

## ATTACHMENT 12: FUNCTIONS AND VALUES ASSESSMENT

### A. Wetlands Functions and Values Assessment

In accordance with Chapter 310 (Wetland and Waterbodies Protection Rules), Tetra Tech completed a wetlands functions and values assessment to evaluate the loss of wetland functions and values as a result of the proposed wetland impacts associated with the Project. The wetlands were evaluated using the USACE New England District's Highway Methodology Workbook.<sup>1</sup>

The majority of wetlands proposed to be impacted by the Project have been previously disturbed through construction of roads, development of the site as a USAF Radar Station, or from timber harvesting practices. These resources generally score low in the functions and values assessment, with each resource having only one or a few functions and values. Table 1-1 in Attachment 1 (Description of Activity) identifies which resources have been previously impacted from these activities.

Several of the wetlands that are not identified as having been previously impacted are under 5,000 square feet and do not contain features that support wetland functions and values of the larger landscape, such as presence of listed species, connection to streams or other resources, or unique qualities. The abundance of larger and more diverse wetlands within the watershed surrounding the Project area limits the functions and values these resources provide at the landscape level. The principal functions and values for these wetlands generally include wildlife habitat, sediment/shoreline stabilization, and sediment/toxicant retention. The location of several wetlands that are proposed to be impacted by the Project also affects the functions of these resources. Several occur within the former USAF Radar Station fields where they are so heavily altered that it is difficult to determine if the origin of the wetland is natural, or if it was created by past activities.

Palustrine emergent (PEM) wetland communities within the Study Area are the most common wetland community and represent approximately 50 percent (%) of the wetland cover types. The remaining wetland community is represented as 38% palustrine forested (PFO) wetlands and 12% are palustrine scrub-shrub (PSS) wetlands. There are no unconsolidated bottom wetlands present within the Study Area. Function-Value Evaluation Forms for each wetland cover type are provided as Exhibit 12-1. No Function-Value Evaluation Form for the PSS Non-Wetland of Special Significance wetlands type is provided at this time due to the fact that wetland W126EI was delineated in the winter of 2021 and wetland WET-68-02 is a wetland delineated as part of the New England Clean Energy Connect project. A Function-Value Evaluation Form will be completed once the follow-on wetland delineations and reporting to support the winter delineation field efforts are completed, and the updated information will be included in the Natural Resources Report Addendum to be submitted as a supplement to the permitting record. Function-Value Evaluation Forms for each impacted wetland are available upon request.

Proposed construction activities within the Project's 34.5 kV overhead transmission corridor will involve clearing and the conversion of PFO/PSS wetland to PSS/PEM wetlands. Additionally, the reuse of the existing 12.7 kV distribution line will require maintenance clearing and the conversion of PFO/PSS wetland to PSS/PEM wetlands. Potential changes to the functions and values of these wetlands are discussed below.

The removal of capable tree, sapling, and shrub species—coupled with transmission line maintenance—generally creates and maintains permanent early successional communities with different functions and values than forested communities. Habitat functions would be altered with some species benefiting and others not. For example, habitat

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<sup>1</sup> USACE, New England District. 2015. The Highway Methodology Workbook Supplement. Wetland Functions and Values. April 6, 2015.

for arboreal species would be diminished while habitat for early successional species would be enhanced. In Maine and in the northeast where the landscape is dominated by forests,<sup>2</sup> the creation of early successional habitat generally promotes species diversity, stem density, annual growth and decomposition, and increased layering of vegetation. Forage, cover, and habitat values for wildlife species are different in early successional communities with increased herbaceous forage, soft mast, grass and sedge seeds, tubers, flowering plants, and cover (MDIFW 2015). Although the removal of capable species reduces shading and hard mast production and reduces or eliminates winter cover for some species, overall, in a densely forested region, converting forested areas to shrub and emergent communities can increase habitat diversity. In Maine, several Species of Greatest Conservation Need as identified in Maine's Wildlife Action Plan, require early successional habitat. These include, but are not limited to, American woodcock (*Scolopax minor*), brown thrasher (*Toxostoma rufum*), white-throated sparrow (*Zonotrichia albicollis*), and wood thrush (*Hylocichla mustelina*) (MDIFW 2015). All of these species have been observed in the Project area.

For wetlands found near streams, the production export and cycling of nutrients to the stream ecosystem via detritus may be enhanced by conversion from a PFO wetland to PSS/PEM wetlands. Dense shrub and herbaceous vegetation can slow the flow of water in streams and increase floodflow alteration functions, slowing and retaining sediments and nutrients (USACE, New England District 2015). Ecological production, diversity, stem density, annual growth, and decomposition will increase. This is a contribution to the local food chain and supports habitat values.

Harvesting timber for sale as lumber, cord wood, and pulp is provided by the initial conversion of PFO wetlands to PSS/PEM wetlands. Hunting value of area lands will remain after clearing, as habitat for game species will still be present.

None of the functions or values provided by the PFO wetlands that will be converted because of the reuse of the distribution line will be completely lost or severely diminished by the conversion to PSS/PEM wetlands. On balance, there is a positive net benefit regarding functions and values.

## Exhibits

- Exhibit 12-1 Functions and Values Assessment Summary Forms

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<sup>2</sup> MDIFW. 2015. Maine's Wildlife Action Plan. Maine Department of Inland Fisheries and Wildlife, Augusta, ME.

**EXHIBIT 12-1      FUNCTIONS AND VALUES ASSESSMENT SUMMARY FORMS**

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**Exhibit 12-1**

**Wetland Function-Value Evaluation Form – Palustrine Forested -WOSS**

Human made? **No** Is wetland part of a wildlife corridor? **No** or a “habitat island”? **No** Wetland ID: **See Table 7-1** Adjacent land use: **Gravel Road, Active Timberland, abandoned radar facility** Distance to nearest roadway or other development? **Some areas are adjacent to roadway, some are 1,500+ feet from roadway** Dominant wetland systems present: **PFO** Contiguous undeveloped buffer zone present: **No** Prepared by: **Emmy Irvin** Is the wetland a separate hydraulic system? **No** If not, where does the wetland lie in the drainage basin: **Generally, ridge line seep wetlands and plateau wetlands** Impact: Type: **Fill** How many tributaries contribute to the wetland? **3** Wildlife & vegetation diversity/abundance: **See Exhibit 7-4 Natural Resources Survey Report, Table 2.**

**Wetland Impact:**      **Type:** Clearing: 791 square feet      **Type:** Permanent: 13,566 square feet      **Combined Total:** 14,358 square feet

Function/Value	Suitability Y/N	Rational Reference #'s	Principal or Secondary Function	Comments
Groundwater Recharge/Discharge	Y	7, 9, 10	Primary	Some wetlands contain small streams that originate and/or disperse in wetland
Floodflow Alteration	Y	1	secondary	This is a large wetland compared to other wetlands in the area
Fish and Shellfish Habitat	N			Wetlands are not suitable to fish and shellfish habitat
Production Export	N			No exportable products are produced in wetlands
Sediment/Toxicant Retention	Y	1, 10	secondary	Some wetlands contain small streams and flood in the spring
Nutrient Removal	N			Wetlands are not suitable to nutrient removal
Sediment/Shoreline Stabilization	Y	2, 4	secondary	Some wetlands provide bank stabilization to intermittent streams
Wildlife Habitat	Y	5, 7, 8, 20	secondary	Wildlife habitat is abundant in the surrounding area
Educational/Scientific Value	N			Limited potential for educational values
Recreation	N			No potential for recreation associated with wetlands
Uniqueness/Heritage	Y	24		Wetland is, or contains, a WOSS
Visual Quality/Aesthetics	N			Not a visually or aesthetically pleasing wetland
Endangered Species Habitat	N			No listed species habitat is present in wetlands
Other	N			

**Wetland Function-Value Evaluation Form – Palustrine Forested – Non-WOSS**

Human made? **No** Is wetland part of a wildlife corridor? **No** or a “habitat island”? **No** Wetland ID: **See Table 7-1** Adjacent land use: **Gravel Road, Active Timberland, abandoned radar facility** Distance to nearest roadway or other development? **Some areas are adjacent to roadway, some are 1,500+ feet from roadway** Dominant wetland systems present: **PFO** Contiguous undeveloped buffer zone present: **No** Prepared by: **Emmy Irvin** Is the wetland a separate hydraulic system? **No** If not, where does the wetland lie in the drainage basin: **Generally, ridge line seep wetlands and plateau wetlands** Impact: Type: **Fill** How many tributaries contribute to the wetland? **0** Wildlife & vegetation diversity/abundance: **See Exhibit 7-4 Natural Resources Survey Report, Table 2.**

**Wetland Impact:**      **Type:** Clearing: 1,840 square feet      **Type:** Permanent: 17,776 square feet      **Combined Total:** 19,616 square feet

Function/Value	Suitability Y/N	Rational Reference #'s	Principal or Secondary Function	Comments
Groundwater Recharge/Discharge	N			Limited potential for groundwater recharge or discharge
Floodflow Alteration	Y	1, 2, 3, 5, 6	Primary	Some wetlands are large compared to other wetlands in the area and are in a relatively flat area that has flood storage potential
Fish and Shellfish Habitat	N			Wetlands are not suitable to fish and shellfish habitat
Production Export	N			No exportable products are produced in wetlands
Sediment/Toxicant Retention	Y	1, 2	secondary	Some wetlands are in previously disturbed area that has potential for erosion
Nutrient Removal	Y	4, 8	secondary	Some wetlands have a dense herbaceous layer in a addition to a think canopy
Sediment/Shoreline Stabilization	Y	3	secondary	Wetland occurs in between roadway and two intermittent or perennial streams
Wildlife Habitat	N	4, 7, 8	secondary	Disturbed wetland in managed forest, other less impacted resources nearby
Educational/Scientific Value	N			Limited potential for educational values
Recreation	N			No potential for recreation associated with wetlands
Uniqueness/Heritage	N			Limited potential for uniqueness or heritage value
Visual Quality/Aesthetics	N			Not a visually or aesthetically pleasing wetland
Endangered Species Habitat	N			No listed species habitat is present in wetlands
Other	N			

**Wetland Function-Value Evaluation Form – Palustrine Emergent -Non-WOSS**

Human made? **No** Is wetland part of a wildlife corridor? **No** or a “habitat island”? **No** Wetland ID: **See Table 7-1** Adjacent land use: **Gravel Road, Active Timberland, abandoned radar facility** Distance to nearest roadway or other development? **Some areas are adjacent to roadway, some are 1,500+ feet from roadway** Dominant wetland systems present: **PEM** Contiguous undeveloped buffer zone present: **No** Prepared by: **Emmy Irvin** Is the wetland a separate hydraulic system? **No** If not, where does the wetland lie in the drainage basin: **Generally, ridge line seep wetlands and plateau wetlands** Impact: Type: **Fill** How many tributaries contribute to the wetland? **3** Wildlife & vegetation diversity/abundance: **See Exhibit 7-4 Natural Resources Survey Report, Table 2.**

**Wetland Impact:** Type: Clearing: 9,832 square feet Type: Permanent: 40,734 square feet **Combined Total:** 50,566 square feet

Function/Value	Suitability Y/N	Rational Reference #'s	Principal or Secondary Function	Comments
Groundwater Recharge/Discharge	N			Limited potential for groundwater recharge or discharge
Floodflow Alteration	Y	1, 6, 7, 13	secondary	Some wetlands are large compared to other wetlands in the area and are in a relatively flat area that has flood storage potential and/or have an associated intermittent stream
Fish and Shellfish Habitat	N			Wetlands are not suitable to fish and shellfish habitat
Production Export	N			No exportable products are produced in wetlands
Sediment/Toxicant Retention	Y	1, 2, 10	secondary	Some wetlands occur in the USAF radar field with historic human made disturbances or within man-made roadside ditches
Nutrient Removal	Y	8	Secondary	Some wetlands have a thick herbaceous layer
Sediment/Shoreline Stabilization	N			Wetland occurs in between roadway and two intermittent or perennial streams
Wildlife Habitat	Y	3, 4, 5, 7, 8, 13,17, 21	Primary	Wildlife habitat is abundant in the surrounding area. some wetlands have beaver activity.
Educational/Scientific Value	N			Limited potential for educational values
Recreation	N			No potential for recreation associated with wetlands
Uniqueness/Heritage	N			Limited potential for uniqueness or heritage value
Visual Quality/Aesthetics	N			Not a visually or aesthetically pleasing wetland
Endangered Species Habitat	N			No listed species habitat is present in wetlands
Other	N			

**Wetland Function-Value Evaluation Form – Palustrine Emergent--WOSS**

Human made? **No** Is wetland part of a wildlife corridor? **No** or a “habitat island”? **No** Wetland ID: **See Table 7-1** Adjacent land use: **Gravel Road, Active Timberland, abandoned radar facility** Distance to nearest roadway or other development? **Some areas are adjacent to roadway, some are 1,500+ feet from roadway** Dominant wetland systems present: **PEM** Contiguous undeveloped buffer zone present: **No** Prepared by: **Emmy Irvin** Is the wetland a separate hydraulic system? **No** If not, where does the wetland lie in the drainage basin: **Generally, ridge line seep wetlands and plateau wetlands** Impact: Type: **Fill** How many tributaries contribute to the wetland? **2** Wildlife & vegetation diversity/abundance: **See Exhibit 7-4 Natural Resources Survey Report, Table 2.**

**Wetland Impact:** Type: Clearing: 4,088 square feet Type: Permanent: 0 square feet Combined Total: 4,088 square feet

Function/Value	Suitability Y/N	Rational Reference #'s	Principal or Secondary Function	Comments
Groundwater Recharge/Discharge	N			Limited potential for groundwater recharge or discharge
Floodflow Alteration	N	6, 7, 13	Primary	Wetlands have intermittent watercourses associated with them and are in flat areas with flood storage potential
Fish and Shellfish Habitat	N			Wetlands are not suitable to fish and shellfish habitat
Production Export	N			No exportable products are produced in wetlands
Sediment/Toxicant Retention	Y	1, 2, 10	secondary	Some wetlands occur in the USAF radar field with historic human made disturbances or within man-made roadside ditches
Nutrient Removal	N			Some wetlands have a thick herbaceous layer
Sediment/Shoreline Stabilization	N			Limited potential for sediment or shoreline stabilization
Wildlife Habitat	Y	17	Secondary	Some wetlands have signs of beaver activity
Educational/Scientific Value	N			Limited potential for educational values
Recreation	N			No potential for recreation associated with wetlands
Uniqueness/Heritage	N			Limited potential for uniqueness or heritage value
Visual Quality/Aesthetics	N			Not a visually or aesthetically pleasing wetland
Endangered Species Habitat	N			No listed species habitat is present in wetlands
Other	N			