

## **APPENDIX D    WILDLIFE HABITAT EVALUATIONS**

June 2023

# NSTAR ELECTRIC COMPANY D/B/A EVERSOURCE ENERGY

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## **Acushnet to Fall River Reliability Project**

*Wildlife Habitat Evaluation*

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## *Wildlife Habitat Evaluation*

*PREPARED FOR: NSTAR ELECTRIC COMPANY d/b/a EVERSOURCE ENERGY*

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## ACRONYMS AND ABBREVIATIONS

ATV	all-terrain vehicle
BLSF	Bordering Land Subject to Flooding
BMP(s)	Best Management Practice(s)
BVW	Bordering Vegetated Wetland
cm	centimeter
CMR	Code of Massachusetts Regulations
CVP	Certified vernal pool
dbh	diameter at breast height
Eversource	NSTAR Electric Company d/b/a Eversource Energy
MassDEP	Massachusetts Department of Environmental Protection
NHESP	Massachusetts Natural Heritage and Endangered Species Program
NEP	New England Power Company d/b/a National Grid
PEM	Palustrine Emergent
PFO	Palustrine Forested
POWER	POWER Engineers Consulting, PC
Project	Acushnet to Fall River Reliability Project
PSS	Palustrine Scrub-Shrub
PUB	Palustrine Unconsolidated Bottom
PVP	Potential vernal pool
RFA	Riverfront Area
ROW(s)	Right(s)-of-Way
WPA	Massachusetts Wetlands Protection Act

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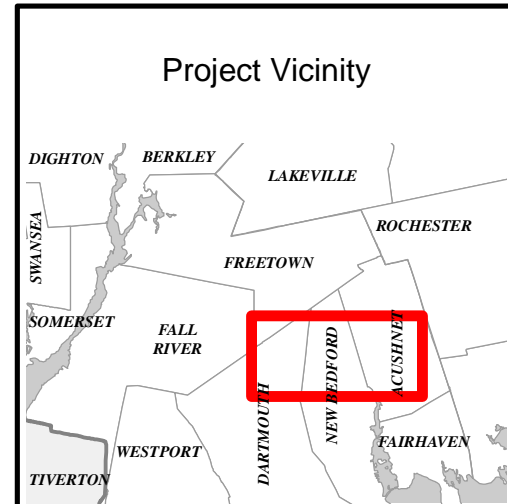
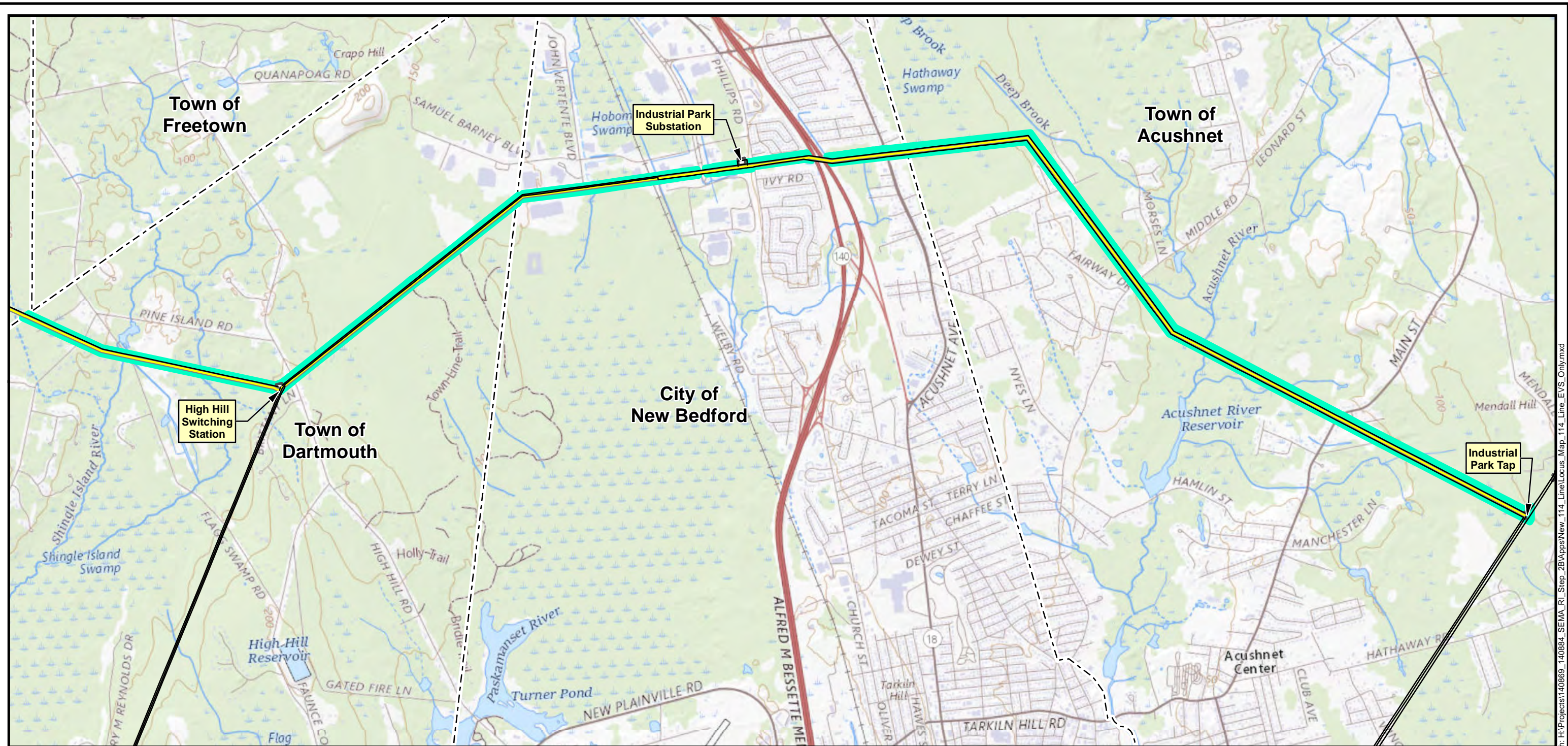
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## 1.0 INTRODUCTION

NSTAR Electric Company d/b/a Eversource Energy (Eversource) and the New England Power Company d/b/a National Grid (NEP) are proposing to undertake the Acushnet to Fall River Reliability Project (Project) to improve the electric transmission reliability in the southeastern Massachusetts area. The Project consists of the installation of a new electric transmission line extending from Eversource's Industrial Park Tap in Acushnet to NEP's existing Bell Rock Substation in Fall River. The proposed Project includes the installation of approximately 12.1 miles of new primarily overhead electric transmission line traversing the municipalities of Acushnet, New Bedford, Dartmouth, and Fall River in Bristol County, Massachusetts (Figure 1). Two small sections of underground cable are proposed (a total of approximately 600 linear feet) to avoid multiple overhead line crossings at Eversource's Industrial Park Tap and High Hill Substation locations. The new line will be located entirely within existing rights-of-way (ROWs) currently occupied by existing transmission lines. Of the 12.1 miles, approximately 7.9 miles are in Eversource service territory and approximately 4.2 miles are in NEP service territory traversing the city of Fall River (see Figure 1).

This report pertains to the proposed Project facilities for Eversource's portion of the Project in Acushnet, New Bedford, and Dartmouth. Field assessments for the Eversource portion of the Project within the existing transmission line ROW (hereafter referred to as the "Survey Area") were conducted from 2018 through 2019 and in 2021.





- Legend**
- New 114 Line Extension
  - Existing Transmission Line
  - Existing Station
  - Eversource ROW
  - Town Boundary

## Fall River to Acushnet Reliability Project

Figure 1  
Project Locus Map  
Commonwealth of Massachusetts  
Bristol County:  
City of Fall River

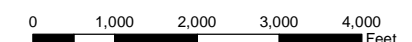


NAD 1983 UTM Zone 18N USFt



EVERSOURCE

**NOT FOR  
CONSTRUCTION**



Date: 12/23/2021

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Author: TDH

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## 2.0 DETAILED WILDLIFE HABITAT EVALUATION

This document presents the results of a wildlife habitat evaluation conducted on the Eversource portion of the ROW pursuant to the Massachusetts Wetland Protection Act ([WPA] M.G. L. c. 131 §40) and associated Regulations (310 Code of Massachusetts Regulations [CMR] 10.00) addressing Wildlife Habitat Evaluations (310 CMR 10.60) and the procedures and methods detailed in the Massachusetts Department of Environmental Protection (MassDEP) *Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands* (Guidance; MassDEP 2006). The Project qualifies as a “limited project” (310 CMR 10.53 (3)(d)) for the construction, reconstruction, operation, and maintenance of underground and overhead public utilities such as transmission lines; under which the issuing authority (Conservation Commissions/MassDEP) is empowered with the discretion to either waive or require wildlife habitat evaluations (MassDEP 2006).

The analysis was undertaken because the Project exceeds review thresholds for wildlife habitat alteration under the WPA, as implemented by the Wetlands Regulations (310 CMR 10.00). Cumulatively, anticipated impacts to Bordering Vegetated Wetland (BVW) and Bordering Land Subject to Flooding (BLSF) are greater than 5,000 square feet due to temporary (construction) impacts associated with construction mats and permanent wetland conversion associated with structure installation. However, in accordance with 310 CMR 10.53 (3)(d), the Project qualifies as a limited project for the construction, reconstruction, operation, and maintenance of underground and overhead public utilities, such as transmission lines.

As a limited project, completion of a wildlife habitat evaluation may be required at the discretion of the issuing authority. Eversource has elected to proactively undertake an Appendix B Detailed Wildlife Habitat Evaluation (Habitat Evaluation) for areas affected by the Project. This documentation is consistent with the standards of the MassDEP Guidance.

Habitat features or characteristics were evaluated in the Survey Area based on characteristics identified on the Guidance detailed data form (Attachment A). Important wildlife habitat features found during the field analyses includes:

- Upland/wetland food plants (hard mast and fruit).
- Shrub thickets/streambeds with abundant earthworms.
- Shrub vegetation suitable for veery nesting.
- Standing dead trees (snags) and tree cavities.
- Potential small mammal burrows.
- Dense herbaceous cover.
- Large woody debris on ground.
- Rocks under the water’s surface.
- Overhanging shrub branches at, or within one meter above the water’s surface.
- Rock piles and crevices suitable as potential habitat.
- Depressions that serve as vernal pools.
- Standing water present at least part of the growing season for use by non-breeding amphibians.



- Standing water present at least part of the growing season suitable for use by turtles and foraging waterfowl.
- Sphagnum hummocks or mats directly adjacent to pools of standing water in spring for use by the four-toed salamander (*Hemidactylium scutatum*).
- Flat rocks within exposed portions of streambeds.
- Areas of ice-free open water in winter.
- Emergent vegetation at least seasonally flooded during the growing season.
- Perennial and intermittent streams.

Representative photographs of habitat characteristics within each impacted resource area are presented in Attachment B. The remainder of this document includes state agencies' rare species consultations (Section 4.0), best management practices (BMPs) which will be used throughout the course of Project activities (Section 5.0), anticipated Project impacts to wildlife habitat with potential mitigation actions listed to offset Project impacts (Section 6.0), and an adverse effect analysis and conclusion (Section 7.0).

## 3.0 EXISTING HABITAT CONDITIONS

### 3.1 Important Habitat Features

Wildlife habitat features and characteristics identified by the MassDEP Guidance were field evaluated in every wetland resource area (BVW and BLSF) to be impacted by the Project and documented on the detailed data forms (Attachment A). The following wetland resource areas are located in the Survey Area: 32 BVWs, seven BLSF, and five river front areas (RFAs). The BLSF is associated with Hathaway Swamp in Acushnet, BVW D54, BVW D55, BVW D35, BVW D25, BVW D 24, Shingle Island Swamp in Dartmouth, and BVW D65. The RFA is associated with perennial streams SD-54 (Acushnet River), SD-35, SD-25, SD-25A, and SD-22 (Shingle Island River). Project impacts include temporary work pads and access routes, and permanent structure installations. In a few locations where multiple sites of impact would take place in a wetland resource area, a representative site was selected to document wildlife habitat characteristics. Wildlife habitat information was collected at a total of 39 locations.

Based on the United States Fish and Wildlife Service's National Wetlands Inventory classification system (Cowardin et al. 1979), wetlands to be impacted by the Project are predominately scrub-shrub wetlands (PSS). However, two other community types were also identified in the Survey Area: Palustrine Emergent (PEM), and Palustrine Forested (PFO).

A variety of suburban wetland wildlife species utilize these habitats including an assemblage of mammals (chiefly small other than white-tailed deer [*Odocoileus virginianus*] and eastern coyote [*Canis latrans* var.]), songbirds, reptiles, amphibians, and invertebrates. These wetland habitats provide feeding, nesting, breeding, and cover opportunities for wildlife where the wetlands are already embedded in a large area of natural habitat. Characteristics of the shrub and forest wetlands which provide necessary resources for wildlife include: berry-producing shrubs for food sources; young, developing shrubs providing an understory for cover; localized areas of surface water in the form of depressions or vernal pools; and standing dead trees offering the potential for cavities and perches.

Listed in the sections below is a comprehensive overview of the wildlife habitat evaluation characteristics observed during the field surveys. The listed habitat characteristics are those identified on the MassDEP detailed habitat evaluation data forms (Attachment A) that are relevant to Project wetland resource areas. At the end of Section 3.0 are several tables, where each table is a summary of these data forms in Attachment A designated by each town or city (Table 1 (Acushnet), Table 2 (New Bedford), and Table 3 (Dartmouth)).

**TABLE 1 EXISTING WILDLIFE HABITAT FEATURES IN ACUSHNET, MASSACHUSETTS**

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN, ETC.)
Wildlife Food: Upland/wetland food plants (hard mast and fruit)	BVW D64	Present	Highbush blueberry and maleberry.
	BVW D62	Present	Highbush blueberry, arrowwood, common blackberry, scrub oak, roundleaf greenbrier.
	BVW D59	Present	Silky dogwood, multiflora rose, gray birch, and goldenrod
	BVW D58	Present	Winterberry, Asian bittersweet, fox grape.
	BVW D55	Present	Maleberry and highbush blueberry.
	BVW D54	Present	Maleberry, highbush blueberry, arrowwood, willows, roundleaf greenbrier.
	BVW D51	Present	Silky dogwood.
	BVW D50	Present	Winterberry, silky dogwood, common blackberry, highbush blueberry.
	BVW D48	Present	Willow, silky dogwood, maleberry, highbush blueberry, roundleaf greenbrier.
	Upland BLSF near BVW D47	Present	Highbush blueberry, maleberry, roundleaf greenbrier.
Shrub thickets/streambeds with abundant earthworms (American woodcock)	BVW D50	Present	Earthworms were observed in the soil pit during the Jan. 2019 evaluations in a dense shrub community comprised of sweet pepperbush.
Shrub/herbaceous vegetation suitable for veery nesting	BVW D64	Present	BVW D64 provides dense shrub thickets comprised of sweet pepperbush, highbush blueberry, and maleberry. No veerys were observed during field evaluations.
	BVW D62	Present	BVW D62 provides dense shrub thickets comprised of highbush blueberry, arrowwood, meadowsweet and stepplebush. No veerys were observed during field evaluations.
	BVW D59	Present	BVW D59 provides dense shrub thickets comprised of silky dogwood, multiflora rose, and gray birch. No veerys were observed during field evaluations.
	BVW D54	Present	Portions of BVW D54 provide shrub thickets comprised of sweet pepperbush, maleberry, white meadowsweet, and alder. No veerys were observed during field evaluations.
	BVW D48	Present	Portions of BVW D48 provide dense shrub thickets comprised of highbush blueberry, sweet pepperbush, willows, meadowsweet, silky dogwood, and stepplebush. No veerys were observed during field evaluations.
Small mammal burrows	BVW D48	Present	One small mammal burrow is present under a rock.

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN, ETC.)
	Upland BLSF near BVW D47	Two burrows	Two potential small mammal burrows are present under rocks.
Dense herbaceous cover (voles, small mammals, amphibians, and reptiles).	BVW D64	Present	Common woolsedge and soft rush.
	BVW D62	Present	Goldenrods.
	BVW D59	Present	Goldenrods and grasses.
	BVW D58	Present	Common reed, sensitive fern, goldenrods.
	BVW D56	Present	Goldenrods, soft rush, sensitive fern, marsh fern.
	BVW D55	Present	Common reed and sensitive fern.
	BVW D54	Present	Sensitive fern, soft rush, goldenrods, deer-tongue rosette-panicgrass.
	BVW D53	Present	Common reed.
	BVW D51	Present	Purple loosestrife, goldenrods, deer-tongue rosette-panicgrass, common reed.
	BVW D50	Present	Deer-tongue rosette-panicgrass, goldenrods, cinnamon fern.
	BVW D48	Present	Sedges, soft rush, goldenrods, cinnamon fern, common reed, bushy bluestem.
	Upland BLSF near BVW D47	Present	Goldenrods, grasses, bushy bluestem.
Large woody debris on ground (voles, small mammals, amphibians, and reptiles).	BVW D58	Present	One fallen red maple tree on the ground.
	BVW D50	Present	Large woody debris on the ground.
Rocks, crevices, logs, tree roots, or <b>hummocks under water's surface</b> (turtles, snakes, frogs)	BVW D62	Present	<b>Rocks are present under the water's surface in the</b> intermittent stream SD62.
Rocks, crevices, fallen logs, overhanging branches or hummocks <b>at, or within 1 meter above the water's</b> surface (turtles, snakes, frogs)	BVW D62	Present	Overhanging branches over intermittent SD-62 provides perching opportunities for turtles, snakes, and frogs.
Rock piles, crevices, or hollow logs	BVW D54	Present	A rock wall is located adjacent to BVW D54 offering potential cover and nesting opportunities for small mammals. There is also a rock pile providing potential cover for small mammals.
	BVW D50	Present	Several rock crevices with openings provide potential habitat for small mammals.
	BVW D48	Present	Several rock crevices with openings provide potential habitat for small mammals. One potential den is under a rock suitable for a medium-sized mammal.

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN, ETC.)
	Upland BLSF near BVW D47	Present	One rock crevice with an opening provides potential habitat for a small mammal. Several stone piles present.
Depressions that may serve as seasonal (vernal/autumnal) pools	BVW D50	Present	A Vernal Pool is located in BVW D50.
Standing water present at least part of the growing season: Suitable for use by breeding amphibians as well as for non-breeding amphibians for foraging and rehydration			
Suitable for non-breeding amphibians	BVW D64	Present	--
Suitable for non-breeding amphibians	BVW D62	Present	--
Suitable for non-breeding amphibians	BVW D59	Present	--
Suitable for non-breeding amphibians	BVW D55	Present	--
Suitable for non-breeding amphibians	BVW D54	Present	--
Suitable for breeding and non-breeding amphibians	BVW D53	Present	--
Suitable for non-breeding amphibians	BVW D51	Present	--
Suitable for breeding and non-breeding amphibians	BVW D50	Present	A Vernal Pool is located in BVW D50.
Suitable for breeding and non-breeding amphibians	BVW D48	Present	A ditch flows through a portion of the impact area.
Standing water present at least part of the growing season suitable for use by turtles and foraging waterfowl	BVW D62	Present	There is one pool within intermittent stream SD62 that may be suitable for turtles.
Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)	BVW D64	Present	Sphagnum moss mats adjacent to pools of standing water are present, providing potentially suitable habitat for four-toed salamanders.
	BVW D48	Present	Sphagnum moss mats adjacent to pools of standing water are present, providing potentially suitable habitat for four-toed salamanders.
	BVW D54	Present	During the Jan. 2019 evaluation, perennial stream SD54 (Acushnet River) was flowing.
	BVW D53	Present	During the Jan. 2019 evaluation, there was one pool of open water.
Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)	BVW D62	Present	Flat rocks are present within intermittent stream SD62 that have the potential to provide cover for stream salamanders.
Areas of ice-free open water in winter	BVW D62	Present	During the Jan. 2019 evaluation, ice-free open water was observed. Intermittent stream SD62 was flowing, and open water was observed in a pool that SD62 flows through.

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN, ETC.)
	BVW D59	Present	During the Feb 2023 evaluation, ice-free open water was observed. Intermittent stream SD59 was flowing, and open water was observed in a pool that SD59 flows through.
	BVW D54	Present	During the Jan. 2019 evaluation, perennial stream SD54 (Acushnet River) was flowing.
	BVW D53	Present	During the Jan. 2019 evaluation, there was one pool of open water.
Perennial and intermittent streams	BVW D62	Present	Stream SD62 is intermittent.
	BVW D59	Present	Stream SD59 is intermittent.
	BVW D54	Present	Stream SD54 (Acushnet River) is perennial.
Persistent emergent vegetation at least seasonally flooded during the growing season	BVW D64	Present	Common wooldsedge dominates portions of the wetland and provides potential habitat for red-winged blackbirds due to a > 5 centimeter (cm) water depth.
	BVW D58	Present	Common reed dominates portions of the wetland and provides potential habitat for red-winged blackbirds and marsh wrens due to a > 5 cm water depth.
	BVW D55	Present	Common reed dominates portions of the wetland and provides potential habitat for red-winged blackbirds and marsh wrens due to a > 5 cm water depth.
	BVW D53	Present	Common reed comprises much of the wetland and provides potential habitat for red-winged blackbirds and marsh wrens due to a > 5 cm water depth.
	BVW D51	Present	Purple loosestrife dominates portions of the wetland and provides potential habitat for red-winged blackbirds and marsh wrens due to a > 5 cm water depth.

**TABLE 2 EXISTING WILDLIFE HABITAT FEATURES IN NEW BEDFORD, MASSACHUSETTS**

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN ETC.)
Wildlife Food: Upland/wetland food plants (hard mast and fruit)	BVW D44	Abundant	Highbush blueberry, maleberry, silky dogwood, arrowwood, winterberry.
	BVW D39	Present	Highbush blueberry, maleberry, willows, arrowwood, common blackberry.
	BVW D38A	Present	Black elderberry and common blackberry.

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN ETC.)
	BVW D35	Present	Maleberry and highbush blueberry.
	BVW D34	Present	Maleberry, common blackberry, and highbush blueberry.
	BVW D32	Present	Maleberry and highbush blueberry.
Shrub/herbaceous vegetation suitable for veery nesting	BVW D44	Present	Portions of BVW D44 provide dense shrub thickets comprised of highbush blueberry, maleberry, silky dogwood and arrowwood. No veerys were observed during field evaluations.
	BVW D41	Present	Portions of BVW D41 provide shrub thickets comprised of white meadowsweet, steeplebush, and sweet pepperbush. No veerys were observed during field evaluations.
	BVW D39	Present	Portions of BVW D39 provide shrub thickets comprised of maleberry, highbush blueberry, white meadowsweet, willows, and arrowwood. No veerys were observed during field evaluations.
	BVW D32	Present	Portions of BVW D32 provide shrub thickets comprised of maleberry, sweet pepperbush, and steeplebush. No veerys were observed during field evaluations.
Standing Dead Trees			
6-12" diameter at breast height (dbh)	BVW D42	Four trees	Four trees are located on the edge of ROW and have less than 6" dbh unidentified woodpecker holes.
12-18" dbh	BVW D41	One tree	Snag is on the edge of the ROW with less than 6" dbh unidentified woodpecker holes.
Tree Cavities	BVW D41	One cavity	One tree cavity in a red maple which has a 6-12" dbh.
Small mammal burrows	BVW D41	Present	Two small mammal burrows (possibly woodchuck) were located under a rock.
	BVW D30	Present	One small mammal burrow is located underneath a stone pile.
Dense herbaceous cover (voles, small mammals, amphibians, and reptiles).	BVW D44	Present	Soft rush, goldenrods, and grasses.
	BVW D42	Present	Broad-leaved cattails, purple loosestrife, and grasses.
	BVW D41	Present	Sensitive fern, soft rush.
	BVW D39	Present	Goldenrods, cinnamon fern and sedges.
	BVW D38A	Present	Goldenrods, sedges, soft rush.
	BVW D35	Present	Grasses, sedges, and soft rush.
	BVW D34	Present	Grasses, goldenrods, and bushy bluestem.
	BVW D32	Present	Sedges, bushy bluestem, soft rush, and cinnamon fern.
	BVW D30	Present	Deer-tongue rosette-panicgrass, bushy bluestem, goldenrods, grasses.
Large woody debris on	BVW D40	Present	Fallen logs on ground located near a snag tree.

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN ETC.)
ground (voles, small mammals, amphibians, and reptiles).	BVW D32	Present	Fallen cut logs on the ground.
Standing water present at least part of the growing season: Suitable for use by breeding amphibians as well as for non-breeding amphibians for foraging and rehydration			
Suitable for non-breeding amphibians	BVW D44	Present	Several pockets of frozen standing water present in February 2019.
Suitable for non-breeding amphibians	BVW D42	Present	Several pockets of frozen standing water present in February 2019.
Suitable for non-breeding amphibians	BVW D41	Present	Several pockets of frozen standing water present in February 2019.
Suitable for breeding and non-breeding amphibians	BVW D39	Present	Pockets of standing water present in February 2019. A ditch flows through a portion of BVW D39. An ABA was present in the access road in July 2021.
Suitable for non-breeding amphibians	BVW D35	Present	Pockets of standing water present in February 2019.
Suitable for non-breeding amphibians	BVW D34	Present	Pockets of standing water present in February 2019.
Suitable for non-breeding amphibians	BVW D32	Present	Pockets of standing water present in February 2019.
Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)	BVW D44	Present	Sphagnum moss mats adjacent to pools of standing water are present, providing potential habitat for four-toed salamanders. No four-toed salamanders were observed.
Areas of ice-free open water in winter	BVW D42	Present	Pockets of standing water present in February 2019.
	BVW D34	Present	Pockets of standing water were present in February 2019.
Perennial and intermittent streams	BVW D35	Present	SD35 is an intermittent stream.
Persistent emergent vegetation at least seasonally flooded during the growing season	BVW D42	Present	Broad-leaved cattails dominate portions of the wetland and provide potential habitat for such species as wood duck, green heron, black-crowned night heron, king rail, Virginia rail, and coot due to a > 5 cm water depth. These species were not observed during field evaluations.
	BVW D42	Present	Broad-leaved cattails dominate portions of the wetland and provide potential habitat for such species as least bittern and common moorhen due to a > 25 cm water depth. These species were not observed during field evaluations.
	BVW D35	Present	Common reed dominates portions of the wetland and provides potential habitat for red-winged blackbirds and marsh wrens due to a > 5 cm water depth. These species were not observed during field evaluations.



HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN ETC.)
Cattail emergent vegetation at least seasonally flooded during the growing season	BVW D42	Present	Broad-leaved cattails dominate portions of the wetland and provide potential habitat for marsh wrens due to a > 5 cm water depth. These species were not observed during field evaluations.
	BVW D42	Present	Broad-leaved cattails dominate portions of the wetland and provide potential habitat for least bittern and common moorhen due to a > 25 cm water depth. These species were not observed during field evaluations.
Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)	BVW D35	Present	Sedges and grasses dominate portions of the wetland and provide potential habitat for common snipe and spotted sandpiper due to a > 5 cm water depth. These species were not observed during field evaluations.

**TABLE 3 EXISTING WILDLIFE HABITAT FEATURES IN DARTMOUTH, MASSACHUSETTS**

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN ETC.)
Wildlife Food: Upland/wetland food plants (hard mast and fruit)	BVW D27	Present	Common blackberry and roundleaf greenbrier.
	BVW D26	Present	Highbush blueberry, willows, and maleberry.
	BVW D25	Present	Common blackberry and maleberry.
	BVW D21	Abundant	Maleberry, highbush blueberry, small cranberry.
	BVW D20	Present	Common blackberry, highbush blueberry, maleberry.
Shrub/herbaceous vegetation suitable for veery nesting	BVW D27	Present	Portions of BVW D27 provide dense shrub thickets comprised of sweet pepperbush. No veerys were observed during field evaluations.
Standing Dead Trees			
6-12" dbh	BVW D27	One tree	No cavities or perches were observed.
12"-18" dbh	BVW D25	One tree	The tree is located outside the impact area.
12-18" dbh	BVW D21	Two trees	One of the trees has unidentified woodpecker holes.
Small mammal burrows	BVW D27	Present	Small mammal burrows were present under an old unidentified tree stump and under an unidentified snag tree.
	BVW D21	Present	Small mammal burrows under a rock.
	BVW D20	Present	Small mammal burrows (likely meadow vole) were present.
Dense herbaceous cover (voles, small mammals, amphibians, and reptiles).	BVW D27	Present	Bushy bluestem and goldenrods.
	BVW D26	Present	Cinnamon fern, bushy bluestem, goldenrods, and sedges.
	BVW D25	Present	Common woolsedge, sensitive fern, goldenrods.

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN ETC.)
	Upland RFA of SD23A	Present	Grasses.
	BVW D22	Present	Grasses and sedges.
	BVW D21	Present	Canada rush and switch panicgrass.
	BVW D20	Present	Bushy bluestem and sedges.
Large woody debris on ground (voles, small mammals, amphibians, and reptiles).	BVW D26	Present	Fallen cut logs on the ground, along with tree stumps and a stockpile of tree branches.
	BVW D25	Present	Tree stumps and a few large decaying logs are on the ground.
	BVW D20	Present	One fallen cut log on the ground.
Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1 meter above the water's surface			
	BVW D21	Present	There are several rocks and one fallen log standing above the water's surface in March 2019. The water level decreases later in the growing season.
Standing water present at least part of the growing season: Suitable for use by breeding amphibians, as well as for non-breeding amphibians for foraging and rehydration			
Suitable for non-breeding amphibians	BVW D27	Present	
Suitable for breeding and non-breeding amphibians	BVW D26	Present	
Suitable for non-breeding amphibians	BVW D25A	Present	
Suitable for breeding and non-breeding amphibians.	BVW D25	Present	
Suitable for non-breeding amphibians.	BVW D22	Present	
Suitable for breeding and non-breeding amphibians.	BVW D21	Present	
Suitable for non-breeding amphibians.	BVW D20	Present	
Standing water present at least part of the growing season suitable for use by turtles and foraging waterfowl	BVW D25	Present	Suitable for turtles and foraging waterfowl in perennial stream SD25.
	BVW D21	Present	Suitable for turtles and foraging waterfowl.
Areas of ice-free open water in winter	BVW D25	Present	SD25 is a perennial stream that was flowing in winter 2019.
Perennial and intermittent streams	BVW D25	Present	SD25 is a perennial stream.
	BVW D20	Present	SD20 is an intermittent stream.

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN ETC.)
Persistent emergent vegetation at least seasonally flooded during the growing season	BVW D25	Present	Common reed dominates portions of the wetland and provides potential habitat for red-winged blackbirds and marsh wrens due to a > 5 cm water depth. These species were not observed during field evaluations.
	BVW D21	Present	Sedges dominates portions of the wetland and provides potential habitat for wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.) wrens due to a > 5 cm water depth. These species were not observed during field evaluations.
Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season.	BVW D21	Present	Sedges dominate portions of the wetland and provide potential habitat for common snipe and spotted sandpiper due to a > 5 cm water depth. These species were not observed during field evaluations.
	BVW D21	Present	Sedges dominates portions of the wetland and provides potential habitat for least bittern and common moorhen due to a > 25 cm water depth. These species were not observed during field evaluations.

**TABLE 4 WILDLIFE OBSERVATIONS AND SIGNS IN ACUSHNET, MASSACHUSETTS**

WETLAND RESOURCE AREA	OBSERVED WILDLIFE SPECIES	OBSERVED WILDLIFE SIGNS
BVW D64	-Red-winged blackbirds -Black-capped chickadee -Spotted turtle	-Eastern coyote scat -White-tailed deer trails -White-tailed deer droppings
BVW D62	-No observations at times of site visits.	-White-tailed deer trails -White-tailed deer droppings
BVW D59	-No observations at times of site visits.	-No observations at times of site visits
BVW D56	-No observations at times of site visits.	-No observations at times of site visits
BVW D55	-Wood frog egg masses	-No observations at times of site visits
BVW D54	-Common yellowthroat -American goldfinch -Flock of unidentified sparrow species -Deceased white-footed mouse -Wood frog egg masses -Spotted salamander egg masses - 1 Box turtle laying eggs in buffer zone	-Eastern coyote scat -White-tailed deer browse
BVW D53	-Wood frog egg masses -Wood frog tadpoles -Spotted salamander egg masses -American toad egg masses -Bullfrog tadpoles	-No observations at times of site visits
BVW D51	-Wood frog egg masses	-No observations at times of site visits

WETLAND RESOURCE AREA	OBSERVED WILDLIFE SPECIES	OBSERVED WILDLIFE SIGNS
BVW D50	-Eastern box turtle -Spotted turtle -Red-winged blackbirds	-White-tailed deer browse
Vernal Pool in BVW D50	-Wood frog egg masses -Wood frog tadpoles -Spotted salamander egg mass -Spotted turtle	-No observations at times of site visits
BVW D48	-Black-capped chickadees -Spotted turtle -American toad egg masses -Young American toads -Spring peeper egg masses -Wood frog egg masses	-White tailed deer prints -White-tailed deer browse -White-tailed deer droppings -White-tailed deer bed -Wild turkey eggs (on wetland edge)

**TABLE 5 WILDLIFE OBSERVATIONS AND SIGNS IN NEW BEDFORD, MASSACHUSETTS**

WETLAND RESOURCE AREA	OBSERVED WILDLIFE SPECIES	OBSERVED WILDLIFE SIGNS
BVW D44	-Deceased white-tailed deer	-White-tailed deer browse -Eastern coyote scat
BVW D42	-No observations at times of site visits.	-No observations at times of site visits
BVW D41	-No observations at times of site visits.	-White-tailed deer droppings -Woodchuck ground holes -Unidentified woodpecker holes in snag trees
BVW D40	-No observations at times of site visits.	-White-tailed deer droppings
BVW D39	-Green frog -Wood frog tadpoles	-White-tailed deer browse -White-tailed deer droppings
BVW D38A	-No observations at times of site visits.	-No observations at times of site visits
BVW D35	-Eastern garter snake -Eastern box turtle	-No observations at times of site visits

**TABLE 6 WILDLIFE OBSERVATIONS AND SIGNS IN DARTMOUTH, MASSACHUSETTS**

WETLAND RESOURCE AREA	OBSERVED WILDLIFE SPECIES	OBSERVED WILDLIFE SIGNS
BVW D34	-Yellow warblers	-No observations at times of site visits
BVW D32	-No observations at times of site visits.	-No observations at times of site visits
BVW D30	-No observations at times of site visits.	-No observations at times of site visits

WETLAND RESOURCE AREA	OBSERVED WILDLIFE SPECIES	OBSERVED WILDLIFE SIGNS
BVW D27	-Eastern towhees -Common yellowthroat -Green frog -Eastern ribbon snake -Wood frog egg masses -Spotted salamander egg masses -Bullfrog tadpoles	-White-tailed deer droppings -Small mammal burrow
BVW D26	-Wood frog egg masses -Deceased adult wood frog	-No observations at times of site visits -White-tailed deer droppings
BVW D25A	-No observations at times of site visits.	-White-tailed deer droppings
BVW D25	-Eastern towhees -American robins -American goldfinch -Spotted turtles -Green frog -White-tailed deer	-White-tailed deer droppings -Wood frogs calling
Upland RFA of stream SD23A	-No observations at times of site visits.	-No observations at times of site visits
BVW D22	-Yellow warblers	-No observations at times of site visits
BVW D21	-Mallards -Brown-headed cowbird -Gray catbirds -Yellow warblers -Canada goose -Tree swallows -Four-toed salamander	-Wood frogs calling -Spring peepers calling -Green frog calling
BVW D20	-No observations at times of site visits.	-Meadow vole burrows

### 3.1.1 Upland / Wetland Food Plants (Hard Mast and Fruit)

A variety of native and invasive shrubs and woody vines in the Survey Area provide fruit and seeds for wildlife food, particularly to birds and mammals inhabiting and using the Survey Area. A majority of the BVWs and the upland BLSF associated with Hathaway Swamp provide food sources for wildlife. Common native shrubs serving as a wildlife food sources include highbush blueberry (*Vaccinium corymbosum*), winterberry (*Ilex verticillata*), maleberry (*Lyonia ligustrina*), willows (*Salix* spp.), and common blackberry (*Rubus allegheniensis*). The native woody vine roundleaf greenbrier (*Smilax rotundifolia*) also provides fruit for wildlife. Refer to Tables 1 through 3 for a list of food plants in each resource area by city or town: Table 1 (Acushnet), Table 2 (New Bedford), and Table 3 (Dartmouth).

### 3.1.2 Shrub Thickets/Streambeds with Abundant Earthworms

Only BVW D50 in Acushnet contained features that may provide American woodcock (*Scolopax minor*) habitat. BVW D50 contained a dense shrub thicket of sweet pepperbush (*Clethra alnifolia*) and

earthworms were observed within the soil. No American woodcocks were observed during the wildlife habitat evaluations.

### 3.1.3 Shrub/Herbaceous Vegetation Suitable for Veery Nesting

Nine BVWs contained a dense assemblage of native shrub species which may provide potential nesting opportunities for the veery (*Catharus fuscescens*). These birds prefer dense shrub or woodland habitats which are damp (DeGraaf and Yamasaki 2001). Dense shrub cover in the BVWs included sweet pepperbush, highbush blueberry, and maleberry. No veerys were observed during the habitat evaluations. Refer to Table 1 (Acushnet), Table 2 (New Bedford), and Table 3 (Dartmouth) for a list of BVWs and the species comprising the dense shrub layer cover species.

### 3.1.4 Standing Dead Trees (Snags) and Tree Cavities

Standing dead trees, also known as snags, provide feeding, nesting, denning, roosting, or perching areas for wildlife. The particular tree species of the snags were all unidentifiable in the field. Several class ranges were observed throughout the Survey Area. Five resource areas total contained snag trees. Two resource areas in New Bedford (BVW D42 and BVW D41) contained snag trees with a diameter at breast height (dbh) range of 6 to 12 inches and a dbh range of 12 to 18 inches. Three resource areas in Dartmouth (BVW D27, BVW D25, and BVW D21) contained snag trees. Four snag trees were recorded with a dbh range of 6 to 12 inches in BVW D42 and one snag tree was recorded with a dbh range of 12 to 18 inches in BVW D41. In Dartmouth, BVW D27 contained one snag tree with a dbh range of 6 to 12 inches, while BVWs D27 and D25 each contained one snag tree in the 12 to 18 inches range. Refer to Tables 2 and 3 for more detail on snag trees in the five resource areas. In addition, BVW D41 in New Bedford contained one tree cavity with a class range of 6 to 12 inches in a red maple (*Acer rubrum*) tree.

Woodpeckers such as the downy woodpecker (*Picoides pubescens*) or the hairy woodpecker (*Picoides villosus*) feed on wood-boring larvae beetles found in snags; thereby creating holes or nesting cavities in snag trees while trying to access the beetles. Several of these snag trees contained woodpecker (*Picoides*) holes in BVWs D42 and D41 in New Bedford and BVW D21 in Dartmouth. Smaller snags provide nesting or feeding sites for such suburban birds as the black-capped chickadee (*Poecile atricapillus*), the tufted titmouse (*Baeolophus bicolor*), and the white-breasted nuthatch (*Sitta carolinensis*). Small mammals, such as the Eastern gray squirrel (*Sciurus carolinensis*) may den in tree cavities during the winter (DeGraaf and Yamasaki 2001).

### 3.1.5 Potential Small Mammal Burrows

Several resource areas contained small mammal burrows, which were most likely either Eastern chipmunk (*Tamias striatus*), woodchuck (*Marmota monax*), or meadow vole (*Microtus pennsylvanicus*). Eastern chipmunks create underground nests with extensive tunnel systems. Meadow voles create underground burrows and cache food for the winter. Woodchucks also create extensive underground burrows that contain numerous chambers. In Acushnet, BVW D48 and the upland BLSF associated with Hathaway Swamp contained small burrows where the openings were observed under rocks. Two BVWs in New Bedford (D41 and D30) contained small mammal burrows where the entrances were also located under rocks. In Dartmouth, three BVWs (D27, D25, and D21) contained small mammal burrows where several of the burrow entrances were located under either tree stumps and snag trees or rocks.

### **3.1.6 Dense Herbaceous Cover**

Herbaceous cover is defined as all non-woody plants regardless of size and woody vegetation less than 3.28 feet tall. Dense herbaceous cover in the BVWs was predominately present as non-woody emergent vegetation including a variety of species. Taller more persistent emergent vegetation included the invasive common reed (*Phragmites australis*), broad-leaved cattails (*Typha latifolia*), and common woosedge (*Scirpus cyperinus*). Shorter, common herbaceous vegetation that offers dense cover for wildlife include sensitive fern (*Onoclea sensibilis*), cinnamon fern (*Osmundastrum cinnamomeum*), bushy bluestem (*Andropogon glomeratus*), deer-tongue rosette-panicgrass (*Dichanthelium clandestinum*), and a variety of goldenrods (*Solidago* spp.). Refer to Table 1 (Acushnet), Table 2 (New Bedford), and Table 3 (Dartmouth) for a list of dense herbaceous cover species within each resource area.

### **3.1.7 Large Woody Debris on Ground**

Large woody debris on the ground was identified near several impact areas in Acushnet, New Bedford, and Dartmouth. Several of the BVWs had fallen cut trees in the impact areas as well as fallen natural woody debris. These areas included BVWs D58 and D50 in Acushnet, BVWs D40 and D32 in New Bedford, and BVW D26, BVW D25, and BVW D20 in Dartmouth. Fallen trees provide potential denning sites within the decaying interior of the logs (Hagan and Grove 1999). Decaying logs also provide food sources for a variety of insects residing within the decaying logs, and cover for specific woodland amphibian species including the red-back salamander (*Plethodon cinereus*) (DeGraaf and Yamasaki 2001). Refer to Table 1 (Acushnet), Table 2 (New Bedford), and Table 3 (Dartmouth) for a description of large woody debris in the Survey Area.

### **3.1.8 Rocks Under the Water's Surface**

Rocks are present under the water's surface in intermittent stream SD-62 in Acushnet. Rocks within a stream system have the potential to provide cover for turtles, snakes, and frogs utilizing the intermittent stream.

### **3.1.9 Rocks and Overhanging Branches at or within One Meter Above the Water's Surface**

Branches within one meter above the water's surface can provide perching locations for many wildlife species such as amphibians, turtles, and birds. Two areas had either overhanging rocks or branches above the water's surface that provide cover for aquatic species or perching opportunities about the water's surface for small mammals, birds, amphibians, and reptiles. Intermittent stream SD-62 in Acushnet had branches hanging over the stream providing perching opportunities. BVW D21 in Dartmouth several rocks and one fallen log were standing above the water's surface in March 2019 within the impact area. However, the water level decreases later in the growing season in this area. Rocks and logs provide cover for aquatic species.

### **3.1.10 Rock Piles and Crevices**

Rock piles and crevices provide habitat for denning mammals. Four resource areas in Acushnet (BVW D54, BVW D50, BVW D48, and Upland BLSF) provide either rock walls or rock crevices for denning sites or temporary cover for small mammals. BVW D54 contains a rock wall that can be used for small mammal habitat.

Refer to Table 1 for further descriptions of the rock piles and crevices within the resource areas in Acushnet.

### 3.1.11 Depressions that may Serve as Vernal Pools

The WPA defines vernal pool habitat as confined basin depressions that typically hold water for two continuous months during the spring and are free of adult fish populations. These areas provide essential breeding habitat for a variety of amphibian species such as wood frogs and the spotted salamander. Certified vernal pools (CVPs) are those that have been certified by the Massachusetts Natural Heritage and Endangered Species Program (NHESP) according to the Guidelines for Certification of Vernal Pool Habitat (NHESP 2018) and are protected if they fall under the jurisdiction of the WPA. CVPs are also afforded protection under Section 401 of the federal Clean Water Act, the Massachusetts Surface Water Quality Standards that relate to Section 401, and the Massachusetts Forest Cutting Practices Act. No CVPs are identified to occur in the Survey Area (NHESP 2021). Potential vernal pools (PVPs) have also been mapped by NHESP but do not receive protection under the WPA or under any other state or federal wetlands protection laws (NHESP 2021.)

Surveys along the Eversource ROW were conducted in the spring of 2018 and the spring of 2021. The surveys were scheduled after the first significant rain events, when the majority of evening low temperatures were expected to remain in the 40s (degrees Fahrenheit). These weather conditions promote inward migration of amphibians to the pools for the purpose of breeding. Biologists conducted visual surveys and used dip nets to sweep the water column to determine the presence or absence of amphibians and other vernal pool species. When heard, choruses of breeding frogs were also noted.

Field identified vernal pools included areas that held standing water and exhibited obligate breeding species during the breeding season and met state and federal vernal pool criteria. The areas classified as field identified vernal pools were located in either an isolated depression in an upland system or within a distinct depression in a wetland system, such as an area of inundation within a WPA-regulated BVW. In addition, several vernal pools were located within disturbed depressional wetlands predominately created from all-terrain vehicle (ATV) trails. These depressional areas were deep enough and with a hydroperiod able to support obligate amphibian egg mass development and maturation.

Isolated vernal pools occurring in a terrestrial environment were identified, recorded and surveyed in the field. In cases where wetland systems exhibited expansive flooding and contained depressions where obligate vernal pool species were breeding, the breeding evidence was recorded and the areas were field identified and surveyed. Such determinations were made by field biologists during the surveys.

Obligate vernal pool species observed during the Eversource ROW vernal pool investigations include wood frogs and spotted salamanders. Facultative species observed during the Eversource ROW vernal pool surveys include American toads (*Bufo americanus*) and spring peepers (*Pseudacris crucifer*).

Table 7 lists vernal pools impacted by the Project.



**TABLE 7 VERNAL POOLS TO BE IMPACTED IN THE SURVEY AREA**

WETLAND RESOURCE AREA	POOL TYPE	EXISTING COVER TYPE	AVERAGE WATER DEPTH (IN.)	MAXIMUM WATER DEPTH (IN.)	OBLIGATE SPECIES OBSERVED	FACULTATIVE SPECIES OBSERVED
BVW D50 Acushnet	Vernal Pool	PSS	8 (2018) 12 (2021)	12 (2018) 15 (2021)	-4 wood frog egg masses -1 spotted salamander egg mass - ~50 wood frog tadpoles	-1 spotted turtle

### 3.1.12 Standing Water Present at Least Part of the Growing Season

Shallow pockets of standing water occur throughout several of the BVWs in the Survey Area in Acushnet, New Bedford, and Dartmouth. These water-filled depressions provide non-breeding amphibians foraging and rehydration opportunities. Water was present in a majority of BVWs during the wildlife habitat evaluations from January-March 2019. The presence of standing water observed during the wetland delineations in spring 2018, as well as during the vernal pool investigations in spring 2018 and spring 2021 suggests that standing water remains in these pockets into the growing season.

Refer to Tables 1 through 3 for a description of standing water in each resource area by city or town: Table 1 (Acushnet), Table 2 (New Bedford), and Table 3 (Dartmouth).

### 3.1.13 Sphagnum Hummocks or Mats Directly Adjacent to Pools of Standing Water in Spring

Three BVWs contain sphagnum mats adjacent to pools of standing water that provide potential habitat for four-toed salamanders. BVWs D64 and D48 in Acushnet and BVW D44 in New Bedford provide these habitat characteristics. Four-toed salamanders prefer wetlands dominated by sphagnum moss and the larvae are usually found in slow-moving streams or small pools (NHESP 2010).

A four-toed salamander was observed in BVW D21 in Dartmouth during May 2018.

### 3.1.14 Flat Rocks within Streams

The presence of flat rocks within streams provides cover for stream salamanders. In intermittent stream (SD62) in Dartmouth several medium-sized flat rocks were observed in the stream channel which may possibly provide cover for stream salamanders.

### 3.1.15 Areas of Ice-Free Open Water in Winter

Portions of the Survey Area were evaluated in January and February 2019, allowing the opportunity to assess the wildlife habitat characteristic of ice-free open water in winter. There were several areas with flowing and ice-free water providing rehydration and foraging opportunities for resident wildlife species within the Survey Area. These areas include several streams: intermittent stream SD-D59 and SD-62 in Acushnet, perennial stream SD-54 in Acushnet, and perennial stream SD-25 in Dartmouth. In addition, there were a few areas of open water in BVW D53 in Acushnet and BVWs D42 and D34 in New Bedford during winter 2019.

### 3.1.16 Persistent Emergent Wetland Present (Flooded > 5 cm)

Emergent wetlands, also classified as marshes, are characterized by persistent emergent vegetation. The predominant emergent plants colonizing the marshes in the Survey Area are common reed and broad-leaved cattails. Additional persistent emergent species include common wooldsedge and purple loosestrife. Five BVWs in Acushnet (D64, D58, D55, D53, and D51) contain persistent emergent vegetation at least seasonally flooded during the growing season. A majority of these wetlands are dominated by common reed. Refer to Table 1 for a further description of each BVW in Acushnet where this characteristic is present. Standing water (with a depth > 5 centimeters [cm]) was present during the winter and spring wildlife habitat evaluations and standing water is expected to continue into the growing season. Red-winged blackbirds and marsh wrens are bird species which use common reed for nesting (Benoit and Askins 1999).

In New Bedford, two BVWs (D42 and D35) are dominated by persistent emergent vegetation with a standing water depth >5 cm. BVW D35 is dominated by common reed, providing habitat for red-winged blackbirds and marsh wrens. BVW D42 is dominated by broad-leaved cattails providing habitat for marsh wrens. BVW D42 may also provide habitat for additional waterfowl species such as wood duck (*Aix sponsa*), green heron (*Butorides virescens*), black-crowned night heron (*Nycticorax nycticorax*), king rail (*Rallulus elegans*), Virginia rail (*Rallus limicola*), and coot (*Fulica americana*). However, these species were not observed during the evaluations. Refer to Table 2 for further descriptions of these BVWs in New Bedford.

In Dartmouth, BVW D25 is dominated by common reed providing habitats for red-winged blackbirds and marsh wrens. BVW D21 is dominated by sedges that may also provide habitats for wood duck, green heron, black-crowned night heron, king rail, Virginia rail, and coot. These species were not observed during the evaluations. Refer to Table 3 for further descriptions of these BVWs in Dartmouth.

### 3.1.17 Persistent Emergent Wetland Present (Flooded > 25 cm)

During the spring 2019 wildlife habitat evaluation, standing water was present in pockets >25 cm within one wetland, BVW D42 in New Bedford. Broad-leaved cattails dominate the emergent wetland portion of BVW D42. Least bitterns (*Ixobrychus exilis*) and common moorhens (*Gallinula galeata*) are bird species which may use this habitat for nesting where the standing water is > 25 cm (DeGraaf and Yamasaki 2001). However, these species were not observed during the evaluations.

### 3.1.18 Fine-Leaved Emergent Vegetation Present (Flooded > 5 cm)

Two wetlands in the Survey Area had areas dominated by fine-leaved emergent vegetation with standing water >5 cm, providing potential habitat for such avian species as common snipe (*Gallinago gallinago*) and spotted sandpiper (*Actitis macularius*). BVW D35 in New Bedford was dominated by sedges and grasses while BVW D21 in Dartmouth was dominated by sedges. None of the above listed avian species were observed during the field evaluations.

### 3.1.19 Fine-Leaved Emergent Vegetation Present (Flooded > 25 cm)

One wetland in the Survey Area, BVW D21 in Dartmouth contained fine-leaved emergent vegetation (sedges) with standing water > 25 cm, providing potential habitat for least bitterns and common moorhens. These species were not observed.

### **3.1.20 Perennial and Intermittent Streams**

One perennial stream and three intermittent streams have anticipated impacts. These include one perennial stream SD25 flowing through BVW D25 and one intermittent stream SD20 flowing through BVW SD20 in Dartmouth. In Acushnet, anticipated stream impacts include two intermittent streams, SD62 flowing through BVW D62 and SD59 flowing through BVW D59.

Streams provide a variety of purposes in the landscape which include wildlife habitat for birds, amphibians, reptiles, and insects. Streams assist with groundwater recharge, improving water quality, and serve as travel corridors for wildlife species (Mitch and Gosselink 2015).

### **3.1.21 Wildlife Habitat Characteristics Summary**

Summarized in Table 1 (Acushnet), Table 2 (New Bedford), and Table 3 (Dartmouth) are the wildlife habitat characteristics discussed in Sections 3.1.1 through 3.1.20 that were observed at the 29 sites during the field surveys. Ten wetlands and one upland BLSF are presented in Table 1, (Acushnet), seven wetlands are presented in Table 2 (New Bedford), and 11 wetlands are presented in Table 3 (Dartmouth) from east to west in the Study Area beginning at the Industrial Tap in Acushnet and heading westward to the Fall River/Dartmouth Town line.

Wildlife observation and signs were also collected during the field wildlife habitat evaluations and are listed in Table 4 (Acushnet), Table 5 (New Bedford), and Table 6 (Dartmouth).

## **3.2 Landscape Context**

In addition to the site-specific habitat characteristics, the MassDEP Guidance more broadly addresses landscape context such as habitat continuity and connectivity, as well as the effects of existing habitat degradation.

The existing utility ROWs in the Survey Area serve as a connector to adjacent areas of habitat and are, therefore, important for connectivity with adjoining natural habitats. Portions of the Project area are surrounded by upland and wetland forests through the town of Acushnet, the city of New Bedford, and the town of Dartmouth. In several areas, the ROW is also adjacent to residential communities in these three towns. The ROW also crosses through a few agricultural areas in Dartmouth and Acushnet, which include hay fields and a Christmas tree farm. Existing infrastructure traversed by the Survey Area includes the New Bedford Business Park and a four-lane highway (Route 140) in New Bedford.

Wildlife currently inhabiting the Project area is accustomed to the existing infrastructure in the area. The existing ROW provides natural shrubland habitats embedded within large tracts of continuous and connected forest habitats. The Project is not anticipated to permanently impact the integrity of the bordering forest land as a wildlife habitat connector to the adjacent forests. After Project completion, the ROWs will continue to serve a role as a landscape connector to wildlife habitats, as well as providing habitats for wildlife species.

## **3.3 Habitat Degradation**

The representative wetland impact areas reviewed during the wildlife habitat evaluation have all been subject to previous alterations, predominately from the existing Eversource infrastructure and mild habitat degradation as a result of recreation activities, including ATV usage.

Several wetlands contain invasive species. The dominant invasive species are common reed, purple loosestrife (*Lythrum salicaria*), and multiflora rose (*Rosa multiflora*).

No observations of trash dumping, chemical contamination, or erosion and sedimentation problems were observed within the Survey Area while conducting the wildlife habitat evaluation, wetland surveys, and vernal pool investigations.

All wetlands have been altered to some degree from the Eversource ROW, chiefly by removal of trees. Temporary disturbances will continue to occur along the existing transmission line ROW since Eversource conducts a regular vegetation maintenance program of the existing transmission line ROWs. Eversource's ROW vegetation practices encourage the growth of low-growing shrubs and other vegetation which provide a degree of natural vegetation control. Vegetation management is necessary to ensure the reliable and safe delivery of electric services to Eversource customers. This is accomplished by allowing for the proper clearance between vegetation and electrical conductors and supporting structures. Vegetation maintenance will continue to occur in accordance with Eversource's current approved Vegetation Management Plan for Central, Eastern, and Southeastern Massachusetts.

## **4.0 RARE SPECIES**

Eversource evaluated state agencies' data to determine whether any Massachusetts State-listed, and/or -proposed, -endangered, or -threatened species or critical habitats are known to occur in the Project ROWs. This section addresses the consultation process with the Massachusetts NHESP which is part of the Massachusetts Division of Fisheries and Wildlife. The identified wildlife species are discussed below.

Based on coordination with the Massachusetts NHESP, three NHESP-mapped priority habitat polygons for State-listed animal species are located in the vicinity of the Project.

Eversource is actively coordinating with the NHESP regarding the species potentially present within these mapped areas of priority habitat and will continue with this consultation in order to minimize or avoid potential adverse effects on rare species during design, construction, and operation of the Project. Species specific surveys were conducted by Oxbow Associates, Inc.

## 5.0 BEST MANAGEMENT PRACTICES

Throughout the planning and design phases of the Project, wetland impacts have been minimized to the greatest extent possible by using an existing ROW, utilizing existing access roads, and avoiding the placement and construction of structures and access roads in wetlands and watercourses, where practicable. However, given the scale and landscape setting of the Project, certain wetland and watercourse resource impacts associated with the development of the Project cannot be avoided.

Permanent fill will be placed in wetlands in the form of structure foundations. Temporary wetland impacts are anticipated due to the placement of timber construction mats used to facilitate construction activities.

BMPs, as detailed in Eversource's *Construction and Maintenance Environmental Requirements Best Management Practices Manual: Massachusetts* (2022), will be employed to minimize disturbances to wetlands during construction of the Project.

### 5.1 Structures

Specific measures will be taken when installing structures. Temporary soil erosion controls will be installed around structure work sites in or near wetlands to minimize the potential for soil erosion and sedimentation. All soil erosion and sediment controls and other applicable construction BMPs will be inspected and maintained on a routine basis. Grading in wetlands will be limited for structure foundations. Construction mats will be used in wetlands to provide a safe workspace. Spoil piles will be placed in uplands, where possible, or properly contained on construction mats in wetlands.

### 5.2 Access Roads

Existing access roads will be used to the extent practicable during the construction phase of the Project to minimize access through wetlands. Where access roads must be improved or possibly developed in certain sections, the roads will be designed, where practical, so as not to interfere with surface water flow or the functions of the wetland. Temporary construction matting for access roads across wetlands will be installed to provide safe passage through the wetlands. The type of stabilization measures to be used in wetlands will depend on soil saturation and depth of organic matter. All temporary access roads through wetlands will be restored following the completion of installation activities by removing the construction mats, re-grading the area (as necessary) to pre-construction elevations to the extent practicable, and re-vegetating the wetlands.

Mat bridges or other bridging techniques will be used to span streams where necessary. Temporary bridge installation will be avoided during peak flows or when the waterway to be crossed is above bankfull width conditions, with the exception of emergency situations or other unforeseen circumstances. If water is present at the time of construction, the ambient water flow will be maintained and water flows will not be constrained or interrupted at any time during construction. In addition, controls will be installed to prevent or minimize turbidity and sediment loading into watercourses. These controls may include the use of crushed stone approach aprons onto mat bridges, stone check dams, water bars, diversion channels, and soil erosion and sediment controls. Existing riparian zone vegetation will also be maintained, to the extent feasible, along the banks of the stream.

### **5.3 Construction Areas**

The size, shape, location, and configuration of work pads were evaluated to minimize impacts to wetlands and watercourses to the extent feasible. Temporary construction matting will be placed on the existing wetland vegetation where wetland impacts could not be avoided.

Temporary construction matting will be removed upon completion of the Project. Wetlands will be restored to pre-construction configuration and elevations to the extent practicable. Vegetation will also be restored within the wetland through native seeding.

### **5.4 Compensatory Wetland and Flood Storage Mitigation**

Compensation for the permanent loss of wetlands and upland BLSF is still in the preliminary planning phase. Consultation will occur with state and federal agencies, as well as with the Town of Acushnet Conservation Commission, the City of New Bedford Conservation Commission, and the Town of Dartmouth Conservation Commission to develop wetland mitigation plans that compensate for unavoidable wetland loss as a result of the Project. Compensatory wetland mitigation options for the Project may include in-situ wetland restoration along the Project Area, wetlands replication/creation (on- or off-ROW), and/or the Massachusetts Department of Fish and Game In-Lieu Fee Program. Eversource will work with the Town of Acushnet Conservation Commission, the City of New Bedford Conservation Commission, and the Town of Dartmouth Conservation Commission to develop a mitigation plan for the loss of BLSF associated with the installation of new structures.

## 6.0 PROJECT IMPACTS AND MITIGATION

Throughout the planning and design process for the Project, wetland impacts have been minimized to the extent practicable by utilizing an existing transmission line ROW and existing access roads. However, given the landscape setting of the Project, certain wetland impacts associated with Project construction cannot be avoided. Construction of the Project will result in temporary and permanent impacts to wetland resources. The following section describes the permanent and temporary impacts associated with construction of the Project including temporary work pads to facilitate construction, excavation for and installation of pole foundations/structures for the new overhead transmission line, and the installation of temporary access roads through wetlands. This section also addresses the associated impacts which are most likely to occur to wildlife as a result of the Project and potential mitigation actions which could be implemented.

### 6.1 Anticipated Temporary Habitat Impacts and Mitigation

Wildlife currently using the Eversource ROW will be temporarily impacted by construction of the Project, but large blocks of intact woodland and shrubland will continue to remain adjacent to the ROW corridor. Larger, more mobile species such as white-tailed deer are expected to temporarily relocate from the construction area but are unlikely to be permanently impacted as a result of construction and operation of the Project. Small mammals such as woodchucks, gray squirrels (*Sciurus carolinensis*), skunks (*Mephitis mephitis*) and raccoons (*Procyon lotor*), as well as herpetofauna are also likely to move away from areas of construction activity. Depending upon the time of year, some avifauna may also be temporarily displaced, possibly impacting breeding and nesting activities, but are otherwise likely to return after construction and in subsequent years. In wetlands which will have temporary work pads or temporary construction access, the disturbed areas will be re-graded to pre-existing conditions and allowed to revegetate.

### 6.2 Anticipated Permanent Habitat Impacts and Mitigation

Eversource designed the Project to first avoid and then minimize permanent impacts to wetlands to the extent practicable, but unavoidable permanent fill of 870 square feet for structures will be required for the new overhead transmission line. With respect to the surrounding available wetland wildlife habitat resources associated with the transmission line ROWs, it is not expected this permanent fill would result in a long-term negative impact on the ability of the area to provide valuable wildlife habitat for the existing assemblage of wetland-dependent species.

Where excavation occurs for new structures, there are several mitigation activities which can be performed to enhance wildlife habitat. Such activities may include: in-situ wetland restoration, including re-grading to smooth any significant soil rutting or disturbance, seeding disturbed areas with a wetlands or conservation seed mix, and leaving woody debris to create cover for wildlife.



## 7.0 CONCLUSION

All wetlands within the Eversource Survey Area provide wildlife habitat functions including providing food, shelter, migration, breeding, and overwintering areas for wildlife. Important wildlife habitat characteristics have been identified within the Survey Area. These include:

- Upland/wetland food plants (hard mast and fruit).
- Shrub thickets/streambeds with abundant earthworms.
- Shrub vegetation suitable for veery nesting.
- Standing dead trees (snags) and tree cavities.
- Potential small mammal burrows.
- Dense herbaceous cover.
- Large woody debris on ground.
- Rocks under the water's surface.
- Overhanging shrub branches at, or within one meter above the water's surface.
- Rock piles and crevices suitable as potential habitat.
- Depressions that serve as vernal pools.
- Standing water present at least part of the growing season for use by non-breeding amphibians.
- Standing water present at least part of the growing season suitable for use by turtles and foraging waterfowl.
- Sphagnum hummocks or mats directly adjacent to pools of standing water in spring (four-toed salamander).
- Flat rocks within exposed portions of streambeds.
- Areas of ice-free open water in winter.
- Emergent vegetation at least seasonally flooded during the growing season.
- Perennial and intermittent streams.

Eversource will develop a wetland restoration and mitigation plan for the Project ROW. Possible wildlife habitat enhancements that may be proposed include:

- In-situ restoration and revegetation of wetlands, including re-grading to smooth any significant soil rutting or disturbance, and seeding disturbed areas with a wetlands or conservation seed.
- Stockpiling woody debris to provide cover.

Alterations to wetlands (which include BVW and BLSF) which have impacts above the thresholds permitted under the WPA are only permitted if the impacts will have no adverse impact on wildlife habitat. For this Project, alterations to BVW and BLSF will occur above the thresholds, however, the Project qualifies as a Limited Project pursuant to 310 CMR 10.24(7)(a), and no adverse impacts to wildlife will occur. According to 310 CMR 10.60 (1)(a), *“Adverse effects on wildlife habitat mean the alteration of any habitat characteristic listed in 310 CMR 10.60(2), insofar as such alteration will, following two growing seasons of project completion and thereafter (or, if a project would eliminate trees, upon the maturity of replanted saplings) substantially reduce its capacity to provide the important wildlife habitat functions listed in 310 CMR 10.60(2). Such performance standard, however, shall not apply to the habitat of rare species which are covered by the performance standards established under 310 CMR 10.59.”*

There are no adverse effects on wildlife habitat since resource areas within the Survey Area will not be substantially reduced in their function to serve as valuable sources of wildlife habitat in an area. The majority of the impacts along the Eversource ROW are temporary and include construction matting installation to facilitate construction activities. Once construction is complete, the matting will be removed, and the areas restored resulting in a *de minimis* loss of wildlife habitat associated with the permanent impacts associated with the pole structures.

Eversource has incorporated appropriate measures to avoid and/or minimize and mitigate adverse impacts. The proposed alterations will not substantially reduce the long-term capacity of the site to provide food, cover, migratory, and breeding areas, especially when viewed in terms of landscape scale availability of similar habitat types. Eversource will compensate for all permanent loss of wetland per conformance with the requirements of the state and federal permitting agencies. Eversource will consult with the Town of Acushnet Conservation Commission, the City of New Bedford Conservation Commission, and the Town of Dartmouth Conservation Commission to develop wetland mitigation plans that adequately compensate for wetland loss as a result of the Project. Compensatory wetland mitigation options for the Project may include wetland restoration along the Project Area, wetlands replication/creation (on- or off-ROW), and/or the Massachusetts Department of Fish and Game In-Lieu Fee Program.

## 8.0 REFERENCES

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## **ATTACHMENT A   WILDLIFE HABITAT EVALUATION DATA FORMS**



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D64

Location

Please refer to breakdown of impacts below.

11/29/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint)		48 sf (0.001 acre)		0.001 acre
2. Temporary (work pad)		7,544 sf (0.17 acre)		0.17 acre
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D64

Impact Area (number/name)

3/20/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 41 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

11/29/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

###### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Scrub-Shrub

Subclass: Broad-leaved Deciduous

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

###### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 55 0 20 45  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Clethra alnifolia (35%)*	Herb	Scirpus cyperinus (35%)*
Shrub	Vaccinium corymbosum (15%)*	Herb	Juncus effusus (15%)*
Shrub	Lyonia ligustrina (5%)	Herb	Juncus sp. (<5%)
Shrub	Spiraea tomentosa (<5%)	Herb	Rubus hispida (<5%)
Shrub	Rhododendron viscosum (<5%)	Herb	Phragmites australis (<5%)
Shrub		Herb	

#### C. Inventory (Soils)

Soil Survey Unit: Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony  
Oi 0"-1"; Oe 1"-9"; Pockets of frozen soil  
Texture (upper part)  
0"  
Depth to Water Table

Very Poorly Drained  
Drainage Class  
9  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☒ Present ☐ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D59-CM and intermittent stream SD-59

Location

Please refer to the breakdown of impacts below.

02/27/2023

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (access)	166 sf	218 sf		384 SF
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to the attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

  
Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

Meaghan Lamothe  
Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D59-CM

Impact Area (number/name)

11/19/2021

Date(s) of Site Visit(s) and Data Collection

Sunny, 45 degrees F

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

02/27/2023

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated



Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: \_\_\_\_\_

Class: Scrub-shrub

Subclass: Broad-leaved Deciduous

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 70 0 0 30  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Salix discolor (50%)*	Herb	Impatiens capensis (<5%)
Shrub	Rosa multiflora (10%)		
Shrub/Sapling	Betula populifolia (<5%)		
Herb	Solidago sp (20%)*		
Herb	Grass sp. (10%)*		

#### C. Inventory (Soils)

Pits, Udorthents complex, gravelly	Not Listed
Soil Survey Unit	Drainage Class
GrFSaL	12"
Texture (upper part)	Depth
2"	
Depth to Water Table	

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

<u>0</u>
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)
<u>0</u>
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)
<u>0</u>
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant                      ☐ Present                      ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter                      ☐ mink                      ☐ porcupine                      ☐ bear                      ☐ bobcat                      ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present                      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians                      ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles                      ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present                      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☒ Present ☐ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least 1.0 acre in size? ☐ Yes ☒ No

(marsh and waterbirds) 2.0 acres in size? ☐ Yes ☒ No

5.0 acres in size? ☐ Yes ☒ No

10.0 acres in size? ☐ Yes ☒ No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acishnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D58-CM

Location

Please refer to the breakdown of impacts below.

11/29/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pads, access)		2,839 sf (0.07 sf)		0.07 sf
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D58, "D58-CM"

Impact Area (number/name)

1/25/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 26 degrees F, light wind

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/29/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*M. Lamothe*

Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	Palustrine	Subsystem:	-
Class:	Emergent	Subclass:	Persistent

Hydrology/Water Regime

- |  |   |
|--|---|
| <input type="checkbox"/> Permanently flooded           | <input type="checkbox"/> Saturated              |
| <input type="checkbox"/> Intermittently exposed        | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded      | <input type="checkbox"/> Intermittently flooded |
| <input checked="" type="checkbox"/> Seasonally flooded | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:	0 Trees (> 20')	<5 Shrubs (< 20')	10 Woody vines	0 Mosses	90 Herbaceous
Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "*" designates a dominant plant species for the strata):					
Strata	Plant Species		Strata	Plant Species	
Shrub	Acer rubrum (<5%)				
Herb	Phragmites australis(65%)*				
Herb	Salidago spp. (20%)*				
Herb	Carex spp. (<5%)				
Woody Vine	Vitus labrusca (10%)*				

#### C. Inventory (Soils)

Freetown Muck, 0 to 1 percent slopes	Very poorly drained
Soil Survey Unit	Drainage Class
Organic hemic (0"-8"), Mucky SiL (8"-16")	16"
Texture (upper part)	Depth
2"	
Depth to Water Table	

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

<u>0</u>
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)
<u>0</u>
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)
<u>0</u>
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant                      ☐ Present                      ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter                      ☐ mink                      ☐ porcupine                      ☐ bear                      ☐ bobcat                      ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present                      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians                      ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles                      ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present                      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least 1.0 acre in size? ☐ Yes ☒ No

(marsh and waterbirds) 2.0 acres in size? ☐ Yes ☒ No

5.0 acres in size? ☐ Yes ☒ No

10.0 acres in size? ☐ Yes ☒ No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D56-CM 14

Location

Please refer to breakdown of impacts below.

12/08/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pad)		2,161 sf (0.05 acre)		0.05 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D56-CM 14

Impact Area (number/name)

8/17/2021

Date(s) of Site Visit(s) and Data Collection

Sunny, 80 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

12/08/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine Subsystem: -

Class: Emergent Subclass: Persistent

##### Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 Trees (> 20') <5 Shrubs (< 20') 0 Woody vines 0 Mosses 95 Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Spiraea tomentosa (<5%)	Herb	Juncus effusus (5%)
Herb	Solidago rugosa (30%)*		
Herb	Thelypteris palustris (20%)*		
Herb	Onoclea sensibilis (20%)*		
Herb	Eutrochium maculatum (15%)		

#### C. Inventory (Soils)

Soil Survey Unit: Hinckley loamy sand, 8 to 15 percent slopes  
0"-13" FSaL  
Texture (upper part)  
No water table observed  
Depth to Water Table

Excessively Drained  
Drainage Class  
13"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☐ Present ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant      ☐ Present      ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter      ☐ mink      ☐ porcupine      ☐ bear      ☐ bobcat      ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians      ☐ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles      ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present      ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D55

Location

Please refer to breakdown of impacts below.

11/30/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (Structure Footprint)		138 sf (0.003 acre)		0.003 acre
2. Temporary (work pad and access)		11,431 sf (0.26 acre)		0.26 acre
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D55

Impact Area (number/name)

1/25/2019

Date(s) of Site Visit(s) and Data Collection

Cloudy, 33 degrees F, light wind

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/30/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*M. Lamothe*

Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Emergent

Subclass: Persistent

Hydrology/Water Regime

☐ Permanently flooded

☒ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      5      <5      0      90  
                 Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Lyonia ligustrina (5%)*	Herb	Juncus effusus (<5%)
Shrub	Vaccinium corymbosum (<5%)	Shrub	Spiraea alba (<5%)
Shrub	Clethra alnifolia (<5%)		
Herb	Phragmites australis (90%)*		
Herb	Onoclea sensibilis(5%)		
Herb	Solidago spp. (<5%)		

#### C. Inventory (Soils)

Freetown Muck, 0 to 1 percent slopes	Very poorly drained
Soil Survey Unit	Drainage Class
FSaL w/ gravels (0"-4")	4"
Texture (upper part)	Depth
4"	
Depth to Water Table	

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☒ Present      ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present      ☒ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☐ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☐ Absent

#### IV. Landscape Context

##### A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☒ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☐ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D54-Pull Pad

Location

Please see breakdown of impacts below.

11/30/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (pull pad)		4,990 sf (0.11 acre)		0.11 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D54-Pull Pad

Impact Area (number/name)

1/29/2019

Date(s) of Site Visit(s) and Data Collection

Cloudy, 33 degrees F, light wind

Weather Conditions During Site Visit (if snow cover, include depth)


M. Lamothe

11/30/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

  
Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	Palustrine	Subsystem:	-
Class:	Emergent	Subclass:	Persistent

Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      5      <5      <5      95  
                 Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	<u>Spiraea alba (5%)*</u>	Herb	<u>Onoclea sensibilis (65%)*</u>
Shrub	<u>Spiraea tomentosa (&lt;5%)</u>	Herb	<u>Solidago spp. (25%)*</u>
Shrub	<u>Frangula alnus (&lt;5%)</u>	Herb	<u>Juncus effusus (20%)</u>
Shrub	<u>Viburnum dentatum (&lt;5%)</u>		

#### C. Inventory (Soils)

Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony

Ground Frozen

Texture (upper part)

0"

Depth to Water Table

Very poorly drained

Drainage Class

-

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☐ Present      ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present      ☒ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

<u>0</u>
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)
<u>0</u>
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)
<u>0</u>
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant                      ☐ Present                      ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☒ Rock piles, crevices, or hollow logs suitable for:

☐ otter                      ☐ mink                      ☐ porcupine                      ☐ bear                      ☐ bobcat                      ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present                      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians                      ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles                      ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present                      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

##### A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- Is the impact area part of an emergent marsh at least 1.0 acre in size? ☐ Yes ☒ No
- (marsh and waterbirds) 2.0 acres in size? ☐ Yes ☒ No
- 5.0 acres in size? ☐ Yes ☒ No
- 10.0 acres in size? ☐ Yes ☒ No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D54-CM 19

Location

Please refer to breakdown of impacts below.

11/30/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint)		5.9 sf (0.0001 acre)		0.0001 acre
2. Temporary (work pad)		3,719 sf (0.09 acre)		0.09 acre
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D54, "D54-CM-19"

Impact Area (number/name)

1/29/2019

Date(s) of Site Visit(s) and Data Collection

Cloudy, 33 degrees F, light wind

Weather Conditions During Site Visit (if snow cover, include depth)

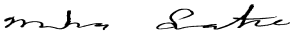
M. Lamothe

11/30/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

Signature 

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	Palustrine	Subsystem:	-
Class:	Scrub Shrub/Emergent	Subclass:	Broad-leaved Deciduous/Emergent

Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 55 <5 <5 45  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Lyonia ligustrina (35%)*	Herb	Onoclea sensibilis (20%)*
Shrub	Spiraea tomentosa (10%)	Herb	Juncus effusus (20%)*
Shrub	Salix spp. (5%)	Herb	Solidago spp. (10%)
Shrub	Spiraea alba (<5%)	Herb	Carex spp. (5%)
Shrub	Pinus strobus (<5%)	Herb	Dichanthelium clandestinum (10%)
Shrub	Rubus hispidus (5%)	Woody Vine	Smilax roduntifolia (<5%)

#### C. Inventory (Soils)

Gloucester - Hinckley complex, undulating, very stony  
Ground Frozen  
Texture (upper part)  
0" , surface water in some spots  
Depth to Water Table

Somewhat excessively drained  
Drainage Class  
-  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

<u>0</u>
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)
<u>0</u>
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)
<u>0</u>
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant                      ☐ Present                      ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☒ Rock piles, crevices, or hollow logs suitable for:

☐ otter                      ☐ mink                      ☐ porcupine                      ☐ bear                      ☐ bobcat                      ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present                      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians                      ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles                      ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present                      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

##### A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D54. CM-18

Location

Please see breakdown of impacts below.

11/30/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (Structure footprint)		48 sf (0.001 acre)		0.001 acre
2. Temporary (work pad and access)		7,269 sf (0.17 acre)		0.17 acre
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D54-CM18

Impact Area (number/name)

1/29/2019

Date(s) of Site Visit(s) and Data Collection

Cloudy, 33 degrees F, light wind

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/30/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*M. Lamothe*

Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Emergent

Subclass: Persistent

Hydrology/Water Regime

☐ Permanently flooded

☒ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      10      0      0      90  
                 Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Spiraea tomentosa (5%)*	Herb	Onoclea sensibilis (65%)*
Shrub	Spiraea alba (<5%)	Herb	Solidago sp. (20%)*
Shrub	Lyonia ligustrina (<5%)	Herb	Carex spp (<5%)
Shrub	Viburnum dentatum (<5%)		

#### C. Inventory (Soils)

Sandbury fine sandy loam, 0 to 3 percent slopes  
Soil Survey Unit  
Ground Frozen  
Texture (upper part)  
-  
Depth to Water Table

Moderately well drained  
Drainage Class  
-  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☐ Present      ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present      ☒ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

<u>0</u>
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)
<u>0</u>
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)
<u>0</u>
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant                      ☐ Present                      ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter                      ☐ mink                      ☐ porcupine                      ☐ bear                      ☐ bobcat                      ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present                      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians                      ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles                      ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present                      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
For upland resource areas is the impact area part of contiguous forested habitat at least			
(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D54-CM 17

Location

Please refer to breakdown of impacts below.

11/30/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pad and access)		6,151 sf (0.19 acre)		0.19 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D54-CM 17

Impact Area (number/name)

1/25/2019

Date(s) of Site Visit(s) and Data Collection

Sunny with light wind, 36 degrees F

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/30/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*M. Lamothe*

Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	Palustrine	Subsystem:	-
Class:	Scrub-Shrub	Subclass:	Broad-leaved deciduous

Hydrology/Water Regime

- |  |   |
|--|---|
| <input type="checkbox"/> Permanently flooded           | <input type="checkbox"/> Saturated              |
| <input type="checkbox"/> Intermittently exposed        | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded      | <input type="checkbox"/> Intermittently flooded |
| <input checked="" type="checkbox"/> Seasonally flooded | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 75 15 0 15  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Lyonia ligustrina (20%)*	Herb	Osmundastrum cinnamomeum (5%)*
Shrub	Clethra alnifolia (35%)*	Herb	Solidago spp. (15%)*
Shrub	Alnus spp. (10%)	Herb	Andropogon glomeratus (<5%)
Shrub	Spiraea alba (10%)	Herb	Carex spp. (<5%)
Shrub	Vaccinium corymbosum (5%)	Woody Vine	Smilax rotundifolia (15%)*
Shrub	Acer rubrum (<5%)	Woody Vine	Rubus hispidus (<5%)

#### C. Inventory (Soils)

Scarboro mucky fine sandy loam, 0 to 3 percent slopes  
FSaL (0"-5"), FSaL (5"-12") low chroma  
Texture (upper part)  
7"  
Depth to Water Table

Very poorly drained  
Drainage Class  
12"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

<u>0</u>
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)
<u>0</u>
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)
<u>0</u>
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant                      ☐ Present                      ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

- ☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)
- ☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)
- ☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)
- ☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)
- ☐ Rock piles, crevices, or hollow logs suitable for:
- |                                |                               |                                    |                               |                                 |   |
|--------------------------------|-------------------------------|------------------------------------|-------------------------------|---------------------------------|---|
| <input type="checkbox"/> otter | <input type="checkbox"/> mink | <input type="checkbox"/> porcupine | <input type="checkbox"/> bear | <input type="checkbox"/> bobcat | <input type="checkbox"/> turkey vulture |
|--------------------------------|-------------------------------|------------------------------------|-------------------------------|---------------------------------|---|
- ☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present                      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

- |  |  |
|--|--|
| <input type="checkbox"/> Breeding amphibians | <input checked="" type="checkbox"/> Non-breeding amphibians (foraging, re-hydration) |
| <input type="checkbox"/> Turtles             | <input type="checkbox"/> Foraging waterfowl  |

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present                      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☐ Absent

Areas of ice-free open water in winter

☒ Present ☐ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least 1.0 acre in size? ☐ Yes ☒ No

(marsh and waterbirds) 2.0 acres in size? ☐ Yes ☒ No

5.0 acres in size? ☐ Yes ☒ No

10.0 acres in size? ☐ Yes ☒ No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D53- CM 21

Location

Please see breakdown of impacts below.

11/30/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (access and work pad)		16,384 sf (0.38 acre)		0.38 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D53- CM 21

Impact Area (number/name)

1/29/2019

Date(s) of Site Visit(s) and Data Collection

Cloudy, 33 degrees F, light wind.

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/30/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

Signature 

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	Palustrine	Subsystem:	-
Class:	Emergent	Subclass:	Persistent

Hydrology/Water Regime

- |  |   |
|--|---|
| <input type="checkbox"/> Permanently flooded           | <input type="checkbox"/> Saturated              |
| <input type="checkbox"/> Intermittently exposed        | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded      | <input type="checkbox"/> Intermittently flooded |
| <input checked="" type="checkbox"/> Seasonally flooded | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 0 0 0 100  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Herbs	Phragmites australis (100%)*		
Herbs	Salidago spp. (<5%)		
Shrub	Spiraea alba (<5%)		
Shrub	Salix spp. (<5%)		

#### C. Inventory (Soils)

Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony

Organic hemic (0"-6")

Texture (upper part)

6",soils frozen. Standing water @ 0"

Depth to Water Table

Very poorly drained

Drainage Class

6", soils frozen

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☐ Present ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☒ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☒ Present ☐ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

##### A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☒ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliably Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D51-CM 22

Location

Please see breakdown of impacts below.

11/30/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pads)		6.606 sf (0.14 acre)		0.14 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D51, "D51-CM-22"

Impact Area (number/name)

1/29/2019

Date(s) of Site Visit(s) and Data Collection

Cloudy 33 degrees F, light wind.

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/30/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

Signature 

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	Palustrine	Subsystem:	-
Class:	Emergent	Subclass:	Persistent

Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      5      0      5      90  
                 Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Swida sp. (5%)*	Shrub	Rosa multiflora (<5%)
Herb	Lythrum virgatum (70%)*	Shrub	Salix sp. (<5%)
Herb	Juncus effusus (15%)	Shrub	Spiraea alba (<5%)
Herb	Dichanthelium clandestinum (15%)	Herb	Juncus sp. (<5%)
Herb	Phragmites australis (10%)		
Herb	Solidago sp.(25%)		

#### C. Inventory (Soils)

Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony

Mucky SaL w/gravels (0"-5")

Texture (upper part)

5"

Depth to Water Table

Very poorly drained

Drainage Class

5"

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☐ Present      ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present      ☒ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☒ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☒ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D50-CM 26

Location

Please refer to breakdown of impacts below.

11/30/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint)		25 sf		25 sf
2. Temporary (work area)		5,513 sf (0.13 acre)		0.13 acre
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D50, "D50-CM-26"

Impact Area (number/name)

1/25/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 30 degrees F, light wind

Weather Conditions During Site Visit (if snow cover, include depth)


M. Lamothe

11/30/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

  
Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	Palustrine	Subsystem:	-
Class:	Scrub Shrub/ Emergent	Subclass:	Broad-leaved Deciduous/Emergent

Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:	0 Trees (> 20')	70 Shrubs (< 20')	5 Woody vines	0 Mosses	30 Herbaceous
Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "*" designates a dominant plant species for the strata):					
Strata	Plant Species		Strata	Plant Species	
Shrub	Spiraea alba (10%)		Herb	Dichanthelium clandestinum (30%)*	
Shrub	Spiraea tomentosa (15%)		Herb	Solidago sp. (25%)*	
Shrub	Vaccinium corymbosum (5%)		Woody Vines	Rubus hispidus (5%)*	
Shrub	Ilex verticillata (30%)*				
Shrub	Swida amomum (25%)*				

#### C. Inventory (Soils)

Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony	Very poorly drained
FSaL (0"-12")	Drainage Class
Texture (upper part)	12"
7"	Depth
Depth to Water Table	

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

<u>0</u>
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)
<u>0</u>
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)
<u>0</u>
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant                      ☒ Present                      ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

- ☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)
- ☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)
- ☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)
- ☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)
- ☐ Rock piles, crevices, or hollow logs suitable for:
- |                                |                               |                                    |                               |                                 |   |
|--------------------------------|-------------------------------|------------------------------------|-------------------------------|---------------------------------|---|
| <input type="checkbox"/> otter | <input type="checkbox"/> mink | <input type="checkbox"/> porcupine | <input type="checkbox"/> bear | <input type="checkbox"/> bobcat | <input type="checkbox"/> turkey vulture |
|--------------------------------|-------------------------------|------------------------------------|-------------------------------|---------------------------------|---|
- ☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present                      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

- |  |  |
|--|--|
| <input type="checkbox"/> Breeding amphibians | <input checked="" type="checkbox"/> Non-breeding amphibians (foraging, re-hydration) |
| <input type="checkbox"/> Turtles             | <input type="checkbox"/> Foraging waterfowl  |

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present                      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least 1.0 acre in size? ☐ Yes ☒ No

(marsh and waterbirds) 2.0 acres in size? ☐ Yes ☒ No

5.0 acres in size? ☐ Yes ☒ No

10.0 acres in size? ☐ Yes ☒ No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☒ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D50-CM 25 and CM 24

Location

Please refer to breakdown of impacts below.

11/30/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pads)		3,586 sf (0.08 acre)		0.08 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D50-CM 25 and CM 24

Impact Area (number/name)

1/29/2019

Date(s) of Site Visit(s) and Data Collection

Partly sunny, 30 degrees F

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/30/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*M. Lamothe*

Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	Palustrine	Subsystem:	-
Class:	Scrub Shrub/Emergent	Subclass:	Broad-leaved Deciduous/Persistent

Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 70 5 0 30  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Vaccinium corymbosum(5%)	Herb	Solidago sp. (35%)*
Shrub	Clethra alnifolia (60%)*	Herb	Osmundastrum cinnamomeum (25%)*
Shrub	Spiraea alba (5%)	Herb	Dichanthelium clandestinum (5%)
Shrub	Rubus allegheniensis (<5%)	Herb	Lythrum virgatum (<5%)
Shrub	Spiraea tomentosa (<5%)	Woody Vine	Celastrus orbiculatus (<5%)
Shrub	Multiflora rosa (<5%)	Woody Vine	Smilax rotundifolia (<5%)

#### C. Inventory (Soils)

Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony

Mucky FSaL (0"-4"), SaL w/gravels (4"-12")

Texture (upper part)

4"

Depth to Water Table

Very poorly drained

Drainage Class

12"

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☒ Present ☐ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

<u>0</u>
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)
<u>0</u>
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)
<u>0</u>
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant                      ☐ Present                      ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☒ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☒ Rock piles, crevices, or hollow logs suitable for:

☐ otter                      ☐ mink                      ☐ porcupine                      ☐ bear                      ☐ bobcat                      ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present                      ☐ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians                      ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles                      ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present                      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☒ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☒ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D48-CM 29

Location

Please refer to breakdown of impacts below.

11/30/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint)		118 sf (0.003 acre)		0.003 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF


Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

  
Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe  
Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D48-CM 29

Impact Area (number/name)

1/29/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 33 degrees F

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/30/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*M. Lamothe*

Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Scrub Shrub/Emergent

Subclass: Broad-leaved  
Deciduous/Emergent

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      80      5      15      20  
                 Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Lyonia ligustrina (30%)*	Shrub	Salix sp. (<5%)
Shrub	Clethra alnifolia (15%)	Herb	Solidago sp. (20%)*
Shrub	Vaccinium corymbosum (30%)	Herb	Phragmites australis (5%)
Shrub	Pinus strobus (15%)	Herb	Carex sp. (5%)
Shrub	Spiraea tomentosa (5%)	Woody Vine	Smilax rotundifolia (5%)*
Shrub	Spiraea alba (5%)	Moss	Sphagnum sp. (15%)*

#### C. Inventory (Soils)

Whitman fine sandy loam, 0-3 percent slopes,  
extremelu stony  
Soils frozen  
Texture (upper part)  
0" in some areas  
Depth to Water Table

Very poorly drained  
Drainage Class  
soils frozen  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☒ Present      ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present      ☐ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

<u>0</u>
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)
<u>0</u>
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)
<u>0</u>
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant                      ☒ Present                      ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

- ☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)
- ☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)
- ☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)
- ☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)
- ☐ Rock piles, crevices, or hollow logs suitable for:
- |                                |                               |                                    |                               |                                 |   |
|--------------------------------|-------------------------------|------------------------------------|-------------------------------|---------------------------------|---|
| <input type="checkbox"/> otter | <input type="checkbox"/> mink | <input type="checkbox"/> porcupine | <input type="checkbox"/> bear | <input type="checkbox"/> bobcat | <input type="checkbox"/> turkey vulture |
|--------------------------------|-------------------------------|------------------------------------|-------------------------------|---------------------------------|---|
- ☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present                      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

- |  |  |
|--|--|
| <input type="checkbox"/> Breeding amphibians | <input checked="" type="checkbox"/> Non-breeding amphibians (foraging, re-hydration) |
| <input type="checkbox"/> Turtles             | <input type="checkbox"/> Foraging waterfowl  |

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☒ Present                      ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least 1.0 acre in size? ☐ Yes ☒ No

(marsh and waterbirds) 2.0 acres in size? ☐ Yes ☒ No

5.0 acres in size? ☐ Yes ☒ No

10.0 acres in size? ☐ Yes ☒ No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☒ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D48

Location

Please refer to breakdown of impacts below.

11/30/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint)		11 sf		11 sf
2. Temporary (work pad)		4,346 sf (0.10 acre)		0.10 acre
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D48, "D48-CM-28"

Impact Area (number/name)

1/29/2019

Date(s) of Site Visit(s) and Data Collection

Partly sunny

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/30/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*M. Lamothe*

Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	Palustrine	Subsystem:	-
Class:	Scrub Shrub	Subclass:	Broad-leaved Deciduous

Hydrology/Water Regime

- |  |   |
|--|---|
| <input type="checkbox"/> Permanently flooded           | <input type="checkbox"/> Saturated              |
| <input type="checkbox"/> Intermittently exposed        | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded      | <input type="checkbox"/> Intermittently flooded |
| <input checked="" type="checkbox"/> Seasonally flooded | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 90 <5 5 10  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Clethra alnifolia (20%)	Shrub	Salix discolor (<5%)
Shrub	Vaccinium corymbosum (25%)*	Herb	Osmundastrum cinnamomeum (10%)*
Shrub	Lyonia ligustrina (35%)*	Herb	Solidago sp. (15%)*
Shrub	Ilex glabra (20%)	Herb	Rubus hispidus (5%)
Shrub	Rhododendron viscosum (5%)	Woody Vine	Smilax rotundifolia (<5%)
Shrub	Acer rubrum (<5%)		

#### C. Inventory (Soils)

Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony

Organic sapric (0"-2"), Mucky SiL w/gravel (2"-4"), LSa (4"-12")

0"

Depth to Water Table

Very poorly drained

Drainage Class

12"

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D48-CM27

Location

Please refer to breakdown of impacts below.

11/30/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pad)		3,262 sf (0.07 acre)		0.07 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D48, "D48-CM-27"

Impact Area (number/name)

1/29/2019

Date(s) of Site Visit(s) and Data Collection

Partly sunny, 32 degrees F

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/30/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

  
Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	Palustrine	Subsystem:	-
Class:	Scrub Shrub/Emergent	Subclass:	Broad-leaved Deciduous/Persistent

Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 Trees (> 20') 65 Shrubs (< 20') <5 Woody vines <5 Mosses 35 Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Spiraea tomentosa (15%)*	Herb	Solidago sp. (10%)
Shrub	Salix discolor (35%)*	Herb	Dichanthelium clandestinum (<5%)
Shrub	Swida sp. (15%)*	Shrub	Lyonia ligustrina (<5%)
Herb	Juncus effusus (20%)*	Woody Vine	Smilax rotundifolia (<5%)
Herb	Scirpus cyperinus (10%)		
Herb	Carex sp. (15%)*		

#### C. Inventory (Soils)

Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony

SaL w/gravels (0"-6")

Texture (upper part)

0"

Depth to Water Table

Very poorly drained

Drainage Class

6"

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

<u>0</u>
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)
<u>0</u>
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)
<u>0</u>
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant                      ☐ Present                      ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

- ☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)
- ☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)
- ☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)
- ☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)
- ☐ Rock piles, crevices, or hollow logs suitable for:
- |                                |                               |                                    |                               |                                 |   |
|--------------------------------|-------------------------------|------------------------------------|-------------------------------|---------------------------------|---|
| <input type="checkbox"/> otter | <input type="checkbox"/> mink | <input type="checkbox"/> porcupine | <input type="checkbox"/> bear | <input type="checkbox"/> bobcat | <input type="checkbox"/> turkey vulture |
|--------------------------------|-------------------------------|------------------------------------|-------------------------------|---------------------------------|---|
- ☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present                      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Breeding amphibians | <input checked="" type="checkbox"/> Non-breeding amphibians (foraging, re-hydration) |
| <input type="checkbox"/> Turtles                        | <input type="checkbox"/> Foraging waterfowl  |

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present                      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least 1.0 acre in size? ☐ Yes ☒ No

(marsh and waterbirds) 2.0 acres in size? ☐ Yes ☒ No

5.0 acres in size? ☐ Yes ☒ No

10.0 acres in size? ☐ Yes ☒ No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Acushnet, MA. Bordering Vegetated Wetland D48-PP2

Location

Please refer to breakdown of temporary impacts below.

11/30/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (pull pad)		14,800 sf (0.34 acre)		0.34 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Acushnet, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D48-PP2

Impact Area (number/name)

1/29/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 33 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/30/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*M. Lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine Subsystem: -  
Class: Scrub-Shrub Subclass: Broad-leaved Deciduous

##### Hydrology/Water Regime

- |  |   |
|--|---|
| <input type="checkbox"/> Permanently flooded           | <input type="checkbox"/> Saturated              |
| <input type="checkbox"/> Intermittently exposed        | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded      | <input type="checkbox"/> Intermittently flooded |
| <input checked="" type="checkbox"/> Seasonally flooded | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      60      5      15      20  
                    Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Vaccinium corymbosum (55%)*	Shrub	Rosa multiflora (<5%)
Shrub	Clethra alnifolia (30%)*	Herb	Osmundastrum cinnamomeum (50%)*
Shrub	Spiraea alba (10%)	Herb	Solidago sp. (20%)
Shrub	Kalmia latifolia (5%)	Herb	Phragmites australis (20%)
Shrub	Salix sp. (5%)	Herb	Andropogon glomeratus (10%)
Shrub	Spiraea tomentosa (<5%)	Herb	Carex sp. (5%)

#### C. Inventory (Soils)

Soil Survey Unit: Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony

Oi 0"-3", MkSiL 3"-6", Fine Sand 6"-10"

0"

Depth to Water Table

Very Poorly Drained

Drainage Class

10"

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☒ Present      ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present      ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☒ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

New Bedford, MA. Bordering Vegetated Wetland D44-PP

Location

Please refer to breakdown of temporary impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (pull pad)		7,500 sf (0.17 acre)		0.17 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

New Bedford, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D44-PP

Impact Area (number/name)

2/06/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 38 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine Subsystem: -  
Class: Emergent Subclass: Persistent

##### Hydrology/Water Regime

- |  |   |
|--|---|
| <input type="checkbox"/> Permanently flooded           | <input type="checkbox"/> Saturated              |
| <input type="checkbox"/> Intermittently exposed        | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded      | <input type="checkbox"/> Intermittently flooded |
| <input checked="" type="checkbox"/> Seasonally flooded | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community) 25% cover of open water

% Cover: 0 Trees (> 20') 10 Shrubs (< 20') 0 Woody vines 0 Mosses 65 Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Spiraea tomentosa (10%)*	Herb	Juncus effusus (50%)*
Shrub	Spiraea alba (<5%)	Herb	Scirpus cyperinus (30%)*
Shrub	Vaccinium corymbosum (<5%)	Herb	

#### C. Inventory (Soils)

Soil Survey Unit: Pipestone loamy sand, 0 to 3 percent slopes

Oi/ Fine Sand 0"-3"; Fine Sand 3"-10"

Texture (upper part)

0"

Depth to Water Table

Poorly Drained

Drainage Class

10"

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☐ Present ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☒ Present ☐ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

New Bedford, MA. Bordering Vegetated Wetland D44-CM 38

Location

Please refer to breakdown of impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint)		151 sf (0.003 acre)		0.003 acre
2. Temporary (access)		4,525 sf (0.10 acre)		0.10 acre
3. Temporary (work pad)		7,837 sf (0.18 acre)		0.18 acre
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

New Bedford, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D44-CM 38

Impact Area (number/name)

2/06/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 38 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. Lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Scrub-Shrub

Subclass: Broad-leaved Deciduous

##### Hydrology/Water Regime

☐ Permanently flooded

☒ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 85 0 0 15  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Vaccinium corymbosum (50%)*	Shrub	Morella caroliniensis (<5%)
Shrub	Lyonia ligustrina (20%)*	Herb	Solidago sp (25%)*
Shrub	Salix sp. (5%)	Herb	Grass sp. (10%)*
Shrub	Spiraea tomentosa (5%)	Herb	Juncus effusus (5%)
Shrub	Frangula alnus. (<5%)	Herb	Rubus hispidus (5%)
Shrub	Quercus ilicifolia (<5%)		

#### C. Inventory (Soils)

Soil Survey Unit: Ridgebury fine sandy loam, 0 to 3 percent slopes, extremely stony

Poorly Drained

Drainage Class

Frozen soils

Depth

Texture (upper part)

Frozen soils

Depth to Water Table

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☒ Abundant ☐ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☐ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

New Bedford, MA. Bordering Vegetated Wetland D44-CM 37

Location

Please refer to breakdown of impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint)		51 sf (0.001 acre)		0.001 acre
2. Temporary (access)		459 sf (0.01 acre)		0.01 acre
3. Temporary (work pads)		9,949 sf (0.23 acre)		0.23 acre
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

New Bedford, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D44-CM 37

Impact Area (number/name)

2/06/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 38 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. Lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine Subsystem: -

Class: Emergent Subclass: Persistent

##### Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      5      0      10      90  
                 Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Spiraea tomentosa (5%)*	Herb	Juncus effusus (65%)*
Shrub	Salix sp. (<5%)	Herb	Scirpus cyperinus (35%)*

#### C. Inventory (Soils)

Soil Survey Unit: Pipestone loamy sand, 0 to 3 percent slopes

Oi/ Fine Sand 0"-3"; Fine Sand 3"-10"

Texture (upper part)

0"

Depth to Water Table

Poorly Drained

Drainage Class

10"

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☐ Present      ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

New Bedford, MA. Bordering Vegetated Wetland D44-CM 36

Location

Please refer to breakdown of impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint)		25 sf (0.001 acre)		0.001 acre
2. Temporary (access)		373 sf (0.009 acre)		0.009 acre
3. Temporary (work pads)		9,898 sf (0.23 acre)		0.23 acre
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

New Bedford, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D44-CM 36

Impact Area (number/name)

2/06/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 38 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Scrub-Shrub

Subclass: Broad-leaved Deciduous

##### Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      70      <5      10      25  
                 Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Swida amomum (35%)*	Herb	Juncus effusus (45%)*
Shrub	Viburnum dentatum. (15%)*	Herb	Solidago sp. (25%)*
Shrub	Spiraea tomentosa (10%)	Herb	Grass sp. (10%)
Shrub	Spiraea alba (5%)	Herb	Rubus hispidus (5%)
Shrub	Ilex verticillata (<5%)	Herb	Onoclea sensibilis (<5%)
		Woody Vine	Smilax rotundifolia (<5%)

#### C. Inventory (Soils)

Soil Survey Unit: Pipestone loamy sand, 0 to 3  
percent slopes

Oi/ Fine Sand 0"-3"; Fine Sand 3"-10"  
Texture (upper part)

0"

Depth to Water Table

Poorly Drained

Drainage Class

10"

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☒ Present      ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

New Bedford, MA. Bordering Vegetated Wetland D42-CM 39

Location

Please refer to breakdown of impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint)		79 sf (0.002 acre)		0.002 acre
2. Temporary (access and work pads)		22,169 sf (0.51 acre)		0.51 acre
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

New Bedford, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D42-CM 39

Impact Area (number/name)

2/06/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 38 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine Subsystem: -  
Class: Emergent Subclass: Persistent

##### Hydrology/Water Regime

- |  |   |
|--|---|
| <input type="checkbox"/> Permanently flooded           | <input type="checkbox"/> Saturated              |
| <input type="checkbox"/> Intermittently exposed        | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded      | <input type="checkbox"/> Intermittently flooded |
| <input checked="" type="checkbox"/> Seasonally flooded | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 Trees (> 20') <5% Shrubs (< 20') 0 Woody vines 0 Mosses 85 Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Vaccinium corymbosum (<5%)	Herb	Typha latifolia (65%)*
		Herb	Phragmites australis (30%)*
		Herb	Lythrum salicaria (10%)
		Herb	Grass sp. (10%)
		Herb	Scirpus cyperinus (<5%)

#### C. Inventory (Soils)

Soil Survey Unit: Swansea muck, 0 to 1 percent slopes

Oi 0"-3"; Oa 3"-5", MkSiL 5"-10"

Texture (upper part)

2" Pockets of standing water 8"-10"

Depth to Water Table

Very Poorly Drained

Drainage Class

10"

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>4</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☒ Present ☐ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (least bittern, common moorhen) ☒ Present ☐ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☒ Present ☐ Absent

Flooded > 25 cm (least bittern, common moorhen) ☒ Present ☐ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

##### A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☒ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☒ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

New Bedford, MA. Bordering Vegetated Wetland D41 and D40-CM 41

Location

Please refer to breakdown of impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint) in D41		15 sf		15 sf
2. Temporary (work pads) in D41		4,657 sf (0.11 acre)		0.11 acre
3. Temporary (work pads) in D40		1,434 sf (0.03 acre)		0.03 acre
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

New Bedford, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D41 and D40-CM 41

Impact Area (number/name)

2/06/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 38 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

###### 1. For Wetland Resource Areas, complete the following:

System:	<u>Palustrine</u>	Subsystem:	<u>-</u>
Class:	<u>Scrub-Shrub</u>	Subclass:	<u>Broad-leaved Deciduous</u>

##### Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

###### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 75% 5 0 20  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Spiraea alba (35%)*	Herb	Onoclea sensibilis (25%)*
Shrub	Spiraea tomentosa (15%)*	Herb	Rubus hispidus (20%)*
Shrub	Clethra alnifolia (10%)	Herb	Juncus effusus (5%)
Shrub	Ilex verticillata (<5%)	Herb	Thelypteris palustris (<5%)
Shrub	Acer rubrum (<5%)	Herb	Scirpus cyperinus (<5%)
Shrub	Salix sp. (<5%)	Woody Vines	Smilax rotundifolia (5%)*

#### C. Inventory (Soils)

Soil Survey Unit: Woodbridge fine sandy loam, 0 to 8 percent slopes, extremely stony

Moderately Well-Drained

Drainage Class

Frozen Soils

Frozen Soils

Depth

Standing Water

Depth to Water Table

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☐ Present ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

1 tree cavity in a red maple tree with woodpecker holes

6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0

12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0

>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☒ Present ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☒ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☒ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☒ Present ☐ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☒ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

New Bedford, MA. Bordering Vegetated Wetland D39-CM 43 and CM 44

Location

Please refer to breakdown of temporary impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pads and access)		5,725 sf (0.13 acre)		0.13 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

New Bedford, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D39-CM 43 and CM 44

Impact Area (number/name)

2/06/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 38 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	<u>Palustrine</u>	Subsystem:	<u>-</u>
Class:	<u>Scrub-Shrub</u>	Subclass:	<u>Broad-leaved Deciduous</u>

##### Hydrology/Water Regime

- |  |   |
|--|---|
| <input type="checkbox"/> Permanently flooded           | <input type="checkbox"/> Saturated              |
| <input type="checkbox"/> Intermittently exposed        | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded      | <input type="checkbox"/> Intermittently flooded |
| <input checked="" type="checkbox"/> Seasonally flooded | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      75%      0      15      10  
                 Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Spiraea alba (45%)*	Herb	Solidago sp. (20%)*
Shrub	Salix discolor (15%)	Herb	Carex sp. (10%)*
Shrub	Viburnum dentatum (15%)	Herb	Lythrum salicaria (5%)
Shrub	Spiraea tomentosa (5%)	Herb	Thelypteris palustris (<5%)
Shrub	Rubus allegheniensis (5%)		
Shrub	Clethra alnifolia. (<5%)		

#### C. Inventory (Soils)

Soil Survey Unit: Pipestone loamy sand, 0 to 3 percent slopes

Frozen Soils

Standing Water

Depth to Water Table

Poorly Drained

Drainage Class

Frozen Soils

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☒ Present      ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present      ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

New Bedford, MA. Bordering Vegetated Wetland D38A-CM45

Location

Please refer to breakdown of temporary impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pad)		839 sf (0.02 acre)		839 sf (0.02 acre)
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

New Bedford, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D38A -CM45

Impact Area (number/name)

7/22/2021

Date(s) of Site Visit(s) and Data Collection

Sunny, 82 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. Lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Scrub Shrub

Subclass: Broad-leaved Deciduous

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 Trees (> 20') 65 Shrubs (< 20') 0 Woody vines 0 Mosses 25 Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Sambucus nigra (20%)*	Herb	Solidago rugosa* (25%)
Shrub	Rubus allegheniensis (15%)*	Herb	Juncus effusus* (10%)*
Shrub	Spiraea alba (15%)*	Herb	Carex intumescens (10%)*
Shrub	Spiraea tomentosa (10%)*		
Shrub	Betula populifolia (5%)		

#### C. Inventory (Soils)

Pipestone loamy sand, 0-3% slopes	Poorly Drained
Soil Survey Unit	Drainage Class
SiL (0"-4"), LFSa (4"-10")	10"
Texture (upper part)	Depth
No Water Table	
Depth to Water Table	

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☐ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☒ Disturbance from roads or highways ☐ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

New Bedford, MA. Bordering Vegetated Wetland D35-CM 50

Location

Please refer to breakdown of temporary impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pad)		1,230 sf (0.03 acre)		0.03 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

New Bedford, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D35-CM 50

Impact Area (number/name)

2/06/2019

Date(s) of Site Visit(s) and Data Collection

Partly cloudy, 38 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. Lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Emergent

Subclass: Persistent

##### Hydrology/Water Regime

☐ Permanently flooded

☒ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 10% 0 5 90  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Spiraea tomentosa (10%)*	Herb	Carex sp. (30%)*
Shrub	Lyonia ligustrina (<5%)	Herb	Phragmites australis (10%)
Shrub	Vaccinium corymbosum (<5%)	Herb	Juncus effusus (10%)
Shrub	Rubus allegheniensis (<5%)	Herb	Andropogon glomeratus (5%)
Shrub	Kalmia latifolia (<5%)	Herb	Dichanthelium clandestinum (<5%)
Herb	Grass sp. (40%)*	Herb	Rubus hispidus (<5%)

#### C. Inventory (Soils)

Soil Survey Unit: Pipestone loamy sand, 0 to 3 percent slopes

Frozen Soils

Standing Water

Depth to Water Table

Poorly Drained

Drainage Class

Frozen Soils

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |   |  |
|---|---------------------|---|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☒ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Dartmouth, MA. Bordering Vegetated Wetland D34-CM 54

Location

Please refer to breakdown of temporary impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pad)		2,015 sf (0.05 acre)		0.05 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Dartmouth, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D34-CM 54

Impact Area (number/name)

2/25/2019

Date(s) of Site Visit(s) and Data Collection

Partly sunny, very windy, 37 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Scrub-Shrub/Emergent

Subclass: Broad-leaved  
Deciduous/Persistent

Hydrology/Water Regime

☐ Permanently flooded

☒ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 Trees (> 20') 50 Shrubs (< 20') 15 Woody vines 0 Mosses 35 Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Lyonia ligustrina (20%)*	Herb	Andropogon glomeratus. (20%)*
Shrub	Clethra alnifolia (20%)*	Herb	Grass sp. (5%)
Shrub	Rubus allegheniensis (10%)	Herb	Solidago sp. (5%)
Shrub	Vaccinium corymbosum (5%)	Herb	Rubus hispidus (5%)
Shrub	Pinus strobus (<5%)	Herb	Smilax rotundifolia (<5%)
Shrub	Quercus ilicifolia (<5%)	Woody Vine	Smilax rotundifolia (15%)*

#### C. Inventory (Soils)

Soil Survey Unit: Ridgebury fine sandy loam, 0 to 3 percent slopes, extremely stony

Frozen Soils

Not Applicable

Depth to Water Table

Poorly Drained

Drainage Class

Frozen Soils

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☒ Present ☐ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |   |  |
|---|---------------------|---|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☒ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Dartmouth, MA. Bordering Vegetated Wetland D32-CM 55

Location

Please refer to breakdown of impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint)		40 sf		40 sf
2. Temporary (work pad)		7,723 sf (0.18 acre)		0.18 acre
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Dartmouth, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D32-CM 55

Impact Area (number/name)

2/25/2019

Date(s) of Site Visit(s) and Data Collection

Partly sunny, very windy, 37 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Scrub-Shrub

Subclass: Broad-leaved Deciduous

##### Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      60      5      10      25  
Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Lyonia ligustrina (25%)*	Herb	Carex sp. (15%)*
Shrub	Clethra alnifolia (15%)*	Herb	Andropogon glomeratus. (10%)*
Shrub	Spiraea tomentosa (10%)	Herb	Solidago sp. (5%)
Shrub	Vaccinium corymbosum (5%)	Herb	Osmundastrum cinnamomeum (5%)
Shrub	Pinus strobus (<5%)	Herb	Juncus effusus (<5%)
Shrub	Quercus ilicifolia (<5%)	Woody Vine	Smilax rotundifolia (5%)*

#### C. Inventory (Soils)

Soil Survey Unit: Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony

Very Poorly Drained

Drainage Class

Frozen Soils

Frozen Soils

0"

Depth

Depth to Water Table

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☒ Present      ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present      ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☒ Present ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☒ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☒ Present ☐ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☒ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Dartmouth, MA. Bordering Vegetated Wetland D30-CM 57

Location

Please refer to breakdown of temporary impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pad)		2,445 sf (0.06 acre)		0.06 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Dartmouth, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D30-CM 57

Impact Area (number/name)

2/06/2019

Date(s) of Site Visit(s) and Data Collection

Partly sunny, very windy, 37 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	Palustrine	Subsystem:	-
Class:	Emergent	Subclass:	Persistent

##### Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      5      0      0      95  
                 Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Rubus allegheniensis (<5%)	Herb	Dichanthelium clandestinum (55%)*
Shrub	Clethra alnifolia (<5%)	Herb	Andropogon glomeratus. (30%)*
Shrub	Spiraea tomentosa (<5%)	Herb	Solidago sp. (15%)
Shrub	Lyonia ligustrina (<5%)	Herb	Grass sp. (10%)
Shrub	Pinus strobus (<5%)		

#### C. Inventory (Soils)

Soil Survey Unit: Whitman fine sandy loam, 0 to 8 percent slopes, extremely stony

Moderately Well- Drained

Drainage Class

Frozen Soils

Frozen Soils

Depth

Not Observed

Depth to Water Table

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☒ Present      ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☒ Present ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☐ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Dartmouth, MA. Bordering Vegetated Wetland D27-CM 62

Location

Please refer to breakdown of temporary impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pads and access)		10,178 sf (0.23 acre)		0.23 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Dartmouth, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D27-CM 62

Impact Area (number/name)

3/20/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 47 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	<u>Palustrine</u>	Subsystem:	<u>-</u>
Class:	<u>Scrub-Shrub</u>	Subclass:	<u>Broad-leaved Deciduous</u>

##### Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 Trees (> 20') 80 Shrubs (< 20') 0 Woody vines 0 Mosses 20 Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Clethra alnifolia (65%)*	Herb	Andropogon glomeratus (15%)*
Shrub	Rubus allegheniensis (10%)	Herb	Rubus hispidus (10%)*
Shrub	Spiraea tomentosa (5%)	Herb	Solidago sp. (5%)
Shrub		Herb	Carex sp. (<5%)
Shrub		Herb	
Shrub		Herb	

#### C. Inventory (Soils)

Soil Survey Unit: Ridgebury fine sandy loam, 0 to 3 percent slopes, extremely stony

Not recorded

Texture (upper part)

0"

Depth to Water Table

Poorly Drained

Drainage Class

Not recorded

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☒ Present ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Dartmouth, MA. Bordering Vegetated Wetland D26

Location

Please refer to breakdown of temporary impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pads and access)		6737 sf (0.15 acre)		0.15 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Dartmouth, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D26

Impact Area (number/name)

3/20/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 47 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Scrub-Shrub

Subclass: Broad-leaved Deciduous

##### Hydrology/Water Regime

☐ Permanently flooded

☒ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 Trees (> 20') 65 Shrubs (< 20') 5 Woody vines 5 Mosses 25 Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Spiraea tomentosa (20%)*	Herb	Osmundastrum cinnamomeum (30%)*
Shrub	Spiraea alba (15%)*	Herb	Solidago sp. (15%)*
Shrub	Clethra alnifolia (15%)*	Herb	Andropogon glomeratus (10%)
Shrub	Acer rubrum (5%)	Herb	Carex sp. (5%)
Shrub	Salix sp. (5%)	Herb	Rubus hispidus (5%)
Shrub	Vaccinium corymbosum (5%)	Herb	Juncus sp. (<5%)

#### C. Inventory (Soils)

Soil Survey Unit: Woodbridge fine sandy loam, 0 to 8 percent slopes, extremely stony  
Oe 0"-1" . MkSiL 1"-2", Mk SiL with pockets of  
Oa 2"-6", Sand 6"-13"  
4"  
Depth to Water Table

Woody Vines Smilax rotundifolia (5%)\*  
Moderately Well- Drained  
Drainage Class  
13"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant      ☒ Present      ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☒ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter      ☐ mink      ☐ porcupine      ☐ bear      ☐ bobcat      ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☒ Breeding amphibians      ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles      ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present      ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Dartmouth, MA. Bordering Vegetated Wetland D25A

Location

Please refer to breakdown of temporary impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pad and access)		3867 sf (0.09 acre)		0.09 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Dartmouth, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D25A

Impact Area (number/name)

7/23/2021

Date(s) of Site Visit(s) and Data Collection

Sunny, 77 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*M. Lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Emergent

Subclass: Persistent

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 Trees (> 20') 10 Shrubs (< 20') 0 Woody vines 0 Mosses 90 Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Elaeagnus umbellata (5%)*	Herb	Juncus tenuis (5%)
Shrub	Salix discolor (5%)*	Herb	Scirpus cyperinus (< 5%)
Shrub	Rosa multiflora (<5%)	Herb	Eutrochium maculatum (<5%)
Shrub	Acer rubrum (<5%)	Herb	Holcus lanatus
Herb	Lythrum salicaria (30%)*		
Herb	Solidago euthamnia (5%)		

#### C. Inventory (Soils)

Woodbridge fine sandy loam, 0-8% slopes, very stony

SiL (0"-3"), SaL (3"-8")

Texture (upper part)

No Water Table

Depth to Water Table

Moderately Well-Drained

Drainage Class

8"

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☐ Present ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☐ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☒ Disturbance from roads or highways ☐ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Dartmouth, MA. Bordering Vegetated Wetland D25-CM 70 and Riverfront Area

Location

Please refer to breakdown of impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint)		51 sf		51 sf
2. Temporary (work pad)		9,5769 sf (0.22 acre)		0.22 acre
3. Temporary (access)		4,302 sf (0.10 acre)		0.10 acre
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Dartmouth, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D25-CM 70 and Riverfront Area

Impact Area (number/name)

3/20/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 47 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	<u>Palustrine</u>	Subsystem:	<u>-</u>
Class:	<u>Emergent/Scrub-Shrub</u>	Subclass:	<u>Persistent/Broad-leaved Deciduous</u>

##### Hydrology/Water Regime

- |  |   |
|--|---|
| <input type="checkbox"/> Permanently flooded           | <input type="checkbox"/> Saturated              |
| <input type="checkbox"/> Intermittently exposed        | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded      | <input type="checkbox"/> Intermittently flooded |
| <input checked="" type="checkbox"/> Seasonally flooded | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community) 5% open water

% Cover: 0 65 0 5 25  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Clethra alnifolia (35%)*	Herb	Juncus effusus (5%)
Shrub	Rubus allegheniensis (<5%)*	Herb	Onoclea sensibilis (5%)
Shrub		Herb	Scirpus cypernius (<5%)
Herb	Phragmites australis (30%)*	Herb	Persicaria sagittata (<5%)
Herb	Solidago sp. (10%)		
Herb	Carex sp. (5%)		

#### C. Inventory (Soils)

Soil Survey Unit: Freetown muck, 0 to 1 percent slopes, extremely stony  
Oa 0"-16"  
Texture (upper part)  
0" ~2" standing water  
Depth to Water Table

Very Poorly Drained  
Drainage Class  
16"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☒ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☒ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☒ Turtles ☒ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Dartmouth, MA. Bordering Vegetated Wetland D25-CM 69

Location

Please refer to breakdown of impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pads)		4,837 sf (0.11 acre)		0.11 acre
2. Temporary (access)		2,288 sf (0.05 acre)		0.05 acre
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Dartmouth, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D25

Impact Area (number/name)

3/27/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 41 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Emergent

Subclass: Persistent

Hydrology/Water Regime

☐ Permanently flooded

☒ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      10      0      0      90  
                 Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Rubus allegheniensis (10%)*	Herb	Scirpus cyperinus (40%)*
Shrub	Spiraea alba (<5%)	Herb	Solidago spp. (40%)*
Shrub	Lyonia ligustrina (<5%)	Herb	Dryopteris intermedia (15%)
Shrub	Pinus strobus (<5%)	Herb	Osmundastrum cinnamomeum (5%)
Shrub	Clethra alnifolia (<5%)	Herb	Typha latifolia (<5%)
Shrub	Spiraea tomentosa (<5%)		

#### C. Inventory (Soils)

Soil Survey Unit: Freetown muck, 0 to 1 percent  
slopes  
Oi (0"-4"), Oa (4"-15")  
Texture (upper part)  
4"  
Depth to Water Table

Very Poorly Drained  
Drainage Class  
15"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☒ Present      ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant      ☒ Present      ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☒ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter      ☐ mink      ☐ porcupine      ☐ bear      ☐ bobcat      ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians      ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles      ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present      ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Dartmouth, MA. Bordering Vegetated Wetland D25-CM 68

Location

Please refer to breakdown of impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint)		48 sf		48 sf
2. Temporary (work pad)		3757 sf (0.09 acre)		0.09 acre
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Dartmouth, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D25

Impact Area (number/name)

3/27/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 41 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. Lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	Palustrine	Subsystem:	-
Class:	Scrub-Shrub/Emergent	Subclass:	Broad-leaved Deciduous/Persistent

Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 Trees (> 20') 30 Shrubs (< 20') 0 Woody vines 0 Mosses 65 Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Clethra alnifolia (20%)*	Herb	Scirpus cyperinus (20%)*
Shrub	Spiraea tomentosa (10%)*	Herb	Solidago spp. (35%)*
Shrub	Spiraea alba (5%)	Herb	Carex sp. (10%)
Shrub	Pinus strobus (<5%)	Herb	Osmundastrum cinnamomeum (5%)
Shrub	Salix spp. (<5%)		
Shrub	Spiraea tomentosa (<5%)		

#### C. Inventory (Soils)

Soil Survey Unit: Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony  
Oi (0"-3"), Oa (3"-10"), mkSiL (10"-11")  
Texture (upper part)  
11"  
Depth to Water Table

Very Poorly Drained  
Drainage Class  
11" Frozen  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☐ Present ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☒ Present ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☒ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Dartmouth, MA. Upland Riverfront Area (RFA) of Perennial Streams SD23 and SD23A-CM 73

Location

Please refer to breakdown of temporary impacts below.

12/08/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pad)		7,962 sf (0.18 acre)		0.18 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1)(b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Dartmouth, MA

Project Location (from NOI page 1)

Upland RFA-CM 73

Impact Area (number/name)

3/27/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 41 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/08/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: \_\_\_\_\_

Subsystem: \_\_\_\_\_

Class: \_\_\_\_\_

Subclass: \_\_\_\_\_

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Cultural Grassland

Community Name

Grassland dominated by non-native grasses

Vegetation Description

Non-native grasses requiring sowing and maintenance

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      0      0      0      95  
                 Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Herb	Grass spp. (95%)*		

#### C. Inventory (Soils)

Soil Survey Unit: Hinckley loamy sand, 3 to 8 percent slopes, extremely stony

SaL(0"-5"), LSa (5"-11")

Texture (upper part)

No water table observed

Depth to Water Table

Excessively drained

Drainage Class

11"

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☐ Present      ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☒ Present ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☐ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Dartmouth, MA. Bordering Vegetated Wetland D22-CM 74

Location

Please refer to breakdown of temporary impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pad)		665 sf (0.02 acre)		0.02 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Dartmouth, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D22

Impact Area (number/name)

3/27/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 41 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	<u>Palustrine</u>	Subsystem:	<u>-</u>
Class:	<u>Scrub-Shrub/Emergent</u>	Subclass:	<u>Broad-leaved Deciduous/Persistent</u>

Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:      0      50      0      0      50  
Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Clethra alnifolia (50%)*	Herb	Andropogon glomeratus (30%)*
Shrub	Spiraea tomentosa (<5%)	Herb	Carex sp. (10%)*
Shrub	Spiraea alba (<5%)	Herb	Rubus hispidus (5%)
Shrub	Rubus allegheniensis (<5%)	Herb	Juncus effusus (5%)
Shrub	Salix spp. (<5%)	Herb	Solidago sp. (<5%)
Shrub	Vaccinium corymbosum (<5%)	Herb	Osmundastrum cinnamomeum (<5%)

#### C. Inventory (Soils)

Soil Survey Unit: Ridgebury fine sandy loam, 0 to 3 percent slopes, extremely stony

Oi (0"-3"), mkSiL (3"-11")

Texture (upper part)

11"

Depth to Water Table

Poorly Drained

Drainage Class

11"

Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☐ Present      ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☒ Present ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Dartmouth, MA. Bordering Vegetated Wetland D21-AR

Location

Please refer to breakdown of temporary impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (access)		5,769 sf (0.13 acre)		0.13 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Dartmouth, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D21

Impact Area (number/name)

3/27/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 41 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Emergent

Subclass: Persistent

##### Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☒ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community) Open water is 15%

% Cover:      0      15      0      0      70  
                 Trees (> 20')      Shrubs (< 20')      Woody vines      Mosses      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Spiraea alba (10%)*	Herb	Carex sp. (70%)*
Shrub	Spiraea tomentosa (5%)	Herb	Solidago spp. (<5%)
Shrub	Acer rubrum (<5%)	Woody Vine	Smilax rotundifolia (<5%)
Shrub	Eubotrys racemosa (<5%)		
Shrub			
Shrub			

#### C. Inventory (Soils)

Soil Survey Unit: Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony  
Oi (0"-2"), Oa (3"-10"), GrSaL (2"-10")  
Texture (upper part)  
0"  
Depth to Water Table

Very Poorly Drained  
Drainage Class  
10"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant      ☐ Present      ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant      ☐ Present      ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present      ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>2</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☐ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☒ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☒ Present ☐ Absent

Standing water present at least part of the growing season, suitable for use by

☒ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☒ Turtles ☒ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☒ Present ☐ Absent

Flooded > 25 cm (least bittern, common moorhen) ☒ Present ☐ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☒ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Dartmouth, MA. Bordering Vegetated Wetland D20-PP

Location

Please refer to breakdown of temporary impacts below.

12/01/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Temporary (work pad and access)		5,725 sf (0.13 acre)		0.13 acre
2.				
3.				
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for the Project which also includes a photographic log.

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Dartmouth, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D20

Impact Area (number/name)

3/27/2019

Date(s) of Site Visit(s) and Data Collection

Sunny, 41 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

12/01/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. Lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System:	Palustrine	Subsystem:	-
Class:	Emergent/Scrub-Shrub	Subclass:	Persistent/Broad-leaved Deciduous

Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 Trees (> 20') 35 Shrubs (< 20') 0 Woody vines 0 Mosses 65 Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Clethra alnifolia (25%)*	Herb	Andropogon glomeratus (60%)*
Shrub	Rubus allegheniensis (10%)*	Herb	Carex sp. (10%)
Shrub	Spiraea tomentosa (5%)	Herb	Osmundastrum cinnamomeum (10%)
Shrub	Lyonia ligustrina (<5%)	Herb	Scirpus cyperinus (<5%)
Shrub	Vaccinium corymbosum (<5%)	Herb	
Shrub		Herb	

#### C. Inventory (Soils)

Soil Survey Unit: Woodbridge fine sandy loam, 0 to 8 percent slopes, extremely stony  
Oi (0"-2"), Oa (2"-5"), mkSiL (5"-8"), Gr Sand (8"-13")  
4"  
Depth to Water Table

Moderately Well- Drained  
Drainage Class  
13"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☒ Present ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☒ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☐ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☒ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance



## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

## **ATTACHMENT B   HABITAT CHARACTERISTICS PHOTOGRAPHS**



PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D64		
<b>Photo No.</b> 1	<b>Date:</b> 6-24-18	
<b>Direction Photo Taken:</b>  West		
<b>Description:</b>  View of dense herbaceous cover and food such as blueberry and maleberry for wildlife.		
PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D62 and Intermittent Stream SD-62		
<b>Photo No.</b> 2	<b>Date:</b> 01-25-19	
<b>Direction Photo Taken:</b>  Southwest		
<b>Description:</b>  Rocks, crevices, and overhanging branches surrounding and beneath the water providing characteristics for turtles, snakes, and frogs.		





PHOTOGRAPHIC LOG		
<b>Site Location:</b> Intermittent Stream SD-59		
<b>Photo No.</b> 3	<b>Date:</b> 08-18-21	
<b>Direction Photo Taken:</b>  Northwest		
<b>Description:</b>  View of intermittent stream SD-59 which is suitable for the rehydration of amphibians, reptiles, and small mammals.		

PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D58		
<b>Photo No.</b> 4	<b>Date:</b> 06-27-18	
<b>Direction Photo Taken:</b>  South		
<b>Description:</b>  Common reed dominates portions of BVW D58. Common reed provides potential habitat for red-winged blackbirds and marsh wrens.		





<div>PHOTOGRAPHIC LOG</div>		
<div>Site Location: BVW D56</div>		
<div>Photo No. 5</div>	<div>Date: 08-17-21</div>	
<div>Direction Photo Taken:</div> <div>Northwest</div>		
<div>Description:</div> <div>View of BVW D56 which provides dense herbaceous cover for wildlife.</div>		
<div>PHOTOGRAPHIC LOG</div>		
<div>Site Location: BVW D55</div>		
<div>Photo No. 6</div>	<div>Date: 06-27-18</div>	
<div>Direction Photo Taken:</div> <div>Southwest</div>		
<div>Description:</div> <div>A view of the dense herbaceous cover including common reed and sensitive fern.</div>		





PHOTOGRAPHIC LOG		
Site Location: BVW D54 and BLSF, Acushnet River		
Photo No. 7	Date: 1-29-19	
Direction Photo Taken:  Southeast		
Description:  View of a rock pile providing potential cover for small mammals.		
PHOTOGRAPHIC LOG		
Site Location: BVW D53		
Photo No. 8	Date: 1-29-19	
Direction Photo Taken:  Southeast		
Description:  View of BVW D53 with dense herbaceous cover including common reed.		




PHOTOGRAPHIC LOG		
<b>Site Location:</b> Amphibian Breeding Area in BVW D53		
<b>Photo No.</b> 9	<b>Date:</b> 4-20-18	
<b>Direction Photo Taken:</b>  Northwest		
<b>Description:</b>  View of an amphibian breeding area where wood frog egg masses and tadpoles were observed.		
PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D51		
<b>Photo No.</b> 10	<b>Date:</b> 01-29-19	
<b>Direction Photo Taken:</b>  Down		
<b>Description:</b>  View of BVW D51 including purple loosestrife and common reed which provide potential habitat for red-winged blackbirds and marsh wrens.		



PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D50		
<b>Photo No.</b> 11	<b>Date:</b> 06-26-18	
<b>Direction Photo Taken:</b>  Northeast		
<b>Description:</b>  Vegetation within BVW D50 includes winterberry, silky dogwood, and common blackberry. All provide nutrients for wildlife.		
PHOTOGRAPHIC LOG		
<b>Site Location:</b> Vernal Pool in BVW 50		
<b>Photo No.</b> 12	<b>Date:</b> 05-06-21	
<b>Direction Photo Taken:</b>  Northwest		
<b>Description:</b>  View of a vernal pool where spotted salamander egg masses and a spotted turtle were observed.		





PHOTOGRAPHIC LOG		
Site Location: BVW 48		
Photo No. 13	Date: 1-29-18	
Direction Photo Taken:  Down		
Description:  View of a small mammal burrow under rock most likely belonging to an Eastern chipmunk.		

PHOTOGRAPHIC LOG		
Site Location: BVW D44		
Photo No. 14	Date: 06-11-18	
Direction Photo Taken:  West		
Description:  BVW D44 consists of abundant wildlife food such as highbush blueberry, maleberry, silky dogwood, arrowwood, and winterberry.		



PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D42		
<b>Photo No.</b> 15	<b>Date:</b> 06-07-18	
<b>Direction Photo Taken:</b>  East		
<b>Description:</b>  BVW D42 has dense herbaceous cover as well as depressions that may serve as seasonal pools.		
PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D42		
<b>Photo No.</b> 16	<b>Date:</b> 02-06-19	
<b>Direction Photo Taken:</b>  North		
<b>Description:</b>  Along the edge of the ROW are four standing dead trees with a dbh range of approximately 6-12".		





PHOTOGRAPHIC LOG		
Site Location: BVW D40 and D41		
Photo No. 17	Date: 02-06-19	
Direction Photo Taken:  Down		
Description:  View of a small mammal burrow located under a rock.		
PHOTOGRAPHIC LOG		
Site Location: BVW D40 and D41		
Photo No. 18	Date: 02-06-19	
Direction Photo Taken:  South		
Description:  Standing dead tree "snag" with less than 6" dbh was located on the edge of ROW. Woodpecker holes were observed throughout the snag.		





PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D39 & Amphibian Breeding Area in BVW D39		
<b>Photo No.</b> 19	<b>Date:</b> 06-07-18	
<b>Direction Photo Taken:</b>  Northwest		
<b>Description:</b>  Wildlife food is present within BVW D39 including highbush blueberry, maleberry, willows, arrowwood, and common blackberry.		
PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW 38A		
<b>Photo No.</b> 20	<b>Date:</b> 7/22/21	
<b>Direction Photo Taken:</b>  East		
<b>Description:</b>  View of dense herbaceous cover within BVW D38A. This provides cover for small mammals.		





PHOTOGRAPHIC LOG		
Site Location: BVW D35		
Photo No. 21	Date: 06-05-18	
Direction Photo Taken:  Southwest		
Description:  View of BVW D35 with dense herbaceous cover comprised of sedges, grasses, and soft rush.		
PHOTOGRAPHIC LOG		
Site Location: BVW D34		
Photo No. 22	Date: 2-25-19	
Direction Photo Taken:  Southwest		
Description:  View of ice-free open water in the winter within BVW D34.		





PHOTOGRAPHIC LOG		
Site Location: BVW D32		
Photo No. 23	Date: 02-25-19	
Direction Photo Taken:  Down		
Description:  View of small mammal burrows throughout an old tree stump.		
PHOTOGRAPHIC LOG		
Site Location: BVW D30		
Photo No. 24	Date: 02-06-19	
Direction Photo Taken:  Down		
Description:  View of small mammal burrow located underneath a rock pile.		





PHOTOGRAPHIC LOG		
<b>Site Location:</b> Amphibian Breeding Area near BVW D28		
<b>Photo No.</b> 25	<b>Date:</b> 05-04-21	
<b>Direction Photo Taken:</b>  East		
<b>Description:</b>  View of an amphibian breeding area in the access road near BVW D28 where wood frog egg masses were observed.		

PHOTOGRAPHIC LOG		
<b>Site Location:</b> Amphibian Breeding Area in BVW D27		
<b>Photo No.</b> 26	<b>Date:</b> 4-12-18	
<b>Direction Photo Taken:</b>  East		
<b>Description:</b>  View of amphibian breeding area where wood frog and spotted salamander egg masses were observed.		




PHOTOGRAPHIC LOG		
Site Location: BVW D27		
Photo No. 27	Date: 03-20-19	
Direction Photo Taken:  Down		
Description:  View of a tree stump with small mammal burrows.		
PHOTOGRAPHIC LOG		
Site Location: BVW 26		
Photo No. 28	Date: 3-20-19	
Direction Photo Taken:  Southeast		
Description:  View of large woody debris on the ground providing cover for small mammals.		



PHOTOGRAPHIC LOG		
<b>Site Location:</b> Amphibian Breeding Area in BVW 26		
<b>Photo No.</b> 29	<b>Date:</b> 4/12/18	
<b>Direction Photo Taken:</b>  East		
<b>Description:</b>  Amphibian breeding area where wood frog egg masses were observed.		
PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D25A		
<b>Photo No.</b> 30	<b>Date:</b> 8/24/21	
<b>Direction Photo Taken:</b>  Southwest		
<b>Description:</b>  The presence of standing water in BVW D25A provides rehydration for amphibians, reptiles, and small mammals.		



PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D25		
<b>Photo No.</b> 31	<b>Date:</b> 03-20-19	
<b>Direction Photo Taken:</b>  Down		
<b>Description:</b>  View of large woody debris on the ground providing cover various small wildlife.		
PHOTOGRAPHIC LOG		
<b>Site Location:</b> Amphibian Breeding Area in BVW D25		
<b>Photo No.</b> 33	<b>Date:</b> 04-11-18	
<b>Direction Photo Taken:</b>  East		
<b>Description:</b>  Amphibian breeding area where wood frog egg masses were observed.		



**PHOTOGRAPHIC LOG****Site Location:** Upland RFA for perennial stream SD-23A**Photo No.**  
34**Date:**  
05-17-18**Direction Photo Taken:**

East

**Description:**

View of upland RFA east of perennial stream SD-23A. Shown in the photo is Line D21 Structure #95 that is surrounded by upland fields.

**PHOTOGRAPHIC LOG****Site Location:** BVW D22**Photo No.**  
35**Date:**  
03-27-19**Direction Photo Taken:**

West

**Description:**

View of dense herbaceous cover including grasses and sedges within BVW D22.





**PHOTOGRAPHIC LOG****Site Location:** BVW 21**Photo  
No.**  
36**Date:**  
03-27-19**Direction Photo  
Taken:**

West

**Description:**

View of standing water which is suitable for turtles and foraging waterfowl.

**PHOTOGRAPHIC LOG****Site Location:** BVW 20**Photo  
No.**  
37**Date:**  
03-27-19**Direction Photo  
Taken:**

Down

**Description:**

View of small mammal burrows around a tree stump within BVW D20.







June 2023

# **NEW ENGLAND POWER COMPANY D/B/A NATIONAL GRID**

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## **Acushnet to Fall River Reliability Project**

*Wildlife Habitat Evaluation*

**PROJECT NUMBER:**

146784

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## *Wildlife Habitat Evaluation*

***PREPARED FOR:*** NEW ENGLAND POWER COMPANY  
d/b/a NATIONAL GRID

***PREPARED BY:*** POWER ENGINEERS CONSULTING, PC

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ATTACHMENT A	WILDLIFE HABITAT EVALUATION DATA FORMS
ATTACHMENT B	HABITAT CHARACTERISTICS PHOTOGRAPHS

## ACRONYMS AND ABBREVIATIONS

ATV	all-terrain vehicle
Bioreserve	Southeastern Massachusetts Bioreserve
BLSF	Bordering Land Subject to Flooding
BMP(s)	Best Management Practice(s)
BVW	Bordering Vegetated Wetland
CMR	Code of Massachusetts Regulations
CVP	Certified vernal pool
dbh	diameter at breast height
Eversource	NSTAR Electric Company d/b/a Eversource Energy
IVW	Isolated Vegetated Wetlands
kV	kilovolt
LUB	Lacustrine Unconsolidated Bottom
MassDEP	Massachusetts Department of Environmental Protection
NHESP	Natural Heritage and Endangered Species Program
NEP	New England Power d/b/a National Grid
NWI	National Wetland Inventory
PEM	Palustrine Emergent
PFO	Palustrine Forested
POWER	POWER Engineers Consulting, PC
Project	Acushnet to Fall River Reliability Project
PSS	Palustrine Scrub-Shrub
PUB	Palustrine Unconsolidated Bottom
PVP	Potential vernal pool
RFA	Riverfront Area
ROW(s)	Right(s)-of-Way
USFWS	United States Fish and Wildlife Service
WPA	Massachusetts Wetlands Protection Act

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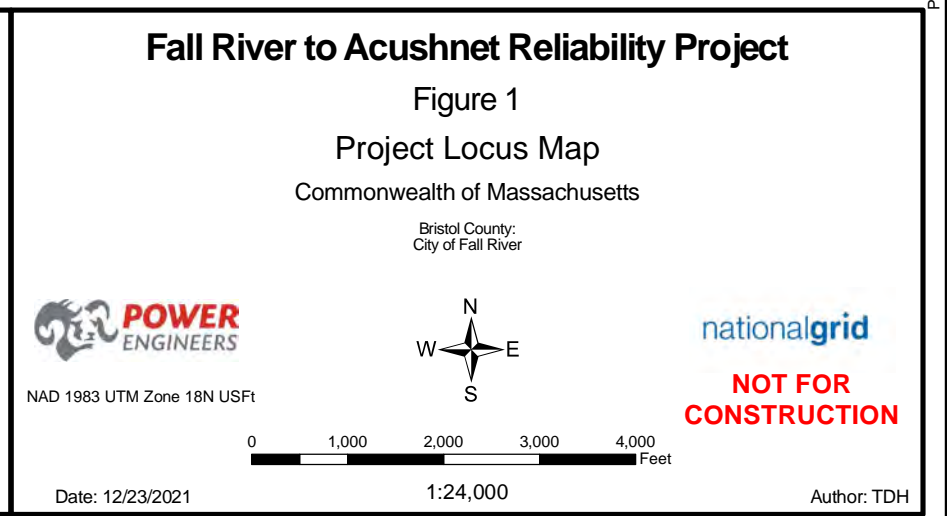
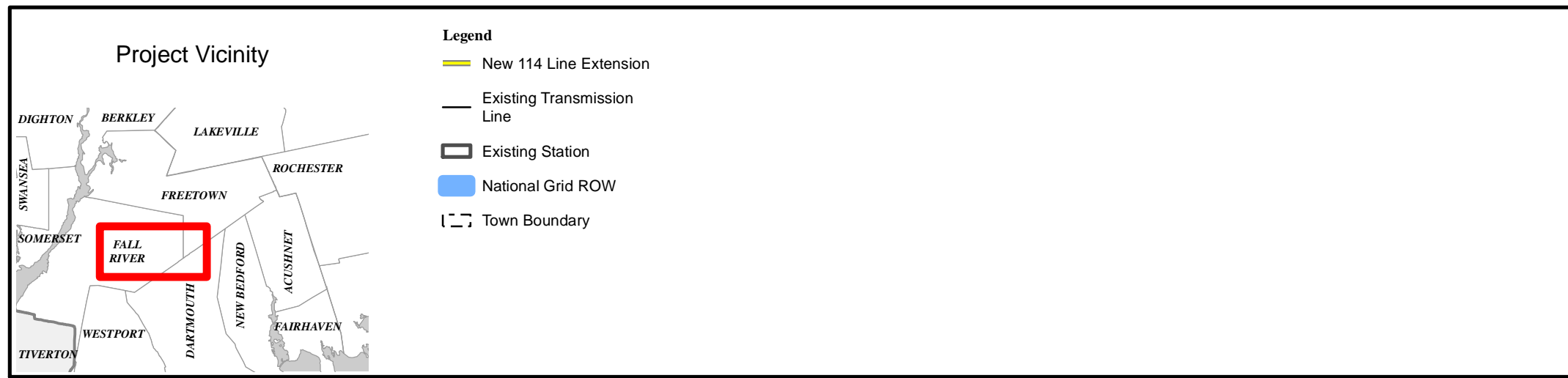
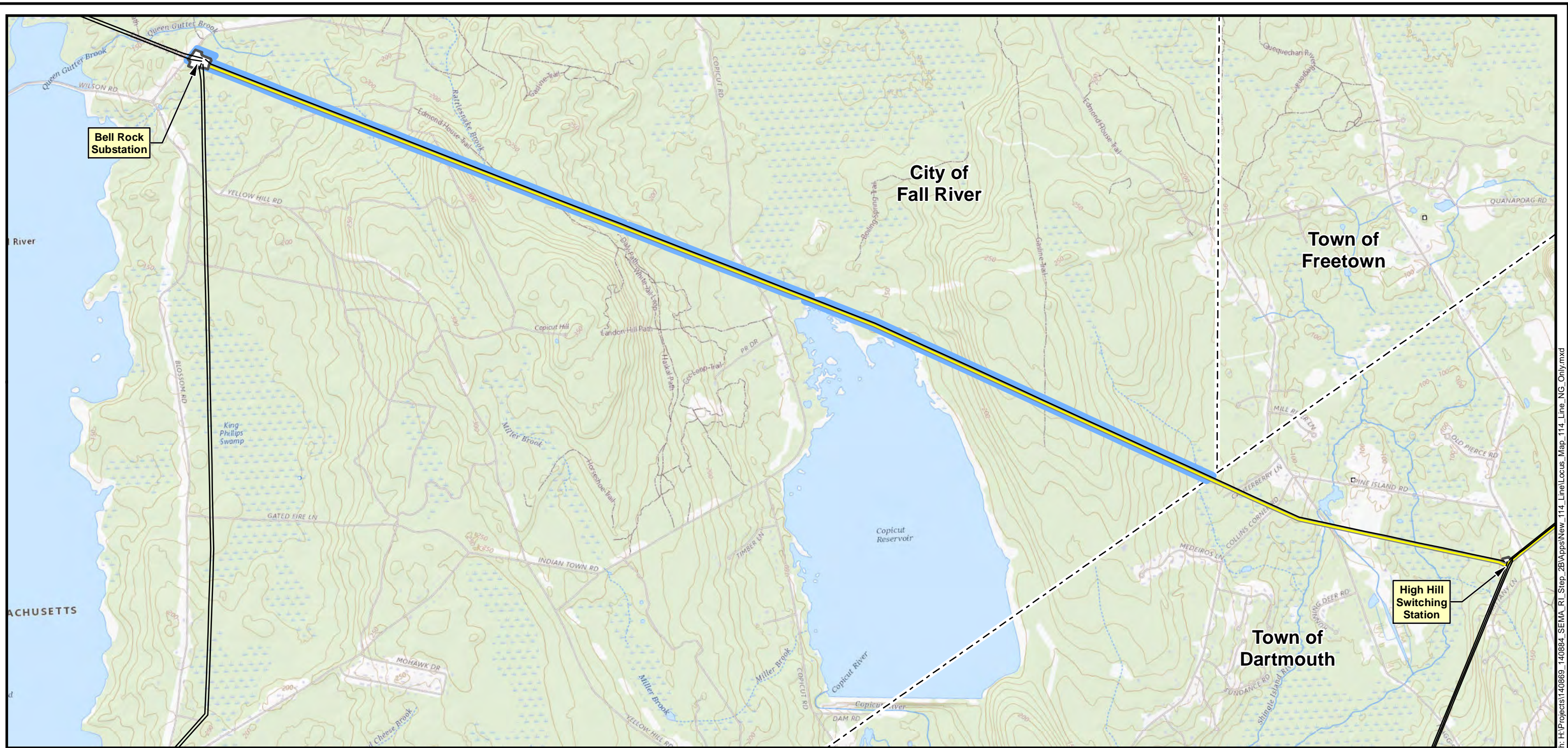


## 1.0 INTRODUCTION

NSTAR Electric Company d/b/a Eversource Energy (Eversource) and the New England Power Company d/b/a National Grid (NEP) are proposing to undertake the Acushnet to Fall River Reliability Project (Project) to improve the electric transmission reliability in the southeastern Massachusetts area. The Project consists of the installation of a new electric transmission line extending from Eversource's Industrial Park Tap in Acushnet to NEP's existing Bell Rock Substation in Fall River. The proposed Project includes the installation of approximately 12.1 miles of new primarily overhead electric transmission line traversing the municipalities of Acushnet, New Bedford, Dartmouth, and Fall River in Bristol County, Massachusetts (Figure 1). Two small sections of underground cable are proposed (a total of approximately 600 linear feet) to avoid multiple overhead line crossings at Eversource's Industrial Park Tap and High Hill Substation locations. The new line will be located entirely within existing rights-of-way (ROWs) currently occupied by existing transmission lines. Of the 12.1 miles, approximately 7.9 miles are in Eversource service territory and approximately 4.2 miles are in NEP service territory traversing the city of Fall River.

This report pertains to the proposed Project facilities for NEP's portion of the Project in Fall River. Field assessments for the NEP portion of the Project within the existing transmission line ROW (hereafter referred to as the "Survey Area") were conducted from 2015 through 2018. Additional data was collected at two sites in 2021 and at the vernal pools. Tree clearing will be required to expand the cleared ROW width in order to accommodate the new transmission line.







## 2.0 DETAILED WILDLIFE HABITAT EVALUATION

This document presents the results of a wildlife habitat evaluation conducted on the NEP portion of the ROW pursuant to the Massachusetts Department of Environmental Protection Massachusetts Wetland Protection Act ([WPA] M.G. L. c. 131 §40) and associated Regulations (310 Code of Massachusetts Regulations [CMR] 10.00) addressing Wildlife Habitat Evaluations (310 CMR 10.60) and the procedures and methods detailed in the Massachusetts Department of Environmental Protection's (MassDEP) *Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands* (Guidance; MassDEP 2006). The Project qualifies as a "limited project" (310 CMR 10.53 (3)(d)) for the construction, reconstruction, operation, and maintenance of underground and overhead public utilities such as transmission lines; under which the issuing authority (Conservation Commissions/MassDEP) is empowered with the discretion to either waive or require wildlife habitat evaluations (MassDEP 2006).

The analysis was undertaken because the Project exceeds review thresholds for wildlife habitat alteration under the Massachusetts WPA, as implemented by the Wetlands Regulations (310 CMR 10.00). Cumulatively, anticipated impacts to Bordering Vegetated Wetland (BVW), Bordering Land Subject to Flooding (BLSF), and Riverfront Area (RFA) are greater than 5,000 square feet due to temporary (construction) impacts associated with construction mats and permanent wetland conversion associated with new tree removal. Some habitat functions associated with forested wetland will be converted to scrub-shrub habitat. However, in accordance with 310 CMR 10.53 (3)(d), the Project qualifies as a limited project for the construction, reconstruction, operation and maintenance of underground and overhead public utilities, such as transmission lines.

As a limited project, completion of a wildlife habitat evaluation may be required at the discretion of the issuing authority. NEP has elected to proactively undertake an Appendix B Detailed Wildlife Habitat Evaluation (Habitat Evaluation) for areas affected by the Project. This documentation is consistent with the standards of the MassDEP Guidance.

Habitat features or characteristics were evaluated in the Survey Area based on characteristics identified on the Guidance detailed data form (Attachment A). Important wildlife habitat features found during the field analyses includes:

- Upland/wetland food plants (hard mast and fruit).
- Shrub thickets/streambeds with abundant earthworms.
- Shrub vegetation suitable for veery nesting.
- Live trees (>30 inches diameter at breast height [dbh]).
- Standing dead trees (snags).
- Potential small mammal burrows.
- Dense herbaceous cover.
- Large woody debris on ground.
- Logs under the water's surface.
- Overhanging shrub branches at, or within one meter above the water's surface.
- Rock piles and crevices suitable as potential habitat.
- Live standing vegetation overhanging water or offering good visibility of open water.

- Depressions that serve as vernal pools and/or amphibian breeding areas.
- Standing water present at least part of the growing season for use by non-breeding amphibians.
- Standing water present at least part of the growing season suitable for use by turtles and foraging waterfowl.
- Flat rocks within exposed portions of streambeds.
- Areas of ice-free open water in winter.
- Perennial and intermittent streams.

Representative photographs of habitat characteristics within each impacted resource area are presented in Attachment B. The remainder of this document includes: state agencies' rare species consultations (Section 4.0), Best Management Practices (BMPs) which will be used throughout the course of Project activities (Section 5.0), anticipated Project impacts to wildlife habitat with potential mitigation actions listed to offset Project impacts (Section 6.0), and an adverse effect analysis and conclusion (Section 7.0).

## 3.0 EXISTING HABITAT CONDITIONS

### 3.1 Important Habitat Features

Wildlife habitat features and characteristics identified by the MassDEP Guidance were field evaluated in every wetland resource area (BVW, BLSF, and RFA) to be impacted by the Project and documented on the detailed data forms (Attachment A). The following wetland resource areas are located in the NEP Survey Area: 18 BVWs, one BLSF, and one RFA. The BLSF is associated with the Copicut Reservoir and the RFA is associated with perennial stream SD-11. Project impacts include: tree clearing within the existing corridor expected to convert to shrub habitat; temporary work pads and access routes; and structure installation. In locations where multiple sites of impact would take place in a wetland resource area, a representative site was selected to document wildlife habitat characteristics. Wildlife habitat information was collected at a total of 16 locations.

Based on the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) classification system (Cowardin et al. 1979), wetlands to be impacted by the Project are predominately forested wetlands (PFO). However, four other community types were also identified in the Survey Area: Palustrine Emergent (PEM), Palustrine Scrub-Shrub (PSS), Palustrine Unconsolidated Bottom (PUB), and Lacustrine Unconsolidated Bottom (LUB).

A variety of suburban wetland wildlife species utilize these habitats including an assemblage of mammals (chiefly small other than white-tailed deer (*Odocoileus virginianus*) and Eastern coyote (*Canis latrans* var.)), songbirds, reptiles, amphibians, and invertebrates. These wetland habitats provide feeding, nesting, breeding, and cover opportunities for wildlife where the wetlands are already embedded in a large area of natural habitat. Characteristics of the forest and shrub wetlands which provide necessary resources for wildlife include: berry-producing shrubs for food sources; young, developing shrubs providing an understory for cover; localized areas of surface water in the form of depressions; or vernal pools; and standing dead trees offering the potential for cavities and perches.

Listed in the sections below is a comprehensive overview of the wildlife habitat evaluation characteristics observed during the field surveys. The listed habitat characteristics are those identified on the MassDEP detailed habitat evaluation data forms (Attachment A) that are relevant to Project wetland resource areas. A summary of these data forms (Attachment A) can be found in Table 1 at the end of Section 3.0.

**TABLE 1 EXISTING WILDLIFE HABITAT FEATURES IN FALL RIVER, MASSACHUSETTS**

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN, ETC.)
Wildlife Food: Upland/wetland food plants (hard mast and fruit)	BVW D20	Present	Highbush blueberry, maleberry, roundleaf greenbrier, white oak, American beech.
	BVW D19 and BVW D19A	Present	Highbush blueberry, maleberry.
	BVW D18	Present	Highbush blueberry, maleberry.
	BVW D17	Present	Highbush blueberry, maleberry, roundleaf greenbrier.
	Upland BLSF associated with the Copicut Reservoir and Upland RFA of SD-11	Present	Highbush blueberry, roundleaf greenbrier maleberry.
	BVW D16A/ BLSF	Present	Highbush blueberry.
	BVW D15	Present	White oak, highbush blueberry, roundleaf greenbrier.
	BVW D12/BLSF of the Copicut Reservoir	Present	Highbush blueberry, arrowwood, roundleaf greenbrier, beech.
	BVW D11/BLSF of the Copicut Reservoir/Vernal Pool DP-4	Abundant	Highbush blueberry, winterberry, maleberry, arrowwood, roundleaf greenbrier, white oak, willow.
	BVW D8	Present	White oak, shagbark hickory.
	BVW D7	Abundant	Highbush blueberry, red oak, white oak, roundleaf greenbrier.
	BVW D6	Present	Raspberry, winterberry, highbush blueberry, roundleaf greenbrier, shagbark hickory.
	BVW D2	Present	Highbush blueberry, winterberry, maleberry, roundleaf greenbrier, willow, white oak.
	BVW D1	Abundant	Highbush blueberry, winterberry, roundleaf greenbrier, fox grape.
	BVW L1	Present	Highbush blueberry, maleberry, roundleaf greenbrier, red oak.
Shrub thickets/streambeds with abundant earthworms	BVW D20	Present	BVW D20 provides dense shrub thickets comprised of sweet pepperbush along portions of intermittent stream SD20. No woodcocks were observed during the evaluations.
	BVW D11	Present	BVW D11 provides dense shrub thickets comprised of sweet pepperbush and highbush blueberry along portions of perennial stream SD11 (the Copicut River). No woodcocks were observed during the evaluations.
Shrub/herbaceous vegetation suitable for veery nesting	BVW D20	Present	BVW D20 provides dense shrub thickets comprised of sweet pepperbush. No veerys were observed during the evaluations.
	BVW D17	Present	BVW D17 provides dense shrub thickets comprised of maleberry and highbush blueberry. No veerys were observed during the evaluations.
	BVW D11A	Present	BVW D11A provides shrub thickets comprised of sweet pepperbush. No veerys were observed during the evaluations.
	BVW D11	Present	BVW D11 provides dense shrub thickets comprised of sweet pepperbush and highbush blueberry. No veerys were observed during the evaluations.
	BVW D7	Present	BVW D7 provides dense shrub thickets comprised of sweet pepperbush and highbush blueberry. No veerys were observed during the evaluations.

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN, ETC.)
	BVW D2	Present	BVW D2 provides dense shrub thickets comprised of sweet pepperbush. No weevils were observed during the evaluations.
	BVW D1	Present	BVW D1 provides dense shrub thickets comprised of sweet pepperbush. No weevils were observed during the evaluations.
Trees (live or dead) > 30" dbh (diameter at breast height)	BVW D12	1	A live 32" dbh white pine tree located in the wetland buffer and 20 feet from the upland Copicut Reservoir BLSF.
	BVW D11	2	Two (32" and 33" dbh) live white pine trees located in the wetland buffer on the north side of Quanapoag Road.
<b>Standing Dead Trees</b>			
6-12" dbh	BVW D20	5 trees	Species unknown. Two trees are leaning.
6-12" dbh	BVW D19	1 tree	Species unknown. Woodpecker holes. Located on edge of the ROW.
6-12" dbh	Upland BLSF of the Copicut Reservoir	3 trees	Species unknown. On edge of ROW.
6-12" dbh	BVW D16A and BLSF of the Copicut Reservoir	3 trees	Species unknown.
6-12" dbh	BVW D11A	1 tree	Species unknown.
6-12" dbh	BVW D11	2 trees	Species unknown.
6-12" dbh	BVW D8	1 tree	Species unknown.
6-12" dbh	BVW D7	2 trees	Species unknown. Woodpecker holes.
6-12" dbh	BVW D6	12 trees	Species unknown. Woodpecker holes.
6-12" dbh	BVW L1	2 trees	Species unknown.
12-18" dbh	BVW D7	4 trees	Species unknown.
Small mammal burrows	BVW D7	Present	Located under a rock for an Eastern chipmunk.
	Upland BLSF of the Copicut Reservoir	Present	Potential habit is located in a stone wall.
	BVW D20	Present	Located under a rock for an Eastern chipmunk.
Dense herbaceous cover	BVW D20	Present	Young sweet pepperbush, young white pine, and young sheep laurel all under three feet tall; deer-tongue rosette-panicgrass.
	Upland BLSF of the Copicut Reservoir	Present	Bracken fern, flat-branched tree-clubmoss.
	BVW D11A	Present	Cinnamon fern
	BVW D11	Present	Cinnamon fern, royal fern, Massachusetts fern.
	BVW D7	Present	Sweet pepperbush under three feet tall, roundleaf greenbrier under three feet tall.
	BVW D1	Present	Cinnamon fern, young sweet pepperbush under three feet tall.
Large woody debris on ground	BVW D20	Present	Medium-sized woody debris on the ground.
	BVW D19	Present	Timber slash (tree logs) on the forest/ROW edge.
	BVW D11A	Present	Fallen tree branches are on the ground.
	BVW D11	Present	Large woody debris on edge of ROW along upland edge.

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN, ETC.)
	Vernal Pool DP-2 in Isolated Vegetated Wetland (IVW) D7A	Present	Medium-sized woody debris on the ground.
	BVW D6	Present	18" dbh log on ground.
	BVW D2	Present	10" dbh fallen tree on ground.
Rocks, crevices, logs, tree roots, or hummocks under water's surface	Vernal Pool DP-7 in BVW D15	Present	Logs are present under the water's surface.
	Vernal Pool DP-2 in IVW 7A	Present	When the pool is inundated, there is a fallen tree under the water's surface.
Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1 meter above the water's surface	Upland RFA of the Copicut River	Present	A fallen tree branch overhangs the Copicut River.
	Vernal Pool DP-7 in BVW D15	Present	When the vernal pool is inundated, overhanging shrubs in the vernal pool and on the periphery of the vernal pool provide this characteristic.
	Vernal Pool DP-2 in IVW D7A	Present	When the vernal pool is inundated, overhanging shrubs in the vernal pool and on the periphery of the vernal pool provide this characteristic.
Rock piles, crevices, or hollow logs	BVW D20	Present	One rock pile provides potential habitat for an animal similar in size to a mink.
	BVW D18	Present	A crevice provides potential habitat for an animal similar in size to a mink.
	BVW D7	Present	One crevice (approximate size 1 foot tall by 2.5 feet wide) under a rock provides potential habitat for an animal the size of a bobcat.
Live or dead standing vegetation overhanging water or offering good visibility of open water	BVW D12	Present	Gray birch trees are growing on the wetland edge with branches overhanging into the Copicut Reservoir.
Depressions that may serve as seasonal (vernal/autumnal) pools	Vernal Pool DP-12 in BVW 20	Present	Average water depth (2018): 19 inches Maximum water depth (2018): 19 inches Average water depth (2021): 12 inches Maximum water depth (2021): 20 inches
	Vernal Pool DP-7 in BVW D15	Present	Average water depth (2018): 8 inches Maximum water depth (2018): 13 inches Average water depth (2021): 6 inches Maximum water depth (2021): 8 inches
	Amphibian Breeding Area (DP-8) adjacent to BVW D14 and BVW D15 in the maintained access road	Present	Average water depth (2018): 7 inches Maximum water depth (2018): 12 inches No surveys in 2021
	Vernal Pool DP-4 in BVW D11	Present	Average water depth (2018): 6 inches Maximum water depth (2018): 13 inches Average water depth (2021): 10 inches Maximum water depth (2021): 13 inches



HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN, ETC.)
	Amphibian Breeding Area DP-3 located in an ATV tire rut adjacent to Yellow Hill Road in an upland	Present	Average water depth (2018): 6 inches Maximum water depth (2018): 13 inches No surveys conducted in 2021
	Vernal Pool DP-2 in IVW D7A	Present	Average water depth (2018): 10 inches Maximum water depth (2018): 12 inches No water observed during the 2021 surveys.
	Vernal Pool DP-5 in BVW D7	Present	Average water depth (2018): 14 inches Maximum water depth (2018): 17 inches Average water depth (2021): 10 inches Maximum water depth (2021): 14 inches
	Vernal Pool LP-1 in BVW L1	Present	Average water depth (2018): 10 inches Maximum water depth (2018): 14 inches Average water depth (2021): 6 inches Maximum water depth (2021): 10 inches
<b>Standing water present at least part of the growing season: Suitable for use by breeding amphibians, as well as for non-breeding amphibians for foraging and rehydration</b>			
Suitable for breeding and non-breeding amphibians	Vernal Pool DP-12 in BVW 20	Present	2 wood frog egg masses (2018) ~50 wood frog tadpoles (2018) ~150 wood frog tadpoles (2021) 3 spotted salamander egg masses (2021)
Suitable for non-breeding amphibians	Intermittent Stream (SD-20) in BVW 20	Present	-
Suitable for non-breeding amphibians	Intermittent Stream (SD-19) in BVW 19A	Present	-
Suitable for breeding and non-breeding amphibians	Vernal Pool DP-7 in BVW D15	Present	~50 fairy shrimp (2018) 1 American toad
Suitable for breeding and non-breeding amphibians	Amphibian Breeding Area (DP-8) between BVW D14 and BVW D15 in the maintained upland access road	Present	1 wood frog egg mass (2018) 3 mating pairs of American toads (2018) 3 single American toads (2018) American toads calling (2018)
Suitable for non-breeding amphibians	BVW12 due to isolated pockets of water from the Copicut Reservoir	Present	-
Suitable for non-breeding amphibians	Perennial Copicut River (SD11)	Present	-
Suitable for breeding and non-breeding amphibians	BVW D11A	Present	-
Suitable for breeding and non-breeding amphibians	Vernal Pool DP-4 in BVW D11	Present	~30 spotted salamander egg masses (2017) 2 wood frog egg masses (2018) 8 spotted salamander egg masses (2018) 10 wood frog egg masses (2021) ~50 wood frog tadpoles (2021) 16 spotted salamander egg masses (2021)

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN, ETC.)
Suitable for breeding and non-breeding amphibians	Amphibian Breeding Area DP-3 located in an ATV tire rut adjacent to Yellow Hill Road. This amphibian breeding area is in no resource areas and is located in upland	Present	20 wood frog egg masses (2017) 1 wood frog adult (2017) 3 spotted salamander egg masses (2017)
Suitable for non-breeding amphibians	Intermittent Stream SD-8 in BVW D8	Present	-
Suitable for breeding and non-breeding amphibians	Vernal Pool DP-2 in IVW D7A	Present	5 spotted salamander egg masses (2017) ~20 spotted salamander larvae (2017) 2 wood frog egg masses (2018) 7 spotted salamander egg masses (2018) ~100 fairy shrimp (2018) American toads calling (2018)
Suitable for breeding and non-breeding amphibians	Vernal Pool DP-5 in BVW D7	Present	3 wood frog egg masses (2018) ~hundreds of wood frog tadpoles (2018) ~55 spotted salamander egg masses (2018) 14 wood frog egg masses (2021) 10 wood frog tadpoles (2021) 6 spotted salamander egg masses
Suitable for non-breeding amphibians	Intermittent Stream (SD-5) in BVW D6	Present	-
Suitable for breeding and non-breeding amphibians	Vernal Pool LP-1 in BVW L1	Present	2 wood frog egg masses (one hatching) (2016) ~50 wood frog tadpoles (2018) 2 old wood frog egg masses (2018) 3 wood frog egg masses (2021) ~50 wood frog tadpoles (2021)
Standing water present at least part of the growing season suitable for use by turtles and foraging waterfowl	Copicut Reservoir	Present	The portion of the Copicut Reservoir within the Project ROW has standing water present earlier in the growing season. During the July-Nov. 2017 surveys, the Copicut Reservoir in the ROW was a majority of exposed shoreline. During the April-June 2018 surveys the previously exposed shoreline was inundated.
Medium to large (>6") flat rocks within a stream	Intermittent Stream (SD-5) and BVW D6	Present	One flat rock was present.
	Perennial Copicut River (SD-11) in BVW D11	Present	Flat rocks are present within the Copicut River near the Quanapoag Road crossing.
Flat rocks and logs on banks or within exposed portions of streambeds	Intermittent Stream (SD-5) in BVW D6	Present	One flat rock was present.
	Perennial Copicut River (SD-11) in BVW D11	Present	Flat rocks are present near the Quanapoag Road crossing.
Areas of ice-free open water in winter	Copicut Reservoir	Present	High potential that areas of the reservoir have ice-free open water in winter.
	Perennial Copicut River (SD-11) in BVW D11	Present	Stream was flowing in Nov. 2017. There is the potential that this perennial stream remains ice-free in winter.

HABITAT CHARACTERISTICS	WETLAND RESOURCE AREA	EXISTING HABITAT FEATURES	NOTES/COMMENTS (EXISTING PLANTS, OBSERVED WATER DEPTHS, SPECIES, SIGN, ETC.)
Perennial and intermittent streams	<ul style="list-style-type: none"><li>- SD-20 in BVW 20</li><li>- SD-19 in BVW D19A</li><li>- SD-11 in BVW D11</li><li>- SD-8 in BVW D8</li><li>- SD-5 in BVW D6</li></ul>	Present	Stream SD-11 (Copicut River) is perennial.  Streams SD-20, SD-19, SD-8, and SD-5 are intermittent.

**TABLE 2 WILDLIFE OBSERVATIONS AND SIGNS IN BORDERING VEGETATED WETLANDS BORDERING LANDS SUBJECT TO FLOODING, AND VERNAL POOLS IN FALL RIVER, MASSACHUSETTS**

WETLAND RESOURCE AREA	OBSERVED WILDLIFE SPECIES	OBSERVED WILDLIFE SIGNS
BVW D20 and Intermittent Stream SD20	-Black-capped chickadee (heard) -Gray catbird -Eastern towhee -Yellow warbler	-Eastern white pine cone shells cache and small mammal burrow (likely Eastern chipmunk) -White-tailed deer droppings -Raccoon prints
Vernal Pool DP-12 in BVW D20	-Wood frog egg masses and tadpoles	-No observations at times of site visits
BVW D19 and BVW 19A, Intermittent Stream SD-19	-Gray catbird -Eastern towhee -Eastern box turtle in buffer zone on the south side of the maintenance road	-White-tailed deer droppings -White-tailed deer prints in access road
BVW D17 and D18	-White-tailed deer on access road -Black-capped chickadee -Gray catbird -Eastern towhee	-White- tailed deer droppings
Upland BLSF associated with the Copicut Reservoir	-Black-capped chickadee	-Eastern coyote scat on access road near Copicut Reservoir
BVW D16A, BLSF associated with Copicut Reservoir	-Black-capped chickadee -Hundreds of young American toads headed to the Copicut Reservoir	-White-tailed deer droppings
BVW D15	-Ovenbird in D15 -Eastern chipmunk in D15 -Eastern towhee	-White-tailed deer droppings and deer beds -Eastern white pine cone shells cache (likely Eastern chipmunk)
Vernal Pool DP-7 in BVW D15	-Fairy shrimp	-No observations at times of site visits
BVW D14	-American toads (mating pairs) -Wood frog egg mass	-White-tailed deer droppings and deer beds
Upland BLSF associated with the Copicut Reservoir	-Eastern towhee -Green frog	-White-tailed deer trail along edge of Copicut Reservoir -White-tailed deer tracks and droppings
Copicut Reservoir	-Red-tailed hawks (2 juveniles) flying overhead -Great egret -Canada geese -Pickerel frog	-No observations at times of site visits
BVW D12 and BLSF associated with the Copicut Reservoir	-Ruby-throated hummingbird	-White-tailed deer droppings
RFA associated with Perennial Stream SD-11 (the Copicut River)	-Green frog	-White-tailed deer droppings
BVW D11A	-No observations at times of site visits	-White-tailed deer droppings
BVW D11, Perennial Stream SD-11, RFA, and BLSF	-Gray catbird -Eastern towhee -Yellow warblers	-White-tailed deer droppings -Unidentified bird nest in shrubs -Raccoon hand print

WETLAND RESOURCE AREA	OBSERVED WILDLIFE SPECIES	OBSERVED WILDLIFE SIGNS
Vernal Pool DP-4 in BVW D11	-Spotted salamander egg masses -Wood frog egg masses	-No observations at times of site visits
BVW D8 and Intermittent Stream SD-8	-No observations at times of site visits	-White-tailed deer droppings -Wild turkey feather near stream SD2
DP-2 in IVW D7A	-Spotted salamander egg masses and larvae -Wood frog egg masses -Fairy shrimp -American toad	-No observations at times of site visits
BVW D7	-Gray catbird -Eastern towhee	-Unidentified bird nest -White-tailed deer droppings -Small mammal burrow (likely Eastern chipmunk)
Vernal Pool DP-5 in BVW D7	-Wood frog egg masses and tadpoles -Spotted salamander egg masses	-No observations at times of site visits
BVW D6 and Stream SD-5	-Gray catbird -Eastern towhee -Wood frog tadpoles in DP1	-White-tailed deer droppings
BVW D1 and BVW D2	-Eastern box turtle carapace in D1 -Gray catbird -Eastern towhee	-White-tailed deer browse on shrubs -Eastern coyote scat
BVW L1	-Gray catbird -Eastern towhee -Two red squirrels -Black-capped chickadee -Tufted titmouse	-White-tailed deer droppings
Vernal Pool LP-1 in BVW L1	-Wood frog egg masses and tadpoles	-No observations at times of site visits

### 3.1.1 Upland / Wetland Food Plants (Hard Mast and Fruit)

A variety of native and invasive shrubs and woody vines in the Survey Area provide fruit and seeds for wildlife food, particularly to birds and mammals inhabiting and using the Survey Area. All BVWs and upland BLSFs associated with North Watuppa Pond and Copicut Reservoir provide food sources for wildlife. Native shrubs serving as a wildlife food source include: highbush blueberry (*Vaccinium corymbosum*), smooth arrowwood (*Viburnum dentatum*), winterberry (*Ilex verticillata*), maleberry (*Lyonia ligustrina*), willows (*Salix* spp.), and raspberries (*Rubus* spp.). The native woody vine roundleaf greenbrier (*Smilax rotundifolia*) provides fruit for wildlife. A variety of tree species provide hard mast for wildlife, predominately small mammals and white-tailed deer. Tree species include white oak and red oak (*Quercus alba* and *Quercus rubra*), American beech (*Fagus grandifolia*), and shagbark hickory (*Carya ovata*). Refer to Table 1 for a list of food plants in each resource area.

### 3.1.2 Shrub Thickets/Streambeds with Abundant Earthworms

Two BVWs (BVW D20 and BVW D11) contained habitats that may provide American woodcock (*Scolopax minor*) habitat. BVW D20 contained a dense shrub thicket of sweet pepperbush (*Clethra alnifolia*) along portions of intermittent stream SD20 that also have the high potential for abundant earthworms. BVW D11 contained a dense shrub thicket of sweet pepperbush (*Clethra alnifolia*) and

highbush blueberry along portions of the perennial stream SD11 (the Copicut River). No American woodcocks were observed during the wildlife habitat evaluations.

### **3.1.3 Shrub/Herbaceous Vegetation Suitable for Veery Nesting**

Eight BVWs contained a dense assemblage of native shrub species which may provide potential nesting opportunities for the veery (*Catharus fuscescens*). These birds prefer dense shrub or woodland habitats which are damp (DeGraaf and Yamasaki 2001). Dense shrub cover in the BVWs included sweet pepperbush and highbush blueberry. No veerys were observed during the habitat evaluations. Refer to Table 1 for a list of BVWs and the species comprising the dense shrub layer cover species.

### **3.1.4 Trees (Live or Dead) > 30-inch Diameter at Breast Height**

A total of three live white pines greater than 30 inches dbh were found in the wetland buffer zones of BVW D12 and BVW D11. The buffer of BVW D12 had a white pine tree with a 32-inch dbh which is located to the northwest of BVW D12 and just over 30 feet north of the Copicut Reservoir. The buffer of BVW D11 had two live white pine trees with a dbh of 32 inches and 33 inches. These two trees were located just to the north of Quanapoag Road.

### **3.1.5 Standing Dead Trees (Snags)**

Standing dead trees, also known as snags, provide feeding, nesting, denning, roosting, or perching areas for wildlife. The particular tree species of the snags were all unidentifiable in the field. Several class ranges were observed throughout the Survey Area. Eleven resource areas contained snag trees with a dbh range of 6 to 12 inches. Resource areas with the highest numbers of snag trees include BVW D6 (12 trees) and BVW D20 (five trees). Three trees each were found in the upland BLSF of the Copicut Reservoir and BVW16A and the BLSF of the Copicut Reservoir. The remainder of the resource areas had one to two snags observed. Four snag trees were recorded with a dbh range of 12 to 18 inches in BVW D7. Refer to Table 1 for more detail on snag trees in each resource area.

Woodpeckers such as the downy woodpecker (*Picoides pubescens*) or the hairy woodpecker (*Picoides villosus*) feed on wood-boring larvae beetles found in snags; thereby creating holes or nesting cavities in snag trees while trying to access the beetles. Several of these snag trees contained woodpecker (*Picoides*) holes in BVWs D19 and D7. Smaller snags provide nesting or feeding sites for such suburban birds as the black-capped chickadee (*Parus atricapillus*), tufted titmouse (*Parus bicolor*), and white-breasted nuthatch (*Sitta carolinensis*). Small mammals, such as the eastern gray squirrel (*Sciurus carolinensis*) may den in tree cavities during the winter (DeGraaf and Yamasaki 2001).

### **3.1.6 Potential Small Mammal Burrows**

Only two resource areas (BVW 20 and BVW D7) contained small mammal burrows, which most likely were eastern chipmunks (*Tamias striatus*). Eastern chipmunks create underground nests with extensive tunnel systems. The upland BLSF of the Copicut Reservoir contained a stone wall which provides potential small mammal habitat.

### **3.1.7 Dense Herbaceous Cover**

Herbaceous cover is defined as all non-woody plants regardless of size and woody vegetation less than 3.28 feet tall. Dense herbaceous cover in the BVWs was predominately present as the shrub, sweet pepperbush which was less than 3.28 feet in height. The common non-woody emergent vegetation providing dense herbaceous cover included cinnamon fern (*Osmundastrum cinnamomeum*) and royal fern (*Osmunda regalis*). In the upland BLSF of the Copicut Reservoir, bracken fern (*Pteridium aquilinum*) and flat-branched tree-clubmoss (*Dendrolycopodium obscurum*) provided dense herbaceous cover. The young sweet pepperbush and dense fern cover provide a thick cover of vegetation under the established overstory of trees and shrubs. Refer to Table 1 for a list of dense herbaceous cover species within each resource area.

### **3.1.8 Large Woody Debris on Ground**

Large woody debris on the ground was identified near several impact areas. In BVW D19, trees which had been cut were placed on the northern edge of the Survey Area. Natural fallen woody debris was identified in wetlands D11A, D11, D6, and D2 as fallen trees. These fallen trees provide potential denning sites within the decaying interior of the logs (Hagan and Grove 1999). Decaying logs also provide food sources for a variety of insects residing within the decaying logs, and cover for specific woodland amphibian species including the red-back salamander (*Plethodon cinereus*) (DeGraaf and Yamasaki 2001).

### **3.1.9 Logs Under the Water's Surface**

Fallen logs and trees are present under the water's surface in three vernal pools. BVW D15 contains vernal pool DP-7 and Isolated Vegetated Wetland (IVW) D7A contains DP-2. An IVW does not border on any creeks, rivers, streams, ponds or lakes and are closed isolated depressions with no inlets or outlets. These logs provide cover for breeding wood frogs (*Lithobates sylvatica*) and spotted salamander (*Ambystoma maculatum*), as well as for the developing larvae of these two amphibian species.

### **3.1.10 Overhanging Branches at or Within One Meter Above the Water's Surface**

Shrubs overhang into two vernal pools (DP-7 and DP-2) when the pools are inundated. These overhanging shrubs, which are predominately sweet pepperbush and highbush blueberry, provide cover for breeding amphibians and developing larvae. The overhanging shrubs also provide shade for egg masses and developing larvae and prevent a high rate of evapotranspiration, thus aiding in a longer hydroperiod for the vernal pools. A fallen branch overhangs the Copicut River (SD-11) in the upland RFA and the upland BLSF of the Copicut Reservoir.

### **3.1.11 Rock Piles and Crevices**

Rock piles and crevices provide habitat for denning mammals. A rock pile present in BVW D20 and a crevice present in BVW D18 have the potential to provide habitat for an animal the size of a mink (*Neovison vison*). A larger crevice in BVW D7 contains a crevice approximately 1.0 feet tall and 2.5 feet wide. This crevice has the potential to provide a denning site for bobcat (*Lynx rufus*).

### 3.1.12 Live Vegetation Overhanging Water or Offering Good Visibility of Open Water

Gray birch (*Betula populifolia*) trees are growing along the edge of BVW D12 and overhang into the Copicut Reservoir water and offer good visibility of the water. These branches provide perching sites for waterbirds to fish in the pond. Potential bird species using these branches in the Project Area may include tree swallows (*Tachycineta bicolor*) and belted kingfishers (*Ceryle alcyon*) (DeGraaf and Yamasaki 2001).

### 3.1.13 Depressions that may Serve as Vernal Pools/Amphibian Breeding Areas

The WPA defines vernal pool habitat as confined basin depressions that typically hold water for two continuous months during the spring and are free of adult fish populations. These areas provide essential breeding habitat for a variety of amphibian species such as wood frogs and the spotted salamander. Certified vernal pools (CVPs) are those that have been certified by the Massachusetts Natural Heritage and Endangered Species Program (NHESP) according to the Guidelines for Certification of Vernal Pool Habitat (NHESP 2018) and are protected if they fall under the jurisdiction of the WPA. CVPs are also afforded protection under Section 401 of the federal Clean Water Act, the Massachusetts Surface Water Quality Standards that relate to Section 401, and the Massachusetts Forest Cutting Practices Act. No CVPs are identified to occur in the Survey Area (NHESP 2018). Potential vernal pools (PVPs) have also been mapped by NHESP but do not receive protection under the WPA or under any other state or federal wetlands protection laws (NHESP 2013).

Amphibian Breeding Area refers to areas where signs of amphibian breeding (obligate and/or facultative species) have been observed, but the overall habitat of the area did not meet the specific vernal pool criteria. Obligate vernal pool species observed during the NEP ROW vernal pool investigations include wood frogs, spotted salamanders, and fairy shrimp (*Eubranchipus spp.*). Facultative species observed during the NEP ROW vernal pool surveys include American toads (*Bufo americanus*) and spring peepers (*Pseudacris crucifer*). If the depression had less than 12 inches of water the pool was classified as an amphibian breeding area due to the unlikelihood of water persisting through the duration of the egg mass development and maturation thus causing the viability of successful amphibian breeding success improbable. An adequate hydroperiod of three to five months allows for a greater chance of the successful development of amphibian species using the pool.

Discretion was also used for classifying vernal pools versus amphibian breeding areas based upon the location of the pool. For example, depressions (e.g., deep tire ruts) located within and along an existing access road or all-terrain vehicle (ATV) trail that were observed to provide amphibian breeding habitat were classified as amphibian breeding areas if they were isolated and not connected to wetland systems. The majority of these isolated depressions within or along anthropogenic areas are located within maintained ROWs in areas with full sun and little or no shrub canopy. There is the likelihood of high evapotranspiration rates within these isolated depressions, causing water levels to decrease. As a result, the depressions may not provide adequate water levels to support the development of obligate vernal pool species.

Surveys along the NEP ROW were conducted from spring 2017-spring 2018, with the exception of LP-1 which also had surveys conducted during spring 2015 and spring 2016. Additional surveys were conducted in spring 2021 for vernal pools. The surveys were scheduled after the first significant rain events, when the majority of evening low temperatures were expected to remain in the 40s (degrees Fahrenheit). These weather conditions promote inward migration of amphibians to the pools for the purpose of breeding. Biologists conducted visual surveys and used dip nets to sweep the water column to



determine the presence or absence of amphibians and other vernal pool species. When heard, choruses of breeding frogs were also noted.

Table 3 is a list of vernal pools and two amphibian breeding areas that will be impacted by the Project.

**TABLE 3 VERNAL POOLS AND AMPHIBIAN BREEDING AREAS TO BE IMPACTED IN THE SURVEY AREA**

ID NUMBER	POOL TYPE	EXISTING COVER TYPE	AVERAGE WATER DEPTH (IN.)	MAXIMUM WATER DEPTH (IN.)	OBLIGATE SPECIES OBSERVED	FACULTATIVE SPECIES OBSERVED
DP-7	Vernal Pool	PFO in BVW D15	8 (2018) 6 (2021)	13 (2018) 8 (2021)	~50 fairy shrimp (2018) No species observed in 2021	1 American toad (2018) No species observed in 2021
DP-8	Amphibian Breeding Area	Upland in the maintained access road between BVW D14 and BVW D15	7 (2018)	12 (2018)	1 wood frog egg mass (2018) No surveys conducted in 2021	3 mating pairs of American toads (2018) 3 single American toads (2018) American toads calling (2018) No surveys conducted in 2021
DP-5	Vernal Pool	PFO in BVW D7	14 (2018) 10 (2021)	17 (2018) 14 (2021)	3 wood frog egg masses (2018) ~hundreds of wood frog tadpoles (2018) ~55 spotted salamander egg masses (2018) 14 wood frog egg masses (2021) 10 wood frog tadpoles (2021) 6 spotted salamander egg masses (2021)	No species observed in 2018 or 2021
DP-4	Vernal Pool	PSS in BVW D11	6 (2018) 10 (2021)	13 (2018) 13 (2021)	~30 spotted salamander egg masses (2017) 2 wood frog egg masses (2018) 8 spotted salamander egg masses (2018) 10 wood frog egg masses (2021) ~50 wood frog tadpoles (2021) 16 spotted salamander egg masses (2021)	No species observed in 2018 or 2021
DP-2	Vernal Pool	PSS in IVW 7A	10 (2018) No water observed during 2021 survey	12 (2018) No water observed during 2021 survey	5 spotted salamander egg masses (2017) ~20 spotted salamander larvae (2017) 2 wood frog egg masses (2018) 7 spotted salamander egg masses (2018) ~100 fairy shrimp (2018)	American toad calling (2018)

ID NUMBER	POOL TYPE	EXISTING COVER TYPE	AVERAGE WATER DEPTH (IN.)	MAXIMUM WATER DEPTH (IN.)	OBLIGATE SPECIES OBSERVED	FACULTATIVE SPECIES OBSERVED
LP-1	Vernal Pool	PSS in BVW L1	10 (2018) 6 (2021)	14 (2018) 10 (2021)	2 wood frog egg masses (one hatching) (2016) ~50 wood frog tadpoles (2018) 2 old wood frog egg masses (2018) 3 wood frog egg masses (2021) ~50 wood frog tadpoles (2021)	No species observed in 2018 or 2021
DP-3	Amphibian Breeding Area	Upland in an ATV tire rut	6	13	20 wood frog egg masses (2017) 1 wood frog adult (2017) 3 spotted salamander egg masses (2017)	

### 3.1.14 Standing Water Present at Least Part of the Growing Season

Shallow pockets of standing water occur throughout several of the BVWs (BVW 20, BVW 19A, BVW 15, BVW D14, BVW 12, BVW D11A, BVW D11, BVW D8, BVW D7, BVW D6, and BVW L1) in the Survey Area. These water-filled depressions provide non-breeding amphibians foraging and rehydration opportunities. Water was present in BVWs during the wildlife habitat evaluations in November 2017. The presence of standing water observed during the wetland delineations in summer 2017, as well as during the vernal pool investigations in spring 2018 suggests that standing water remains in these pockets into the growing season.

The Copicut Reservoir provides a permanent water source for breeding amphibians such as green frogs (*Lithobates clamitans*), bullfrogs (*Lithobates catesbeianus*), and pickerel frogs (*Lithobates palustris*). The Reservoir also provides a habitat for turtles and foraging waterfowl.

### 3.1.15 Flat Rocks within Streams

The presence of flat rocks within streams provides cover for stream salamanders. In intermittent stream (SD5) one medium-sized flat rock was observed in the stream channel which may possibly provide cover for stream salamanders. The perennial Copicut River (SD-11) had several medium-sized flat rocks present in the riverbed where the Copicut River flows under Quanaoag Road.

### 3.1.16 Areas of Ice-Free Open Water in Winter

The Copicut Reservoir may contain areas of ice-free open water in the winter. These areas provide rehydration and foraging opportunities for resident wildlife species within the Survey Area. The Copicut River (SD-11) also most likely continues to flow during the winter months as it empties into the Copicut Reservoir.

### 3.1.17 Perennial and Intermittent Streams

Only one perennial stream (SD11), the Copicut River, flows through the Survey Area and is associated with BVW D11. Four intermittent streams are located within the Survey Area. These streams include SD-

20 (flowing through BVW D20 and into Dartmouth), SD-19 (flowing through BVW 19A), SD-8 (flowing through BVW D8), and SD-5 (flowing through BVW D6).

Streams provide a variety of purposes in the landscape which include wildlife habitat for birds, amphibians, reptiles, and insects. Streams assist with groundwater recharge, improving water quality, and serve as travel corridors for wildlife species (Mitch and Gosselink 2015).

### **3.1.18 Wildlife Habitat Characteristics Summary**

Summarized in Table 1 are the wildlife habitat characteristics discussed in Sections 3.1.1 through 3.1.17 that were observed at the 17 sites during the field surveys. Wetlands are presented in Table 1 from east to west in the Study Area beginning at the Fall River/Dartmouth Town line and heading west to the Bell Rock Substation.

Wildlife observation and signs were also collected during the field wildlife habitat evaluations and are listed in Table 2.

## **3.2 Landscape Context**

In addition to the site specific habitat characteristics, the MassDEP Guidance more broadly addresses landscape context such as habitat continuity and connectivity, as well as the effects of existing habitat degradation.

The existing utility ROWs in the Survey Area serve as a connector to adjacent areas of habitat and are, therefore, important for connectivity with adjoining natural habitats. The Project area is surrounded by dense upland and wetland forest, providing a large expanse of unfragmented forest habitat. The Project site is located within the Southeastern Massachusetts Bioreserve (Bioreserve), with over 13,600 acres of protected land in Fall River and Freetown that lies to the east of downtown Fall River. The Bioreserve is managed by the Commonwealth of Massachusetts, the City of Fall River, and the Trustees of Reservation and offers diverse habitats and natural communities. The location of the Bioreserve in southeastern Massachusetts serves as vital habitat since this area is one of the fastest growing regions in the state with residential, commercial, and industrial zones. Wildlife currently inhabiting the Project area are accustomed to the existing utility infrastructure in the area. The existing ROWs extending to the west, south, and east of the existing substation provide natural shrubland habitats embedded within large tracts of continuous and connected forest habitats.

The Project is not anticipated to permanently impact the integrity of the bordering Bioreserve land as a wildlife habitat connector to the adjacent forests. After Project completion the ROWs will continue to serve a role as a landscape connector to wildlife habitats, as well as providing habitats for wildlife species.

## **3.3 Habitat Degradation**

The representative wetland impact areas reviewed during the wildlife habitat evaluation have all been subject to previous alterations, predominately from the existing NEP infrastructure and mild habitat degradation as a result of recreation activities, including ATV usage.

A few wetlands contain invasive species. The dominant invasive species is Japanese stiltgrass (*Microstegium vimineum*) which is present in four BVWs but with a  $\leq 5.0$  percent cover. Multiflora rose (*Rosa multiflora*) was also observed in one BVW in the ROW.

No observations of trash dumping, chemical contamination, or erosion and sedimentation problems were observed within the Survey Area while conducting the wildlife habitat evaluation, wetland surveys, and vernal pool investigations.

All wetlands have been altered to some degree from the NEP ROW, chiefly by removal of trees. Temporary disturbances will continue to occur along the existing transmission line ROW since NEP conducts a regular vegetation maintenance program of the existing transmission line ROWs. NEP's ROW vegetation practices encourage the growth of low-growing shrubs and other vegetation which provide a degree of natural vegetation control. Vegetation management is necessary to ensure the reliable and safe delivery of electric services to NEP customers. This is accomplished by allowing for the proper clearance between vegetation and electrical conductors and supporting structures. Vegetation maintenance will continue to occur in accordance to National Grid's currently approved Vegetation Management Plan, which is in compliance with the Massachusetts Rights-of-Way Management regulations (333 CMR 11.00) administered by the Massachusetts Department of Agricultural Resources) (National Grid 2013).

Tree clearing, earth-disturbing work, and the filling of wetlands will be required for the installation of the new 115 kV Line. Tree-clearing will result in the conversion of forested wetlands to either scrub-shrub or emergent wetlands. Once the trees are removed, these once forested sections will be maintained as scrub-shrub or emergent wetlands. Therefore, a change in wildlife habitat will occur.

## 4.0 RARE SPECIES

NEP evaluated state agencies' data to determine whether any Massachusetts State-listed, and/or -proposed, -endangered, or -threatened species or critical habitats are known to occur in the Project ROWs. This section addresses the consultation process with the Massachusetts NHESP which is part of the Massachusetts Division of Fisheries and Wildlife. The identified wildlife species are discussed below.

Based on coordination with the Massachusetts NHESP, three NHESP State-listed animal species or priority habitats of rare species are located in the vicinity of the Project including the eastern whip-poor-will (*Caprimulgus vociferus*), eastern box turtle (*Terrapene carolina*), and marbled salamander (*Ambystoma opacum*).

NEP is actively coordinating with the NHESP regarding the potentially present within these mapped areas of priority habitat and will continue with this consultation in order to minimize or avoid potential adverse effects on rare species during design, construction, and operation of the Project. Species specific surveys are being conducted for the eastern whip-poor-will and the eastern box turtle. Input from the NHESP on June 21, 2018, concluded that the marbled salamander is documented from sites north and south of the Project area. Therefore, no species-specific surveys are required.

## **5.0 BEST MANAGEMENT PRACTICES**

Throughout the planning and design phases of the Project, wetland impacts have been minimized to the greatest extent possible by using an existing ROW, utilizing existing access roads, and avoiding the placement and construction of structures and access roads in wetlands and watercourses, where practicable. However, given the scale and landscape setting of the Project, certain wetland and watercourse resource impacts associated with the development of the Project cannot be avoided.

Permanent fill will be placed in wetlands in the form of structure foundations. Trees will be cleared in select locations within wetlands to accommodate on the installation of the new Line. However, wetland scrub-shrub and emergent vegetation will remain in these proposed tree clearing areas.

BMPs, as detailed in National Grid's Environmental Guidance document EG-303NE, will be employed to minimize disturbances to wetlands during construction of the Project.

### **5.1 Structures**

Specific measures will be taken when installing structures. Temporary soil erosion controls will be installed around structure work sites in or near wetlands to minimize the potential for soil erosion and sedimentation. All soil erosion and sediment controls and other applicable construction BMPs will be inspected and maintained on a routine basis. Grading in wetlands will be limited for structure foundations. Construction mats will be used in wetlands to provide a safe workspace. Spoil piles will be placed in uplands, where possible, or properly contained on construction mats in wetlands.

### **5.2 Access Roads**

Existing access roads will be used to the extent practicable during the construction phase of the Project to minimize access through wetlands. Where access roads must be improved or possibly developed in certain sections, the roads will be designed, where practical, so as not to interfere with surface water flow or the functions of the wetland. Temporary construction matting for access roads across wetlands will be installed to provide safe passage through the wetlands. The type of stabilization measures to be used in wetlands will depend on soil saturation and depth of organic matter. All temporary access roads through wetlands will be restored following the completion of installation activities by removing the construction mats, re-grading the area (as necessary) to pre-construction elevations to the extent practicable, and re-vegetating the wetlands.

Mat bridges or other bridging techniques will be used to span streams where necessary. Temporary bridge installation will be avoided during peak flows or when the waterway to be crossed is above bankfull width conditions, with the exception of emergency situations or other unforeseen circumstances. If water is present at the time of construction, the ambient water flow will be maintained and water flows will not be constrained or interrupted at any time during construction. In addition, controls will be installed to prevent or minimize turbidity and sediment loading into watercourses. These controls may include the use of crushed stone approach aprons onto mat bridges, stone check dams, water bars, diversion channels, and soil erosion and sediment controls. Existing riparian zone vegetation will also be maintained, to the extent feasible, along the banks of the stream.

### **5.3 Construction Areas**

The size, shape, location, and configuration of work pads were evaluated to minimize impacts to wetlands and watercourses to the extent feasible. Temporary construction matting will be placed on the existing wetland vegetation where wetland impacts could not be avoided. The type of work pad material chosen will depend upon soil saturation and depth of organic matter in the wetland.

Temporary construction matting will be removed upon completion of the Project. Wetlands will be restored to pre-construction configuration and elevations to the extent practicable. Vegetation will also be restored within the wetland through native seeding.

### **5.4 Compensatory Wetland and Flood Storage Mitigation**

Compensation for the permanent loss of wetlands and BLSF is still in the preliminary planning phase. Consultation will occur with state and federal agencies, as well as with the City of Fall River Conservation Commission to develop wetland mitigation plans that compensate for unavoidable wetland loss as a result of the Project. Compensatory wetland mitigation options for the Project may include in-situ wetland restoration along the Project Area, wetlands replication/creation (on- or off-ROW), and/or, the Massachusetts Department of Fish and Game In-Lieu Fee Program. . NEP will work with the City of Fall River Conservation Commission to develop a mitigation plan for the loss of BLSF associated with the installation of new structures.

### **5.5 Wildlife Mitigation and Wildlife Habitat Enhancement**

In areas where trees will be cleared there are several wildlife habitat mitigation activities which can be performed to enhance wildlife habitat in the surrounding area. Such activities may include: seeding disturbed areas with a conservation seed mix, leaving woody debris to create cover for wildlife, and leaving snag trees as potential wildlife habitat.

## 6.0 PROJECT IMPACTS AND MITIGATION

Construction of the Project will result in temporary, permanent, and secondary impacts to wetland resources. Secondary impacts generally involve the conversion of forested wetland habitat to scrub-shrub or emergent wetland habitat, whereby the cover type changes but results in a no net-loss of wetlands. The following section describes the permanent and temporary impacts associated with construction of the Project including temporary work pads to facilitate construction, vegetation removal, installation and excavation for pole foundations/structures for the overhead transmission line, access road upgrades, and the installation of the new overhead transmission line. This section also addresses the associated impacts which are most likely to occur to wildlife as a result of the Project and potential mitigation actions which could be implemented.

### 6.1 Anticipated Temporary Habitat Impacts and Mitigation

Wildlife currently using the forested portion of the NEP ROW that are proposed to be widened will be temporarily impacted by construction of the Project, but large blocks of intact woodland will continue to remain adjacent to the ROW corridor. Larger, more mobile species such as white-tailed deer are expected to temporarily relocate from the construction area, but are unlikely to be permanently impacted as a result of construction and operation of the Project. Small mammals such as gray squirrels (*Sciurus carolinensis*), woodchucks (*Marmota monax*), skunks (*Mephitis mephitis*) and raccoons (*Procyon lotor*), as well as herpetofauna are also likely to move away from areas of construction activity. Depending upon the time of year, some avifauna may also be temporarily displaced, possibly impacting breeding and nesting activities, but are otherwise likely to return after construction and in subsequent years. In wetlands which will have temporary work pads or temporary construction access, the disturbed areas will be re-graded to pre-existing conditions and allowed to revegetate.

### 6.2 Anticipated Permanent Habitat Impacts and Mitigation

The removal of mature trees in forested areas of the NEP ROW to accommodate the new overhead transmission line will result in long-term impacts, but these impacts will be incremental and localized on both the vegetation and associated wildlife habitats. The removal of forest vegetation may affect wildlife species composition by favoring species that prefer shrub land, emergent, or open habitats to those that inhabit forested communities. A study conducted in the Northeast from northern Connecticut into southern New Hampshire along a powerline corridor indicated an increase in early successional plant and wildlife usage of powerline corridors following removal of trees from ROWs (Wagner et al. 2014). Another study in western Massachusetts found transmission line corridors provided habitat for shrub land birds of high regional conservation priority (King et al. 2009). ROWs also serve as open corridors connecting non-contiguous natural areas (Temple 1996).

Based on some of the published literature, the creation of additional shrub land habitat along the NEP ROWs will represent a long-term positive effect on disturbance and shrub-dependent avian species, as well as species from other trophic levels such as bees and butterflies, since shrub land habitat is otherwise declining in New England (King et al. 2009; Wagner et al. 2014). This decline is a result of various factors (e.g., development, ecological succession, absence of fire) (DeGraaf and Miller 1996). Additionally, most of the historic shrub land in the Northeast is irreversibly gone due to permanent human development; therefore, management for shrub habitat dependent species and for biodiversity cannot occur at these locations. Studies conducted in the Northeast have shown that populations of most bird species associated with shrub land habitats have declined sharply and these shrub land species have been shown to make use of human-impacted habitats including utility ROWs (Hunter et al. 2001). Shrub land



birds and other disturbance dependent species are now more dependent than ever on human activities to maintain the habitat required for their survival (King et al. 2009; Confer and Pasco 2003; Confer et al. 2008). Actually, in response to shrub land habitat loss and the decline in shrub land dependent species in the Northeast, the USFWS has recently approved the Great Thicket National Wildlife Refuge, which will be dedicated to managing shrub land wildlife habitat in the Northeast (USFWS 2016). So in this regard, transmission line ROW is considered a major source of shrub land habitat (Saucier 2003).

The management and maintenance of ROW creates early successional habitats dominated by shrub vegetation and open areas with dense grasses and other herbaceous vegetation. These habitats within the ROW can provide wildlife opportunities such as nesting for birds, browsing for deer, and cover for small mammals (Ballard et al. 2004). In addition to the initial tree clearing to accommodate the new transmission line, routine vegetation maintenance will continue within the NEP corridor. Vegetation on the existing ROW is managed in accordance with the NEP vegetation management program (National Grid 2018); accordingly, trees that could interfere with the operation of the transmission lines are routinely removed from the ROW and trees along the edges are periodically pruned or removed. Vegetation will be maintained as low-growth shrubs or grasses and herbs. Vegetation removal for the new transmission line will be performed using mechanized methods. Where removal of woody vegetation is required, vegetation will be cut flush with the ground surface to the extent possible. Where practical, trees will be felled parallel to the ROW to minimize the potential for off-ROW vegetation damage.

NEP designed the Project to first avoid and then minimize permanent impacts to wetlands to the extent practicable, but unavoidable permanent fill of 30 square feet for structures will be required for the new overhead transmission line. With respect to the surrounding available wetland wildlife habitat resources associated with the transmission line ROWs and the Bioreserve, it is not expected this permanent fill would result in a long-term negative impact on the ability of the area to provide valuable wildlife habitat for the existing assemblage of wetland-dependent species.

In areas where trees will be cleared there are several mitigation activities which can be performed to enhance wildlife habitat as a result of tree loss. Such activities may include: seeding disturbed areas with a conservation seed mix, leaving woody debris to create cover for wildlife, and leaving snag trees as potential wildlife habitat.

## 7.0 CONCLUSION

All wetlands within the NEP Survey Area provide wildlife habitat functions including providing food, shelter, migration, breeding, and overwintering areas for wildlife. Important wildlife habitat characteristics have been identified within the Survey Area. These include:

- Upland/wetland food plants (hard mast and fruit).
- Shrub thickets/streambeds with abundant earthworms.
- Shrub vegetation suitable for veery nesting.
- Live trees (>30-inch diameter at dbh).
- Standing dead trees (snags).
- Potential small mammal burrows.
- Dense herbaceous cover.
- Large woody debris on ground.
- Logs under the water's surface.
- Overhanging shrub branches at, or within one meter above the water's surface.
- Rock piles and crevices suitable as potential habitat.
- Live standing vegetation overhanging water or offering good visibility of open water.
- Depressions that serve as vernal pools and/or amphibian breeding areas.
- Standing water present at least part of the growing season for use by non-breeding amphibians.
- Standing water present at least part of the growing season suitable for use by turtles and foraging waterfowl.
- Flat rocks within exposed portions of streambeds.
- Areas of ice-free open water in winter.
- Perennial and intermittent streams.

NEP will develop a wetland restoration and mitigation plan for the Project ROW. Possible wildlife habitat enhancements that may be proposed include:

- Creating additional snags for denning and nesting sites where possible/available.
- Stockpiling woody debris to provide cover.

Alterations to wetlands (which include BVW, BLSF, and RFA) which have impacts above the thresholds permitted under the WPA are only permitted if the impacts will have no adverse impact on wildlife habitat. *Adverse effects on wildlife habitat mean the alteration of any habitat characteristic listed in 310 CMR 10.60(2), insofar as such alteration will, following two growing seasons of project completion and thereafter (or, if a project would eliminate trees, upon the maturity of replanted saplings) substantially reduce its capacity to provide the important wildlife habitat functions listed in 310 CMR 10.60(2). Such performance standard, however, shall not apply to the habitat of rare species which are covered by the performance standards established under 310 CMR 10.59.*

There are no adverse effects on wildlife habitat since resource areas within the Survey Area will not be substantially reduced in their function to serve as valuable sources of wildlife habitat in an area. In the areas of proposed tree clearing, where forest habitat will be converted to scrub-shrub and emergent habitats, wildlife will still be able to use the area along the transmission line ROWs.

Suburban wildlife species using the Project area will most likely not be impacted in response to the increase in the scrub-shrub habitat type as a result of the Project. For resource areas lost as a result of the Project, the proper mitigation measures will be taken to compensate for the loss in wildlife habitat.

NEP has incorporated appropriate measures to avoid and/or minimize and mitigate adverse impacts. The proposed alterations will not substantially reduce the long-term capacity of the site to provide food, cover, migratory, and breeding areas, especially when viewed in terms of landscape scale availability of similar habitat types. While the habitat functions associated with forested wetland will be lost due to tree removal and/or fill in these localized areas, it is expected that adjacent similar habitat types will continue to provide basic habitat requirements of the existing assemblage of wetland-dependent species. NEP will compensate for all permanent loss of wetland per conformance with the requirements of the state and federal permitting agencies. NEP will consult with the City of Fall River Conservation Commission to develop wetland mitigation plans that adequately compensate for wetland loss as a result of the Project. Compensatory wetland mitigation options for the Project may include wetland restoration along the Project Area, wetlands creation/replication (on- or off-ROW), the Massachusetts Department of Fish and Game In-Lieu Fee Program.

## 8.0 REFERENCES

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## **ATTACHMENT A   WILDLIFE HABITAT EVALUATION DATA FORMS**



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Bordering Vegetated Wetland L1 and Vernal Pool LP-1

Location

Please refer to breakdown of secondary and temporary impacts below.

11/29/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Secondary (tree clearing converted to shrub or emergent vegetation)		661 sf (0.02 acres)		0.02 acres
2. Temporary (Work pads, pull pads)		2,309 sf (0.05 acres)		0.05 acres
3.				
4.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Fall River, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland L1 and Vernal Pool LV1

Impact Area (number/name)

11/14/2017

Date(s) of Site Visit(s) and Data Collection

Cloudy, 44 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

11/29/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Forested

Subclass: Needle/Leaved Evergreen and  
Broad-Leaved Deciduous

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 85 60 5 20 5  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	<u>Pinus strobus (60%)*</u>	Herb	<u>Pinus strobus (&lt;5%)</u>
Tree	<u>Acer rubrum (25%)*</u>	Woody Vine	<u>Smilax rotundifolia (5%)</u>
Tree	<u>Quercus rubra (5%)</u>		
Shrubs	<u>Vaccinium corymbosum (35%)*</u>		
Shrubs	<u>Clethra alnifolia (15%)*</u>		
Herb	<u>Vaccinium corymbosum (&lt;5%)</u>		

#### C. Inventory (Soils)

Whitman FSaL, 0-3% slopes, extremely stony  
Soil Survey Unit  
Organic Hemic (0"-6"), Organic Sapric (6"-8"),  
Mucky Silt Loam (8"-9")  
6"  
Depth to Water Table

Very Poorly Drained  
Drainage Class  
9"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☐ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☒ Present ☐ Absent

Standing water present at least part of the growing season, suitable for use by

☒ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Bordering Vegetated Wetlands D1 and D2

Location

Please refer to breakdown of permanent, secondary, and temporary impacts below.

11/23/2021

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. D2: Permanent: Structure footprint		6 sf		6 sf
2. D2: Temporary (work pads and access)		3,967 sf (0.10 acres)		0.09 acres
3. D1: Temporary (work pads and access)		1,629 sf (0.04 acres)		0.04 acres
4.				
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

Fall River, MA

Project Location (from NOI page 1)

Plot 2. Bordering Vegetated Wetlands D1 and D2

Impact Area (number/name)

11/14/2017

Date(s) of Site Visit(s) and Data Collection

Cloudy, 44 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/23/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

## II. Site Description (complete A or B under Classification - see instructions for full description)

### A. Classification

#### 1. For Wetland Resource Areas, complete the following:

System: Palustrine Subsystem: -  
Class: Forested Subclass: Broad-Leaved Deciduous

#### Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input checked="" type="checkbox"/> Saturated   |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

#### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

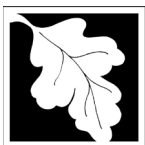
- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 85 60 5 60 5  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	<u>Acer rubrum (40%)*</u>	Shrub	<u>Pinus strobus (10%)</u>
Tree	<u>Pinus strobus (15%)</u>	Shrub	<u>Vaccinium corymbosum (5%)</u>
Tree	<u>Quercus alba (10%)</u>	Herb	<u>Quercus alba (&lt;5%)</u>
Tree	<u>Betula alleghaniensis (10%)</u>	Herb	<u>Ilex verticillata (&lt;5%)</u>
Tree	<u>Fraxinus americana (5%)</u>	Woody Vine	<u>Smilax rotundifolia (5%)*</u>
Shrub	<u>Clethra alnifolia (45%)*</u>		

#### C. Inventory (Soils)

Whitman FSal, 0-3% slopes, extremely stony  
Soil Survey Unit  
Organic Fibric (0"-2"), Mucky Silt Loam (2"-10")  
Texture (upper part)  
NA  
Depth to Water Table

Very Poorly Drained  
Drainage Class  
10"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

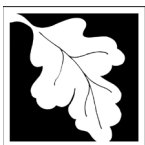
☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☒ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

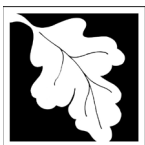
Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

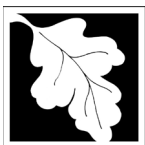
☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

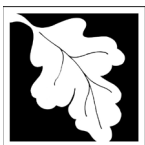
Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Bordering Vegetated Wetland D6

Location

Please refer to breakdown of impacts below.

11/23/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. D6: Secondary (tree clearing converted to shrub or emergent vegetation)		2,995 sf (0.07 acres)		0.07 acres
2.				
3.				
4.				
5.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

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### Certification

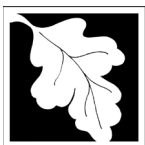
I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

Fall River, MA

Project Location (from NOI page 1)

Plot 4. Bordering Vegetated Wetland D6

Impact Area (number/name)

11/14/2017

Date(s) of Site Visit(s) and Data Collection

Cloudy, 44 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/23/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*M. Lamothe*

## II. Site Description (complete A or B under Classification - see instructions for full description)

### A. Classification

#### 1. For Wetland Resource Areas, complete the following:

System: Palustrine Subsystem: -

Class: Forested Subclass: Broad-Leaved Deciduous

#### Hydrology/Water Regime

☐ Permanently flooded

☒ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

#### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 90 50 0 25 15  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	Acer rubrum (85%)*		
Tree	Pinus strobus (5%)		
Shrub	Carpinus caroliniana (40%)*		
Shrub	Betula sp. (10%)		
Herb	Grass sp. (10%)*		
Herb	Rubus sp. (5%)		

#### C. Inventory (Soils)

Ridgebury FSal, 0-3% slopes, extremely stony	Poorly Drained
Soil Survey Unit	Drainage Class
Organic fibric (0"-2"), Silt Loam (2"-10")	10"
Texture (upper part)	Depth
10"	
Depth to Water Table	

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>12</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

<u>0</u>
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)
<u>0</u>
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)
<u>0</u>
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant      ☐ Present      ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

- ☐ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)
- ☒ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)
- ☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)
- ☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)
- ☐ Rock piles, crevices, or hollow logs suitable for:
- |                                |                               |                                    |                               |                                 |                                 |
|--------------------------------|-------------------------------|------------------------------------|-------------------------------|---------------------------------|---------------------------------|
| <input type="checkbox"/> otter | <input type="checkbox"/> mink | <input type="checkbox"/> porcupine | <input type="checkbox"/> bear | <input type="checkbox"/> bobcat | <input type="checkbox"/> turkey |
|--------------------------------|-------------------------------|------------------------------------|-------------------------------|---------------------------------|---------------------------------|
- ☐ vulture
- ☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

- |  |  |
|--|--|
| <input type="checkbox"/> Breeding amphibians | <input checked="" type="checkbox"/> Non-breeding amphibians (foraging, re-hydration) |
| <input type="checkbox"/> Turtles             | <input type="checkbox"/> Foraging waterfowl  |

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☒ Present ☐ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☒ Present ☐ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

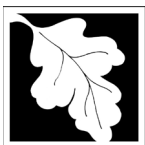
☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

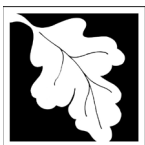
Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
For upland resource areas is the impact area part of contiguous forested habitat at least			
(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Bordering Vegetated Wetland D7 and Vernal Pool DP-5

Location

Please refer to breakdown of permanent, secondary, and temporary impacts below.

11/23/2021

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Secondary (tree clearing converted to shrub or emergent vegetation)		5,758 sf (0.13 acres)		0.13 acres
2.				
3.				
4.				
5.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Fall River, MA

Project Location (from NOI page 1)

Plot 5. Bordering Vegetated Wetland D7

Impact Area (number/name)

11/14/2017

Date(s) of Site Visit(s) and Data Collection

Cloudy, 44 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

11/23/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Forested

Subclass: Broad-Leaved Deciduous

Hydrology/Water Regime

☐ Permanently flooded

☒ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 90 65 10 <5 10  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	<u>Quercus rubra (60%)*</u>	Woody Vine	<u>Smilax rotundifolia (10%)*</u>
Tree	<u>Acer rubrum (20%)*</u>		
Tree	<u>Quercus alba (10%)</u>		
Shrub	<u>Vaccinium corymbosum (30%)*</u>		
Shrub	<u>Clethra alnifolia (30%)*</u>		
Herb	<u>Clethra alnifolia (10%)</u>		

#### C. Inventory (Soils)

Ridgebury FSal, 0-3% slopes, extremely stony  
Soil Survey Unit  
Organic (0"-2"), Silt Loam (2"-13")  
Texture (upper part)  
13"  
Depth to Water Table

Poorly Drained  
Drainage Class  
13"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☒ Abundant ☐ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>2</u>	<u>4</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☒ Present ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☒ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☒ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☒ Present ☐ Absent

Standing water present at least part of the growing season, suitable for use by

☒ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
For upland resource areas is the impact area part of contiguous forested habitat at least			
(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Vernal Pool DP2 in Isolated Vegetated Wetland D7A

Location

Please refer to breakdown of impacts below.

11/23/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Secondary (tree clearing converted to shrub or emergent vegetation)		530 sf (0.01 acres)		0.01 acres
2.				
3.				
4.				
5.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Fall River, MA

Project Location (from NOI page 1)

Plot 6. Vernal Pool DV2 and Isolated Vegetated Wetland D7A

Impact Area (number/name)

11/14/2017

Date(s) of Site Visit(s) and Data Collection

Cloudy, 44 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/23/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: \_\_\_\_\_

Class: Scrub-Shrub

Subclass: Broad-Leaved Deciduous

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 15 20 0 5 20  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	<u>Acer rubrum (10%)*</u>		
Tree	<u>Pinus strobus (5%)*</u>		
Shrub	<u>Vaccinium corymbosum (20%)*</u>		
Herb	<u>Vaccinium corymbosum (20%)*</u>		
Herb	<u>Smilax rotundifolia (5%)</u>		
Herb	<u>Osmunda regalis (&lt;5%)</u>		

#### C. Inventory (Soils)

Woodbridge FSaL, 0-8% slopes, extremely stony  
Organic (0"-2"), Silt Loam (2"-4"), Fine Sandy Loam (4"-14")  
NA  
Depth to Water Table

Moderately Well Drained  
Drainage Class  
14"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>5</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☒ Present ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☐ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☒ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☒ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☒ Present ☐ Absent

Standing water present at least part of the growing season, suitable for use by

☒ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

##### A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
For upland resource areas is the impact area part of contiguous forested habitat at least			
(forest interior nesting birds)	50 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	100 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	250 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	500 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Bordering Vegetated Wetland D8, Intermittent Stream SD8

Location

Please refer to breakdown of impacts below.

11/23/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Secondary (tree clearing converted to shrub or emergent vegetation)		387 sf (0.008 acres)		0.008 acres
2. Temporary (Stream crossing of SD8)		1,630 sf (0.04 acres)		0.04 acres
3.				
4.				
5.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Fall River, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D8, Intermittent Stream SD8

Impact Area (number/name)

11/14/2017

Date(s) of Site Visit(s) and Data Collection

Cloudy, 44 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

11/23/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Forested

Subclass: Broad-Leaved Deciduous

Hydrology/Water Regime

☐ Permanently flooded

☒ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 90 50 0 25 10  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	<u>Quercus alba (40%)*</u>	Shrub	<u>Fagus grandifolia (&lt;5%)</u>
Tree	<u>Pinus strobus (30%)*</u>	Herb	<u>Smilax rotundifolia (&lt;5%)</u>
Tree	<u>Fagus grandifolia (10%)</u>	Herb	<u>Vaccinium corymbosum (&lt;5%)</u>
Tree	<u>Carya ovata (10%)</u>		
Shrub	<u>Corylus cornuta (30%)*</u>		
Shrub	<u>Pinus strobus (20%)*</u>		

#### C. Inventory (Soils)

Ridgebury FSal, 3-8% slopes, extremely stony  
Soil Survey Unit  
Organic (0"-1"), Silt Loam (1"-10"), Fine Sandy Loam (10"-11")  
NA  
Depth to Water Table

Poorly Drained  
Drainage Class  
11"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☐ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☒ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
For upland resource areas is the impact area part of contiguous forested habitat at least			
(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways ☐ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Bordering Vegetated Wetland D11, Vernal Pool DP4.

Location

Please refer to breakdown of permanent, secondary, and temporary impacts below.

11/23/2021

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. D11: Secondary (tree clearing converted to shrub or emergent vegetation)		20,564 sf (0.47 acres)		0.47 acres
2. D11: Temporary (work pads and access)		4,676 sf (0.11 acres)		0.11 acres
3.				
4.				
5.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Fall River, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D11, Vernal Pool DP-4

Impact Area (number/name)

11/16/2017

Date(s) of Site Visit(s) and Data Collection

Cloudy, Light Rain, 47 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

11/23/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Forested

Subclass: Needle-Leaved Evergreen/Broad-Leaved Deciduous

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 80 65 0 20 40  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	<u>Pinus strobus (50%)*</u>	Shrub	<u>Viburnum dentatum (5%)</u>
Tree	<u>Acer rubrum (30%)*</u>	Shrub	<u>Prunus sp. (&lt;5%)</u>
Tree	<u>Quercus alba (5%)</u>	Shrub	<u>Chamaecyparis thyoides (&lt;5%)</u>
Shrub	<u>Clethra alnifolia (45%)*</u>	Herb	<u>Osmundastrum cinnamomeum (30%)*</u>
Shrub	<u>Vaccinium corymbosum (20%)*</u>	Herb	<u>Osmunda regalis (10%)*</u>
Shrub	<u>Smilax rotundifolia (5%)</u>	Herb	<u>Rubus hispidus (&lt;5%)</u>

#### C. Inventory (Soils)

Whitman FSal, 0-3% slopes, extremely stony  
Soil Survey Unit  
Organic (0"-3"), Mucky Silt Loam (3"-9")  
Texture (upper part)  
NA  
Depth to Water Table

Very Poorly Drained  
Drainage Class  
9"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☒ Present ☐ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 2

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>2</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☒ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☒ Present ☐ Absent

Standing water present at least part of the growing season, suitable for use by

☒ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☒ Present ☐ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☒ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☒ Present ☐ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
For upland resource areas is the impact area part of contiguous forested habitat at least			
(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



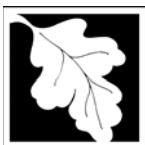
# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Bordering Vegetated Wetland D11A

Location

Please refer to breakdown of impacts below.

11/23/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Secondary (tree clearing converted to shrub or emergent vegetation)		1,257 sf (0.03 acres)		0. acres
2.)				
3.				
4.				
5.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

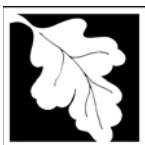
### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Fall River, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D11A.

Impact Area (number/name)

06/24/2021

Date(s) of Site Visit(s) and Data Collection

Sunny, 73 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

11/23/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. Lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Forested

Subclass: Broad-Leaved Deciduous

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 75 20 0 5 10  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	<u>Acer rubrum (70%)*</u>	Herb	<u>Osmundastrum cinnamomeum (5%)*</u>
Shrub	<u>Clethra alnifolia (20%)*</u>		
Shrub	<u>Carpinus caroliniana (5%)</u>		
Shrub	<u>Hamamelis virginiana (5%)</u>		

#### C. Inventory (Soils)

Whitman FSal, 0-3% slopes, extremely stony  
Soil Survey Unit  
Oi (0"-5"), Oa(5"-19")  
Texture (upper part)  
3"  
Depth to Water Table

Very Poorly Drained  
Drainage Class  
19"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

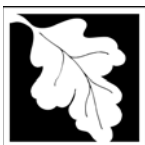
☐ Abundant ☐ Present ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☒ Present ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☒ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☒ Present ☐ Absent

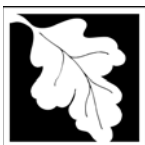
Standing water present at least part of the growing season, suitable for use by

☒ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Bordering Vegetated Wetland D12 and Bordering Land Subject to Flooding associated with the Copicut Reservoir

Please refer to breakdown of impacts below.

11/23/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Secondary (tree clearing converted to shrub or emergent vegetation)		1,123 sf (0.03 acres)		0.03 acres
2. Temporary (work pads and access)		982 sf (0.02 acres)		0.02 acres
3.				
4.				
5.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Fall River, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D12 and Bordering Land Subject to Flooding associated with the  
Copicut Reservoir

11/16/2017

Date(s) of Site Visit(s) and Data Collection

Cloudy, Windy, 47 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

11/23/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. Lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Forested

Subclass: Needle-Leaved Evergreen

Hydrology/Water Regime

☐ Permanently flooded

☒ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 95 10 10 0 0  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	<u>Pinus strobus (55%)*</u>		
Tree	<u>Chamaecyparis</u> <u>thyoides (45%)*</u>		
Tree	<u>Fagus grandifolia</u> <u>(&lt;5%)</u>		
Shrub	<u>Vaccinium</u> <u>corymbosum (10%)*</u>		
Woody Vine	<u>Smilax rotundifolia</u> <u>(10%)*</u>		

#### C. Inventory (Soils)

Paxton FSaL, 0-8% slopes, very stony  
Soil Survey Unit  
Organic (0"-3"), Sandy Loam (3"-6"), Silt Loam  
(6"-12")  
NA  
Depth to Water Table

Well Drained  
Drainage Class  
12"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 1

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☐ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☒ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Bordering Vegetated Wetlands D14 and D15 and Vernal Pool DP-7

Location

Please refer to breakdown of impacts below.

11/23/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Secondary (tree clearing converted to shrub or emergent vegetation) in D15		1,711 sf (0.04 acres)		0.04 acres
2. Temporary (work pads and access) in D15		939 sf (0.02 acres)		0.02 acres
3. Temporary (work pads and access) in D14		166 sf (0.004 acres)		0.004 acres
4.				
5.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Fall River, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetlands D14 and D15 and Vernal Pool DP-7

Impact Area (number/name)

11/16/2017

Date(s) of Site Visit(s) and Data Collection

Cloudy, Windy, 47 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

11/23/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Forested

Subclass: Broad-Leaved Deciduous

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 90 35 5 15 30  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	<u>Acer rubrum (60%)*</u>	Shrub	<u>Clethra alnifolia (5%)</u>
Tree	<u>Quercus alba (15%)</u>	Shrub	<u>Fagus grandifolia (&lt;5%)</u>
Tree	<u>Nyssa sylvatica (5%)</u>	Herb	<u>Rubus hispida (25%)*</u>
Tree	<u>Pinus strobus (5%)</u>	Herb	<u>Grass sp. (5%)</u>
Shrub	<u>Vaccinium corymbosum (20%)*</u>	Woody Vines	<u>Smilax rotundifolia (5%)*</u>
Shrub	<u>Pinus strobus (10%)*</u>		

#### C. Inventory (Soils)

Ridgebury FSal, 0-3% slopes, extremely stony  
Soil Survey Unit  
Organic (0"-2"), Silt Loam (2"-14")  
Texture (upper part)  
NA  
Depth to Water Table

Poorly Drained  
Drainage Class  
14"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant      ☐ Present      ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☐ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☒ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☒ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter      ☐ mink      ☐ porcupine      ☐ bear      ☐ bobcat      ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☒ Present      ☐ Absent

Standing water present at least part of the growing season, suitable for use by

☒ Breeding amphibians      ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles      ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Bordering Vegetated Wetland D16A and Bordering Land Subject to Flooding associated with the Copicut Reservoir

Please refer to breakdown of impacts below.

11/23/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Secondary (tree clearing converted to shrub or emergent vegetation)		1,133 sf (0.03 acres)		0.03 acres
2. Temporary (work pads in access)		981 sf (0.02 acres)		0.02 acres
3.				
4.				
5.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Fall River, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D16A and Bordering Land Subject to Flooding associated with the  
Copicut Reservoir

11/15/2017

Date(s) of Site Visit(s) and Data Collection

Sunny, 44 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

11/23/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Forested

Subclass: Broad-Leaved Deciduous

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 85 50 0 20 30  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	<u>Acer rubrum (65%)*</u>	Shrub	<u>Kalmia angustifolia (5%)</u>
Tree	<u>Pinus strobus (10%)</u>	Herb	<u>Carex sp. (20%)*</u>
Tree	<u>Betula papyrifera (5%)</u>	Herb	<u>Juncus effusus (10%)*</u>
Tree	<u>Pinus rigida (5%)</u>		
Shrub	<u>Vaccinium corymbosum (40%)*</u>		
Shrub	<u>Clethra alnifolia (10%)</u>		

#### C. Inventory (Soils)

<u>Udorthents, smoothed</u>	<u>None Listed</u>
<u>Soil Survey Unit</u>	<u>Drainage Class</u>
<u>Organic (0"-2"), Sandy Loam (2"-11"), Loamy Sand with Gravels (11"-17")</u>	<u>17"</u>
<u>NA</u>	<u>Depth</u>
<u>Depth to Water Table</u>	

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>3</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☐ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☐ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
For upland resource areas is the impact area part of contiguous forested habitat at least			
(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Bordering Vegetated Wetlands D17 and D18 and BLSF associated with the Copicut Reservoir

Please refer to breakdown of impacts below.

11/23/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. D18: Secondary (tree clearing converted to shrub or emergent vegetation)		18,254 sf (0.42 acres)		0.42 acres
2. D18: Temporary (work pads, pull pads, and access)		9,204 sf (0.21 acres)		0.21 acres
3. D17: Temporary (work pads and access)		3,416 sf (0.08 acres)		0.08 acres
4.				
5.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Fall River, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetlands D17 and D18

Impact Area (number/name)

11/15/2017

Date(s) of Site Visit(s) and Data Collection

Partly Sunny, 44 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

11/23/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Forested

Subclass: Broad-Leaved Deciduous

##### Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

- B. Inventory (Plant community): \*\*\*Plant community inventoried in BVW D18. BVW D17 is predominately scrub-shrub

% Cover: 90 40 5 30 15  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	<u>Betula lenta (45%)*</u>	Herb	<u>Osmundastrum cinnamomeum (10%)*</u>
Tree	<u>Fagus grandifolia (20%)*</u>	Herb	<u>Juncus effusus (5%)*</u>
Tree	<u>Pinus strobus (15%)</u>		
Tree	<u>Acer rubrum (10%)</u>		
Shrub	<u>Vaccinium corymbosum (30%)*</u>		
Shrub	<u>Pinus strobus (10%)*</u>		

- C. Inventory (Soils)

Ridgebury FSA, 3-8% slopes, extremely stony  
Soil Survey Unit  
Organic fibric (0"-2"), Fine Sand (2"-11")  
Texture (upper part)  
3"  
Depth to Water Table

Poorly Drained  
Drainage Class  
11"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☐ Present ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☐ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☒ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☒ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present ☒ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands Program

# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Bordering Vegetated Wetland D19 and D19A and intermittent stream SD-19

Location

Please refer to breakdown of impacts below.

11/23/2021

Size of Area Being Impacted

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. D19A and SD-19A: Secondary (tree clearing converted to shrub or emergent vegetation)		151 sf (0.003 acres)		0.003 acres
2. D19 Temporary: (work pads and access)		2,430 sf (0.06 acres)		0.06 acres
3.				
4.				
5.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Fall River, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D19 and D19A and intermittent stream SD-19

Impact Area (number/name)

11/15/2017

Date(s) of Site Visit(s) and Data Collection

Sunny, 44 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

11/23/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

###### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Scrub-Shrub

Subclass: Broad-Leaved Deciduous

Hydrology/Water Regime

☐ Permanently flooded

☒ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

###### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 10 80 0 10 65  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	<u>Pinus strobus (5%)*</u>		
Tree	<u>Quercus alba (5%)*</u>		
Shrub	<u>Smilax rotundifolia (70)*</u>		
Shrub	<u>Vaccinium corymbosum (15%)</u>		
Herb	<u>Rubus hispidus (50%)*</u>		
Herb	<u>Grass sp. (15%)</u>		

#### C. Inventory (Soils)

Ridgebury FSA, 0-3% slopes, extremely stony  
Soil Survey Unit  
Organic (0"-3"), Silt Loam (3"-11"), Sandy Loam  
with gravels (11"-12")  
NA  
Depth to Water Table

Poorly Drained  
Drainage Class  
12"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☒ Abundant ☐ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

<u>1</u>
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)
<u>0</u>
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)
<u>0</u>
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant      ☐ Present      ☒ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

- ☐ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)
- ☒ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)
- ☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)
- ☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)
- ☐ Rock piles, crevices, or hollow logs suitable for:
- |                                |                               |                                    |                               |                                 |   |
|--------------------------------|-------------------------------|------------------------------------|-------------------------------|---------------------------------|---|
| <input type="checkbox"/> otter | <input type="checkbox"/> mink | <input type="checkbox"/> porcupine | <input type="checkbox"/> bear | <input type="checkbox"/> bobcat | <input type="checkbox"/> turkey vulture |
|--------------------------------|-------------------------------|------------------------------------|-------------------------------|---------------------------------|---|
- ☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☐ Present      ☒ Absent

Standing water present at least part of the growing season, suitable for use by

- |  |   |
|--|---|
| <input type="checkbox"/> Breeding amphibians | <input type="checkbox"/> Non-breeding amphibians (foraging, re-hydration) |
| <input type="checkbox"/> Turtles             | <input type="checkbox"/> Foraging waterfowl                               |

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present      ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least	1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(marsh and waterbirds)	2.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Bordering Vegetated Wetland D20

Location

Please refer to breakdown of permanent, secondary, and temporary impacts below.

11/29/2021

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (structure footprint)		48 sf (0.001 acres)		0.001 acres
2. Secondary (tree clearing converted to shrub or emergent vegetation)		18,358 sf (0.42 acres)		0.42 acres
3. Temporary (work pads and access)		19,732 sf (0.45 acres)		0.45 acres
4.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Fall River, MA

Project Location (from NOI page 1)

Bordering Vegetated Wetland D20

Impact Area (number/name)

11/15/2017

Date(s) of Site Visit(s) and Data Collection

Sunny, 44 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

Person completing form per 310 CMR 10.60(1)(b)

11/29/2021

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*m. lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: Palustrine

Subsystem: -

Class: Forested

Subclass: Broad-Leaved Deciduous

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☒ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Community Name

Vegetation Description

Physical Description





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 90 60 0 10 25  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	Acer rubrum (45%)*	Shrub	Pinus strobus (20%)
Tree	Quercus alba (30%)*	Shrub	Fagus grandifolia (5%)
Tree	Betula lenta (10%)	Shrub	Carpinus caroliniana (<5%)
Tree	Pinus strobus (5%)	Herb	Clethra alnifolia (15%)*
Tree	Fagus grandifolia (5%)	Herb	Pinus strobus (10%)*
Shrub	Clethra alnifolia (35%)*	Herb	Carex sp. (5%)
		Herb	Smilax rotundifolia (<5%)

#### C. Inventory (Soils)

Whitman FSal, 0-3% slopes, extremely stony  
Soil Survey Unit  
Organic (0"-4"), Silt Loam (4"-9"), Fine Sand (9"-15")  
11"  
Depth to Water Table

Very Poorly Drained  
Drainage Class  
15"  
Depth

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☒ Present ☐ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☒ Present ☐ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☒ Present ☐ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>5</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☒ Present ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☒ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☐ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☒ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☒ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☒ Present ☐ Absent

Standing water present at least part of the growing season, suitable for use by

☒ Breeding amphibians ☒ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☐ Present ☒ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☐ Present ☒ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☐ Present ☒ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	10.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	25.0 acres in size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
For upland resource areas is the impact area part of contiguous forested habitat at least			
(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Acushnet to Fall River Reliability Project

Project Name

Fall River, MA. Upland Bordering Land Subject to Flooding associated with the Copicut Reservoir and RFA associated with Perennial Stream SD11 (Copicut River)

Please refer to breakdown of permanent, secondary, and temporary impacts below.

11/29/2021

Date

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Permanent (Structure footprint)			BLSF: 48 sf (0.001 acres)	0.001 acres
2. Secondary (tree clearing converted to shrub or emergent vegetation)			BLSF: 33,333 sf (0.77 acres)	0.77 acres
3. Secondary (tree clearing converted to shrub or emergent vegetation)			RFA: 4,074 sf (0.09 acres)	0.12 acres
4. Temporary (work pads and access)			BLSF: 14,195 sf (0.33 acres)	0.33 acres
5. Temporary (work pads and access)			RFA: 338 sf (0.001 acres)	0.001 acres

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

Please refer to attached Wildlife Habitat Evaluation for Fall River which also includes a photographic log.

### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

*M. Lamothe*

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b))

M. Lamothe

Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

Fall River, MA

Project Location (from NOI page 1)

Upland Bordering Land Subject to Flooding associated with the Copicut Reservoir and Upland RFA associated with Perennial Stream SD11 (Copicut River)

06/24/2021

Date(s) of Site Visit(s) and Data Collection

Sunny, 73 degrees for temperature

Weather Conditions During Site Visit (if snow cover, include depth)

M. Lamothe

11/29/2021

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

*M. Lamothe*

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: \_\_\_\_\_

Subsystem: \_\_\_\_\_

Class: \_\_\_\_\_

Subclass: \_\_\_\_\_

Hydrology/Water Regime

☐ Permanently flooded

☐ Saturated

☐ Intermittently exposed

☐ Temporarily flooded

☐ Semi-permanently flooded

☐ Intermittently flooded

☐ Seasonally flooded

☐ Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Eastern white pine

Community Name

Eastern white pine is pure or usually predominant. In pure stands the understory is composed primarily of ericaceous shrubs, such as blueberry.

Widespread in central New England from sea level to elevations of 2500 feet. Establishment is often easier on poor sites because hardwood competition is less.





# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 80 10 0 0 5  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Tree	<u>Pinus strobus (60%)*</u>	Shrub	<u>Quercus alba (&lt;5%)*</u>
Tree	<u>Quercus rubra (10%)</u>	Shrub	<u>Clethra alnifolia (&lt;5%)</u>
Tree	<u>Fagus grandifolia (5%)</u>	Herb	<u>Maianthemum canadense (&lt;5%)</u>
Tree	<u>Juniperus virginiana (&lt;5%)</u>		
Shrub	<u>Hamamelis virginiana (5%)</u>		
Shrub	<u>Fagus grandifolia (5%)</u>		

#### C. Inventory (Soils)

<u>Paxton FSaL, 0-8% slopes, very stony</u>	<u>Well Drained</u>
<u>Soil Survey Unit</u>	<u>Drainage Class</u>
<u>SiL (0"-1"), FSaL with gravel (1"-8")</u>	<u>8"</u>
<u>Texture (upper part)</u>	<u>Depth</u>
<u>No water table</u>	
<u>Depth to Water Table</u>	

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

☐ Abundant ☐ Present ☒ Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

☐ Abundant ☐ Present ☒ Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

☐ Present ☒ Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
6-12" dbh	12-18" dbh	18-24" dbh	> 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

☐ Abundant ☒ Present ☐ Absent

Cover/Perches/Basking/Denning/Nesting Habitat

☐ Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

☐ Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

☐ Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

☒ Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

☐ Rock piles, crevices, or hollow logs suitable for:

☐ otter ☐ mink ☐ porcupine ☐ bear ☐ bobcat ☐ turkey vulture

☐ Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

☒ Present ☐ Absent

Standing water present at least part of the growing season, suitable for use by

☐ Breeding amphibians ☐ Non-breeding amphibians (foraging, re-hydration)

☐ Turtles ☐ Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

☐ Present ☒ Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

☒ Present ☐ Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

☒ Present ☐ Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

☐ Present ☒ Absent

Undercut or overhanging banks (small mammals, mink, weasels)

☐ Present ☒ Absent

Vertical sandy banks (bank swallow, kingfisher)

☐ Present ☒ Absent

Areas of ice-free open water in winter

☒ Present ☐ Absent

Mud flats

☐ Present ☒ Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

☐ Present ☒ Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

☐ Present ☒ Absent

Bank swallow colony

☐ Present ☒ Absent

Nest(s) present of

☐ Bald Eagle

☐ Osprey

☐ Great Blue Heron

Den(s) present of

☐ Otter

☐ Mink

☐ Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- ☐ 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- ☐ 200' of Great Blue Heron or osprey nest(s)
- ☐ 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (pied-billed grebe) ☐ Present ☒ Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren) ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm ☐ Present ☒ Absent

Flooded > 25 cm (least bittern, common moorhen) ☐ Present ☒ Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Is the impact area part of a wetland complex at least	2.5 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(turtles, frogs, waterfowl, mammals)	5.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	10.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	25.0 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

For upland resource areas is the impact area part of contiguous forested habitat at least

(forest interior nesting birds)	50 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	100 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	250 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	500 acres in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(grassland nesting birds)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(special habitat such as gallery floodplain forest, alder thicket, etc.)	> 1.0 acre in size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### B. Connectivity with adjoining natural habitats

- ☐ No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- ☒ Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- ☐ Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- ☐ Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- ☐ Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

#### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- ☐ Evidence of significant chemical contamination
- ☐ Evidence of significant levels of dumping
- ☐ Evidence of significant erosion or sedimentation problems
- ☐ Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- ☐ Disturbance from roads or highways
- ☒ Other human disturbance
- ☐ Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance



## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)


#### VI. Quantification Table for Important Habitat Characteristics


Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8

## **ATTACHMENT B   HABITAT CHARACTERISTICS PHOTOGRAPH**

PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D20		
<b>Photo No.</b> 1	<b>Date:</b> 11-15-17	
<b>Direction Photo Taken:</b>  East		
<b>Description:</b>  Potential den habitat that is a suitable size for a mink.		
<b>PHOTOGRAPHIC LOG</b>		
<b>Site Location:</b> BVW D19		
<b>Photo No.</b> 2	<b>Date:</b> 08-24-17	
<b>Direction Photo Taken:</b>  Southeast		
<b>Description:</b>  Roundleaf greenbrier, highbush blueberry, and maleberry provide a food source for wildlife.		



PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D18		
<b>Photo No.</b> 3	<b>Date:</b> 11-15-17	
<b>Direction Photo Taken:</b>  Northwest		
<b>Description:</b>  Potential den habitat that is a suitable size for a mink.		

PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D17		
<b>Photo No.</b> 4	<b>Date:</b> 08-23-17	
<b>Direction Photo Taken:</b>  Southeast		
<b>Description:</b>  Highbush blueberry, maleberry, and roundleaf greenbrier provide a food source for wildlife in the maintained portion of the ROW.		





PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D16A		
<b>Photo No.</b> 5	<b>Date:</b> 11-15-17	
<b>Direction Photo Taken:</b>  East		
<b>Description:</b>  A dead standing tree with a 6-12 inch dbh range provides potential for cavities and perches. Three dead standing trees are located within BVW 16A.		
<b>PHOTOGRAPHIC LOG</b>		
<b>Site Location:</b> Vernal Pool DP-7 in BVW D15		
<b>Photo No.</b> 6	<b>Date:</b> 04-27-18	
<b>Direction Photo Taken:</b>  East		
<b>Description:</b>  Vernal pool DP-7 is located within BVW D15. This vernal pool contains fairy shrimp.		

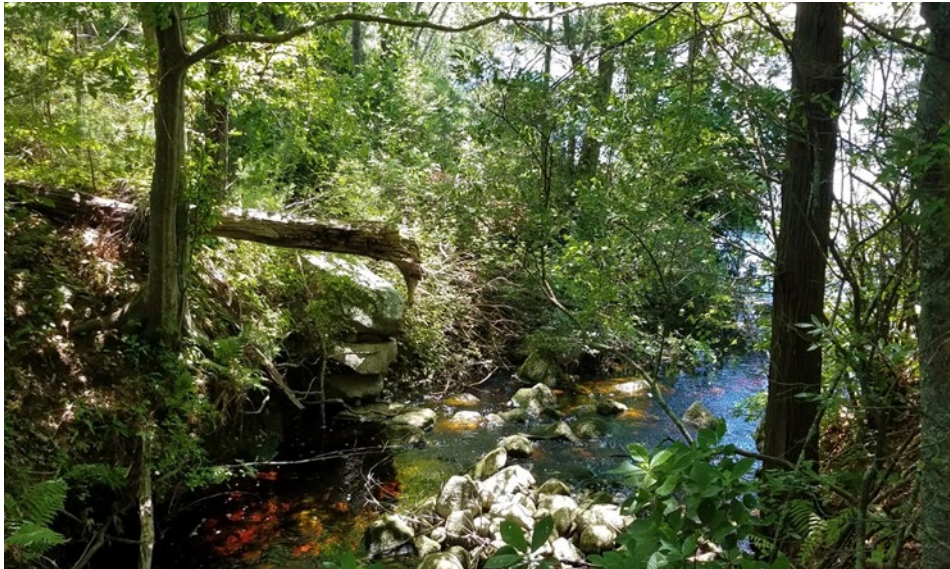



PHOTOGRAPHIC LOG		
<b>Site Location:</b> BVW D14		
<b>Photo No.</b> 7	<b>Date:</b>	
<b>Direction Photo Taken:</b>  Northwest		
<b>Description:</b>  BVW D14 (right) and BVW D15 (left) are shown on the ponded access road. American toads were present in the ponded water. There was an average		
PHOTOGRAPHIC LOG		
<b>Site Location:</b> Upland BLSF of the Copicut Reservoir		
<b>Photo No.</b> 8	<b>Date:</b> 11-16-17	
<b>Direction Photo Taken:</b>  Northeast		
<b>Description:</b>  Highbush blueberry and maleberry comprise the shrub understory of an Eastern white pine forest. These shrubs are a wildlife food source.		





PHOTOGRAPHIC LOG		
Site Location: BVW D12 and BLSF of the Copicut Reservoir		
Photo No. 9	Date: 11-16-17	
Direction Photo Taken:  Northwest		
Description:  Gray birch branches overhang the Copicut Reservoir. The water line of the Reservoir fluctuates. These branches offer perching opportunities for water birds.		
PHOTOGRAPHIC LOG		
Site Location: Upland RFA of the Copicut River and upland RFA of the Copicut Reservoir		
Photo No. 10	Date: 11-16-17	
Direction Photo Taken:  West		
Description:  The upland is dominated by relatively large Eastern white pine trees. An Eastern white pine with a dbh of 32 inches is located 20 feet outside the RFA.		





PHOTOGRAPHIC LOG		
Site Location: Upland RFA of the Copicut River and upland BLSF of the Copicut Reservoir		
Photo No. 11	Date: 06-24-21	
Direction Photo Taken:  Southeast		
Description:  A fallen branch overhangs the Copicut River providing habitat for perching birds or turtles, snakes, and frogs.		
PHOTOGRAPHIC LOG		
Site Location: BVW D11A		
Photo No. 12	Date: 06-24-21	
Direction Photo Taken:  Southwest		
Description:  A standing dead tree in the 6-12 inch dbh range provides the potential for cavities and perches.		





PHOTOGRAPHIC LOG		
Site Location: BVW D11 and RFA of the Copicut River		
Photo No. 13	Date: 07-21-17	
Direction Photo Taken:  East		
Description:  Cinnamon fern and young sweet pepperbush provide dense herbaceous cover during the growing season.		
PHOTOGRAPHIC LOG		
Site Location: BVW D44		
14	Date: 11-14-17	
Direction Photo Taken:  Southeast		
Description:  One dead standing tree in the 6-12 inch dbh range offers the potential for cavities or perches.		





PHOTOGRAPHIC LOG		
<b>Site Location:</b> Vernal Pool DP-2 in Isolated Vegetated Wetland D7A		
<b>Photo No.</b> 15	<b>Date:</b>	
<b>Direction Photo Taken:</b>  East		
<b>Description:</b>  Vernal pool DP-2 is located within an Eastern white pine forest. The vernal pool supports populations of wood frog, spotted salamander, and fairy shrimp.		
PHOTOGRAPHIC LOG		
<b>Site Location:</b> Vernal Pool DP-5 in BVW D7		
<b>Photo No.</b> 16	<b>Date:</b> 04-24-18	
<b>Direction Photo Taken:</b>  North		
<b>Description:</b>  Vernal pool DP-5 located within BVW D7 supports populations of spotted salamanders and wood frogs.		



PHOTOGRAPHIC LOG		
Site Location: BVW D7		
Photo No. 17	Date: 11-14-17	
Direction Photo Taken:  West		
Description:  A standing dead tree in the 12-18 inch dbh range provides the potential for cavities and perches.		


PHOTOGRAPHIC LOG		
Site Location: BVW D6 and Intermittent Stream SD-5		
Photo No. 18	Date: 11-14-17	
Direction Photo Taken:  Southeast		
Description:  Intermittent Stream SD-5 provides foraging and rehydration opportunities for non-breeding amphibians for a portion of the growing season.		



PHOTOGRAPHIC LOG		
Site Location: BVW D6		
Photo No. 19	Date: 11-14-17	
Direction Photo Taken:  South		
Description:  Large woody debris on the ground offers potential habitat for small mammals, amphibians, and reptiles.		
PHOTOGRAPHIC LOG		
Site Location: BVW D2		
Photo No. 20	Date: 07-11-17	
Direction Photo Taken:  Northwest		
Description:  BVW D2 has a dense shrub stratum which is dominated by sweet pepperbush and may provide veery nesting habitat.		



PHOTOGRAPHIC LOG		
Site Location: BVW D1		
Photo No. 21	Date: 06-29-17	
Direction Photo Taken:  Northwest		
Description:  Highbush blueberry and roundleaf greenbrier provide a food source for wildlife in the maintained portion of the ROW.		

PHOTOGRAPHIC LOG		
Site Location: BVW L1		
Photo No. 22	Date: 04-24-11	
Direction Photo Taken:  Southwest		
Description:  Vernal pool LP-1 located within BVW L1 supports populations of spotted salamanders and wood frogs.		