

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. 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.

Three Corners Solar Project

MDEP Natural Resources Protection Act Permit Application

ATTACHMENT 12. FUNCTIONAL ASSESSMENT

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.

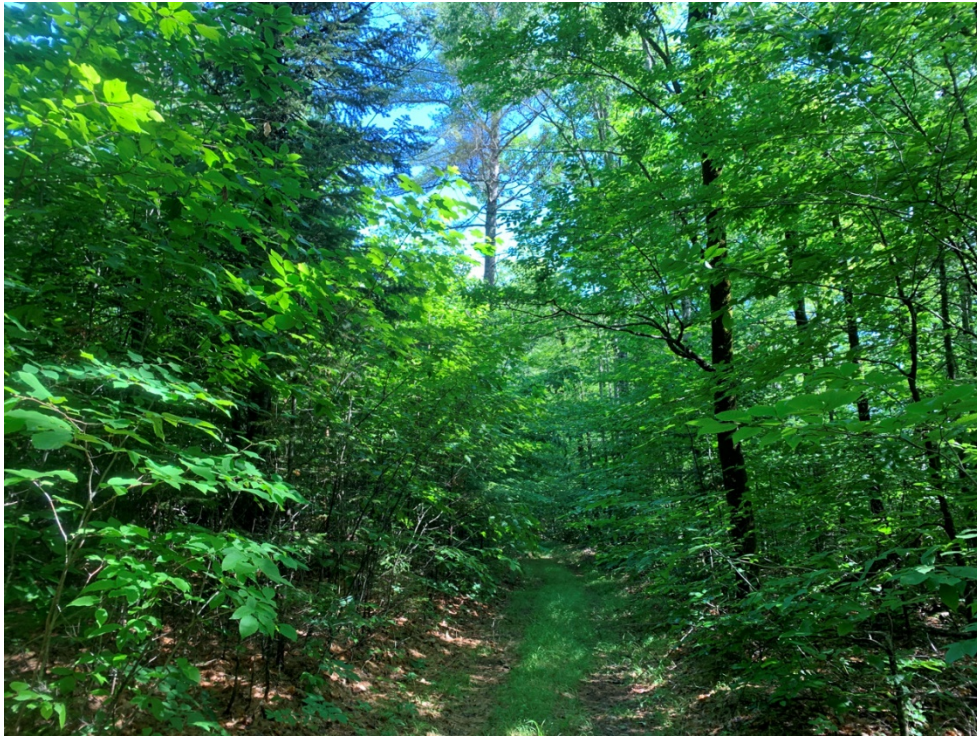
In discrete locations (i.e., access road fill/grading), some localized functions may be lost. However, overall, the wetlands are anticipated to continue to provide principal functions and values at a high-level following Project construction due to the primary location of impacts along wetland edges 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



Contents

Table of Contents

1.0	Introduction	2
3.0	Methods	2
4.0	Results	3
5.0	Discussion	6

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 Methodology¹. 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 verticillata*). 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 (*Nymphaea 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 from 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

THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT

Table of Contents

1.0 INTRODUCTION..... 1

2.0 METHODOLOGY..... 1

3.0 RESULTS 3

4.0 SUMMARY OF PROPOSED PROJECT IMPACTS 6

LIST OF TABLES

Table 1. Summary of Wetland Functions and Values 5

Table 2. Summary of Wetland Impacts 7

LIST OF FIGURES

Figure 1. Location Map

Figures 2–5. Wetland and Watercourse Delineation and Potential Vernal Pool Survey Results

LIST OF APPENDICES

APPENDIX A REPRESENTATIVE PHOTOGRAPHS..... A.1

APPENDIX B FUNCTIONAL ASSESSMENT DATA FORMS..... B.1



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT

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.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT

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.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT

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



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT

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.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT

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.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT

Table 2. Summary of Wetland Impacts

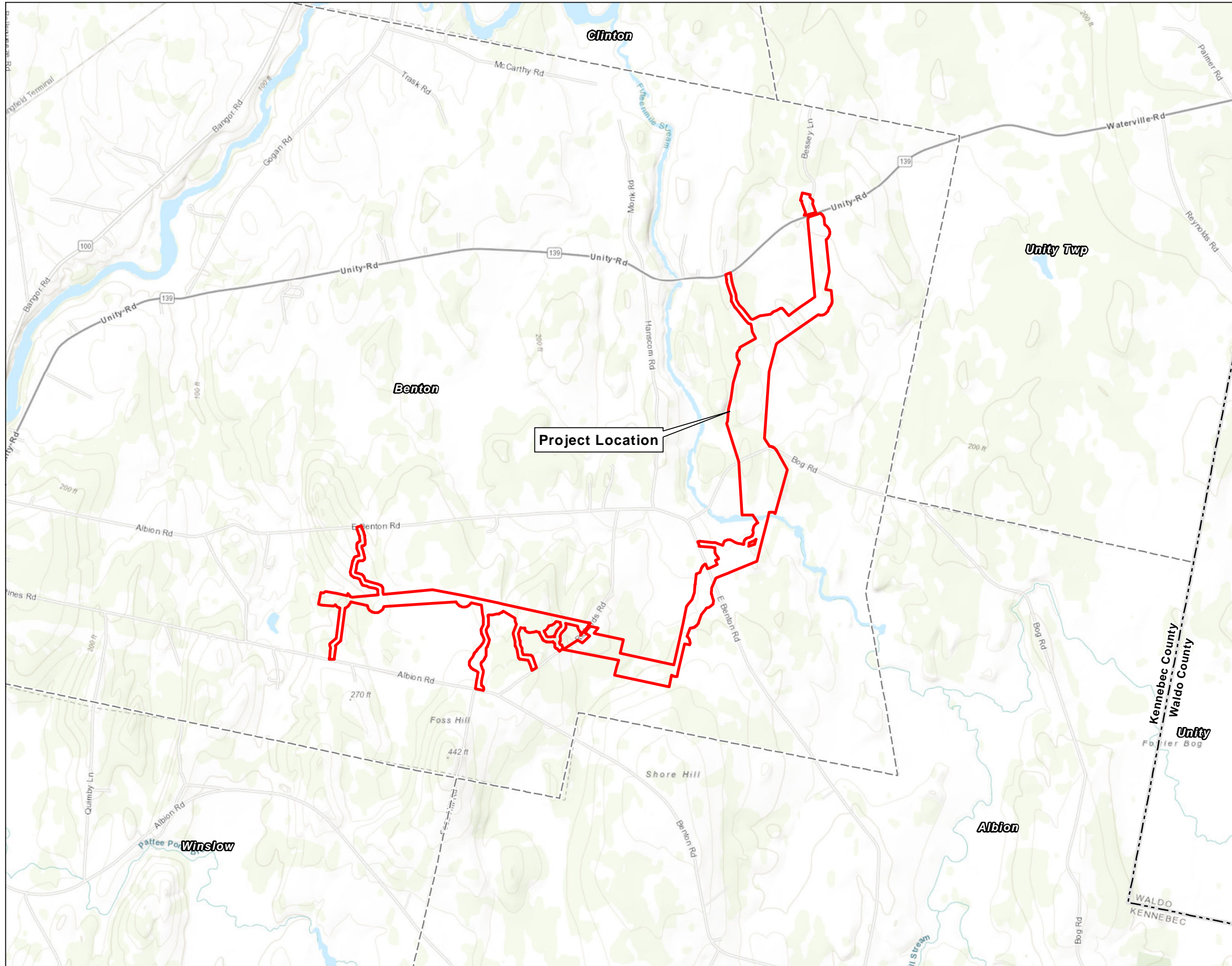
Wetland Identifier	Wetland Field Designation	Wetland Classification(s)¹	Proposed Wetland Impacts (acres)
W07	01CFD	PFO	0.07
W09	01RKE	PFO/PSS/PEM	4.94
W14	01CFG	PSS	0.14
W15	01RKF	PFO	0.18
W16	01RKG	PFO	0.16
W22	01RKI	PFO	0.59
W27	01CFK	PSS/PFO	0.39
W28	01CFN	PFO	1.31
W32	01RKL	PFO/PSS/PEM	1.05
W35	01RKM	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



V:\1956\active\195601453\03_data\gis_cad\gis\Map\ThreeCornersLocationMap.mxd Revised: 2021-11-30 By: gcarpenter



Legend

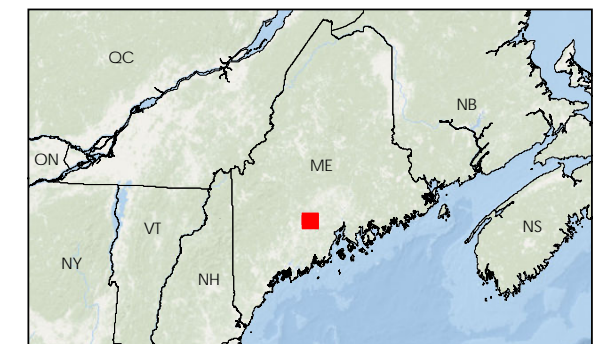
-  Project Location
-  Municipal Boundary
-  County Boundary



0 1,500 3,000 Feet
 (At original document size of 11x17)
 1:36,000

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
 Three Corners Solar Project
 Transmission Line Delineation
 Benton, Maine

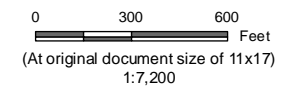
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Figure No.
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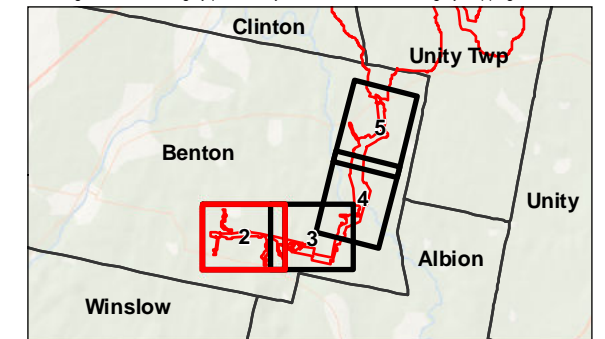
Title
USGS Location Map

Legend

- Army Corps Location Plot
- Potential Significant Vernal Pool
- Potential Vernal Pool
- Delineated Intermittent Stream
- Delineated Perennial Stream
- 250' Significant Vernal Pool Critical Terrestrial Habitat
- 250' Potential Significant Vernal Pool Critical Terrestrial Habitat
- Delineated Wetland
- Open Water Feature
- Delineation Limits
- Limit of Disturbance
- Overhead Transmission Line



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



Project Location
Benton, Maine

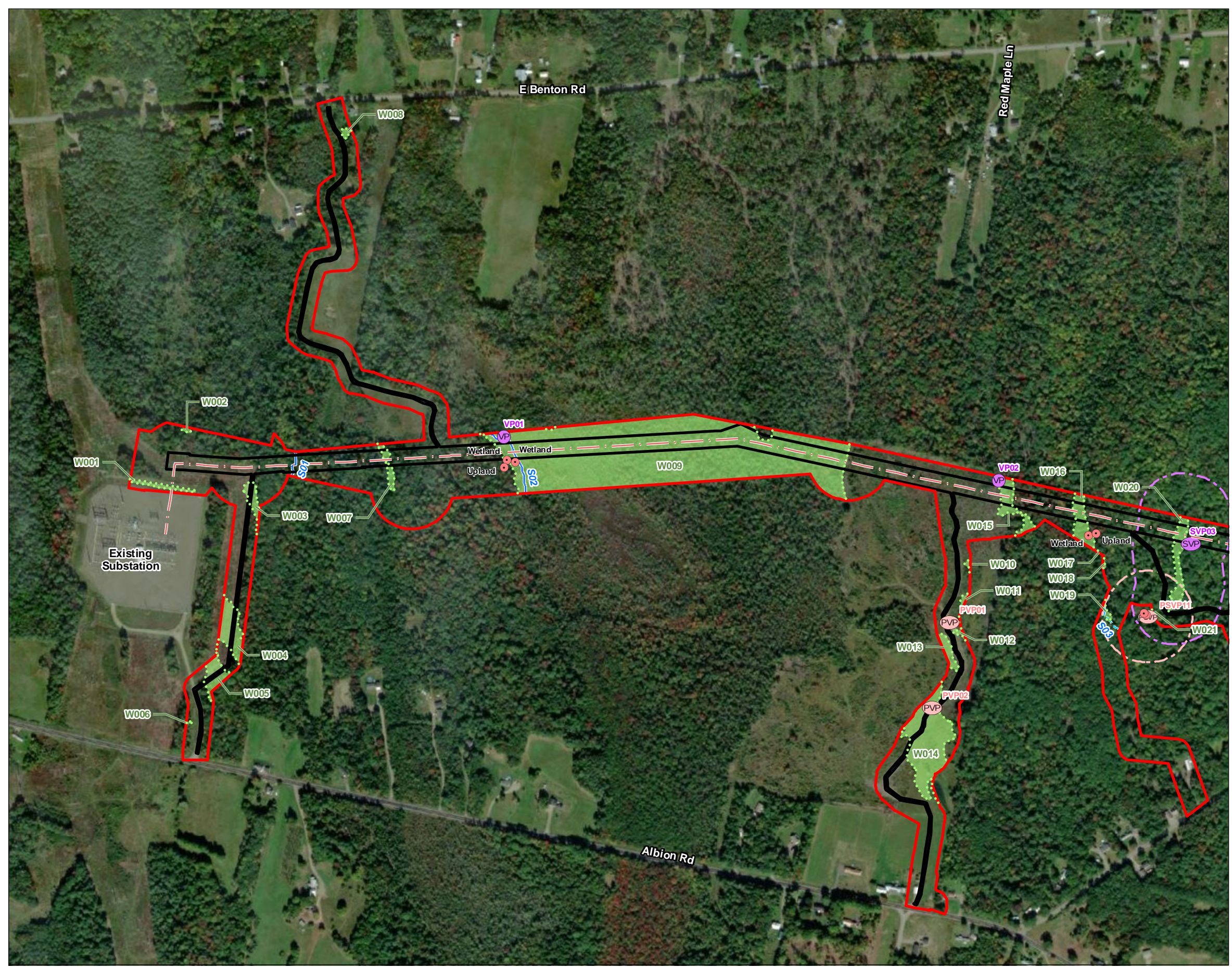
Prepared by GC on 2021-12-16
Reviewed by EB on 2021-12-16

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

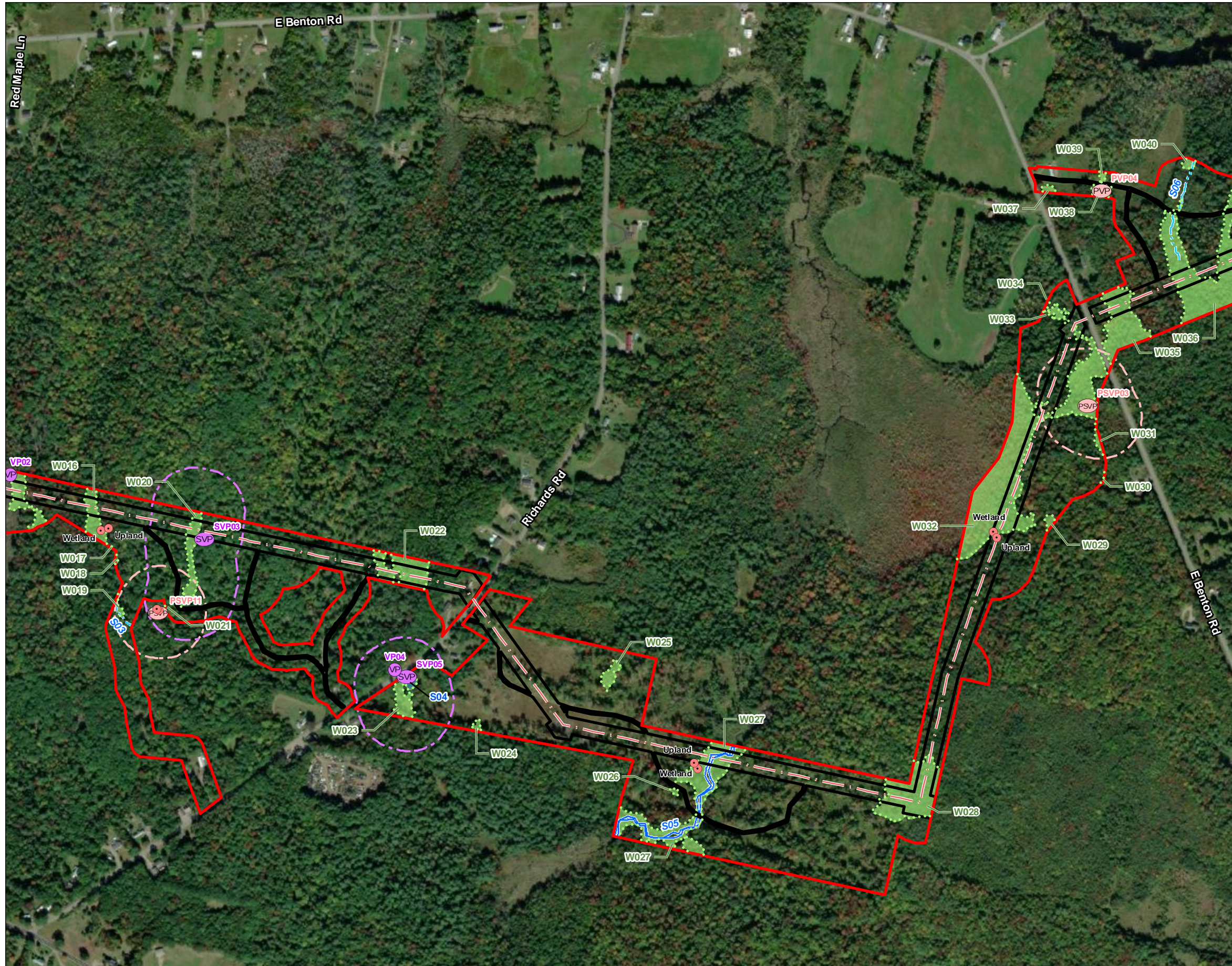
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Figure No.
2 of 5

Title
Wetland and Watercourse Delineation and
Vernal Pool Survey Results

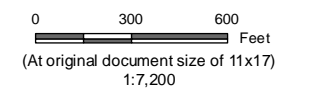


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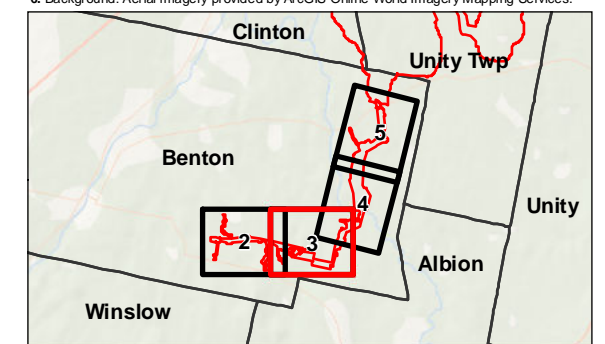


Legend

- Army Corps Location Plot
- PSVP Potential Significant Vernal Pool
- PVP Potential Vernal Pool
- Delineated Intermittent Stream
- Delineated Perennial Stream
- 250' Significant Vernal Pool Critical Terrestrial Habitat
- 250' Potential Significant Vernal Pool Critical Terrestrial Habitat
- Delineated Wetland
- Open Water Feature
- Delineation Limits
- Limit of Disturbance
- Overhead Transmission Line



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



Project Location
Benton, Maine

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

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

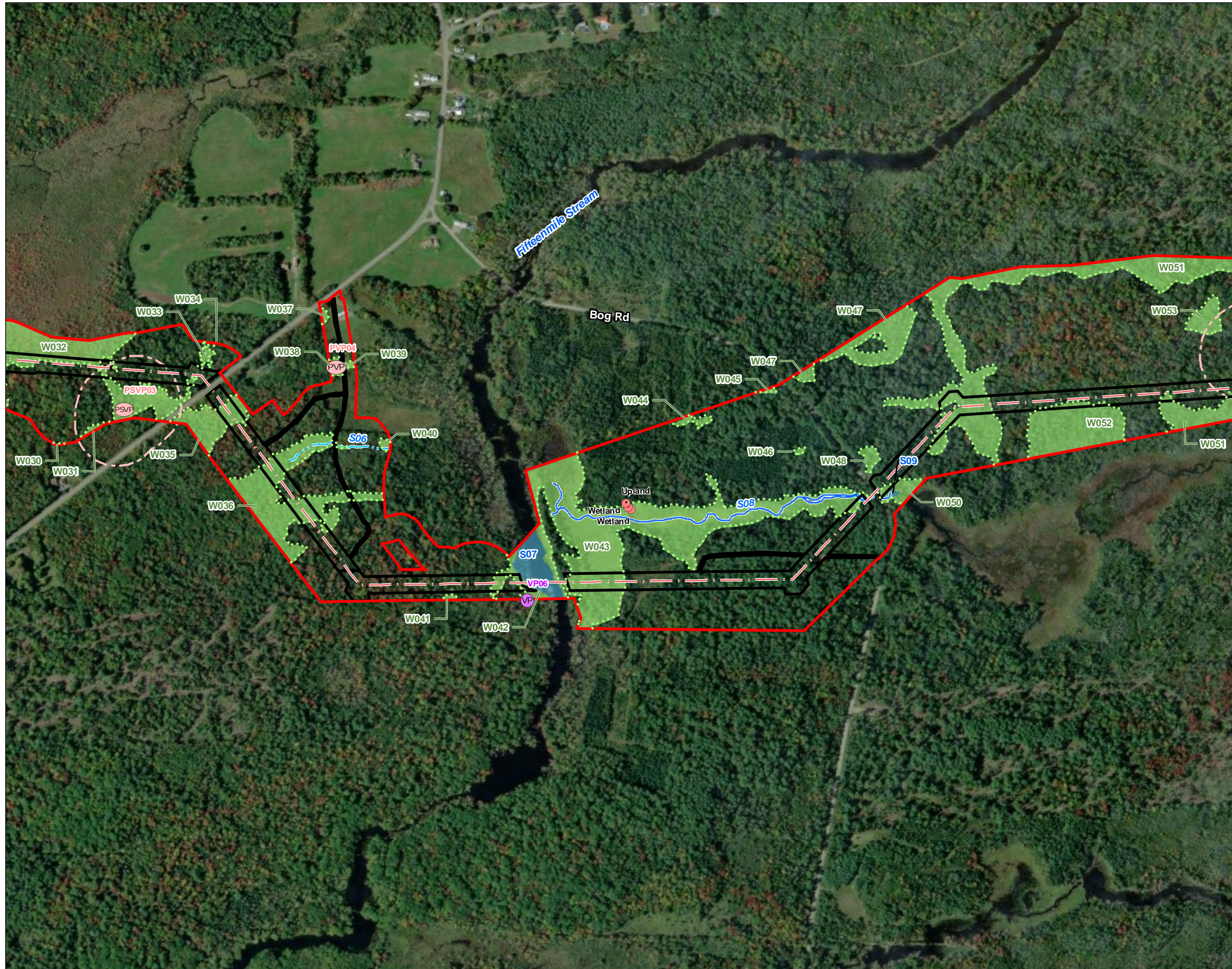
195601453

Figure No.
3 of 5

Title
**Wetland and Watercourse Delineation and
Vernal Pool Survey Results**

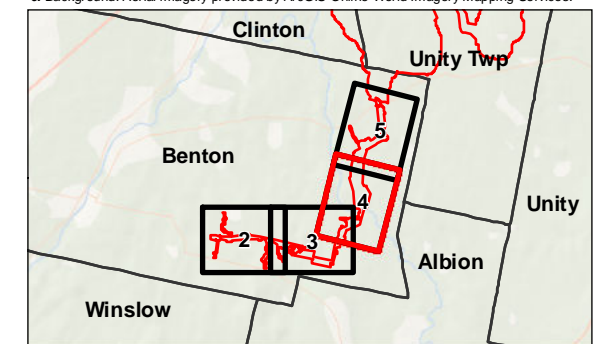
Legend

- Army Corps Location Plot
- Potential Significant Vernal Pool
- Potential Vernal Pool
- Delineated Intermittent Stream
- Delineated Perennial Stream
- 250' Significant Vernal Pool Critical Terrestrial Habitat
- 250' Potential Significant Vernal Pool Critical Terrestrial Habitat
- Delineated Wetland
- Open Water Feature
- Delineation Limits
- Limit of Disturbance
- Overhead Transmission Line



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.
 4 of 5

Title
 Wetland and Watercourse Delineation and
 Vernal Pool Survey Results

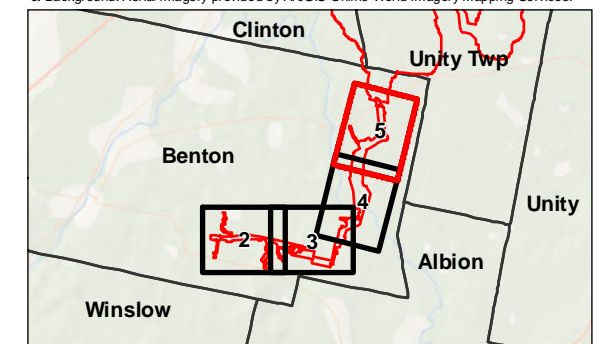
Legend

- Army Corps Location Plot
- Potential Significant Vernal Pool
- Potential Vernal Pool
- Delineated Intermittent Stream
- Delineated Perennial Stream
- 250' Significant Vernal Pool Critical Terrestrial Habitat
- 250' Potential Significant Vernal Pool Critical Terrestrial Habitat
- Delineated Wetland
- Open Water Feature
- Delineation Limits
- Limit of Disturbance
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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

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APPENDICES



Appendix A REPRESENTATIVE PHOTOGRAPHS



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



Photo 1: Wetland W03 (01RKD/01CFC). Stantec. July 27, 2020.



Photo 2. Wetland W04 (01RKC). Stantec. July 27, 2020.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



Photo 3. Wetland W05 (01RKB). Stantec. July 27, 2020.



Photo 4: Wetland W07 (01CFD). Stantec. July 27, 2020.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



Photo 5. Wetland W09 (01RKE). Stantec. July 27, 2020.



Photo 6. Wetland W14 (01CFG). Stantec. July 27, 2020.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



Photo 7. Wetland W15 (01RKF). Stantec. July 27, 2020.



Photo 8. Wetland W16 (01RKG). Stantec. July 27, 2020.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



Photo 9. Wetland W22 (01RKI). Stantec. July 28, 2020.



Photo 10: Wetland W27 (01CFK), forested portion. Stantec. July 28, 2020.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



Photo 11: Wetland W28 (01CFN). Stantec. July 28, 2020.



Photo 12: Wetland W32 (01RKL). Stantec. July 28, 2020.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



Photo 13. Wetland W35 (01RKM). Stantec. July 29, 2020.



Photo 14. Wetland W36 (01RKN/01RKO/01CFU). Stantec. July 29, 2020.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



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.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



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.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



Photo 19. Wetland 50 (01CFY) open water and emergent component. Stantec. July 30, 2020.



Photo 20. Wetland W51 (02RKC). Stantec. July 30, 2020.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



Photo 21. Wetland W51 (02RKD) recently forested portion. Stantec. July 30, 2020.



Photo 22. Wetland W52 (02CFB). Stantec. July 30, 2020.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



Photo 23. Wetland W56 (01RKZ), scrub-shrub portion. Stantec. July 31, 2021.



Photo 24. Wetland W57 (01RKX), forested portion. Stantec. July 30, 2021.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



Photo 25. Wetland W58 (02RKH) forested portion. Stantec. July 31, 2021.



Photo 26. Wetland W58 (02RKH) emergent portion. Stantec. July 31, 2021.



THREE CORNERS SOLAR TRANSMISSION LINE PROJECT: WETLAND FUNCTION AND VALUE ASSESSMENT REPORT



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 Arsenaault
	Date: 12/14/2021













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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		Summary	Principal Yes/No
	Y	N		
 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		Summary	Principal Yes/No
	Y	N		
 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 <i>Acer rubrum</i> , <i>Fraxinus pennsylvanica</i> , and <i>Abies balsamea</i> trees. Understory plants include	File number: 195601453	
<i>Abies balsamea</i> , <i>Acer rubrum</i> , <i>Alnus incana</i> , <i>Onoclea sensibilis</i> , <i>Osmundastrum cinnamomeum</i> , <i>Carex crinita</i> , and <i>Carex trisperma</i>	Wetland identifier: W7	
	Latitude: 44.575519	Longitude: -69.503498
	Preparer(s): Matt Arsenault	
	Date: 12/6/2021	













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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		Summary	Principal Yes/No
	Y	N		
 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 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 by forest harvest equipment	File number: 195601453
	Wetland identifier: W14
	Latitude: 44.571037 Longitude: -69.491043
	Preparer(s): Matt Arsenaault
	Date: 12/14/2021













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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 <i>Abies balsamea</i> , <i>Acer rubrum</i> , <i>Fraxinus nigra</i> , <i>Thuja occidentalis</i> , <i>Alnus incana</i> , <i>Onoclea sensibilis</i> , <i>Typha latifolia</i> , <i>Toxicodendron radicans</i> , <i>Carex triperma</i> , <i>Osmundastrum cinnamomeum</i> , and <i>Osmunda spectabilis</i>	File number: 195601453
	Wetland identifier: W15
	Latitude: 44.574952 Longitude: -69.489187
	Preparer(s): Matt Arsenaault
	Date: 12/6/2021













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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 <i>Abies balsamea</i> , <i>Acer</i>	File number: 195601453	
<i>Rubrum</i> , <i>Fraxinus nigra</i> , <i>Thuja occidentalis</i> , <i>Alnus incana</i> , <i>Onoclea sensibilis</i> , <i>Carex trisperma</i> , <i>Rubus pubescens</i> , <i>Osmundastrum cinnamomeum</i> ,	Wetland identifier: W16	
<i>Thelypteris palustris</i> , <i>Equisetum sylvaticum</i>	Latitude: 44.574696	Longitude: -69.487511
	Preparer(s): Matt Arseneault	
	Date: 12/6/2021	













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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, 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 wetland swale. Includes common vegetation associates such as <i>Abies balsamea</i> , <i>Acer rubrum</i> , <i>Ulmus americana</i>	File number: 195601453	
<i>Spiraea latifolia</i> , <i>Ilex verticillata</i> , <i>Alnus incana</i> , <i>Onoclea sensibilis</i> , <i>Carex trisperma</i> , <i>Typha latifolia</i> , <i>Glyceris striata</i> , <i>Impatiens capensis</i> , <i>Rubus</i>	Wetland identifier: W22	
<i>hispidus</i> , <i>Osmunda claytoniana</i> , <i>Toxicodendron radicans</i> , <i>Cinna latifolia</i>	Latitude: 44.573649	Longitude: -69.480342
	Preparer(s): Matt Arseneault	
	Date: 12/6/2021	













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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 <i>Acer rubrum</i> , <i>Abies balsamea</i> , <i>Betula alleghaniensis</i> , <i>Thuja occidentalis</i> , <i>Alnus incana</i> , <i>Calamagrostis canadensis</i> , <i>Carex lacustris</i> , <i>Carex lurida</i> ,	Wetland identifier: W27	
and <i>Sparganium</i> spp.	Latitude: 44.570677	Longitude: -69.473229
	Preparer(s): Matt Arsenaault	
	Date: 12/6/2021	













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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: <i>Thuja occidentalis</i> , <i>Fraxinus nigra</i> , <i>Betula populifolia</i> , <i>Betula alleghaniensis</i> , <i>Abies balsamea</i> , <i>Populus tremuloides</i> , <i>Acer rubrum</i> , <i>Onoclea</i>	Wetland identifier: W28	
<i>sensibilis</i> , <i>Osmunda claytoniana</i> , <i>Carex crinita</i> , <i>Carex trisperma</i> , <i>Glyceria striata</i> .	Latitude: 44.569973	Longitude: -69.468625
	Preparer(s): Matt Arseneault	
	Date: 12/6/2021	













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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 forested portions of the wetland. Wetland contains a potential vernal pool. Vegetation includes common wetland associates including	File number: 195601453
<i>Abies balsamea, Acer rubrum, Betula alleghaniensis, Thuja occidentalis, Fraxinus nigra, Alnus incana, Ilex verticillata, Rubus pubescens, Glyceria striata, Osmunda claytoniana, Calamagrostis canadensis</i>	Wetland identifier: W32
	Latitude: 44.575114 Longitude: -69.466424
	Preparer(s): Matt Arseneault
	Date: 12/6/2021













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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	
<i>Abies balsamea, Acer rubrum, Fraxinus nigra, Thuja occidentalis, Ilex verticillata, Alnus incana, Onoclea sensibilis, Osmunda regalis, Typha latifolia</i>	Wetland identifier: W35	
	Latitude: 44.578105	Longitude: -69.464093
	Preparer(s): Matt Arsenaault	
	Date: 12/6/2021	













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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 <i>Ilex verticillata</i> 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 <i>Acer rubrum</i> ,	File number: 195601453	
<i>Abies balsamea</i> , <i>Fraxinus nigra</i> , <i>Thuja occidentalis</i> , <i>Alnus incana</i> , <i>Ilex verticillata</i> , <i>Onoclea sensibilis</i> , <i>Osmunda spectabilis</i>	Wetland identifier: W36	
	Latitude: 44.578760	Longitude: -69.461717
	Preparer(s): Matt Arsenaault	
	Date: 12/6/2021	













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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 Arsenaault	
	Date: 12/6/2021	













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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 open water wetland types. Vegetation is diverse and consists of abundance of common species with localized occurrences of state-listed species	File number: 195601453
	Wetland identifier: W43
	Latitude: 44.582912 Longitude: -69.458353
	Preparer(s): Matt Arsenaault
	Date: 12/6/2021













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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 <i>Allium canadense</i> , 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 complex that extends off-site and includes forested, emergent, and open water community types.	File number: 195601453
	Wetland identifier: W50
	Latitude: 44.588096 Longitude: -69.458626
	Preparer(s): Matt Arsenaault
	Date: 12/6/2021













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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 harvests have opened portions of the wetland canopy. Wetland includes a potential vernal pool. Vegetation is diverse, containing common hydrophytes.	File number: 195601453	
Wetland is contiguous with large wetland complex associated with Fifteenmile Stream.	Wetland identifier: W51	
	Latitude: 44.589815	Longitude: -69.460054
	Preparer(s): Matt Arseneault	
	Date: 12/7/2021	













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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 <i>Acer rubrum</i> , <i>Abies balsamea</i> , <i>Betula alleghaniensis</i> , <i>Thuja occidentalis</i> ,	Wetland identifier: W52	
<i>Betula populifolia</i> , and <i>Fraxinus nigra</i> trees. Understory contains <i>Alnus incana</i> and <i>Ilex verticillata</i> shrubs with a diverse herbaceous flora.	Latitude: 44.591493	Longitude: -69.459413
	Preparer(s): Matt Arsenault	
	Date: 12/7/2021	













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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. <i>Abies balsamea</i> , <i>Acer rubrum</i> , <i>Betula alleghaniensis</i> , and <i>Thuja occidentalis</i> are the characteristic tree species. <i>Alnus incana</i> , <i>Ilex verticillata</i> , <i>Spiraea latifolia</i> , and <i>Spiraea tomentosa</i> 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		Summary	Principal Yes/No
	Y	N		
 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 northerly off site. The wetland is associated with a small perennial stream. The wetland is bisected by a forest equipment trail.	File number: 195601453
	Wetland identifier: W57
	Latitude: 44.598921 Longitude: -69.457916
	Preparer(s): Matt Arsenaault
	Date: 12/14/2021













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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 occurred in forested portions of the wetland on site. Wetland contains a great blue heron rookery off-site. Vegetation includes common wetland associates including <i>Abies balsamea</i> , <i>Acer rubrum</i> , <i>Betula alleghaniensis</i> , <i>Thuja occidentalis</i> , and <i>Fraxinus nigra</i> trees, <i>Alnus incana</i> , <i>Ilex verticillata</i> , <i>Spiraea latifolia</i> , and <i>Spiraea tomentosa</i> shrubs; and a diverse herbaceous flora.	File number: 195601453	Wetland identifier: W58
	Latitude: 44.599165	Longitude: -69.453108
	Preparer(s): Matt Arseneault	
	Date: 12/7/2021	













Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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 occurred in forested portions of the wetland on site. Wetland contains a great blue heron rookery off-site. Vegetation includes common wetland associates including <i>Abies balsamea</i> , <i>Acer rubrum</i> , <i>Betula alleghaniensis</i> , <i>Thuja occidentalis</i> , and <i>Fraxinus nigra</i> trees, <i>Alnus incana</i> , <i>Ilex verticillata</i> , <i>Spiraea latifolia</i> , and <i>Spiraea tomentosa</i> shrubs; and a diverse herbaceous flora.	File number: 195601453	Wetland identifier: W59
	Latitude: 44.601198	Longitude: -69.452215
	Preparer(s): Matt Arseneault	
	Date: 12/7/2021	

Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 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.