Section 10. WETLANDS, WATERBODIES, AND SIGNIFICANT WILDLIFE HABITAT

10.1. INTRODUCTION

This section provides an overview of the wetland, waterbodies, and Significant Wildlife Habitat (SWH) resources regulated under the NRPA, as defined in 38 M.R.S.A. Section 480-B, that may occur within the proposed Project Area. Agency consultation, desktop analyses, and field surveys were completed to document the existing resources and to evaluate the condition of the resources in the Project Area. The following subsections describe the results of the surveys and the Project's plans to avoid, mitigate, and minimize potential impacts to any sensitive resources.

The Project Area is located on privately owned commercial agriculture and forestry land in the town of Columbia and unorganized territories of T18 MD BPP and T24 MD BPP in Washington County, Maine. Land use in the Project Area and the surrounding region primarily consists of large-scale commercial agriculture, forestry, and timber production.

The Project is located within the Pleasant River-Frontal Atlantic Ocean (HUC 10: 0105000206), Lower Machias River (HUC 10: 0105000206), and Narraguagus River-Frontal Atlantic Ocean (HUC 10: 0105000210) watersheds. The water draining across the landscape and through the Project Area generally flows south to southeast into the Pleasant River and Atlantic Ocean. Topography across the Project Area varies from flat, gentle slopes to moderate and steeper slopes.

Wetland and stream delineations and wildlife surveys were conducted in the Project Area for planning and to provide the requisite impact avoidance and minimization measures for sensitive natural areas and rare, threatened, and endangered species.

Downeast Wind performed early and frequent consultation with the Maine Natural Areas Program (MNAP), Maine Department of Inland Fisheries and Wildlife (MDIFW), and U.S. Fish and Wildlife Service (USFWS), including written information requests (2015 and 2020) and in-person meetings and conference calls (2016-2020) to inform agency staff of study results and Project updates. Details regarding these communications are outlined in Table 10-1.

Table 10-1. Summary of Agency Consultation

Date	Participants	Purpose and Takeaway
October 16, 2015	Downeast Wind, Stantec, MDIFW, MDEP, and MNAP	Initial Project information requests sent.
February 23, 2016	Downeast Wind, Stantec, MDIFW, and USFWS	Discuss wildlife surveys and study plans.
March 3, 2016	Downeast Wind, Stantec, and USFWS	Discuss potential project impacts to federally listed species.
January 19, 2017	Downeast Wind, Stantec, and USFWS	General Project update and review of bird and bat studies.
March 2, 2017	Downeast Wind, Stantec, and MDIFW	Project update, review 2015-2016 survey results, and discuss 2017 study plans.

Date	Participants	Purpose and Takeaway
May 31, 2017	Downeast Wind, Stantec, and MDIFW	Project update, review study results for bats and upland sandpipers.
July 27, 2017	Stantec and MDIFW	MDIFW accompanied Stantec in the field for grassland bird surveys.
January 18, 2019	Downeast Wind, TRC, Stantec, MDIFW, MDEP, and LUPC	Project update, review completed studies, and upcoming planned studies. MDIFW identified bats, migrating songbirds, upland sandpipers, and whimbrels as species of concern.
February 14, 2019	TRC and MDIFW	Meeting to discuss eagle surveys.
February 20, 2019	Downeast Wind, TRC, Stantec, MDIFW, and USFWS	Meeting to discuss potential impacts to upland sandpiper and whimbrels as well as research on these species from other sites in North America. Additionally, included discussion and approval of methods for eagle use and eagle nest surveys.
April 26, 2019	Stantec and MDIFW	Meeting with MDIFW to discuss results of field surveys for upland sandpipers and whimbrels, as well as research on these species from other sites in North America.
June 28, 2019	Downeast Wind, TRC, Stantec, and MDIFW	Letter from MDIFW providing summary of wildlife and fishery resource issues.
November 19, 2019	Downeast Wind, TRC, Stantec, MDEP, MHPC, USACE, MDIFW, LUPC, and MNAP/DACF	MDEP pre-application meeting. Downeast Wind introduced deterrent use and the curtailment regime envisioned.
December 17, 2019	TRC and USFWS	Phone call and email with USFWS and TRC to discuss eagle survey progress and completion. USFWS requested additional surveys for January and February.
January 17, 2020	Downeast Wind, Stantec, and MNAP	Review results of 2016 and 2019 rare plant surveys and discuss Project avoidance and minimization measures.
March 26, 2020	TRC and MHPC	Consultation pertaining to architectural resource survey and proposed scope of survey work.
April 3, 2020	TRC and MHPC	MHPC concurred with the proposed scope of work.
July 16, 2020	TRC and MHPC	Phase I Archaeological survey and protocol provided to MHPC.
July 23, 2020	TRC and MHPC	Phase IB Archaeological recommendations were developed and approved by MHPC.
August 19, 2020	Downeast Wind, TRC, Stantec, MDIFW MNAP	Updated information request sent.

Date	Participants	Purpose and Takeaway
September 17, 2020	Downeast Wind, TRC, MDIFW	MDIFW request for information response.
October 8, 2020	Downeast Wind, TRC, Stantec, and MIDFW	Wood turtle surveys in the Pleasant River as a response to the updated information request.
March 2, 2021	Downeast Wind, TRC, Stantec, and MNAP.	Review results of 2020 rare plant surveys and Project impacts.
March 4, 2021	Downeast Wind, TRC, Stantec, MDIFW, and MDEP	Discussion of proposed mitigation measures with MDIFW.
March 17, 2021	Downeast Wind, TRC, MDEP.	Review NRPA Project impacts.

10.2. SURVEYS

10.2.1. WETLANDS AND WATERBODIES

The Downeast Wind Project Area is a mix of actively managed commercial agricultural lands tied to blueberry production, along with second-growth and early successional forestland managed for timber production. Wetland and waterbody delineations were conducted for the Project on approximately 6,267 acres (Survey Area) of land from 2016 to 2020 following the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual (USACE 1987) (Manual) and the Regional Supplement to the USACE Wetland Delineation Manual: Northeast Region (Version 2.0) (Regional Supplement) (USACE 2012). Results of the delineation were used to refine the Project development footprint (Project Area) to avoid resource impacts. Descriptions of the existing conditions within the approximately 16,600-acre Project Area follow.

Uplands

Natural upland forests were classified based on *Natural Landscapes of Maine: A Guide to Natural Communities and Ecosystems* (Gawler and Cutko 2018). This classification was supplemented with vegetation data which was assessed and recorded during wetland and wildlife field surveys conducted within the Project Area. The Project Area uplands contain large portions of actively managed commercial agricultural blueberry barrens. As a result of this management there are extensive areas of open land with blueberry plants being the primarily vegetative cover. There are also areas that were formerly managed for blueberries that are reverting to forest cover in varying successional stages, and forests that have been subject to extensive large-scale timber management practices. Blueberry barren vegetation consists of lowbush blueberry, bracken fern (*Pteridium aquilinum*), sheep American-laurel (*Kalmia angustifolia*), sweet-fern (*Comptonia peregrina*), and wintergreen (*Gaultheria procumbens*). The upland forests, which are largely early successional or second growth, are a mixture of red oak (*Quercus rubra*), Eastern white pine (*Pinus strobus*), red pine (*Pinus resinosa*), gray birch (*Betula populifolia*), red maple (*Acer rubrum*), and pin cherry (*Prunus pensylvanica*) with an understory of bracken fern, sheep American-laurel, black huckleberry (*Gaylussacia baccata*), lowbush blueberry, and wintergreen.

Wetlands

Wetlands delineated within the Project Area were classified according to Cowardin, et al. (1979). Identified wetlands were classified as Palustrine Forested (PFO), Palustrine Scrub-Shrub (PSS), Palustrine Emergent (PEM), and Palustrine Unconsolidated Bottom (PUB). All the wetland areas identified in the Project Area are classified as palustrine systems which are non-tidal wetlands. Wetland types identified within the Project Area are further discussed in the Wetland Delineation Report (see Exhibit 8-1).

Palustrine Forested Wetlands

Palustrine forested (PFO) wetlands in the Project Area contained some of the following species: red maple, Eastern white pine, Eastern hemlock (Tsuga canadensis), red spruce, wild raisin (*Viburnum nudum*), common winterberry (*Ilex verticilata*), American witch-hazel (*Hamamelis virginiana*), speckled alder (*Alnus incana*), catberry (*Nemopanthus mucronatus*), lowbush blueberry, cinnamon fern (*Osmundastrum cinnamomeum*), interrupted fern (*Osmunda claytoniana*), sensitive fern (*Onoclea sensibilis*), sedge species (*Carex* spp.), cottongrass bulrush (*Scirpus cyperinus*), sheep-laurel, fowl manna grass (*Glyceria striata*), and steeplebush (*Spiraea tomentosa*). PFO wetlands comprised approximately 73.1% of wetlands in the Project Area.

Palustrine Scrub Shrub Wetlands

Palustrine scrub-shrub (PSS) wetlands in the Project Area contained some of the following species: gray birch (*Betula populifolia*), yellow birch (*Betula alleghaniensis*), speckled alder, highbush blueberry (*Vaccinium corymbosum*), common winterberry, broad-leaf meadowsweet (*Spiraea latifolia*), white meadowsweet (*Spiraea alba*), bluejoint (*Calamagrostis canadensis*), leatherleaf (*Chamaedaphne calyculata*), rhodora (*Rhododendron canadense*), cinnamon fern, sensitive fern, cottongrass bulrush, and sedge species. PSS wetlands comprised approximately 15.6% of wetlands in the Project Area.

Palustrine Emergent Wetlands

Palustrine emergent (PEM) wetlands in the Project Area contained some of the following species: gray willow (Salix *bebbiana*), common winterberry, wild raisin, rhodora, cottongrass bulrush, steeplebush, three-way sedge (*Dulichium arundinaceum*), bluejoint, interrupted fern, cinnamon fern, sensitive fern, sweetgale (*Myrica gale*), and fringed sedge (*Carex crinata*). PEM wetlands comprised approximately 8.7% of wetlands in the Project Area.

Palustrine Unconsolidated Bottom

The palustrine unconsolidated bottom (PUB) wetlands in the Project Area consisted of the following species: broad-leaf pondweed (*Potamogeton natans*), greater bladderwort (*Utricularia macrorhiza*), uptight sedge (*Carex stricta*), speckled alder, gray birch, black spruce, Eastern white pine, cottongrass bulrush, and lowbush blueberry. PUB wetlands comprised 2.6% of wetlands within the Project Area.

Wetlands of Special Significance

Certain freshwater wetlands are considered Wetlands of Special Significance (WOSS). Freshwater WOSS have one or more of the following characteristics: critically imperiled community (S1) or imperiled community (S2) defined by the MNAP; SWH as defined by 38

M.R.S.A. § 480-B(10); location near coastal wetland; location near great pond; aquatic vegetation, emergent marsh vegetation or open water; wetlands subject to flooding, (i.e. 100-year flood); peatlands; and wetland areas within 25 feet of a river, stream, or brook. WOSS found within the Project Area consist of:

- one wetland in a 100-year flood zone (new crane path along existing irrigation line);
- two wetlands that contains a peatland (existing road upgrades);
- five wetlands that contain aquatic vegetation or open water areas larger than 20,000 square feet (existing road upgrades and new crane path along existing irrigation line);
- four wetlands areas that are being impacted are associated with SVP or PSVP which are not impacted by Project and are greater than 250 feet from the Project Area (existing road upgrades, new access road and new crane path along existing irrigation line);
- one SVP (existing road upgrade and collection line);
- seven wetlands associated with three Inland Waterfowl and Wading Bird Habitats (IWWH) (existing road upgrades and new crane path along existing irrigation line); and
- two wetlands associated with Atlantic salmon habitat (existing road upgrades).

Streams and Other Waterbodies

A total of nineteen (19) streams were delineated within the Project Area. Of these streams, one (1) was identified as ephemeral, eight (8) were identified as intermittent, and ten (10) were identified as perennial. No other waterbodies such as great ponds were identified within the Project Area.

10.2.2. SIGNIFICANT WILDLIFE HABITAT

Significant Vernal Pools

The first round of vernal pool (VP) surveys were conducted in the Survey Area during late April – early May 2019 while the second round of VP surveys were conducted during late May 2019. Results of these surveys were used to shape and design the Project and avoid impacts to these resources. Survey timeframe was selected based on region-specific guidance outlined in Chapter 335 of the NRPA. To be considered a significant vernal pool (SVP), the pool must be natural in origin and meet indicator species abundance levels and/or be used by a rare, threatened, or endangered (RTE) species as outlined in Chapter 335, Significant Wildlife Habitat (SWH), of the NRPA. Surveys were conducted again in April of 2021 to determine the regulatory context of three potential SVPs and gather additional data on a previously surveyed SVP within the Project Area. A total of one (1) SVP depression was delineated within the Project Area. A total of eight (8) critical terrestrial habitats (CTHs) associated with SVPs were identified within the Project Area. There were no documentations or observations of threatened and endangered species or species of special concern during the vernal pool survey effort. For a complete discussion of these surveys, please refer to Exhibit 8-2.

Inland Waterfowl and Wading Bird Habitat

MDIFW has identified significant inland habitats for ducks, geese, herons, and similar species of waterfowl and wading birds throughout the state, rating them as having high to moderate value.

A high to moderate value inland waterfowl and wading bird habitat (IWWH) is a complex of freshwater wetland and open water areas plus a 250-foot-wide area surrounding the complex itself where inland species of waterfowl and wading birds nest and forage. Only IWWHs rated by MDIFW as moderate or high value are protected under the NRPA.

A desktop analysis was conducted in the summer of 2020, utilizing publicly available GIS data from the MDIFW to identify IWWH classified as moderate or high value within the Project Area. Three moderate IWWH were identified within the Project Area.

Deer Wintering Areas

Deer Wintering Areas (DWAs) are defined by MDIFW as a forested area that deer use a) when snow gets deeper than 12 inches in the open, b) when deer sink into snow deeper than 8 inches in the open, and c) when mean daily temperature falls below 32 degrees Fahrenheit. DWAs contain cover components that provide conditions in which deer can find protection from deep snow and cold wind, which is important for overwinter survival. A desktop analysis of publicly available state data was conducted in the summer of 2020 for deer wintering areas located within the Project Area. Based on the analysis, there are no DWAs located within the Project Area.

Atlantic Salmon Habitat

The Atlantic salmon was federally listed as endangered on November 17, 2000 (65 FR 69459). The federal listing identified the Gulf of Maine Distinct Population Segment (GOM DPS) as including all anadromous Atlantic salmon found east of the Androscoggin River to the Dennys River. This included three watersheds in the vicinity of the proposed Project Area: the Machias River, Pleasant River, and Narraguagus River watersheds. Critical habitat for the species was designated by National Oceanic and Atmospheric Administration (NOAA) for the GOM DPS on June 19, 2009 (74 FR 29299). The entirety of the Project Area is within watersheds that are designated critical habitat for the GOM DPS of Atlantic salmon and includes all freshwater bodies that are part of the freshwater range of the GOM salmon at any life stage unless above an impassable fall (50 CFR Parts 17 and 224).

10.3. POTENTIAL IMPACTS

10.3.1. WETLAND AND WATERBODIES

The Project will result in both permanent and clearing impacts to wetlands and indirect impacts to water resources under the jurisdiction of the NRPA. Permanent impacts include fill impacts for the Operations and Maintenance (O&M) building, new access roads and crane paths, and also include grading, enhancements and widening of existing roads. Temporary impacts include clearing of forested canopy and placement of construction mats in wetlands for construction access.

Within the Project Area, a total of 59 NRPA wetlands are proposed to be impacted by the Project. Overall, approximately 89,733 square feet (2.06 acres) of NRPA wetlands will be impacted by clearing impacts (conversion), and approximately 59,153 square feet (1.36 acres) will be permanently impacted (fill), for a total of 148,886 square feet (3.42 acres).

Impacts will also occur to WOSS. All of the WOSS impacts are associated with roads (crane paths and access roads) and electric collector lines. Approximately 23,153 (0.53 acres) of WOSS impacts are from clearing (conversion), and approximately 24,327 (0.56 acres) will be

permanently impacted (fill), for a total of 47,480 (1.09 acres). In order to meet standards for assessing impacts to WOSS, pursuant to Chapter 310.5. General Standards, an alternative analysis and discussion of avoidance and minimization is provided in Section 2 and is summarized below. WOSS proposed to be impacted within the Project Area consist of:

- one wetland in a flood zone (new crane path along existing irrigation line);
- two wetlands that contains a peatland (existing road upgrades);
- five wetlands that contain aquatic vegetation or open water areas larger than 20,000 square feet (existing road upgrades and new crane path along existing irrigation line);
- four wetlands associated with SVP or PSVP which are greater than 250 feet from Project Area (existing road upgrades, new access road and new crane path along existing irrigation line);
- one SVP (existing road upgrade and collection line);
- seven wetlands associated with three Inland Waterfowl and Wading Bird Habitats (existing road upgrades and new crane path along existing irrigation line); and
- two wetlands associated with Atlantic salmon habitat (existing road upgrades).

For a complete discussion of these impacts, please refer to Section 9.

10.3.2. STREAMS AND OTHER WATERBODIES

Table 10-2 provides information on stream impacts within Project Area. No other waterbodies such as great ponds were identified within the Project Area. The MDIFW recommends that a 100-foot undisturbed vegetative buffer be maintained along all perennial and intermittent streams, rivers, and ponds. Maintaining buffers along coldwater fisheries is critical to the protection of water temperatures, water quality, and inputs of coarse woody debris which is necessary to support conditions required by Atlantic salmon. New stream crossings are to be done following recommendations from the MDIFW Recommended Performance Standards for Riparian Buffers in Overhead Utility ROW Projects (March 2012).

The Project proposes to use one existing stream crossing over the Pleasant River to avoid and minimize impacts. A total of twelve (12) streams will be potentially impacted by the Project. Of these streams, six (6) are perennial, five (5) are intermittent, and one (1) is ephemeral. Three of the new perennial stream crossings within the Project Area will be bridges or open bottom box culverts that are sized to span at least 1.2 times the bankfull width of the stream (see Exhibit 1-2, Sheet 2.5). These impacts are characterized as permanent impacts. Six (6) new perennial and intermittent stream crossings, associated with crane and access paths, will be embedded culverts that will be backfilled with representative streambed materials. These impacts are characterized as permanent impacts. Five (5) intermittent stream crossings associated with collection will be crossed with temporary construction mats. These impacts will be temporary for use during construction only. One ephemeral stream crossing, associated with a crane path, will be a buried culvert. This is characterized as a permanent impact. The total linear stream length crossed is 730 feet. The overall temporary construction access stream impacts from construction mats spanning the streams and clearing will be 968 square feet, and the overall permanent stream impacts will be 3,873 square feet. Crossings will be installed following the MDIFW and USFWS recommendations for stream crossings, thereby avoiding and minimizing impacts to fisheries.

Table 10-2. Impacts to Streams

Stream ID	Associated Water Feature	Stream Class	Impact Type	Stream Centerline Crossing (Ft.)	Temporary Impact (Sq. Ft.)	Temporary Impact (Acres)	Temporary Construction Matting Access (Sq. Ft.)	Permanent Impact (Sq. Ft.)	Permanent Impact (Acres)	Fisheries Habitat
03CF	Pleasant River Tributary	Intermittent	Collection Temporary Construction Mat Access	24	118	0.002	124	0	0.000	Coldwater Fishery
09TT	Mud Hole Brook Tributary	Intermittent	Collection Temporary Construction Mat Access	109	544	0.012	125	0	0.000	Coldwater Fishery
S-CWF-01	Ingersoll Branch Tributary	Intermittent	Collection Temporary Construction Mat Access	51	257	0.006	125	0	0.000	Coldwater Fishery
S-CWF-02	Beech Hill Brook	Perennial	Crane Path New Bridge or Box Culvert	90	159	0.004	0	289	0.007	Coldwater Fishery and Modeled Atlantic Salmon Rearing
S-CWF-03	Beech Hill Brook Tributary	Perennial	Crane Path New Embedded Culvert	99	112	0.003	0	382	0.009	Coldwater Fishery
S-CWF-04	Beech Hill Brook Tributary	Perennial	Crane Path New Embedded Culvert	45	59	0.001	0	164	0.004	Coldwater Fishery
S-CWF-05	Beech Hill Brook Tributary	Ephemeral	Crane Path New Embedded Culvert	34	0	0.000	0	171	0.004	Coldwater Fishery
S-CWF-15	Pleasant River Tributary	Perennial	Access Road New Bridge or Box Culvert	46	0	0.000	0	1372	0.031	Coldwater Fishery Modeled Atlantic Salmon Rearing
S-JMR-06	Colonel Brook	Perennial	Access Road New Bridge or Box Culvert	33	1	0.000	0	495	0.011	Coldwater Fishery and Modeled Atlantic Salmon Rearing
S-JMR-10	Colonel Brook Tributary	Intermittent	Access Road New Bridge or Box Culvert with S-JMR-06	46	68	0.002	0	161	0.004	Coldwater Fishery and Modeled Atlantic Salmon Rearing
S-JMR-21	Fred Dorr Brook	Perennial	Crane Path and Collection New Embedded Culvert	128	182	0.004	0	456	0.010	Coldwater Fishery
S-JMR-22	Fred Dorr Brook Tributary	Intermittent	Crane Path and Collection New Embedded Culvert	126	223	0.005	0	382	0.009	Coldwater Fishery
Total				831	1723	0.039	374	3872	0.089	

10.3.3. SIGNIFICANT WILDLIFE HABITAT

Significant Vernal Pool Habitat

The Project will result in direct permanent impact to one SVP depression (V-DC-190430-02). The direct impact to the SVP depression is directly adjacent to an existing road which will be widened for use as a crane path. This pool was previously impacted by ditching along the existing road, and the Project impacts will be confined to that existing ditch area. Impacts to this vernal pool depression will include approximately 907 square feet (0.02 acres) of clearing and approximately 826 square feet (0.019 acres) of permanent impacts (Table 10-3). With the appropriate erosion controls there should be no adverse impacts to this resource. The natural portion of the pool will remain intact. Downeast Wind will commit to performing construction activities during a time when impacts will be minimized.

Table 10-3. Impacts to Significant Vernal Pools Permitted Under NRPA Chapter 310

Resource ID	Associated Resource	Location (Lat. – Long)	Survey Date	Description	Hydrology	Clearing Impact sq ft	Clearing Impact acres	Permanent Impact sq ft	Permanent Impact acres
V-DC-190430-02	W-CWF-22	44.789945, -67.8733	4/30/2019	Natural-Modified	Semi-permanent	907	0.020	826	0.019
Total						907	0.020	826	0.019

The Project will impact the upland area of five SVP CTHs (Table 10-4 and Table 10-5). Approximately 43,544 square feet (0.99 acres) of clearing will occur and approximately 79,166 square feet (1.82 acres) of permanent impacts from new roads will occur. One of the impacts from clearing and road construction requires individual approval under NRPA because less than 75 percent of the CTH will remain unfragmented forest from proposed widening of an existing road (Table 10-4, V-DC-190430-02). Existing impacts from the existing road left approximately 75 percent of the CTH unfragmented forest. The proposed road upgrade will increase cleared area within the CTH by approximately 15 percent, leaving 60 percent of the CTH unfragmented forest. This is the same SVP depression described above and in Table 10-3. Five of these impacts meet the criteria for NRPA Permit By Rule (PBR) since greater than 75 percent of the total CTH will remain unfragmented forest (Table 10-5).

Table 10-4. Impacts to Critical Terrestrial Habitat Permitted Under NRPA Chapter 310

Resource ID	Associated Resource	Location (Lat. – Long.)	Impact Type	Clearing Impact sq ft	Clearing Impact acres	Permanent Impact sq ft	Permanent Impact acres
Vernal Pool CTH	V-DC-190430-02	44.789945, -67.8733	Crane Path and Collection	21,123	0.4849	32,359	0.7429
Total				21,123	0.4849	32,359	0.7429

Table 10-5. Impacts to Critical Terrestrial Habitat Permitted Under NRPA Chapter 305

Resource ID	Associated Resource	Location (Lat. – Long.)	Impact Type	Clearing Impact sq ft	Clearing Impact acres	Permanent Impact sq ft	Permanent Impact acres
Vernal Pool Upland CTH	49tt	44.684771, -67.860097	Crane Path	1,976	0.045	2,600	0.060
Vernal Pool Upland CTH	18jl & 19jl	44.72608, -67.90707	Crane Path	3,726	0.086	22,234	0.510
Vernal Pool Upland CTH	V-DBV-02	44.793435, -67.905617	Collection	7,946	0.182	0	0
Vernal Pool Upland CTH	V-RJ-190430-08	44.77807, -67.869632	Crane Path	8,773	0.201	21,973	0.504
Total				22,421	0.514	46,807	1.074

Inland Waterfowl and Wading Bird Habitat

The Project will impact three moderate value IWWH upland areas. Approximately 92,155 square feet (2.12 acres) of clearing impacts will occur and approximately 162,467 square feet (3.73 acres) of permanent impacts from construction of a new road associated with an existing irrigation system, road improvements, and turbine pads will occur. In addition, the Project will impact nine wetlands within moderate value IWWH. Approximately 5,736 square feet (0.13 acres) of clearing impacts will occur and approximately 9,855 square feet (0.22 acres) of permanent impacts will occur from proposed widening of existing roads and a new road associated with an existing irrigation system. These impacts will affect small portions of a significantly larger IWWH area. Existing roads were used to the extent possible to minimize impacts. Downeast Wind will commit to performing construction activities during a time when impacts will be minimized. Table 10-6 outlines the impacts to IWWH.

Table 10-6. Impacts to Inland Waterfowl and Wading Bird Habitat

Wetland ID	IWWH ID	Clearing Impact (sq ft)	Clearing Impact (acres)	Permanent Impact (sq ft)	Permanent Impact (acres)
Upland	Iwwh051036	5,163	0.119	41,299	0.948
Upland	Iwwh206178	69,845	1.603	63,167	1.450
Upland	Iwwh302107	17,147	0.393	58,001	1.331
Upland Subtotal		92,155	2.115	162,467	3.729
W-GAR-07	Iwwh206178	0	0.000	26	0.001
W-GAR-07	Iwwh206178	478	0.011	671	0.015
W-GAR-07	Iwwh206178	0	0.000	340	0.008
W-GAR-08	Iwwh206178	113	0.003	525	0.012
W-SLG-09	Iwwh206178	132	0.003	172	0.004
W-CWF-10	Iwwh302107	2,385	0.055	5,374	0.123
W-CWF-11	Iwwh302107	1,931	0.044	1,834	0.042
W-CWF-12	Iwwh302107	177	0.004	440	0.010
W-CWF-13	Iwwh302107	520	0.012	473	0.011
Wetland Subtotal		5,736	0.132	9,855	0.226
TOTAL		97,891	2.247	172,322	3.955

Deer Wintering Areas

Given that no DWAs are located within the Project Area, no impacts to DWAs will occur.

Atlantic Salmon Habitat

To avoid and minimize impacts to potential Atlantic habitat including designated critical habitat, Downeast Wind will follow the USFWS Programmatic Stream Crossing Consultation process for the CWA Section 404 permit. Through design modifications, impacts to Atlantic salmon habitat have been limited to four locations within the Project Area. Three of these streams (S-CWF-15, S-JMR-10, and S-JMR-6) are direct tributaries to the Pleasant River and one stream (S-CWF-02) is associated with Beech Hill Brook which is a direct tributary to Mopang Stream (Table 10-2).

These streams will be crossed with a new bridge or box culvert that will be designed in accordance with USFWS Programmatic Stream Crossing Consultation design standards (i.e., sized to span at least 1.2 times the bankfull width of the stream). These design standards are meant to support free passage for aquatic organisms and prevent any unnatural stream bed or bank erosion. Dependent upon the final design, there could be up to 2,317 square feet of permanent impact at these crossings. Time of year restrictions will include no work within non-tidal waters between October 1 and July 14 to avoid impacts during spawning and egg incubation periods.

10.4. REFERENCES

Gawler, S. and A. Cutko. 2018. Natural Landscapes of Maine: A Guide to Natural Communities and Ecosystems. Maine Natural Areas Program, Maine Department of Conservation, Augusta, Maine.

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