

Request for Determination of Applicability for

Approval of Wetland Resource Boundaries



McLean Hospital
Belmont, Massachusetts

12 August 1997

Pressley Associates, Inc. ■ *Landscape Architects*

Sanford Ecological Services, Inc. ■ *Environmental Consultants*

10.99: Forms

DEP File No.

(To be provided by DEP)

Form 1

City/Town Belmont
Applicant McLean Hospital*Commonwealth
of Massachusetts*

**Request for a Determination of Applicability
Massachusetts Wetlands Protection Act, G.L. c. 131, § 40**

1. I, the undersigned, hereby request that the Town of Belmont Conservation Commission make a determination as to whether the area, described below, or work to be performed on said area, also described below, is subject to the jurisdiction of the Wetlands Protection Act, G.L. c. 131, § 40.

2. The area is described as follows. (Use maps or plans, if necessary, to provide a description and the location of the area subject to this request.)

 Location: Street Address 115 Mill Street

 Lot Number: Map 59, Parcel 11

 Attached:
 1. USGS topographical quadrangle of location of property.
 2. Wetland Location Plan, Prepared by Design Consultants, Inc.; Consulting Engineers and Surveyors.
 3. Wetland Delineation Report, prepared by Sanford Ecological Services, Inc.; Environmental Consultants.
 4. Wetland Location Plan overlay on the Town's existing Wetland Location Plan of McLean Hospital.

3. The work in said area is described below. (Use additional paper, if necessary, to describe the proposed work.)

In order to pursue engineering design work the applicant is seeking a positive determination of applicability which references the attached resource plan and states the commission's approval of resource boundaries and resource types as shown on the plan. Resource survey is tied into the perimeter survey.

RECEIVED
 TOWN OF BELMONT, MA
 AUG 13 10 17 AM '97

10.99: continued

4. The owner(s) of the area, if not the person making this request, has been given written notification of this request on _____ (date)

The name(s) and address(es) of the owner(s):

McLean Hospital Corporation
115 Mill Street
Belmont, MA 02178

5. I have filed a complete copy of this request with the appropriate regional office of Massachusetts Department of Environmental Protection _____ (date)

X DEP Northeast Regional Office
10 Commerce Way
Woburn, MA 01801

DEP Southeast Regional Office
20 Riverside Dr., Route 105
Lakeville, MA 02347

DEP Central Regional Office
75 Grove Street
Worcester, MA 01605

DEP Western Regional Office
State House West, 4th Floor
436 Dwight Street
Springfield, MA 01103

6. I understand that notification of this request will be placed in a local newspaper at my expense in accordance with Section 10.5(3)(b)1 of the regulations by the Conservation Commission and that I will be billed accordingly.

Signature Michele J. Gougeon Name Michele Gougeon, Sr. Vice Pres./Chief Operating Office

Address McLean Hospital Tel. 855-3450

115 Mill Street
Belmont, MA 02178

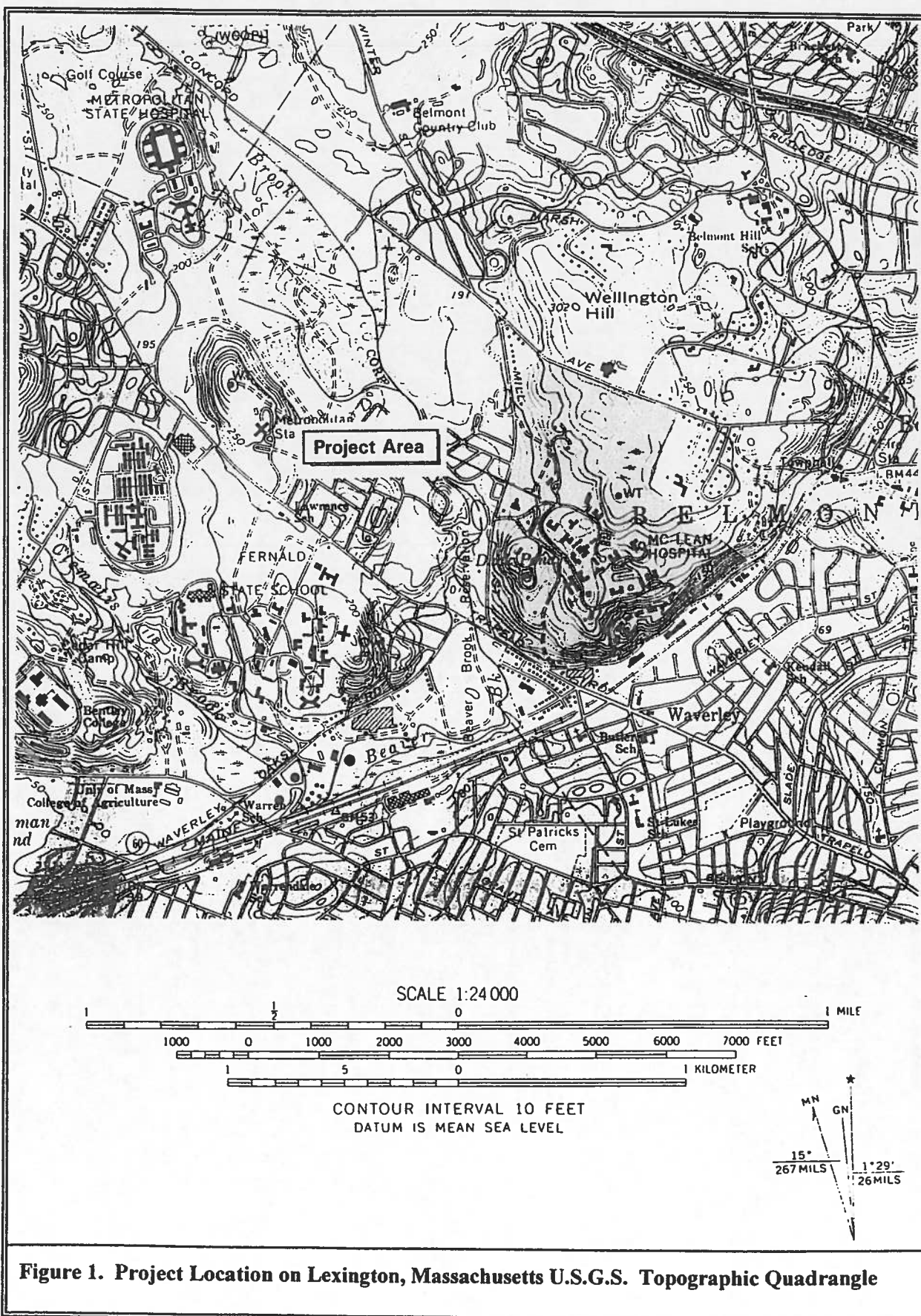


Figure 1. Project Location on Lexington, Massachusetts U.S.G.S. Topographic Quadrangle

REPORT

DISCUSSION OF PROPOSED WORK

Letter From:

SANFORD ECOLOGICAL SERVICES, INC.
30 Turnpike Road
Southborough, Massachusetts
01772

June 16, 1997

SANFORD ECOLOGICAL SERVICES, Inc.
Environmental Consultants

30 Turnpike Road, Southborough, Massachusetts 01772 • Telephone (508) 460-9900
FAX (508) 481-2009

June 16, 1997

Ms. Catherine Wilkie
Pressley Associates, Inc.
432 Columbia Street
Cambridge, Massachusetts 02141

RE: McLean Hospital, Belmont, Massachusetts
Wetland Delineation

Dear Ms. Wilkie:

On May 5, 6, 7, and 8, 1997, Sanford Ecological Services, Inc. (SES) inspected the McLean Hospital property situated between Mill Street, Concord Avenue, Pleasant Street, and Trapelo Road in Belmont, Massachusetts for the presence of wetland resources as defined by the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, S. 40) and its implementing regulations (310 CMR 10.00 et seq.) and the U.S. Clean Water Act. Matthew D.C. Varrell of SES conducted the site inspections.

Seven wetland areas were identified on the site: three areas fall under the jurisdiction of both the Massachusetts Wetlands Protection Act (e.g., the Belmont Conservation Commission) and the U.S. Clean Water Act; three areas are federal, non-state wetlands under the jurisdiction of the U.S. Clean Water Act; and one area to which the jurisdictional oversight has not been decided pending additional observations. These areas are discussed below.

Aside from Buffer Zone, the Massachusetts Wetlands Protection Act regulations have established four freshwater resource categories: (1) Bank, (2) Bordering Vegetated Wetlands, (3) Land Under Water Bodies and Waterways, and (4) Land Subject to Flooding. Under the Massachusetts Rivers Protection Act, the Wetlands Protection Act was amended to include an additional resource category: Riverfront Area. The site was examined and areas suspected to qualify as any of the above resources were identified. Vegetated wetlands are identified by the presence of a vegetational community comprised of 50 percent or more wetland plant species and the presence of wetland hydrology (i.e., hydric soils and/or other indicators of hydrology). Bordering Vegetated Wetlands are delineated in accordance with the methodology set forth in "Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act: A Handbook," dated March 1995, produced by the Massachusetts Department of Environmental Protection, Division of Wetlands and Waterways.

Three areas of state regulated wetlands were delineated in the field with numbered flagging tape: SES-1 to SES-33 (including SES-8A through SES-8H), nearest Concord Avenue in the northern portion of the site; SES-100 to SES-179 and SES-200 to SES-242, nearest Pleasant Street in the southeastern portion of the site; and SES-400 to SES-661 adjacent to Mill Street in the north-central and western portion of the site. Two sets of DEP Bordering Vegetated Wetlands Delineation Field Data Forms were completed for observation plots located in the wetlands and uplands near flags SES-151 and SES-541. Copies of these forms are presented in Attachment I.

The largest wetland system on the site (SES-400 to SES-661) is located in the north-central and western portion of the site, and consists of a red maple swamp drained by an intermittent stream. Plant species within the main wetland include: red maple and yellow birch in the tree layer; highbush blueberry, arrow-wood, glossy buckthorn, and common elder in the shrub layer; and spotted touch-me-not, skunk cabbage, cinnamon fern, poison ivy, and sensitive fern in the ground cover layer. Evidence of hydrology, including the presence of hydric soils, was noted within the red maple swamp. The main swamp drains to the west via an intermittent stream which eventually drains to a catch basin beside Mill Street. Prior to reaching the catch basin, the stream widens into areas of vegetated wetlands in several places. These areas are predominantly vegetated with such species as: red maple and apple in the tree layer; glossy buckthorn, arrow-wood, and common buckthorn in the shrub layer; and spotted touch-me-not and poison ivy in the ground cover layer. Evidence of hydrology, including the presence of leaf staining and shallow rooted vegetation, was noted within these portions of the delineated wetland.

The delineated wetland would be regulated as Bordering Vegetated Wetlands and Bank. The flagged line represents the edge of Bordering Vegetated Wetlands (BVW), and in the absence of BVW, Bank. A 100-foot Buffer Zone extends horizontally outward from the boundary of Bordering Vegetated Wetlands and Bank. As the stream within this area is intermittent, the wetland resources Land Under Water Bodies and Waterways and Riverfront Area are not present. This wetland would also be federally regulated under the U.S. Clean Water Act.

The next largest wetland system on the site (SES-100 to SES-179 and SES-200 to SES-242) exists in the southeastern portion of the site, and consists of a wooded swamp drained by two intermittent streams. The wooded swamp is hydraulically supported by a natural spring located at the uppermost portion of the delineated area. Vegetation observed within this area includes: red maple, eastern white pine, sugar maple, and northern red oak in the tree layer; arrow-wood, northern spicebush, and American elm in the shrub layer; and poison ivy

in the ground cover layer. The two intermittent streams which drain the wooded swamp converge just prior to draining into a catch basin beside Pleasant Street. Evidence of hydrology, including the presence of hydric soils and drainage patterns, was noted within the delineated wetland.

The delineated wetland would be regulated as Bordering Vegetated Wetlands and Bank. The flagged line represents the edge of Bordering Vegetated Wetlands (BVW), and in the absence of BVW, Bank. A 100-foot Buffer Zone extends horizontally outward from the edge of Bordering Vegetated Wetlands and Bank. As the streams within this area are intermittent, the wetland resources Land Under Water Bodies and Waterways and Riverfront Area are not present. This wetland would also be federally regulated under the U.S. Clean Water Act.

The final area of state regulated wetland delineated on the site (SES-1 to SES-33, including SES-8A to SES-8H) is located in the northern portion of the site, and consists of an isolated wetland system. According to the Massachusetts Natural Heritage and Endangered Species Program, this wetland is listed as a Certified Vernal Pool. Vegetation within this wetland includes: red maple, white ash, and American elm in the tree layer; common buckthorn and glossy buckthorn in the shrub layer; and spotted touch-me-not, poison ivy, and devil's beggar-ticks in the ground cover layer. Evidence of hydrology, including hydric soils, inundation, and shallow rooted vegetation, was noted within the delineated wetland.

As the area appears to hold at least $\frac{1}{4}$ acre-feet of water to a depth of at least six inches, it likely qualifies as Isolated Land Subject to Flooding (ILSF) under the Massachusetts Wetlands Protection Act. Engineering calculations would be required to confirm this designation. The boundary of ILSF "...is the perimeter of the largest observed or recorded volume of water confined in said area," or if there is a dispute, the lateral extent of water which will theoretically result from the 100-year frequency storm. Under the U.S. Clean Water Act, the area qualifies as a federally regulated wetland. As the wetland is a Certified Vernal Pool, it would be classified as Outstanding Resource Waters. The flagged boundary represents the extent of federal wetlands. ILSF and federally regulated wetlands do not have Buffer Zones.

Three areas of federal, non-state wetlands were also delineated in the field with numbered flagging tape: SES-I-1 to SES-I-14 in the west-central portion of the site; and SES-I-20 to SES-I-35 and SES-I-40 to SES-I-46 in the northwestern portion of the site. These wetlands are described below.

The first federal, non-state wetland (SES-I-1 to SES-I-14) is located in the west-central portion of the site, adjacent, but not connected vegetationally or hydrologically to the

intermittent stream that drains the large red maple swamp on the site. Vegetation within this isolated wetland consists of: American elm in the sapling layer; red maple in the shrub layer; and spotted touch-me-not and Japanese knotweed in the ground cover layer. Evidence of hydrology, including hydric soils and inundation, was noted within the delineated wetland.

The second federal, non-state wetland (SES-I-20 to SES-I-35) is located in the northwestern portion of the site, in a highly disturbed, open area. Vegetation within this isolated wetland is restricted to the ground cover layer and consists of purple loosestrife, broad-leaf cattail, soft rush, red maple seedlings, and hydrophilic grasses. Evidence of hydrology, including hydric soils and inundation, was noted within the delineated wetland.

The third federal, non-state wetland (SES-I-40 to SES-I-46) is also located in the northwestern portion of the site, in a highly disturbed, open area. Vegetation within this isolated wetland is restricted to the ground cover layer and consists of purple loosestrife, broad-leaf cattail, soft rush, and hydrophilic grasses. Evidence of hydrology, including hydric soils and inundation, was noted within the delineated wetland.

As each of these three isolated areas would not appear to hold the requisite volume of water (at least $\frac{1}{4}$ acre-feet of water to a depth of six inches), none of them would qualify as Isolated Land Subject to Flooding (ILSF) under the Massachusetts Wetlands Protection Act. However, each of the areas would qualify as a wetland under the U.S. Clean Water Act. The flagged boundaries represent the edge of federal wetlands. Federally regulated wetlands do not have Buffer Zones.

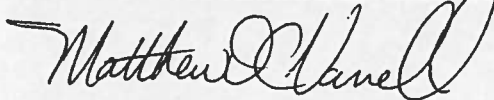
The final area of wetland delineated on the site is a stream located in the southern portion of the site adjacent to Pleasant Street which drains the stormwater system of McLean Hospital to a catch basin located beside Pleasant Street. The centerline of this stream was flagged (SES-300 to SES-332). At this time, it has not been determined whether the stream is intermittent or perennial. Therefore, the regulatory status of this stream is currently undetermined. 

As part of the wetland evaluation for this site, the Massachusetts Natural Heritage Atlas, 1997-1998 Edition, Lexington Quadrangle, published by the Massachusetts Natural Heritage and Endangered Species Program, was reviewed. According to the Atlas, the site does not exist within any area designated as an Estimated Habitat of Rare Wetlands Wildlife. As previously stated, one Certified Vernal Pool exists in the northern portion of the site. A copy of this map is presented as Attachment II.

On June 12, 1997, a meeting was held on the site between Dr. Gary Sanford and Mr. Matthew Varrell of SES, Mr. Josh Gilbert and Ms. Jennifer O'Reilly of Jason Cortell Associates, consultants for the Town of Belmont, and Ms. Catherine Wilkie of Pressley Associates, Inc. The purpose of this inspection was to review the delineated wetland boundaries on the site. The site was inspected and the boundaries of the delineated wetlands were mutually agreed upon.

Should you have any questions regarding the wetland delineation or the topics addressed by this letter, please feel free to contact me at any time.

Cordially,
SANFORD ECOLOGICAL SERVICES, INC.

A handwritten signature in black ink, appearing to read "Matthew D. Varrell", written over a horizontal line.

Matthew D.C. Varrell
Environmental Scientist

attachments

Attachment I

**DEP Bordering Vegetated Wetland
Delineation Field Data Forms**

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: McLean Hospital Prepared by: Sanford Ecological Services, Inc. Project location: McLean Hospital, Belmont, MA DEP File #: _____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
☒ Vegetation and other indications of hydrology used to delineate BVW boundary: fill out Sections I and II
☐ Method other than dominance test used (attach additional information)

Section I. Vegetation		Observation Plot Number: SES - 151	Transect Number: T-1 WET		Date of Delineation: 5/8/97
A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*	
<u>Ground Cover</u>					
POISON IVY/ <i>Toxicodendron radicans</i>	63.0%	86%	yes	FAC*	
ARROW-WOOD / <i>Viburnum dentatum</i>	10.5%	14%	no	FAC*	
<u>Shrubs</u>					
ARROW-WOOD/ <i>Viburnum dentatum</i>	38.0%	44%	yes	FAC*	
NORTHERN SPICEBUSH / <i>Lindera benzoin</i>	38.0%	44%	yes	FACW-*	
AMERICAN ELM / <i>Ulmus americana</i>	10.5%	12%	no	FACW-*	
<u>Trees</u>					
RED MAPLE / <i>Acer rubrum</i>	20.5%	23%	yes	FAC*	
EASTERN WHITE PINE / <i>Pinus strobus</i>	10.5%	12%	no	FACU	
SUGAR MAPLE / <i>Acer saccharum</i> (shallow rooted due to wetness)	20.5%	23%	yes	FACU-*	
NORTHERN RED OAK / <i>Quercus rubra</i>	38.0%	42%	yes	FACU-	

* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c. 131, s. 40); plants in the genus *Sphagnum*, plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetlands indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusions:

Number of dominant wetland indicator plants: 5 Number of dominant non-wetland indicator plants: 1
 Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

T-1 WET (cont.)

Section II. Indications of Hydrology

1. Soil Survey

Is there a published soil survey for this site? ☐ no

title/date:

map number:

soil type mapped:

hydric soil inclusions:

Are field observations consistent with soil survey?

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
O	0-6	10 YR 2/1 organic	
A	6-14	10 YR 3/4 silty loam	

Remarks:

Refusal at 14 inches (rock)

3. Other:

Conclusion: Is soil Hydric? ☐ No

Other Indications of Hydrology: (check all that apply and describe)

- ☐ Site inundated: _____
- ☒ Depth to free water in observation hole: 2 inches
- ☒ Depth to soil saturation in observation hole: at surface
- ☐ Water marks: _____
- ☐ Drift lines: _____
- ☐ Sediment deposits: _____
- ☒ Drainage patterns in BVW: ponding areas observed
- ☐ Oxidized rhizospheres: _____
- ☐ Water-stained leaves: _____
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other): _____
- ☒ Other: Wetland is fed by upgradient natural spring

Vegetation and Hydrology Conclusion

Number of wetland indicator plants
≥ number of non-wetland indicator plants

yes ☒
no ☐

Wetland hydrology present:

hydric soil present

☐ ☒

other indicators of hydrology
present

☒ ☒
☐ ☐

Sample location is in a BVW

Submit this form with the Request for Determination of Applicability or Notice of Intent.

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: McLean Hospital Prepared by: Sanford Ecological Services, Inc. Project location: McLean Hospital, Belmont, MA DEP File #: _____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
☒ Vegetation and other indications of hydrology used to delineate BVW boundary: fill out Sections I and II
☐ Method other than dominance test used (attach additional information)

Section I. Vegetation		Observation Plot Number: SES - 151	Transect Number: T-1 UP	Date of Delineation: 5/8/97
A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
Ground Cover				
WILD-LILY-OF-THE-VALLEY / <i>Maianthemum canadense</i>	20.5%	66%	yes	FAC-
FALSE SOLOMON'S SEAL / <i>Smilacina racemosa</i>	10.5%	34%	yes	FACU-
Shrubs				
BLACK CHERRY / <i>Prunus serotina</i>	38.0%	55%	yes	FACU
RED MAPLE / <i>Acer rubrum</i>	10.5%	15%	no	FAC*
AMERICAN ELM / <i>Ulmus americana</i>	20.5%	30%	yes	FACW-*
Trees				
RED MAPLE / <i>Acer rubrum</i>	10.5%	15%	no	FAC*
EASTERN WHITE PINE / <i>Pinus strobus</i>	38.0%	55%	yes	FACU
AMERICAN BEECH / <i>Fagus grandifolia</i>	10.5%	15%	no	FACU
NORTHERN RED OAK / <i>Quercus rubra</i>	10.5%	15%	no	FACU-

* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c. 131, s.40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetlands indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusions:	
Number of dominant wetland indicator plants: 1	Number of dominant non-wetland indicator plants: 4
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants?	No

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

T-1 UP (cont.) Section II. Indications of Hydrology

1. Soil Survey

Is there a published soil survey for this site? no

title/date:
map number:
soil type mapped:
hydric soil inclusions:

Are field observations consistent with soil survey?
Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
O	0-3	10 YR 2/1 organic peat loam	
A	3-9	10 YR 3/3 loam	
B	9-18+	10 YR 3/6 silty loam	

Remarks:

3. Other:

Conclusion: Is soil Hydric? No

Other Indications of Hydrology: (check all that apply and describe)

- ☐ Site inundated: _____
- ☐ Depth to free water in observation hole: _____
- ☐ Depth to soil saturation in observation hole: _____
- ☐ Water marks: _____
- ☐ Drift lines: _____
- ☐ Sediment deposits: _____
- ☐ Drainage patterns in BVW: _____
- ☐ Oxidized rhizospheres: _____
- ☐ Water-stained leaves: _____
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other): _____
- ☐ Other: _____

Vegetation and Hydrology Conclusion		yes	no
Number of wetland indicator plants		☐	☒
≥ number of non-wetland indicator plants		☐	☒
Wetland hydrology present:		☐	☒
hydric soil present		☐	☒
other indicators of hydrology present		☐	☒
Sample location is in a BVW		☐	☒

Submit this form with the Request for Determination of Applicability or Notice of Intent

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: McLean Hospital Prepared by: Sanford Ecological Services, Inc. Project location: McLean Hospital, Belmont, MA DEP File #: _____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
☒ Vegetation and other indications of hydrology used to delineate BVW boundary: fill out Sections I and II
☐ Method other than dominance test used (attach additional information)

Section I. Vegetation		Observation Plot Number: <u>SES - 541</u>	Transect Number: <u>T-2 WET</u>	Date of Delineation: <u>5/8/97</u>
A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
<u>Ground Cover</u>				
SENSITIVE FERN / <i>Onoclea sensibilis</i>	38.0%	100%	yes	FACW*
<u>Shrubs</u>				
ARROW-WOOD / <i>Viburnum dentatum</i>	10.5%	20%	yes	FAC*
HIGHBUSH BLUEBERRY / <i>Vaccinium corymbosum</i>	20.5%	40%	yes	FACW-*
GLOSSY BUCKTHORN / <i>Rhamnus frangula</i>	10.5%	20%	yes	FAC*
APPLE / <i>Pyrus malus</i>	10.5%	20%	yes	NL
<u>Saplings</u>				
RED MAPLE / <i>Acer rubrum</i>	10.5%	100%	yes	FAC*
<u>Trees</u>				
RED MAPLE / <i>Acer rubrum</i>	63.0%	86%	yes	FAC*
APPLE / <i>Pyrus malus</i>	10.5%	14%	no	NL
* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c. 131, s.40); plants in the genus <i>Sphagnum</i>; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetlands indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.				
Vegetation conclusions:				
Number of dominant wetland indicator plants: 6	Number of dominant non-wetland indicator plants: 1			
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants?		Yes		

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

T-2 WET (cont.)

Section II. Indications of Hydrology

1. Soil Survey

Is there a published soil survey for this site? ☐ no

title/date:
map number:
soil type mapped:
hydric soil inclusions:

Are field observations consistent with soil survey?
Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
O	0-10	10 YR 2/1 organic muck	
A	10-18+	10 YR 5/2 loam	10 YR 5/6

Remarks:

3. Other:

Conclusion: Is soil Hydric? Yes

Other Indications of Hydrology: (check all that apply and describe)

- ☐ Site inundated: _____
- ☒ Depth to free water in observation hole: 2 inches
- ☒ Depth to soil saturation in observation hole: at surface
- ☐ Water marks: _____
- ☐ Drift lines: _____
- ☐ Sediment deposits: _____
- ☐ Drainage patterns in BWI: _____
- ☐ Oxidized rhizospheres: _____
- ☒ Water-stained leaves: _____
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other): _____
- ☐ Other: _____

Vegetation and Hydrology Conclusion

Number of wetland indicator plants
≥ number of non-wetland indicator plants

yes

no



Wetland hydrology present:

hydric soil present



other indicators of hydrology
present



Sample location is in a BWI



Submit this form with the Request for Determination of Applicability or Notice of Intent.

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: McLean Hospital Prepared by: Sanford Ecological Services, Inc. Project location: McLean Hospital, Belmont, MA DEP File #: _____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
☒ Vegetation and other indications of hydrology used to delineate BVW boundary: fill out Sections I and II
☐ Method other than dominance test used (attach additional information)

Section I. Vegetation		Observation Plot Number: <u>SES - 541</u>	Transect Number: <u>T-2 UP</u>	Date of Delineation: <u>5/8/97</u>
A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
<u>Ground Cover</u>				
WILD-LILY-OF-THE-VALLEY / <i>Maianthemum canadense</i>	20.5%	87%	yes	FAC-
BLACK CHERRY / <i>Prunus serotina</i>	3.0%	13%	no	FACU
<u>Shrubs</u>				
BLACK CHERRY / <i>Prunus serotina</i>	10.5%	17%	no	FACU
RED MAPLE / <i>Acer rubrum</i>	3.0%	5%	no	FAC*
ARROW-WOOD / <i>Viburnum dentatum</i>	10.5%	17%	no	FAC*
HIGHBUSH BLUEBERRY / <i>Vaccinium corymbosum</i>	38.0%	61%	yes	FACW-*
<u>Saplings</u>				
BLACK CHERRY / <i>Prunus serotina</i>	10.5%	100%	yes	FACU
<u>Trees</u>				
EASTERN RED CEDAR / <i>Juniperus virginiana</i>	38.0%	42%	yes	FACU
SWAMP TUPELO / <i>Nyssa sylvatica</i>	20.5%	23%	yes	FACW+*
BLACK OAK / <i>Quercus velutina</i>	10.5%	12%	no	NL
NORTHERN RED OAK / <i>Quercus rubra</i>	20.5%	23%	yes	FACU-

* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c. 131, s.40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetlands indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusions:

Number of dominant wetland indicator plants: 2 Number of dominant non-wetland indicator plants: 4

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

T-2 UP (cont.)

Section II. Indications of Hydrology

1. Soil Survey

Is there a published soil survey for this site? ☐ no

title/date:
map number:
soil type mapped:
hydric soil inclusions:

Are field observations consistent with soil survey?
Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
O	0-2	10 YR 2/1 organic peat	
A	2-5	10 YR 3/2 organic loam	
B	5-18+	10 YR 3/4 silty loam	

Remarks:

3. Other:

Conclusion: Is soil Hydric? ☐ No

Other Indications of Hydrology: (check all that apply and describe)

- ☐ Site inundated: _____
- ☐ Depth to free water in observation hole: _____
- ☐ Depth to soil saturation in observation hole: _____
- ☐ Water marks: _____
- ☐ Drift lines: _____
- ☐ Sediment deposits: _____
- ☐ Drainage patterns in BVW: _____
- ☐ Oxidized rhizospheres: _____
- ☐ Water-stained leaves: _____
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other): _____
- ☐ Other: _____

Vegetation and Hydrology Conclusion

	yes	no
Number of wetland indicator plants	☐	☒
≥ number of non-wetland indicator plants	☐	☒
Wetland hydrology present:	☐	☒
hydric soil present	☐	☒
other indicators of hydrology present	☐	☒
Sample location is in a BVW	☐	☒

Submit this form with the Request for Determination of Applicability or Notice of Intent.

Attachment II

Massachusetts Natural Heritage Atlas
Lexington Quadrangle



ESTIMATED HABITATS OF RARE WILDLIFE AND CERTIFIED VERNAL POOLS

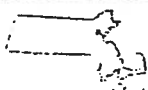
For use with the MA Wetlands Protection Act regulations (310 CMR 10).

Produced by Natural Heritage & Endangered Species Program, MA Division of Fisheries & Wildlife



0 1 mile
0 1 kilometer

See County Index Maps to
locate adjacent quadrangles



LEXINGTON QUAD 1997