

## Phragmites Survey Protocol

### Duluth-Superior Area

#### Areas to survey:

Suitable habitats include open areas with disturbed and/or wet soils, especially around transportation and utility corridors. Before heading out into the field, review satellite imagery (Google maps) for areas with suitable habitat for *Phragmites*. Areas near known occurrences that have not yet been surveyed are a priority for surveillance.

#### Tracking survey efforts:

Track areas that were surveyed using a GPS or highlighting maps in the field. If using a GPS, set the tracklog to collect points every 30-60 seconds. If no GPS tracklog is available, highlight maps during surveys and create a GIS layer of the areas surveyed when you return to the office.

#### Data collection:

At each *Phragmites* location take a GPS point near the center of the infestation and document the data fields below. If you have a smart phone, take a geotagged photo of the location.

#### **Data fields**

##### *Mandatory data to collect:*

- Scientific name
  - *Phragmites australis* subsp. *australis*
  - *Phragmites australis* subsp. *americanus*
- Number of plants
  - 1-10
  - 11-50
  - 50-100
  - 100-500
  - 500-1000
  - >1000
- Size of infestation
  - < 0.25 acre (approx. 10,000 square feet)
  - 0.25 - 0.5 acre (approx. 10,000 sq.ft to 20,000 sq.ft)
  - 0.5 - 1 acre (approx. 20,000 sq.ft to 40,000 sq.ft)
  - >1 acre (greater than 40,000 sq.ft)
- Date observed
- Observer
- Georeference protocol
  - GPS
  - Hand plotted on desktop GIS (if using this method, mark at a resolution of 1:24,000 or closer)

##### *Additional useful data to collect, but not mandatory:*

- Habitat (shoreline, wetland, open, woodland edge, wooded, etc.)
- Hydrology (aquatic, wet, seasonally wet, mesic, dry, etc.)
- Land use (right-of-way, residential, agriculture, natural area, etc.)
- Land owner (private, county, city, public, owner information if known, etc.)
- Comments or Notes (field notes on habitat, location, size, spread, potential source, etc.)

Before you head out into the field, it is a good idea to determine your pace to help accurately estimate infestation size. Below is information on how to calculate your pace.

1. Accurately measure out a course that you will pace over several times (200 ft)
2. Walk the course with a natural stride and count each pace (1 pace = 2 steps)
3. Calculate your pace by dividing the length of the course by the number of paces it took to travel the distance.
4. Walk the course multiple times to estimate your average pace.