# Instructions for the Maine Invasive Aquatic Plant Screening and Mapping Survey123 mobile app
Part 1: Installation

For assistance with the app, contact Becky Schaffner (becky.schaffner@maine.gov)

1. Install Survey123
   a. Phone or tablet: The Survey123 for ArcGIS program is available through the Apple App Store, Google Play, and Amazon Appstore depending on your device. Search for "Survey123 for ArcGIS", and install the app. (Note: After installation you do not need to log in. Go to step 2.)
   b. Computer: Go to https://www.esri.com/en-us/arcgis/products/survey123/resources#settingup.
      1. Under "Survey123 for ArcGIS field app" (middle column) choose the installation link that corresponds to your computer's operating system. Most newer Windows computers will use Windows x64 (64-bit). Other Windows computers will used Windows x86 (32-bit). If you don't know your operating system, click here to find out. Apple computers will use the macOS install file.
      2. When the installation file has been downloaded (usually to your computer's Downloads folder) double-click to open and run the installation wizard.
      3. You do not need to sign in to use the app; close the app and proceed to step 2.
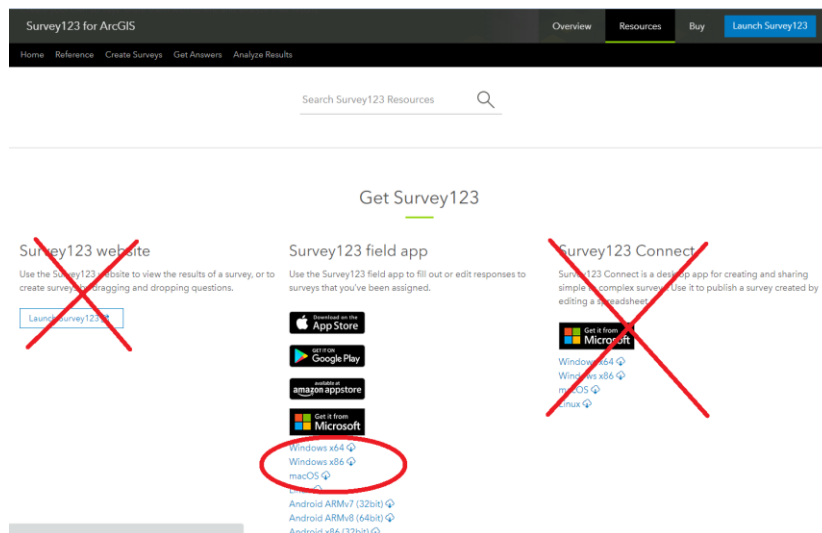
2. Install the Invasive Plant Survey mobile app using one of the following methods:
   a. Phone or tablet: Many newer phones have built-in QR code readers. Open the camera app and point your camera at the QR code below. If a pop-up appears that says "Open arcg.is in [browser name]", click it to download the IAP app.

   b. Phone or tablet (if the above does not work): open a browser app such as Safari or Chrome and type the following URL in the address bar at the top: (case-sensitive) - arcg.is/1qDePa
   c. Computer: click or enter this link in a browser address bar: https://arcg.is/1qDePa

Any of the above options will bring you to a web page where you will be prompted to open the app in Survey123 (Fig. 1).

3. Click "Open in the Survey123 field app." The survey will be downloaded and installed and should open in the app automatically.
4. If you are requested by the app to sign in to download surveys, ignore it. The survey is public and accessible to anyone with the link.
5. Once you have installed the IAP survey, it will be saved and available within Survey123 for ArcGIS on future use. Open the Survey123 program on your device and select the Maine IAP survey.
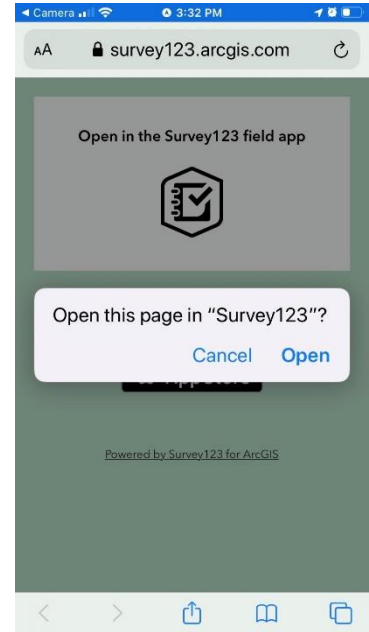

Figure 1. SURVEY DOWNLOAD PAGE

FILLING OUT AND SUBMITTING THE SURVEY (QUICK START-SEE PART 2 FOR DETAILED INSTRUCTIONS)

1. Open the Survey123 app by clicking the icon on your device.
2. NEW: Check the update notifications at the top of the home screen. If there are updates for the IAP survey, click the arrow to continue to the Updates list. Click the "refresh" icon next to the IAP survey.
3. On the My Surveys screen, click the IAP Survey icon, then the Collect button at the bottom of the screen (Fig. 2), and the survey will open, ready to be filled out.
4. When you have successfully answered all required questions in the survey, click the check button at the bottom right of the screen to submit it. If there are no errors, and there is an internet connection available, the survey will be submitted immediately. If the survey is unable to be submitted, it will be saved in an "Outbox." Be sure to check whether the Outbox has appeared on your screen. If so, you will need to try sending the survey again when you have a connection.
5. The data will be sent to a central database in the cloud and will be available for viewing and editing through a secure log-in page.
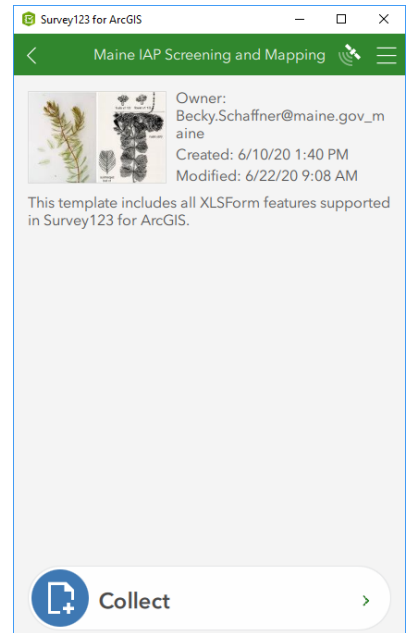

Figure 2. SURVEY HOME SCREEN

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Instructions for the Maine Invasive Aquatic Plant Screening and Mapping Survey123 mobile app
Part 2: Data Entry

For assistance with the app, contact Becky Schaffner (becky.schaffner@maine.gov)

Survey Basics

1. Open the Survey123 app by clicking the icon on your device.
2. Check the update notifications at the top of the home screen. If there are updates for the IAP survey, click the arrow to continue to the Updates list. Click the "refresh" icon next to the IAP survey.
3. On the My Surveys screen, click the IAP Survey icon, then the Collect button at the bottom of the screen, and the survey will open, ready to be filled out.
4. Saving a draft survey: while filling out the survey, click the X at top left. Select Save in Drafts. Any draft surveys will appear in the Draft folder on the survey home page.
5. Saving answers to use in multiple surveys: For example, you may want to save site info, surveyor names, and methods to be used in multiple sector surveys on one day. Fill out all fields you want to save to be copied to future surveys. Click the menu icon (3 horizontal lines) in the top right of the survey and click 'Set as favorite answers.' All filled-in fields will be saved. Access saved answers in your next survey by clicking the menu again and choosing 'Paste answers from favorite.'
6. When you have successfully answered all required questions in the survey, click the check button at the bottom right of the screen to submit it. If there are no errors, and there is an internet connection available, the survey will be submitted immediately. Submitted surveys will appear in the Sent folder.
7. If there is no internet connection and the survey cannot be submitted, it will be saved in an Outbox. Be sure to check whether the Outbox has appeared on your home screen. If so, you will need to try sending the survey again when you have a connection.

Location Questions

There are 3 location-type questions in the survey. Be sure to turn on location services on your device. If you have an internet connection, you will see an aerial imagery basemap with each question. If no connection, you will only see the target icon and your current coordinates.

Section 1: CLICK TARGET TO SET GENERAL SURVEY LOCATION. This captures a point location at or near the starting point of your survey to set a reference location. Survey123 operates on a geographically-aware system, and all data is associated with points or polygons stored in the underlying database. (Fig. 3)
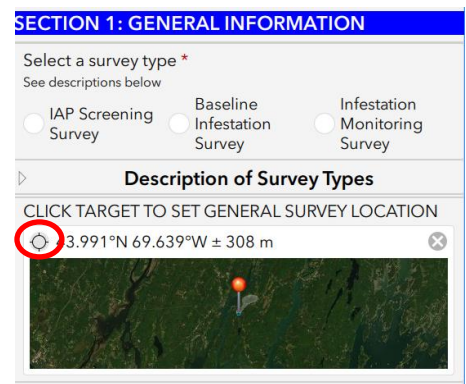

Figure 3. Click target icon to capture survey location

Section 2: You have two options for collecting invasive plant locations and can use one or both. The data for each option is saved in a separate database table that is related to the overall survey.

A. **Option 1:** Collect Point Locations. Answer the questions about species and abundance, then click the target icon above the map to collect the coordinates of the plant. This question allows repeats, so you can collect multiple point locations by clicking the + sign after the Notes section to add another set of questions (Fig. 4)
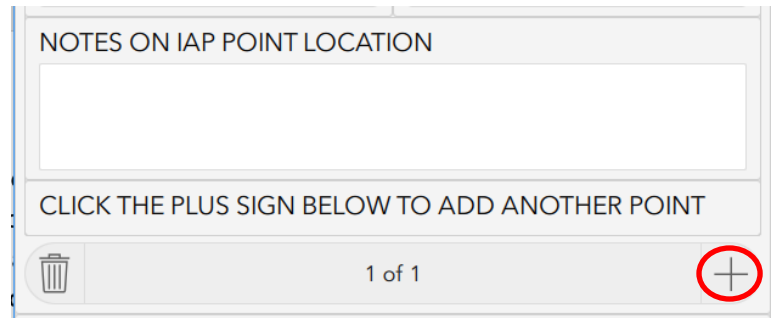
Figure 4. Click + sign to add more plant locations

B. **Option 2:** Collect Survey Area (polygon). This allows you to draw a polygon or capture the vertices of a polygon surrounding the sector you survey. After entering species info, click the map icon to open a full screen map where you can begin drawing the survey area (Fig. 5)
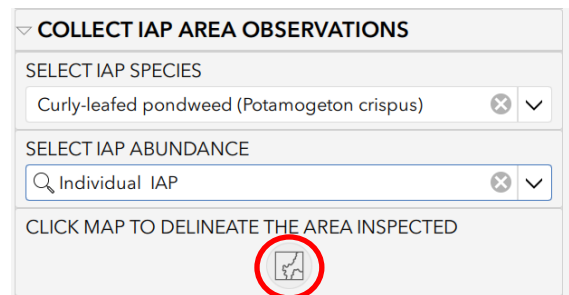

Figure 5. Click Map Icon to open map view and delineate survey area

There are two methods for creating polygons, the Draw vertex method and the Collect waypoint method.

1. Draw vertex method: The simplest way to create a polygon is to click on the map at each vertex. In the map view screen, click the Create Polygon icon (bottom left). Then click on the map at each vertex. You can move vertices by clicking and dragging (Fig. 6).
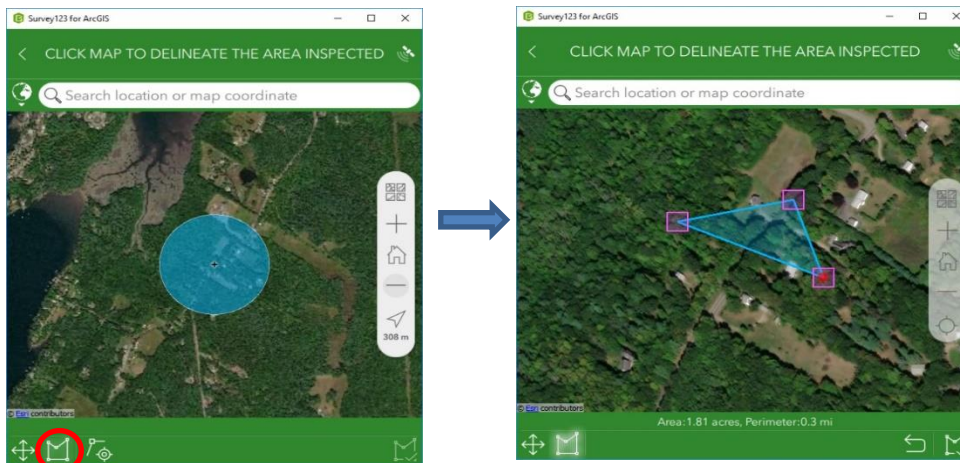

Figure 6. Draw vertex method for creating polygon

2. Collect waypoint method: You can also create polygons by taking waypoints in the map as you travel around a sector. You must have the map centered on your current location (click the target icon that appears in the navigation bar on the right side of the map until it becomes an arrow.) Click the Capture waypoint icon periodically as you move until you complete the desired polygon. Every time you click the Waypoint icon, a vertex will be placed in the center of the map.
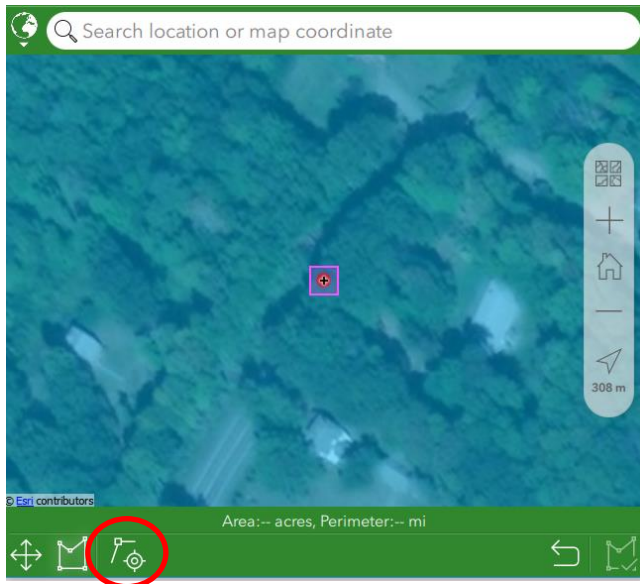
Click to center map on current location

Figure 7. Collect Waypoint method of polygon creation

Complete polygon capture: Use the "Undo" button to undo your last action. When done drawing, click the Stop editing icon once to stop editing, then the check mark to save the polygon and return to the survey. Note: If you do not see your polygon in the preview screen, it was not saved (Fig. 8).
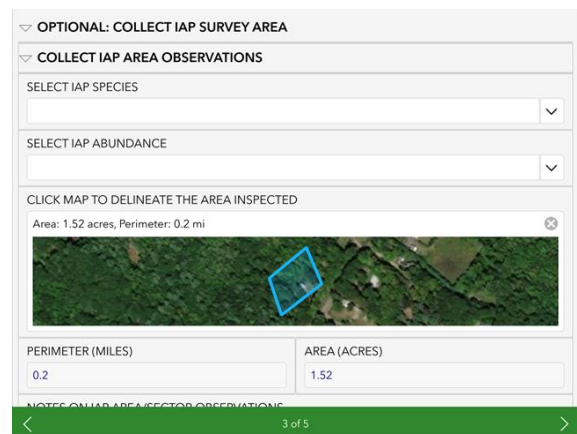

Figure 8. Completed polygon shown in map preview