



WNY PRISM Invasive Species Survey Protocol

WNY PRISM's Invasive Species Survey Protocol has been developed to increase and improve invasive species presence and distribution data throughout western New York. The information provided may be used to guide education and outreach initiatives, future survey efforts, management decisions and much more.

Use the following Invasive Species Survey Protocol to conduct invasive species surveys of your own property or public property. Do not survey private property without first obtaining permission from the property owner. This protocol may be used to record occurrences of one or multiple species. Use WNY PRISM's Field Observation Form (available on our website – <https://www.wnyprism.org/wp-content/uploads/2020/04/Field-Observation-Form.pdf>), or similar format to record entries.

At a minimum, plan to conduct invasive species surveys along trails, waterways and edges. Invasive species are most often found in disturbed areas with high levels of human and animal activity (i.e. along hiking trails, animal trails, roadsides, field edges, streams, etc.). However, to get a complete picture of the entire property, continue the survey off trail. Not all species are visible or easily identifiable throughout the year, so if time allows, consider surveying the property twice a year. Depending on the size and shape of the property, you may consider breaking the property up into sections. You may also consider a simple inventory (identifying a list of species present on a site) if time is an issue.

Once you have collected data, input this information into NY iMapInvasives, an online invasive species database and mapping tool. See below for more information on iMapInvasives and other data submission options.

1. Initial Steps

A. Scout out survey location(s):

- For each survey area, obtain maps of the property. If it is a park or nature preserve, the map should include trails. Otherwise, be aware of property lines and do not survey on private property without permission.

B. Fill out the general information on the top of the WNY PRISM Field Observation Form:

- Observer Name
- Date(s) of Survey
- Location of Survey - use one form for each location.
 - This can be the name of the park or natural area, or the site address. If there is no street address associated with the site, please provide a GPS point, street name and/or the nearest intersection and a description of the property.
- Acres/Linear Feet
 - Provide the acreage of the site and/or of the area surveyed and indicate which you are providing. If you are conducting a linear survey, you may provide linear feet.

- iMap Project (if applicable)
 - iMap projects are used to tie many records together, such as to group all records related to a single property or organization. If you have made a specific project in iMap, or plan to, record the name of that project here.

C. Be safe:

- Bring someone to survey with you or at least let someone know where you are going and when you plan to be back.
- Check the weather and dress accordingly.
- Beware of ticks. Wear long pants and closed toed shoes, and tuck socks into pants. Do a full body tick check at least once at the end of the day.
- Locate an area to safely park your vehicle and use proper gear such as safety vests when working along roads.

D. Be prepared:

- Bring the following:
 - Hiking gear such as water, food, bug spray and sunscreen
 - Trail map(s)
 - Multiple copies of WNY PRISM Field Observation Form
 - Clipboard or something to write on
 - Pencils
 - Fully charged cell phone
 - Examples of (free) GPS tracking apps: iMapInvasives Mobile App*, Locus Map, Gaia GPS, etc.
 - Camera
 - GPS unit with extra batteries, if available
 - Plant ID books and/or guides

*You can use the iMapInvasives Mobile App in conjunction with this protocol for fast and easy invasive species reporting. See a user manual here -

http://media.wix.com/ugd/bd649e_74e0ee196d7949e4a6e7b4545c11540f.pdf

E. Stop the Spread:

- When you've finished surveying for the day, to prevent the further spread of invasive species, remove all plant material from shoes, clothing and equipment, and leave it on site.

2. Data Collection

This survey protocol may be used to conduct a general survey or to survey for specific species. If a general survey is being conducted, you may not need to include every individual plant observed but you should ensure an accurate representation of species presence is obtained. For high priority species, such as Tier 1 and Tier 2 invasive species, you may choose to take more detailed observations. For both

survey types, when individuals of the same species are observed within 12m (~40ft) of one another, only one data point should be entered. This means that if a species is found along a stretch of trail, there may only be a single data point entered on the data sheet. Record polygons (or outlining points) of infestations if they exceed 40m² (or 430ft²), if possible. These 12m and 40m² distances are *estimates*, they do not have to be exact.

If a species is very common and found continually (consistently within 12m of each other) along a trail, roadside or other boundary, consider taking multiple points. You may consider natural features, trail junctions, barriers or property lines as a 'break' and create an additional observation point. This helps visualize the data on a map and better demonstrates the distribution of an individual species.

A. Species:

- Record the invasive species you see. You can record scientific and/or common names.
- You can record multiple invasive species at a single GPS point, if applicable.
 - Make sure to record each species on a separate line of the Field Observation Form.

B. Photo documentation:

- Take clear, descriptive photos using your phone or other camera. Record the number of photos taken for each species and the time of observation, which will help match photos with data.
- For each entry, take at least **two photos**:
 - **Close-up photo**: Focus on the characteristics of the plant that led to a positive identification.
 - **Infestation photo**: Photo that clearly shows the extent of the population and how it fits into the landscape.
- Take additional photos that may assist with identification, access, etc.
 - Examples: edges or boundaries of infestations, access points or landmarks, nearby conservation targets, etc.

C. Location information:

- With a GPS unit or GPS tracking app on your phone, identify GPS coordinates for each observation:
 - Depending on the GPS you are using, you may be able to save each point, or you may need to write down each as you go.
 - If you can save the points to later upload onto your computer, record the point number/identifier on the form.
 - If you are recording waypoint numbers, write the number as it is shown on the GPS unit in the GPS Point # field (e.g., if it shows 002, write 002 not 2)
 - If you're unable to save, you will need to write down the complete coordinates for each observation (latitude and longitude in decimal degrees: 42.93317, -78.89215).
- If the population is greater than 40m², record a GPS polygon of the infestation area, or record coordinates that surround the area.
 - If a Garmin GPS is used, a polygon can be recorded using the track feature.

D. Distribution:

- This describes how the plants are arranged in the landscape within the infestation:
 - Trace (single plant/clump)
 - Sparse (scattered plants/clumps)
 - Dense plants/clumps
 - Monoculture
 - Linearly scattered

E. Phenology:

- Describe the life stage of the invasive species. Multiple options can be chosen to describe plant maturity as all plants in the infestation may not show the same characteristics at the same time. Record plant phenology using the following categories:
 - Flowers
 - Fruits/Seeds
 - Vegetative
 - Dormant
 - Dead

F. % Cover

- Record how much of the soil (or water) is covered by the invasive species. The following categories can be used to describe percent cover:
 - 0 - 5%
 - 6 - 25%
 - 26 - 50%
 - 51 - 75%
 - 76 - 95%
 - 96 - 100%

G. Additional Notes

- Record any additional, helpful information such as:
 - Information regarding polygons or photos that were recorded.
 - Other species in the area.
 - Notes about landmarks nearby, etc.

3. Spread Prevention

A. To prevent the further spread of invasive species, be sure to take spread prevention measures at the end of each day or whenever you leave the survey site.

- Remove all soil and plant material from shoes, clothes and equipment. Plant material may be left on site or contained in a sealed, landfill bound trash bag.

4. Submit Data

A. Report all observation data to iMapInvasives.

- To make an iMapInvasives account, please visit their website - <https://imapinvasives.natureserve.org/imap/login.jsp>.
 - iMapInvasives provides online resources and tutorials to assist with creating invasive species records - <https://www.imapinvasives.org/help-documents-toolbox>

- If you are unable to report observations to iMapInvasives, please submit your data to WNY PRISM by using the Field Observation Form available here – <https://www.wnyprism.org/wp-content/uploads/2020/04/Field-Observation-Form.pdf>
 - If you used a GPS or GPS app to record location, extract your waypoints and/or polygons into an electronic file (GPX or SHP format preferred).
 - If you can't extract your waypoints, type or write the GPS coordinates into the data sheet.
 - Email the data sheet, GPS file(s), and all photos (preferably as jpegs) to **wnyprism@buffalostate.edu with the subject line "Field Observation Form: Location" (Location being the "location" outlined on the top of the form).**