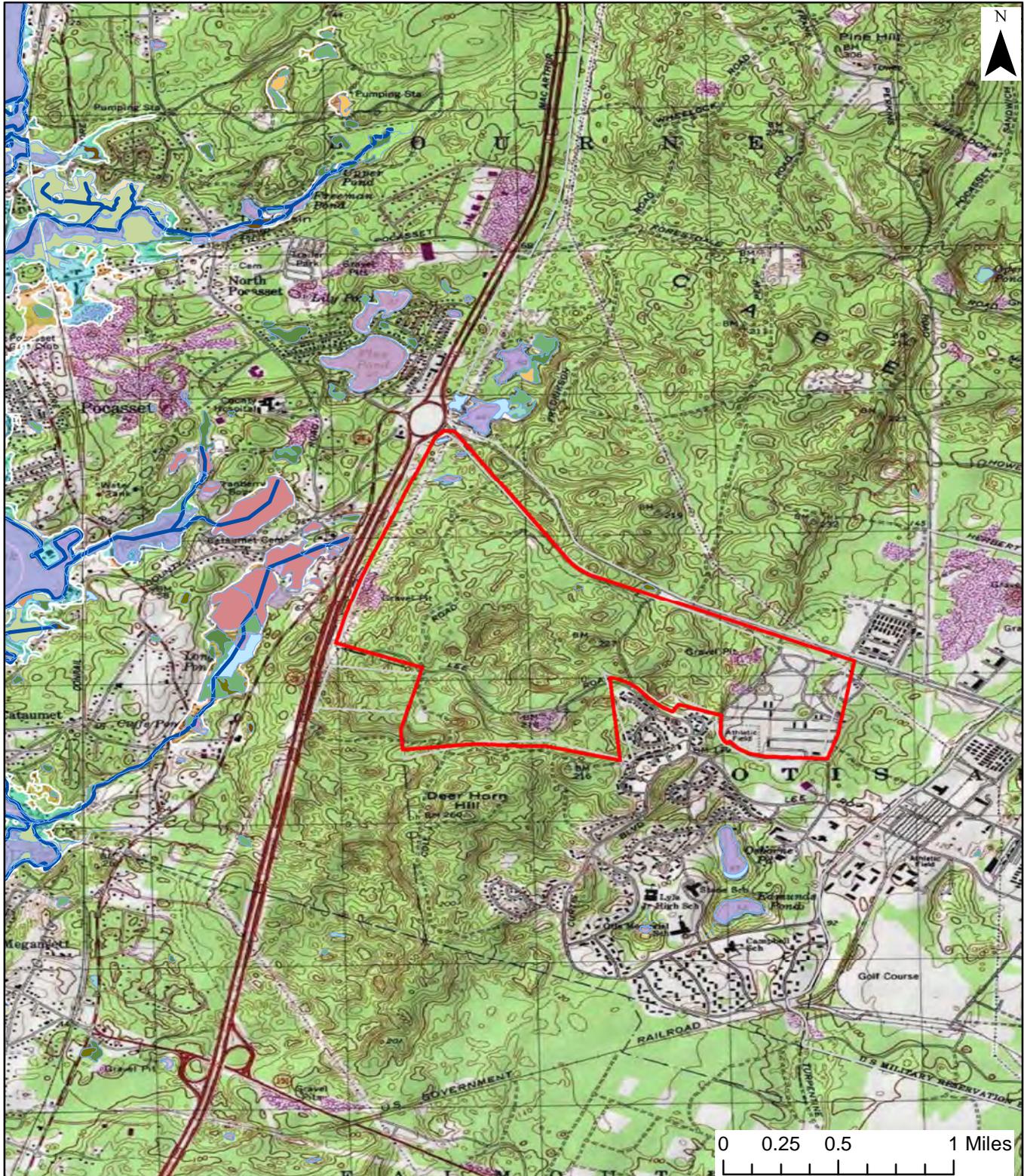


# Locus Map

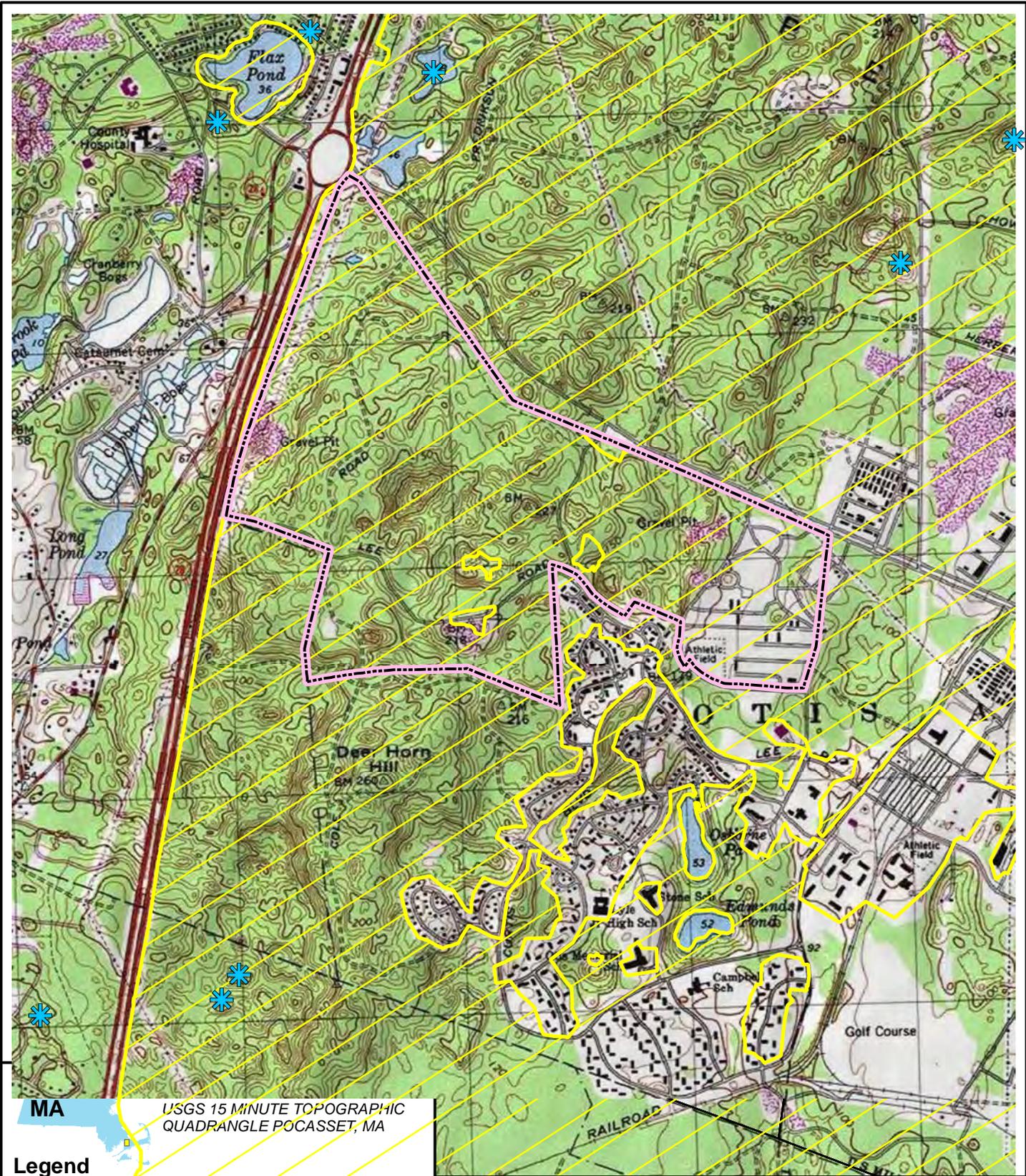


- 1% Annual Chance Flood Hazard
- MassDEP Hydrologic Connections
- NHD Streams
- NWI Wetlands
- MNC Property Boundary

### MassDEP Wetland Categories

- Barrier Beach System
- Barrier Beach- Coastal Beach
- Bog
- Coastal Bank Bluff or Sea Cliff
- Coastal Beach
- Coastal Dune
- Cranberry Bog

- Deep Marsh
- Open Water
- Salt Marsh
- Shallow Marsh Meadow or Fen
- Shrub Swamp
- Wooded Swamp Coniferous
- Wooded Swamp Deciduous
- Wooded Swamp Mixed Trees



MA

USGS 15 MINUTE TOPOGRAPHIC QUADRANGLE POCASSET, MA

**Legend**

-  Certified Vernal Pools (June 2018)
-  NHESP Priority Habitats of Rare Species
-  Property Boundary
-  Town Boundaries



**SITE LOCUS AND NHESP PRIORITY AND ESTIMATED HABITATS AND CERTIFIED VERNAL POOLS**

Veterans Affairs Massachusetts National Cemetery  
Bourne, Massachusetts

SCALE	DATE	PROJECT NO.
1:24000	09/20	60587570

Figure Number
1



# WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40  
and the Town of Bourne Wetlands Protection Bylaw

## A. General Information

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



From:

Town of Bourne  
Conservation Commission

To: Applicant

US Department of Veterans Affairs – MA National Cemetery  
Name  
Connery Avenue  
Mailing Address  
Bourne MA 02532  
City/Town State Zip Code

Property Owner (if different from applicant):

Name  
Mailing Address  
City/Town State Zip Code

1. Title and Date (or Revised Date if applicable) of Final Plans and Other Documents:

Figure 1 Wetland Review Area	NA
Title	Date
Figures 2, 3, & 4 (Wetlands 1, 7, & 13)	NA
Title	Date
Photographic log	01/24/2019
Title	Date

2. Date Request Filed:

March 13, 2019

## B. Determination

Pursuant to the authority of M.G.L. c. 131, § 40, the Conservation Commission considered your Request for Determination of Applicability, with its supporting documentation, and made the following Determination.

Project Description (if applicable):

Wetland jurisdiction determination (Bylaw only)

Project Location:

Veterans Cemetary, Connery Ave.  
Street Address  
48  
Assessors Map/Plat Number

Bourne  
City/Town  
82  
Parcel/Lot Number



## WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40  
and the Town of Bourne Wetlands Protection Bylaw

### B. Determination (cont.)

The following Determination(s) is/are applicable to the proposed site and/or project relative to the Wetlands Protection Act and regulations:

Positive Determination

Note: No work within the jurisdiction of the Wetlands Protection Act may proceed until a final Order of Conditions (issued following submittal of a Notice of Intent or Abbreviated Notice of Intent) or Order of Resource Area Delineation (issued following submittal of Simplified Review ANRAD) has been received from the issuing authority (i.e., Conservation Commission or the Department of Environmental Protection).

1. The area described on the referenced plan(s) is an area subject to protection under the Act. Removing, filling, dredging, or altering of the area requires the filing of a Notice of Intent.

2a. The boundary delineations of the following resource areas described on the referenced plan(s) are confirmed as accurate. Therefore, the resource area boundaries confirmed in this Determination are binding as to all decisions rendered pursuant to the Wetlands Protection Act and its regulations regarding such boundaries for as long as this Determination is valid.

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2b. The boundaries of resource areas listed below are not confirmed by this Determination, regardless of whether such boundaries are contained on the plans attached to this Determination or to the Request for Determination.

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3. The work described on referenced plan(s) and document(s) is within an area subject to protection under the Act and will remove, fill, dredge, or alter that area. Therefore, said work requires the filing of a Notice of Intent.

4. The work described on referenced plan(s) and document(s) is within the Buffer Zone and will alter an Area subject to protection under the Act. Therefore, said work requires the filing of a Notice of Intent or ANRAD Simplified Review (if work is limited to the Buffer Zone).

5. The area and/or work described on referenced plan(s) and document(s) is subject to review and approval by:

\_\_\_\_\_  
Name of Municipality

Pursuant to the following municipal wetland ordinance or bylaw:

\_\_\_\_\_  
Name

\_\_\_\_\_  
Ordinance or Bylaw Citation



## WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40  
and the Town of Bourne Wetlands Protection Bylaw

### B. Determination (cont.)

6. The following area and/or work, if any, is subject to a municipal ordinance or bylaw but not subject to the Massachusetts Wetlands Protection Act:
- 

7. If a Notice of Intent is filed for the work in the Riverfront Area described on referenced plan(s) and document(s), which includes all or part of the work described in the Request, the applicant must consider the following alternatives. (Refer to the wetland regulations at 10.58(4)c. for more information about the scope of alternatives requirements):

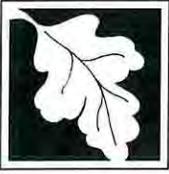
- Alternatives limited to the lot on which the project is located.
- Alternatives limited to the lot on which the project is located, the subdivided lots, and any adjacent lots formerly or presently owned by the same owner.
- Alternatives limited to the original parcel on which the project is located, the subdivided parcels, any adjacent parcels, and any other land which can reasonably be obtained within the municipality.
- Alternatives extend to any sites which can reasonably be obtained within the appropriate region of the state.

#### Negative Determination

Note: No further action under the Wetlands Protection Act is required by the applicant. However, if the Department is requested to issue a Superseding Determination of Applicability, work may not proceed on this project unless the Department fails to act on such request within 35 days of the date the request is post-marked for certified mail or hand delivered to the Department. Work may then proceed at the owner's risk only upon notice to the Department and to the Conservation Commission. Requirements for requests for Superseding Determinations are listed at the end of this document.

1. The area described in the Request is not an area subject to protection under the Act or the Buffer Zone.
2. The work described in the Request is within an area subject to protection under the Act, but will not remove, fill, dredge, or alter that area. Therefore, said work does not require the filing of a Notice of Intent.
3. The work described in the Request is within the Buffer Zone, as defined in the regulations, but will not alter an Area subject to protection under the Act. Therefore, said work does not require the filing of a Notice of Intent, subject to the following conditions (if any).
- 

4. The work described in the Request is not within an Area subject to protection under the Act (including the Buffer Zone). Therefore, said work does not require the filing of a Notice of Intent, unless and until said work alters an Area subject to protection under the Act.



## WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40  
and the Town of Bourne Wetlands Protection Bylaw

### B. Determination (cont.)

5. The area described in the Request is subject to protection under the Act. Since the work described therein meets the requirements for the following exemption, as specified in the Act and the regulations, no Notice of Intent is required:

Exempt Activity (site applicable statutory/regulatory provisions)

6. The area and/or work described in the Request is not subject to review and approval by:

Name of Municipality

Pursuant to a municipal wetlands ordinance or bylaw.

Bourne Wetland Protection Bylaw  
Name

Article 3.7  
Ordinance or Bylaw Citation

### C. Authorization

This Determination is issued to the applicant and delivered as follows:

- by hand delivery on \_\_\_\_\_  by certified mail, return receipt requested on \_\_\_\_\_

Date

Date

04/11/2019

This Determination is valid for **three years** from the date of issuance (except Determinations for Vegetation Management Plans which are valid for the duration of the Plan). This Determination does not relieve the applicant from complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.

This Determination must be signed by a majority of the Conservation Commission. A copy must be sent to the appropriate DEP Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/>) and the property owner (if different from the applicant).

Signatures:

*RM Gray*  
*Thomas L. Legier*  
*Elise Sedue*  
*[Signature]*

*[Signature]*

04/04/2019

Date



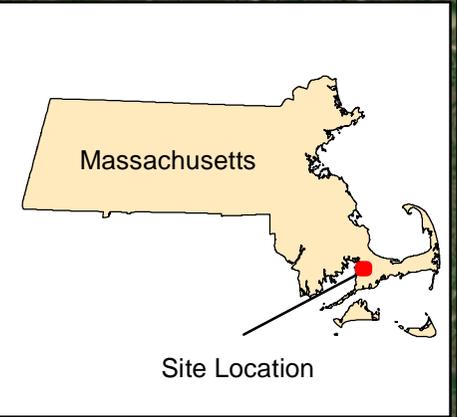
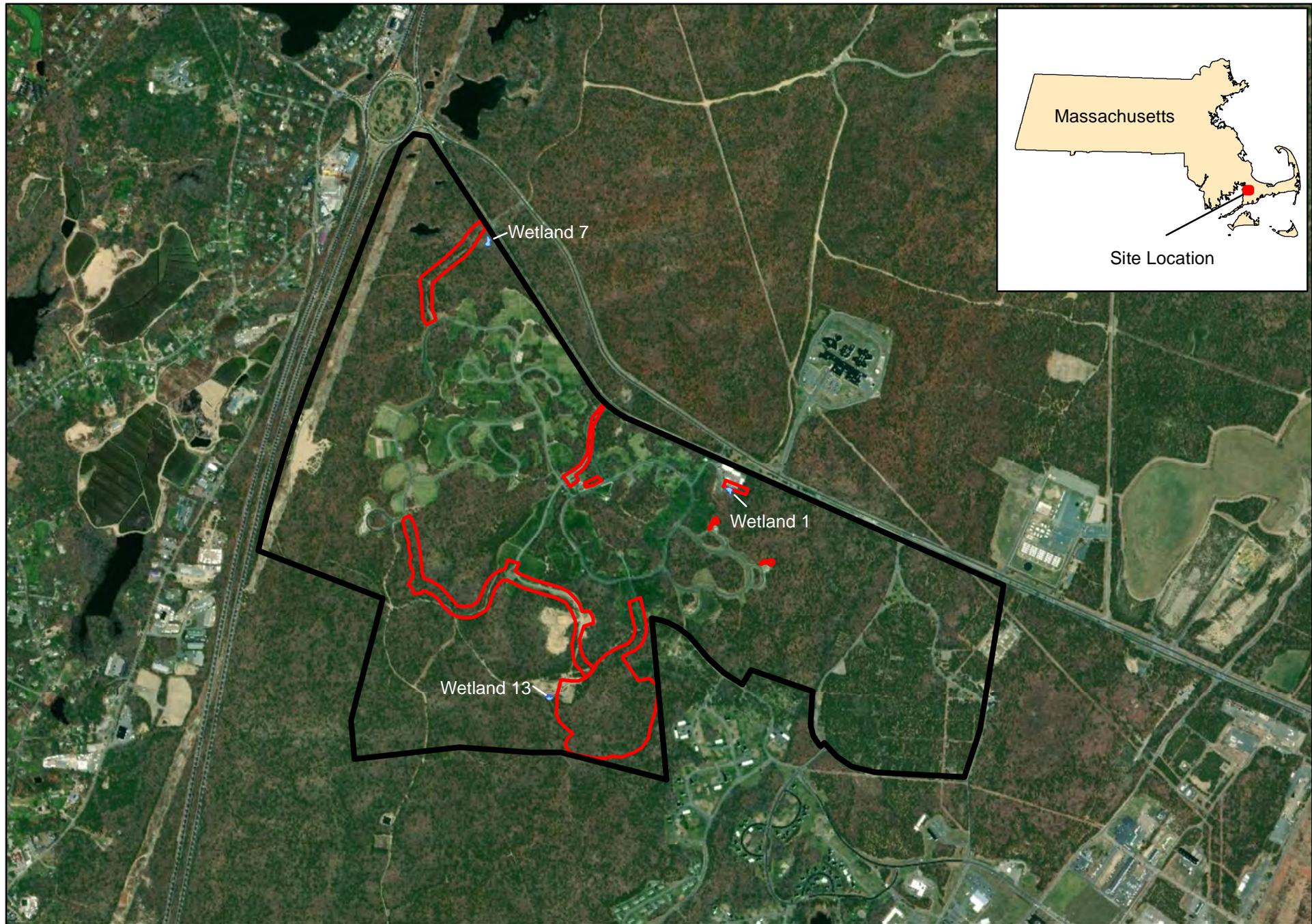
## WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40  
and the Town of Bourne Wetlands Protection Bylaw

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### D. Appeals

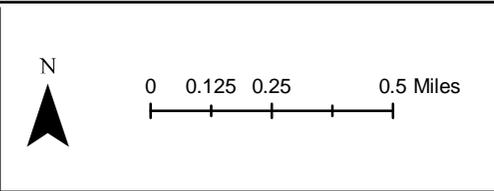
The applicant, owner, any person aggrieved by this Determination, any owner of land abutting the land upon which the proposed work is to be done, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate Department of Environmental Protection Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/>) to issue a Superseding Determination of Applicability. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and Fee Transmittal Form (see Request for Departmental Action Fee Transmittal Form) as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Determination. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant if he/she is not the appellant. The request shall state clearly and concisely the objections to the Determination which is being appealed. To the extent that the Determination is based on a municipal ordinance or bylaw and not on the Massachusetts Wetlands Protection Act or regulations, the Department of Environmental Protection has no appellate jurisdiction.



**Phase 4 Development Area  
Delineated Wetlands**  
**Massachusetts National Cemetery**

**Legend**

 MNC Boundary	 Wetland Area
 Phase 4 Development Area	





# Request for Determination of Applicability

United States Department of Veterans Affairs –  
Massachusetts National Cemetery

Connery Avenue, Bourne, Massachusetts

February 21, 2019

**Prepared for:**

United States Department of Veterans Affairs  
Massachusetts National Cemetery  
Connery Avenue  
Bourne, MA 02532

**Prepared by:**

Gordon  
4501 Daly Drive, Suite 200  
Chantilly, VA 20151



Mabbett & Associates, Inc.  
5 Bedford Circle  
Bedford, MA 01730



# Request for Determination of Applicability

# WPA Form 1

## Request for Determination of Applicability



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

Bourne  
City/Town

WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. General Information

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



1. Applicant:

US Department of Veterans Affairs - MA National Cemetery

Name

richard.wallace1@va.gov

E-Mail Address

Connery Avenue

Mailing Address

Bourne

City/Town

MA

State

02532

Zip Code

(508) 563-7113

Phone Number

Fax Number (if applicable)

2. Representative (if any):

AECOM

Firm

Christopher Newhall

Contact Name

Christopher.Newhall@aecom.com

E-Mail Address

9 Jonathan Bourne Drive

Mailing Address

Pocasset

City/Town

MA

State

02559

Zip Code

508-833-6952

Phone Number

508-833-6951

Fax Number (if applicable)

B. Determinations

1. I request the Bourne Conservation Commission make the following determination(s). Check any that apply:

a. whether the area depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.

b. whether the boundaries of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.

c. whether the work depicted on plan(s) referenced below is subject to the Wetlands Protection Act.

d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any municipal wetlands ordinance or bylaw of:

Bourne

Name of Municipality

e. whether the following scope of alternatives is adequate for work in the Riverfront Area as depicted on referenced plan(s).



# WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

## C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

Connery Avenue	Bourne
Street Address	City/Town
48	82
Assessors Map/Plat Number	Parcel/Lot Number

- b. Area Description (use additional paper, if necessary):

The property consists of an approximately 750-acre site, which is owned by the US Department of Veterans Affairs, and contains the Massachusetts National Cemetery. Approximately 250-acres of the property are developed with roadways, maintained landscapes, gravesites, structures and other support facilities. The remaining portions of the site primarily consist of forested locations, with existing gravel access roads, and cleared utility corridors.

- c. Plan and/or Map Reference(s):

_____	_____
Title	Date
_____	_____
Title	Date
_____	_____
Title	Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

See enclosed Project Narrative



## WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

### C. Project Description (cont.)

b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

No exemptions identified.

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3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

- Single family house on a lot recorded on or before 8/1/96
- Single family house on a lot recorded after 8/1/96
- Expansion of an existing structure on a lot recorded after 8/1/96
- Project, other than a single family house or public project, where the applicant owned the lot before 8/7/96
- New agriculture or aquaculture project
- Public project where funds were appropriated prior to 8/7/96
- Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision
- Residential subdivision; institutional, industrial, or commercial project
- Municipal project
- District, county, state, or federal government project
- Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.

b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)

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# WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

## D. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

US Department of Veterans Affairs - Massachusetts  
National Cemetery c/o Richard Wallace, Director, MA

~~National Cemetery~~

Mailing Address

Bourne

City/Town

MA

State

02532

Zip Code

Signatures:

I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Representative (if any)

\_\_\_\_\_  
Date

# Project Narrative

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# 1. Introduction

The United States Department of Veterans Affairs (VA) Massachusetts National Cemetery (MNC) is submitting this Massachusetts Department of Environmental Protection (MassDEP), Wetland Protection Act (WPA) Form 1 – Request for Determination of Applicability (RDA) application to confirm the boundaries and jurisdictional status of three (3) isolated wetland features located within the limits of the VA MNC property in Bourne, Massachusetts. This RDA has been prepared pursuant to the Massachusetts WPA (MGL Chapter 131, Section 40) and implementing Regulations (310 CMR 10.00), as well as the Town of Bourne Wetlands Protection Bylaw (Article 3.7) and Regulations (BWR 1.00) (Bylaw).

The VA MNC is currently in the planning and design stages of a proposed multi-phase expansion project to extend the longevity of the VA MNC by several decades through development of previously undeveloped areas of the property. To assist in the design of the expansion project, VA contracted professional wetland scientists to conduct wetland identification and delineation surveys of the expansion areas to confirm the presence or absence of federal, state and/or local jurisdictional wetland features. The following sections provide a summary of the existing site conditions, a description of the wetland areas encountered during site assessments, and an overview of the jurisdictional status of each resource area, with respect to both state and local regulations.

## 2. Existing Conditions

The VA MNC is located on an approximately 750-acre site off Connery Avenue in Bourne, Massachusetts, and is identified as Lot 82 on the Town of Bourne Assessor's Map 48. The property is confined to the west by State Route 28, to the north by Connery Avenue, and to the south and east by state-owned property comprising Joint Base Cape Cod. Approximately 250 acres of the MNC property are developed with existing paved roadways, maintained landscapes, gravesites, buildings, and ancillary facilities. The remaining 500-acres primarily consist of forested land, with limited areas containing gravel access roads, cleared and maintained utility right-of-ways, and active borrow pit and landscape material stockpile areas.

Undisturbed portions of the identified expansion areas generally contain rolling terrain with upland vegetation communities consisting of a dense overstory of pitch pine (*Pinus rigida*) and oaks (*Quercus* spp.), with an understory of blueberry (*Vaccinium* spp.), black huckleberry (*Gaylussacia baccata*), and sheep laurel (*Kalmia angustifolia*), and a groundcover of bracken fern (*Pteridium aquilinum*), wintergreen (*Gaultheria procumbens*), and Pennsylvania sedge (*Carex pensylvanica*). Wetland community types encountered within the identified expansion areas were limited to three (3) isolated wetland features that were found in low-lying areas of the property, along both natural landscape features and human altered landscapes. Vegetation typical of these wetland habitats includes emergent/herbaceous communities of soft rush (*Juncus effusus*), narrow-leaved cattail (*Typha latifolia*), common reed (*Phragmites australis*) and wool-grass (*Scirpus cyperinus*), with transitional shrub/sapling communities of highbush blueberry (*Vaccinium corymbosum*), gray willow (*Salix cinerea*), and red maple (*Acer rubrum*). Specific details pertaining to the classification of the wetland features identified and delineated during field surveys have been provided in the sections below.

## 3. Freshwater Wetland Delineation Methodology and Procedures

The wetland identification and delineation surveys at the MNC property were completed on September 10, 2018 and January 23, 2019. The wetland surveys were performed to determine if wetland resources were present within the identified expansion areas, and if found, to establish and locate the limit of the wetland boundaries in accordance with applicable federal, state and municipal regulations.

## 3.1 Pre-survey Desktop Investigations

Prior to the commencement of field surveys, an in-office desktop review of pertinent information was performed utilizing the online mapping resources available through the MassGIS Online Data Viewer (OLIVER 2019), as well as the Natural Resource Conservation Service (NRCS) Web Soil Survey (NRCS 2019) to evaluate the potential presence of wetlands, waterbodies, hydric soils and Federal Emergency Management Agency (FEMA) flood hazard areas. Results of the in-office review of publicly available information indicated the following:

- No portion of the identified expansion areas contain wetland resources as mapped by the MassDEP Wetland Inventory Program and United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI);
- No portion of the identified expansion areas contain any waterbodies or streams as mapped by the MassDEP, United States Geological Survey (USGS) National Hydrography Dataset (NHD), or USFWS NWI;
- No potential or certified vernal pools have been mapped by the MA Natural Heritage & Endangered Species Program (NHESP) within the identified expansion areas;
- No soil series map units with a hydric classification have been mapped within the identified expansion areas by the NRCS; and
- No portion of the identified expansion areas are within flood hazard risk areas as mapped by FEMA.

## 3.2 Field Surveys

The wetland identification and delineation surveys were performed pursuant to the local Bylaw and Regulations, along with the guidance contained in *Delineating Bordering Vegetated Wetlands under the Massachusetts Wetlands Protection Act Handbook* (MassDEP 1995), and the Routine Onsite Determination Method as described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and applicable *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Ver. 2.0; U.S. Army Corps of Engineers 2011) and the *Field Indicators for Identifying Hydric Soils in New England, Version 4* (New England Hydric Soils Technical Committee 2018).

Field surveys were performed in the identified expansion areas to identify soil types, topographic and drainage features, and plant associations that would indicate the potential for jurisdictional wetlands to be present. Soil profiles were sampled using a soil auger to determine if any hydric soil indicators were present. The information collected for each soil profile included soil horizons, depth, texture, color, and the presence or absence of redoximorphic features (mottles and other features). Colors of the soil matrix and mottles were identified using Munsell Soil Color Charts.

The indicator status of dominant plant species in each stratum was evaluated in the field to determine whether a hydrophytic plant association was present. Dominant species in both upland and wetland communities were visually estimated and recorded with appropriate radius plots, and the wetland indicator status was noted using the applicable state reference materials. Wetlands were classified during field surveys according to the "Cowardin system", which is a process discussed in *Classification of Wetlands and Deepwater Habitats of the United States* (1979). Identified wetlands were classified as Palustrine Forested (PFO), Palustrine Scrub-Shrub (PSS), or Palustrine Emergent (PEM), all of which are further described below.

Indicators of wetland hydrology were also observed and recorded. Site hydrology was evaluated during field surveys by initially observing whether the soil at the surface was inundated or saturated. If the ground surface was dry, the depth to water table or saturated soil was measured, and the presence or absence of other indicators of wetland hydrology (e.g., drift lines, water-stained leaves, etc.) was noted.

During the field investigations, the boundaries of each wetland were identified by surveyors flagging tape noted with a unique alpha-numeric designation for each point tied to vegetation and spaced at appropriate intervals. Wetland boundaries were flagged with pink and black ribbon, and wetland boundary flags as well as wetland/upland data plots were located using a hand-held Trimble® Global Positioning System (GPS) unit. The delineated wetland boundaries were plotted on aerial imagery, and were subsequently reviewed and confirmed by field personnel. Figures depicting the locations of the delineated wetlands within the identified expansion areas have been included for review in Appendix A, and MassDEP Delineation Field Data Forms for each delineated wetland have been included for review in Appendix B. Site photos are provided in Appendix C.

## 4. Survey Results

A total of three (3) isolated wetlands were documented and delineated within the identified expansion areas as shown on figures presented in Appendix A. A description of each wetland delineated in the field has been provided below, identifying the feature's location, classification type, source of hydrology and associated characteristics. MassDEP Vegetated Wetland Delineation Field Data Forms for each feature can be found in Appendix B and site photographs of the wetlands have been included for review in Appendix C.

### 4.1 Wetland 1

Wetland 1 is an isolated Palustrine Emergent/Forested (PEM/PFO) freshwater wetland that is located immediately south of the maintenance building complex within the northcentral portion of the property. This wetland totals 3,889-square feet (0.089 acres) in size, and the boundary was demarcated in the field using pink and black surveyor's flagging, identified with flag numbers W-100 through W-113. This wetland's hydrology is associated with stormwater discharge from an existing up-gradient earthen swale and an outfall structure located at the southern section of the paved parking lot associated with the maintenance-building complex. Dominant vegetation includes red maple, bladder sedge (*Carex intumescens*), smartweed (*Polygonum pennsylvanicum*), soft rush, beggarticks (*Bidens frondosa*), barnyard grass (*Echinochloa crus-galli*) and common reed. Hydric soils were encountered within this wetland along with water-stained leaves at the soil surface as an indicator of hydrology.

### 4.2 Wetland 7

Wetland 7 is an isolated Palustrine Scrub-Shrub (PSS)/ PEM freshwater wetland located in the northwestern portion of the property, southeast of the intersection of Connery Avenue and Cole Road. This wetland is situated at the low point of a kettle hole-type landform, and is 5,013-square feet (0.115 acres) in total size. The limits of this feature were delineated in the field using pink and black surveyor's flagging, identified with flag numbers A1 through A14. Dominant wetland vegetation includes red maple, highbush blueberry, cinnamon fern (*Osmundastrum cinnamomeum*), sheep laurel, water willow (*Justicia americana*), and sensitive fern (*Onoclea sensibilis*). This feature's hydrology is associated with surface water runoff from the surrounding up-gradient locations, as well as stormwater discharge from Connery Avenue and Cole Road. Hydric soils were present within this wetland as well as approximately 3 inches of standing water within the center of the feature.

### 4.3 Wetland 13

Wetland 13 is an isolated PEM freshwater wetland that is located in the southcentral portion of the property, along the southern perimeter of an existing soil borrow area, immediately adjacent to the landscape material stockpile area. This wetland appears to be man-made, as piles of recently deposited fill border the perimeter of the feature. This feature's hydrology is associated with surface water runoff from the surrounding soil borrow area, and dominant wetland vegetation includes gray willow, narrow-leafed cattail, wool-grass, goldenrods (*Solidago* spp.), sedges (*Carex* spp.), soft rush and manna grass (*Glyceria* spp.). Hydric soils were encountered during site investigations and areas of standing water, ranging from one to two feet in depth were observed within the center of the wetland. This feature is 3,577-square feet (0.082 acres) in size, and the boundary was demarcated in the field using pink and black surveyor's flagging, identified with flag numbers A1 through A20.

## 5. Summary of Regulatory Jurisdiction

The WPA and its implementing Regulations provides protection to wetlands and other wetland resource areas subject to jurisdiction under the WPA. The MassDEP regulates specific activities that occur in and within the vicinity of resource areas listed in the WPA. Enforcement of the laws contained within the WPA is typically overseen by the MassDEP, and administered at a local level by the municipality's conservation commission.

Freshwater wetlands regulated under the WPA include wet meadows, marshes, swamps, and bogs that border on creeks, rivers, streams, ponds, or lakes (310 CMR 10.02(1)(a)). In the absence of any creeks, rivers, streams or a lake, regulated inland wetlands may border on smaller isolated waterbodies including ponds. The term pond is further defined under the WPA Regulations as any open body of fresh water with a surface area observed or recorded within the last ten years of at least 10,000 square feet (310 CMR 10.04). However, if an area of open water is too small in size to qualify as a pond, it may still be regulated under the WPA if it meets the definition of Isolated Land Subject to Flooding (ILSF). ILSF is defined as an isolated depression or closed basin without an inlet or an outlet which at least once a year confines standing water to a volume of at least ¼ acre-feet and to an average depth of at least six inches (310 CMR 10.57(2)(b)). In the absence of any areas meeting the definition of creeks, rivers, streams, ponds, lakes, or ILSF, any vegetated wetlands would typically considered “isolated” wetlands not subject to jurisdiction under the WPA.

Similarly, the local Bylaw and Regulations identify wetland resource areas as all locations detailed in the WPA and its Regulations; and any other area that due to its vegetation, soils, and/or hydrology supports a wetland plant community or holds enough water to provide a breeding habitat for certain water dependent fauna species. The local Bylaw further indicates areas in which 50% or more of the vegetational community is composed of wetland plant species shall be classified as a wetland resource area. Therefore, the local Bylaw and Regulations effectively regulate freshwater wetlands regardless of size, or whether or not they border on any creeks, rivers, streams, ponds, or lakes.

Under the WPA, wetlands that “border” on creeks, rivers, streams, ponds, or lakes are identified in the Regulations as Bordering Vegetated Wetlands (BVWs) (310 CMR 10.55(2)). Based on review and delineation of the wetlands within the identified expansion locations, none of wetland features would meet the regulatory definition of a BVW, as all three (3) wetlands are isolated and do not border on any creeks, rivers, streams, ponds, or lakes. This conclusion is supported by both field observations by a wetland scientist, as well as review of MassGIS OLIVER data that did not depict any known streams, rivers, ponds, waterbodies, or other hydrologic connections in the vicinity of the field-delineated isolated wetlands.

As identified above, the regulation of isolated wetlands and/or depression landforms may be afforded if locations meet the regulatory definition of ILSF (310 CMR 10.57 (2)(b)). As detailed in the Regulations, the boundary of ILSF is the perimeter of the largest observed or recorded volume of water confined in said area. In the event of a conflict of opinion regarding the extent of water confined in an ILSF, an opinion supported by engineering calculations may be submitted by a certified registered professional engineer, as to the probable extent of water within the isolated wetland.

VA's contracted professional wetland scientists performed a preliminary evaluation of the isolated wetland locations to determine the potential for each feature to meet the total volume calculation requirements (at least a ¼ acre-foot) for classification as a ILSF under 310 CMR 10.57 (2)(b). For preliminary assessment purposes, the field-delineated limit of each isolated wetland was utilized as the total potential extent to which water could be confined within each wetland. Results of the evaluation determined that all three (3) of the isolated features lacked the necessary total area required to accommodate a ¼ acre-foot of water at an average depth of 6-inches. The largest delineated feature, Wetland 7 has a total area of 5,013 square feet, while features Wetland 1 and Wetland 13 have a total square foot area of 3,889 and 3,577 respectively. Given the minimum area requirements of an ILSF (¼ acre = 10,890 square feet), it is the opinion of VA that based on the limited elevation profiles associated with each wetland (typically one to two foot elevation difference), none of the delineated features would be capable of containing the volumes required for classification as an ILSF under the WPA Regulations. Additionally, utilization of the field-delineated wetland boundary as the total potential extent of water, rather than the largest volume of water observed, provided a conservative estimate of each feature's total volume potential, as the limit of confined water noted during field surveys in September 2018 and January 2019 was generally limited to the center of each wetland.

The local Bylaw and Regulations provide protection to all wetland resource areas listed in the WPA, as well as any other area (regardless of size or whether it is “bordering” on any creeks, rivers, streams, ponds, or lakes) that due to its vegetation, soils, and/or hydrology supports a wetland plant community or holds enough water to provide a breeding habitat for certain water dependent fauna species. As a result and irrespective of their limited size and isolated nature, all three (3) of the wetlands delineated within the review area would be wetland resource areas under the local Bylaw.

Vernal pools that have been certified by the NHESP would receive protection under the Regulations, as well as locations within 100-feet of the vernal pool boundary, providing the certified vernal pool is located within a jurisdictional resource area protected under the WPA. Currently, there are no certified vernal pools mapped within the limits of the VA MNC.

**In summary, none of the delineated wetland features meet the regulatory definition of BVW or ILSF, and are therefore not classified as jurisdictional wetland resources under the WPA.** All three (3) delineated features meet the definition of wetland resource areas under the local Bylaw and Regulations, and as a result, would be classified as jurisdictional resources under the local Bylaw only. Additionally, no certified vernal pools are mapped for the property.

**Table 1. Regulatory Status of Wetlands Associated with the VA MNC**

Wetland ID	Freshwater Wetland Type (Bordering vs. Isolated)	Total Area <sup>a</sup>	Minimal Square Feet Required for ¼ Acre Analysis	Certified Vernal Pool	Jurisdictional Under the WPA	Jurisdictional Under the Local Bylaw
Wetland 1	Isolated	3,889 SF	10,890	No	No	Yes
Wetland 7	Isolated	5,013 SF		No	No	Yes
Wetland 13	Isolated	3,577 SF		No	No	Yes

a: Total area is based on the calculated square foot (SF) of the delineated wetland, not the extent of confined water in each basin.

## 6. References

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# Appendix A Figures

# USGS Locus Map