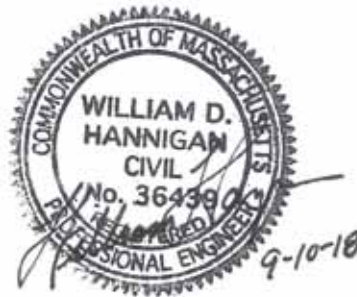


NOTICE OF INTENT
For
Solar Energy Project
Boutilier Road
in
Leicester, Massachusetts

September 10, 2018



Prepared for: *ZPT Energy Solutions II, LLC*
Brendon Gove
6 Park Avenue
Worcester, Massachusetts 01605
(774) 314-2549

Prepared by: *Hannigan Engineering, Inc.*
8 Monument Square
Leominster, Massachusetts 01453
(978) 534-1234

ZP-230

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1.0 NARRATIVE

1.1 Introduction

On behalf of the applicant, ZPT Energy Solutions, LLC, Hannigan Engineering, Inc. has prepared this Notice of Intent package for review by the Town of Leicester Conservation Commission under the Massachusetts Wetlands Protection Act (WPA) and local bylaws, as they may apply. The proposal is for the installation of a Solar Energy Array on land of Nicolas A Casello located off Boutilier Road in Leicester, Massachusetts. The property is depicted on the Assessor's Map 35 as Parcel B.3.

1.2 Project Description

The proposed project is located on a parcel of land of approximately 44.77 acres on the northerly side of Boutilier Road in the Town of Leicester shown as Lot#3 on the recently submitted Preliminary Subdivision Plan. The site is currently a combination of woodland and brush. The areas subject to protection under the Act were delineated by Caron Environmental in May of 2018. These areas are limited to two primary areas of Bordering Vegetated Wetland (BVW), one being along the northerly property line and a second located at the southeasterly corner of the project. Reference is made to the provide Wetland Delineation Report prepared by Caron Environmental, in Appendix D of this Application.

It is the intent to install a large-scale ground-mounted solar photovoltaic system with an estimated capacity of approximately 4.5-Megawatt AC. As is typically with these types of projects, much of the existing woodland vegetation will be cleared to provide adequate sun-exposure and minimize the effects of shading on the array. Areas of the site will be regraded to even out variations in the existing grades and to allow for the installation of the array, stormwater drainage features on the property and other various project features. The total area of alteration for this project will be approximately 36.2 acres.

Access to the site will be via a 20-foot gravel access drive off of Boutilier Road near the end of the existing pavement. This gravel drive will run along the southerly limits of the project and be the permanent access to the site. It is anticipated to be utilized on a periodic basis for general maintenance and inspections of the facility. The entire array will be surrounded by a chain-link security fence to ensure that unauthorized personnel do not enter the array with a 6" gap at ground level to allow for wildlife movement.

The utility connection will utilize underground electrical conduits to transmit the generated electricity from the array to an inverter pad to be installed within the facility from there, additional underground conduits will transmit the power to a series of connection poles for final connect to the grid. The final design and location will be established by National Grid and is not under control of the applicant.

Erosion control practices will utilize straw-wattle and siltation fencing and will demarcate the limits of construction. Temporary mitigation measures will remain in place until disturbed areas are stabilized. As is required by the Leicester Wetlands Protection Bylaw, there will be work within 25-feet of the BVW and no direct alteration to any resource areas.

1.3 Stormwater Management

As part of the review, Stormwater Management Regulations are applicable and the Stormwater Drainage Analysis and Report is included with this submission. The site generally drains to one of several areas. As this project is being completed by the same developer as the recently completed solar array to the immediate south of Boutilier Road, the drainage analysis is being performed in conjunction with the previous project, taking into account land disturbance activities for the entire construction area.

To provide compliance with Stormwater Management Regulations for this project, several dry-detention basins will be constructed to mitigate the increases in peak rate of runoff. Stormwater generated by the completed project site will be transmitted via overland flow and by several 4-ft wide stone-bottom swales to the detention basins. These detention basins will be equipped with a PVC sub-drain system and an outlet structure consisting of various orifices to control the discharge rate of the flow. During smaller storm events, the stormwater will back up in the detention basin and be controlled by the discharge flow allowed by the subdrain system and outlet control structure.

Reference is made to the Drainage Analysis & Report for full description of the drainage system and its compliance.

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 - Notice of Intent

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

Provided by MassDEP:

MassDEP File #:

eDEP Transaction #:1041894

City/Town:LEICESTER

A.General Information

1. Project Location:

a. Street Address	500 BOUTILIER ROAD	c. Zip Code	01524
b. City/Town	LEICESTER	e. Longitude	71.88645W
d. Latitude	42.21721N	g.Parcel/Lot #	B3
f. Map/Plat #	35		

2. Applicant:

☐ Individual ☒ Organization

a. First Name	BRENDON	b.Last Name	GOVE
c. Organization	ZERO POINT ENERGY SOLUTIONS II, LLC		
d. Mailing Address	6 PARK AVENUE		
e. City/Town	WORCESTER	f. State	MA
g. Zip Code	01605		
h. Phone Number	774-314-2549	i. Fax	
j. Email			

3.Property Owner:

☒ more than one owner

a. First Name	NICHOLAS	b. Last Name	CASELLO
c. Organization			
d. Mailing Address	500 BOUTILIER ROAD		
e. City/Town	LEICESTER	f.State	MA
g. Zip Code	01524		
h. Phone Number		i. Fax	
j.Email			

4.Representative:

a. First Name	WILLIAM	b. Last Name	HANNIGAN
c. Organization	HANNIGAN ENGINEERING INC.		
d. Mailing Address	8 MONUMENT SQUARE		
e. City/Town	LEOMINSTER	f. State	MA
g. Zip Code	01453		
h.Phone Number	978-534-1234	i.Fax	
j.Email			

5.Total WPA Fee Paid (Automatically inserted from NOI Wetland Fee Transmittal Form):

a.Total Fee Paid	2,550.00	b.State Fee Paid	1,262.50	c.City/Town Fee Paid	1,287.50
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6.General Project Description:

INSTALLATION AND CONSTRUCTION OF SOLAR ENERGY ARRAY. WORK TO INCLUDE GENERAL REGRADING OF THE SITE FOR SOLAR PANEL ACCEPTANCE AND CONSTRUCTION OF STORMWATER MANAGEMENT INFRASTRUCTURE.

7a.Project Type:

- | | |
|---|--|
| 1. ☐ Single Family Home | 2. ☐ Residential Subdivision |
| 3. ☐ Limited Project Driveway Crossing | 4. ☐ Commercial/Industrial |
| 5. ☐ Dock/Pier | 6. ☒ Utilities |
| 7. ☐ Coastal Engineering Structure | 8. ☐ Agriculture (eg., cranberries, forestry) |
| 9. ☐ Transportation | 10. ☐ Other |

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

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7b. Is any portion of the proposed activity eligible to be treated as a limited project subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. ☐ Yes ☒ No

If yes, describe which limited project applies to this project:

2. Limited Project

8. Property recorded at the Registry of Deeds for:

a. County:

b. Certificate:

c. Book:

d. Page:

WORCESTER

42787

182

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1. Buffer Zone & Resource Area Impacts (temporary & permanent):

☒ This is a Buffer Zone only project - Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.

2. Inland Resource Areas: (See 310 CMR 10.54 - 10.58, if not applicable, go to Section B.3. Coastal Resource Areas)

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
---------------	-----------------------------	-------------------------------

a. ☐ Bank

1. linear feet

2. linear feet

b. ☐ Bordering Vegetated Wetland

1. square feet

2. square feet

c. ☐ Land under Waterbodies and Waterways

1. Square feet

2. square feet

3. cubic yards dredged

d. ☐ Bordering Land Subject to Flooding

1. square feet

2. square feet

3. cubic feet of flood storage lost

4. cubic feet replaced

e. ☐ Isolated Land Subject to Flooding

1. square feet

2. cubic feet of flood storage lost

3. cubic feet replaced

f. ☐ Riverfront Area

1. Name of Waterway (if any)

2. Width of Riverfront Area (check one)

☐ 25 ft. - Designated Densely Developed Areas only

☐ 100 ft. - New agricultural projects only

☐ 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project

square feet

4. Proposed Alteration of the Riverfront Area:

a. total square feet

b. square feet within 100 ft.

c. square feet between 100 ft.

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 - Notice of Intent

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

Provided by MassDEP:

MassDEP File #:

eDEP Transaction #:1041894

City/Town:LEICESTER

and 200 ft.

5. Has an alternatives analysis been done and is it attached to this NOI?

☐ Yes ☐ No

6. Was the lot where the activity is proposed created prior to August 1, 1996?

☐ Yes ☐ No

3.Coastal Resource Areas: (See 310 CMR 10.25 - 10.35)

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Designated Port Areas	Indicate size under	Land under the ocean below,
b. ☐ Land Under the Ocean	1. square feet	
	2. cubic yards dredged	
c. ☐ Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes, below	
d. ☐ Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab, crea.
i. ☐ Land Under Salt Ponds	1. square feet	
	2. cubic yards dredged	
j. ☐ Land Containing Shellfish	1. square feet	
k. ☐ Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	
	1. cubic yards dredged	
l. ☐ Land Subject to Coastal Storm Flowage	1. square feet	

4.Restoration/Enhancement

☐ Restoration/Replacement

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please entered the additional amount here.

a. square feet of BVW

b. square feet of Salt Marsh

5.Projects Involves Stream Crossings

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 - Notice of Intent

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

Provided by MassDEP:

MassDEP File #:

eDEP Transaction #:1041894

City/Town:LEICESTER

☐ Project Involves Stream Crossings

If the project involves Stream Crossings, please enter the number of new stream crossings/number of replacement stream crossings.

a. number of new stream crossings

b. number of replacement stream crossings

C. Other Applicable Standards and Requirements

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage of Endangered Species program (NHESP)?

a. ☐ Yes ☒ No

If yes, include proof of mailing or hand delivery of NOI to:

Natural Heritage and Endangered Species
Program
Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581

b. Date of map:FROM MAP VIEWER

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18)....

c. Submit Supplemental Information for Endangered Species Review * (Check boxes as they apply)

1. ☐ Percentage/acreage of property to be altered:

(a) within Wetland Resource Area

percentage/acreage

(b) outside Resource Area

percentage/acreage

2. ☐ Assessor's Map or right-of-way plan of site

3. ☐ Project plans for entire project site, including wetland resource areas and areas outside of wetland jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

a. ☐ Project description (including description of impacts outside of wetland resource area & buffer zone)

b. ☐ Photographs representative of the site

c. ☐ MESA filing fee (fee information available at: <http://www.mass.gov/eca/agencies/dfg/dfw/natural-heritage/regulatory-review/mass-endangered-species-act-mesa/mesa-fee-schedule.html>)

Make check payable to "Natural Heritage & Endangered Species Fund" and mail to NHESP at above address

Projects altering 10 or more acres of land, also submit:

d. ☐ Vegetation cover type map of site

e. ☐ Project plans showing Priority & Estimated Habitat boundaries

d. OR Check One of the following

1. ☐ Project is exempt from MESA review. Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, <http://www.mass.gov/eca/agencies/dfg/dfw/laws-regulations/cmr/321-cmr-1000-massachusetts-endangered-species-act.html#10.14>; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing.

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 - Notice of Intent

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

Provided by MassDEP:

MassDEP File #:

eDEP Transaction #:1041894

City/Town:LEICESTER

a. NHESP Tracking Number

b. Date submitted to NHESP

3. ☐ Separate MESA review completed.

Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review...

2. For coastal projects only, is any portion of the proposed project located below the mean high waterline or in a fish run?

a. ☒ Not applicable - project is in inland resource area only

b. ☐ Yes ☐ No

If yes, include proof of mailing or hand delivery of NOI to either:

South Shore - Cohasset to Rhode Island,
and the Cape & Islands:

North Shore - Hull to
New Hampshire:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
1213 Purchase street - 3rd floor
New Bedford, MA 02740-6694

Division of Marine
Fisheries -
North Shore Office
Attn: Environmental
Reviewer
30 Emerson Avenue
Gloucester, MA 01930

If yes, it may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office.

For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional office.

3. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

a. ☐ Yes ☒ No

If yes, provide name of ACEC (see instructions to WPA Form 3 or
DEP Website for ACEC locations). **Note:** electronic filers click on
Website.

b. ACEC Name

4. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the
Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

a. ☐ Yes ☒ No

5. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L.c. 131, §
40A) or the Coastal Wetlands Restriction Act (M.G.L.c. 130, § 105)?

a. ☐ Yes ☒ No

6. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

a. ☒ Yes, Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR
10.05(6)(k)-(q) and check if:

1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook
☐ Vol2, Chapter 3)

2. ☐ A portion of the site constitutes redevelopment

3. ☐ Proprietary BMPs are included in the Stormwater Management System

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 - Notice of Intent

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

Provided by MassDEP:

MassDEP File #:

eDEP Transaction #:1041894

City/Town:LEICESTER

b. ☐ No, Explain why the project is exempt:

1. ☐ Single Family Home
2. ☐ Emergency Road Repair
3. ☐ Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department by regular mail delivery.

1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the ☒ Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland ☒ [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.
3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s). ☒ Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.
4. List the titles and dates for all plans and other materials submitted with this NOI. ☒

a. Plan Title: b. Plan Prepared By: c. Plan Signed/Stamped By: c. Revised Final Date: e. Scale:

SITE DEVELOPMENT
PLANS-SOLAR
ENERGY ARRAY

HANNIGAN

ENGINEERING, INC.

WILLIAM HANNIGAN, PE Sept 10, 2018

1:60

5. If there is more than one property owner, please attach a list of these property owners not listed on this form. ☐
6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed. ☐
7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed. ☐
8. Attach NOI Wetland Fee Transmittal Form. ☒
9. Attach Stormwater Report, if needed. ☒

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 - Notice of Intent

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

Provided by MassDEP:

MassDEP File #:

eDEP Transaction #:1041894

City/Town:LEICESTER

E. Fees

Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

1 2311

2 Municipal Check Number

2310

4 State Check Number

201 ENERGY SOLUTIONS II, LLC

6 Payer name on check First Name

9/12/18

3 Check date

9/12/18

5 Check date

7 Payer name on check Last Name

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the project, line of the project location.

[Signature]

1 Signature of Applicant OWNER

September 12, 2018

2 Date

[Signature]

3 Signature of Property Owner (if different from Applicant)

9/12/18

4 Date

[Signature]

5 Signature of Representative (if any)

9/13/18

6 Date

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a copy of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

If the applicant has checked the "yes" box in Section C, Items 1-3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

APPENDIX A
WETLAND FEE TRANSMITTAL FORM

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 3 - Notice of Wetland Fee Transmittal
Form
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File #:
eDEP Transaction #: 1041894
City/Town: LEICESTER

A. Applicant Information

1. Applicant:					
a. First Name	BRENDON	b. Last Name	GOVE		
c. Organization	ZERO POINT ENERGY SOLUTIONS II, LLC				
d. Mailing Address	6 PARK AVENUE				
e. City/Town	WORCESTER	f. State	MA	g. Zip Code	01605
h. Phone Number	7743142549	i. Fax		j. Email	
2. Property Owner: (if different)					
a. First Name	NICHOLAS	b. Last Name	CASELLO		
c. Organization					
d. Mailing Address	500 BOUTILIER ROAD				
e. City/Town	LEICESTER	f. State	MA	g. Zip Code	01524
h. Phone Number		i. Fax		j. Email	
3. Project Location:					
a. Street Address	500 BOUTILIER ROAD		b. City/Town	LEICESTER	

Are you exempted from Fee? ☐

Note: Fee will be exempted if you are one of the following:

- City/Town/County/District
- Municipal Housing Authority
- Indian Tribe Housing Authority
- MBTA

State agencies are only exempt if the fee is less than \$100

B. Fees

Activity Type	Activity Number	Activity Fee	RF Multiplier	Sub Total
G.) EACH PROJECT SOURCE (STORM DRAIN) DISCHARGE;	3	500.00		1500.00
A.) SITE PREPARATION (FOR DEVELOPMENT) BEYOND NOTICE OF INTENT SCOPE;	1	1050.00		1050.00
		City/Town share of filing fee	State share of filing fee	Total Project Fee
		\$1,287.50	\$1,262.50	\$2,550.00

ZPT ENERGY SOLUTIONS II LLC215 EXECUTIVE DR
MOORESTOWN NJ 08057TD BANK
AMERICA'S MOST CONVENIENT BANK

2310

55-136/312

036

CHECK ARMOR
TRADE PROTECTION

2310

9/12/2018

PAY TO THE
ORDER OF COMMONWEALTH OF MASSACHUSETTS

\$ 1,262.50

One thousand two hundred sixty two dollars and fifty cents

DOLLARS

COMMONWEALTH OF MASSACHUSETTS
1000 WASHINGTON STREET
SUITE 710
BOSTON, MA 02118-6100

MEMO

ZPT11-230 ConCom fee


AUTHORIZED SIGNATURE MP

⑈002310⑈ ⑆031201360⑆ 4345130720⑈

ZPT ENERGY SOLUTIONS II LLC215 EXECUTIVE DR
MOORESTOWN NJ 08057TD BANK
AMERICA'S MOST CONVENIENT BANK

2311

55-136/312

036

CHECK ARMOR
TRADE PROTECTION

2311

9/12/2018

PAY TO THE
ORDER OF Town of Leicester

\$ 1,287.50

One thousand two hundred eighty seven dollars and fifty cents

DOLLARS

Town of Leicester
3 Washburn Square
Leicester, MA 01524

MEMO

ZPT11-230 ConCom fee


AUTHORIZED SIGNATURE MP

⑈002311⑈ ⑆031201360⑆ 4345130720⑈

ZPT ENERGY SOLUTIONS II LLC215 EXECUTIVE DR
MOORESTOWN NJ 08057TD BANK
AMERICA'S MOST CONVENIENT BANK

2312

55-136/312

036

CHECK ARMOR
TRADE PROTECTION

2312

9/12/2018

PAY TO THE
ORDER OF Town of Leicester

\$ 2,550.00

Two thousand five hundred fifty dollars

DOLLARS

Town of Leicester
3 Washburn Square
Leicester, MA 01524

MEMO

ZPT11-230 ConCom NOIFEE


AUTHORIZED SIGNATURE MP

⑈002312⑈ ⑆031201360⑆ 4345130720⑈

APPENDIX B
ABUTTER NOTIFICATION

Notification to Abutters Under the Massachusetts Wetlands Protection Act

In accordance with the second paragraph of the Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following:

- A. The name of the applicants: ZPT Energy Solutions II, LLC
- B. The applicants have filed a Request for a Notice of Intent with the Leicester Conservation Commission seeking the permission to remove, fill, dredge or alter an Area Subject to subject to protection under the Wetlands Protection Act (M.G.L. Chapter 131, Section 40).
- C. The address of the Lot where the activity is proposed is 500 Boutilier Road, Map 35 Parcel B3
- D. Copies of the Notice of Intent may be examined at the Leicester Development & Inspectional Services Office between the hours of 8:00 AM and 7:00 PM on Tuesday and Between the hours of 8:00 AM and 5:00 PM Monday, Wednesday and Thursday

For more information, call the office of the Conservation Commission at 508-892-7007

- E. Copies of the Notice of Intent may be obtained from the applicant's representative, by calling: Hannigan Engineering, Inc. at (978) 534-1234 between the hours of 9:00 AM and 4:00 PM, Monday through Friday.
- F. Information regarding the date, time, and place of the public hearing may be obtained from the the Leicester Development & Inspectional Services Office between the hours of 8:00 AM and 7:00 PM Tuesdays and between the hours of 8:00 AM and 5:00 PM Monday, Wednesday and Thursday.

For more information, call the Office of the Conservation Commission at 508-892-7007

NOTE: Notice of the Public Hearing, including its date, time, and place, will be published at least five (5) days in advance in the Worcester Telegram

NOTE: Notice of the Public Hearing, including its date, time, and place, will be posted in the City or Town Hall not less than forty-eight (48) hours in advance.

NOTE: You may also contact your local Conservation Commission or the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call:

Central Region: (508) 792-7650
Southeast Region: (508) 946-2800

Northeast Region: (617) 935-2160
Western Region: (413) 784-1100

AFFIDAVIT OF SERVICE
Under the Massachusetts Wetlands Protection Act

(to be submitted to the Massachusetts Department of
Environmental Protection and the Conservation Commission
when filing a Notice of Intent)

I, CHRISTOPHER M. ANDERSON, hereby certify under the pains and penalties of perjury that on or before SEP 13, 2018 I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, and the **DEP Guide to Abutter Notification** in connection with the following matter:

A Notice of Intent filed under the Massachusetts Wetlands Protection Act by ZPT Energy Solutions II, LLC with the Leicester Conservation Commission for the property located at 500 Boutilier, Map 35 Parcel B.3

The form of notification and a list of the abutters to whom it was given and their addresses are attached to this Affidavit of Service.



(on behalf of the applicant)

CHRISTOPHER ANDERSON, EIT

9/13/18
Date

Town of Leicester Abutters List

ParcelID	Location	Owner	Co-Owner	Mailing Address	City	State	Zip
32 A7 0	253 HENSHAW ST	MORLEY DERMOTT W		253 HENSHAW ST	LEICESTER	MA	01524
32 A9 0	279 HENSHAW ST	SUMMERSON PAUL R	SUMMERSON RITA M	279 HENSHAW ST	LEICESTER	MA	01524
35 A2.1 0	24 BOUTILIER RD	CASELLO NICHOLAS A	CASELLO JAQUELINE	21 BOUTILIER RD	LEICESTER	MA	01524
35 A2.2 0	22 BOUTILIER RD	NGUYEN HAI		22 BOUTILIER RD	LEICESTER	MA	01524
35 B10 0	STAFFORD ST	ROBERTS CHRISTINA L	ROBERTS JOSEPH H III	PO BOX 74	ROCHDALE	MA	01542
35 B2 0	285 HENSHAW ST	CASELLO NICHOLAS P	CASELLO JEANNE A	21 BOUTILIER RD	LEICESTER	MA	01524
35 B2.1 0	21 BOUTILIER RD	CASELLO NICHOLAS P	CASELLO JEANNE A	21 BOUTILIER RD	LEICESTER	MA	01524
35 B3.1 0	680 STAFFORD ST	WITKOWSKI WAYNE P	WITKOWSKI JACQUELINE V	PO BOX 122	ROCHDALE	MA	01542-0122
35 B4 0	678 STAFFORD ST	WITKOWSKI WAYNE JR	WITKOWSKI LORETTA	678 STAFFORD ST	ROCHDALE	MA	01542
35 B5 0	6 OLD STAFFORD TURNPIKE	HOLMES MATTHEW L	HOLMES JEAN M	6 OLD STAFFORD TURNPIKE	ROCHDALE	MA	01542
35 B8 0	STAFFORD ST	INGHAM REALTY INC		197 SOUTH SPENCER ROAD	SPENCER	MA	01562
35 B8.4 0	8 OLD STAFFORD TURNPIKE	FLYNN FRANK B	PAULSON SARA M	8 OLD STAFFORD TURNPIKE	ROCHDALE	MA	01542
35 B8.5 0	10 OLD STAFFORD TURNPIKE	SOUTHARD THOMAS P	SOUTHARD PATRICIA M	10 OLD STAFFORD TURNPIKE	ROCHDALE	MA	01542
35A A3 0	396 AUBURN ST	LEICESTER ONE MA SOLAR LLC		545 MADISON AVE	NEW YORK	NY	10022
36 A1 0	690 STAFFORD ST	BERANTUO ERICH		690 STAFFORD ST	ROCHDALE	MA	01542
36 A1.3 0	36 BOUTILIER RD	EIP ENERGY I LLC		1435 BEDFORD AV	PITTSBURG	PA	15219
36 A2 0	688 STAFFORD ST	DABRILA ZIGMAS	DABRILA JOANNE	325 LOVELL ST	WORCESTER	MA	01602

End of Report

Above is a certified list of abutters and abutters to abutters within 300 feet of subject.
Subject property: 500 Boutilier Road, Assessors Map 35-B3-0, Deed Ref. 42787/182
Subject owner: Nicholas Casello & Jaqueline Mathews

John Prescott, Principal Assessor

Prepared by: Kathleen Asquith, Assistant

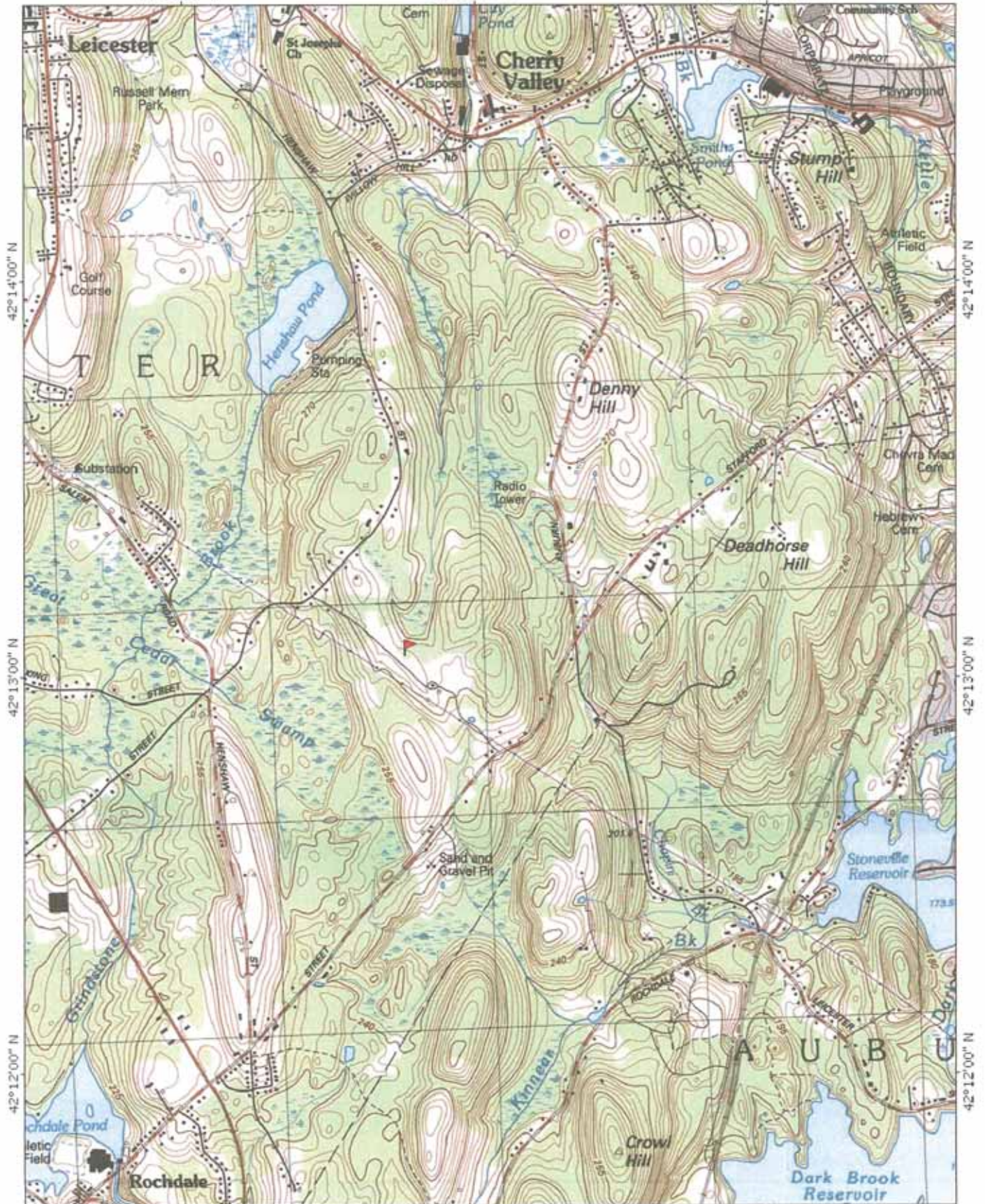
APPENDIX C
ADDITIONAL INFORMATION

Boutlier Road, Leicester, Massachusetts

71°54'00" W

71°53'00" W

WGS84 71°52'00" W



42°14'00" N

42°13'00" N

42°12'00" N

42°14'00" N

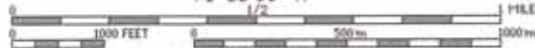
42°13'00" N

42°12'00" N

71°54'00" W

71°53'00" W

WGS84 71°52'00" W



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APPENDIX D
WETLAND DELINEATION REPORT



Caron Environmental Consulting

978-874-5469

Wetlands • Forestry • Permitting • Habitat Studies

September 3, 2018

Mr. William Hannigan
Hannigan Engineering, Inc.
8 Monument Square
Leominster, MA 01453

Re: Wetland Delineation
Boutilier Road, Leicester

Dear Mr. Hannigan:

As requested, we have delineated the wetlands on the above-referenced site. The delineation was conducted on May 8, 2018. The delineation was based on observations of the soils, the plant communities and hydrology.

The edges of Bordering Vegetated Wetlands were delineated with blue flagging labeled A1 to A25, B1 to B29 and C1 to C62. The site is primarily forested. There are also some abandoned fields, an abandoned structure and other disturbed areas on the property.

Species which were observed to be dominant primarily in the wetlands include black tupelo, winterberry, spicebush, sweet pepperbush, jewelweed, cinnamon fern and sphagnum moss. Several facultative species were found to be common in both the wetlands and uplands including red maple, yellow birch, green ash, hemlock, highbush blueberry, multiflora rose, meadowsweet, arrow-wood and sensitive fern. Species which were observed to be abundant primarily in the uplands include white pine, red oak, black oak, scarlet oak, black cherry, bigtooth aspen, shagbark hickory, paper birch, raspberry, staghorn sumac, Morrow honeysuckle, mountain laurel, witch-hazel, fox grape, bittersweet, garlic mustard and sarsaparilla. The attached Delineation Data Forms provide greater detail on the vegetation, soil conditions and hydrological indicators.

The MassGIS Online Viewer does not show any Estimated/Priority Habitat Areas or Certified Vernal Pools on the site.

The delineation was based on features visually apparent at the time. As you are aware the interpretation of the boundaries of wetlands can vary depending on many factors including the time of year, growth phase of vegetation, groundwater levels, soil conditions, weather and political factors. As a result no delineation can be considered definitive until it has been reviewed and verified by all of the relevant approving authorities.

If you have any questions in regards to this matter, please feel free to contact us.

Very truly yours,
CARON ENVIRONMENTAL CONSULTING

By:

Charles E. Caron

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

Applicant: Boutillier Road Prepared by: Caron Environmental Consulting Project location: Leicester DEP File #: _____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☒ Vegetation and other indicators 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: A8-W	Transect Number: A8	Date of Delineation: 5/8/18	
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>Herbs & Seedlings</u>					
New York Fern/ <i>Thelypteris novboracensis</i>	10.5	54	Yes		FAC*
Jack-in-the-Pulpit/ <i>Arisaema triphyllum</i>	3	15	No		FAC*
Goldenrod/ <i>Solidago spp.</i>	3	15	No		
Sedges/ <i>Carex spp.</i>	3	15	No		FACW
<u>Shrubs</u>					
Morrow Honeysuckle/ <i>Lonicera morrowii</i>	38	63	Yes		FACU
Multiflora Rose/ <i>Rosa multiflora</i>	10.5	17	No		FACU
Raspberry/ <i>Rubus idaeus</i>	3	5	No		FACU
Black Cherry/ <i>Prunus serotina</i>	3	5	No		FACU
Highbush Blueberry/ <i>Vaccinium corymbosum</i>	3	5	No		FACW*
Winterberry/ <i>Ilex verticillata</i>	3	5	No		FACW*
<u>Saplings</u>					
Green Ash/ <i>Fraxinus pennsylvanica</i>	3	50	Yes		FACW*
Red Maple/ <i>Acer rubrum</i>	3	50	Yes		FAC*
<u>Woody Vines</u>					
Fox Grape/ <i>Vitis labrusca</i>	3	50	Yes		FACU
Poison Ivy/ <i>Toxicodendron radicans</i>	3	50	Yes		FAC*
<u>Trees</u>					
Green Ash	4.978	65	Yes		FACW*
Red Maple	1.707	22	Yes		FAC*
Black Oak/ <i>Quercus velutina</i>	0.922	12	No		UPL

* Use an asterisk to mark wetland indicator plants

Vegetation conclusion:

Number of dominant wetland indicator plants: 6 Number of dominant non-wetland indicator plants: 2
Is the number of dominant wetland indicator plants equal to or greater than the number of dominant non-wetland indicator 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.

Section II. Indicators of Hydrology Plot A8-W

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☒ Yes ☐ No

Title/date: Soil Survey of Worcester County, Southern Part

Map number: Online map

Soil type mapped: Scituate Fine Sandy Loam

Hydric soil inclusions: Yes

Are field observations consistent with soil survey? ☐ Yes ☒ No

Remarks: Somewhat similar to Ridgebury which is a noted inclusion

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
A	0"-10"	10 YR 3/2	10 YR 5/2 7.5 YR 5/6
B	10"-20"+	2.5 Y 5/2	10 YR 5/2 5 YR 5/6

Remarks:

Other:

Conclusion: Is soil hydric: ☒ Yes ☐ No

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

- ☐ Site inundated;
☐ Depth to free water in observation hole:
☒ Depth to soil saturation in observation hole: 6"
☐ 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: Boutillier Road Prepared by: Caron Environmental Consulting Project location: Leicester DEP File #: _____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☒ Vegetation and other indicators 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: A8-U	Transect Number: A8	Date of Delineation: 5/8/18
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*
Herbs & Seedlings				
Goldenrod/ <i>Solidago</i> spp. (<i>likely canadensis</i>)	10.5	37	Yes	FACU
Canada Mayflower/ <i>Maianthemum Canadensis</i>	3	11	Yes	FACU
Jack-in-the-Pulpit	3	11	Yes	FAC*
Multiflora Rose	3	11	Yes	FACU
Northern Bedstraw/ <i>Galium boreale</i>	3	11	Yes	FAC*
Raspberry	3	11	Yes	FACU
New York Fern	3	11	Yes	FAC*
Shrubs				
Raspberry	20.5	37	Yes	FACU
Meadowsweet/ <i>Spiraea latifolia</i>	10.5	19	Yes	FACW*
Morrow Honeysuckle	10.5	19	Yes	FACU
Multiflora Rose	10.5	19	Yes	FACU
Blackberry/ <i>Rubus allegheniensis</i>	3	5	No	FACU
Saplings				
Staghorn Sumac/ <i>Rhus typhina</i>	10.5	100	Yes	UPL
Trees				
Red Maple	0.545	100	Yes	FAC*

* Use an asterisk to mark wetland indicator plants.

Vegetation conclusion:

Number of dominant wetland indicator plants: 5 Number of dominant non-wetland indicator plants: 8

Is the number of dominant wetland indicator plants equal to or greater than the number of dominant non-wetland indicator 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.

Section II. Indicators of Hydrology Plot A8-U

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☒ Yes ☐ No

Title/date: Soil Survey of Worcester County, Southern Part

Map number: Online map

Soil type mapped: Scituate Fine Sandy Loam

Hydric soil inclusions: yes

Are field observations consistent with soil survey? ☒ Yes ☐ No

Remarks:

2. Soil Description
Horizon Depth (inches) Matrix Color Mottles Color

A 0"-14" 10 YR 3/2 less than 2%
at boundary
5 YR 5/6

Bw 14"-22"+ 10 YR 5/6 None

Remarks:

Other:

Conclusion: Is soil hydric: ☐ Yes ☒ No

Other Indicators 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.



Wetland at Plot A8-W



Upland at Plot A8-U



Soil at Plot A8-W



Soil at Plot A8-U

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

Applicant: Boutilier Road Prepared by: Caron Environmental Consulting Project location: Leicester DEP File #: _____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☒ Vegetation and other indicators 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: B15-W	Transect Number: B15		Date of Delineation: 5/8/18	
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>Herbs & Seedlings</u>						
Canada Mayflower/ <i>Maianthemum canadensis</i>		10.5	39	Yes	FACU	
Cinnamon Fern/ <i>Osmunda cinnamomea</i>		10.5	39	Yes	FACW*	
Arrow-wood/ <i>Viburnum dentatum</i>		3	11	No	FAC*	
Sarsaparilla/ <i>Aralia nudicaules</i>		3	11	No	FACU	
<u>Shrubs</u>						
Highbush Blueberry/ <i>Vaccinium corymbosum</i>		38	50	Yes	FACW*	
Winterberry/ <i>Ilex verticillata</i>		38	50	Yes	FACW*	
<u>Saplings</u>						
None						
<u>Woody Vines</u>						
Fox Grape/ <i>Vitis labrusca</i>		10.5	100	Yes	FACU	
<u>Trees</u>						
Red Maple/ <i>Acer rubrum</i>		4.483	71	Yes	FAC*	
Black Oak/ <i>Quercus velutina</i>		1.163	18	No	UPL	
Black Cherry/ <i>Prunus serotina</i>		0.648	10	No	FACU	

* Use an asterisk to mark wetland indicator plants

Vegetation conclusion:

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

Is the number of dominant wetland indicator plants equal to or greater than the number of dominant non-wetland indicator 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.

Section II. Indicators of Hydrology Plot B15-W

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☒ Yes ☐ No

Title/date: Soil Survey of Worcester County, Southern Part

Map number: Online map

Soil type mapped: Charlton Fine Sandy Loam

Hydric soil inclusions: No

Are field observations consistent with soil survey? ☐ Yes ☒ No

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
A	0"-2"	10 YR 2/1	
B1	2"-10"	2.5 Y 5/2	10 YR 4/1 7.5 YR 4/6
B2	10"-18"+	10 YR 4/3	7.5 YR 5/2 7.5 YR 5/6

Remarks:

Other:

Conclusion: Is soil hydric: ☒ Yes ☐ No

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

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☒ Depth to soil saturation in observation hole: 4"
- ☐ 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: Boutlier Road Prepared by: Caron Environmental Consulting Project location: Leicester DEP File #: _____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☒ Vegetation and other indicators 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: B15-U	Transect Number: B15	Date of Delineation: 5/8/18	
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>Herbs & Seedlings</u>					
Canada Mayflower	38	81	Yes		FACU
Upland Sedge/ <i>Carex spp.</i>	3	6	No		FACU
Shagbark Hickory/ <i>Carya ovata</i>	3	6	No		FACU
Highbush Blueberry	3	6	No		FACW*
<u>Shrubs</u>					
Morrow Honeysuckle	20.5	44	Yes		FACU
Highbush Blueberry	20.5	44	Yes		FACW*
White Pine/ <i>Pinus strobus</i>	3	6	No		FACU
Black Cherry	3	6	No		FACU
<u>Saplings</u>					
Black Oak	10.5	32	Yes		UPL
Shagbark Hickory	10.5	32	Yes		FACU
Shadblow/ <i>Amelanchier Canadensis</i>	3	9	No		FAC*
Green Ash/ <i>Fraxinus pennsylvanica</i>	3	9	No		FACW*
White Pine	3	9	No		FACU
Black Cherry	3	9	No		FACU
<u>Trees</u>					
Black Cherry	2.157	35	Yes		FACU
Black Oak	2.039	33	Yes		UPL
Green Ash	1.991	32	Yes		FACW*

Vegetation conclusion:

Number of dominant wetland indicator plants: 2 Number of dominant non-wetland indicator plants: 6

Is the number of dominant wetland indicator plants equal to or greater than the number of dominant non-wetland indicator 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.

Section II. Indicators of Hydrology

Plot B15-U

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

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☒ Yes ☐ No

Title/date: Soil Survey of Worcester County, Southern Part

Map number: Online map

Soil type mapped: Charlton Fine Sandy Loam

Hydric soil inclusions: No

Are field observations consistent with soil survey? ☒ Yes ☐ No

Remarks:

Recorded data (stream, lake, or tidal gauge; Aerial photo; other):

☐ Other:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
A	0"-8"	2.5 Y 3/2	None
Bw	8"-20"+	7.5 YR 4/6	None

Remarks:

Other:

Conclusion: Is soil hydric: ☐ Yes ☒ No

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.



Wetland at Plot B15-W



Upland at B15-U



Soil at Plot B15-W



Soil at Plot B15-U

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

Applicant: Boutillier Road Prepared by: Caron Environmental Consulting Project location: Leicester DEP File #: _____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☒ Vegetation and other indicators 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: C27-W	Transect Number: C27	Date of Delineation: 5/8/18	
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>Herbs & Seedlings</u>					
Canada Mayflower/ <i>Maianthemum canadensis</i>	38	37	Yes		FACU
Cinnamon Fern/ <i>Osmunda cinnamomea</i>	20.5	20	Yes		FACW*
Intermediate Woodfern/ <i>Dryopteris intermedia</i>	20.5	20	Yes		FAC*
Sedges/ <i>Carex</i> spp.	10.5	10	No		FACW*
Sphagnum Moss/ <i>Sphagnum</i> spp.	10.5	10	No		OBL
Witch-hazel/ <i>Hamamelis virginiana</i>	3	3	No		FACU
<u>Shrubs</u>					
Winterberry/ <i>Ilex verticillata</i>	20.5	55	Yes		FACW*
Sweet Pepperbush/ <i>Clethra alnifolia</i>	10.5	28	Yes		FAC*
Highbush Blueberry/ <i>Vaccinium corymbosum</i>	3	8	No		FACW*
Mountain Laurel/ <i>Kalmia latifolia</i>	3	8	No		FACU
<u>Saplings</u>					
Red Maple/ <i>Acer rubrum</i>	10.5	50	Yes		FAC*
Yellow Birch/ <i>Betula allegheniensis</i>	10.5	50	Yes		FAC*
<u>Trees</u>					
Red Maple	2.622	57	Yes		FAC*
Yellow Birch	1.117	24	Yes		FAC*
Black Tupelo/ <i>Nyssa sylvatica</i>	0.884	19	No		FAC*

* Use an asterisk to mark wetland indicator plants

Vegetation conclusion:

Number of dominant wetland indicator plants: 8 Number of dominant non-wetland indicator plants: 1

Is the number of dominant wetland indicator plants equal to or greater than the number of dominant non-wetland indicator 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.

Section II. Indicators of Hydrology Plot C27-W

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☒ Yes ☐ No

Title/date: Soil Survey of Worcester County, Southern Part

Map number: Online map

Soil type mapped: Swansea Muck

Hydric soil inclusions: Yes

Are field observations consistent with soil survey? ☒ Yes ☐ No

Remarks:

2. Soil Description
Horizon Depth (inches) Matrix Color Mottles Color

O 0"-12" 10 YR 2/1 N/A

Rock at 12"

Remarks:

Other:

Conclusion: Is soil hydric: ☒ Yes ☐ No

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

- ☒ Site inundated;
☐ Depth to free water in observation hole;
☒ Depth to soil saturation in observation hole: surface
☐ 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

Number of wetland indicator plants Yes ☒ No ☐

>/= 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: Boutillier Road Prepared by: Caron Environmental Consulting Project location: Leicester DEP File #: _____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary; fill out Section I only
☒ Vegetation and other indicators 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: C27-U	Transect Number: C27	Date of Delineation: 5/8/18
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>Herbs & Seedlings</u>				
Canada Mayflower	38	60	Yes	FACU
Hay-scented Fern/ <i>Dennstaedtia punctilobula</i>	10.5	17	No	UPL
White Pine/ <i>Pinus strobus</i>	3	5	No	FACU
Witch-hazel	3	5	No	FACU
Striped Maple/ <i>Acer pennsylvanicum</i>	3	5	No	FACU
Red Maple	3	5	No	FAC*
Red Oak/ <i>Quercus rubra</i>	3	5	No	FACU
<u>Shrubs</u>				
Witch-hazel	3 (5% estimated)	100	Yes	FACU
<u>Saplings</u>				
Yellow Birch	38	74	Yes	FAC*
Hemlock/ <i>Tsuga Canadensis</i>	10.5	20	Yes	FACU*
Red Maple	3	6	No	FAC*
<u>Trees</u>				
Yellow Birch	4.135	44	Yes	FAC*
White Ash/ <i>Fraxinus Americana</i>	3.472	37	Yes	FACU
Red Oak	1.634	17	No	FACU
Red Maple	0.196	2	No	FAC*

* Use an asterisk to mark wetland indicator plants

Vegetation conclusion:

Number of dominant wetland indicator plants: 3 Number of dominant non-wetland indicator plants: 3
 Is the number of dominant wetland indicator plants equal to or greater than the number of dominant non-wetland indicator 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.

Section II. Indicators of Hydrology

Plot C27-U

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

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☒ Yes ☐ No

Title/date: Soil Survey of Worcester County, Southern Part

Map number: Online map

Soil type mapped: Charlton Fine Sandy Loam

Hydric soil inclusions: No

Are field observations consistent with soil survey? ☒ Yes ☐ No

Remarks:

Recorded data (stream, lake, or tidal gauge; Aerial photo; other):

☐ Other:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
A	0"-3"	10 YR 2/2	None
Bw	3"-18"+	10 YR 5/6	None

Remarks:

Other:

Conclusion: Is soil hydric: ☐ Yes ☒ No

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.



Wetland at Plot C27-W



Upland at Plot C27-U



Soil at Plot C27-W



Soil at Plot C27-U