08/2021 02:44:10 PM
INSTR#: 2021003332 ATTEST: BEVERLY BUSTIN-HATHEWAY
RECEIVED KENNEBEC SS REGISTER OF DEEDS
eRecorded Document

MEMORANDUM OF PURCHASE AND SALE AGREEMENT

1. **Seller:** **Randall W. Richards III**
25 Coachlight Drive
Chatham, N.J. 07928

2. **Purchaser:** **Three Corners Solar, LLC**
its successors or assigns
c/o Longroad Development Company
330 Congress Street, 6th Floor
Boston, Massachusetts 02210

3. **Effective Date of Purchase and Sale Agreement:** December 4, 2020

4. **Property Subject to Purchase and Sale Agreement:** An approximately 1 acre parcel of land located in the Town of Benton, County of Kennebec County, State of Maine generally depicted on Exhibit A attached hereto and described in a deed to Seller recorded in Book 3053, Page 120 in the Kennebec County Registry of Deeds (a copy of which is attached as Exhibit B) (the "Premises"). The Premises is designated as Lot 4 on the Town of Benton Tax Map 4

5. **Closing Date:** First business day after first anniversary of Effective Date of Purchase and Sale Agreement.

6. **Counterparts:** This Memorandum may be signed in multiple counterparts on separate signature pages, which when assembled shall comprise a single instrument.

[Intentional end of page. Signatures follow on next page(s).]

IN WITNESS WHEREOF, the undersigned have executed this Memorandum of Purchase and Sale Agreement as of this 4 day of December, 2020.

SELLER:

Witness

Randall W. Richards III

STATE OF ~~MAINE~~ NEW JERSEY
COUNTY OF Union

Dated: DECEMBER 4TH, 2020

Then personally appeared the above-named Randall W. Richards III and acknowledged the foregoing instrument to be his free act and deed.

Notary Public
My Commission Expires:

SHERYL A. STOLL
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 04/04/2022

WITNESS:

Vanessa Kwong

PURCHASER:

THREE CORNERS SOLAR, LLC

By: _____

Name: Michael U. Alvarez

Title: Chief Operating Officer

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA

COUNTY OF SAN FRANCISCO

On 12/10/2020 before me, Jocelyn Koo, Notary Public, personally appeared Michael U. Alvarez, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JOCELYN KOO
Commission No. 2302816
NOTARY PUBLIC-CALIFORNIA
ALAMEDA COUNTY
My Comm. Expires SEPTEMBER 19, 2023

Signature _____ (seal)

OPR BK 14289 PGS 55 - 59 12/16/2021 12:05:13 PM
INSTR # 2021036381 # OF PAGES 5
ATTEST: BEVERLY BUSTIN-HATHEWAY
REGISTER OF DEEDS KENNEBEC COUNTY, ME

RECORDING REQUESTED BY
AND WHEN RECORDED RETURN TO:

Three Corners Solar, LLC
c/o Longroad Development Company, LLC
Attn: Vanessa Kwong
735 Montgomery Street, Suite 480
San Francisco, CA 94111

AMENDMENT TO MEMORANDUM OF PURCHASE AND SALE AGREEMENT

This AMENDMENT TO MEMORANDUM OF PURCHASE AND SALE AGREEMENT (this "Memorandum") is entered into as of the 12 day of OCTOBER, 2021 by and between Randall W. Richards ("Seller") and Three Corners Solar, LLC, a Delaware limited liability company ("Purchaser"). Seller and Purchaser are sometimes referred to herein individually as a "Party" and collectively as the "Parties."

RECITALS

A. Seller and Purchaser previously entered into a Purchase and Sale Agreement dated December 4, 2020 (as amended by the Amendment (defined below), the "Agreement"), a Memorandum of which was recorded on February 8, 2021 in the Kennebec County Register of Deeds, Maine, in Book 13889, Page 125, for the purchase of approximately one (1) acre parcel of land located in the Town of Benton, County of Kennebec, State of Maine, as more particularly described on Exhibit A attached hereto and incorporated herein by reference (the "Premises").

B. The Parties have amended the Agreement pursuant to an Amendment to Purchase and Sale Agreement, dated as of OCTOBER 12, 2021 (the "Amendment") to amend certain terms of the Agreement as further described below, among other terms. The Parties desire to execute this Memorandum to put the public on notice of certain terms of the Amendment.

NOW, THEREFORE, in consideration of the mutual promises set forth in the Agreement and the Amendment, and of other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. **Amendments.** The Amendment extends the Closing date to the first business day after the second anniversary of the Effective Date of the Purchase and Sale Agreement.

2. **Miscellaneous.**

(5)
Amtrust Title

Rec'd DB

i. Interpretation. Nothing contained in this Memorandum or the Amendment shall be construed as modifying the Agreement except as specifically provided pursuant to the Amendment. Capitalized terms used but not otherwise defined in the Amendment shall have the same meanings assigned to them in the Agreement. The purpose of this Memorandum is to give public notice of the existence of the Amendment. In the event of any inconsistency between this Memorandum and the terms and conditions of the Amendment, the Amendment shall prevail.

ii. Counterparts. This Memorandum may be executed in multiple counterparts, all of which shall be considered one and the same agreement and each of which shall be deemed an original.

[*Signature pages follow*]

IN WITNESS WHEREOF, Seller and Purchaser have executed this Memorandum to be effective as of the date first set forth above.

SELLER:

Randall W. Richards III

By: Randall W. Richards III

STATE OF ~~MAINE~~ New Jersey §

COUNTY OF Cape May §

I, the undersigned Notary Public, hereby certify that Randall Richards, whose name is signed to the foregoing conveyance, and who is known to me or proved to me on the basis of satisfactory evidence, acknowledged before me on this day that, being informed of the contents of the conveyance, he/she executed the same voluntarily on the same date the same bears date.

Given under my hand this 6th day of October, 2021.

NANCY E DOWLING NOTARY PUBLIC STATE OF NEW JERSEY

Nancy E. Dowling

[seal of Notary] Notary Public

My Commission Expires:

NANCY E DOWLING
Notary Public - State of New Jersey
My Commission Expires Apr 29, 2024

RLR III

PURCHASER:

THREE CORNERS SOLAR, LLC,
a Delaware limited liability company

By:_____
Name: Michael U. Alvarez
Title: Chief Operating Officer

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of San Francisco

On October 12, 2021, before me, Jocelyn Koo, Notary Public, personally appeared Michael U. Alvarez, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

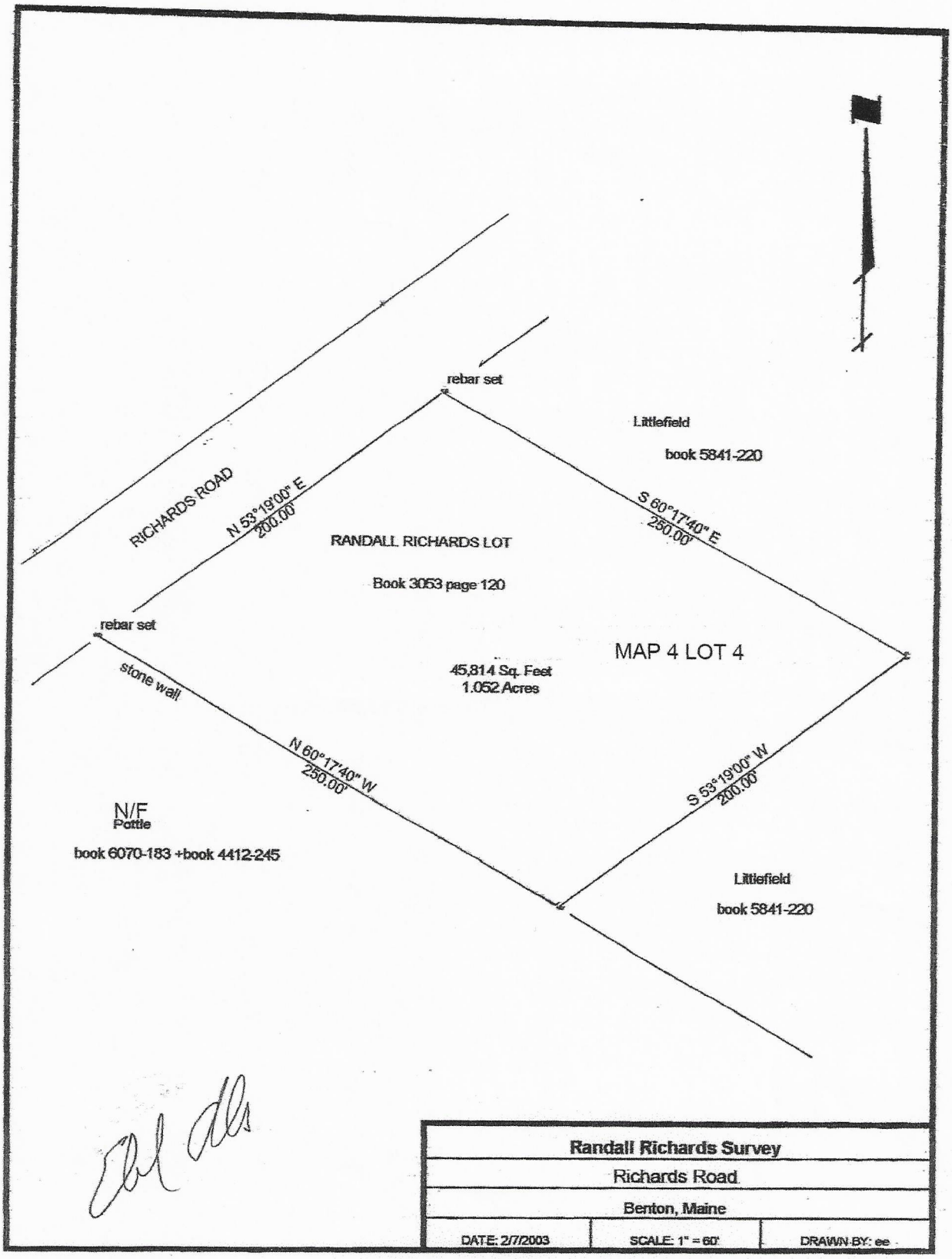
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (Seal)

JOCELYN KOO
Commission No. 2302816
NOTARY PUBLIC-CALIFORNIA
ALAMEDA COUNTY
My Comm. Expires SEPTEMBER 19, 2023

EXHIBIT A


RICHARDS ROAD
rebar set
N 53°19'00" E
200.00'
Littlefield
book 5841-220
S 60°17'40" E
250.00'
RANDALL RICHARDS LOT
Book 3053 page 120
rebar set
MAP 4 LOT 4
45,814 Sq. Feet
1.052 Acres
stone wall
N 60°17'40" W
250.00'
S 53°19'00" W
200.00'
N/F
Pottle
book 6070-183 +book 4412-245
Littlefield
book 5841-220
Randall Richards Survey
Richards Road
Benton, Maine
DATE: 2/7/2003
SCALE: 1" = 60'
DRAWN BY: ee

BK13888 PGS 66 - 71 02/08/2021 10:18:52 AM
INSTR#: 2021003193 ATTEST: BEVERLY BUSTIN-HATHEWAY
RECEIVED KENNEBEC SS REGISTER OF DEEDS
eRecorded Document

MEMORANDUM OF OPTION TO PURCHASE EASEMENT

1.	Owner:	**JOEL B. LITTLEFIELD AND JENNIFER L. KING** 128 Richards Road Benton, Maine 04901
2.	Grantee:	**THREE CORNERS SOLAR, LLC** its successors or assigns c/o Longroad Development Company 133 Federal Street, Suite 1202 Boston, MA 02110
3.	Effective Date of Option:	December 23, 2020
4.	Description of Easement Area:	An approximately 34,960 square foot portion of Owner's land located in the Town of Benton, Kennebec County, Maine, shown as Tax Map 3 Lot 82 of the Tax Maps of the Town of Benton and being more particularly described in the deed to Owner dated November 3, 2006 and recorded at the Kennebec County Registry of Deeds in Book 9138, Page 36, said Easement Area being shown on the attached Exhibit.
5.	Option Period:	Two (2) years from Effective Date; provided that Grantee shall have the right to extend the Option Period for one (1) additional period of one (1) year.
6.	Counterparts:	This Memorandum may be signed in multiple counterparts on separate signature pages, which when assembled shall comprise a single instrument.

[Intentional end of page. Signatures follow on next page(s).]

AK JT

IN WITNESS WHEREOF, the undersigned have executed this Memorandum as of this 23rd day of December, 2020.

WITNESS:

OWNER:

Joel B. Littlefield

Jennifer L. King

GRANTEE:

THREE CORNERS SOLAR, LLC

By: _____
Name:
Title:

STATE OF MAINE
COUNTY OF _____ Dated: _____, 2020

Then personally appeared the above-named Joel B. Littlefield and acknowledged the foregoing instrument to be his free act and deed.

_____
Notary Public
My Commission Expires:_____

IN WITNESS WHEREOF, the undersigned have executed this Memorandum as of this 23rd day of December, 2020.

WITNESS:

OWNER:

Joel B. Littlefield

Jennifer L. King

GRANTEE:

THREE CORNERS SOLAR, LLC

By: _____
Name: Michael U. Alvarez
Title: Chief Operating Officer

STATE OF MAINE
COUNTY OF _____ Dated: _____, 2020

Then personally appeared the above-named Joel B. Littlefield and acknowledged the foregoing instrument to be his free act and deed.

_____
Notary Public
My Commission Expires:_____

STATE OF MAINE
COUNTY OF Kennebec Dated: December 23, 2020

Then personally appeared the above-named Jennifer L. King and acknowledged the foregoing instrument to be her free act and deed.

Neil Postlewaite
Notary Public
My Commission Expires:

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

STATE OF MAINE
COUNTY OF _____ Dated: _____, 2018

Then personally appeared the above-named _____, as _____ of Three Corners Solar, LLC, and acknowledged the foregoing instrument to be his/her free act and deed in said capacity and the free act and deed of said limited liability company.

See attached

Notary Public
My Commission Expires: _____

CALIFORNIA ALL- PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of SAN FRANCISCO }

On JANUARY 8, 2021 before me, JOCELYN KOO, NOTARY PUBLIC, (Here insert name and title of the officer)

personally appeared MICHAEL U ALVAREZ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JOCELYN KOO
Commission No. 2302816
NOTARY PUBLIC-CALIFORNIA
ALAMEDA COUNTY
My Comm. Expires SEPTEMBER 10, 2023

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages ____ Document Date____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

(Title)

- ☐ Partner(s)
- ☐ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other ____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknowledgments from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - ❖ Indicate title or type of attached document, number of pages and date.
  - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

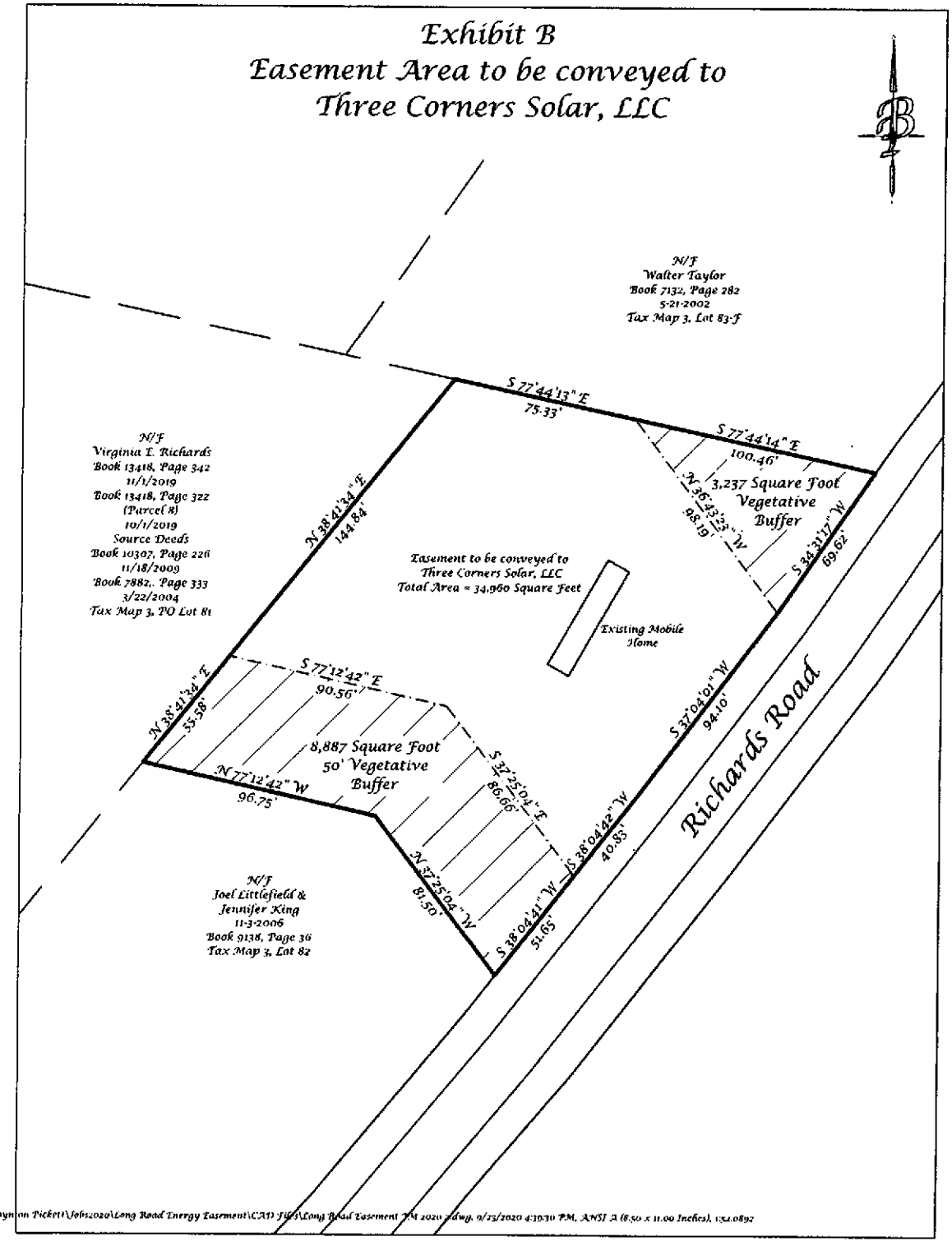


Exhibit B
Easement Area to be conveyed to
Three Corners Solar, LLC
B
N/F
Walter Taylor
Book 7132, Page 282
5-21-2002
Tax Map 3, Lot 83-F
N/F
Virginia T. Richards
Book 13418, Page 342
11/1/2019
Book 13418, Page 322
(Parcel 8)
10/1/2019
Source Deeds
Book 10307, Page 226
11/18/2009
Book 7882,. Page 333
3/22/2004
Tax Map 3, TO Lot 81
N/F
Joel Littlefield &
Jennifer King
11-3-2006
Book 9138, Page 36
Tax Map 3, Lot 82
S 77°44'13" E
75.33'
S 77°44'14" E
100.46'
N 36°43'23" W
98.19'
S 34°31'17" W
69.62'
S 37°04'01" W
94.10'
S 38°04'42" W
40.83'
S 38°04'41" W
51.65'
N 37°25'04" W
81.50'
S 37°25'04" E
86.66'
N 77°12'42" W
96.75'
N 38°41'34" E
55.58'
S 77°12'42" E
90.56'
N 38°41'34" E
144.84
3,237 Square Foot
Vegetative
Buffer
8,887 Square Foot
50' Vegetative
Buffer
Easement to be conveyed to
Three Corners Solar, LLC
Total Area = 34,960 Square Feet
Existing Mobile
Home
Richards Road
K:\Boynton Ticket\Job2020\Long Road Energy Easement\CAD Files\Long Road Easement PM 2020.dwg, 9/23/2020 4:39:30 PM, ANSI A (8.50 x 11.00 Inches), 1:1.0892

JL

OPR BK 13097 PGS 32 - 36 11/30/2018 12:55:07 PM
INSTR # 2018027984 # OF PAGES 5
ATTEST: BEVERLY BUSTIN-HATHEWAY
REGISTER OF DEEDS KENNEBEC COUNTY, ME

MEMORANDUM OF OPTION

1. Owner: **Merton D. Richards, Sr. and Virginia E Richards, Trustees of the Merton D. Richards, Sr. Living Trust dated August 23, 2005**
214 Gogan Road
Benton, Maine 04901

2. Grantee: **THREE CORNERS SOLAR, LLC**
its successors or assigns
c/o Longroad Development Company
133 Federal Street, Suite 1202
Boston, MA 02110

3. Effective Date of Option: November 16, 2018

4. Description of Generator Lead Area and Temporary Access Easement Area:

The Generator Lead Area and Temporary Access Easement Area preliminarily located as shown on the attached Exhibit, being a portion of Owner's land located in the Town of Benton, Kennebec County, Maine, shown as Tax Map 3 Lot 81 of the Tax Maps of the Town of Benton and more particularly described in the deed to Owner dated November 18, 2009 and recorded at the Kennebec County Registry of Deeds in Book 10307, Page 226.

5. Option Period: One (1) year from Effective Date.

6. Counterparts: This Memorandum may be signed in multiple counterparts on separate signature pages, which when assembled shall comprise a single instrument.

[Intentional end of page. Signatures follow on next page(s).]

(5) BSSN

IN WITNESS WHEREOF, the undersigned have executed this Memorandum as of this 16th day of November, 2018.

WITNESS:

OWNER:

Merton D. Richards, Sr., Trustee
Merton D. Richards, Sr. Living Trust dated August 23, 2005

Virginia E. Richards, Trustee
Merton D. Richards, Sr. Living Trust dated August 23, 2005

STATE OF MAINE
COUNTY OF Kennebec Dated: November 16, 2018

Then personally appeared the above-named Merton D. Richards, Sr., Trustee, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Notary Public
My Commission Expires:

JOHN E. NALE
Notary Public, Maine
My Commission Expires November 13, 2024

STATE OF MAINE
COUNTY OF Kennebec Dated: November 16, 2018

Then personally appeared the above-named Virginia E. Richards, Trustee, as aforesaid, and acknowledged the foregoing instrument to be her free act and deed in her said capacity.

Notary Public
My Commission Expires:

JOHN E. NALE
Notary Public, Maine
My Commission Expires November 13, 2024

WITNESS:

GRANTEE:

THREE CORNERS SOLAR, LLC

By: _____
Name: PAUL GAYNOR
Title: PRES/DIR

STATE OF Massachusetts
COUNTY OF Suffolk

Dated: 11/20/2018, 2018

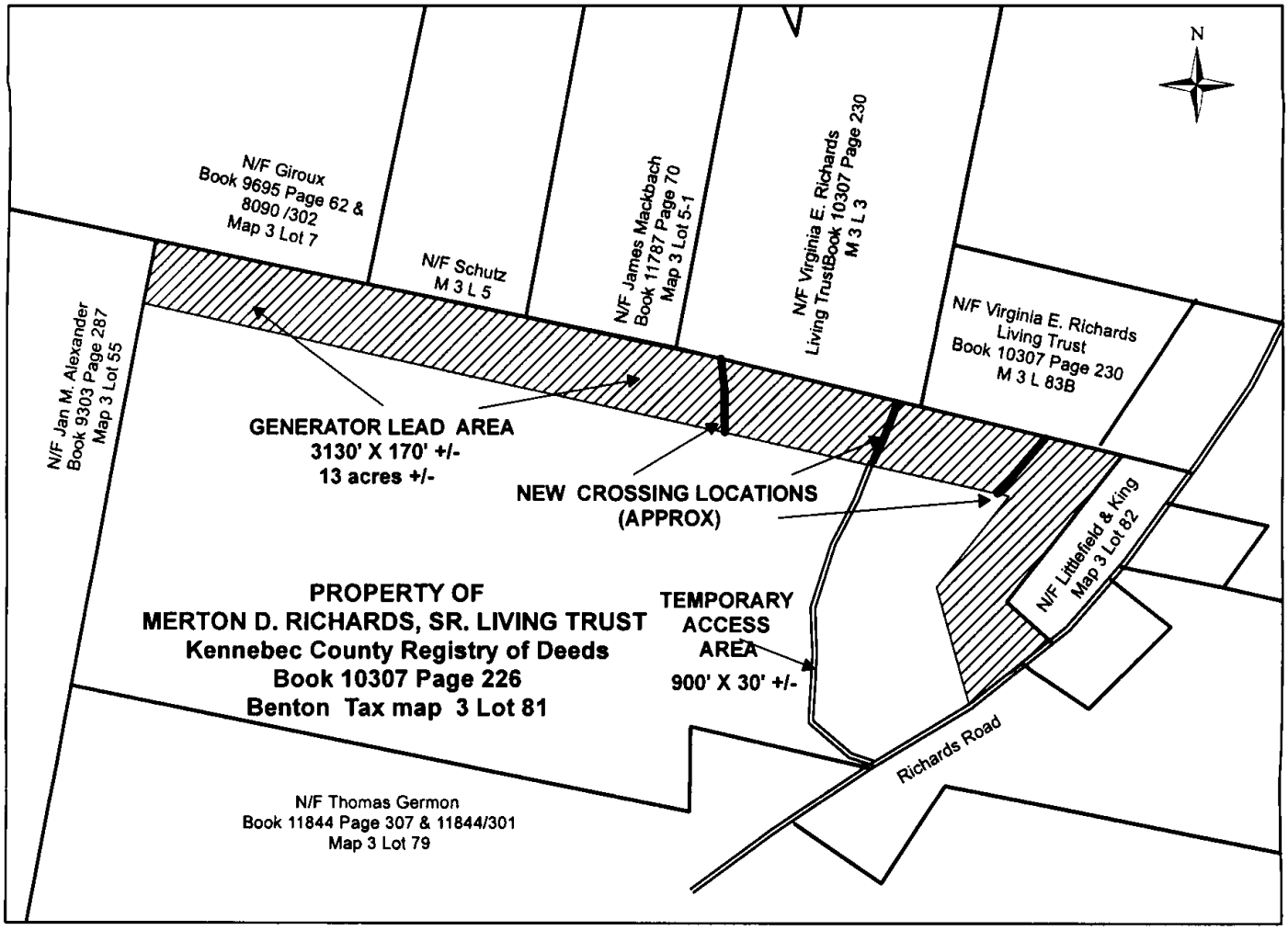
Then personally appeared the above-named Paul Gaynor, as CEO of Three Corners Solar, LLC, and acknowledged the foregoing instrument to be his/her free act and deed in said capacity and the free act and deed of said limited liability company.

SEAN M. FLYNN
Notary Public
Commonwealth of Massachusetts
My Commission Expires
October 4, 2024

Notary Public
My Commission Expires: 10/4/2024

Exhibit A to Memorandum of Option
Preliminary Depiction of Generator Lead Area and Temporary Access Area
(See attached.)

EXHIBIT A


N
N/F Giroux
Book 9695 Page 62 &
8090 /302
Map 3 Lot 7
N/F Schutz
M 3 L 5
N/F James Mackbach
Book 11787 Page 70
Map 3 Lot 5-1
N/F Virginia E. Richards
Living TrustBook 10307 Page 230
M 3 L 3
N/F Virginia E. Richards
Living Trust
Book 10307 Page 230
M 3 L 83B
N/F Jan M. Alexander
Book 9303 Page 287
Map 3 Lot 55
GENERATOR LEAD AREA
3130' X 170' +/-
13 acres +/-
NEW CROSSING LOCATIONS
(APPROX)
N/F Littlefield & King
Map 3 Lot 82
PROPERTY OF
MERTON D. RICHARDS, SR. LIVING TRUST
Kennebec County Registry of Deeds
Book 10307 Page 226
Benton Tax map 3 Lot 81
TEMPORARY
ACCESS
AREA
900' X 30' +/-
Richards Road
N/F Thomas Germon
Book 11844 Page 307 & 11844/301
Map 3 Lot 79

BK13888 PGS 189 - 194 02/08/2021 11:43:19 AM
INSTR#: 2021003266 ATTEST: BEVERLY BUSTIN-HATHEWAY
RECEIVED KENNEBEC SS REGISTER OF DEEDS
eRecorded Document

AMENDED AND RESTATED MEMORANDUM OF OPTION

This Amended and Restated Memorandum of Option corrects the name of the Owner of the Property subject to the Option evidenced of record by a Memorandum of Option recorded in Book 13097, Page 32 of the Kennebec County Registry of Deeds, and also more particularly describes the Property subject to such Option.

1.	Owner:	**Virginia E. Richards, individually, and Virginia E Richards, Trustee of the Virginia E. Richards Living Trust dated August 23, 2005** 214 Gogan Road Benton, Maine 04901
2.	Grantee:	**THREE CORNERS SOLAR, LLC** its successors or assigns c/o Longroad Development Company 330 Congress Street, 6th Floor Boston, Massachusetts 02210
3.	Effective Date of Option:	November 16, 2018
4.	Property Subject to Option:	The Generator Lead Area and Temporary Access Easement Area preliminarily located as shown on the attached Exhibit A, being a portion of Owner's land located in the Town of Benton, Kennebec County, Maine, shown as Tax Map 3 Lot 81 of the Tax Maps of the Town of Benton and more particularly described in the following deeds: : deed dated November 18, 2009 to the Trustees of the Virginia E. Richards Living Trust, recorded in the Kennebec County Registry of Deeds in Book 10307, Page 230 (Parcel #7 therein); and deed dated October 1, 2019 to Virginia E. Richards recorded in said Registry of Deeds in Book 13418, Page 322 (Parcel 8 therein), as affected by deed dated November 1, 2019 recorded in Book 13418, Page 342
5.	Option Period:	Three (3) years from the Effective Date of the Option.

6. Counterparts: This Memorandum may be signed in multiple counterparts on separate signature pages, which when assembled shall comprise a single instrument.

[Intentional end of page. Signatures follow on next page(s).]

IN WITNESS WHEREOF, the undersigned have executed this Amended and Restated Memorandum of Option as of this 5th day of January, 2020.

OWNER:

Witness

Virginia E. Richards, individually and as Trustee of the Virginia E. Richards Living Trust

Witness

Merton D. Richards, Jr., individually and as Trustee of the Virginia E. Richards Living Trust

Witness

Brian Richards, as Trustee of the Virginia E. Richards Living Trust

STATE OF MAINE
COUNTY OF Kennebec

Dated: January 5, 2020

Then personally appeared the above-named ~~Virginia E. Richards, individually and~~ as Trustee~~,~~ as aforesaid, and acknowledged the foregoing instrument to be ~~her~~ free act~~and~~ deed~~s~~ ~~individually and~~ in ~~her~~ said capacity.

MERTON D. RICHARDS, JR. AND BRIAN RICHARDS

Notary Public
My Commission Expires: July 10, 2022

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

WITNESS:

GRANTEE:

THREE CORNERS SOLAR, LLC

By: _____
Name: MICHAEL J ALVAREZ
Title: CHIEF OPERATING OFFICER

STATE OF
COUNTY OF _____ Dated: _____, 2020

Then personally appeared the above-named _____, as _____ of Three Corners Solar, LLC, and acknowledged the foregoing instrument to be his/her free act and deed in said capacity and the free act and deed of said limited liability company.

SEE ATTACHED

_____
Notary Public
My Commission Expires: _____

CALIFORNIA ALL- PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of SAN FRANCISCO }

On JANUARY 8, 2021 before me, JOCELYN KOO, NOTARY PUBLIC,
(Here insert name and title of the officer)

personally appeared MICHAEL U ALVAREZ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JOCELYN KOO
Commission No. 2302816
NOTARY PUBLIC-CALIFORNIA
ALAMEDA COUNTY
My Comm. Expires SEPTEMBER 19, 2023

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

(Title)

- ☐ Partner(s)
- ☐ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

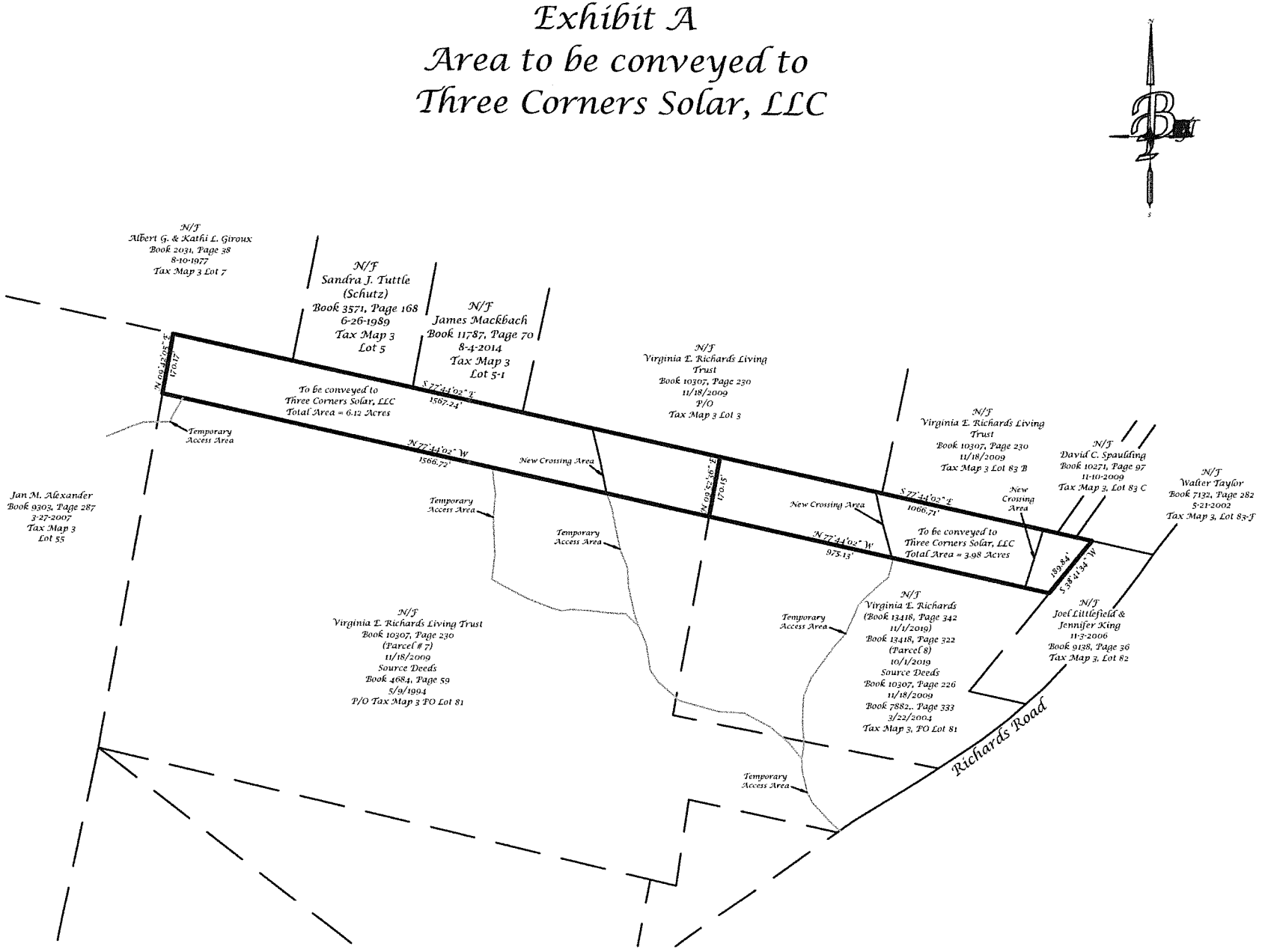
2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknowledgments from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - ❖ Indicate title or type of attached document, number of pages and date.
  - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

Exhibit A
Area to be conveyed to
Three Corners Solar, LLC



OPR BK 13888 Page 194 - INSTR#: 2021003266 LAST PAGE OF DOCUMENT

BK14324 PGS 220 - 225 01/18/2022 02:36:55 PM
INSTR#: 2022001345 ATTEST: DIANE WILSON
RECEIVED KENNEBEC SS ACTING REGISTER OF DEEDS
eRecorded Document

RECORDING REQUESTED BY
AND WHEN RECORDED RETURN TO:

Three Corners Solar, LLC
c/o Longroad Development Company, LLC
Attn: Vanessa Kwong
735 Montgomery Street, Suite 480
San Francisco, CA 94111

AMENDMENT TO AMENDED AND RESTATED MEMORANDUM OF OPTION AGREEMENT

This AMENDMENT TO AMENDED AND RESTATED MEMORANDUM OF OPTION AGREEMENT (this "Memorandum") is entered into as of the 15th day of November, 2021 by and between Virginia E. Richards, individually, and Virginia E. Richards, Merton D. Richards, Jr. And Brian Richards, as Trustees of the Virginia E. Richards Living Trust (collectively, "Owner") and Three Corners Solar, LLC, a Delaware limited liability company ("Grantee"). Owner and Grantee are sometimes referred to herein individually as a "Party" and collectively as the "Parties."

RECITALS

A. Owner and Grantee previously entered into an Amended and Restated Option Agreement, with an effective date as of November 15, 2020, a Memorandum of which was recorded on February 8, 2021 in the Kennebec County Register of Deeds, Maine in Book 13888, Page 189 (the "Agreement") granting Grantee the exclusive, irrevocable right and option to purchase (i) fee title to the areas generally depicted in Exhibit A attached hereto, and (ii) a temporary construction access easement (the "Temporary Access Easement") in the general locations depicted on Exhibit A, each designated thereon as "Temporary Access Area" (collectively, the "Temporary Access Areas").

B. The Parties have amended the Agreement pursuant to an Amendment to Restated Option Agreement, dated as of November 15, 2021 (the "Amendment") to amend certain terms of the Agreement as further described below, among other terms. The Parties desire to execute this Memorandum to put the public on notice of certain terms of the Amendment.

NOW, THEREFORE, in consideration of the mutual promises set forth in the Agreement and the Amendment, and of other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. **Amendments.** The Amendment extends the term of the option for an additional one (1) year and the term shall expire, unless earlier terminated, on November 16, 2022.

2. **Miscellaneous.**

i. Interpretation. Nothing contained in this Memorandum or the Amendment shall be construed as modifying the Agreement except as specifically provided pursuant to the Amendment. Capitalized terms used but not otherwise defined in the Amendment shall have the same meanings assigned to them in the Agreement. The purpose of this Memorandum is to give public notice of the existence of the Amendment. In the event of any inconsistency between this Memorandum and the terms and conditions of the Amendment, the Amendment shall prevail.

ii. Counterparts. This Memorandum may be executed in multiple counterparts, all of which shall be considered one and the same agreement and each of which shall be deemed an original.

[*Signature pages follow*]

IN WITNESS WHEREOF, Owner and Grantee have executed this Memorandum to be effective as of the date first set forth above.

OWNER:

By: Virginia Richards by Brian Richards power of Attorney
Virginia E. Richards, individually
and as Trustee of the Virginia E. Richards Living Trust

By: _____
Merton D. Richards, Jr., Trustee of the Virginia E. Richards Living Trust

By: Brian Richards
Brian Richards, Trustee of the Virginia E. Richards Living Trust

STATE OF Maine §
COUNTY OF Kennebec §

I, the undersigned Notary Public, hereby certify that Virginia E. Richards, whose name is signed to the foregoing conveyance, and who is known to me or proved to me on the basis of satisfactory evidence, acknowledged before me on this day that, being informed of the contents of the conveyance, he/she executed the same voluntarily on the same date the same bears date.

Given under my hand this 15th day of November, 2021.

Neil Postlewaite
Notary Public
My Commission Expires: Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

[seal of Notary]

STATE OF Maine §

COUNTY OF Kennebec §

I, the undersigned Notary Public, hereby certify that Merton D. Richards, Jr., whose name is signed to the foregoing conveyance, and who is known to me or proved to me on the basis of satisfactory evidence, acknowledged before me on this day that, being informed of the contents of the conveyance, he/she executed the same voluntarily on the same date the same bears date.

Given under my hand this 15th day of November, 2021.

[seal of Notary]

Notary Public

My Commission Expires: _____

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

STATE OF Maine §

COUNTY OF Kennebec §

I, the undersigned Notary Public, hereby certify that Brian Richards, whose name is signed to the foregoing conveyance, and who is known to me or proved to me on the basis of satisfactory evidence, acknowledged before me on this day that, being informed of the contents of the conveyance, he/she executed the same voluntarily on the same date the same bears date.

Given under my hand this 15th day of November, 2021.

[seal of Notary]

Notary Public

My Commission Expires: _____

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

GRANTEE:

THREE CORNERS SOLAR, LLC,
a Delaware limited liability company

By:_____
Name: Michael U. Alvarez
Title: Chief Operating Officer

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of San Francisco

On NOVEMBER 19, 2021, before me, Jocelyn Koo, Notary Public, personally appeared Michael U. Alvarez, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

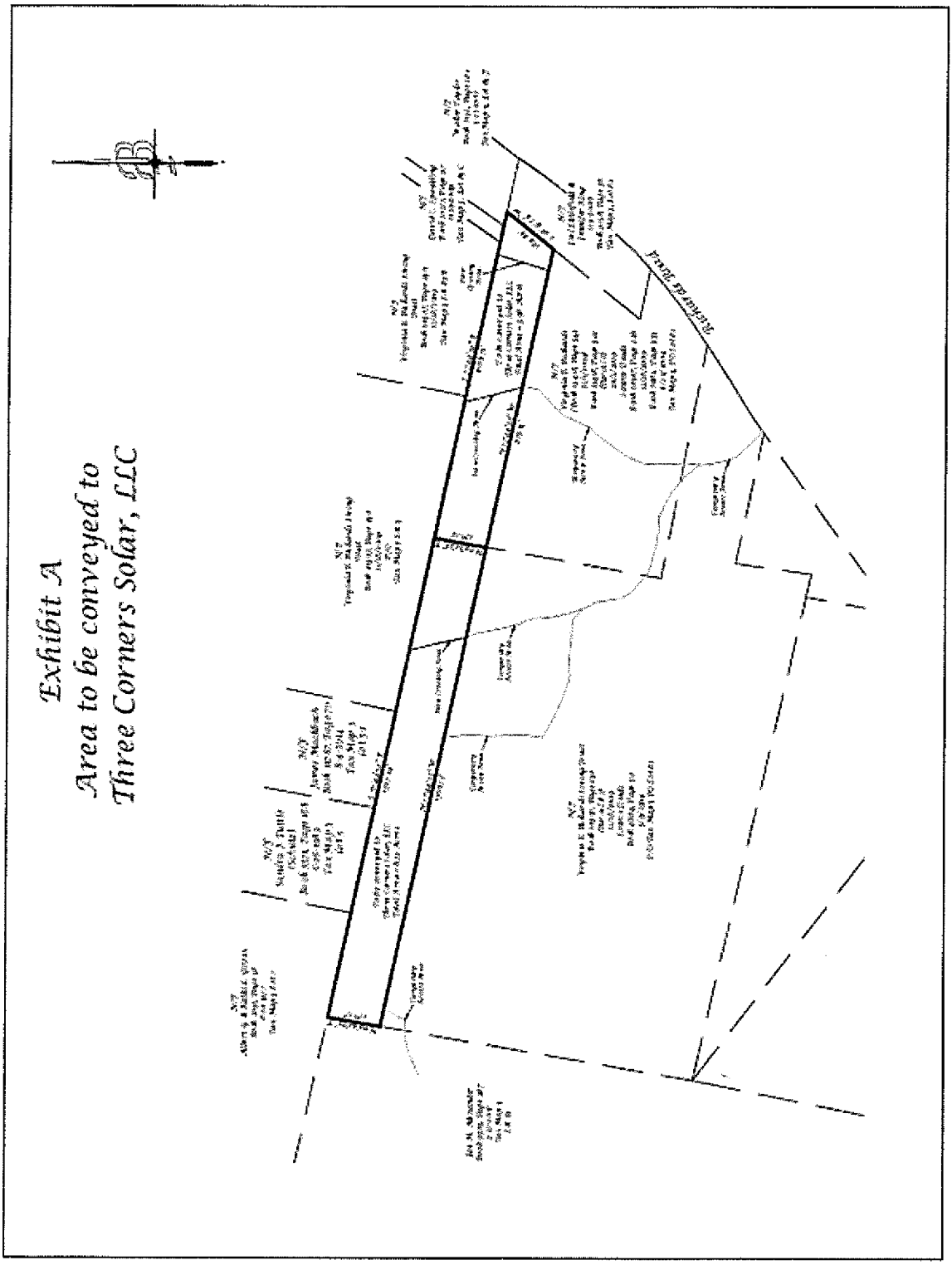
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JOCELYN KOO
Commission No. 2302816
NOTARY PUBLIC-CALIFORNIA
ALAMEDA COUNTY
My Comm. Expires SEPTEMBER 19, 2023

Signature_____ (Seal)

EXHIBIT A



OPR BK 13139 PGS 157 - 161 01/30/2019 01:37:31 PM
INSTR # 2019001947 # OF PAGES 5
ATTEST: BEVERLY BUSTIN-HATHEWAY
REGISTER OF DEEDS KENNEBEC COUNTY, ME

MEMORANDUM OF OPTION TO PURCHASE EASEMENT

1.	Owner:	**JAN M. ALEXANDER (fka JAN M. WRIGHT)** 680 Albion Road Benton, Maine 04901
2.	Grantee:	**THREE CORNERS SOLAR, LLC** its successors or assigns c/o Longroad Development Company 133 Federal Street, Suite 1202 Boston, MA 02110
3.	Effective Date of Option:	10/15, 2018
4.	Description of Easement Areas:	Those Easement Areas preliminarily located as shown on the attached Exhibit B, being a portion of Owner's land located in the Town of Benton, Kennebec County, Maine, shown as Tax Map 3 Lot 55 of the Tax Maps of the Town of Benton and more particularly described in the deed to Owner dated March 27, 2007 and recorded at the Kennebec County Registry of Deeds in Book 9303, Page 287.
5.	Option Period:	Three (3) years from Effective Date; provided Grantee shall have the right to extend the Option Period for one (1) additional period of one (1) year.
6.	Counterparts:	This Memorandum may be signed in multiple counterparts on separate signature pages, which when assembled shall comprise a single instrument.

[Intentional end of page. Signatures follow on next page(s).]

J.M.A.

(5) Bernstein Shur Portland

IN WITNESS WHEREOF, the undersigned have executed this Memorandum as of this 4 day of October, 2018.

WITNESS:

Michael K Laflin

OWNER:

Jan M. Alexander

Jan M. Alexander (fka Jan M. Wright)

STATE OF MAINE
COUNTY OF Kennebec

Dated: Oct. 4, 2018

Then personally appeared the above-named Jan M. Alexander (fka Jan M. Wright), as aforesaid, and acknowledged the foregoing instrument to be her free act and deed in her said capacity.

Michael K Laflin

Notary Public: Michael K. Laflin

My Commission Expires:

MICHAEL K. LAFLIN
Notary Public, State of Maine
My Commission Expires 9/8/2022

WITNESS:

GRANTEE:

THREE CORNERS SOLAR, LLC

_____

By: Michael U. Alvarez
Name: Michael U. Alvarez
Title: Chief Operating Officer

STATE OF MAINE
COUNTY OF _____

Dated: _____, 2018

Then personally appeared the above-named _____, as _____ of Three Corners Solar, LLC_____, and acknowledged the foregoing instrument to be his/her free act and deed in said capacity and the free act and deed of said limited liability company.

_____
Notary Public
My Commission Expires: _____

J.ma

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of San Francisco }

On January 18, 2019 before me, Lis Q. Ungareti - Notary Public,
Date *Here Insert Name and Title of the Officer*

personally appeared Michael U. Alvarez
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

LIS Q. UNGARETI
Notary Public - California
San Francisco County
Commission # 2250087
My Comm. Expires Jul 15, 2022

Place Notary Seal and/or Stamp Above

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Lis Ungareti
Signature of Notary Public

OPTIONAL

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: Memo of Option to Purchase Easement

Document Date: 10/15/18 Number of Pages: 4

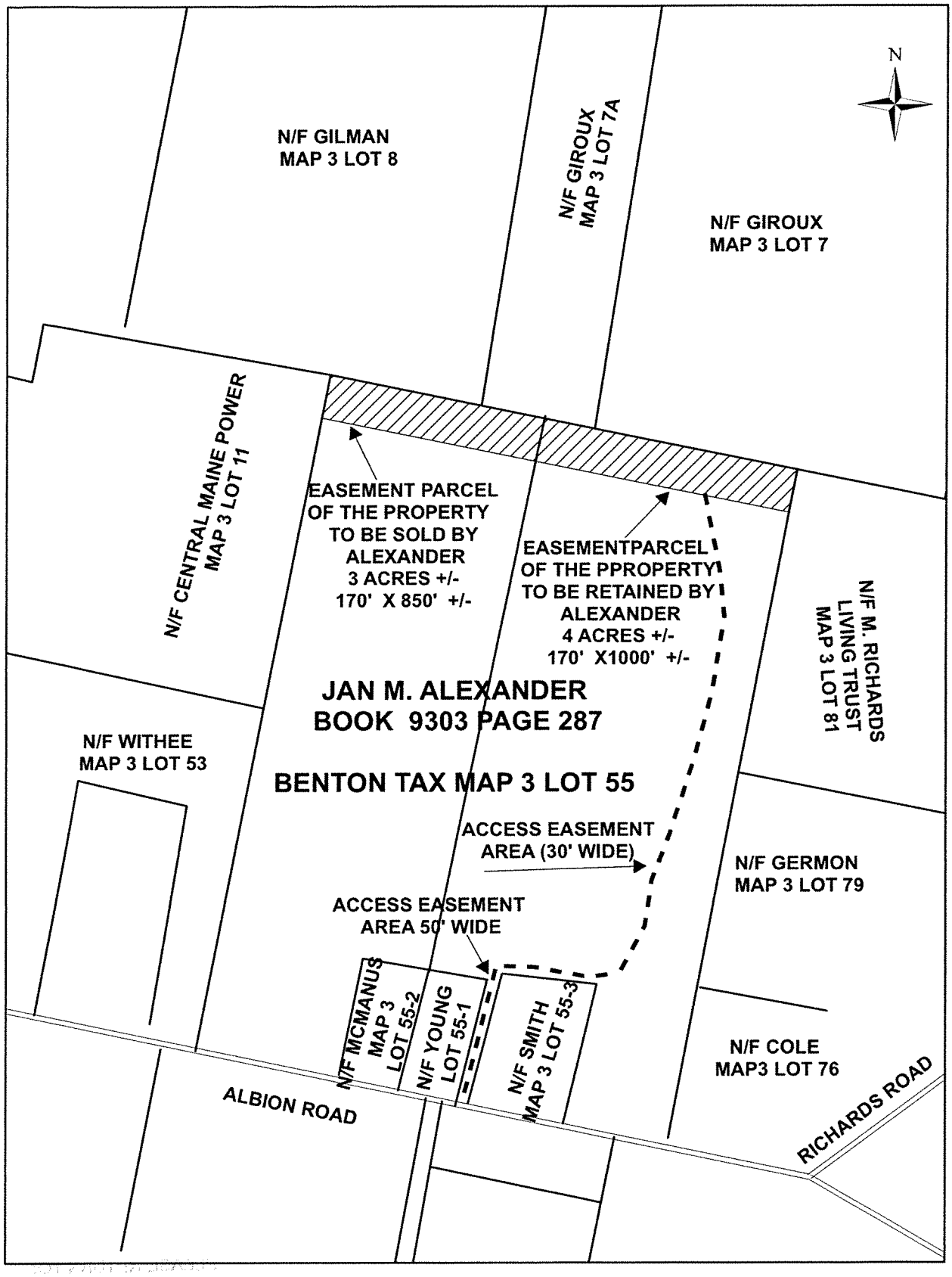
Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____	Signer's Name: _____
☐ Corporate Officer – Title(s): _____	☐ Corporate Officer – Title(s): _____
☐ Partner – ☐ Limited ☐ General	☐ Partner – ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian of Conservator	☐ Trustee ☐ Guardian of Conservator
☐ Other: _____	☐ Other: _____
Signer is Representing: _____	Signer is Representing: _____

©2017 National Notary Association

EXHIBIT B



J.m.a.

Three Corners Solar, LLC
c/o Longroad Development Company, LLC
330 Congress Street, 6th Floor
Boston, MA 02210

VIA HAND DELIVERY

September 21, 2021

Jan M. Alexander
680 Albion Road
Benton, ME 04901

RE: Option Agreement to Purchase Easement Extension

Dear Jan Alexander:

This notice is delivered pursuant to Section A of that certain Option Agreement to Purchase Easement, dated as of October 15, 2018, by and between Three Corners Solar, LLC ("Grantee") and Jan M. Alexander ("Owner") (the "Contract"). Unless otherwise defined herein or the context otherwise requires, capitalized terms used herein shall have the meanings set forth in the Contract.

Grantee shall have the right to extend the Option Period for one (1) additional period of one (1) year, in exchange for the payment of Extension Consideration in the amount of Eighteen Hundred and Sixty dollars ($1860) for such extension, such extension to be exercised by notice (accompanied by payment) given prior to the expiration of the Option Period, and to be on all the same terms and conditions provided herein. Grantee hereby extends the Option Period for one (1) additional period of one (1) year, with an expiration date of October 15, 2022. This letter serves as the written notice of extension of the Option Period.

Sincerely,

THREE CORNERS SOLAR, LLC

By: Michael U. Alvarez
Name: Michael U. Alvarez
Title: COO

After recording return to:
Three Corners Solar, LLC
Attn: Vanessa Kwong
735 Montgomery Street, Suite 480
San Francisco, CA 94111

AMENDMENT TO MEMORANDUM OF OPTION TO PURCHASE EASEMENT

This AMENDMENT TO MEMORANDUM OF OPTION TO PURCHASE EASEMENT (this "Memorandum") is entered into as of the 30 day of January, 2022 by and between Dustin Wright (as assignee of Jan M. Alexander (fka Jan M. Wright) ("Previous Owner")) ("Owner") and Three Corners Solar, LLC, a Delaware limited liability company, a Delaware limited liability company ("Optionee"). Owner and Optionee are sometimes referred to herein individually as a "Party" and collectively as the "Parties."

RECITALS

A. Owner and Optionee previously entered into an Option Agreement to Purchase Easement dated October 15, 2018, a Memorandum of which was recorded on January 30, 2019 at the Kennebec County Registry of Deeds in Book 13139, Page 157 (the "Agreement") providing Optionee with an exclusive option to purchase an easement on certain real property situated in the County of Kennebec, State of Maine, more particularly described on the attached Exhibit B attached hereto and made a part hereof (the "Premises"), on the terms and conditions set forth in the Agreement.

B. Previous Owner transferred certain parcel of land in the Town of Benton, County of Kennebec, including the property covered by the Agreement to Owner, pursuant to that certain Warranty Deed dated January 12, 2021, which was recorded on February 1, 2021 in the Kennebec County Registry of Deeds in Book 13878, Page333 (the "Warranty Deed").

C. The Parties have amended the Agreement pursuant to an Amendment to Option Agreement to Purchase Easement dated as of January 30, 2022 (the "Amendment") to amend certain terms of the Agreement as further described below, among other terms. The Parties desire to execute this Memorandum to put the public on notice of certain terms of the Amendment.

NOW, THEREFORE, in consideration of the mutual promises set forth in the Agreement and the Amendment, and of other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. **Amendments.**

The Amendment amends the Easement Parcel Location in Exhibit B.

2. **Miscellaneous.**

i. Interpretation. Nothing contained in this Memorandum or the Amendment shall be construed as modifying the Agreement except as specifically provided pursuant to the Amendment. Capitalized terms used but not otherwise defined in the Amendment shall have the same meanings assigned to them in the Agreement. The purpose of this Memorandum is to give public notice of the existence of the Amendment. In the event of any inconsistency between this Memorandum and the terms and conditions of the Amendment, the Amendment shall prevail.

ii. Counterparts. This Memorandum may be executed in multiple counterparts, all of which shall be considered one and the same agreement and each of which shall be deemed an original.

[*Signature pages follow*]

IN WITNESS WHEREOF, the parties have executed this Memorandum to be effective as of the date first set forth above.

OWNER:

By: _____
Dustin Wright

STATE OF §

COUNTY OF Kennebec §

I, the undersigned Notary Public, hereby certify that Dustin Wright, whose name is signed to the foregoing conveyance, and who is known to me or proved to me on the basis of satisfactory evidence, acknowledged before me on this day that, being informed of the contents of the conveyance, he/she executed the same voluntarily on the same date the same bears date.

Given under my hand this 30 day of January, 2022.

[seal of Notary]

_____
Notary Public

Neil Postlewaite
Notary Public, State of Maine
My Commission Expires July 10, 2022

[*Signature pages continue*]

OPTIONEE:

THREE CORNERS SOLAR, LLC,

a Delaware limited liability company

By:_____

Name: Michael U. Alvarez
Title: Chief Operating Officer

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of San Francisco

On JANUARY 14, 2022, before me, Jocelyn Koo, Notary Public, personally appeared Michael U. Alvarez, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

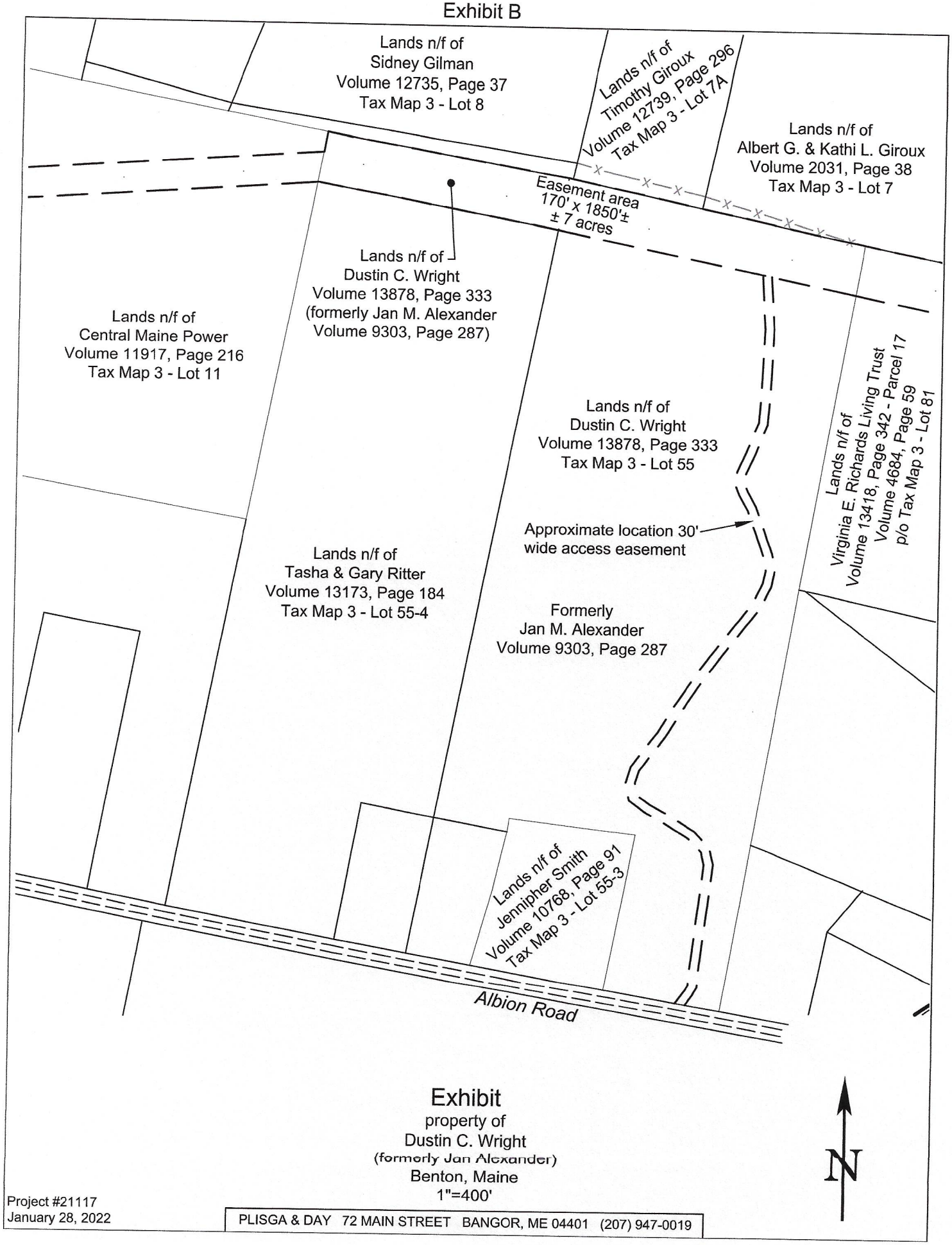
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JOCELYN KOO
Commission No. 2302816
NOTARY PUBLIC-CALIFORNIA
ALAMEDA COUNTY
My Comm. Expires SEPTEMBER 19, 2023

Signature_____ (Seal)

Exhibit B



Exhibit

property of
Dustin C. Wright
(formerly Jan Alexander)
Benton, Maine
1"=400'

Project #21117
January 28, 2022

PLISGA & DAY 72 MAIN STREET BANGOR, ME 04401 (207) 947-0019

ACCESS LICENSE AGREEMENT

THIS ACCESS LICENSE AGREEMENT ("Agreement"), dated January 28, 2022, is entered into between **CENTRAL MAINE POWER COMPANY**, a Maine corporation having a primary place of business at 83 Edison Drive, Augusta, Kennebec County, Maine 04336, ("CMP"), and **THREE CORNERS SOLAR, LLC,** a Delaware limited liability company with a mailing address of 330 Congress Street, 6th Floor, Boston, MA 02210 ("Licensee"), for itself and its successors and assigns.

W I T N E S S E T H:

WHEREAS, CMP owns certain land located in the Town of Benton, State of Maine, designated by CMP as the Albion Road Substation Lot situated at Benton, Maine, described in deeds dated May 3, 1977 and recorded in the Kennebec County Registry of Deeds in Book 2009, Page 284, and other land abutting the Albion Road Substation Lot described in a deed dated February 19, 2015 recorded in said County Registry of Deeds in Book 11917, Page 216 ("CMP's land").

WHEREAS, Licensee owns, leases or has options to own, lease or has easement rights to certain land (the "Licensee Land") situated at Benton, Maine, as described on **Exhibit B** attached hereto related to Licensee's solar project (the "Project"), and those rights will be vested after Licensee exercises its options.

WHEREAS, Licensee is desirous of entering into an access license agreement for the purposes of Licensee's construction, maintenance, repair, rebuilding, re-space, replacement, operation, patrol and removal of a single circuit overhead, three-phase 115 kV electric generator lead line ("Improvements") across a portion of CMP's land as described in this Agreement consisting of suitable and sufficient poles, cables and towers and sufficient foundations together with lines extending upon, within and between the same for the transmission of electric energy and intelligence related thereto, together with any fixtures, anchors, guys, cross-arms and other equipment and appurtenances related to the Project, such Improvements to be permitted in the location and as depicted on a plan attached hereto as **Exhibit A** and made a part hereof (the "Access Area").

WHEREAS, CMP is willing to enter into an access license agreement to permit the Improvements within the Access Area subject to the conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the foregoing recitals, the mutual covenants contained herein, and other good and valuable consideration, the receipt of which is hereby acknowledged, CMP and Licensee agree as follows:

1. CMP hereby permits the Improvements within the Access Area conditioned upon and provided that the Improvements shall at all times be subject to and in accordance with the terms and conditions set forth in this Agreement.

2. This Agreement and the Improvements shall in no way encumber CMP's operation and maintenance of its transmission line(s) within CMP's land. Licensee's use of the Access Area shall not interfere with or impair the facilities and operations of CMP, including the addition, operation, replacement, upgrade and maintenance of any transmission lines, structures or other transmission line facilities; provided that this restriction shall not be construed to prevent Licensee from constructing and maintaining any permitted Improvements set forth in **Exhibit A** in accordance with and subject to the terms of this Agreement.

3. This Agreement shall commence on the date hereof and expire on January 28, 2064, ("Term"). The Improvements may be revoked and this Agreement terminated prior to the expiration of the Term upon sixty (60) days' written notice by CMP for any failure to comply with the terms and conditions of this Agreement; provided, however, that Licensee shall have thirty (30) days following such notice to cure such failure. If the thirty (30) day cure period does not allow sufficient time to cure such failure then CMP may agree upon a specific extension of the time to cure the failure or agree upon a specific resolution of the failure. Any extension of the term of this Agreement shall be separately agreed to by the parties in writing and any negotiations regarding an extension of the Term shall commence within six (6) months prior to the expiration date stated in this paragraph.

4. Once fully executed, Licensee may record at Licensee's expense this Agreement in the registry of deeds in which the Access Area is located. In the event that this Agreement is terminated or abandoned in accordance herewith, CMP may cause a notice thereof to be recorded on Licensee's behalf at such registry of deeds.

5. CMP shall have use of roadways that now exist or will be constructed by Licensee within the Access Area or between any public road and CMP's land for all purposes of access to its transmission line corridors. Gated roads are acceptable, provided a dual lock system is established for independent access.

6. Licensee shall notify CMP prior to commencement of construction of any Improvements on CMP land which shall be located and constructed as shown on **Exhibit A** and the Design Plan (defined below) therein contained. In the event that Exhibit A does not include the site design showing grade, elevation and design ("Design Plan"), or in the event that anticipated construction of any Improvements by Licensee will vary in design or construction from that set forth in **Exhibit A** or the Design Plan otherwise agreed to by CMP prior to this Agreement, then prior to construction of the Improvements, Licensee shall provide CMP with a site design showing the grade, elevation and design to review for clearances and determine compliance with the terms of this Agreement. CMP shall have the right to object to any such modified site design that provides for inadequate clearance or is not in compliance with this Agreement

and require Licensee to redesign the Improvements in order to comply with the same prior to commencement of construction.

7. Subject to the terms, limitations, and conditions in this Agreement and **Exhibit A**, CMP will permit the construction and maintenance of the Improvements across the Access Area by Licensee.

8. The Improvements shall be constructed, repaired, maintained, protected, operated, and removed by Licensee and at no cost or expense to CMP. Licensee shall own the Improvements constructed by Licensee.

   Licensee's use of the Access Area shall at all times be performed in accordance with the requirements of any and all applicable codes and standards, federal, state, or local codes, rules or ordinances and commonly accepted utility practice (including, without limitation, safety regulations). Without limiting the foregoing any Improvements constructed and located within the Access Area shall be constructed and maintained at the sole risk and expense of Licensee

9. Any roadway constructed for construction and maintenance of the Improvements and located within the Access Area shall be constructed in a manner so that the existing grade shall not be increased beyond Licensee's grading plan previously approved by CMP in accordance with this Agreement.

10. Licensee will take any steps as required by local, state, and federal permits, laws, ordinances, rules, and regulations to ensure that erosion does not occur and will, at their sole expense, repair any erosion which may occur as a result of the exercise of the rights herein.

11. During the term of this Agreement, Licensee shall maintain, or cause its contractors to maintain, appropriate and adequate workers' compensation, automobile and commercial general liability insurance (in an amount not less than Three Million Dollars ($3,000,000) per occurrence and Five Million Dollars ($5,000,000) in the aggregate) and other applicable insurance, with solvent, reputable insurance companies rated not less than A-/VII in the most current "Best's Key Rating Guide" and qualified to do business in the State of Maine in connection with the use of CMP's land under this Agreement. Each of the policies required hereunder (other than workers' compensation insurance coverage) shall name CMP as additional insured and shall include endorsements that are reasonably acceptable to CMP. Licensee shall provide to CMP a copy of the certificate of insurance or a copy of the insurance policy and relevant additional insured endorsement evidencing coverage required hereby at full execution of this Agreement and thereafter, and from time to time upon CMP's request and one (1) time annually, during the term of the Agreement. The amount of insurance coverage required by this Agreement may be reassessed every 5 years and amended as necessary to ensure that the coverage adjusted for inflation is consistent with the amounts set forth herein.

12. Licensee will be responsible for all taxes lawfully assessed against any of the Improvements installed by or for Licensee within CMP land, including without limitation the Access Area.

13. CMP shall not be liable to Licensee for any damage to Licensee's property, including the Improvements, on CMP land caused by CMP's use of its land for public utility purposes, other than due to CMP's willful misconduct.

14. Except for the Improvements permitted by this Agreement, no buildings, improvements, or other structures (including but not limited to fencing) shall be erected, moved or placed on CMP land by Licensee, nor shall any trees or other vegetation (beyond that used for typical erosion control purposes as agreed to by CMP and in compliance with CMP's non-capable species list), be grown or cultivated, within the Access Area by Licensee. No equipment, vehicles, or materials shall be stored upon CMP land by Licensee except as may be provided for in a separate agreement for temporary construction access and laydown area, not made a part hereof.

15. No fueling or refueling of equipment or fuel storage shall be permitted on the Access Area (or any adjacent portion of CMP land) by Licensee, except as may be provided for in a separate agreement for temporary construction access and laydown area, not made a part hereof. No snow shall be stockpiled within the Access Area (or any adjacent portion of CMP land).

16. Licensee or its authorized agent(s) shall notify the Dig Safe Call Center prior to commencement of any excavation on the Access Area at 1-888-DIG-SAFE and comply with the provisions of both the Maine Dig Safe Statute Title 23, M.R.S.A. Section 3360-A.

17. Licensee shall comply with Maine's Overhead High Voltage Line Safety Act, 35-A M.R.S. § 751-761 (and any subsequent amendments to or replacements thereof), and shall not use any equipment, mechanical or otherwise, within fifteen feet (15') of the lowest overhead electric conductor constructed, maintained, and operated over the Access Area (and any adjacent portion of CMP land) unless there is a CMP inspector on site inspecting the work. The CMP inspector shall have the right, but not the duty, to halt all work on CMP land if it is deemed that the Licensee's actions present an unreasonable risk to persons or CMP property.

18. Licensee shall be responsible for the cost of relocating or raising pole structures and or wires, located within CMP land, if the constructed Improvements vary from the Design Plan as approved pursuant to Section 6 and CMP determines in its sole discretion that (i) the grade of any roadway or (ii) the Improvements interfere with said pole structures or wires, or CMP's maintenance thereof.

19. Licensee will, at its sole expense, obtain prior to any construction (or as the case may be prior to undertaking any action or making any improvement requiring a local, state or federal permit), and will at all times comply with, construct, operate and maintain the Improvements in compliance with all local, state and federal permits, and will comply with all laws, ordinances, rules, regulations, conditions of approval, and requirements of all

federal, state and local governments and appropriate departments, commissions, boards and officers thereof, which may be applicable to the exercise of the rights herein and use of the Access Area contemplated hereby. CMP shall have no obligation to obtain, or join in obtaining, any local, state or federal permits applicable to the Improvements. Licensee shall not cause CMP to be in violation of any permits and shall not subject CMP, the CMP land or any portion of CMP's facilities located within the CMP land to any stipulation or permit condition pertaining to vegetation management, equipment access, buffers or other environmental restrictions, including but not limited to stipulations and permit conditions of the Maine Department of Environmental Protection without CMP's prior written consent. In the event that CMP determines in its sole discretion, the need to join in (or desires to participate as an interested or affected party in any proceeding regarding) an application for any permits related to Licensee's activities on CMP land, any such permit applications shall be provided to CMP for approval prior to submittal (other than Licensee's Maine Department of Environmental Protection and U.S. Army Corps of Engineers applications which CMP may review after Licensee's submission), and any such permit related documents shall be shared with CMP. Without limiting the generality of the foregoing, unless CMP has hereinafter provided prior written consent to be bound by a term or restriction in any above permit, following its review and approval thereof prior to the permit being issued or obtained, CMP shall have no obligation to comply with, take any action or abide by any restriction, contained in any local, state, or federal permit (or any agreement of Licensee in connection therewith).

20. Upon expiration, termination, or abandonment of this Agreement, Licensee shall at its own cost and expense promptly remove the Improvements and restore and repair any damage to the Access Area (and any adjacent portion of the CMP land) to CMP's reasonable satisfaction. In accordance with Section 4, CMP shall be entitled to record a notice of the termination of this Agreement on Licensee's behalf in the Registry of Deeds in which the Access Area is located. CMP shall have the right to determine this Agreement abandoned in the event that Licensee fails to use the Access Area for a period of five consecutive years.

21. CMP may, at its option and sole cost, and after commercially reasonable advance notice to Licensee in order to permit coordination and cause minimal disruption to Licensee's permitted uses hereunder, relocate, move, modify, or otherwise alter the location of the Access Area and/or Improvements thereon provided said relocation, movement, modification or alteration is for public utility purposes and the Licensee retains substantially the same uses as described herein in the locations shown in **Exhibit A** hereto. In the event that actions under this Paragraph require taking Licensee's Project off-line, CMP will endeavor to work with Licensee to coordinate timelines and minimize disruptions in accordance with the terms of the LGIA between Licensee and CMP.

22. Licensee, for itself and its directors, officers, employees, contractors, agents and successors and assigns, hereby releases and waives any and all claims, demands, damages, liabilities, actions, causes of action, suits, judgments, penalties, and fines of any type or nature (collectively, "Claims"), including but not limited to claims for personal injury, death, or property damage, they now have or may have in the future against CMP and its parent

corporation and affiliates and their respective directors, officers, employees, contractors, agents, successors, and assigns, which may arise out of the Licensee's use of the Access Area, or the Project pursuant to this Agreement or otherwise.

23. Licensee, for itself and its directors, officers, employees, agents, successors, and assigns, agrees to indemnify CMP and its parent corporation and affiliates and their respective directors, officers, employees, agents, contractors, successors and assigns and hold it and them harmless from and against any and all claims, arising out of the Licensee's use of the Access Area, or the Project. Additionally, Licensee for itself and its directors, officers, employees, agents, successors, and assigns, hereby waives any defenses or immunity they might otherwise have under applicable worker's compensation laws or any other statute or judicial decision disallowing or limiting such indemnification, including without limitation, Diamond International Corp. v. Sullivan & Merritt, Inc., 493 A2d. 1043 (Me. 1985), and Licensee consents to a cause of action by CMP for Indemnity.

24. Licensee agrees that in the event of a breach by Licensee of the terms and conditions of this Agreement, CMP shall be entitled to seek injunctive relief, in addition to any other appropriate relief at law to which it may be entitled, including the right of termination as set forth above and any claim for damages or indemnification hereunder; provided, however, that, in connection with seeking such relief, and without limiting any other remedy or indemnity provided herein, in the event Licensee shall fail to comply with the terms, covenants and conditions set forth in this Agreement, including any exhibits or attachments hereto, or defaults in any of its obligations hereof, and Licensee shall fail to cure any such default in accordance with Section 3, and CMP consequently initiates a legal proceeding against Licensee in order to enforce or defend CMP's rights under this Agreement and such process results in a final judgment or ruling in favor of CMP, then Licensee shall reimburse CMP for all direct, indirect, or incidental documented expenses incurred, including, but not limited to reasonable attorneys' fees and costs, in order to enforce CMP's rights hereunder or otherwise in connection with any such legal proceeding.

25. Licensee may assign this Agreement, and its rights hereunder, at any time (a) to any entity providing financing as security for or in connection with a financing or other financial arrangement for the Project (a "Security Assignment"), or (b) to any other person or entity who accepts and assumes in writing by separate assignment agreement all of Licensee's rights and obligations hereunder, provided, however, that, except for any Security Assignment, the effectiveness of any such assignment shall be conditioned upon Licensee not being in default of this Agreement. Licensee's right to make a Security Assignment is further subject to and conditioned upon the requirement that if the financing party exercises its remedies with respect to this Agreement, all terms of this Agreement, including without limitation any provision regarding the subordination of rights of Licensee, shall be binding upon the financing party, and upon the recipient of a future transfer by or assignment from the Security Assignment. Any Security Assignment shall be subject to the requirements of this paragraph. Except for any Security Assignment, any assignment of this Agreement is subject to CMP's written approval and consent, such consent not to be unreasonably conditioned, withheld or delayed, and which may be conditioned on, among other things, the assignee's (1) compliance with all insurance and indemnification obligations under the

Agreement, (2) ownership of the Project; and (3) satisfactory production of written documentation to provide financial assurance that assignee is able to fulfill all obligations under the Agreement. Prior to any assignment, except a Security Assignment, Licensee shall provide CMP with written notice of such assignment. Each party agrees that it shall, at any time and from time to time during the term of this Agreement and within (10) days after a written request by the other party, execute, acknowledge and deliver to the requesting party a written statement certifying that this Agreement is unmodified and in full force and effect (or modified and stating the modifications), the dates to which the payments and any other charges have been paid, and that there are no defaults existing (or that defaults exist and stating the nature of such defaults), and stating such other facts as the requesting party may reasonably provide. The failure of a party to deliver any such certificate within such time shall be conclusive upon such party that this Agreement is unmodified and in full force and effect, all payments to such party are current, there are no defaults existing, and such other facts are true and correct.

In the event of an assignment, except a Security Assignment, the assignee shall execute an agreement to assume all of Licensee's obligations in a form reasonably acceptable to CMP, which shall contain, in a form reasonably acceptable to CMP, a covenant on the part of the assignee to assume all of the obligations of Licensee hereunder. Within ten (10) business days of the execution by Licensee and any assignee of any permitted assignment, Licensee shall deliver to CMP an executed copy thereof.

26. This instrument is an agreement between the parties and no provision in this Agreement shall be construed as conveying any rights to Licensee not expressly stated herein nor shall any liability arise from CMP's use of its land.

27. This Agreement shall inure to the benefit of and be binding upon the respective successors and permitted assigns of a party hereto. The use of the term CMP or Licensee herein shall mean and include its and their respective successors and assigns.

28. In the event that any changes, modifications, or amendments may be required or requested by either party, the parties agree that any such changes, modifications, or amendments must be in writing and executed by both parties.

29. This Agreement may be executed in any number of counterparts, each of which shall be effective only upon delivery and thereafter shall be deemed an original, and all of which shall be taken to be one and the same instrument, for the same effect as if all parties hereto had signed the same signature page.

The parties hereto agree to the terms of this Agreement as indicated below by their signatures or the signatures of their duly authorized representatives.

Signed, Sealed and Delivered
in presence of:

CENTRAL MAINE POWER COMPANY

_____
Witness

By: _____
Frederick Ball, Manager
Energy Land Management

STATE OF MAINE
KENNEBEC, ss.

January 28, 2022.

The above named Frederick Ball, Manager, Energy Land Management, personally appeared before me and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Central Maine Power Company.

Megan L. Masarsky
Notary Public/Attorney at Law

_____
Printed Name
My Commission Expires:

MEGAN L. MASARSKY
Notary Public
Maine
My Commission Expires Feb. 10, 2027

THREE CORNERS SOLAR, LLC

Witness

By: _____
Printed Name: Charles Spiliotis
Its: Chief Investment Officer

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA

COUNTY OF SAN FRANCISCO

On January 27, 2022, before me, Jocelyn Koo, Notary Public, personally appeared Charles Spiliotis, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

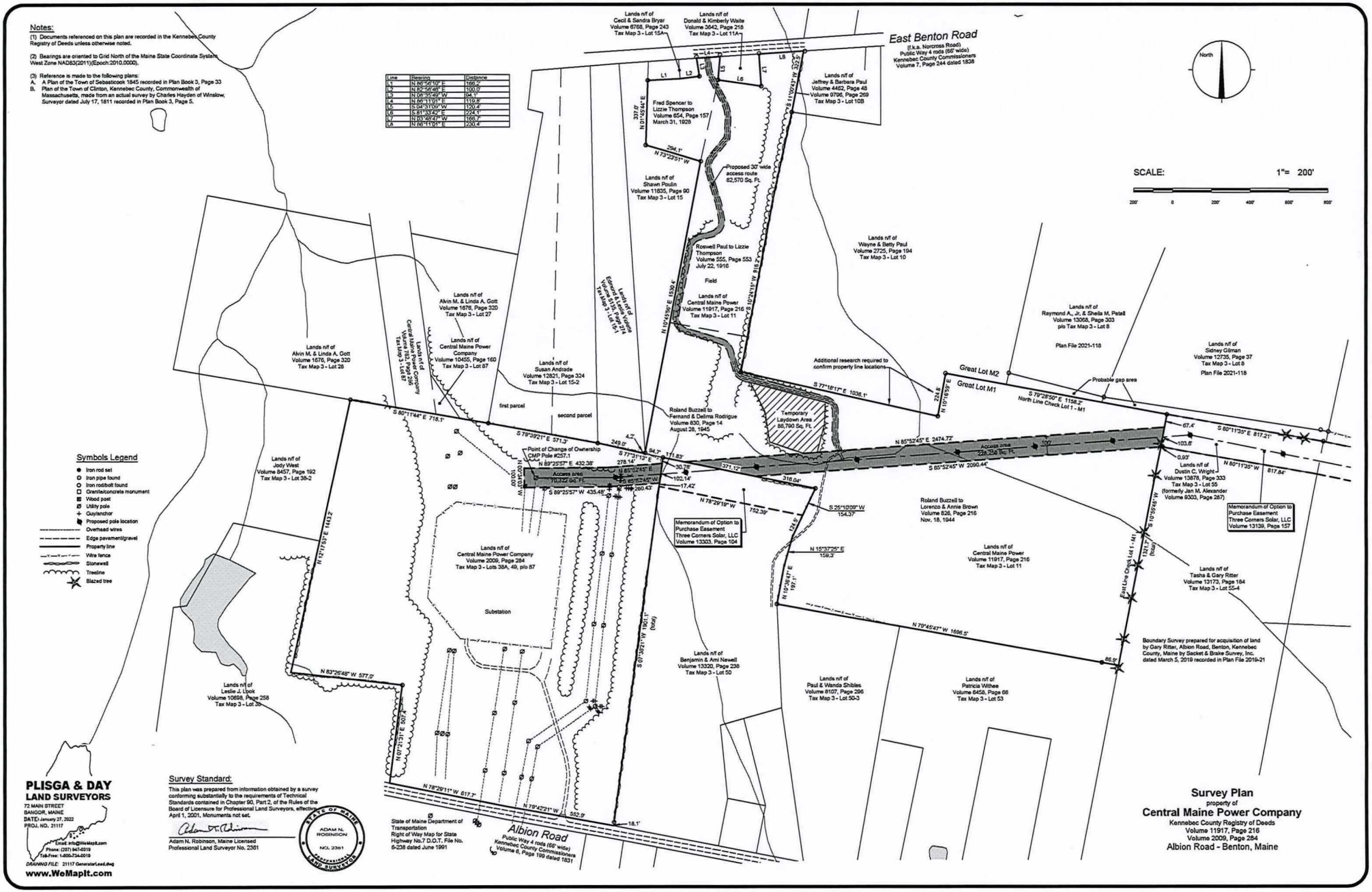
WITNESS my hand and official seal.

Signature _____

JOCELYN KOO
Commission No. 2302816
NOTARY PUBLIC-CALIFORNIA
ALAMEDA COUNTY
My Comm. Expires SEPTEMBER 19, 2023

EXHIBIT A

Site Exhibit



Line	Bearing	Distance
L1	N 80°56'10" E	169.4'
L2	N 82°56'48" E	160.0'
L3	N 08°35'49" W	94.1'
L4	N 66°11'01" E	119.8'
L5	S 04°31'09" W	120.4'
L6	S 81°33'42" E	224.1'
L7	N 83°48'47" W	166.7'
L8	N 66°11'01" E	230.4'

EXHIBIT B

Licensee Land

Tax Map/Plan and Lot	Book and Page	Location	Three Corners Solar Interest
Plan 01, Lots 7, 8, 9, 10, 11, 12, 14, 17, 18, 19, 20, 22, and 23	Book 12861 Page 325, Book 12887, Page 103, Book 13184, Page 55, Book 14324, Page 333	Unity Twp.	Option to Lease
Map 04, Lots 49 and 51		Clinton	Option to Lease
Map 08, Lot 10		Benton	Option to Lease
Map 4, Lot 52 Map 8, Lots 23, 24			Option to Purchase Easement
Map 08, Lot 14	Book 13778, Page 53, Book 13139, Page 162	Benton	Option to Lease (array), Option to Purchase Easement (Genlead)
Map 08, Lot 11	Book 13034, Page 140, Book 14329, Page 255	Benton	Option to Purchase Easement
Map 04, Lots 28 and 28-2	Book 13482, Page 279, Book 13754, Page 102, Book 13785, Page 310	Benton	Fee (owned by affiliate of Licensee)
Map 04, Lot 30.2	Book 13139, Page 152, Book 14144, Page 88	Benton	Option to Purchase Easement
Map 04, Lot 30.1	Book 13139, Page 142	Benton	Option to Purchase Easement
Map 04, Lot 42	Book 14328, Page 337	Benton	Fee
Map 04, Lot 3-1	Book 12982, Page 71	Benton	Option to Purchase
Map 04, Lot 4	Book 13889, Page 125, Book 14289, Page 55	Benton	Option to Purchase
Map 03, Lot 82	Book 13888, Page 66	Benton	Option to Purchase Easement
Map 03, Lot 81	Book 13097, Page 32, Book 13888, Page 189, Book 14324, Page 220	Benton	Option to Purchase Easement
Map 03, Lot 55	Book 13139, Page 157	Benton	Option to Purchase Easement
Map 03, Lot 50	Book 13303, Page 104	Benton	Option to Purchase Easement

TEMPORARY LICENSE AGREEMENT

Central Maine Power Company (CMP), a Maine corporation with offices at 83 Edison Drive in Augusta, Maine 04336 grants to **Three Corners Solar, LLC,** a Delaware limited liability company with a mailing address of 330 Congress Street, 6th Floor, Boston, MA 02210 (Licensee), a license over a portion of CMP's land described in deeds dated May 3, 1977 and recorded in the Kennebec County Registry of Deeds in Book 2009, Page 284, known as the Albion Road Substation Lot, and other land abutting the Substation Lot described in a deed dated February 19, 2015 recorded in said County Registry of Deeds in Book 11917, Page 216, in the Town of Benton, Maine, (hereinafter the "Property").

This Temporary License Agreement ("Agreement") shall allow Licensee to use the Property for construction access and laydown area, as described in Licensee's access and staging plan submitted to CMP and as shown on Exhibit A both attached hereto, during the construction activities associated with the Licensee's generator lead line. The License to be contingent on the following conditions:

1. Licensee is responsible for providing a copy of this Agreement to its employees, contractors, subcontractors and/or agents and may be asked to provide to CMP an acknowledgment of receipt of this Agreement by said employees, contractors, subcontractors and/or agents.

2. Licensee shall be allowed access to the Property thru the existing access roads identified on Exhibit A and shall maintain its own gates and locks on the gate. The gates will be kept closed and locked at the end of each work-day and/or during those times when not in use.

3. The term of the License shall commence on 7/15/22 and will expire 7/15/24, unless either party notifies the other party of their intention to cancel the License, in writing, at least 60 days before such cancellation. At the end of this License or any cancellation, Licensee will return the Property to its original or better condition, except CMP may request that gates remain in place.

4. Licensee will make a one-time payment in the amount of [redacted] for this License, which amount shall be payable within thirty (30) days after the Effective Date (as defined below).

5. Termination or cancellation of this License shall not affect the obligations for acts or omissions occurring prior to termination or cancellation.

6. Licensee will at its sole expense obtain and will at all times comply with and maintain the Property in compliance with all local, state and federal permits, and will comply with all laws, ordinances, rules, regulations and requirements of all federal, state and local governments and appropriate departments, commissions, boards and officers thereof, which may be applicable to the exercise of the rights granted herein and use of the License contemplated hereby.

7. Licensee agrees that the activity allowed by this License shall not create or cause damage to the Property. Licensee shall promptly take, at their sole expense, any corrective actions or repairs to any damage to Property including but not limited to damage to the access road and or laydown area caused by Licensee or its employees, agents, contractors, invitees or others, and take any steps necessary to insure that erosion does not occur and repair any erosion which may occur as a result of the exercise of the rights herein granted.

8. Licensee shall not undertake or permit: (a) construction of any structure or improvement on the Property beyond those described in Exhibit A; or (b) storage, even temporarily, of hazardous materials, products or equipment on the Property in each case without prior notice to and written approval by CMP. Lessee shall comply with all applicable local, state and federal guidelines and procedures for material and chemical containment and/or transfer at its sole cost and responsibility.

9. Licensee agrees to keep the Property neat, clean, orderly and safe and shall not permit any waste or nuisance on the Property. If CMP determines, in its sole discretion, that Licensee is not acting within a reasonable time to so maintain the Property, CMP shall provide written notice to Licensee and Licensee shall have thirty (30) days following such notice to cure such failure. If the thirty (30) day cure period does not allow sufficient time to cure such failure then CMP may agree upon a specific extension of the time to cure the failure or agree upon a specific resolution of the failure. After such thirty (30) day period (as may be extended), CMP may cancel this License, or correct the situation and Licensee agrees to reimburse CMP for documented expenses incurred for such corrective actions. Within thirty (30) days of CMP's submittal of an invoice to Licensee, Licensee shall reimburse CMP for such expenses for such corrective actions and all related work. CMP's actions to correct the failure to maintain as required and Licensee's payment for such actions shall not waive Licensee's default and shall not make CMP liable to Licensee for any damages resulting therefrom or any other claim by Licensee.

10. Licensee shall not assign this License nor lease or underlet or improve the Property or to make or suffer to be made any alteration thereon.

11. Licensee is fully familiar with the condition of the Property. CMP has made no representations of whatever nature as to the condition of the Property and Licensee accepts the Property "as is".

12. The License herein granted shall at all times be subject to and shall not in any way limit CMP's rights in or use of the Property, provided that CMP shall not materially obstruct or interfere with Licensee's use and enjoyment of the License or access thereto. Further, nothing in this License shall be construed as conveying any rights not expressly granted herein, nor shall any liability arise from CMP's use of its Property other than due to CMP's willful misconduct.

13. If Licensee or its employees, agents, contractors, invitees or others caused or causes a violation of the Federal Occupational Safety and Health Administration regulations and/or Maine Revised Statute: Title 35-A, Chapter 7A (HIGH VOLTAGE SAFETY

ACT) or any other rule or regulation applicable to CMP and it is determined by CMP that such conduct presents an immediate threat to public safety, such acts shall constitute a default under this License and CMP shall have the right to correct such violation immediately, including but not limited to removing Licensee from the Property without notice. If CMP determines that said conduct does not impose an immediate safety hazard, after written notice from CMP, Licensee shall have thirty (30) days to correct the situation unless Licensee has obtained prior written consent from CMP.

14. During the term of this License, Licensee shall maintain, or cause its contractors to maintain, appropriate and adequate workers' compensation, automobile and commercial general liability insurance (in an amount not less than Three Million Dollars ($3,000,000) per occurrence and Five Million Dollars ($5,000,000) in the aggregate) and other applicable insurance, with solvent, reputable insurance companies rated not less than A-/VII in the most current "Best's Key Rating Guide" and qualified to do business in the State of Maine in connection with the use of the Property under this Agreement. Each of the policies required hereunder (other than worker's compensation insurance coverage) shall name CMP as additional insured and shall include endorsements that are reasonably acceptable to CMP. Licensee shall provide to CMP a copy of the certificate of insurance or a copy of the insurance policy and relevant additional insured endorsement evidencing coverage required hereby at full execution of this Agreement and thereafter, and from time to time upon CMP's request and one (1) time annually, during the term of the Agreement.

15. This License shall terminate automatically to the extent any portion of the Property is condemned or taken by any manner for any public or quasi-public use as of the date of such taking.

16. Any notices required herein shall be addressed to CMP and Licensee at the addresses provided above or to such other place as may be designated by written notice. Unless otherwise directed, all License fees shall be payable to CMP at the address stated above.

17. Licensee agrees to indemnify CMP and its parent corporation and affiliates and its and their directors, officers, employees, agents, contractors, successors and assigns and protect and hold it and them harmless from and against all claims, penalties, fines demands and actions arising out of the use of the Property by Licensee, or its employees, agents, contractors, invitees or others.

18. This License constitutes the entire agreement between the parties. There are no terms, obligations, or conditions pertaining to this license other than those contained herein.

IN WITNESS WHEREOF, **Central Maine Power Company** and Three Corners Solar, LLC, have caused this instrument to be signed in its corporate name both hereunto duly authorized this 28th day of January, 2022 (the "Effective Date").

ATTEST:

CENTRAL MAINE POWER COMPANY

Witness

Frederick Ball, Manager
Energy Land Management

Licensee:
THREE CORNERS SOLAR, LLC

Witness

Name:
Its:

STATE OF MAINE
COUNTY OF KENNEBEC, ss. January 28, **2022**

Personally appeared the above named Frederick Ball, Manager, Energy Land Management and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of Central Maine Power Company.

Before me,

Notary Public / Attorney at Law

MEGAN L. MASARSKY
Notary Public
Maine
My Commission Expires Feb. 10, 2027

MEGAN L. MASARSKY
Notary Public
Maine
My Commission Expires Feb. 10, 2027

IN WITNESS WHEREOF, Central Maine Power Company and Three Corners Solar, LLC, have caused this instrument to be signed in its corporate name both hereunto duly authorized this ____ day of _____, 2022 (the "Effective Date").

ATTEST:

CENTRAL MAINE POWER COMPANY

_____
Witness

_____
Frederick Ball, Manager
Energy Land Management

Licensee:
THREE CORNERS SOLAR, LLC

_____
Witness

_____
Name:
Its:

STATE OF MAINE
COUNTY OF KENNEBEC, ss. **_____, 2022**

Personally appeared the above named Frederick Ball, Manager, Energy Land Management and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of Central Maine Power Company.

Before me,

_____
Notary Public / Attorney at Law

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA

COUNTY OF SAN FRANCISCO

On January 27, 2022, before me, Jocelyn Koo, Notary Public, personally appeared Charles Spiliotis, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

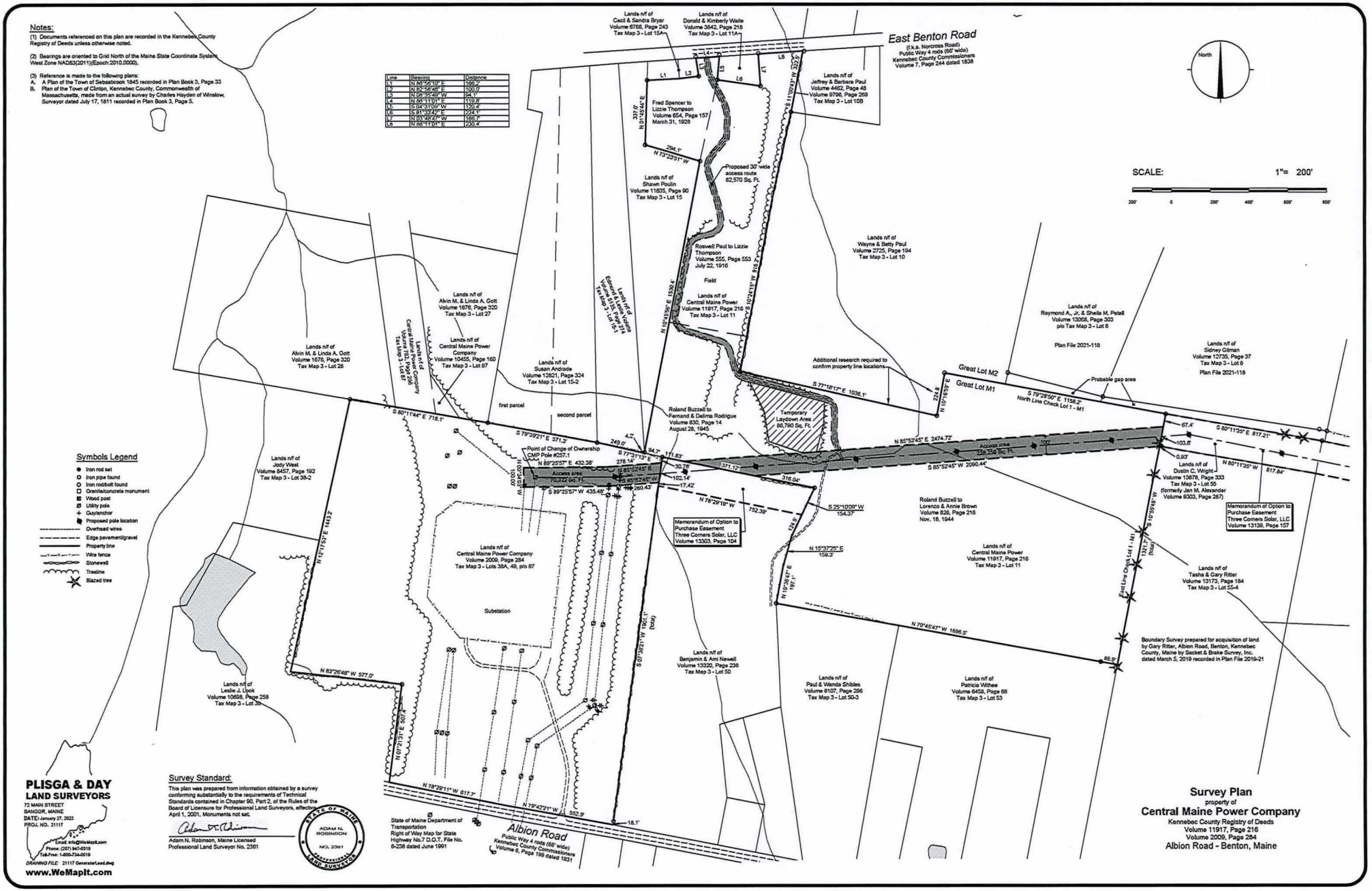
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

NCC1 JOCELYN KOO NCC1
Commission No. 2302816
NOTARY PUBLIC-CALIFORNIA
ALAMEDA COUNTY
My Comm. Expires SEPTEMBER 19 2023

Exhibit A



Line	Bearing	Distance
L1	N 80°56'10" E	169.4'
L2	N 82°56'48" E	160.0'
L3	N 08°35'49" W	94.1'
L4	N 66°11'01" E	119.8'
L5	S 04°31'09" W	120.4'
L6	S 81°33'42" E	224.1'
L7	N 83°48'47" W	166.7'
L8	N 66°11'01" E	230.4'

OPR BK 13303 PGS 104 - 108 08/16/2019 01:33:53 PM
INSTR # 2019018132 # OF PAGES 5
ATTEST: BEVERLY BUSTIN-HATHEWAY
REGISTER OF DEEDS KENNEBEC COUNTY, ME

MEMORANDUM OF OPTION TO PURCHASE EASEMENT

Owners:		BENJAMIN AND AMI NEWELL (as successors in title to Timothy Hendrickson and Robert Carruth) 16 Main Street Albion, ME 04910
Grantee:		THREE CORNERS SOLAR, LLC its successors or assigns c/o Longroad Development Company 133 Federal Street, Suite 1202 Boston, MA 02110
1.	Effective Date of Option:	October 24, 2018
2.	Description of Easement Area:	An approximately 2.7 acre portion of land located in the Town of Benton, Kennebec County, Maine, shown as Tax Map 3 Lot 50 of the Tax Maps of the Town of Benton and being more particularly described in a deed to Hendrickson and Carruth dated June 19, 2017 and recorded at the Kennebec County Registry of Deeds in Book 12637 Page 259, said Easement Area being preliminarily located as shown on the attached Exhibit A. Said property has been transferred by Hendrickson and Carruth to Owner by deed recorded in said Registry.
3.	Option Period:	Three (3) years from Effective Date of Option; provided that Grantee shall have the right to extend the Option Period for one (1) additional period of one (1) year.

[Intentional end of page. Signatures and acknowledgement follow on separate page.]

5 ODonnell Lee

IN WITNESS WHEREOF, the undersigned have executed this Memorandum as of this 18 day of July, 2019.

WITNESS:

Amanda Y Dow
Ben Newell

Print name: Amanda Y Dow

Amanda Y Dow
Ami Newell

Print name: Amanda Y Dow

OWNERS:

Benjamin Newell

Ami Newell

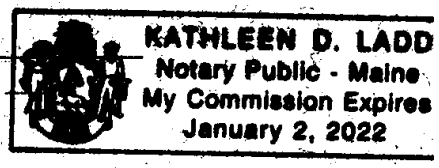
STATE OF
COUNTY OF

July 18, 2019

Then personally appeared the above-named Benjamin Newell and acknowledged the foregoing instrument to be his free act and deed.

Kathleen D Ladd

Notary Public
Name: _____
My Commission Expires: _____



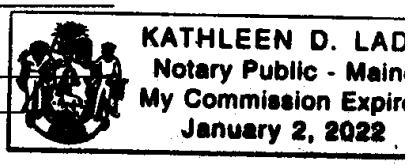
STATE OF
COUNTY OF

July 18, 2019

Then personally appeared the above-named Ami Newell and acknowledged the foregoing instrument to be her free act and deed.

Kathleen D Ladd

Notary Public
Name: _____
My Commission Expires: _____



WITNESS:

GRANTEE:

THREE CORNERS SOLAR, LLC

By: _____
Name: Peter Keel
Title: CFO

STATE OF ~~MAINE~~ Massachusetts
COUNTY OF Suffolk

Dated: 25, 2019

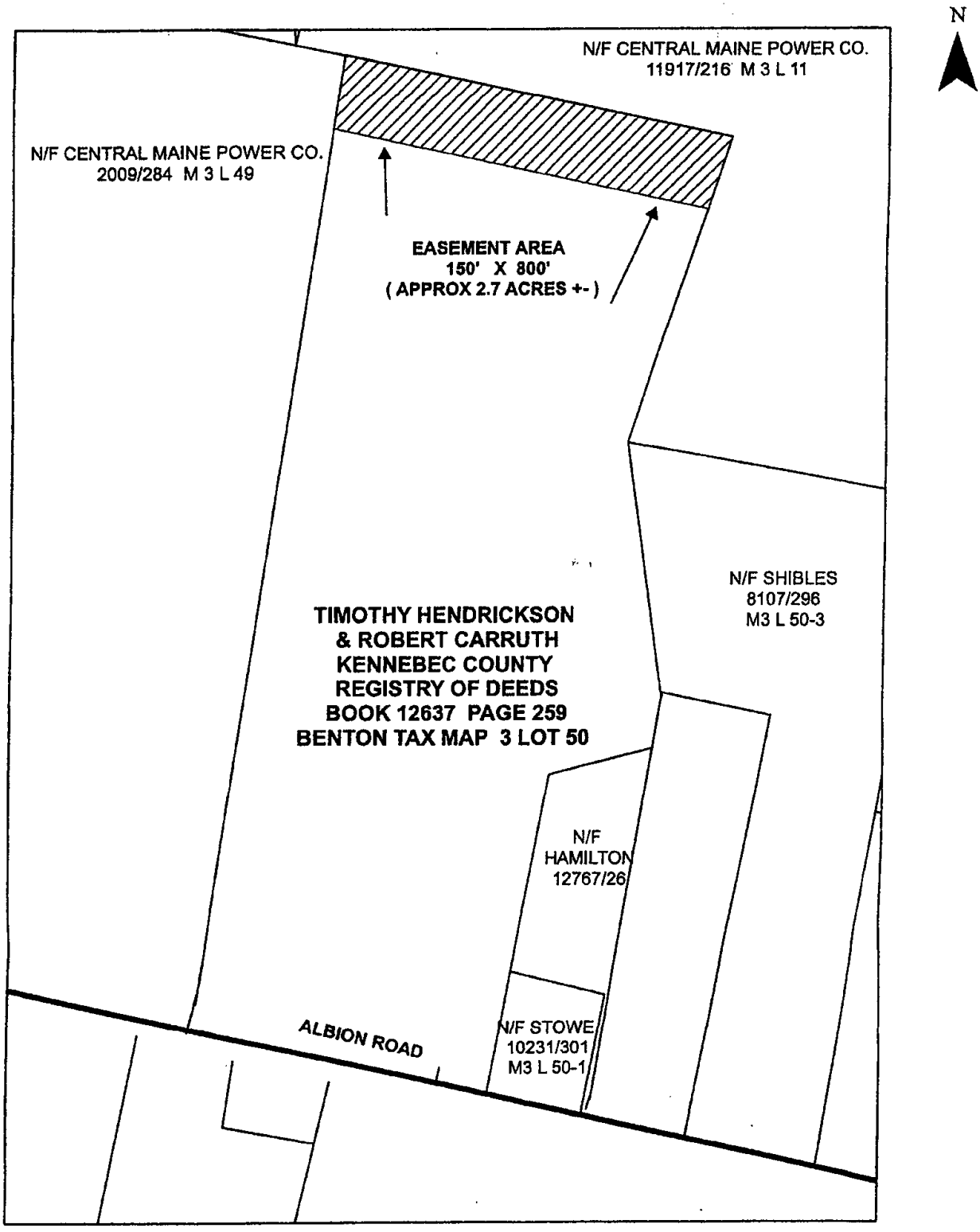
Then personally appeared the above-named Peter Keel, as CFO of Three Corners Solar, LLC, and acknowledged the foregoing instrument to be his/her free act and deed in said capacity and the free act and deed of said limited liability company.

_____
Notary Public

My Commission Expires: 10/4/2024

SEAN M. FLYNN
Notary Public
Commonwealth of Massachusetts
My Commission Expires
October 4, 2024

EXHIBIT A



TH / RC

Three Corners Solar, LLC
c/o Longroad Development Company, LLC
330 Congress Street, 6th Floor
Boston, MA 02210

VIA FEDEX

October 12, 2021

Benjamin and Ami Newell
16 Main Street
Albion, ME 04910

RE: Option to Purchase Easement Extension

Dear Benjamin and Ami Newell:

This notice is delivered pursuant to Section A of that certain Option to Purchase Easement, dated as of October 24, 2018, by and between Three Corners Solar, LLC ("Grantee") and Benjamin and Ami Newell (as assignee of Timothy Hendrickson and Robert Carruth pursuant to that certain Agreement) ("Owner") (the "Contract"). Unless otherwise defined herein or the context otherwise requires, capitalized terms used herein shall have the meanings set forth in the Contract.

Grantee shall have the right to extend the Option Period for one (1) additional period of one (1) year, in exchange for the payment of Extension Consideration in the amount of [redacted] for such extension, such extension to be exercised by notice (accompanied by payment) given prior to the expiration of the Option Period, and to be on all the same terms and conditions provided herein. Grantee has paid the Extension Consideration on September 30, 2021 and therefore Grantee hereby extends the Option Period for one (1) additional period of one (1) year, effective October 24, 2021, with an expiration date of October 24, 2022. This letter serves as the written notice of extension of the Option Term.

Sincerely,

THREE CORNERS SOLAR, LLC

By: Michael U. Alvarez
Name: Michael U. Alvarez
Title: COO

Exhibit B-2

Entity Relationships

January 28, 2022

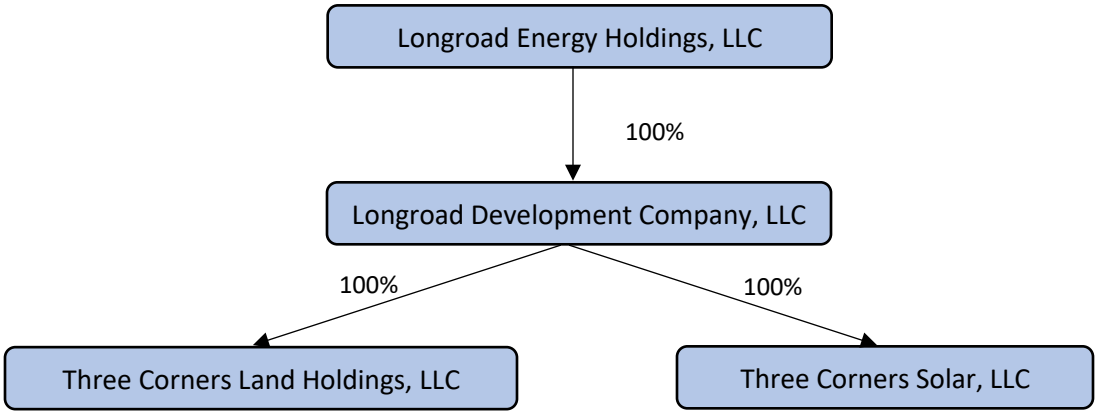
Maine Department of Environmental Protection
State House Station 17
Augusta, ME 04330

Subject: Longroad Development Company, LLC Affiliates

To Whom it May Concern:

Three Corners Solar, LLC and Three Corners Land Holdings, LLC are affiliates. They are both wholly owned, indirect subsidiaries of Longroad Development Company, LLC and Longroad Energy Holdings, LLC. Prior to the start of construction of the project, Three Corners Land Holdings, LLC will lease land it owns or will own in fee to Three Corners Solar, LLC so that the project agreements and land agreement(s) are in the same entity's name.

The current organizational structure is illustrated as follows:



Sincerely,

Vanessa Kwong
VP, Legal
Longroad Development Company, LLC

Exhibit C

Public Notice

Three Corners Solar Project
MDEP Natural Resources Protection Act Permit Application
EXHIBIT C. PUBLIC NOTICE

Notice Mailing List

Location	Map or Plan/Lot(s)	Name	Address			
			Street/P.O. Box	Town	State	Zip
Benton	4/2, 5	Virginia Richards Living Trust	214 Gogan Road	Benton	ME	04901
	3/5	Sandra Tuttle	335 East Benton Road	Benton	ME	04901
	3/5-1	James Mackback & Sandra Tuttle	409 East Benton Road	Benton	ME	04901
	3/7	Albert Giroux & Kathi Giroux	P.O. Box 411	Clinton	ME	04927
	3/7-A	Timothy Giroux & Leland Giroux	349 East Benton Road	Benton	ME	04901
	3/8	Sidney Gilman	P.O. Box 92	Fairfield	ME	04937
	3/8-2	Raymond & Sheilla Petell	150 Richards Road	Benton	ME	04901
	3/10	Wayne Paul	240 East Benton Road	Benton	ME	04901
	3/10-B	Jeffrey Paul & Barbara Paul	217 East Benton Road	Benton	ME	04901
	3/11-A	Donald Waite & Kimberly Waite	195 East Benton Road	Benton	ME	04901
	3/15	Shawn Poulin	58 Andrea Avenue	Benton	ME	04901
	3/15-1	Edmond & Leslie Violette	167 East Benton Road	Benton	ME	04901
	3/15-2, 3	Susan Andrade	P.O. Box 159	Benton	ME	04901
	3/15-A	Cecil Bryar	181 East Benton Road	Benton	ME	04901
	3/27	Alvin Gott	50 Spencer Road	Benton	ME	04901
	3/48, 86, 87	Central Maine Power	One City Center, 5th Floor	Portland	ME	04101
	3/48-A	Owen & Alli Hotham & Deborah Breuckner	69 Pond Road	Athens	ME	04912
	3/50-1	Kimberly Stowe	4 Pomader Drive	Shawmut	ME	04976
	3/50-2	Mark Hamilton	250 Benton Road	Albion	ME	04910
	3/50-3	Paul Shibles & Wanda Shibles	572 Albion Road	Benton	ME	04901
	3/51	Christopher Gamage & Emily Shibles	527 Albion Road	Benton	ME	04901
	3/52	Joshua Patterson & Melissa Patterson	19 Patterson Road	Benton	ME	04901
	3/53	Patricia Withee	582 Albion Road	Benton	ME	04901
	3/55-1	Elaine Young	650 Albion Road	Benton	ME	04901
	3/55-2	Karen McManus	640 Albion Road	Benton	ME	04901
	3/55-4	Tasha & Gary Ritter	27 Lawrence Drive	Benton	ME	04901
	3/55-3	Jennipher Smith	664 Albion Road	Benton	ME	04901
	3/56	David Littlefield c/o Sharon Oliver	12 Island Avenue, Apt. 208	Fairfield	ME	04937
	3/57	Alexandria Mucci	657 Albion Road	Benton	ME	04901
	3/58	Richard & Jacquelynne Charity	661 Albion Road	Benton	ME	04801
	3/59	David Lovely	20 Foss Hill Road	Benton	ME	04901

Three Corners Solar Project
MDEP Natural Resources Protection Act Permit Application
EXHIBIT C. PUBLIC NOTICE

Location	Map or Plan/Lot(s)	Name	Address			
			Street/P.O. Box	Town	State	Zip
Benton	3/59-A	Karl & Myrla Rolfe	669 Albion Road	Benton	ME	04901
	3/63-A	Travis & Cindy Dubay	99 Clark Road	Albion	ME	04910
	3/73	Richard Alexander & Julie Ann Alexander	732 Albion Road	Benton	ME	04901
	3/76	Denzil Cole & Joyce Cole	690 Albion Road	Benton	ME	04901
	3/79	Thomas Germon Jr.	54 Richards Road	Benton	ME	04901
	3/79-4, 79-5	Dale & Linda Germon	38 Richards Road	Benton	ME	04901
	3/80	Wendell Germon & Leah Germon	166 Pattee Pond Road	Winslow	ME	04901
	3/80-ON	Rodney Duperry	P.O. Box 1454	Northbridge	MA	01534
	3/80-A	Dustin Gerow & Katie Blye	91 Richards Road	Benton	ME	04901
	3/83-C	David Spaulding & Tina Spaulding	123 Winslow Road	Albion	ME	04910
	3/83-F	Walter Taylor	144 Richards Road	Benton	ME	04901
	4/1	Ronald Hayward & Nancy Hayward	1685 Tomahawk Court	Vineland	NJ	08361
	4/3	Mark Leboeuf & Jeanne Leboeuf	121 Richards Road	Benton	ME	04901
	4/6, 9	Joel Littlefield	P.O. Box 191	Albion	ME	04910
	4/8	Stella Brown	35 School Drive	Benton	ME	04901
	4/24	Donald Goodale & Betty Goodale	587 East Benton Road	Benton	ME	04901
	4/25	Henry Norwood & Amy Norwood	1207 Wagner Road	Glenview	IL	60025
	4/25-1	Robin Dennis	10 Bog Road	Benton	ME	04901
	4/27	Joanne Gagnon & Roger Gagnon	5 Bog Road	Benton	ME	04901
	4/29	Russell Violette	619 East Benton Road	Benton	ME	04901
	4/30; 8/1-22	James Dennis II	915 Unity Road	Benton	ME	04901
	4/30-A	Alexander Small & Sarah Small	721 East Benton Road	Benton	ME	04901
	4/31	Bernard Cormier Jr. & Cindy Cormier	689 East Benton Road	Benton	ME	04901
	4/32, 33-A	Donna Cookson	706 East Benton Road	Benton	ME	04901
	4/33	Frank Pelletier	732 East Benton Road	Benton	ME	04901
	4/33-B	Shirley Tibbetts	720 East Benton Road	Benton	ME	04901
	4/34	Russell Leary & Beverly Leary	751 East Benton Road	Benton	ME	04901
	4/35	Paula Lewis	132 Emerald Drive	Barrington	NH	03825
	4/36	Matthew Gomola & Krista Gomola	756 East Benton Road	Benton	ME	04901
	4/37	Richard Lawrence & Sandra Lawrence	780 East Benton Road	Benton	ME	04901
	4/37-ON	David Lawrence	780 East Benton Road	Benton	ME	04901
	4/42	Timothy & Emily Ryan	25 Nicole Lane	Benton	ME	04901

Three Corners Solar Project
MDEP Natural Resources Protection Act Permit Application
EXHIBIT C. PUBLIC NOTICE

Location	Map or Plan/Lot(s)	Name	Address			
			Street/P.O. Box	Town	State	Zip
Benton	4/42-A	Jonathan & Kayleigh Farrell	769 East Benton Road	Benton	ME	04901
	4/42-B	Danielle Brow & Justin Brow	1 Pinehurst Avenue	Winslow	ME	04901
	4/42-C	Mark Rancourt	791 East Benton Road	Benton	ME	04901
	4/42-D	Gary Ellis & Connie Ellis	803 East Benton Road	Benton	ME	04901
	4/43	Paul Levasseur Sr. & Camellia Levasseur	820 East Benton Road	Benton	ME	04901
	4/43-1	Paul Levasseur Jr.	133 Turtlepoint Lane	Thorndale	PA	19372
	4/43-4	Donald Sheets & Dori Sheets	820 East Benton Road	Benton	ME	04901
	4/44-B	Richard Brackett & Cheryl Brackett	829 East Benton Road	Benton	ME	04901
	7/3	Trustee of Stephanie Clark	659 Bangor Road	Benton	ME	04901
	7/3-2	Judith Lacombe	406 Bangor Road	Benton	ME	04901
	8/1	Barry Lee & Virginia Lee	143 Hanscom Road	Benton	ME	04901
	8/1-A	Tracey Horton	12 Winter Street	Waterville	ME	04901
	8/1-11	Dixon Construction Inc.	275 Bellsqueeze Road	Benton	ME	04901
	8/1-12	Shelean Ware	169 Hanscom Road	Benton	ME	04901
	8/1-13	Christopher & Karen Smith	179 Hanscom Road	Benton	ME	04901
	8/1-14	Derrick Laflamme	185 Hanscom Road	Benton	ME	04901
	8/1-15	Katrina Abel	P.O. Box 2574	Waterville	ME	04901
	8/1-16	Richard Gilliand III	199 Hanscom Road	Benton	ME	04901
	8/1-20	Larry Innes	207 Hanscom Road	Benton	ME	04901
	8/3	Bruce Fowler	738 Unity Road	Benton	ME	04901
	8/4	Ryan & Cara Greenwood	280 Norridgewock Road	Fairfield	ME	04937
	8/5	Charles Heath & Monica Heath	17 Dixon Drive	Benton	ME	04901
	8/6	C & C Spray Foam LLC	P.O. Box 261	Clinton	ME	04927
	8/7-1	Eric J. Robbins	1080 Unity Road	Benton	ME	04901
	8.8	Donald M. Hafford, Jr.	28 Belgrade Road	Oakland	ME	04963
	8/9	Bruce & Janice Kelley	1112 Unity Road	Benton	ME	04901
	8/12-1, 15/1	Andrew Wiggin & Kelly Wiggin	1191 Unity Road	Benton	ME	04901
	8/14	Russell N. Thompson & Darcie Thompson	1140 Unity Road	Benton	ME	04901
	8/14-A	Daniel M. Thompson & Sandra Thompson	1194 Unity Road	Benton	ME	04901
	8/18	Dawn Marin	4 Oxford Street	Fairfield	ME	04937
	8/19	Town of Benton	1279 Clinton Avenue	Benton	ME	04901
	8/20	Robert Nicholas	1315 Unity Road	Benton	ME	04901

Three Corners Solar Project
MDEP Natural Resources Protection Act Permit Application
EXHIBIT C. PUBLIC NOTICE

Location	Map or Plan/Lot(s)	Name	Address			
			Street/P.O. Box	Town	State	Zip
	8/21	Neil Donnenfeld	594 Newmarket Road	Warner	NH	03278
Benton	8/21-1	Charles Baker	611 Newmarket Road	Warner	NH	03278
	8/22	William Clark	691 Quarry Road	Wells	ME	04090
Unity Twp.	1/1, 2, 3, 4	Bingham Land Co. c/o Silas Lawry	19 Great Meadow Lane	Fairfield	ME	04937
	1/25, 36	New England Waste Services of Maine Inc. c/o Harding & Carbone, Inc.	1235 North Loop West Suite 205	Houston	TX	77008
	1/26	Robert Hueston	965 Waterville Road	Unity	ME	04988
	1/29	Mara L. Baranowski	P.O. Box 897	Milford	ME	04461
	1/30.1, 31	Ralph & Jean Myrick	71 Palmer Road	Unity Twp.	ME	04988
	1/30.2, 31.1, 39.1, 40	Daniel and Bonnie Parsons	29 Palmer Road	Unity Twp.	ME	04988
	1/30.3	Casey Wadleigh	P.O. Box 2423	Waterville	ME	04903
	1/32	Geraldine Reynolds	1127 Waterville Road	Unity	ME	04988
	1/39	Edwin V. Williams	Box 1043 Waterville Road	Unity	ME	04988
Clinton	4/8	Layne Bowers	1495 Bangor Road	Clinton	ME	04927
	4/10	Anthony & Melissa Michaud	1607 Bangor Road	Clinton	ME	04927
	4/32	Rebecca Taffett	27 Pine Drive	Clinton	ME	04927
	4/33	Christopher & Joy Davis	17 Pine Drive	Clinton	ME	04927
	4/34	Robert Foster	5582 Rawhide Court	Las Vegas	NV	89120
	4/36, 38, 39	David Morrissette	223 College Avenue	Waterville	ME	04901
	4/46	Monk Farms	P.O. Box 402	Clinton	ME	04927
	4/47, 48	Louise & Calvin Chapman	P.O. Box 174	Clinton	ME	04927
	4/50A	Nicole Boivin & Katie Demanche	12 Harmony Drive	Standish	ME	04084
	4/50B	Elizabeth Diamond and Andrea Veilleux	11 Ross Avenue	Thomaston	ME	04861
	4/50C	Paul King and Frank King Jr. & Ellen Huggins	85 Pirate Lane	Fairfield Center	ME	04937
	4/50D	Paul E. Willette	1340 China Road	Winslow	ME	04901
	4/51-ON	Shane Steeves	37 Breman Road	Nobleboro	ME	04555
	4/52	Bingham Land Co. c/o Bill Lawry	35 Barnet Ave	Waterville	ME	04901
Albion, Benton, Clinton, & Unity Twp.	15/1 (Albion); 3/54, 8/10 (Benton); 4/49, 51 (Clinton); 1/5, 7, 8, 9, 10, 11, 12, 14, 17, 18, 19, 20, 21, 22, 23, 33, 55 (Unity Twp.)	Bessey Development Co.	P.O. Box 96	Hinckley	ME	04944

Three Corners Solar Project

MDEP Natural Resources Protection Act Permit Application

EXHIBIT C. PUBLIC NOTICE

Location	Map or Plan/Lot(s)	Name	Address			
			Street/P.O. Box	Town	State	Zip
Clinton & Unity Twp.	4/50 (Clinton) 1/15, 16 (Unity Twp.)	Heidi Patterson	P.O. Box 134	Clinton	ME	04927
Clinton & Unity Twp.	4/50A (Clinton) 1/15.1 (Unity Twp.)	Nicole Boivin & Katie Demanche	12 Harmony Drive	Standish	ME	04084
Albion	15/4	Chad LePage	100 Albion Road	Winslow	ME	04901
--	--	Kennebec County Commissioner, District 3, George M. Jabar, II	125 State Street 2nd Floor	Augusta	ME	04330
--	--	Town of Benton	1279 Clinton Avenue	Benton	ME	04901
--	--	Town of Clinton	27 Baker Street	Clinton	ME	04927
--	--	Town of Unity	74 School Street	Unity	ME	04988
--	--	Represenatitve Timothy S. Theriault	2 State House Station	Augusta	ME	04333-0002
--	--	State Senator Scott Cyrway	3 State House Station	Augusta	ME	04333-0003

NOTICE OF INTENT TO FILE AND PUBLIC INFORMATIONAL MEETING

Please take notice that Three Corners Solar, LLC (the "Applicant"), a subsidiary of Longroad Energy Holdings, LLC, with offices at 30 Danforth Street, Suite 210, Portland ME 04101 (207-210-1175), is intending to file a Site Location of Development Act permit application and a Natural Resources Protection Act permit application with the Maine Department of Environmental Protection (DEP), pursuant to the provisions of 38 M.R.S.A. §§ 481-490 and 38 M.R.S.A. §§ 480-A et seq., respectively. The Applicant is also seeking a Section 401 Water Quality Certification pursuant to 33 U.S.C. § 1341. The Applicant intends to file these applications with the DEP on or around January 31, 2022.

This application is to allow for construction and operation of the Three Corners Solar Project in Unity Township, Benton, and Clinton in Kennebec County, Maine. The proposed project will consist of solar arrays capable of generating up to 110 megawatts of alternating current electricity. The project also includes existing and new access roads; 34.5-kilovolt electrical collector lines among the arrays and connecting to a new collector substation in Benton; an approximately 5.2-mile-long 115-kilovolt transmission line connecting the project to an existing substation in Benton; and an operations and maintenance building in Benton.

The Applicant will hold a public informational meeting to inform the public about the project and its anticipated environmental impacts and to educate the public about the opportunities for public comment on the project. Due to the COVID-19 pandemic and restrictions on in-person gatherings, the public meeting will be held by telephone and online on Tuesday, January 25, 2022, from 6:00 p.m. to 8:00 p.m. Interested members of the public can join through Zoom by visiting www.longroadenergy.com/3C-Public-Meeting or by calling 1-646-558-8656, entering the meeting ID (91578976369#), followed by the meeting passcode (1234#). Questions from the public will be taken both online and by phone. Members of the public who are unable to access presentation materials online may request materials be sent by mail by calling (207) 210-1175 or by emailing the project team at threecornerssolar@longroadenergy.com. A recording of the meeting audio and presentation slides will also be available at www.longroadenergy.com/3C-Public-Meeting within a week of the meeting.

A request for a public hearing or a request that the Board of Environmental Protection assume jurisdiction over these applications must be received by the DEP in writing no later no later than 20 days after the application is found by the DEP to be complete and are accepted for processing. A public hearing may or may not be held at the discretion of the Commissioner or Board of Environmental Protection. Public comment on the applications will be accepted throughout the processing of the applications. Written public comments on the Site Law application may be mailed to Bob Green at the DEP after filing at: DEP, Bureau of Land Management, Central Maine Regional Office, 17 State House Station, Augusta, ME 04333-0017; or via electronic mail at: robert.l.green@maine.gov.

The Site Location application will include a request, pursuant to 12 M.R.S.A. § 685-B(1-A)(B-1), that the Land Use Planning Commission (LUPC) certify to the DEP that the development is an allowed use in the subdistricts in which it is proposed and that the development will comply with applicable LUPC land use standards that are not considered in the DEP's review.

A request for a LUPC public hearing on the request for certification and/or a petition for leave to intervene in any such hearing must be received by the LUPC in writing no later than 20 days after the request for certification is found by the LUPC to be complete and accepted for processing. The LUPC will consider the degree of public interest when determining whether to hold a public hearing, but the decision whether to hold a hearing is at the LUPC's discretion.

If the LUPC holds a public hearing, members of the public also may offer testimony at the hearing without formally intervening in the hearing, and/or may submit written comments until the close of the record. A request or petition that is not timely filed will be denied unless the requestor/petitioner shows good cause for failure to file on time. Filing may be by electronic mail or facsimile if followed by receipt of an original signed document within five working days. The LUPC's provisions for intervention may be found in Chapter 5, section 5.03 of the LUPC's rules, which are available at https://www.maine.gov/dacf/lupc/laws_rules/index.shtml.

If no public hearing is held, interested persons may submit written comments on the LUPC certification throughout the processing of the certification. Written public comments and questions on the request for certification may be mailed to Karen Bolstridge at the LUPC's Bangor office: Land Use Planning Commission, 106 Hogan Road, Suite 8, Bangor, ME 04401; or via electronic mail at: karen.bolstridge@maine.gov.

The DEP applications, including the request for certification, will be filed for public inspection at the DEP's office in Augusta and the LUPC's office in Augusta and Bangor during normal working hours. Copies of the applications may also be seen at the Kennebec County Commissioner's office in Augusta and at the municipal offices in Benton and Clinton.

Questions about the proposed project or the public informational meeting can be directed to Chad Allen of Longroad Energy at (207) 210-1175 or emailed to threecornerssolar@longroadenergy.com.

Public Notices

IN RE: GAGNON DEGAN

Doc. No.: AUG-PC-20-23

NOTICE IS HEREBY GIVEN TO Zackery Gagnon whereabouts unknown:

Pursuant to 22 M.R.S. §4001 et seq., the Maine Department of Health & Human Services (hereafter, "DHHS") has petitioned the Court for a Child Protection Order and Termination of Parental Rights Order, concerning the child: Degan Gagnon , d/o/b: 03/16/2017, born in Augusta, ME. The mother is Michelle Campbell and the father is or may be Zackery Gagnon. DHHS has met the requirements of M.R. Civ. P. Rule 4(g)(1)(A)-(C). Hearing on the pending Petition(s) will be held at **Maine District Court, 1 Court St, Suite 101 Augusta ME 04330-7495, on March 8th 2022, at 830am. Failure to appear at this hearing may result in the issuance of a child protection order, the termination of your parental rights, and/ or any other order permissible under 22 M.R.S. §4001 et seq**. You may be entitled to legal counsel in these proceedings. Contact the court at the above address or (207) 213-2800. To obtain a copy of the Petition(s), contact the court or DHHS at 35 Anthony Avenue Augusta, ME 04333--0011, (207) 624-8088. DHHS is represented by the Maine Office of the Attorney General, 6 State House Station, Augusta, ME 04333.

Dated: 12.21.2021
Sarah Churchill
Judge,
Maine District Court
Michelle Lumbert
A True Attested
Copy Clerk,
Maine District Court

Public Notice

Maine Connections Academy is accepting enrollment applications for grades 7 - 12 for the 2022-2023 school year from February 2, 2022 - March 4, 2023. Intent to enroll forms are available at https://www.connectionsacademy.com/maine-virtual-school/enrollment. Hard copies are available at the following address: Maine Connections Academy 8 Science Park Road, Floor 3, Scarborough, ME 04074.

Public Notice

NOTICE OF INTENT TO FILE AND PUBLIC INFORMATIONAL MEETING

Please take notice that Three Corners Solar, LLC (the "Applicant"), a subsidiary of Longroad Energy Holdings, LLC, with offices at 30 Danforth Street, Suite 210, Portland ME 04101 (207-210-1175), is intending to file a Site Location of Development Act permit application and a Natural Resources Protection Act permit application with the Maine Department of Environmental Protection (DEP), pursuant to the provisions of 38 M.R.S.A. §§ 481-490 and 38 M.R.S.A. §§ 480-A et seq., respectively. The Applicant is also seeking a Section 401 Water Quality Certification pursuant to 33 U.S.C. § 1341. The Applicant intends to file these applications with the DEP on or around January 31, 2022.

This application is to allow for construction and operation of the Three Corners Solar Project in Unity Township, Benton, and Clinton in Kennebec County, Maine. The proposed project will consist of solar arrays capable of generating up to 110 megawatts of alternating current electricity. The project also includes existing and new access roads; 34.5-kilovolt electrical collector lines among the arrays and connecting to a new collector substation in Benton; an approximately 5.2-mile-long 115-kilovolt transmission line connecting the project to an existing substation in Benton; and an operations and maintenance building in Benton.

The Applicant will hold a public informational meeting to inform the public about the project and its anticipated environmental impacts and to educate the public about the opportunities for public comment on the project. Due to the COVID-19 pandemic and restrictions on in-person gatherings, the public meeting will be held by telephone and online on Tuesday, January 25, 2022, from 6:00 p.m. to 8:00 p.m. Interested members of the public can join through Zoom by visiting www.longroadenergy.com/3C-Public-Meeting or by calling 1-646-558-8656, entering the meeting ID (91578976369#), followed by the meeting passcode (1234#). Questions from the public will be taken both online and by phone. Members of the public who are unable to access presentation materials online may request materials be sent by mail by calling (207) 210-1175 or by emailing the project team at threecornerssolar@longroadenergy.com. A recording of the meeting audio and presentation slides will also be available at www.longroadenergy.com/3C-Public-Meeting within a week of the meeting.

A request for a public hearing or a request that the Board of Environmental Protection assume jurisdiction over these applications must be received by the DEP in writing no later no later than 20 days after the application is found by the DEP to be complete and are accepted for processing. A public hearing may or may not be held at the discretion of the Commissioner or Board of Environmental Protection. Public comment on the applications will be accepted throughout the processing of the applications. Written public comments on the Site Law application may be mailed to Bob Green at the DEP after filing at: DEP, Bureau of Land Management, Central Maine Regional Office, 17 State House Station, Augusta, ME 04333-0017; or via electronic mail at: robert.l.green@maine.gov.

The Site Location application will include a request, pursuant to 12 M.R.S.A. § 685-B(1-A)(B-1), that the Land Use Planning Commission (LUPC) certify to the DEP that the development is an allowed use in the subdistricts in which it is proposed and that the development will comply with applicable LUPC land use standards that are not considered in the DEP's review.

A request for a LUPC public hearing on the request for certification and/or a petition for leave to intervene in any such hearing must be received by the LUPC in writing no later than 20 days after the request for certification is found by the LUPC to be complete and accepted for processing. The LUPC will consider the degree of public interest when determining whether to hold a public hearing, but the decision whether to hold a hearing is at the LUPC's discretion.

If the LUPC holds a public hearing, members of the public also may offer testimony at the hearing without formally intervening in the hearing, and/ or may submit written comments until the close of the record. A request or petition that is not timely filed will be denied unless the requestor/petitioner shows good cause for failure to file on time. Filing may be by electronic mail or facsimile if followed by receipt of an original signed document within five working days. The LUPC's provisions for intervention may be found in Chapter 5, section 5.03 of the LUPC's rules, which are available at https://www.maine.gov/dacf/lupc/laws_rules/index.shtml.

If no public hearing is held, interested persons may submit written comments on the LUPC certification throughout the processing of the certification. Written public comments and questions on the request for certification may be mailed to Karen Bolstridge at the LUPC's Bangor office: Land Use Planning Commission, 106 Hogan Road, Suite 8, Bangor, ME 04401; or via electronic mail at: karen.bolstridge@maine.gov.

The DEP applications, including the request for certification, will be filed for public inspection at the DEP's office in Augusta and the LUPC's office in Augusta and Bangor during normal working hours. Copies of the applications may also be seen at the Kennebec County Commissioner's office in Augusta and at the municipal offices in Benton and Clinton.

Questions about the proposed project or the public informational meeting can be directed to Chad Allen of Longroad Energy at (207) 210-1175 or emailed to threecornerssolar@longroadenergy.com.

Public Notice

NOTICE OF PUBLIC SALE OF REAL ESTATE

Property located at 103 Manning Drive a/k/a 103C Manning Drive, West Gardiner, Maine 04345

Mortgages recorded in the Kennebec County Registry of Deeds at Book 8699, Page 334 and at Book 9179, Page 287.

By virtue of and in execution of an Order and Judgment of Foreclosure and Sale entered in the Kennebec County Superior Court on March 12, 2021, in Civil Action, Docket No. RE-2019-28, brought by TD Bank, N.A. f/k/a TD Banknorth, N.A. as Plaintiff against Defendants, Laurie Stevens f/k/a Laurie L. Dyer and Matthew Dyer for the foreclosure of the mortgage recorded as set forth above, the ninety (90) day period of redemption having expired without redemption, notice is hereby given that there will be sold at public sale at **two o'clock P.M. on the 10thday of the month of February, 2022** at the offices of Duane Morris LLP, 2 Monument Square, Suite 505, Portland, ME 04101-4079, for the premises described in said mortgage, situated at 103 Manning Drive a/k/a 103C Manning Drive, in the Town of West Gardiner, County of Kennebec, and State of Maine. Please refer to said mortgage deeds recorded in said Registry of Deeds for a more particular description of the premises. There will be no open house.

TERMS OF SALE: The property will be sold to the highest bidder who complies with the terms of sale. A deposit of at least $5,000.00 must be paid by the highest bidder to TD Bank, N.A. in bank check or certified U.S. funds, which sum will be retained as a non-refundable, non-interest bearing deposit. The highest bidder must also sign a purchase and sale contract with TD Bank, N.A. calling for a closing within thirty days of the public sale, at which time the balance will be due in money order, bank check, or certified U.S. funds payable to said bank, which will then deliver a duly executed quitclaim deed without covenant. The sale shall be made on an "AS IS" basis, without warranties of any kind, and subject to: (a) any condition which a title search would reveal, (b) any unpaid real estate taxes or sewer assessments, and (c) any facts which an inspection or survey of the premises might show. Other terms will be announced at the sale. **The sale will be conducted in accordance with all State of Maine requirements and regulations and/or Duane Morris, LLP's policies in response to the COVID-19 Pandemic, including, but not limited to, requiring physical distancing, all attendees wearing face coverings, masks, and limitations on group size. Effective August 23, 2021 Duane Morris, LLP has instituted a COVID-19 vaccination requirement for all visitors and personnel to be on premises in US based Duane Morris and affiliate offices.**

TD BANK, N.A.,
by its attorneys
Duane Morris LLP
Andrea T. Holbrook
ME Bar 005251
2 Monument Square,
Suite 505
Portland, ME 04101-4079
Phone: 215-979-1677
Fax 207-470-1068

Public Notice

NOTICE TO ALL INTERESTED PERSONS DETERMINATION OF CATEGORICAL EXCLUSION

TO:
All Interested Persons
DATE ISSUED:
January 12, 2022

As required by Section 6 of the State of Maine Rules Relating to Drinking Water State Revolving Loan Fund Chapter 230, the Department of Health and Human Services (DHHS) staff prepared a "Justification for Categorical Exclusion" on behalf of Kennebec Water District of Waterville, Maine to exempt a proposed project from the formal environmental review requirements.

The proposed action is to upgrade the existing water treatment plant (WTP) site and chemical storage facility. Site improvements include repaving the existing parking lots and expanding the existing parking lot towards the south side of the building by approximately 230 SF. All work is to be on property currently owned by the District at their Water Treatment Plant, 462 Main Street in Vassalboro, ME.

The Drinking Water Program's review of the proposed actions has indicated that it meets the criteria of "Categorical Exclusion" listed in subsection c (II) of Chapter 230. The project is not likely to have significant effects on the quality of the environment. Specifically, the proposed action is the upgrades to an existing drinking water treatment plant owned by the Kennebec Water District.

Therefore, a Categorical Exclusion from formal environmental review as provided in Section 6 of the State of Maine Rules Relating to Drinking Water State Revolving Loan Fund Chapter 230 is being granted. This exclusion may be revoked at any time if 1) the project is altered and no longer meets the requirements of a categorical exclusion 2) new evidence shows that serious environmental issues exist or 3) a local, State or Federal law is being or may be violated.

Project documents are on file and are available for public review at the offices of the Kennebec Water District and the offices of the Drinking Water Program. Comments relative to this decision may be submitted to the Department of Health and Human Services Drinking Water Program.

Public Notice

REQUEST FOR BIDS

Sealed bids for the construction of the Western Avenue Water Main Improvements project will be received by the Kennebec Water District, at the District's Business Office, 6 Cool Street, Waterville Maine 04901, until 2:00 PM local time on Thursday February 10, 2022. At which time they will be publicly opened and read aloud. The project consists of approximately 2,000 linear feet of water main replacement as well as fire hydrants and water services on Western Avenue between West Street and Newhall Street in Fairfield, ME. Bids will be received for a single prime Contract.

A free PDF version of the Contract Documents including the Plans and Specifications can be obtained my emailing the District's Project Engineer, Max Kenney at info@kennebecwater.org. Paper copies of the Contract Documents may be ordered by calling 207.872.2763. There will be a non-refundable deposit of $100.00 for each paper copy of the Contract Documents ordered. The Kennebec Water District will be responsible for full or partial sets of Bid Documents, including Addenda if any, obtained from sources other than the District.

A pre-bid conference will be held at 2:00 PM local time on Thursday January 27, 2022 at the District's Business Office located at 6 Cool Street, Waterville, Maine 04901. Attendance at the pre-bid conference is not mandatory, but strongly encouraged.

Bids shall be contained in an envelope plainly marked: Western Avenue Water Main Improvements, they will not to be Opened Until 2:00 PM on February 10, 2022. Bidders may be represented at bid opening if so desired. Faxed or e-mailed bids will not be accepted. The Kennebec Water District reserves the right to waive any informality in bids, to accept any bid, and to reject any or all bids should it be deemed in the best interest of the Town to do so. No bidder may withdraw their bid within 60 days after the actual date of the bid opening.

Public Notice

State of Maine Department of Agriculture, Conservation & Forestry RFP# 202112197 22 Foot Buoy Tender

The State of Maine is seeking proposals for a 22-foot buoy tender. The vessel shall be constructed meeting or exceeding the specifications outlined in the RFP.

A copy of the RFP, as well as the Question & Answer Summary and all amendments related to the RFP, can be obtained at: https://www.maine.gov/dafs/bbm/procurementservices/vendors/rfps

Proposals must be submitted to the State of Maine Division of Procurement Services, via e-mail, at: Proposals@maine.gov. Proposal submissions must be received no later than 11:59 p.m., local time, on (February 9, 2022). Proposals will be opened the following business day. Proposals not submitted to the Division of Procurement Services' aforementioned e-mail address by the aforementioned deadline will not be considered for contract award.

Public Notice

State of Maine Office of the State Treasurer RFP# 202107100 Investment Consultant Services

The State of Maine is seeking proposals for qualified investment consultants to provide consulting services for the Treasurer's cash pool.

A copy of the RFP, as well as the Question & Answer Summary and all amendments related to the RFP, can be obtained at: https://www.maine.gov/dafs/bbm/procurementservices/vendors/rfps

Proposals must be submitted to the State of Maine Division of Procurement Services, via e-mail, at: Proposals@maine.gov. Proposal submissions must be received no later than 11:59 p.m., local time, on 2/23/2022. Proposals will be opened the following business day. Proposals not submitted to the Division of Procurement Services' aforementioned e-mail address by the aforementioned deadline will not be considered for contract award.

Public Notice

State of Maine Department of Environmental Protection RFP# 202111169 2022 Waste Diversion Grants Program Round 1

The State of Maine is seeking proposals to assist in the development, implementation or improvement of programs, projects, initiatives, or activities designed to increase the diversion of solid waste from disposal.

A copy of the RFP, as well as the Question & Answer Summary and all amendments related to the RFP, can be obtained at: https://www.maine.gov/dafs/bbm/procurementservices/vendors/grants

Proposals must be submitted to the State of Maine Division of Procurement Services, via e-mail, at: Proposals@maine.gov. Proposal submissions must be received no later than 11:59 p.m., local time, on February 11, 2022. Proposals will be opened the following business day. Proposals not submitted to the Division of Procurement Services' aforementioned e-mail address by the aforementioned deadline will not be considered for contract award.

SERVICE DIRECTORY

Carpentry & Remodeling

B. RODERICK Free Estimates. Call 680-0647 roderickcontracting.com

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A.W. ALLEN FIREWOOD Cut- Split- Delivered 623-6002

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Full-Time
Residential Care Coordinator (RCC)
CRMA Certified and CNA or PSS certificate
Leadership/Supervisory Skills
MDS/RCA certified or training
Qualified applicants please email resume to: admin@sunsethomewtvl.com

SUNSET HOME OF WATERVILLE

is seeking to fill the following positions:

CRMA/PSS
Full and Part time
Must have valid 40 hr CRMA certificate

Dietary Aide/Cook
Part time
11am – 6pm

Please call Sunset Home for more information Mon – Fri 8am -3pm
May pick up application at 114 College Ave Waterville

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SOLON 2bdrm $750 a mo. everything included. first, last & deposit 313-4490.

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ALLEN'S SELF STORAGE: 185 climate & reg. units **5x5 - 10x30** IND DR (off Civic Ctr Dr) Augusta **(207)623-3877** After Hrs (207) 557-5561

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3.	Rebecca Taffett 27 Pine Drive Clinton ME 04927				
4.	Layne Bowers 1495 Bangor Road Clinton ME 04927				
5.	Geraldine Reynolds 1127 Waterville Road Unity ME 04988				
6.	Daniel and Bonnie Parsons 29 Palmer Road Unity Twp. ME 04988				

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2.	Charles Heath & Monica Heath 17 Dixon Drive Benton ME 04901				
3.	Bruce Fowler 738 Unity Road Benton ME 04901				
4.	Shane Steeves 37 Breman Road Nobleboro ME 04555				
5.	Paul King and Frank King Jr. & Ellen Huggins 85 Pirate Lane				
6.	Nicole Boivin & Katie Demanche 12 Harmony Drive Standish ME 04084				

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2.	Anthony & Melissa Michaud 1607 Bangor Road Clinton ME 04927				
3.	Edwin V. Williams Box 1043 Waterville Road Unity ME 04988				
4.	Casey Wadleigh P.O. Box 2423 Waterville ME 04903				
5.	Ralph & Jean Myrick 71 Palmer Road Unity Twp. ME 04988				
6.	Represenatitve Timothy S. Theriault 2 State House Station Augusta ME 04333-0002				

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2.	Kennebec County Commissioner District 3, George M. Jabar, II 125 State St 2 Fl Augusta ME 04330				
3.	Nicole Boivin & Katie Demanche 12 Harmony Drive Standish ME 04084				
4.	Bessey Development Co. P.O. Box 96 Hinckley ME 04944				
5.	State Senator Scott Cyrway 3 State House Station Augusta ME 04333-0003				
6.	Town of Unity 74 School Street Unity ME 04988				

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2.	Charles Baker 611 Newmarket Road Warner NH 03278				
3.	Robert Nicholas 1315 Unity Road Benton ME 04901				
4.	Dawn Marin 4 Oxford Street Fairfield ME 04937				
5.	Russell N. Thompson & Darcie Thompson 1140 Unity Road Benton ME 04901				
6.	Bruce & Janice Kelley 1112 Unity Road Benton ME 04901				

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3.	William Clark 691 Quarry Road Wells ME 04090				
4.	Neil Donnenfeld 594 Newmarket Road Warner NH 03278				
5.	Town of Benton 1279 Clinton Avenue Benton ME 04901				
6.	Daniel M. Thompson & Sandra Thompson 1194 Unity Road Benton ME 04901				

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2.	Alexandria Mucci 657 Albion Road Benton ME 04901				
3.	Jennipher Smith 664 Albion Road Benton ME 04901				
4.	Karen McManus 640 Albion Road Benton ME 04901				
5.	Patricia Withee 582 Albion Road Benton ME 04901				
6.	Christopher Gamage & Emily Shibles 527 Albion Road Benton ME 04901				

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USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Albert Giroux & Kathi Giroux P.O. Box 411 Clinton ME 04927				
2.	Sandra Tuttle 335 East Benton Road Benton ME 04901				
3.	Rodney Duperry P.O. Box 1454 Northbridge MA 01534				
4.	Dale & Linda Germon 38 Richards Road Benton ME 04901				
5.	Denzil Cole & Joyce Cole 690 Albion Road Benton ME 04901				
6.	Travis & Cindy Dubay 99 Clark Road Albion ME 04910				

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Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Stantec 30 Park Drive Topsham, ME 04086	6	6	UNITED STATES POSTAL SERVICE® 0000 U.S. POSTAGE PAID TOPSHAM, ME 04086 JAN 13, 22 AMOUNT $2.82 R2305E123626-7
	Postmaster, per *(name of receiving employee)* Jeff Reynolds		

USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Central Maine Power One City Center, 5th Floor Portland ME 04101				
2.	Cecil Bryar 181 East Benton Road Benton ME 04901				
3.	Edmond Violette & Leslie 167 East Benton Road Benton ME 04901				
4.	Donald Waite & Kimberly Waite 195 East Benton Road Benton ME 04901				
5.	Wayne Paul 240 East Benton Road Benton ME 04901				
6.	Sidney Gilman P.O. Box 92 Fairfield ME 04937				

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1.	Raymond & Sheilla Petell 150 Richards Road Benton ME 04901				
2.	Timothy Giroux & Leland Giroux 349 East Benton Road Benton ME 04901				
3.	James Mackback & Sandra Tuttle 409 East Benton Road Benton ME 04901				
4.	Virginia Richards Living Trust 214 Gogan Road Benton ME 04901				
5.	Paul Shibles & Wanda Shibles 572 Albion Road Benton ME 04901				
6.	Kimberly Stowe 4 Pomader Drive Shawmut ME 04976				

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Postmaster, per *(name of receiving employee)*

Jeff Reynolds

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Owen & Alli Hotham & Deborah Breuckner 69 Pond Road Athens ME 04912				
2.	Mark Hamilton 250 Benton Road Albion ME 04910				
3.	Alvin Gott 50 Spencer Road Benton ME 04901				
4.	Susan Andrade P.O. Box 159 Benton ME 04901				
5.	Shawn Poulin 58 Andrea Avenue Benton ME 04901				
6.	Jeffrey Paul & Barbara Paul 217 East Benton Road Benton ME 04901				

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	Postmaster, per *(name of receiving employee)* Jeff Reynolds		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Mara L. Baranowski P.O. Box 897 Milford ME 04461				
2.	Paul E. Willette 1340 China Road Winslow ME 04901				
3.	Elizabeth Diamond and Andrea Veilleux 11 Ross Avenue Thomaston ME 04861				
4.	Louise & Calvin Chapman P.O. Box 174 Clinton ME 04927				
5.	David Morrissette 223 College Avenue Waterville ME 04901				
6.	Bingham Land Co. c/o Bill Lawry 35 Barnet Ave Waterville, ME 04901				

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1.	Andrew Wiggin & Kelly Wiggin 1191 Unity Road Benton ME 04901				
2.	Donald M. Hafford, Jr. 28 Belgrade Road Oakland ME 04963				
3.	C & C Spray Foam LLC P.O. Box 261 Clinton ME 04927				
4.	Ryan & Cara Greenwood 280 Norridgewock Road Fairfield ME 04937				
5.	Larry Innes 207 Hanscom Road Benton ME 04901				
6.	Robert Hueston 965 Waterville Road Unity ME 04988				

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USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Tracey Horton 12 Winter Street Waterville ME 04901				
2.	Judith Lacombe 406 Bangor Road Benton ME 04901				
3.	Richard Brackett & Cheryl Brackett 829 East Benton Road Benton ME 04901				
4.	Paul Levasseur Jr. 133 Turtlepoint Lane Thorndale PA 19372				
5.	Gary Ellis & Connie Ellis 803 East Benton Road Benton ME 04901				
6.	Danielle Brow & Justin Brow 1 Pinehurst Avenue Winslow ME 04901				

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1.	Mark Rancourt 791 East Benton Road Benton ME 04901				
2.	Jonathan & Kayleigh Farrell 769 East Benton Road Benton ME 04901				
3.	Richard Lawrence & Sandra Lawrence 780 East Benton Road Benton ME 04901				
4.	Richard Gilliand III 199 Hanscom Road Benton ME 04901				
5.	Derrick Laflamme 185 Hanscom Road Benton ME 04901				
6.	Shelean Ware 169 Hanscom Road Benton ME 04901				

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1.	Joanne Gagnon & Roger Gagnon 5 Bog Road Benton ME 04901				
2.	Henry Norwood & Amy Norwood 1207 Wagner Road Glenview IL 60025				
3.	Stella Brown 35 School Drive Benton ME 04901				
4.	Mark Leboeuf & Jeanne Leboeuf 121 Richards Road Benton ME 04901				
5.	Walter Taylor 144 Richards Road Benton ME 04901				
6.	Katrina Abel P.O. Box 2574 Waterville ME 04901				

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1.	Christopher & Karen Smith 179 Hanscom Road Benton ME 04901				
2.	Dixon Construction Inc. 275 Bellsqueeze Road Benton ME 04901				
3.	Barry Lee & Virginia Lee 143 Hanscom Road Benton ME 04901				
4.	Trustee of Stephanie Clark 659 Bangor Road Benton ME 04901				
5.	Donald Sheets & Dori Sheets 820 East Benton Road Benton ME 04901				
6.	Paul Levasseur Sr. & Camellia Levasseur 820 East Benton Road Benton ME 04901				

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1.	Donna Cookson 706 East Benton Road Benton ME 04901				
2.	Alexander Small & Sarah Small 721 East Benton Road Benton ME 04901				
3.	Russell Violette 619 East Benton Road Benton ME 04901				
4.	Robin Dennis 10 Bog Road Benton ME 04901				
5.	Donald Goodale & Betty Goodale 587 East Benton Road Benton ME 04901				
6.	Joel Littlefield P.O. Box 191 Albion ME 04910				

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1.	Ronald Hayward & Nancy Hayward 1685 Tomahawk Court Vineland NJ 08361				
2.	David Spaulding & Tina Spaulding 123 Winslow Road Albion ME 04910				
3.	Matthew Gomola & Krista Gomola 756 East Benton Road Benton ME 04901				
4.	Russell Leary & Beverly Leary 751 East Benton Road Benton ME 04901				
5.	Frank Pelletier 732 East Benton Road Benton ME 04901				
6.	Bernard Cormier Jr. & Cindy Cormier 689 East Benton Road Benton ME 04901				

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1.	Dustin Gerow & Katie Blye 91 Richards Road Benton ME 04901				
2.	Wendell Germon & Leah Germon 166 Pattee Pond Road Winslow ME 04901				
3.	Thomas Germon Jr. 54 Richards Road Benton ME 04901				
4.	Richard Alexander & Julie Ann Alexander 732 Albion Road Benton ME 04901				
5.	Karl & Myrla Rolfe 669 Albion Road Benton ME 04901				
6.	Richard & Jacquelynne Charity 661 Albion Road Benton ME 04801				

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USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	David Littlefield c/o Sharon Oliver 12 Island Avenue, Apt. 208 Fairfield ME 04937				
2.	Tasha & Gary Ritter 27 Lawrence Drive Benton ME 04901				
3.	Elaine Young 650 Albion Road Benton ME 04901				
4.	Joshua Patterson & Melissa Patterson 19 Patterson Road Benton ME 04901				
5.	Paula Lewis 132 Emerald Drive Barrington NH 03825				
6.	Shirley Tibbetts 720 East Benton Road Benton ME 04901				

See Reverse for Instructions

FORM C 08/08

PUBLIC NOTICE FILING AND CERTIFICATION

The DEP Rules, Chapter 2, require an applicant to provide public notice for all Site Location projects with the exception of minor revisions and condition compliance applications. In the notice, the applicant must describe the proposed activity and where it is located. **"Abutter"** for the purposes of the notice provision means any person who owns property that is BOTH (1) adjoining and (2) within one mile of the delineated project boundary, including owners of property directly across a public or private right of way.

1. **Newspaper:** You must publish the Notice of Intent to File in a newspaper circulated in the area where the activity is located. The notice must appear in the newspaper within 30 days prior to the filing of the application with the Department. You may use the attached Notice of Intent to File form, or one containing identical information, for newspaper publication and certified mailing.

2. **Abutting Property Owners:** You must send a copy of the Notice of Intent to File by certified mail to the owners of the property abutting the activity. Their names and addresses can be obtained from the town tax maps or local officials. They must receive notice within 30 days prior to the filing of the application with the Department.

3. **Municipal Office:** You must send a copy of the Notice of Intent to File and a **duplicate of the entire application** to the Municipal Office.

   ATTACH a list of the names and addresses of the owners of abutting property.

CERTIFICATION

By signing below, the applicant or authorized agent certifies that:

1. A Notice of Intent to File was published in a newspaper circulated in the area where the project site is located within 30 days prior to filing the application;
2. A certified mailing of the Notice of Intent to File was sent to all abutters within 30 days of the filing of the application;
3. A certified mailing of the Notice of Intent to File, and a duplicate copy of the application was sent to the town office of the municipality in which the project is located; and
4. Provided notice of, if required, and held a public informational meeting in accordance with Chapter 2, Rules Concerning the Processing of Applications, Section 14, prior to filing the application. Notice of the meeting was sent by certified mail to abutters and to the town office of the municipality in which the project is located at least ten days prior to the meeting. Notice of the meeting was also published once in a newspaper circulated in the area where the project site is located at least seven days prior to the meeting.

The Public Informational Meeting was held on January 25, 2022.
Date

Approximately 8 members of the public attended the Public Informational Meeting.

Eben Baker
Signature of Applicant or authorized agent

January 26, 2022
Date

Exhibit D

Agent Authorization

January 24, 2022

Attention: Krista Clark & Eben Baker
Stantec Consulting Services Inc.
30 Park Drive
Topsham, ME 04086

Reference: Agent Authorization

Dear Krista and Eben,

The intent of this letter is to authorize Stantec Consulting Services Inc. to act as our agent in submitting municipal, state, and federal permit applications and answering questions associated with the Three Corners Solar, LLC (subsidiary of Longroad Development Company, LLC) proposed solar project in Kennebec County, Maine. The proposed project is located along Unity Road in Unity Township.

Regards,

Longroad Development Company, LLC

By: _____
Name: Michael U. Alvarez
Title: Chief Operating Officer