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

***Phragmites australis* – Saranac Lakes Wild Forest** **DATE: July 13, 2011**

APPLICANT: Adirondack Park Invasive Plant Program

PREPARED BY: Brendan R. Quirion

STATE LAND UNIT: Saranac Lakes Wild Forest.
DEC REGION: 5
COUNTY: Essex
TOWN: North Elba

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)
Site 1 – 44.29681312 Latitude and -73.94335588 Longitude
Site 2 – 44.29356500 Latitude and -73.94990333 Longitude
Site 3 - 44.30306167 Latitude and -74.10882667 Longitude

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

- **Narrative**

The project proposes to treat eight small to moderate sized stands of *Phragmites australis* located along State Route 86 near the villages of Lake Placid and Raybrook. The control method selected is to apply a treatment of a glyphosate based herbicide via foliar spray 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. These *Phragmites* stands have been established since 2003, and have spread significantly forming new satellite stands as of 2010. The cumulative size of the infestations is approximately 1.72177

acres. All clothing, boots, and equipment will be cleaned prior to leaving the site to prevent the spread of seed or rhizome fragments.

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

The sites were mapped by the preparers of this work plan on 7-27-2010, 7-29-2010, 8-17-2010, and 1-6-2011 as part of an invasive species inventory on State Route 86. Within the invaded sites *Phragmites* coverage ranged from 75-100% above ground biomass and non target species included *Calamogrostis, Solidago, Juncus, Aster, Spiraea, Carex, Typha, Salix, Cornus*. 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 sites are within wetlands extending off of State Route 86 right of way. 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 these *Phragmites* stands. *Phragmites* was manually cleared for several years beginning in 2003 in an attempt to reduce the plant's dominance. Unfortunately, the effort did not work. Quantitative sampling undertaken in 2008 demonstrated the proliferation of the target species. 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 cutting 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 size of the infestations.

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.

Treatment of *Phragmites australis* within the Saranac Lakes Wild Forest

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

Past cutting and removal of plant material from these *Phragmites* sites prior to 2010 made the infestations in these areas worse by increasing vegetative growth, creating satellite populations, and serving as a source for new infestations elsewhere. As of 2010 three of these sites received herbicide treatments via the first pilot AANR Agreement for herbicide treatment on Forest Preserve within the Adirondack Park. These sites are now being included in this AANR Agreement to incorporate all sites to be managed on Forest Preserve within the Adirondack Park.

- **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 developing 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**

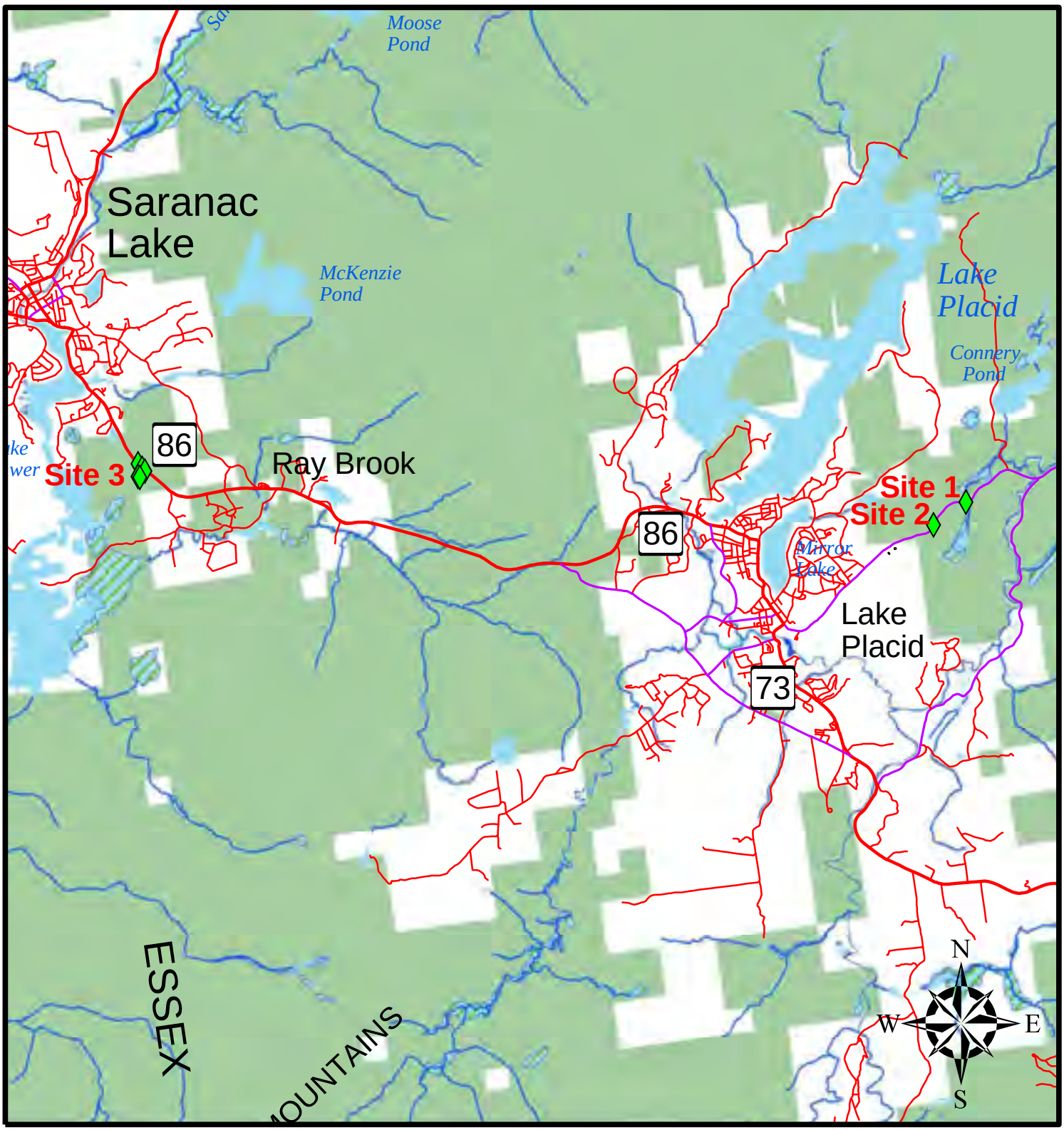
The sites will be inspected and a rapid assessment of dominance by the target species will be performed before and after treatment. Prior to treatment, two 1m² plots will be established in order to measure treatment results. One plot will be located in the heart of the infestation while the other will 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 sites will be inspected again in July/August 2012 (and each year thereafter) to look for native plant 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 Maps: (Sites 1 & 2) – Map 2
(Site 3) – Map 3
Infestation Maps: (Site 1) – Map 4
(Site 2) – Map 5
(Site 3) – Map 6
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.



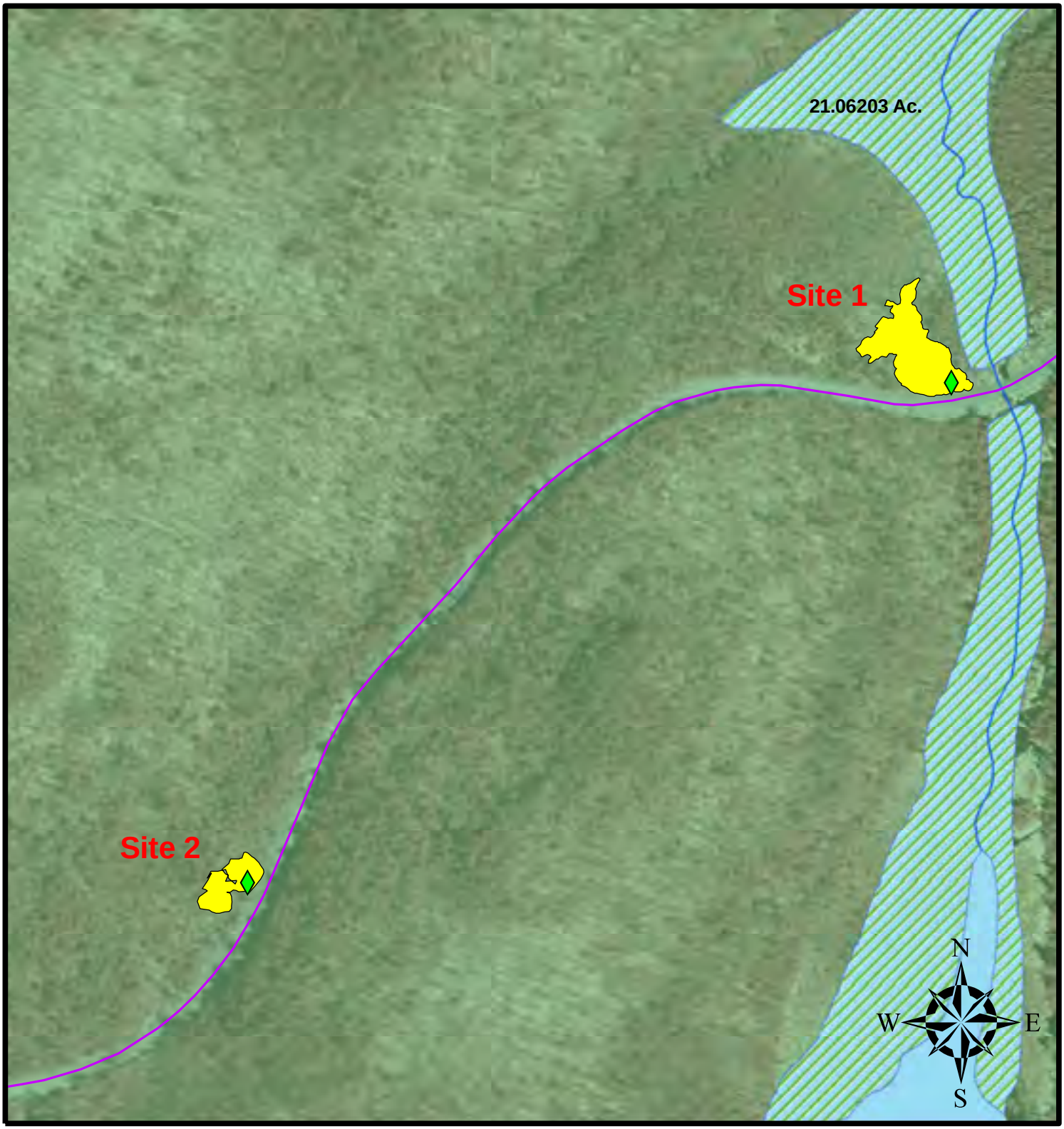
Location - Map 1

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

APIPP

The Nature Conservancy



Project Site (Sites 1 & 2) - 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

ADIRONDACK PARK INVASIVE PLANT PROGRAM APIPP

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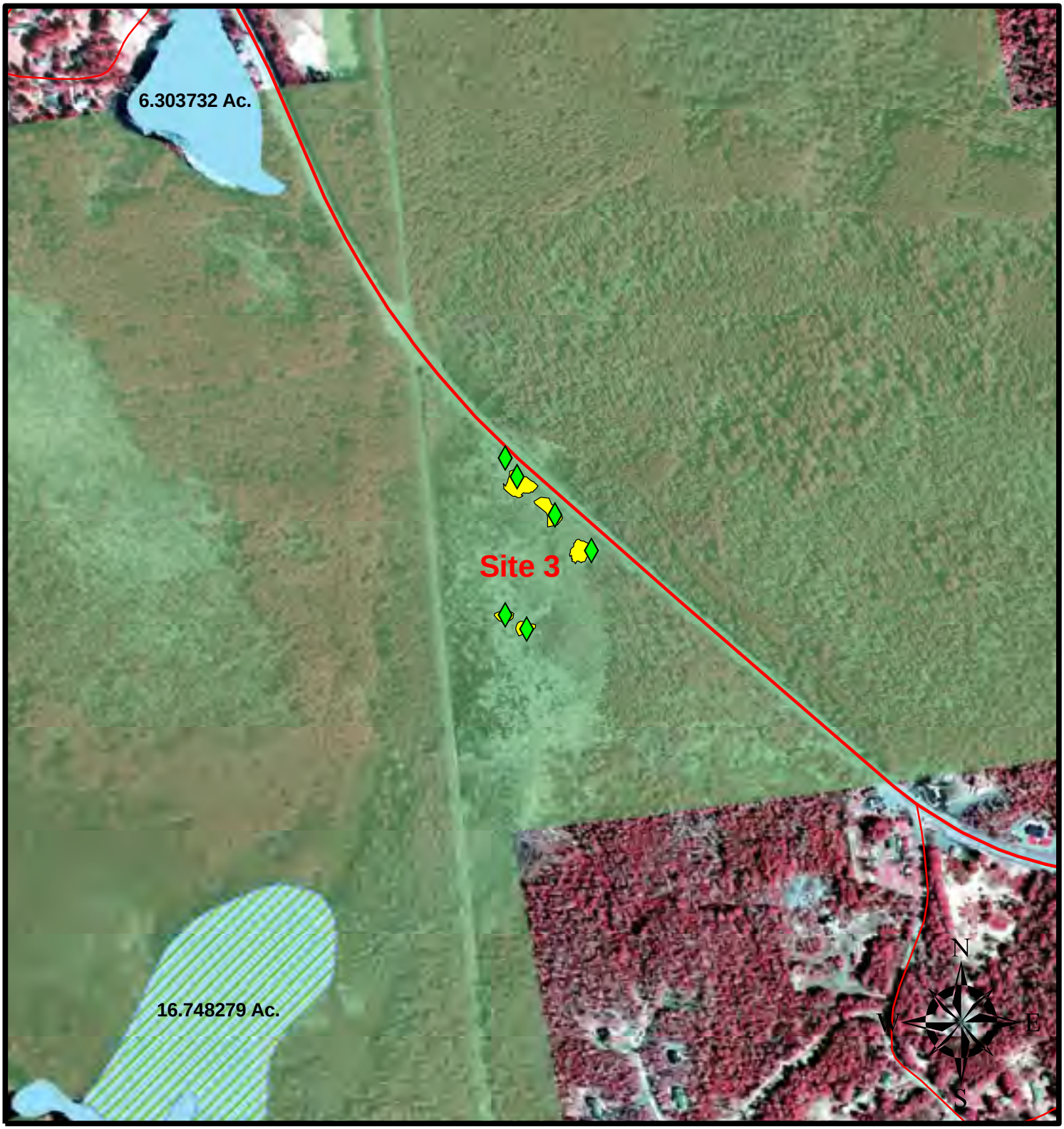

Project Site (Site 3) - Map 3

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

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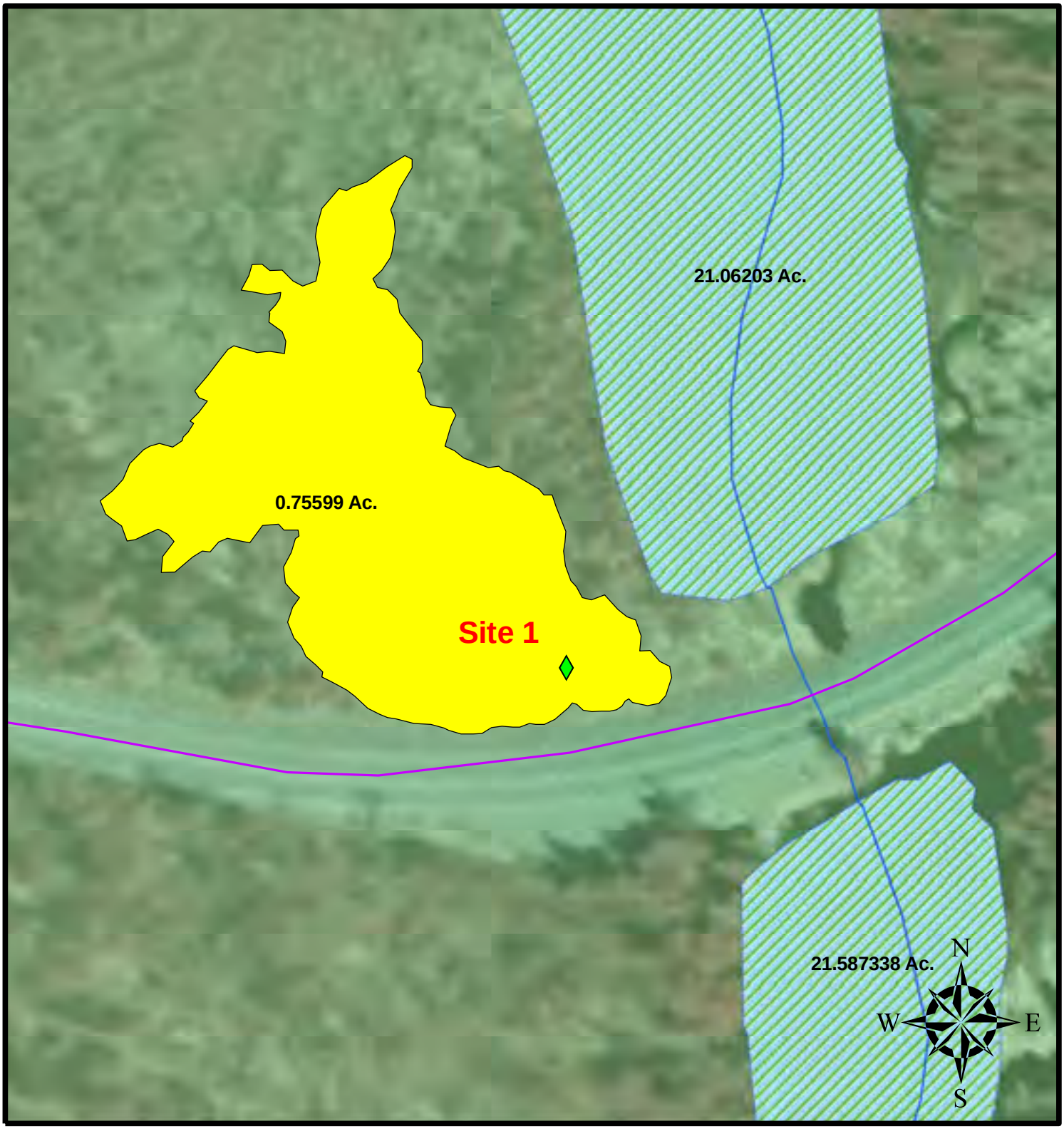

Infestation (Site 1) - Map 4

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
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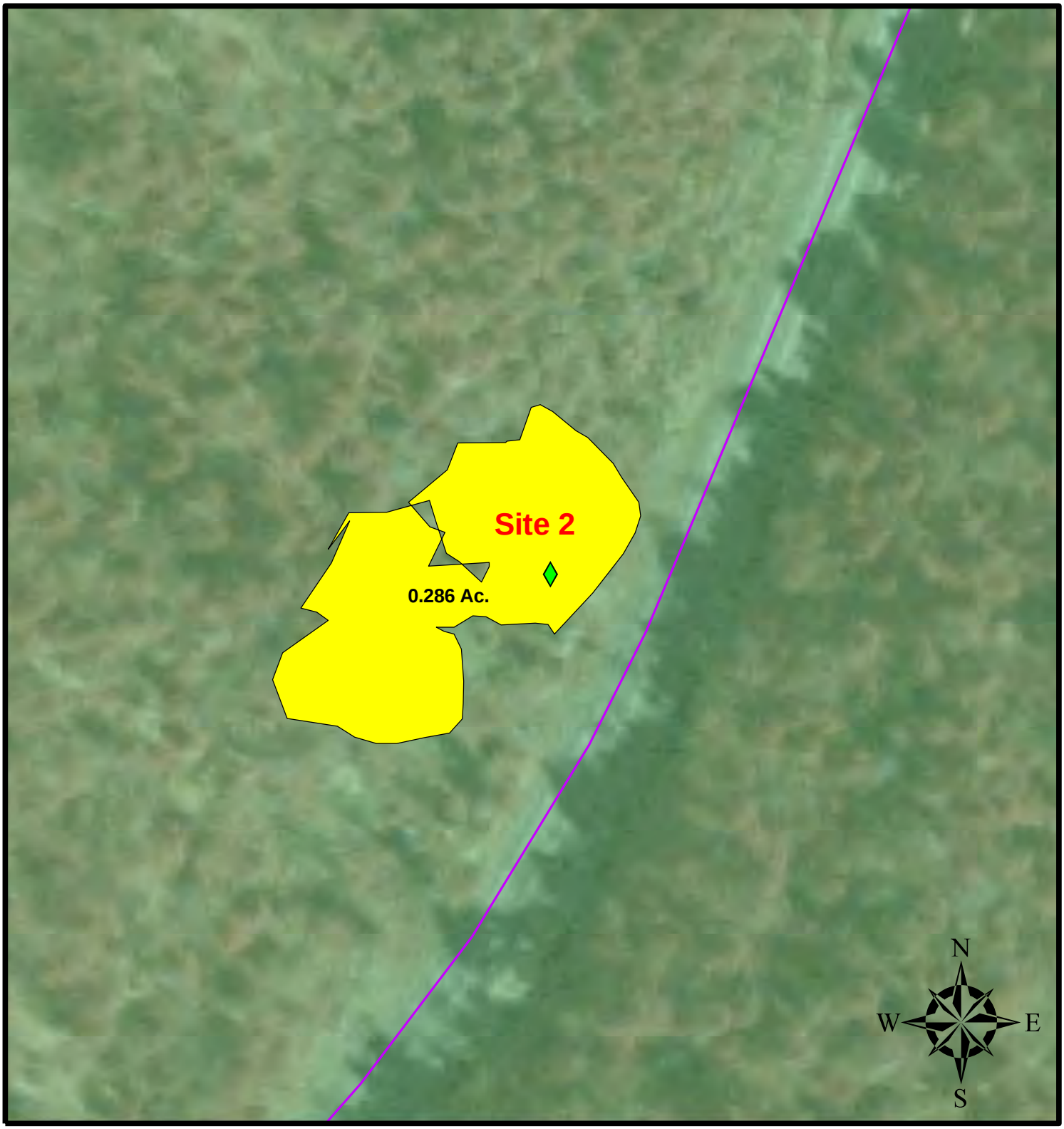

Infestation (Site 2) - Map 5

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

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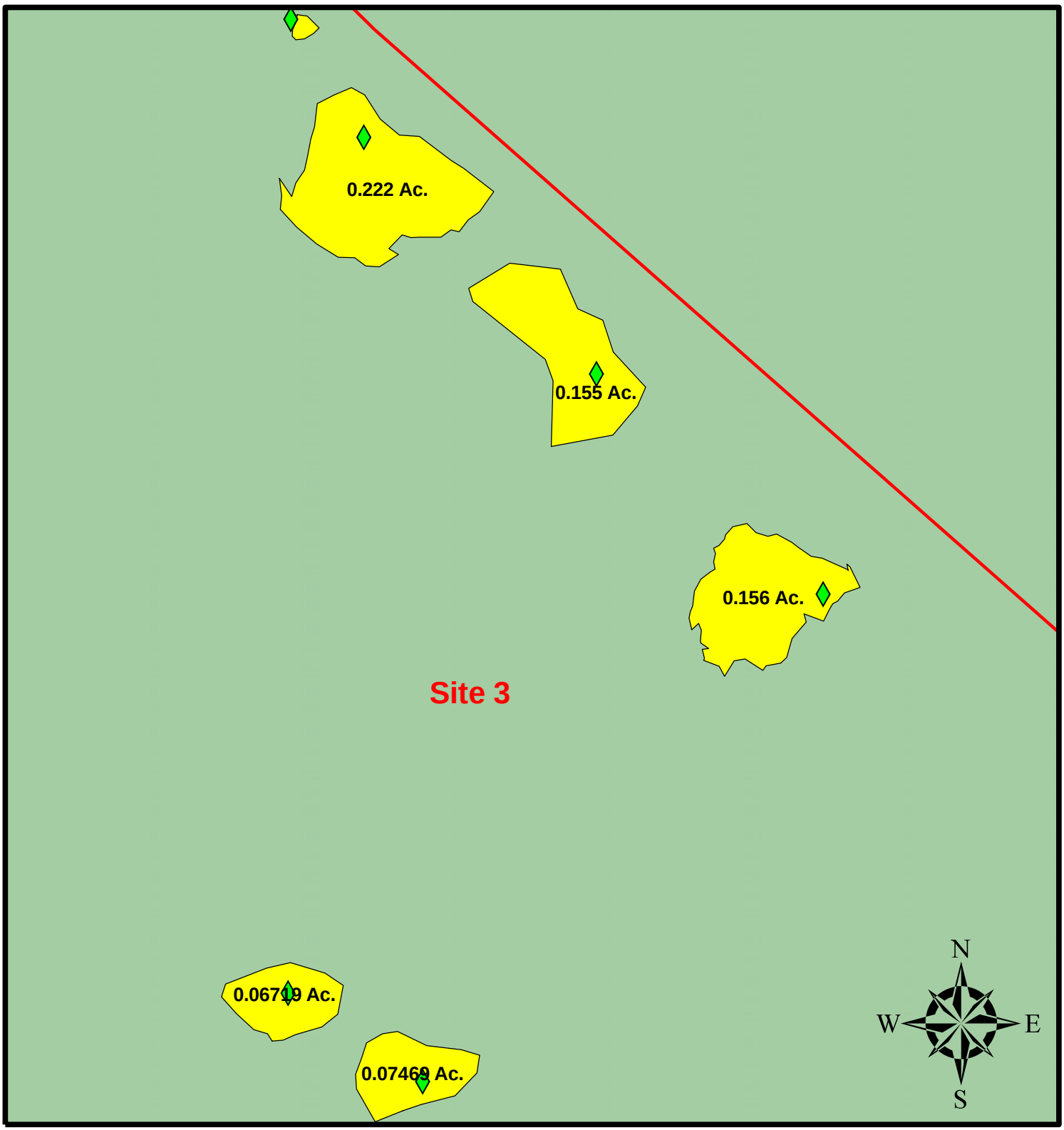

Infestation (Site 3) - Map 6

Key:

- Common Reed
- Small Rivers/Streams
- Large Rivers/Streams
- Wetlands
- Lakes/Ponds
- Forest Preserve
- Weed_Polygon_Assessments_(WIMS)
- PRIMARY HIGHWAY WITH LIMITED ACCESS
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Photo 1 – Site 1

Photo 2 – Site 2

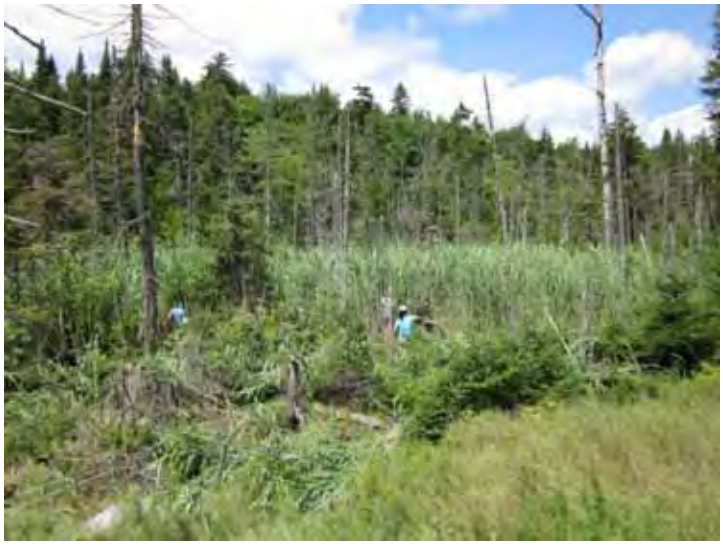

Photo 3 – Site 3