

**Figure 2.** NHESP Priority and Estimated Habitats for Rare Species and Wildlife delineation.

## *Wetlands*

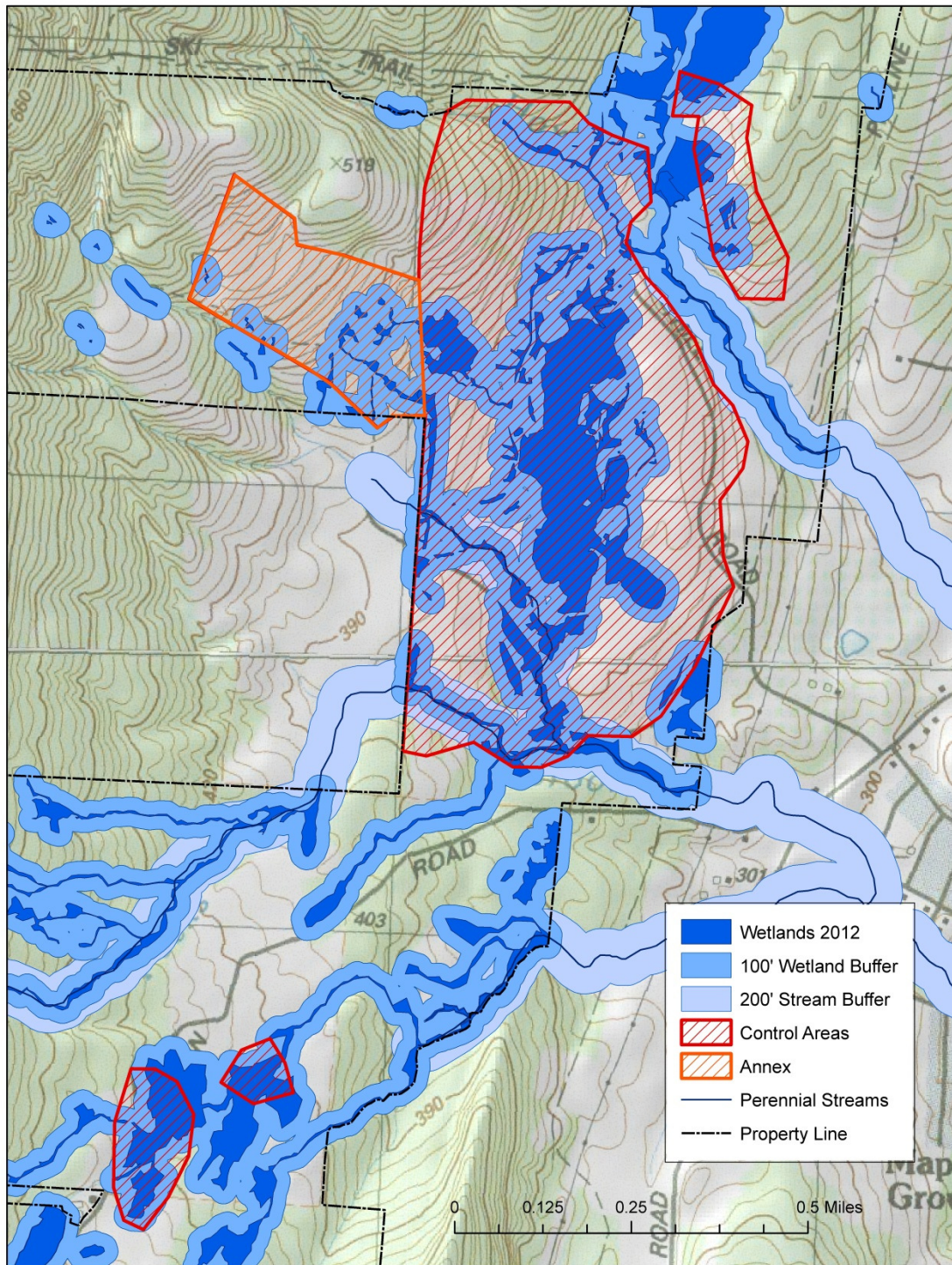
Large portions of all four Control Areas fall under the jurisdiction of the WPA, therefore we are filing a Notice of Intent (NOI), accompanied by this IPMP, with the Adams Conservation Commission and the Department of Environmental Protection (DEP) in order to comply with the WPA.

The Department of Conservation and Recreation (DCR) submitted an Abbreviated Notice of Resource Area Delineation (ANRAD) to the Adams Conservation Commission in 2011. The ANRAD included areas for future development (trails, campsites, and other facilities), but did not include up-to-date delineations of all jurisdictional wetlands in the Control Areas. While the ANRAD was accepted, The Adams Conservation Commission suggested that several wetland complexes within the Control Areas be re-delineated prior as part of the NOI and this IPMP. These wetlands were believed to be misrepresented or under-represented in the ANRAD. The updated wetlands layer could then be used to estimate the area of potential impact to wetland resource areas from the proposed invasive control work.

In response to this suggestion, Ward Smith of Wendell Wetland Services and Steve Johnson of Biodiversity delineated wetlands within the suggested areas in November of 2011. The newly delineated wetland lines were reviewed informally by Jason Krzanowski of the Adams Conservation Commission. Because the purpose of this wetland delineation work was to provide only an estimate of the potential impact to wetlands, the locations of the latest wetland flags were recorded with GPS units rather than by land surveyors. The coordinates of the flag locations were imported into ArcMap and maps were produced depicting an updated wetlands layer in association with the control areas (Figure 3).

At the September 27, 2012 meeting of the Adams Conservation Commission, a decision was made to disregard the findings of the ORAD, and to establish No Contest lines for the purposes of invasive plant control only. The Commission also established a buffer zone of 40' around all wetland resource areas. No foliar treatments are permitted within this zone, which will be flagged with heavy-duty vinyl flagging tape by PES.

The maps used in this management plan are meant to be reference maps in order to convey a conceptual reference to the work being proposed. More thorough large scale regulatory maps have been prepared to accompany the Notice of Intent. Once approved, these NOI maps will be the official maps for this management plan.



**Figure 3.** Updated wetlands and buffer zones within Control Areas.

### **Invasive Management Activities**

### *Preparations Prior to Control Work*

*Signage and Public Notification:* Greylock Glen is used by many people for a variety of recreational purposes, including hiking and dog walking. We will use signs to demarcate herbicide-treated areas for a period of 48 hours during and following treatment. Using a 48-hour interval is a very conservative practice, as the longest recommended restricted-entry interval for Garlon 4 Ultra® and Polaris® herbicides is only 12 hours (see Appendix A). The signs will not indicate that the trails are closed off to the public, but will alert people to the herbicide application and request that they stay on the trails (Appendix H). Signs will be mounted on hardwood stakes, at a visible height of 4-5 feet, and placed along trails at intervals of 100-200 feet to alert the public of herbicide treated areas. We will also post warning signs on our utility vehicle.

Maps of active herbicide application areas will be posted in parking lots to inform the public of the location of current treatment activities. The Director of the Town of Adams Community Development Department Donna Cesan will be notified prior to the commencement of herbicide application activities. She will notify the public of the location of work performed, on a weekly basis, via newspaper and website.

*Wetland Permitting Issues:* We will follow the decision of the Adams Conservation Commission establishing a 40' buffer zone around wetland resource areas. PES will flag the extent of the buffer zones in the field, using heavy-duty vinyl flagging material. No foliar spray will be used within the wetland zone.

We will follow the Sensitive Area Materials standards for wetland areas described in the Rights of Way Management Regulations (ROWMR, 333 CMR 11.00). The restrictions are summarized as follows:

- a) Only herbicides listed on the "Sensitive Area Materials List" (SAML) may be used (Appendix D). These herbicides have been evaluated by the Massachusetts Pesticide Bureau (MPB) as being of low toxicity for use in sensitive areas.
- b) No more than the minimum-labeled rate of herbicide for the appropriate site, pest, and application method is to be applied from the SAML.
- c) Herbicides shall only be applied selectively using low pressure foliar techniques or basal or cut-stump applications, or other method approved for use by Massachusetts Department of Agricultural Resources (MDAR).
- d) Applicators must take precautions to avoid chemical drift within ten feet of standing or flowing water in a wetland.
- e) A minimum of 12 months must elapse between treatments.

For more information about the ROWMR, see the MDAR website:  
<http://www.mass.gov/agr/pesticides/rightofway/index.htm>

We are using the following definitions to establish the work zones of this invasive plant management project:

*Upland* = Any area >100 feet from the Bank or Bordering Vegetated Wetlands (BVW); >40 feet from Bordering Land Subject to Flooding (BLSF) or Isolated Land Subject to Flooding (ILSF); >200 feet from Mean Annual High Water (MAHW) (perennial stream).

*Transition Zone* = Area 40-100 feet from Bank or BVW and 40-200 feet from MAHW (perennial stream).

*Wetland Zone* = Area inside of or within 40 feet of Bank, BVW, MAHW, BLSF, ILSF, and one Certified Vernal Pool that is located outside of designated wetland complexes..

Note: BLSF and ILSF do not have buffer zones.

### *Proposed Control Methods*

#### Herbaceous Invasive Species

##### ***Garlic Mustard (42 acres)***

Garlic mustard has been found scattered throughout Control Area C-1 (Figure 4). Control of this species requires both a long-term integrated strategy and a commitment to ongoing management. It has a biennial life cycle, and its seeds remain viable for five to seven years. In past projects, PES has reduced heavy infestations to a monitoring/spot control stage after two years using the integrated approach described below. This approach will ensure the control of garlic mustard on site:

#### *Methods for Control Work in Non-wetland Areas*

We have completed two rounds of herbicide application and hand-pulling during spring 2011 and spring 2012

1. Herbicide application (Fall 2012). Foliar spray <sup>1st</sup> year mustard with glyphosate-based herbicide.
2. Herbicide application (Spring 2013). Foliar spray garlic mustard with glyphosate-based herbicide.
3. Herbicide application (Fall 2013). Foliar spray 1<sup>st</sup> year mustard.
4. Herbicide application (Spring 2014). Foliar spray garlic mustard with glyphosate-based herbicide.
5. Herbicide application (Fall 2014). Foliar spray garlic mustard.

In order for this control sequence to be effective, work must be done before garlic mustard sets seed around mid-May.

#### *Methods for Control Work in Jurisdictional Wetland Areas*

We will use the herbicides and rates specified on the Sensitive Area Materials List (SAML) within the *Transition Zone* boundaries (Area 40-100 feet from Bank or BVW and 10-200 feet from MAHW). Garlic mustard within the *Wetland Zone* (area inside of or within 40 feet of Bank, BVW, MAHW, BLSF, ILSF) will be hand-pulled and bagged. No herbicide will be used.

*Methods for Control Work in Sensitive Areas*

For the small amount of garlic mustard in sensitive rare plant areas, we will adhere to the NHESP conditions:

*“For garlic mustard, plants can be hand-pulled and left on site if done before seed sets. If garlic mustard is controlled by flame weeding with propane torches in rare plant habitat, MESA plants will have to be flagged or a botanist needs to be on site. Flame weeding can be done only on wet days.”*