

REQUEST FOR DETERMINATION OF APPLICABILITY

PATTON WATER TREATMENT PLANT PATTON ROAD DEVENS, MA

SUBMITTED TO:
Devens Enterprise Commission
33 Andrews Parkway
Devens, MA 01434

SUBMITTED ON BEHALF OF:
MassDevelopment
33 Andrews Parkway
Devens, MA 01434

PREPARED BY:
Caron Environmental Consulting
247 Bragg Hill Road
Westminster, MA 01473

PROJECT ENGINEER:
Wright-Pierce
600 Federal Street; Suite 2151
Andover, MA 01810

September 2, 2020

PROJECT NARRATIVE

Project Introduction and Overview

This Request for Determination of Applicability (RDA) is being filed by the MassDevelopment in accordance with the Massachusetts Wetlands Protection Act (MAWPA) (M.G.L. Chapter 131, Section 40) and its implementing regulations (310 CMR 10.00) and the Devens Zoning By-law (Chapter XII Wetlands Protection). This RDA is being filed for the construction of a water treatment plant.

The proposed project consists of the construction of a new water treatment plant, at 96 Patton Road. The water treatment plant will consist of a 7500 sq. ft. water treatment plant, an electrical generator and propane tank on concrete pads, a 10,000-gallon residuals holding tank, a 4000-gallon tight tank, electrical connections, a paved driveway with 2 parking spots, watermains, connections, clearing of about 0.38 acres of vegetation and appurtenances.

Project Impacts and Mitigation

Buffer Zone:

The majority of the proposed work for the Patton Water Treatment Plant is outside of the 100-foot Buffer Zone. The only work proposed within the 100-Buffer Zone is the installation of about 15 linear feet of underground electric and 135 linear feet of watermain, all of which are proposed within previously disturbed areas or Patton Road.



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:
- MassDevelopment
Name
33 Andrews Parkway
Mailing Address
Devens
City/Town
(978) 784-2391
Phone Number
- jmoore@massdevelopment.com
E-Mail Address
- MA
State
(978) 772-7469
Fax Number (if applicable)
- 01434
Zip Code
2. Representative (if any):
- Caron Environmental Consulting, LLC
Firm
Charles Caron
Contact Name
247 Bragg Hill Road
Mailing Address
Westminster
City/Town
(978) 944-2326
Phone Number
- caronenv@aol.com
E-Mail Address
- MA
State
(978) 944-2326
Fax Number (if applicable)
- 01473
Zip Code

B. Determinations

1. I request the Devens Enterprise Commission / 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:
- Devens
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):

150 Patton Road	Devens
Street Address	City/Town
10/11	99-200/99-204
Assessors Map/Plat Number	Parcel/Lot Number

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

The area consists of the Patton Well Station, a gravel parking/turnaround and the approximately 750 ft. of road between them.

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

Patton Water Treatment Plant, Devens, MA	
Title	Date
_____	_____
Title	Date
_____	_____
Title	Date
_____	_____

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

This project is the construction of a water treatment plant at 96 Patton Road. The water treatment plant is proposed to be 7500 sq. ft. in size with its associated driveway and parking, an emergency generator, a propane tank, watermains, connections, electrical connections, a 10000-gallon residuals holding tank, a 4000-gallon tight tank and appurtenances. Clearing of 0.38 acres of vegetation is also proposed.



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).

The only work proposed within the 100-foot Buffer Zone, is approximately 135 linear feet of watermain and 15 linear feet of underground electrical conduit. This work is located within previously disturbed areas or Patton Road, and at the closest point is over 85 feet from the wetlands. No work is proposed within a resource area.

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.)



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:

Massachusetts Development Finance Agency
Name
99 High Street: 11th Floor
Mailing Address
Boston
City/Town
MA
State

02110
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.

Jim Moore

Signature of Applicant

9-2-2020

Date

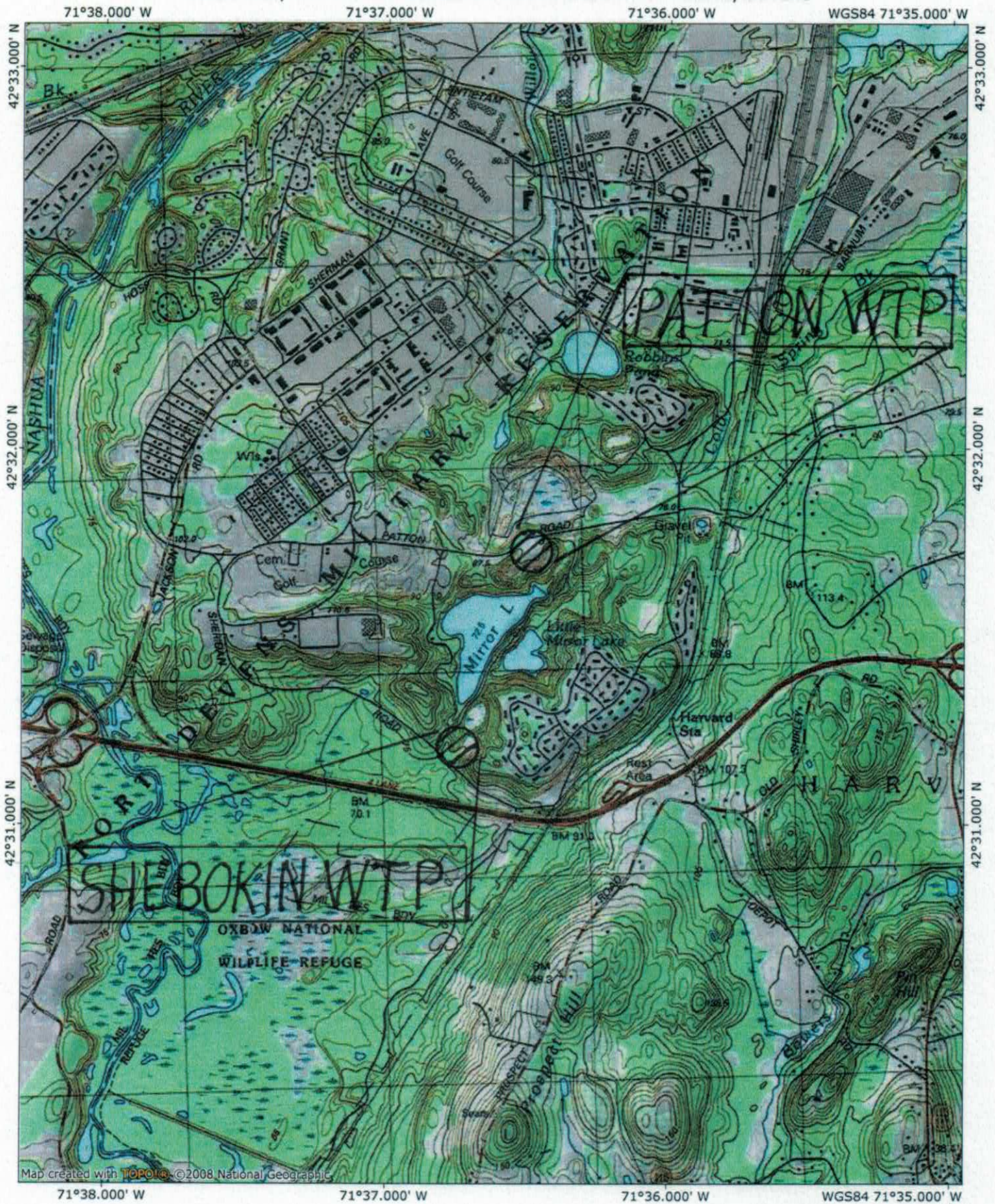
Clark E. C.

Signature of Representative (if any)

9/2/20

Date

LOCUS MAP; PATTON AND SHEBOKIN WATER TREATMENT PLANTS, DEVENS



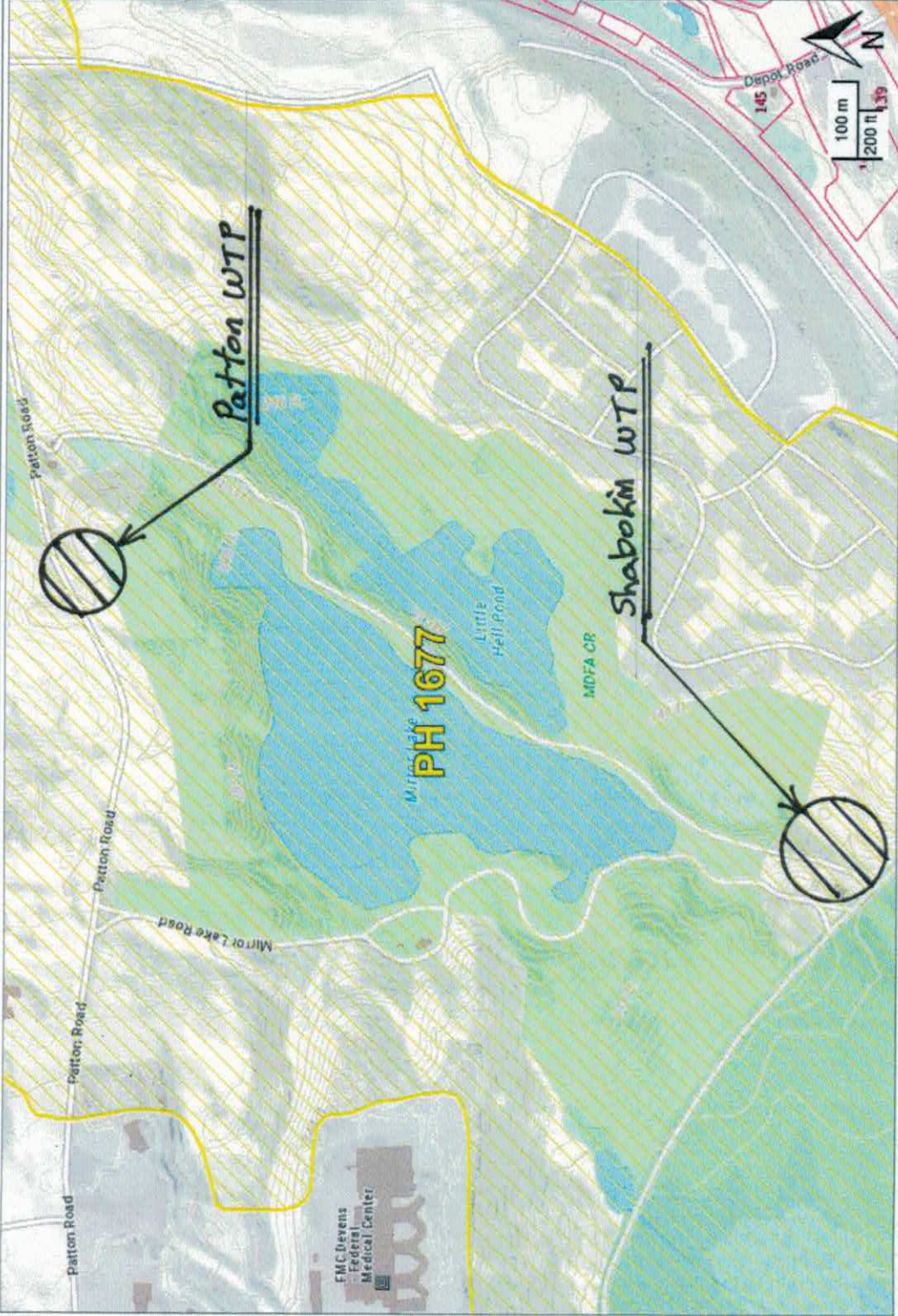
Map created with **TOPOLK** ©2008 National Geographic



MN ↑ TN
14°
07/31/20

NHESP Estimated/Priority Habitat Area

- NHESP Priority Habitats of Rare Species
- NHESP Estimated Habitats of Rare Wildlife
- Tax Parcels for Query
- Detailed Features
- Tax Parcels for Display
- Structures
- MassGIS Statewide Basemap
- MassGIS Topographic Features Basemap





Caron Environmental Consulting

978-874-5469

Wetlands • Forestry • Permitting • Habitat Studies

October 29, 2019

Ms. Christine Catalini
Wright-Pierce
600 Federal Street ; Suite 2151
Andover, MA 01810

Re: Wetland Delineation
Patton Well/Devens

Dear Ms. Catalini:

As requested, we have delineated the wetlands on the above-referenced site. The delineation was conducted on October 25, 2019. The delineation was based on observations of the soils, the plant communities and hydrology.

The edges of non-bordering vegetated wetlands were delineated with blue flagging labeled A1 to A1 and B1 to B3. The edge of a Bordering Vegetated Wetland was delineated with blue flagging labeled C1 to C13. The A-series wetland is a shrub marsh. The B and C-series are wooded. The uplands are wooded and contain roadways and the Patton Well station.

The A and B-series are non-bordering. Therefore, they are not jurisdictional under the Wetlands Protection Act as Bordering Vegetated Wetlands. They may, however, be jurisdictional under the Federal Clean Waters Act. Federal wetlands do not have buffer zones associated with them. Accordingly, these areas should have no impact on the project. They should be protected during construction by erosion control measures where appropriate.

Species which were observed to be dominant primarily in the uplands include Black Oak, Red Oak, Scarlet Oak, White Oak, Paper Birch, Bigtooth Aspen, Quaking Aspen, Chestnut, Russian Olive, Witch-hazel, Hemlock, White Pine, Raspberry, Black Raspberry, Morrow Honeysuckle, Bittersweet, Mapleleaf Viburnum, Sweet Fern, Common Dewberry and upland sedges. Several species are common in both the wetlands and uplands including Gray Birch, Red Maple, and European Buckthorn. Species abundant primarily in the wetlands include Speckled Alder, Highbush Blueberry, Jewelweed, Meadowsweet, Marginal Woodfern, Evergreen Woodfern, Sensitive Fern and Winterberry. The attached Delineation Data Forms provide greater detail on the vegetation, soil conditions and hydrological indicators.

The MassGIS Online Viewer shows that the site is within an Estimated/Priority Habitat Areas. There are no Certified Vernal Pools on the site. The viewer does show two potential vernal pools on site, one in the A-series and one in the B-series.

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.

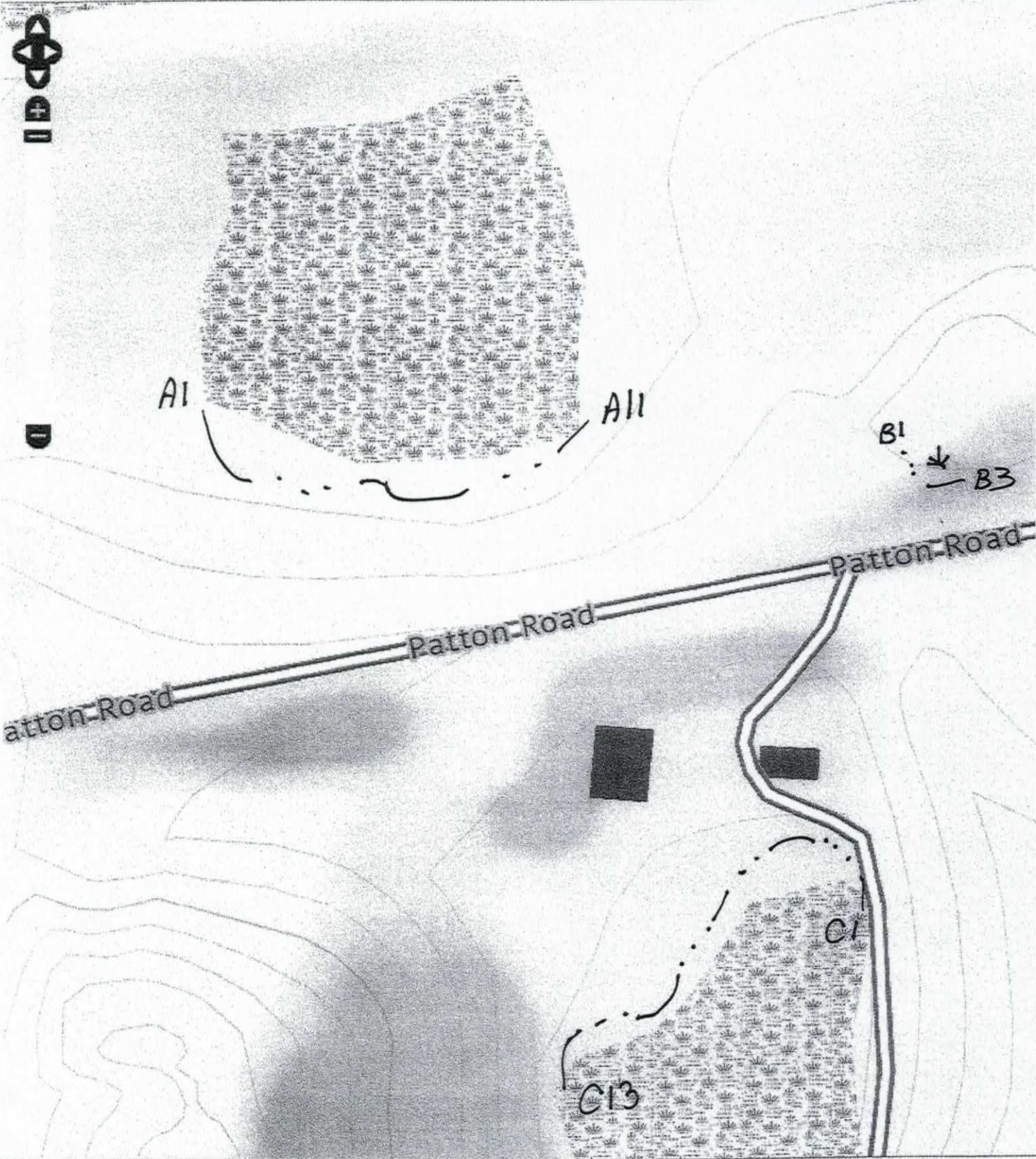
Very truly yours,
CARON ENVIRONMENTAL CONSULTING

By:

Charles E. Caron

Search for a location

Zoom to a town



0 m

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

Applicant: Mass Development Prepared by: Caron Environmental Consulting Project location: Patton Well Site/Devens 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: A4-W	Transect Number: A4	Date of Delineation: 10/25/2019
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>			
European Buckthorn/ <i>Frangula alnus</i>	20.5	77	Yes
Sensitive Fern/ <i>Onoclea sensibilis</i>	3.0	11	No
Swamp Dewberry/ <i>Rubus hispidus</i>	3.0	11	No
<u>Shrubs</u>			
European Buckthorn	85.5	100	Yes
<u>Saplings</u>			
None			
<u>Trees</u>			
Red Maple/ <i>Acer rubrum</i>	2.148	100	Yes
			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: **0**
 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 A4-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, Massachusetts
Northeastern Part

Map number: Online map

Soil type mapped: Quonset Loamy Sand

Hydric soil inclusions:

Are field observations consistent with soil survey? Yes No

Remarks:

2. Soil Description Horizon	Depth (inches)	Matrix Color	Mottles Color
Fill/Sediment	0"-6"	10 YR 4/4	
A	6"-20"+	10 YR 2/1	10 YR 6/1

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	<input checked="" type="checkbox"/>	<input type="checkbox"/>
>/= number of non-wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland hydrology present:		
Hydric soil present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other indicators of hydrology present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample location is in a BVW	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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: Mass-Development Prepared by: Caron Environmental Consulting Project location: Patton Well Site/Devens 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: A4-U	Transect Number: A4	Date of Delineation: 10/25/2019
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>				
European Buckthorn	20.5	100	Yes	FAC*
<u>Shrubs</u>				
European Buckthorn	10.5	44	Yes	FAC*
Highbush Blueberry/ <i>Vaccinium corybosum</i>	10.5	44	Yes	FACW*
Morrow Honeysuckle/ <i>Lonicera morrowii</i>	3.0	13	No	FACU
<u>Saplings</u>				
Black Oak/ <i>Quercus velutina</i>	10.5	39	Yes	UPL
White Pine/ <i>Pinus strobus</i>	10.5	39	Yes	FACU
Black Cherry/ <i>Prunus serotina</i>	3.0	11	No	FACU
Red Maple	3.0	11	No	FAC*
<u>Woody Vines</u>				
Bittersweet/ <i>Celastrus orbiculatus</i>	10.5	100	Yes	UPL
<u>Trees</u>				
Bigtooth Aspen/ <i>Populus grandidentata</i>	2.452	42	Yes	FACU
Paper Birch/ <i>Betula papyrifera</i>	2.015	35	Yes	FACU
White Pine	0.893	15	No	FACU
Red Maple	0.422	7	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: 5

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 A4-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, Massachusetts

Northeastern Part

Map number: Online map

Soil type mapped: Quonset Loamy Sand

Hydric soil inclusions:

Are field observations consistent with soil survey?

Yes No

Remarks:

Other:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
A	0"-2"	10 YR 3/3	None
Bw	2"-24"+	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

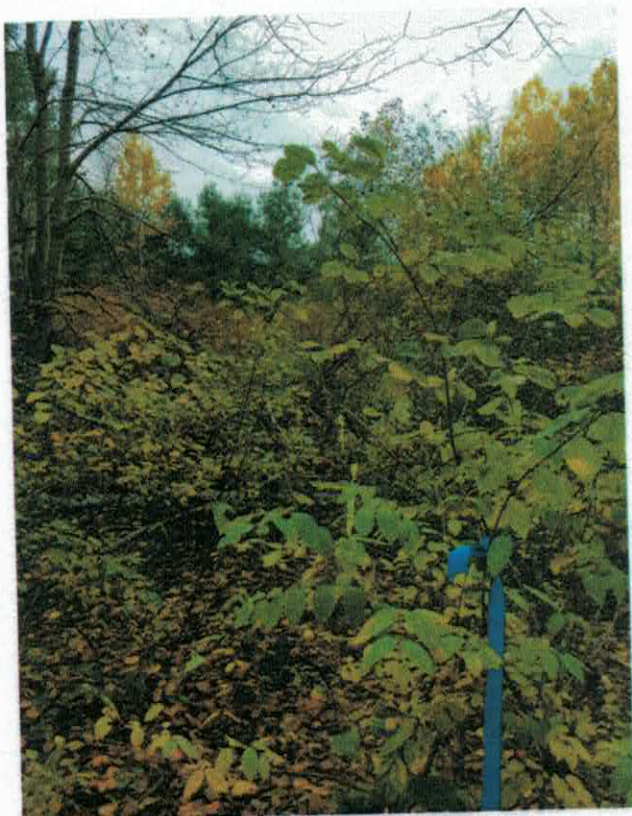
Wetland hydrology present:

Hydric soil present

Other indicators of hydrology present

Sample location is in a BVW

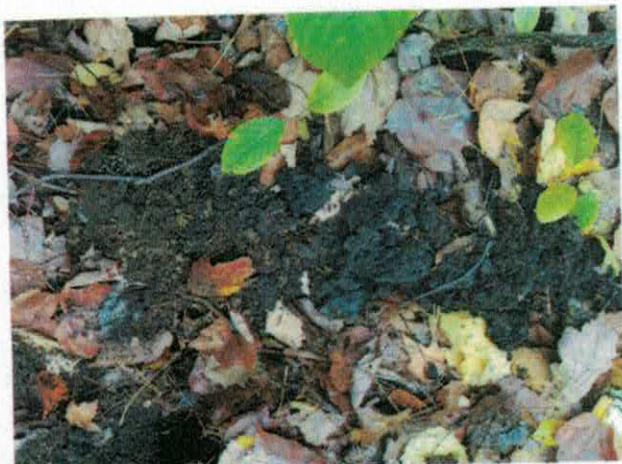
Submit this form with the Request for Determination of Applicability or Notice of Intent.



Wetland at Plot A4-W



Upland at Plot A4-U



Soil at Plot A4-W



Soil at Plot A4-U

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

Applicant: Mass Development Prepared by: Caron Environmental Consulting Project location: Patton Well/Devens 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: C9-W	Transect Number: C9	Date of Delineation: 10/28/2019	
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>				
Intermediate Woodfern/ <i>Dryopteris intermedia</i>	10.5	26	Yes	FAC*
Bittersweet/ <i>Celastrus orbiculatus</i>	10.5	26	Yes	UPL
Swamp Dewberry/ <i>Rubus hispidus</i>	10.5	26	Yes	FACW*
Raspberry/ <i>Rubus idaeus</i>	3.0	7	No	FACU
Meadowsweet/ <i>Spiraea alba</i>	3.0	7	No	FACW*
Marginal Woodfern/ <i>Dryopteris marginalis</i>	3.0	7	No	FACU
<u>Shrubs</u>				
European Buckthorn/ <i>Frangula alnus</i>	38.0	44	Yes	FAC*
Speckled Alder/ <i>Alnus incana</i>	20.5	24	Yes	FACW*
Maleberry/ <i>Lyonia lingustrina</i>	10.5	12	No	FACW*
Sweet Pepperbush/ <i>Clethra alnifolia</i>	10.5	12	No	FAC*
Common Buckthorn/ <i>Rhamnus cathartica</i>	3.0	4	No	FAC*
Swamp Dogwood/ <i>Cornus amomum</i>	3.0	4	No	FACW*
<u>Saplings</u>				
None				
<u>Trees</u>				
Red Maple/ <i>Acer rubrum</i>	5.559	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: **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 C9-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, Massachusetts
Northeastern Part

Map number: Online map

Soil type mapped: Hinckley Sandy Loam

Hydric soil inclusions:

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 3/2	None
B	2"-20"+	10 YR 5/2	10 YR 6/1

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: at 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	<input checked="" type="checkbox"/>	<input type="checkbox"/>
>/= number of non-wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland hydrology present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hydric soil present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other indicators of hydrology present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample location is in a BVW	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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: Mass Development Prepared by: Caron Environmental Consulting Project location: Patton Well/Devens 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: C9-U	Transsect Number: C9	Date of Delineation: 10/25/2019	
A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or basal area)	C. Percent Dominance (yes or no)	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
<i>Herbs & Seedlings</i>				
Swamp Dewberry	20.5	48	Yes	FACW*
Bittersweet	10.5	24	Yes	UPL
Wild Strawberry/ <i>Fragaria vesca</i>	3.0	7	No	UPL
Witch-hazel/ <i>Hamamelis virginiana</i>	3.0	7	No	FACU
Raspberry	3.0	7	No	FACU
Red Oak/ <i>Quercus rubra</i>	3.0	7	No	FACU
<i>Shrubs</i>				
Witch-hazel	10.5	35	Yes	FACU
White Pine/ <i>Pinus strobus</i>	10.5	35	Yes	FACU
European Buckthorn	3.0	10	No	FAC*
Mapleleaf Viburnum/ <i>Viburnum acerifolium</i>	3.0	10	No	UPL
Russian Olive/ <i>Elaeagnus angustifolia</i>	3.0	10	No	FACU
<i>Saplings</i>				
Paper Birch/ <i>Betula papyrifera</i>	10.5	64	Yes	FACU
Red Maple	3.0	18	No	FAC*
White Pine	3.0	18	No	FACU
<i>Woody Vines</i>				
Bittersweet	3.0	100	No	UPL
<i>Trees</i>				
Bigtooth Aspen/ <i>Populus grandidentata</i>	0.922	28	Yes	FACU
Paper Birch	0.894	28	Yes	FACU
Red Maple	0.681	21	Yes	FAC*
Black Oak/ <i>Quercus velutina</i>	0.403	12	No	UPL
White Pine	0.349	11	No	FACU

* Use an asterisk to mark wetland indicator plants

Vegetation conclusion:

Number of dominant wetland indicator plants: **1** Number of dominant non-wetland indicator plants: **7**

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 C9-U

Hydric Soil Interpretation

I. Soil Survey

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

Title/date: Soil Survey of Worcester County, Massachusetts

Northeastern Part

Map number: Online map

Soil type mapped: Hincley Sandy Loam

Hydric soil inclusions:

Are field observations consistent with soil survey? Yes No

Remarks:

2. Soil Description Horizon	Depth (inches)	Matrix Color	Mottles Color
A	0"-3"	10 YR 3/3	None
Bw	3"-25"+	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	<input type="checkbox"/>	<input checked="" type="checkbox"/>
>/= number of non-wetland indicator plants	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wetland hydrology present:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hydric soil present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other indicators of hydrology present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample location is in a BVW	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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



Wetland at Plot C9-W



Upland at Plot C9-U



Soil at Plot C9-W



Soil at Plot C9-U



Caron Environmental Consulting, LLC

Wetlands • Forestry • Permitting • Habitat Studies

BLANDING'S TURTLE PROTECTION PLAN
PATTON AND SHABOKIN WATER TREATMENT PLANTS
PATTON AND SHERIDAN ROADS
DEVENS
AUGUST 2020

1. Blanding's Turtle Timing:
 - a. The active season is defined as April 1 to October 31.
 - b. The inactive season is defined as November 1 to March 31.
2. If all work can take place during the inactive season this Protection Plan does not need to be implemented.
3. The applicant shall implement the Blanding's Turtle Protection Plan during each and all phases of construction that occur during the active season.
4. Prior to the commencement of work an on-site meeting shall be held with at a minimum the following parties present: the approved biologist, the applicant, the contractor and other key personnel that might be in charge on-site. The purpose of this meeting will be to ensure that all parties are familiar with this Protection Plan and are able to identify Blanding's Turtles.
5. Blanding's Turtle Exclusion Barrier During Work:
 - a. An entrenched silt fencing turtle barrier shall be installed around the entire work area. If possible the installation should take place during the inactive season.
 - b. If it becomes necessary to commence work during the active season the approved biologist must conduct sweeps (as detailed below) prior to the installation of the barrier as close to the date of installation, and on the morning of the day the barrier is to be installed an additional sweep shall be conducted. Supplemental sweeps by the approved biologist must then be conducted for the two following days to ensure that no turtles are trapped inside the barrier. The total effort for this series of sweeps must meet the time requirements specified below. These sweeps must be completed before any other work may begin.
 - c. The barrier should consist of tightly woven silt fencing material, staked at a 6 to 10 foot interval. The face of the barrier must be relatively smooth. Loosely woven geotextile fabrics, hay or straw bales, wattles or tubular materials are not sufficient.
 - d. Installation of the barrier must be conducted using methods that result in a minimum of disturbance (i.e., hand dug, 2-man trencher, or auger). It is not appropriate to clear large access paths prior to the barrier installation or prior to turtle sweeps.
 - e. The barrier must be at least 2.5 feet high, vertically above the ground surface. The bottom of the silt fencing must be carefully buried in a 4 to 6 inch deep trench. The trench must be backfilled and compacted. If it is not possible to dig a trench (due to rocks, bedrock, pavement, etc.) the bottom of the silt fencing must be continuously affixed to the surface.

- f. A single gap in the barrier to serve as an access point shall be allowed. In this location the barrier shall consist of a crenelated row of haybales. If the haybales are not tight to the ground sandbags shall also be placed as needed at the base of the bales.
- g. The barrier must remain taut between the stakes. Slumps or loose materials will undermine the effectiveness of the barrier. In some circumstances the silt fencing may need to be reinforced with backer materials to ensure integrity.
- h. No work, clearing, soil or vegetation disturbance may occur outside the limit of work approved on the project plans and protected by the turtle barrier.
- i. Any supplemental haybales, straw wattles or other erosion control measures must be installed on the work-side of the barrier. The turtle barrier may also serve as a sedimentation control barrier where appropriate.
- j. The barrier shall be maintained in good condition throughout the construction period, and repaired or replaced as necessary.
- k. During the active season, while work is on-going, the barrier shall be inspected weekly by the approved biologist.
- l. During the active season daily inspections of the barrier by the applicant shall occur so as to ensure that the fence remains intact.
- m. If during the active season the applicant discovers any significant gaps in the barrier that have gone undetected for more than 2 days they shall contact the approved biologist who will need to conduct a sweep of the interior as described below.
- n. If the barrier will be in place over the winter in late March or early April (dependent on snow cover conditions) the barrier must be inspected by the approved biologist to ensure that the barrier is fully functional by the start of the active season.
- o. The turtle barrier shall be removed no later than two years from the initiation of work for the relevant phase of the project. The barrier should be removed as soon as possible when it is certain that no additional work will need to take place.

6. Blanding's Turtle Sweeps During Construction:

- a. The NHESP must pre-approve the biologist before work begins. In order to handle state-listed species the biologist must obtain a Commercial Scientific Collection Permit for the project prior to conducting turtle sweeps.
- b. Sweeps of the work area shall be conducted by the approved biologist prior to the installation of the turtle barrier if it is being installed during the active season or if during the active season the applicant discovers gaps in the barrier that have gone undetected for more than two days.
- c. If a sweep is required the biologist shall make it during appropriate weather conditions. Ideal conditions for sweeps are sunny days with temperatures between 50°F and 80°F. At critical stages sweeps may be conducted outside of ideal conditions if necessary.
- d. Sweeps shall include looking on each side of the barrier, along construction and personnel access paths and within the interior of the barrier.

- e. Any cycle of sweeps requires a total effort of 2 hours/acre for grassland, 4 hours/acre for woody successional and forested areas, and 0.5 hours/acre of the gravel parking area or other areas with exposed, un-vegetated surfaces.
- f. Any rare species found shall be relocated into suitable habitat in an area nearby, but outside of the enclosed work area.
- g. In any year that sweeps occur, a brief report shall be submitted by December 31st of the same year briefly summarizing the dates of any visits, the activities conducted by the biologist on each visit, the name of the biologist who conducted each sweep, the number of hours searched and observations made and repairs suggested and implemented.
- h. All rare species observations associated with sweeps shall be reported to NHESP through a Rare Species Observation Form, preferably submitted through the Vernal Pool & Rare Species Information System, within 10 days of observation.

7. Perimeter Fences:

- a. Long-term the perimeter fences will serve to prevent turtles from entering the sites.
- b. The perimeter fence will be buried a minimum of 6" to prevent small animals from creating breaches that could be used by turtles to enter the sites.
- c. The fences shall have sweeps attached to all personnel or vehicle access gates such that there is no space between the bottom of the gate and the ground.
- d. After installation the fence shall be visually inspected by the operators at least every March and then every three months during the turtle active season to ensure that no breach repairs are necessary. Any necessary repairs shall be made in a timely manner.
- e. To avoid trapping any individuals within the fence three one-way gates will be installed equidistant along the fence. The gates will be 1'x1' openings placed 18" to 24" off the ground, with grassed ramps on the interior at an angle not greater than 45° leading up to the opening. There are no ramps on the exterior of the gates.

8. Timing of Work Outside Fence:

- a. All work including routine (but not emergency) maintenance and vegetation management located outside of the perimeter fence shall occur during the inactive season, except that the use of a weed-whacker to maintain the fence line and turtle gates is permitted at any time.
- b. This restriction does not apply to work at the existing Shabokin and Patton Well facilities, or to work within 100' of Patton Road in the vicinity of the Patton Water Treatment Plant.

9. Final Report:

- a. Within 60 days of the completion of the project or any approved phase of the project, a report shall be submitted to NHESP which details conditions on the site and to serve as notice that the approved work has been completed.