

# SITE SPECIFIC WORK PLAN FOR INVASIVE SPECIES MANAGEMENT ON FOREST PRESERVE IN THE ADIRONDACK PARK

*Phragmites australis* – Debar Mountain Wild Forest

DATE: July 13, 2011

APPLICANT: Adirondack Park Invasive Plant Program

PREPARED BY: Brendan R. Quirion

STATE LAND UNIT: Debar Mountain Wild Forest

DEC REGION: 5

COUNTY: Franklin

TOWN: Brighton

TARGET SPECIES: *Phragmites australis*

CONTROL METHOD: Herbicide treatment using best management practices in accordance with the Inter-Agency Guidelines for Implementing Best Management Practices for the Control of Terrestrial and Aquatic Invasive Species on Forest Preserve Lands in the Adirondack Park.

HERBICIDE SELECTED FOR USE: Accord Concentrate (EPA registration No. 62719-324)

UTM COORDINATES: (Decimal Degrees)

44.46402333 Latitude and -74.26238167 Longitude

OBS ID # from iMap: New Sites for 2010 not yet in iMap

- **Narrative**

The project proposes to treat one small stand of *Phragmites australis* located along State Route 30 near Barnum Pond in the town of Brighton. The control method selected is to apply a treatment of a glyphosate based herbicide via stem injection in accordance with the best management practices identified in the “Inter-Agency Guidelines for Implementing Best Management Practices for the Control of Terrestrial and Aquatic Invasive Species on Forest Preserve Lands in the Adirondack Park, prepared by NYS Department of Environmental Conservation and the Adirondack Park Agency”. The foliar spray treatment of glyphosate based herbicide involves using a backpack sprayer to apply the herbicide onto the leaf surfaces until they are wetted. The foliar spray method is useful in covering large/dense stands of vegetation efficiently. However, with spray applications, there is an increased likelihood for non-target or off site impacts through herbicide spray drift. To reduce this likelihood, applications will be conducted during periods of little or no wind. A marking dye will also be used to identify which plants have already been sprayed so that plants are not sprayed more than once. This *Phragmites* stand is approximately 0.07339 acres. All clothing, boots, and equipment will be cleaned prior to leaving the site to prevent the spread of seed or rhizome fragments.

## Treatment of *Phragmites australis* within the Debar Mountain Wild Forest

- **Inventory of target and non-target species**

The site was mapped by the preparers of this work plan on 01-7-2011 as part of an invasive species inventory on State Route 30. Within the invaded site *Phragmites* coverage ranged from 50-75% above ground biomass and non target species included *Calamagrostis*, *Solidago*, *Juncus*, *Aster*, *Spiraea*, and *Carex*. No protected plant species were identified during the inventory.

- **Target species impacts and concerns**

Areas impacted by *Phragmites australis* can range from large scrub shrub palustrine wetland communities to right of way drainage ditches. Saturated or seasonally flooded, degraded habitats often provide the best conditions for invasion by this species. If infestations are not controlled, and suitable habitat is present, this species will spread vegetatively by rhizome growth, plant fragments, and seed dispersal to create a monotypic plant community in the impacted area. This can result in an overall decrease in the native biodiversity and ecological quality of the invaded habitat. These infestations will also continue to serve as source populations for future invasion.

- **Natural Heritage review**

A review of the Natural Heritage database indicated that there are no known occurrences of rare, threatened or endangered species present on this site.

- **Adjoining land uses and nearby State land units**

The site is extending off of a State Route 30 right of way drainage ditch onto Forest Preserve. There will be no offsite impacts to nearby uses on State Land.

- **Assessment of treatment alternatives**

Cutting/Mulching - Cutting is an option that has already been tried at similar *Phragmites* stands on State Land within the Adirondack Park. On those sites, *Phragmites* was manually cleared for several years beginning in 2003 in an attempt to reduce the plants dominance. Unfortunately, the effort did not work. Quantitative sampling undertaken in 2008 demonstrated the proliferation of the target species at the cut sites. A comparison of historical photos also demonstrates this fact. These photos show rapid expansion of each stand in size, and the creation of satellite stands from 50 to 150 feet from the initially detected locations, after a cutting treatment was performed.

Pulling - Hand pulling is not an option due to the size of the impacted area, the sites soil characteristics, and the number of plants present.

Herbicide – A treatment of glyphosate based herbicide is currently the best option due to the plants moderate size in this stage of infestation.

Black Plastic - Covering the site with black plastic is not an option due to the size of the infested area.

Excavation - This method is not currently a viable option due to its cost.

- **History of past treatment methods used on site**

No past treatment methods have been used on this site. However, past cutting and removal of plant material from *Phragmites* sites elsewhere on State Land has made the infestations in those areas worse.

## Treatment of *Phragmites australis* within the Debar Mountain Wild Forest

- **Timeframe by which the work will be undertaken and completed**

The work will be undertaken from the end of July to the middle of October 2011 before the first hard killing frost of each year for five years. At this time the plants will be at their maximum height and will be beginning to develop inflorescences. During this stage of development the plants will be readily transporting nutrients to the roots making herbicide application extremely effective. A photographic record will be made to document management progress. Any and all new infestations of *Phragmites* that establish in future years as a result of seed dispersal or rhizomatic growth from these parent stands will be treated in a similar manner until 2016.

- **Schedule of anticipated future work**

See monitoring section below.

- **Monitoring provisions to determine the effectiveness of the management action**

The site will be inspected and a rapid assessment of dominance by the target species will be performed before and after treatment. Prior to treatment, two 1m<sup>2</sup> plots will be established in order to measure treatment results. One plot will be located in the heart of the infestation while the other will be located on the infestation's fringe where "scout shoots" are found. It is our intent that these will be semi-permanent plots. Therefore, fixed corners will be used by locating the center point via GPS coordinates and rebar lengths will be implanted in the soil at each corner. The site will be inspected again in July/August 2012 (and each year thereafter) to look for native and/or *Phragmites* recovery. If *Phragmites* plants are detected during these monitoring visits, subsequent treatment will be undertaken. The photographic record will be continued to document the management progress of the site.

- **Attachments**

Three different map scales are provided below. The location map shows all of the project sites to be treated within the designated forest preserve unit. The project site maps show a closer view of each project site to be treated, and the infestation maps show the exact acreage of the weed assessment polygons (the perimeters of the infestation) and, if present, the exact acreages of the adjoining wetland complexes.

**Location Map:** Map 1

**Project site Map:** Map 2

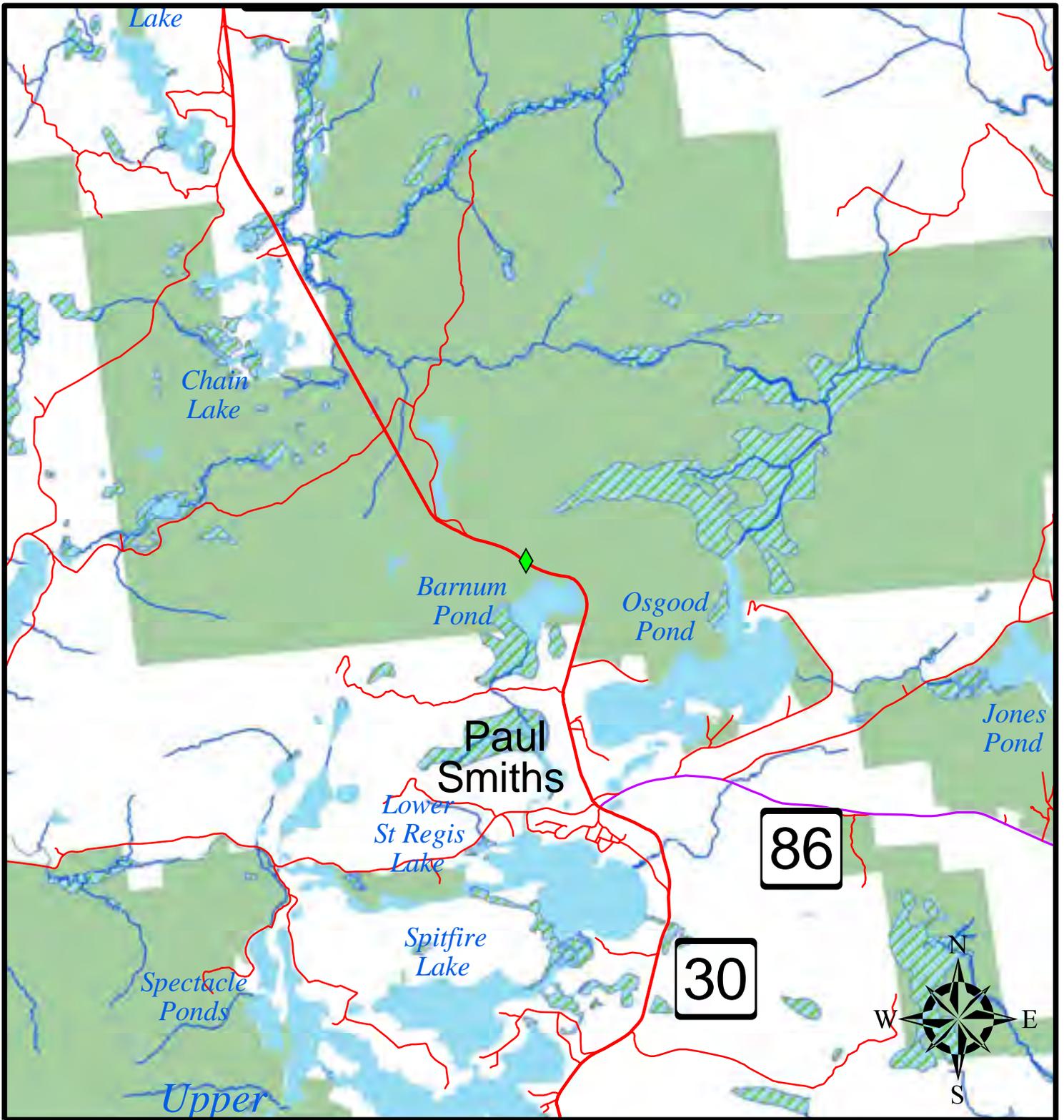
**Infestation Map:** Map 3

**SEQRA documents (long environmental assessment form)**

**Site Photo Documentation**

### SAFETY PROCEDURES:

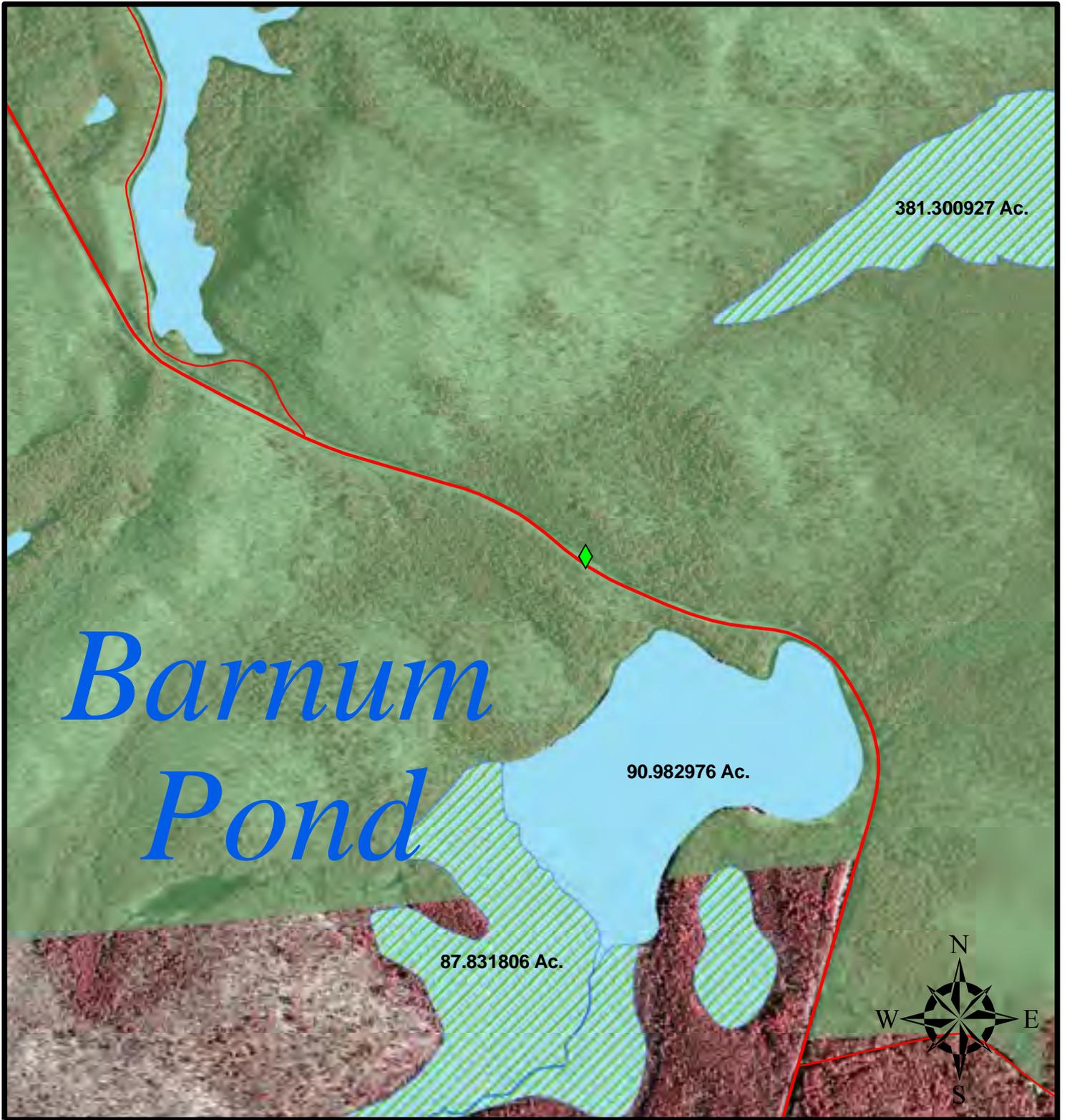
Application will follow label precautions. Necessary protective clothing will be worn. A certified applicator will be on site.



## Location - Map 1

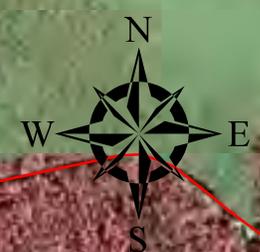
<b>Key:</b>		Common Reed		Weed_Polygon_Assessments_(WIMS)
		Small Rivers/Streams		PRIMARY HIGHWAY WITH LIMITED ACCESS
		Large Rivers/Streams		PRIMARY ROAD WITHOUT LIMITED ACCESS
		Wetlands		SECONDARY and CONNECTING ROAD
		Lakes/Ponds		LOCAL, NEIGHBORHOOD, and RURAL ROAD
		Forest Preserve		VEHICULAR TRAIL





## Project - Map 2

- Key:**
-  Common Reed
  -  Small Rivers/Streams
  -  Large Rivers/Streams
  -  Wetlands
  -  Lakes/Ponds
  -  Forest Preserve
  -  Weed\_Polygon\_Assessments\_(WIMS)
  -  PRIMARY HIGHWAY WITH LIMITED ACCESS
  -  PRIMARY ROAD WITHOUT LIMITED ACCESS
  -  SECONDARY and CONNECTING ROAD
  -  LOCAL, NEIGHBORHOOD, and RURAL ROAD
  -  VEHICULAR TRAIL





### Infestation - Map 3

- Key:**
-  Common Reed
  -  Small Rivers/Streams
  -  Large Rivers/Streams
  -  Wetlands
  -  Lakes/Ponds
  -  Forest Preserve
  -  Weed\_Polygon\_Assessments\_(WIMS)
  -  PRIMARY HIGHWAY WITH LIMITED ACCESS
  -  PRIMARY ROAD WITHOUT LIMITED ACCESS
  -  SECONDARY and CONNECTING ROAD
  -  LOCAL, NEIGHBORHOOD, and RURAL ROAD
  -  VEHICULAR TRAIL



**Photo 1 – Only Site**

