MassDEP and Hanover Conservation Field Data Form and Instructions[1]

WHEN TO USE THIS FORM

The Department of Environmental Protection's field data form (revised to include Hanover Bylaw requirements) should be submitted with a Request for Determination of Applicability or a Notice of Intent when delineating the boundary of a Bordering Vegetated Wetland (BVW) under the Massachusetts Wetlands Protection Act (M.G.L. c 131, § 40), its associated regulations (310 CMR 10.55) and/or the Town of Hanover Wetlands Protection Bylaw. It should be used whether the boundary is delineated by vegetation alone or by vegetation and other indicators of wetland hydrology. Details on the criteria for delineating a BVW boundary and the terminology used in this field data form are described in the handbook, *Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act* (MA Department of Environmental Protection, Division of Wetlands and Waterways, 1995) found at http://www.mass.gov/eea/docs/dep/water/laws/a-thru-h/bvwmanua.pdf .

Note: if detailed vegetative assessment is *not* necessary for the site, *make a note on the data form and submit it with your application*.

INSTRUCTIONS

The data form includes a section on project identification, including the applicant's name, the name of the person performing the delineation, project location, and the MassDEP file number, if available.

- If *vegetation alone* is presumed adequate to delineate the BVW boundary, mark the first box, complete Section I of the data form, and submit the document.
- If *vegetation and other indicators* of hydrology are used to delineate the BVW boundary, mark the second box, complete Sections I and II of the form, and submit the document.
- MassDEP has selected the dominance test as the preferred method of vegetation analysis at sample plot locations. The information gathered for that method should be recorded on the form. If a method other than the dominance test is used, mark the third box and explain the method and why it was used.

Section I: Vegetation

Section I should be used to record information about the vegetation within an observation plot and on a transect used to delineate the BVW boundary. Note the date of the delineation. ***Submit a separate data form for each observation plot.*** Attach supplemental sheets if more space is needed.

A. Sample Layer and Plant Species

- **Record** each plant species using common *and* scientific names for the following layers:
  - **Ground Cover**
    - woody vegetation less than 3 feet in height (seedlings),
    - non-climbing woody vines less than 3 feet in height, and
    - non-woody vegetation (including mosses) of any height within a 5-foot radius plot;
  - **Shrubs**
    - woody vegetation between 3 feet and 20 feet in height within a 15-foot radius plot;
  - **Saplings**
    - woody vegetation over 20 feet in height with a diameter at breast height (dbh- measured 4.5 feet from the ground) greater than or equal to 0.4 inches to less than 5 inches within a 15-foot radius plot;

[1] Reformatted and revised for ease of use for Hanover applicants.

- **Climbing woody vines**
  - woody vines that are attached, rooted, or climbing on trees, saplings, or shrubs within a 30-foot radius plot; and
- **Trees**
  - woody vegetation with a dbh of 5 inches or greater and over 20 feet in height within a 30-foot radius plot.

Section I: Vegetation *(continued)*

Mass DEP recommends that "if you do not recognize a plant species or do not know a plant's name, call it a generic name with a detailed description- unknown plants need to be identified only if they are determined to be dominant plants as per DEP requirements". However, for delineations conducted in Hanover, it is important to make every effort to identify the species since poisonous vegetation has been found in some circumstances, such as the poisonous Canadian Moon Seed plant *(menispermum canadense)*[2].

B. Percent Cover

Determine percent cover (or basal area for trees) for each plant species in each layer by visual analysis and measurement. (See handbook http://www.mass.gov/eea/docs/dep/water/laws/a-thru-h/bvwmanua.pdf for information about determining percent cover, page 12.)

C. Percent Dominance

Determine percent dominance for each plant species by dividing the percent cover or basal area for each plant species by the total percent cover or basal area for the layer. (See handbook http://www.mass.gov/eea/docs/dep/water/laws/a-thru-h/bvwmanua.pdf for information about the dominance test, pages 15-19.)

D. Dominant Plants

1. Identify the dominant plants. Dominant plants are:
   - plants with a percent dominance of 50 percent or greater, or plants whose percent dominance add up to immediately exceed 50 percent;
   - plants with a percent dominance of 20 percent or greater;
   - plants with a percent dominance equal to a plant already listed as a dominant species.
2. Determine common and scientific names for any unknown plants identified as dominant plants.

E. Wetland Indicator Category

1. Identify the Wetland Indicator Category for all dominant plant species using the *National List of Plant Species That Occur in Wetlands: Massachusetts*.
2. Use an asterisk to mark the wetland indicator plants. Wetland indicator plants are any of the following: plant species listed in the Wetlands Protection Act;
   - plants in the genus *Sphagnum*;
   - plants listed as Facultative (FAC), Facultative+ (FAC+), Facultative Wetland(FACW-), Facultative Wetland (FACW), Facultative Wetland+ (FACW+) or Obligate (OBL);
   - plants with morphological or physiological adaptations (such as buttressed or
   - fluted trunks, shallow roots, or adventitious roots).

If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk (e.g. White pine, *Pinus strobus*, FacU*/shallow roots, buttressed trunks).

[2] For further information go to https://en.wikipedia.org/wiki/Menispermum_canadense

Vegetation Conclusion

List the number of dominant wetland indicator plants and the number of dominant non-wetland indicator plants. If the number of dominant wetland indicator plants is equal to or greater than the number of non-wetland indicator plants, and vegetation alone is presumed adequate for the delineation, the plot is located in a BVW.

If vegetation alone has been chosen for the delineation at this site, complete only Section I and submit the form with a Request for Determination of Applicability or a Notice of Intent. Otherwise, continue the delineation process and record information for Section II on the second page of the form.

Section II: Indicators of Hydrology

Section II should be used to record information on indicators of hydrology in those areas where vegetation alone is not presumed adequate to delineate the BVW boundary, or to overcome the presumption that vegetation alone is adequate.

Hydric Soil Interpretation

1. Soil Survey: Record information about the site from the Soil Survey Report prepared by the U.S. Natural Resources Conservation Service (NRCS) - formerly called the Soil Conservation Service. 2. Soil Description: Record information based on observations at a soil test hole located within the vegetation observation plot. Describe the soil profile of each soil horizon, noting the depth. Identify the matrix and mottles colors by hue, value, and chroma (information from Munsell Soil Color Charts). For example, 10YR 5/2. Notes on soil texture and other soil characteristics may be recorded in the Remarks section.
3. Other: note any additional information used to determine if hydric soil is present, such as regional field indicator guides.

Conclusion: Indicate whether the soil is hydric based on information observed in the field. (See list of Hydric Soil Indicators in the handbook, page 29.)

Other Indicators of Hydrology

Record observations of other indicators of hydrology. Check and describe all that apply. Due to their seasonal or temporal nature, these other indicators generally are used in conjunction with vegetation and soils to determine the location of the BVW boundary.

Vegetation and Hydrology Conclusion

Determine if the observation plot is in a BVW. The observation plot is in a BVW if the number of dominant wetland indicator plants is equal to or greater than the number of dominant non-wetland indicator plants, and if hydric soil or other indicators of hydrology are present.

For an observation plot located in a disturbed area, any one of the three indicators is sufficient to determine that the sample location is in a BVW. In that case, make a note on the form about that conclusion. Submit the completed form with a Request for Determination of Applicability or a Notice of Intent.

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

Applicant:_____ Prepared by:_____ Project location:_____ 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:		Transect Number:	Date of Delineation:
A. Sample Layer & 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*

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

Vegetation conclusion:

Number of dominant wetland indicator plants: ☐ Number of dominant non-wetland indicator plants: ☐

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? ☐yes ☐no

NOTE: If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the RDA or NOI.

Section II. Indicators of Hydrology- Hydric Soil Interpretation

1. Soil Survey

***Is there a published soil survey for this site?** ☐ **Yes** ☐ **No** ***title/date:** _____

***map number:** _____ ***soil type mapped:** _____

***hydric soil inclusions:** _____

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

Remarks: _____

2. Soil Description

*Horizon _____ *Depth_____ *Matrix Color _____ Mottles Color _____

Remarks: _____

3. Other: _____

Conclusion: Is soil hydric? ☐ **Yes** ☐ **No**

Other Indicators of Hydrology: ***(check all that apply & 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 (streams, lake, or tidal gauge; aerial photo; other):
  _____
- ❑ Other: _____

Vegetation and Hydrology Conclusion

	Yes	No
Number of wetland indicator plants ≥ # 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.