

NOTICE OF INTENT

**SHABOKIN WATER
TREATMENT PLANT
SHERIDAN 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

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PROJECT NARRATIVE

Project Introduction and Overview

This Notice of Intent (NOI) 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 NOI 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 88 Sheridan Road. The water treatment plant will consist of a 7500 sq. ft. water treatment plant, an electrical generator and fuel tank on concrete pads, propane tank on concrete pad, a 10,000-gallon sanitary tank, a 4000-gallon tight tank, electrical connections, a paved driveway with three parking spots, watermains, connections, clearing of about 0.30 acres of vegetation and appurtenances.

Project Impacts and Mitigation

Buffer Zone:

The majority of the proposed work for the Shabokin Water Treatment Plant is outside of the 100-foot Buffer Zone. Clearing of 4200 sq. ft. of vegetation, a portion of the paved driveway, a portion of a stormwater basin, 250 linear feet of raw watermain and 290 linear feet of finish water main and 390 linear feet of underground electric are proposed within the 100-foot Buffer Zone. Due to the location of the current access drive it is not feasible to locate the work outside of the 100-foot Buffer Zone. Clearing of 410 sq. ft. and 25 linear feet of the underground electric is necessary within the 25' No Disturbance Area.



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 Number

Document Transaction Number

Devens

City/Town

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



Note:
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

88 Sheridan Road

a. Street Address

Devens

b. City/Town

01434

c. Zip Code

Latitude and Longitude:

42°31'12.3"N

d. Latitude

71°36'41.9"W

e. Longitude

2/3

f. Assessors Map/Plat Number

99-202/99-203

g. Parcel /Lot Number

2. Applicant:

James

a. First Name

Moore

b. Last Name

MassDevelopment

c. Organization

33 Andrews Parkway

d. Street Address

Devens

e. City/Town

MA

f. State

01434

g. Zip Code

(978) 784-2931

h. Phone Number

(978) 772-7496

i. Fax Number

jmoore@massdevelopment.com

j. Email Address

3. Property owner (required if different from applicant): ☐ Check if more than one owner

a. First Name

b. Last Name

Massachusetts Development Finance Agency

c. Organization

99 High Street; 11th Floor

d. Street Address

Boston

e. City/Town

MA

f. State

02110

g. Zip Code

(617) 330-2000

h. Phone Number

i. Fax Number

jmoore@massdevelopment.com

j. Email address

4. Representative (if any):

Charles

a. First Name

Caron

b. Last Name

Caron Environmental Consulting, LLC

c. Company

247 Bragg Hill Road

d. Street Address

Westminster

e. City/Town

MA

f. State

01473

g. Zip Code

(978) 944-2326

h. Phone Number

i. Fax Number

caronenv@aol.com

j. Email address

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

Exempt

a. Total Fee Paid

b. State Fee Paid

c. City/Town Fee Paid



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A. General Information (continued)

6. General Project Description:

This project is the construction of a water treatment plant at 88 Sheridan Road. The water treatment plant is proposed to be 7500 sq. ft. in size with its associated driveway and parking, an emergency generator and fuel tank on concrete pads, propane tank on concrete pad, watermain, connections, electrical connections, a 10,000-gallon residuals holding tank, a 4000-gallon tight tank and appurtenances.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- | | |
|---|---|
| 1. <input type="checkbox"/> Single Family Home | 2. <input type="checkbox"/> Residential Subdivision |
| 3. <input type="checkbox"/> Commercial/Industrial | 4. <input type="checkbox"/> Dock/Pier |
| 5. <input checked="" type="checkbox"/> Utilities | 6. <input type="checkbox"/> Coastal engineering Structure |
| 7. <input type="checkbox"/> Agriculture (e.g., cranberries, forestry) | 8. <input type="checkbox"/> Transportation |
| 9. <input type="checkbox"/> Other | |

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration 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. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR 10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Middlesex South

a. County

26317

c. Book

b. Certificate # (if registered land)

3

d. Page Number

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

1. ☒ Buffer Zone Only – 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).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



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

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet	2. square feet
	3. cubic yards dredged	

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet	2. square feet
	3. cubic feet of flood storage lost	4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet	
	2. cubic feet of flood storage lost	3. cubic feet replaced
f. <input type="checkbox"/> Riverfront Area	1. Name of Waterway (if available) - specify coastal or inland	

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. 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)

Note: for coastal riverfront areas, please complete **Section B.2.f.** above.



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

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

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 Beach 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

Size of Proposed Alteration Proposed Replacement (if any)

f. ☐ Coastal Banks 1. linear feet

g. ☐ Rocky Intertidal Shores 1. square feet

h. ☐ Salt Marshes 1. square feet 2. sq ft restoration, rehab., creation

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

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 enter the additional amount here.

a. square feet of BVW

b. square feet of Salt Marsh

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings



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C. Other Applicable Standards and Requirements

- ☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

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 and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

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

07/27/20

b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); OR complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

c. Submit Supplemental Information for Endangered Species Review*

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

(a) within wetland Resource Area 0% / 0 acres
percentage/acreage

(b) outside Resource Area 4.6% / 1.5 acres
percentage/acreage

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

2. ☒ Project plans for entire project site, including wetland resource areas and areas outside of wetlands 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

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/>). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



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C. Other Applicable Standards and Requirements (cont'd)

- (c) ☒ MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/ mesa/ mesa_fee_schedule.htm). Make check payable to "Commonwealth of Massachusetts - NHESP" 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
- (f) 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/dfwele/dfw/nhosp/regulatory_review/ mesa/ mesa_exemptions.htm; 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. a. NHESP Tracking # _____ 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.
3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?
- a. ☒ Not applicable – project is in inland resource area only b. ☐ Yes ☐ No

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

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

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: DMF.EnvReview-North@state.ma.us

Also if yes, the project 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.



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D. Additional Information (cont'd)

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.

Shabokin Water Treatment Plant

a. Plan Title

Wright-Pierce

b. Prepared By

James Cray

c. Signed and Stamped by

Varies

d. Final Revision Date

e. Scale

09/08/2020

f. Additional Plan or Document Title

g. Date

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.

E. Fees

1. ☒ 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:

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

6. Payor name on check: First Name

7. Payor name on check: Last Name



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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 property line of the project location.

Jim Moore
1. Signature of Applicant

9/2/2020

2. Date

3. Signature of Property Owner (if different)

Clark & C
5. Signature of Representative (if any)

4. Date

9/9/20
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:

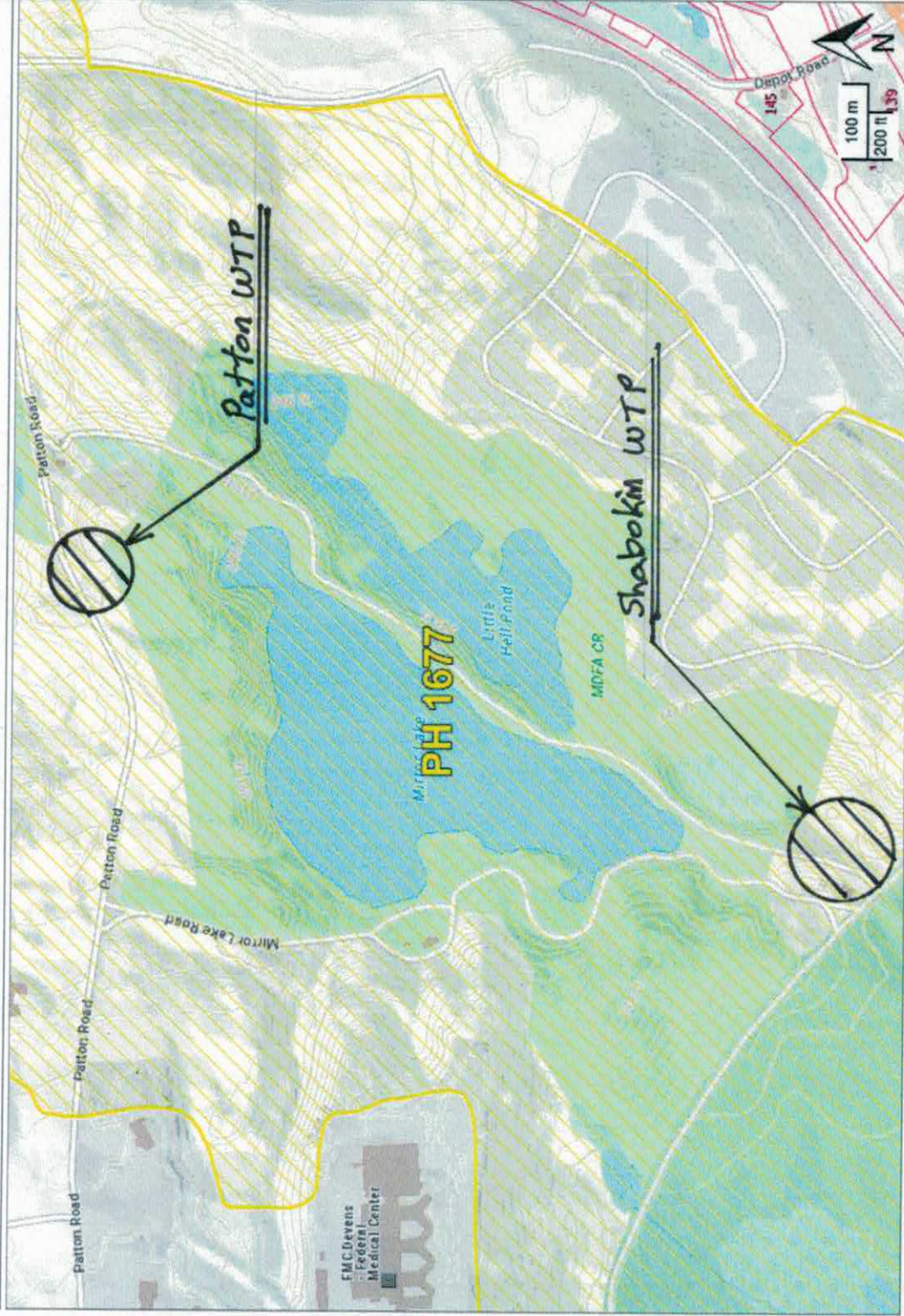
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

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.

LOCUS MAP; PATTON AND SHEBOKIN WATER TREATMENT PLANTS, DEVENS



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

November 1, 2018

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

Re: Wetland Delineation
Sheridan Well
Sheridan Road/Devens

Dear Ms. Catalini

As requested, we have delineated the wetlands on the above-referenced site. The delineation was conducted on August 6, 2018. The delineation was based on observations of the soils, the plant communities and hydrology.

The edges of the wetlands were delineated with blue flagging labeled A1 to A14, B1 to B4, C1 to C9 and D1 to D14. The A-series is a non-bordering vegetated wetland that is a raised bog. The B-series and C-series wetlands are wooded wetlands located on the south side of Sheridan Road. The D-series is a bordering vegetated wetland located east of the Shabokin Well. It appears to be man-made. The uplands contain the Shabokin Well site and an old gravel pit. The remainder of the adjacent uplands are forested.


Species which were observed to be dominant primarily in the wetlands include Black Spruce, Sweet Pepperbush, Sphagnum Moss, Highbush Blueberry, Arum, Meadowsweet, Skunk Cabbage, Swamp Beggartick, Swamp Azalea, Cinnamon Fern, Maleberry, and Red Maple. Species abundant primarily in the uplands include Black Oak, Red Oak, Scarlet Oak, White Oak, White Pine, Witch-hazel, Lowbush Blueberry, Huckleberry, Chestnut, American Hazelnut, Maple-leaf Viburnum, Trailing Arbutus, Mountain Laurel, Hemlock and Red Maple. The attached Delineation Data Forms provide greater detail on the vegetation, soil conditions and hydrological indicators.

The MassGIS Online Viewer shows that the entire site is located within an Estimated/Priority Habitat Area. There are no certified vernal pools on the site, although the A-series wetland is mapped as a potential vernal pool.

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: Mass Development Prepared by: Caron Environmental Consulting Project location: Sheridan Road 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: A7-W	Transect Number: A7	Date of Delineation: 08/06/2018	
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>					
Sweet Pepperbush/ <i>Clethra alnifolia</i>	63.0	100	Yes		FAC*
<u>Shrubs</u>					
Sweet Pepperbush	20.5	36	Yes		FAC*
Maleberry/ <i>Lyonia ligustrina</i>	10.5	19	Yes		FACW*
Witch-Hazel/ <i>Hamamelis virginiana</i>	10.5	19	Yes		FACU
Red Maple/ <i>Acer rubrum</i>	3.0	5	No		FAC*
Swamp Azalea/ <i>Rhododendron viscosum</i>	3.0	5	No		FACW
European Buckthorn/ <i>Frangula alnus</i>	3.0	5	No		FAC*
White Pine/ <i>Pinus strobus</i>	3.0	5	No		FACU
Highbush Blueberry/ <i>Vaccinium corymbosum</i>	3.0	5	No		FACW*
<u>Saplings</u>					
Red Maple	20.5	100	Yes		FAC*
<u>Trees</u>					
Red Maple	1.532	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 A7-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: Freetown Muck

Hydric soil inclusions:

Are field observations consistent with soil survey?



Yes



No

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
O	0"-3"	10 YR 2/1	N/A
B	3"-16"+	2.5 YR 4/2	10 YR 5/1 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: standing water



Depth to soil saturation in observation hole: to surface



Water marks: on trees



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: Sheridan Road 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: A7-U	Transect Number: A7	Date of Delineation: 08/06/2018	
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					
American Hazelnut/ <i>Corylus americana</i>	10.5	54	Yes		FACU
Pennsylvania Sedge/ <i>Carex pensylvanica</i>	3.0	15	No		UPL
Lowbush Blueberry/ <i>Vaccinium angustifolium</i>	3.0	15	No		FACU
Rattlesnake Plantain/ <i>Goodyera spp.</i>	3.0	15	No		FACU
Shrubs					
Witch-Hazel	20.5	87	Yes		FACU
Paper Birch/ <i>Betula papyrifera</i>	3.0	13	No		FACU
Saplings					
White Pine	38.0	78	Yes		FACU
Paper Birch	10.5	22	Yes		FACU
Trees					
Red Oak/ <i>Quercus rubra</i>	4.172	56	Yes		FACU
Black Oak/ <i>Quercus velutina</i>	2.448	33	Yes		UPL
White Pine	0.860	11	No		FACU

* Use an asterisk to mark wetland indicator plants

Vegetation conclusion:

Number of dominant wetland indicator plants: 0 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 A7-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 Massachusetts

Northeastern part

Map number: Online map

Soil type mapped: Hinckley Sandy Loam

Hydric soil inclusions: No

Are field observations consistent with soil survey?



Yes



No

Remarks:



Other:

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:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
A	0"-3"	10 YR 4/3	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

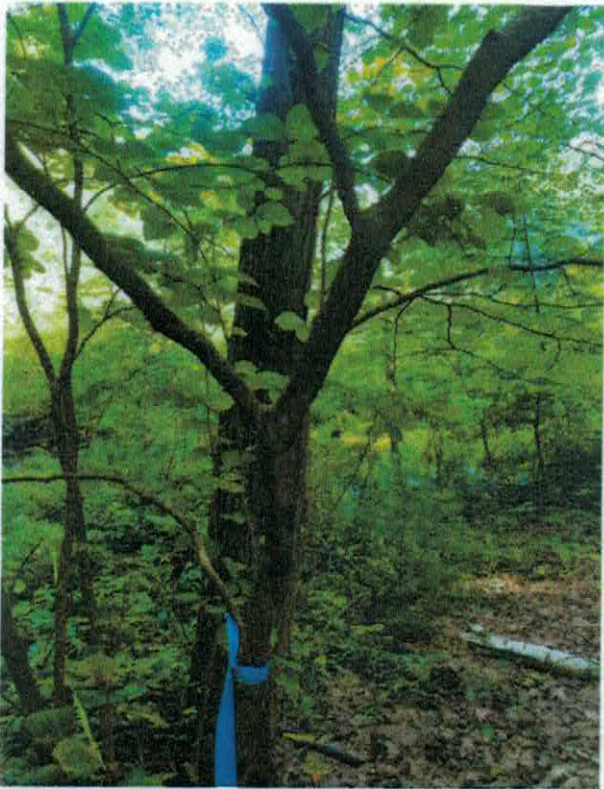
present



Sample location is in a BVW



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



Wetland at Plot A7-W



Upland at Plot A7-U



Soil at Plot A7-W



Soil at Plot A7-U

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

Applicant: Mass Development Prepared by: Caron Environmental Consulting Project location: 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: D1-W	Transect Number: D1	Date of Delineation: 08/06/2018	
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					
Highbush Blueberry/ <i>Vaccinium corymbosum</i>	10.5	28	Yes	FACW*	
Witch-Hazel/ <i>Hamamelis virginiana</i>	3.0	8	Yes	FACU	
Late Goldenrod/ <i>Solidago gigantea</i>	3.0	8	Yes	FACW*	
White Pine/ <i>Pinus strobus</i>	3.0	8	Yes	FACU	
Sweet Pepperbush/ <i>Clethra alnifolia</i>	3.0	8	Yes	FAC*	
Hornbeam/ <i>Carpinus caroliniana</i>	3.0	8	Yes	FACU	
Lowbush Blueberry/ <i>Vaccinium angustifolium</i>	3.0	8	Yes	FACU	
Red Oak/ <i>Quercus rubra</i>	3.0	8	Yes	FACU	
White Oak/ <i>Quercus alba</i>	3.0	8	Yes	FACU	
Black Oak/ <i>Quercus velutina</i>	3.0	8	Yes	UPL	
Shrubs					
European Buckthorn/ <i>Frangula alnus</i>	3.0	33	Yes	FAC*	
Multiflora Rose/ <i>Rosa multiflora</i>	3.0	33	Yes	FACU	
Highbush Blueberry	3.0	33	Yes	FACW*	
Saplings					
Hornbeam	3.0	100	Yes	FAC*	
Woody Vines					
Oriental Bittersweet/ <i>Celastrus orbiculatus</i>	10.5	100	Yes	UPL	
Trees					
Red Maple/ <i>Acer rubrum</i>	1.227	100	Yes	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: 8
 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 D1-W

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: No

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

Remarks:

Other:

2. Soil Description	Depth (inches)	Matrix Color	Mottles Color
Horizon			
A	0"-16"	10 YR 2/2	2.5 YR 2.5/1
Bg	16"+	5 YR 5/1	5 YR 8/1

Remarks: A horizon – mottle color refers to vertical organic streaking

Other:

Conclusion: Is soil hydric: ☒ Yes ☐ No

- ☐ 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):

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: Mass Development Prepared by: Caron Environmental Consulting Project location: 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: D1-U	Transect Number: D1		Date of Delineation: 08/06/2018	
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						
Checkerberry/ <i>Gaultheria procumbens</i>		20.5	36	Yes		FACU
Witch-Hazel		10.5	19	Yes		FACU
American Hazelnut/ <i>Corylus americana</i>		10.5	19	Yes		FACU
Canada Mayflower/ <i>Maianthemum canadense</i>		3.0	5	No		FACU
Shadbush/ <i>Amerlanchier canadensis</i>		3.0	5	No		FAC*
Lowbush Blueberry		3.0	5	No		FACU
Mapleleaf Viburnum/ <i>Viburnum acerifolium</i>		3.0	5	No		UPL
Red Oak		3.0	5	No		FACU
Shrubs						
Witch-Hazel		10.5	64	Yes		FACU
American Hazelnut		3.0	18	No		FACU
Hornbeam		3.0	18	No		FAC*
Saplings						
White Pine		10.5	50	Yes		FACU
Red Maple		10.5	50	Yes		FAC*
Trees						
Red Oak		3.409	50	Yes		FACU
Black Oak		2.601	38	Yes		UPL
Scarlet Oak/ <i>Quercus coccinea</i>		0.660	10	No		UPL
White Oak		0.136	2	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 D1-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 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 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:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
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B	0"-1"	10 YR 5/1	None
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Bhs	1"-2"	10 YR 4/3	None
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Bw	2"-25"+	10 YR 6/6	None
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Remarks:

Other:

Conclusion: Is soil hydric: ☒ Yes ☐ No

Vegetation and Hydrology Conclusion

	Yes	No
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Number of wetland indicator plants	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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>/= number of non-wetland indicator plants	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Wetland hydrology present:

Hydric soil present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Other indicators of hydrology	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Sample location is in a BVW ☐ ☒

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



Wetland at Plot D1-W



Upland at D1-U



Soil at Plot D1-W



Soil at Plot D1-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.