



# 2018 Water Chestnut Chasers Challenge

A Fun Way to Search for a High Priority Invasive Species in Pennsylvania

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June 21, 2018



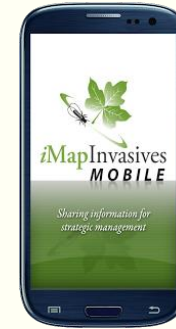
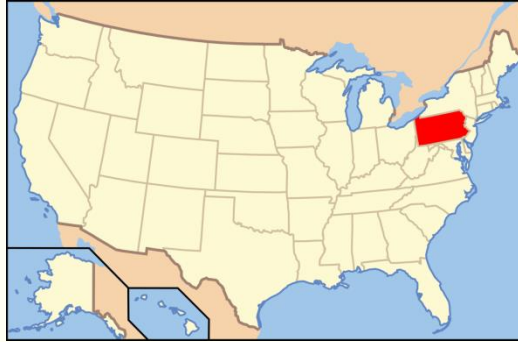
Bradford Reservoir (Bucks County) – Photo credit: Nick Macelko

# Purpose

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The main purpose of the Challenge is to:

- Identify new water chestnut infestations in Pennsylvania.
- Discern areas that require initial or continued treatment efforts.
- Support efforts to detect high priority invasive species early and to prevent or slow their spread.
- Raise awareness of the harm caused by invasive species.
- Utilize PA iMapInvasives to gather and disperse data.



# Challenge Details

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**WHO:** You and your “technology of choice”

- Smartphone, tablet, or desktop computer

**WHAT:** Search for water chestnut

**WHEN:** The month of July

**WHERE:** Report findings to iMapInvasives

**WHY:** Water chestnut is a high priority invasive species in Pennsylvania, meaning it isn't widespread across the state (yet).

It causes harm to native wildlife and their habitats and hinders recreational activities.



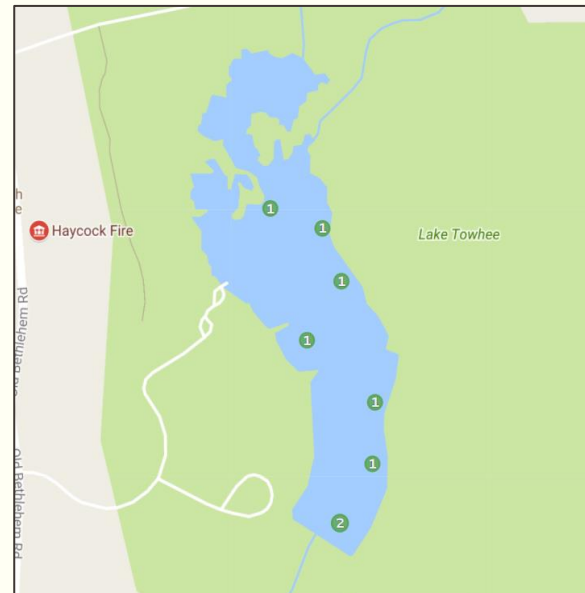


# Value of iMapInvasives

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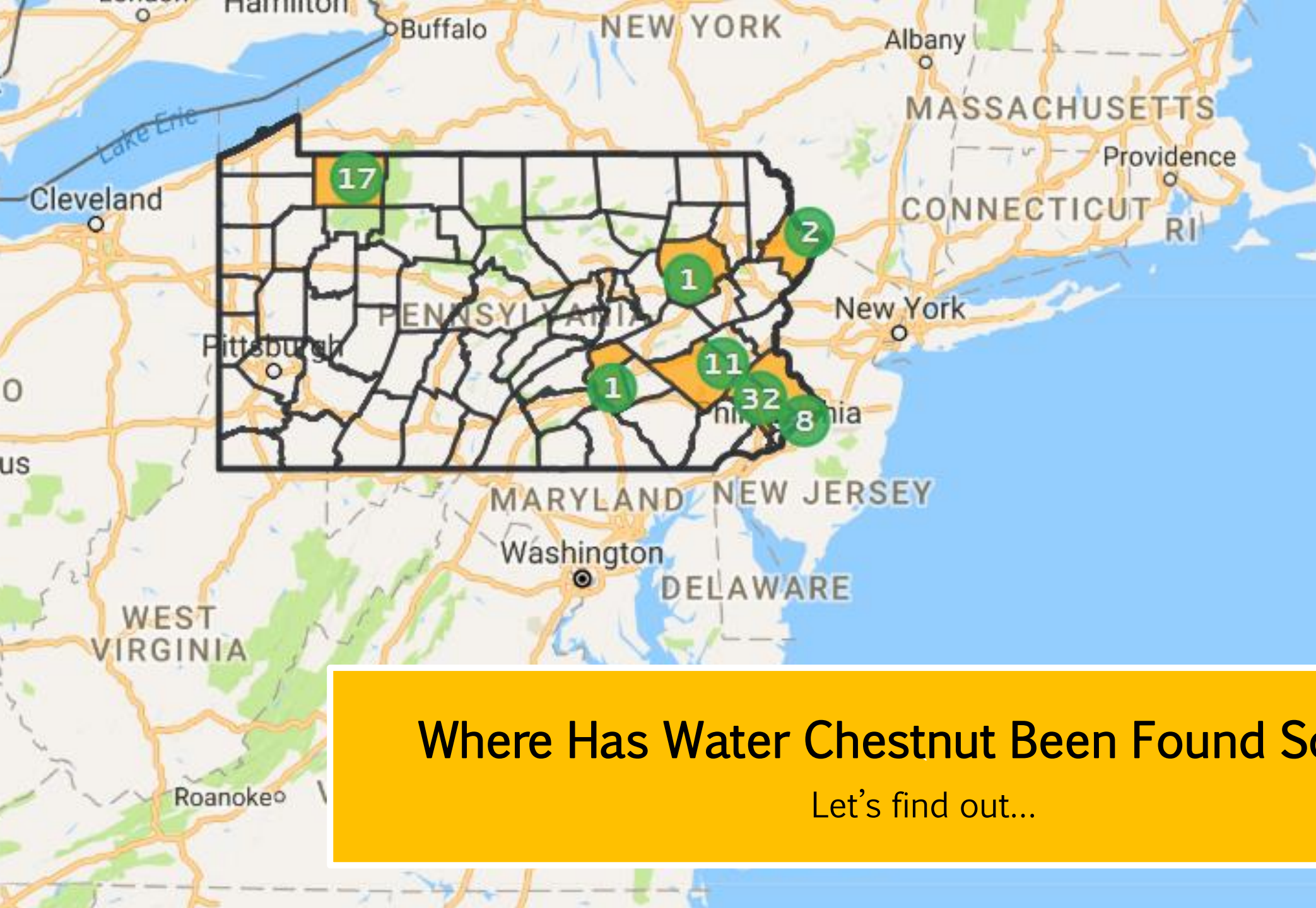
Using iMapInvasives, we can know:

- The specific waterbodies where water chestnut has already been reported
- Precise observation dates
- Observer name and affiliated organization
- **Note:** Documented W.C. reports do not guarantee an infestation still exists at a particular location.
  - Treatment may have occurred and the population may have been eradicated.



Specific waterbodies with reports of water chestnut





# Where Has Water Chestnut Been Found So Far?

Let's find out...

# Challenge Details

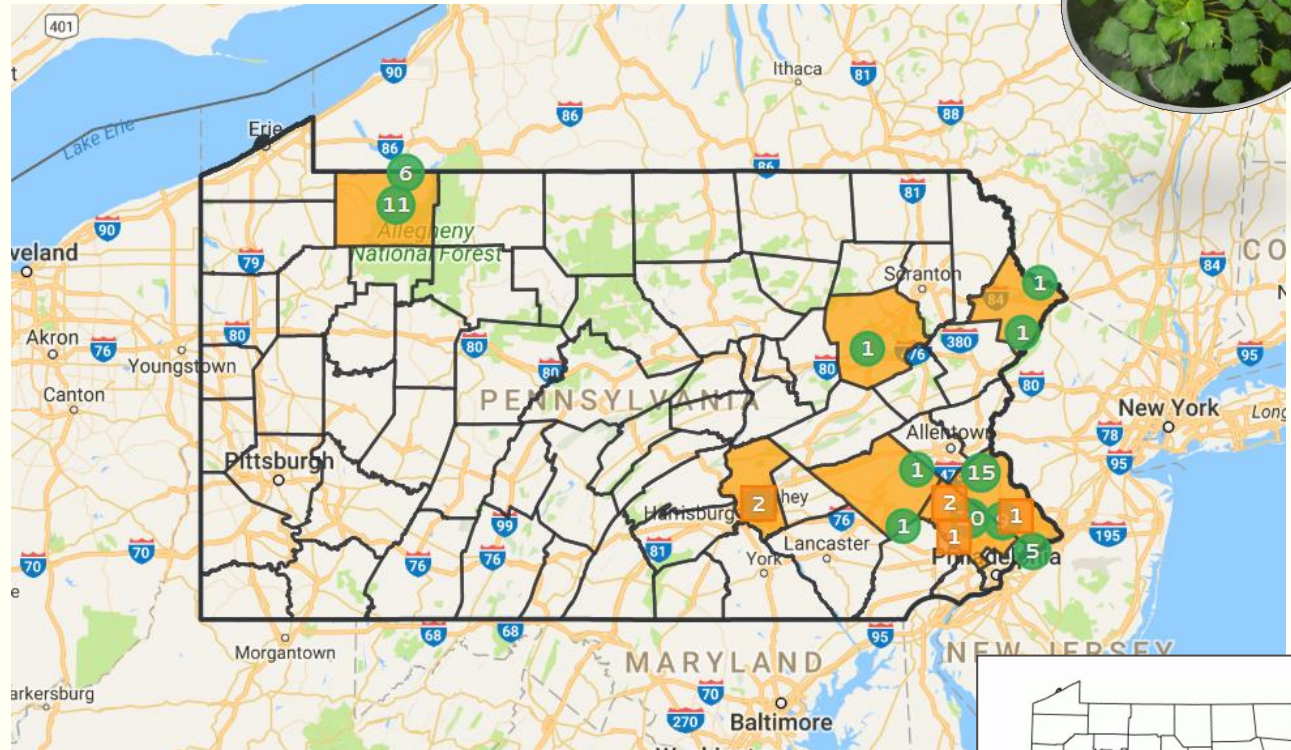
According to iMapInvasives, water chestnut has been found in seven counties in Pennsylvania:

- Berks
- Bucks
- Dauphin
- Luzerne
- Montgomery
- Pike
- Warren

PA Flora (paflora.org) and BONAP (bonap.net) also have data indicating its presence in Wayne county.

**Let's take a look at some of the known infested locations...**

PA iMapInvasives map



PA Flora

Green circles represent confirmed reports with precise locations. The orange square represents a confirmed report with an approximate, or imprecise location. Numbers in each circle and square indicate the # of findings in a certain area.



























# GET TO KNOW WATER CHESTNUT

Species at a glance.

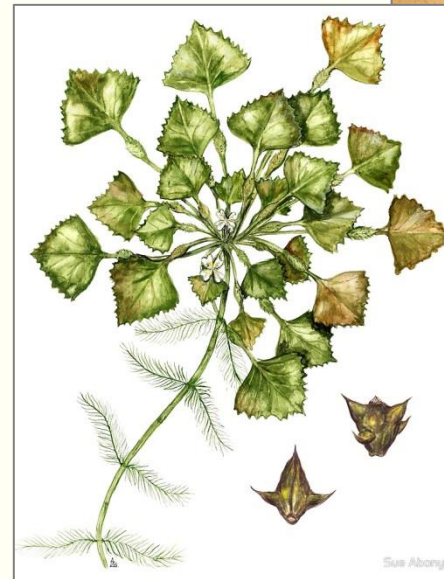
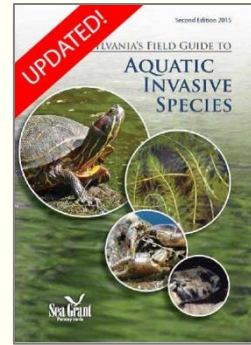




# Water Chestnut: Species at a Glance

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- Scientific name = *Trapa natans*
- Water chestnut is a rooted aquatic plant (very different from the one you find in Chinese take-out).
- It can dominate ponds, shallow lakes, and rivers because it grows in thick, dense colonies and can grow as much as 4.8 m (16 ft) in length.
- Information provided by ["Pennsylvania's Field Guide to Aquatic Invasive Species"](#)



# Water Chestnut: Species at a Glance

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## Leaves:

- Leaves of plant are both floating and submersed.
- Floating leaves are triangular or fan-shaped with noticeably toothed margins on the outer edges.
- Arranged in large floating rosettes.
- Upper leaf is glossy, while the underside is covered with soft hairs.
- Leaves are kept afloat by spongy, inflated bladders attached to long stems called petioles, which connect the leaves to the submersed section of the plant.



Left: Triangular shaped leaves with toothed margins



Above: Inflated bladders keep water chestnut afloat



# Water Chestnut: Species at a Glance

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## Flowers:

- Small flowers with four white petals, located in the center of the leafy rosette.
- Usually appear in mid to late July.





# Water Chestnut: Species at a Glance

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## Fruits/Seeds:

- Black nut-like structures have four spiny projections.
- So sharp, they are capable of penetrating shoe leather.
- Be cautious while walking along shorelines.





# Water Chestnut: Species at a Glance

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## Stems/Roots:

- Numerous finely branched roots develop along the lower stem.
- Assist in anchoring the plant to the substrate.



alamy stock photo

F0W93K  
www.alamy.com



# Water Chestnut: Species at a Glance

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## Habitat:

- Water chestnut can grow in any freshwater setting, but prefers nutrient rich waters less than 4.8 m (16 ft) deep.
- Can be found in ponds, lakes, slow moving streams, and rivers.





# Water Chestnut: Species at a Glance

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Spread:

- Water chestnut has a high reproductive rate with each plant producing up to 15 nuts per season.



Each nut can sink to the bottom of a waterbody and remain viable for up to 12 years.

- It can also spread vegetatively when the rosettes of floating leaves break apart and fragments attach to boats and trailers, or float to new locations.
- Clean Your Gear!





# Water Chestnut: Species at a Glance

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## Distribution:

- Native range includes Europe, Asia, and Africa.
- When brought to the United States by water gardeners in the 1800s, it quickly established. First observed in Massachusetts.
- It has since spread to the waters of Maryland, New York, and Pennsylvania.





# Water Chestnut: Species at a Glance

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## Environmental Impacts:

- The dense floating mats of water chestnut can choke a water body, limiting light and oxygen.
- Colonies can outcompete native organisms for nutrients and space, and they offer little nutritional value for wildlife.
- It impedes boating and other recreational activities.



Boating



Fishing



Swimming



# Water Chestnut : Species at a Glance

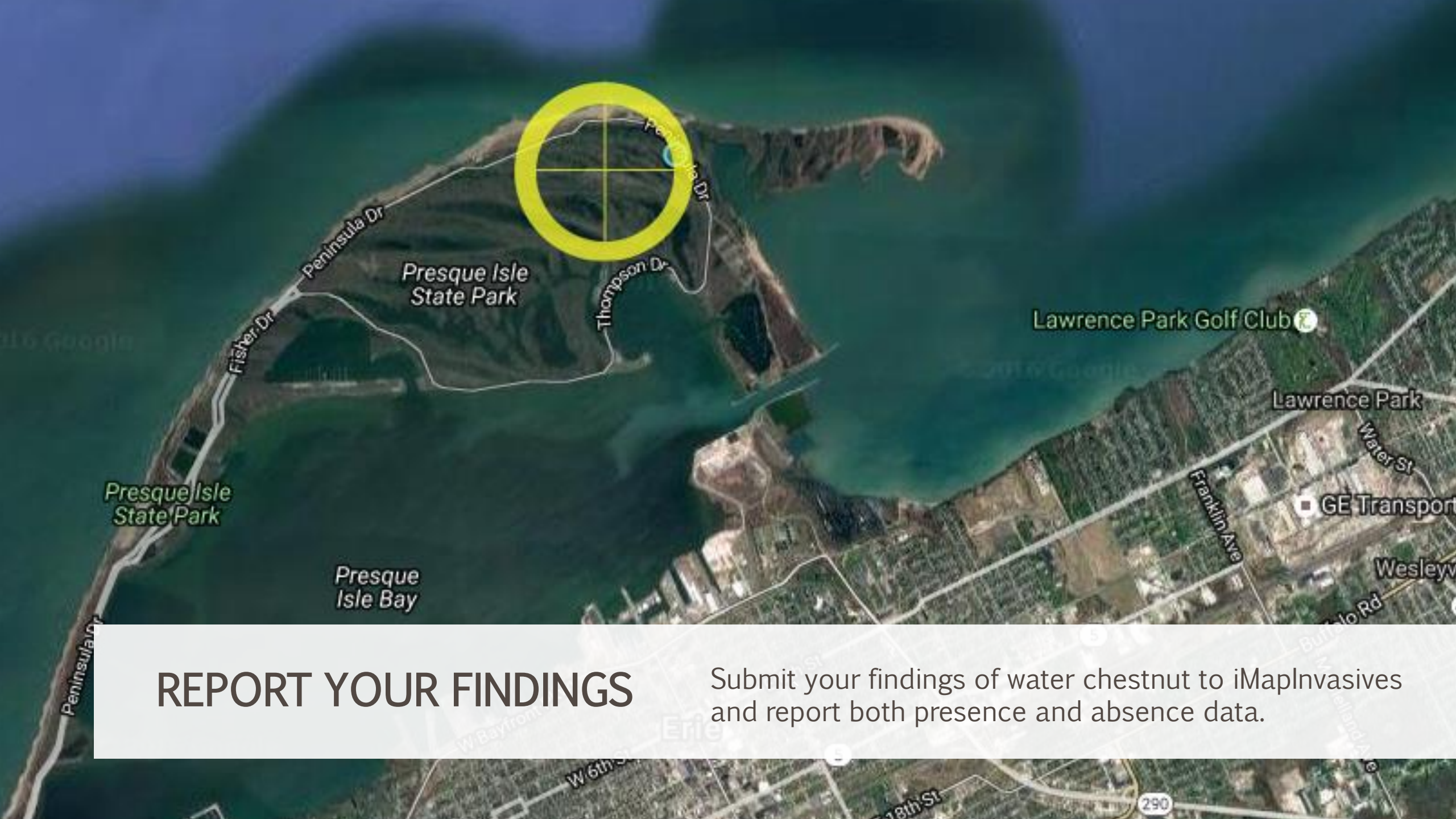
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Despite its invasive qualities, water chestnut is still sold commercially as a water garden plant. (Yikes!)

- Help to educate others. Don't purchase an invasive species, EVER.
- Know what you are buying. Don't purchase something just because it's pretty or the price is right.
  - Do your homework and know what you're buying.
- Reliable resources:
  - iConservepa.org
  - Penn State Extension
  - Pennsylvania Sea Grant







## REPORT YOUR FINDINGS

Submit your findings of water chestnut to iMapInvasives and report both presence and absence data.



# Report Your Findings

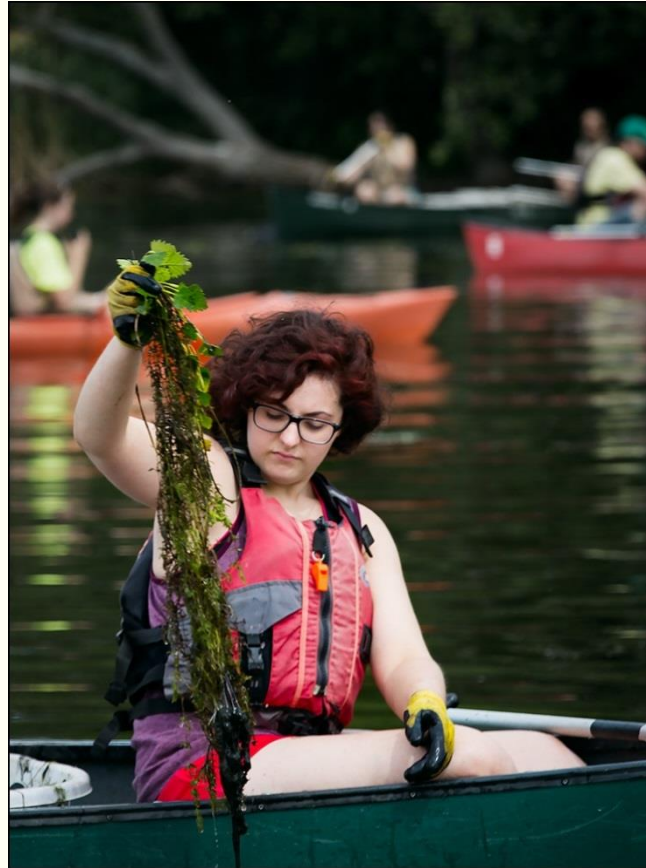
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## Find water chestnut?

- You'll be recording Presence data.
- Document with an observation and assessment record
- Mobile app (obs only) or online interface

## Looked and couldn't find it?

- You'll be recording Absence data
- Document with a survey record
- Online interface only









# REQUESTING A LOGIN ACCOUNT

Get started using iMapInvasives by requesting your own unique login credentials.





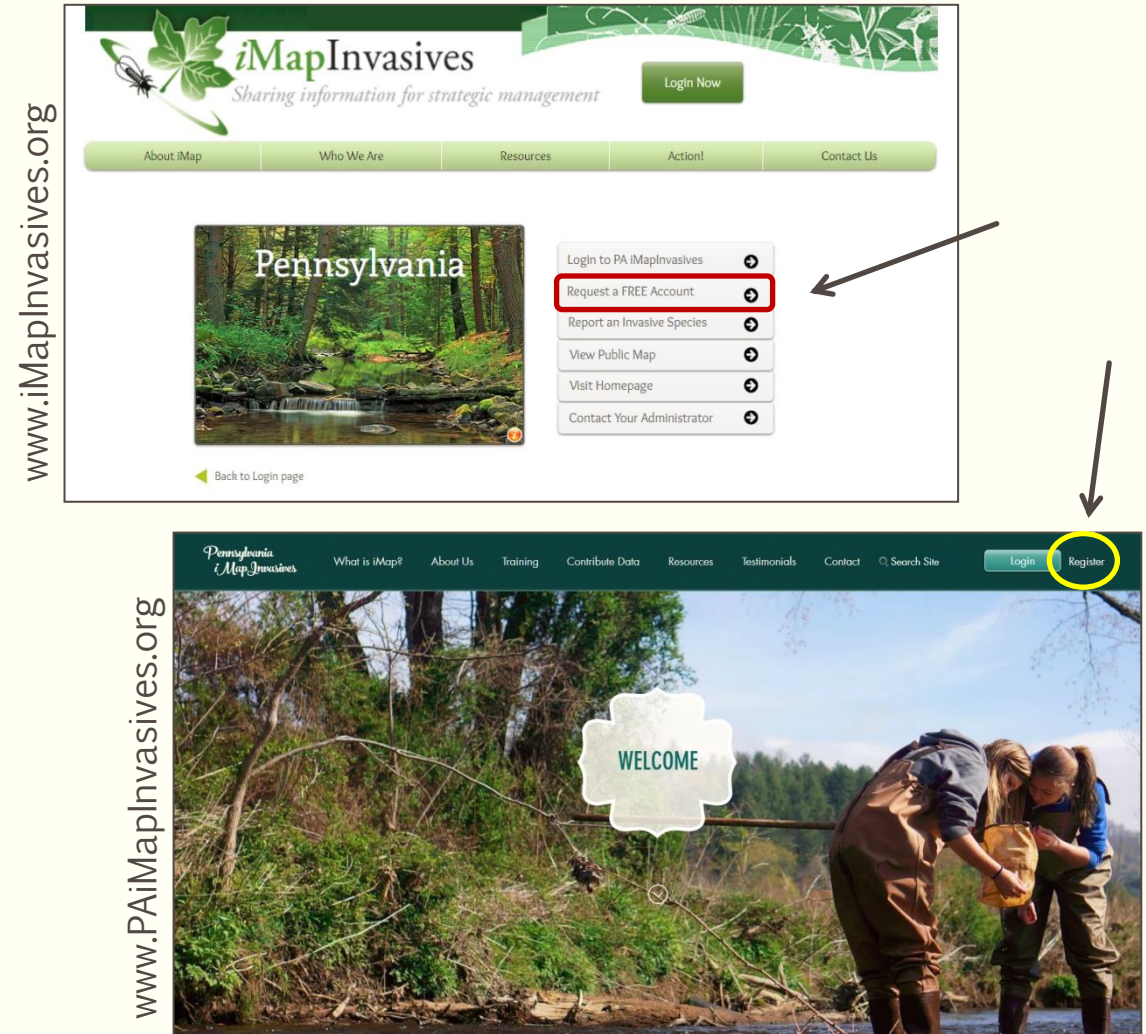
# How to Request a Login Account

Get started with iMapInvasives by requesting a free login account via:

- [www.iMapInvasives.org](http://www.iMapInvasives.org)
  - Click on “Login Now” button
  - Choose Pennsylvania
  - Click “Request a FREE Account” button
- [www.PAiMapInvasives.org](http://www.PAiMapInvasives.org)
  - Click on “Register” button in top right corner


A login account is required in order to utilize the database and all the tools it has to offer.

You’ll also need a login account to use the iMapInvasives mobile app.





# Requesting a Login Account



**iMapInvasives**  
*Sharing information  
for strategic management*

**Pennsylvania User Tools**  
[Home](#) [Request account](#)

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## Request a Login

First Name\*:  This field is required.

Last Name\*:

Organization\*:

E-mail Address\*:

Describe your interest in the iMapInvasives Project:

Do you want to receive information on training opportunities? :

What is your general area of interest? :

How did you hear of the iMapInvasives web site? :

Are you over 13 years of age? :

An email will be sent as soon as our staff reviews your request.

**If you are on a Smartphone now, and wish to report an invasive species, please take a photo and note the location. You will be able to add the report once you receive a data entry account for iMapInvasives.**

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[Home](#) | [Legal Disclosure and Terms of Use](#) | [Privacy Policy](#) | [Financials](#) | [Contact your iMap Administrator](#)

Once your login request is submitted, you will receive an email from the state administrator with your unique credentials.





A woman with dark hair tied back, wearing a red jacket and a black headband with a yellow stripe, is smiling while looking at a black smartphone. She is standing on a mountain trail with a vast, hazy mountain range in the background. The scene is captured in a cinematic style with soft lighting.

## USING THE MOBILE APP

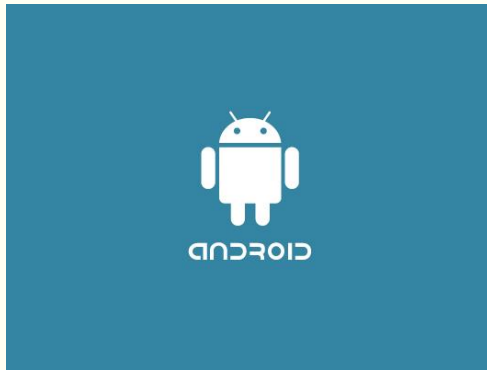
Reporting invasive species while  
in the field just got easier!



# iMapInvasives Mobile App

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Designed for use on Android and Apple devices.



Usable on both smartphones and tablets.  
*(Device must have integrated GPS capability.)*





# iMapInvasives Mobile App

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Report invasive species findings  
using your mobile device's  
camera and GPS.

An internet connection is not  
required!



You could be here...

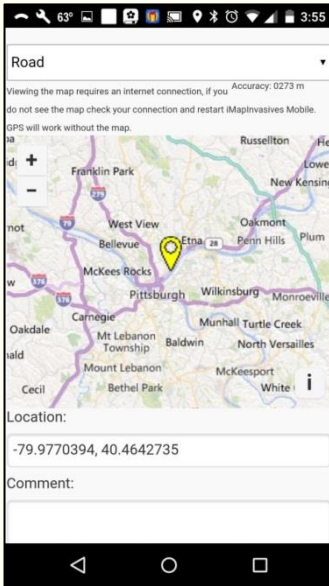
Or here...



Or here... and still  
be able to use the  
iMap Mobile App!







# GETTING STARTED

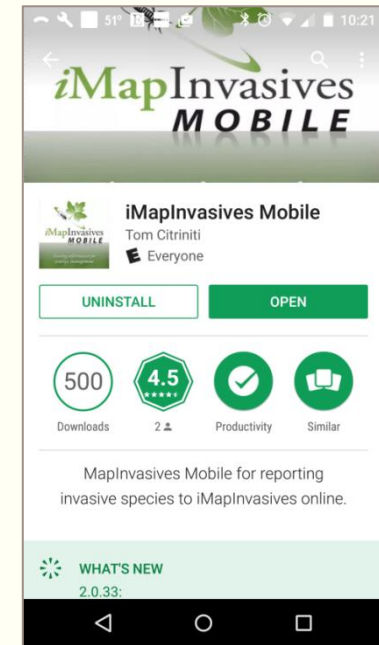
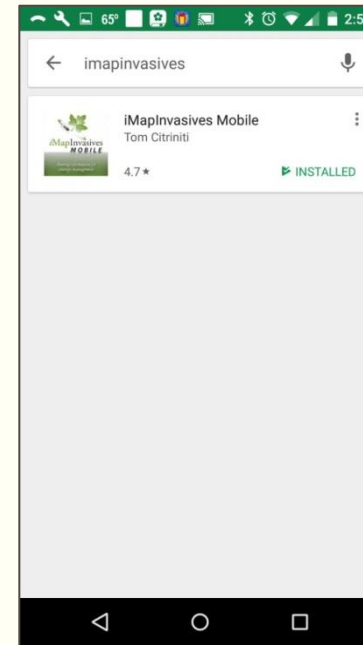
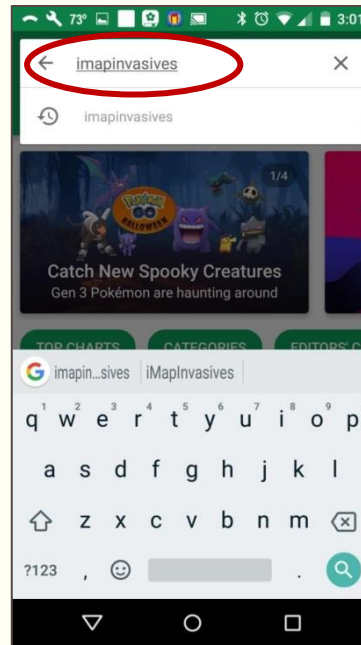
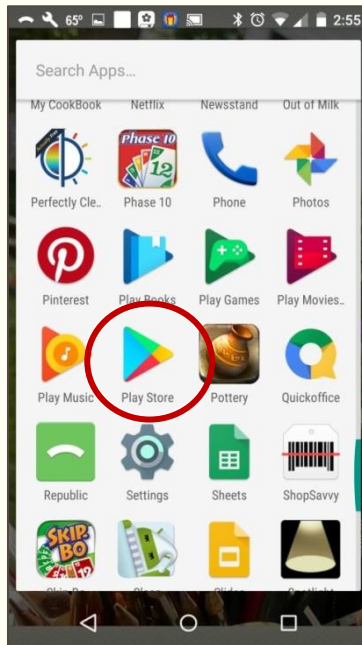
## Step-By-Step Instructions and Screenshots



# Getting Started

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- Download the app (example provided on Android smartphone):
  - Visit the Play Store
  - Search using the key word “iMapInvasives”
  - Follow prompts to install the app



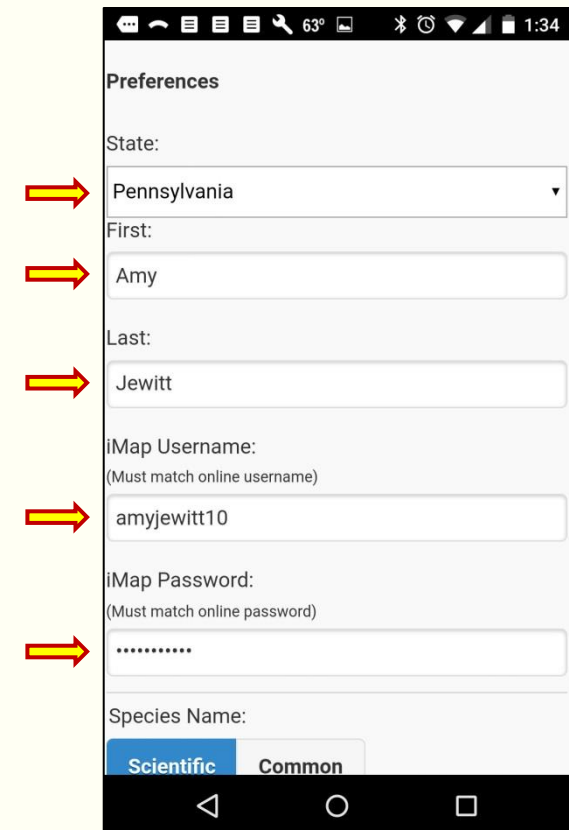
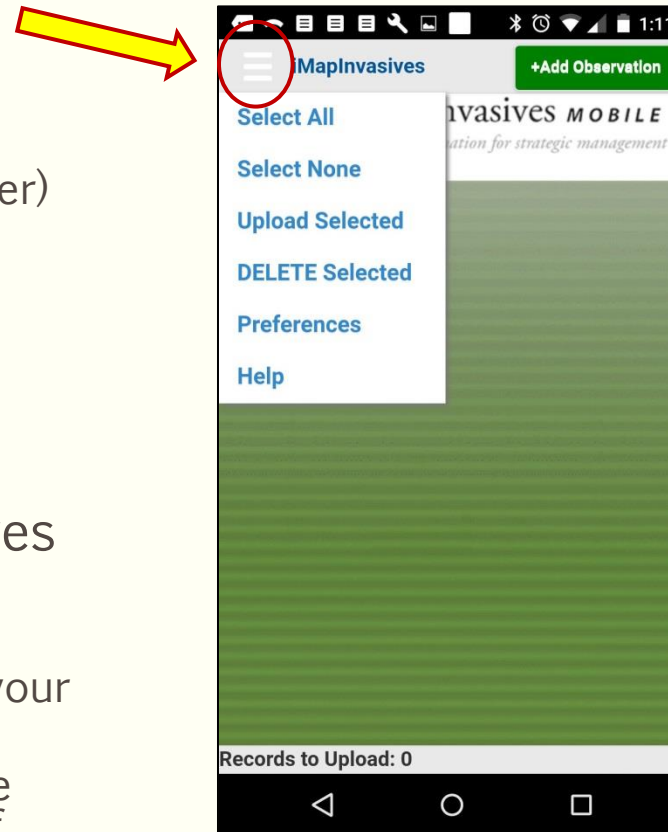


# Getting Started

Once installed...

## Set Your Preferences

- Tap the menu icon (upper left corner)
- Choose your default state (Pennsylvania)
- Fill in your first and last name
- Fill in your assigned iMapInvasives user name and password
  - This information is provided by the Administrator when first assigned your login credentials.
  - Username is typically the first three letters of your first name and all of your last name; all lowercase and no spaces.
    - Ex. Briana McCormick - brimccormick



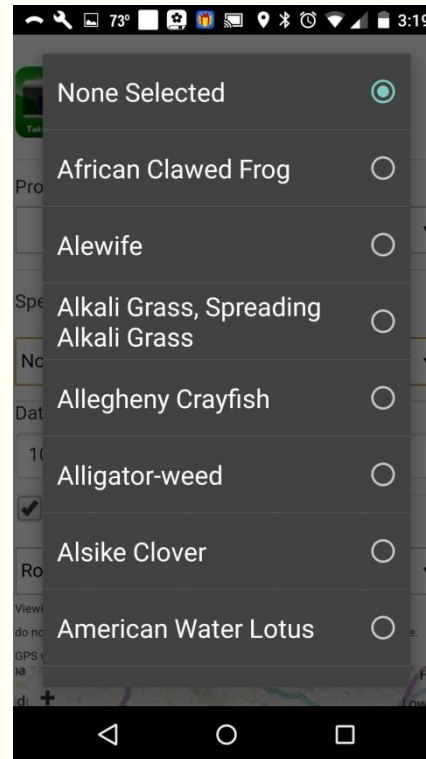
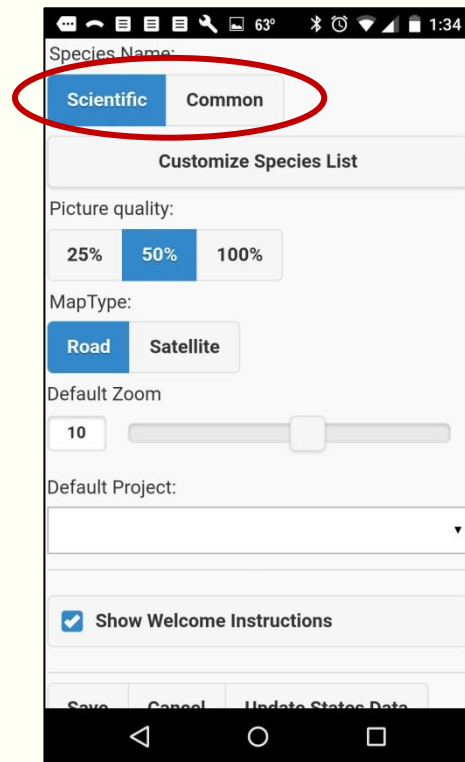


# Getting Started

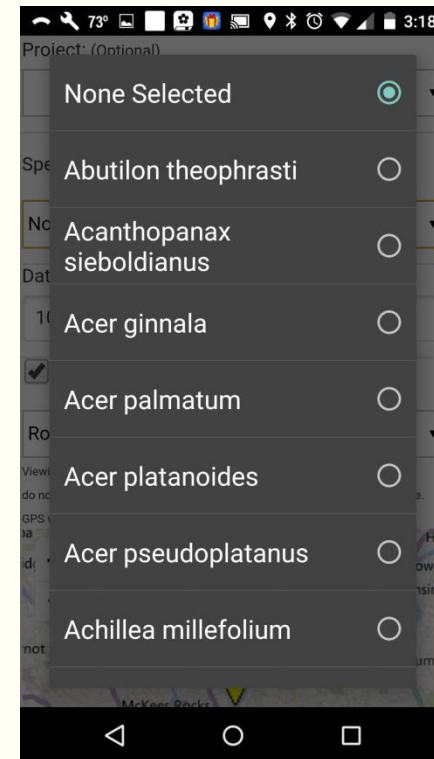
## Preferences continued...

Choose how you want to see the species list

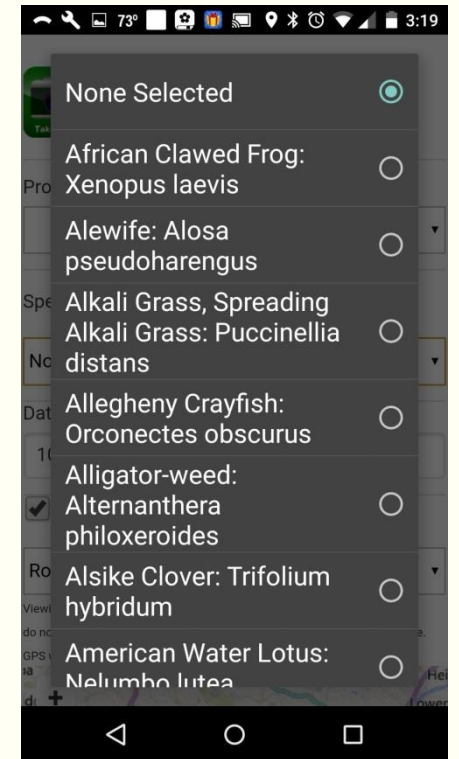
- Common, Scientific, or both



Common Names



Scientific Names



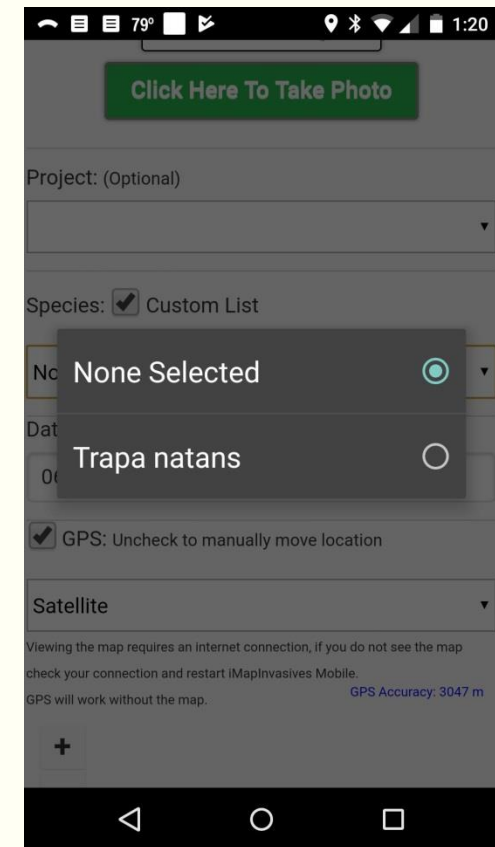
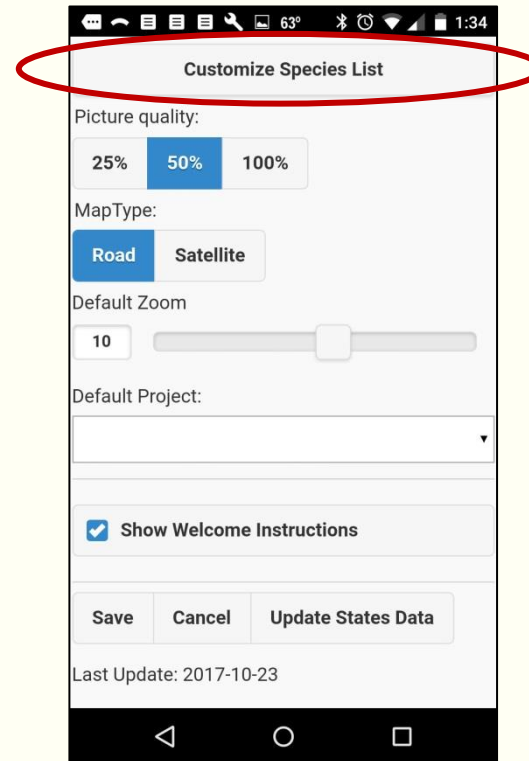
Common & Scientific

# Getting Started

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## Preferences continued...

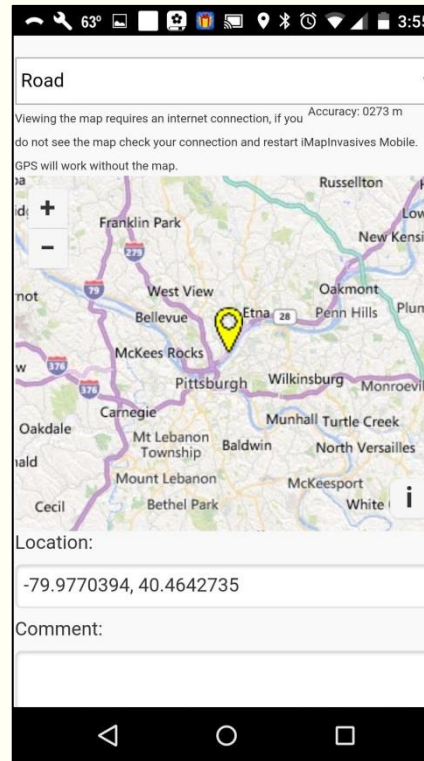
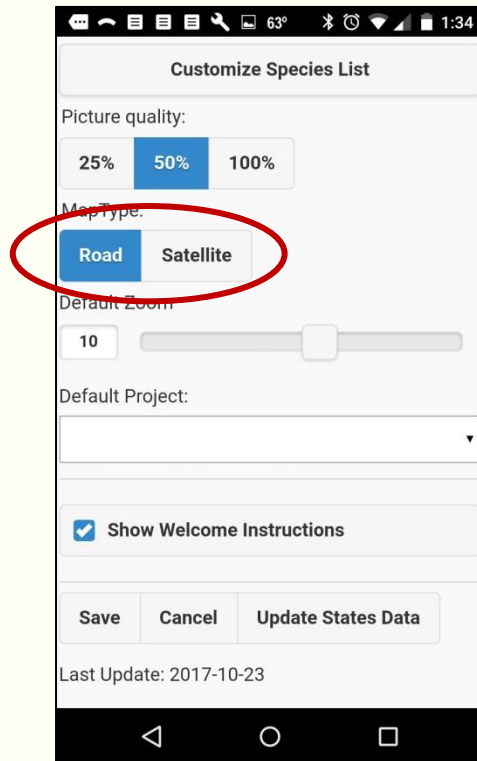
- Create a custom species list (optional)
  - Use this feature to save time finding the species you work with most frequently.
  - Only the species you choose will appear in the species selection pane when adding an observation.
  - If you choose not to create a custom list, the entire tracked list will display when adding an observation.
- In these screenshots, I've customized my list to show only water chestnut (*Trapa natans*).





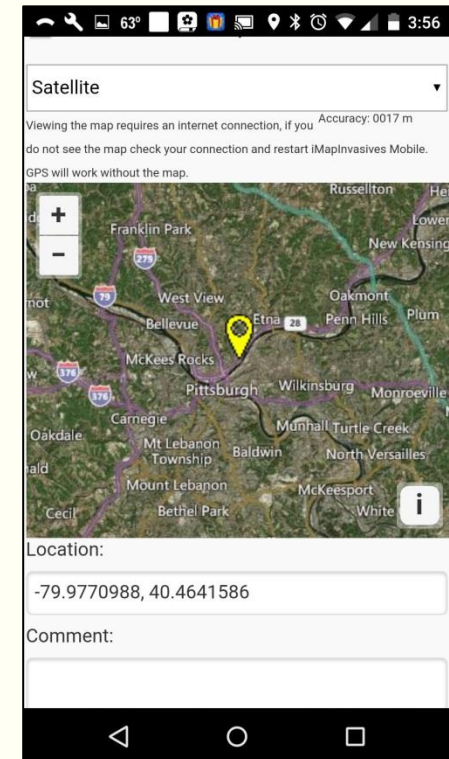
# Getting Started

Choose which map you'd prefer to see when entering your observation points.



Road View

OR

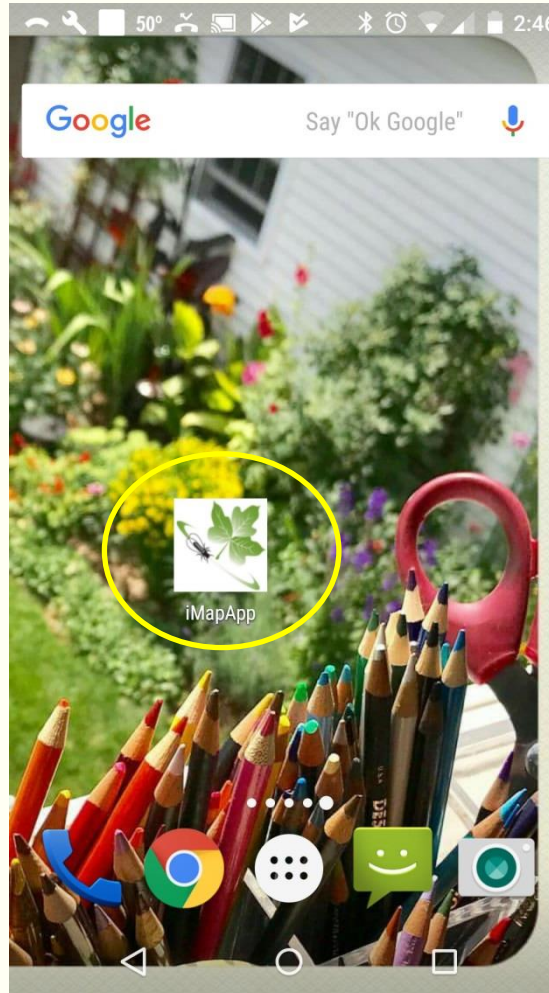


Satellite View

# Entering Observations Using Mobile App

## Access App Homepage

- Open the app on your phone/tablet and review the instructions outlined on the homepage.
  - Example provided on Android smartphone.

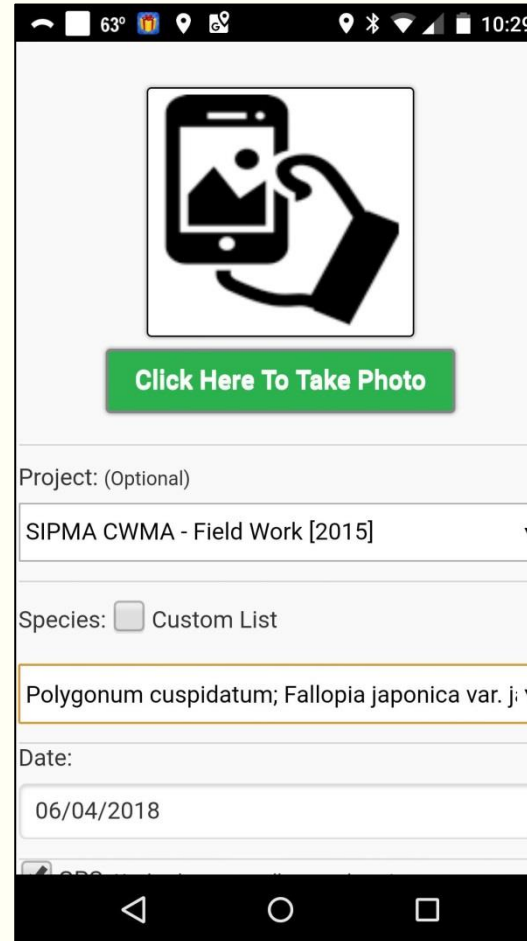




# Entering Observations Using Mobile App

## Step 2. Take Photo

- Tap the camera icon to open your phone's camera and take a **distinguishing** photo of the species found.
- The app can only save one photo per observation; however, you can take additional photos with your phone and then add them to the observation when you return to a desktop computer.



The screenshot shows the mobile app interface. At the top, there's a status bar with icons for signal, battery, and time (10:29). Below that, a large icon of a hand holding a phone with a camera icon is displayed. A green button labeled 'Click Here To Take Photo' is positioned below the icon. Underneath the button, there's a 'Project: (Optional)' dropdown menu showing 'SIPMA CWMA - Field Work [2015]'. Below that, there's a 'Species:' label with a checkbox for 'Custom List' and a dropdown menu showing 'Polygonum cuspidatum; Fallopia japonica var. j.'. At the bottom, there's a 'Date:' label with a text input field showing '06/04/2018'. The app is running on an Android device, as indicated by the navigation bar at the very bottom.



# Advice to Users

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## Take distinguishing photographs!

- Avoid taking photos from far away (except for an infestation photo).
- Take photos from various angles
  - Aerial view
  - Side view
  - Underside
  - Distinguishing features
  - Total population (infestation)
- Good photos are **crucial** in order for the Administrator to confirm your findings!

Infestation photo



Distinguishing features (close-up)



Distinguishing features (close-up)



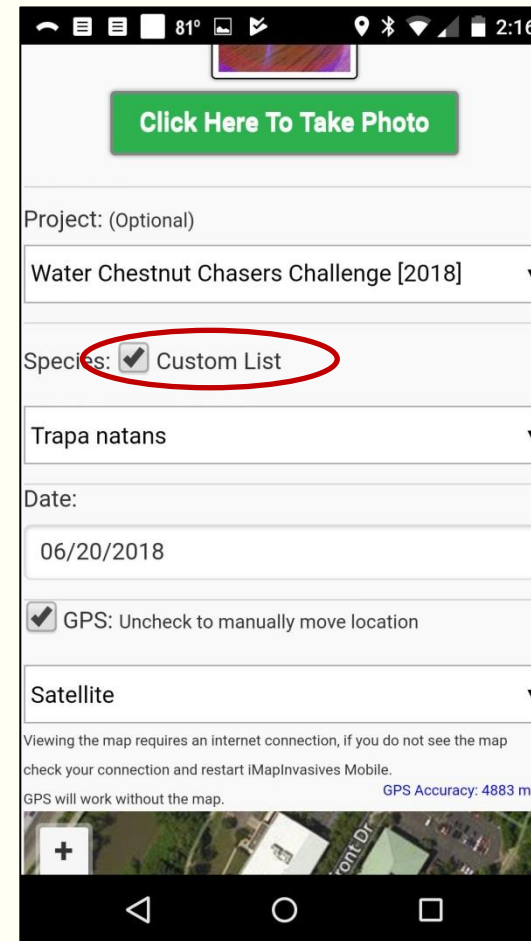
Scale photo



# Entering Observations Using Mobile App

## Step 3. Fill in Observation Details

- Select the project name  
“Water Chestnut Chasers Challenge [2018]”.
- Select the species observed.
  - Choose to use a custom list, if desired.
- Date automatically defaults to current day, though can be changed if needed.

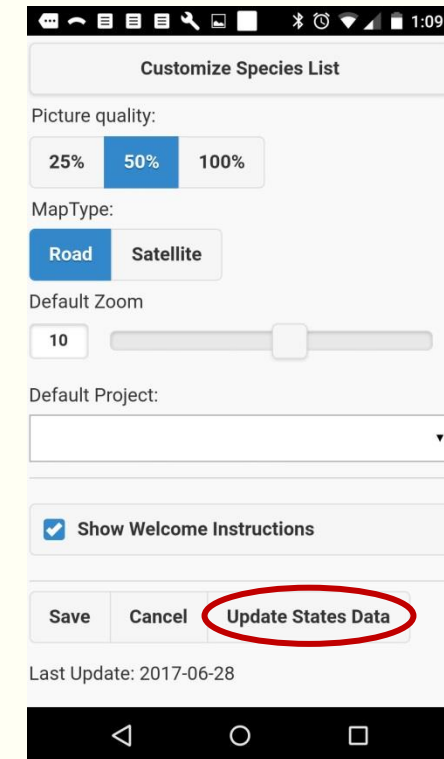
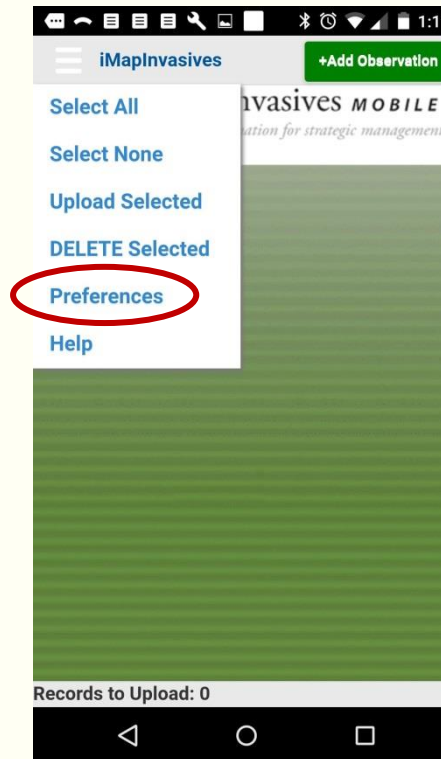
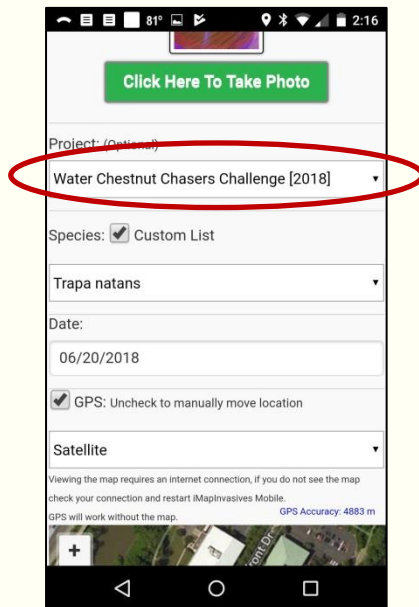


The screenshot shows the mobile app interface for entering observations. At the top, there is a green button labeled "Click Here To Take Photo". Below this, the "Project: (Optional)" dropdown menu is set to "Water Chestnut Chasers Challenge [2018]". The "Species:" section has a red circle around the "Custom List" checkbox, which is checked. Below this, the species dropdown menu is set to "Trapa natans". The "Date:" field shows "06/20/2018". The "GPS" checkbox is checked, with the text "Uncheck to manually move location". The "Satellite" dropdown menu is set to "Satellite". At the bottom, there is a map view with a red location pin and a plus sign icon. The status bar at the top shows the time as 2:16 and the temperature as 81°.



# Entering Observations Using Mobile App

- Note:** If the project name “Water Chestnut Chasers Challenge [2018]” does not appear in your project list, access Preferences and click “Update States Data”.

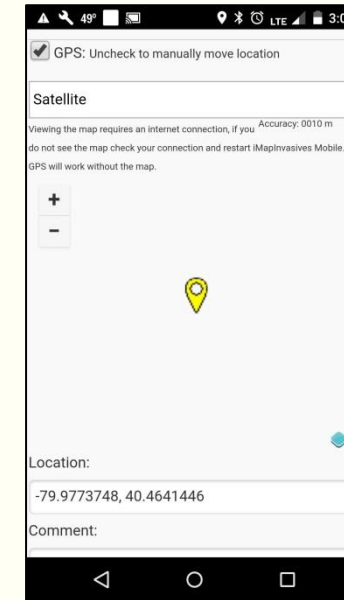
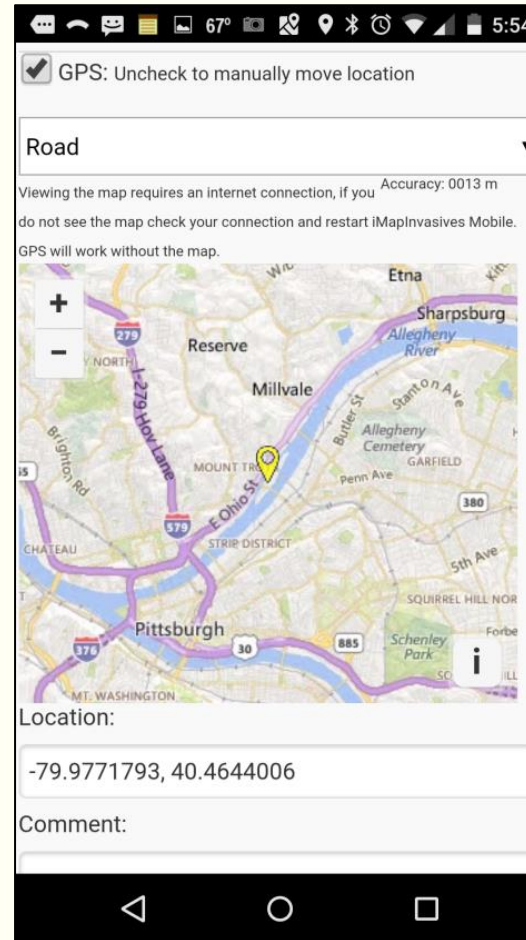




# Entering Observations Using Mobile App

## Step 4. Check Observation Location

- GPS capability in phone/tablet will automatically determine your location.
- If needed, uncheck the “GPS” box to manually move the point to another location.
  - If you do not have an internet connection when making an observation, the base map will NOT display. However, as long as your GPS is working, it will mark the correct location.



In this screenshot, the base map has disappeared because I do not have an internet connection. However, the GPS is still functioning.

An observation can still be created even when the basemap is gone!

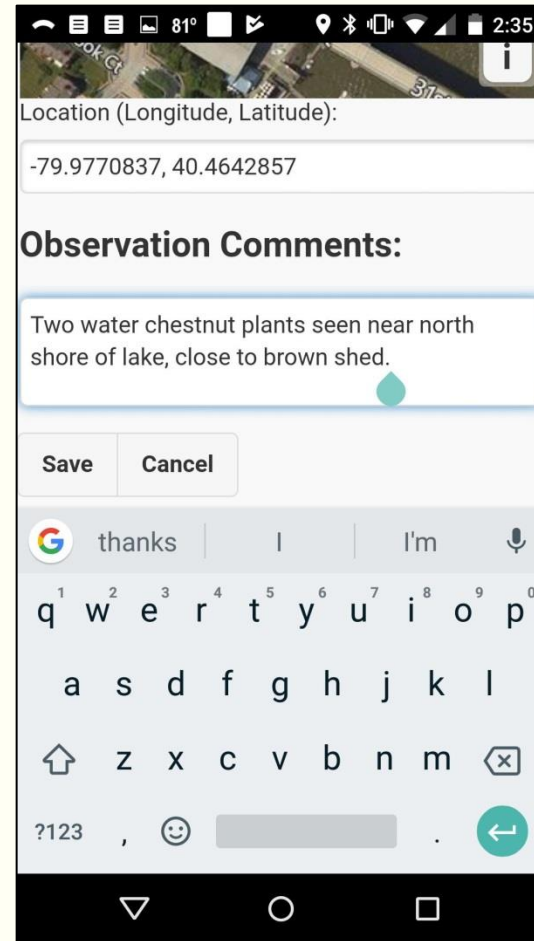


# Entering Observations Using Mobile App

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## Step 5. Add Comments

- To make your observation more informative, add some comments.
- Comments could include information on population density, other landmarks nearby, additional observers, etc.
  - *“Two water chestnut plants seen near north shore of lake, close to brown shed.”*





# Entering Observations Using Mobile App

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## Step 6. Save Your Observation

- Save your observation to a list on the app's homepage.
- This list can be uploaded into iMapinvasives once you're in an area with an internet connection (Wifi).

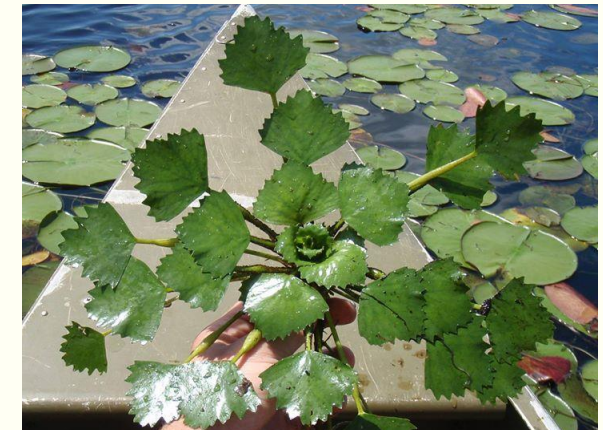
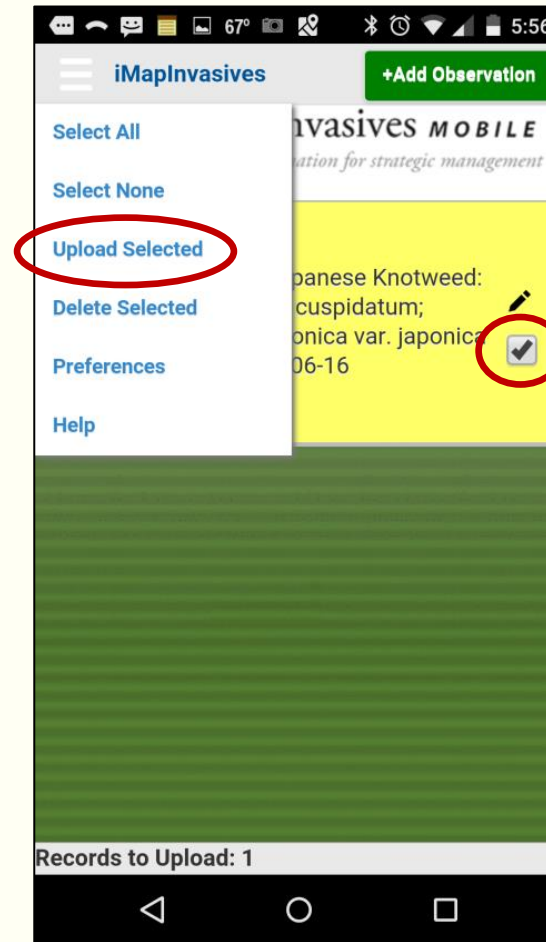


# Entering Observations Using Mobile App

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## Step 7. Upload Your Observation(s)

- To upload your observation, click on the check box next to each observation record.
- Then access the main menu and click “Upload Selected”.

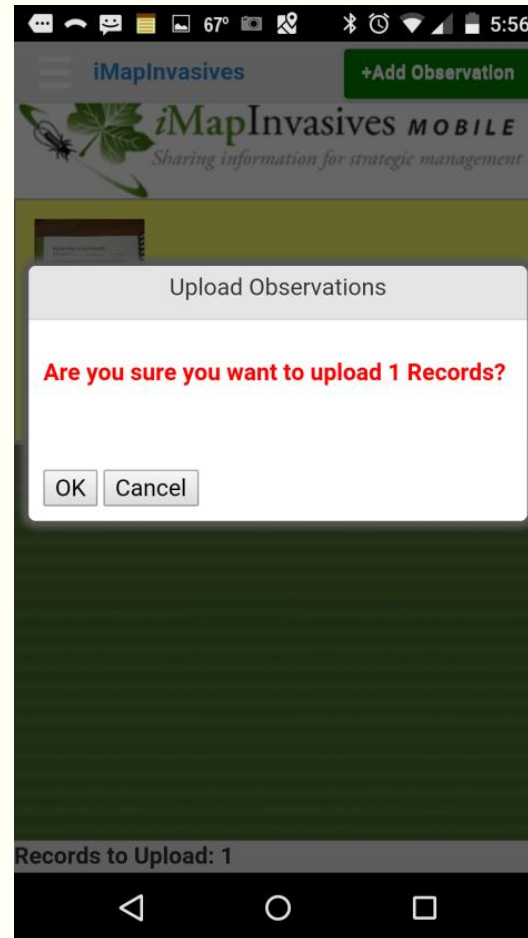




# Entering Observations Using Mobile App

## Upload Confirmation

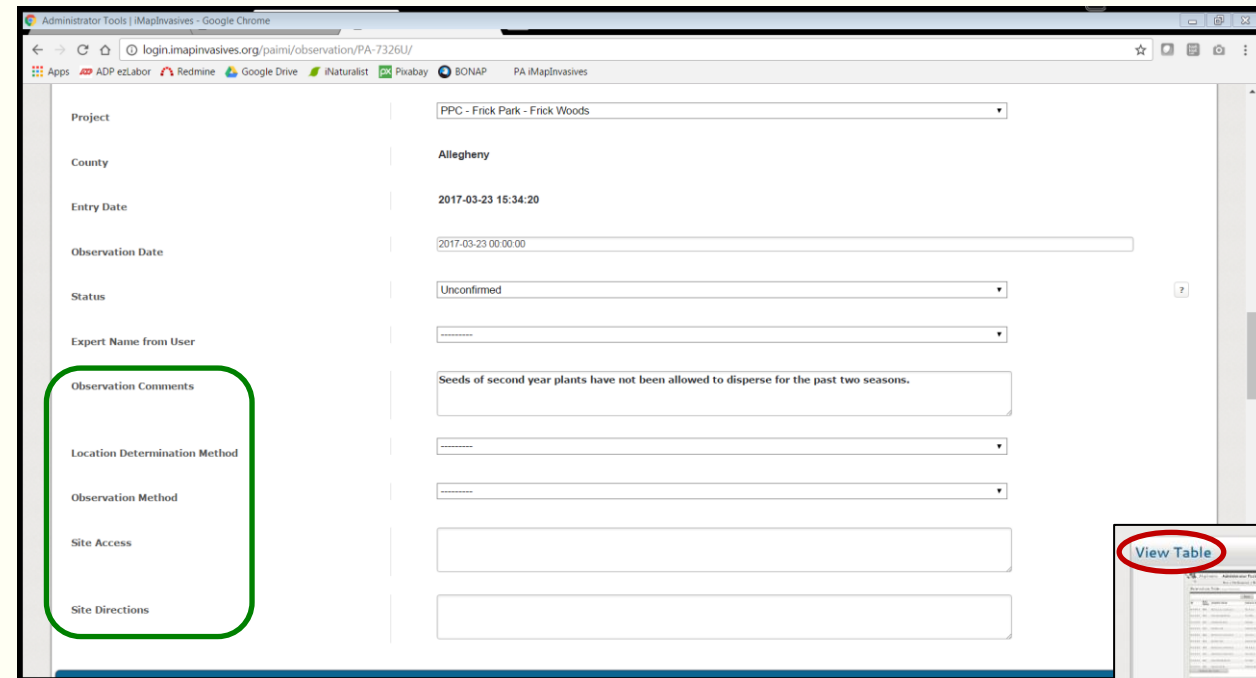
- Confirm that you would like to upload the selected record(s) to the iMapInvasives database by clicking “Ok”.
- Note that the records will disappear from your iMapInvasives app.
- **Hint:** If you continue to see the observation in the list, this means it has NOT been uploaded into the main iMapInvasives database.
  - If this happens, try uploading again.



# Entering Observations Using Mobile App

## Step 8. Add Additional Comments and Photos

- After uploading your observation(s), return to a desktop computer to add other details AND upload up to four more photos.
- Access your record(s) by logging into PA iMapInvasives and clicking on “View Table” from the main navigation page.



Project: PPC - Frick Park - Frick Woods

County: Allegheny

Entry Date: 2017-03-23 15:34:20

Observation Date: 2017-03-23 00:00:00

Status: Unconfirmed

Expert Name from User: \*\*\*\*\*

Observation Comments: Seeds of second year plants have not been allowed to disperse for the past two seasons.

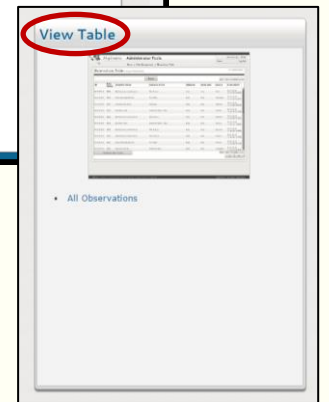
Location Determination Method: \*\*\*\*\*

Observation Method: \*\*\*\*\*

Site Access:

Site Directions:

Log into Pennsylvania iMapInvasives at [www.PAiMapInvasives.org](http://www.PAiMapInvasives.org).





# Entering Observations Using Mobile App

Now what? What happens once your report has been submitted?

An iMapInvasives administrator will:

- Review your record and attached photo(s).
- If the species ID is correct, your record will be confirmed.
- If there are questions regarding your record, you will be notified.



Administrator Tools | iMapInvasives - Google Chrome  
login.imapinvasives.org/palmi/observation/PA-5544U/

Apps ADP ezLabor PA Login iMap PA iMap Home Redmine New Wix Site Google Drive iNaturalist Pixabay BONAP PA Flora iMap Network My Account: Uj

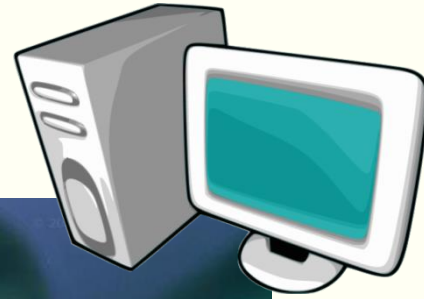
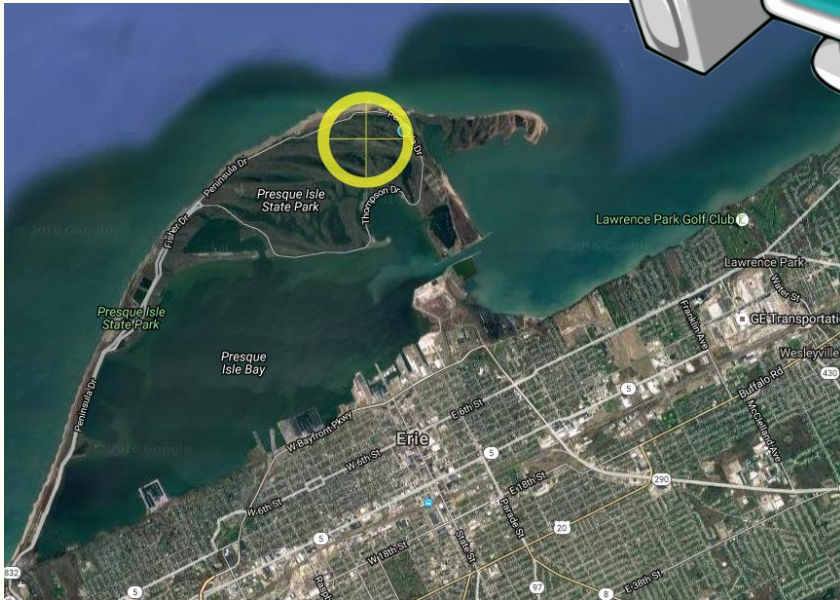
Welcome back, Amy (amyjwitt10, User Level 10) 2:06  
Home Log Out

### Observation Information PA-5544U

Data Entry Person: amyjwitt10  
Observer: Amy Jewitt  
Organization: Western Pennsylvania Conservancy  
Project: SIPMA CWMA  
Dates  
Observed: June 16, 2016  
Species  
Japanese Knotweed  
*Polygonum cuspidatum; Fallopia japonica var. japonica*  
Status: Unconfirmed  
Geographic Data  
County: Allegheny  
ID: PA-5544U  
Observation Location  
Latitude  
40.464422  
Longitude  
-79.977214  
Move the map to move the observation location  
Return to the initial Map Location  
Save New Map Location  
View Observation on Map

77554 4451218 State based Coordinates  
79°58'38"W, 40°27'51.9"N  
0,0

Notice this record is still labeled as Unconfirmed, meaning the Administrator has not yet reviewed it or is in the process of contacting the observer with questions.



# OBSERVATION DATA ENTRY

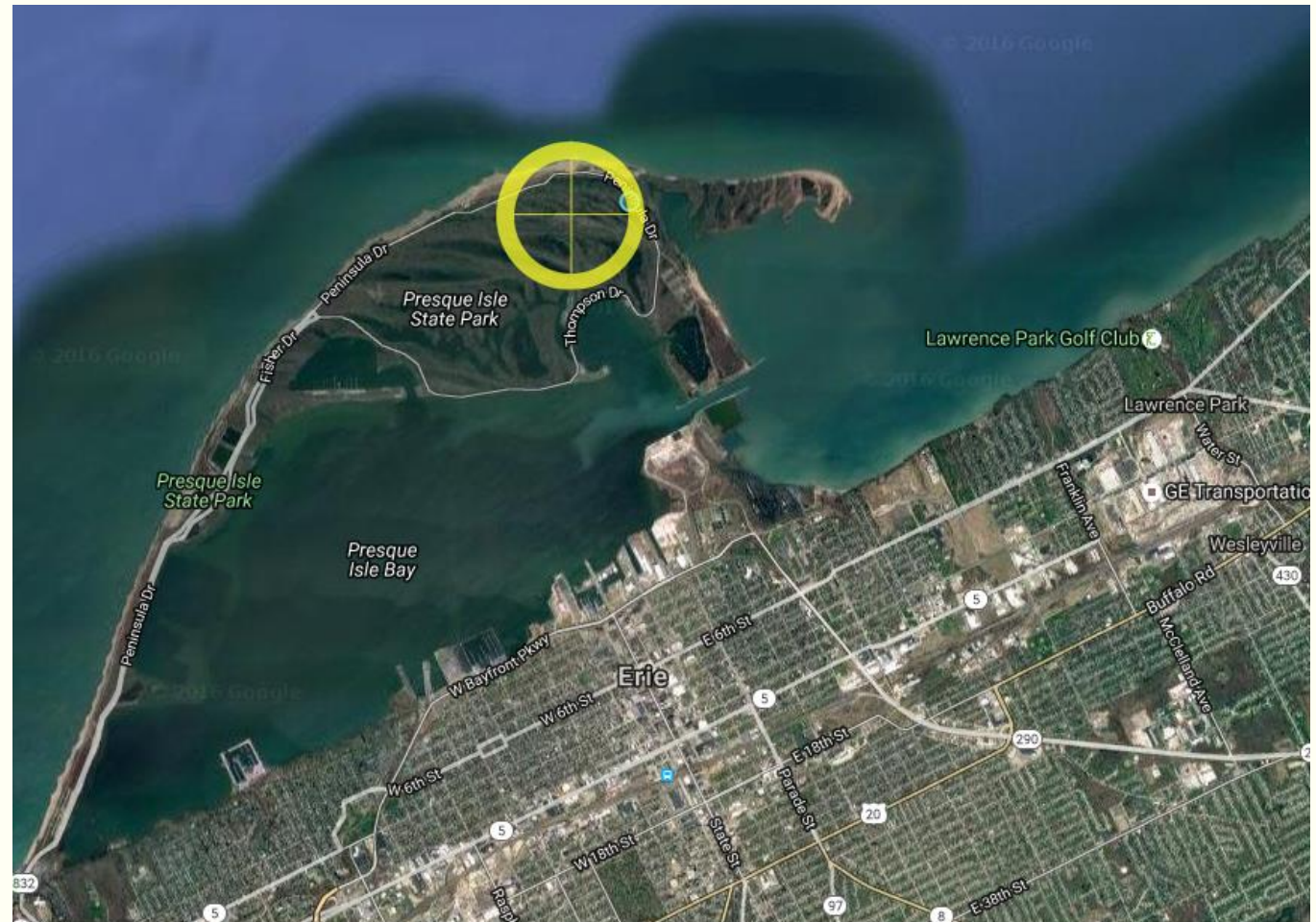
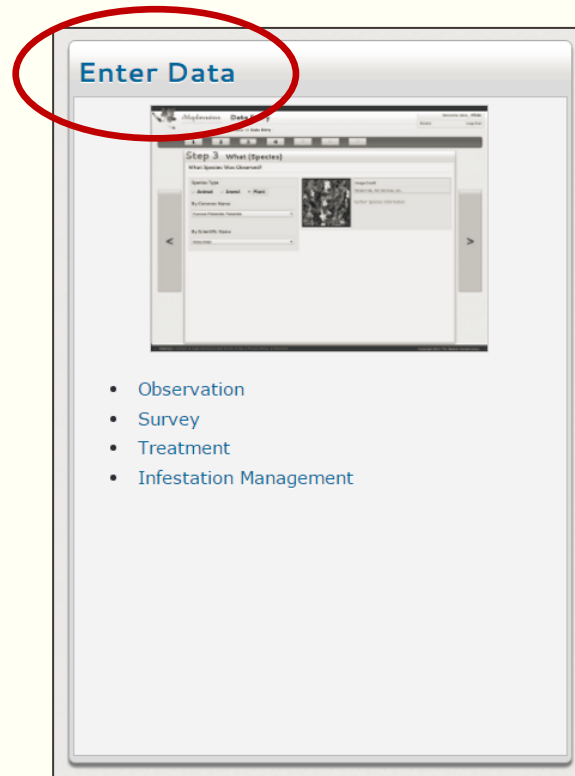
Found water chestnut?

Learn how to report your finding to iMapInvasives using a desktop computer.



# How to Enter Observation Data

When logged into Pennsylvania iMapInvasives, click on “Enter Data” on left side of screen.



# How to Enter Observation Data

Observation data entry done (via a desktop computer) is very similar to the mobile app process.

- Photos
  - Load up to five photos.
  - Include distinguishing characteristics!
- Observer name
- Project
  - Water Chestnut Chasers Challenge [2018]
- Species name
  - Common or scientific
- Observation date
  - Navigate using the calendar
  - Cannot type the date directly
- Location
  - GPS coordinates OR
  - Waterbody name, then navigate

When was the species observed?

Select a date

2017-03-20

March 2017						
Mo	Tu	We	Th	Fr	Sa	Su
27	28	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2
3	4	5	6	7	8	9

Select observation date by navigating the calendar

Select a date

2017-03-20

2017

Jan	Feb	Mar
Apr	May	Jun
Jul	Aug	Sep
Oct	Nov	Dec

Display list of months in a designated year

Select a date

2017-03-20

2000-2019

2000	2001	2002	2003	2004
2005	2006	2007	2008	2009
2010	2011	2012	2013	2014
2015	2016	2017	2018	2019

Display list of years

bradford reservoir

Go to location

Lon: -75.17105 / Lat: 40.23375

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# Entering Observation Date: Step 7

Once you've entered all of the required information, review your record details and submit your observation to iMapInvasives!

OBS - Data Entry | iMapInvasives - Google Chrome

login.imapinvasives.org/paimi/entry/

Apps ADP ezLabor Redmine Google Drive iNaturalist Pixabay BIONAP PA iMapInvasives

iMapInvasives  
Sharing information  
for strategic management

Observation Data Entry

Welcome back, Amy  
(amyjevt110: User Level 10) 2:07  
Log Out

Home

1 2 3 4 5 6 7

### Step 7 Submit Observation

Submit Observation

Observer:	I am the observer.
Species:	Black Jetbead
Project:	Observation is not associated with a project.
Date:	2017-03-20
Location:	Lat / Lon Decimal Longitude: -76.914128 Latitude: 39.7916021

Submit Observation

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# Entering an Observation – Important Note!

After creating your record, return to it using the Table on the Main Navigation page and add additional details including:

- Comments
  - Additional observers, # of species observed, site conditions, etc.
- Site directions and access information
  - Locked gate, permission required from landowner, rough terrain.
- Specimen collected? If so, where is specimen being housed at?
  - Museum, herbarium, botanical garden, etc.

The screenshot displays the iMapInvasives Pennsylvania Administrator Tools interface. The main section is titled "Observation Information" and contains the following details:

- Data Entry Person:** nikryan
- Observer:** Nikki Ryan
- Organization:** Sinnemahoning Invasive Plant Management Area
- Project:** SIPMA CWMA - Initial Dataset
- Dates:** Observed: Nov. 18, 2016
- Species:** Japanese Knotweed (*Polygonum cuspidatum*; *Fallopia japonica* var. *japonica*)
- Status:** Unconfirmed
- Geographic Data:** County: Cameron, ID: PA-7298U

Below the information, there are buttons for "View Observation on Map", "Create Assessment for this Observation", "Return to the Initial Map Location", and "Save New Map Location". A map of the area is shown on the right, with a yellow dot indicating the observation location. The map includes coordinates: 232883.83, 4589812.0 (State based Coordinates) and 41.41548003, -78.19606098 (Latitude, Longitude). A small inset map shows the location within Pennsylvania.

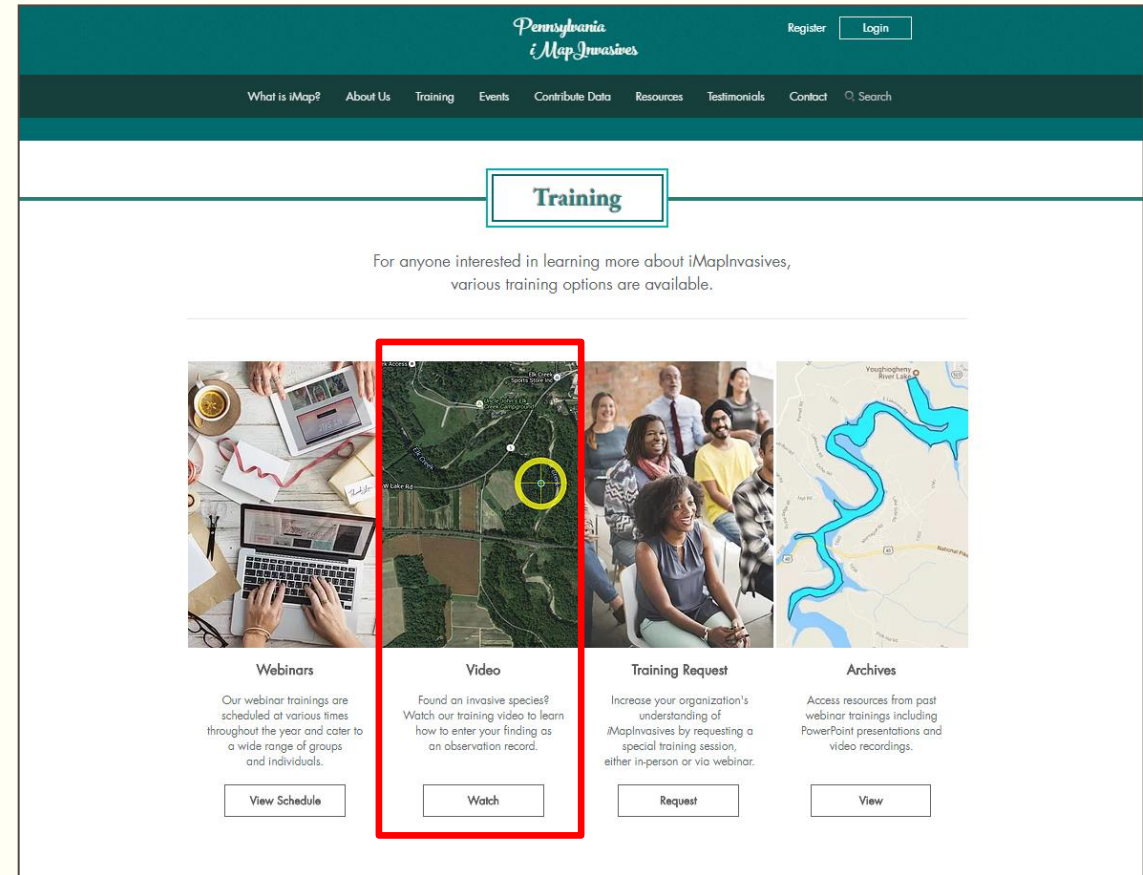
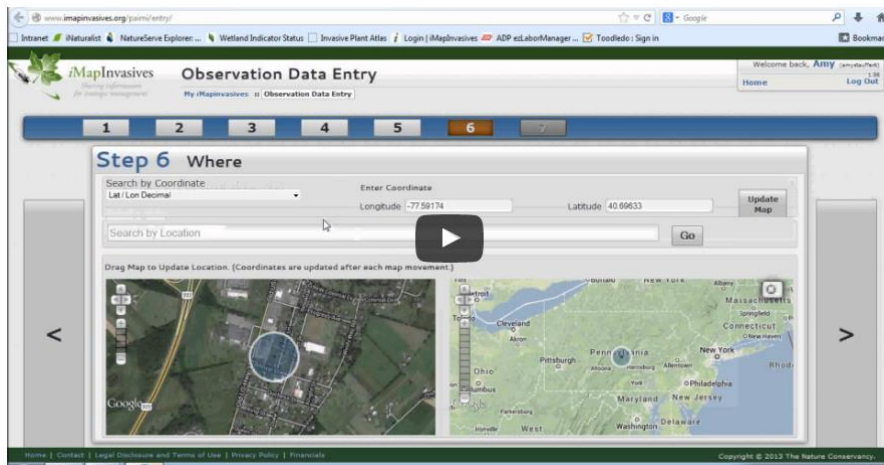
In the bottom right corner, there is a "View Table" button circled in red, which links to a table of all observations. The table has columns for "Date", "Observer", "Species", "Status", "County", and "ID".

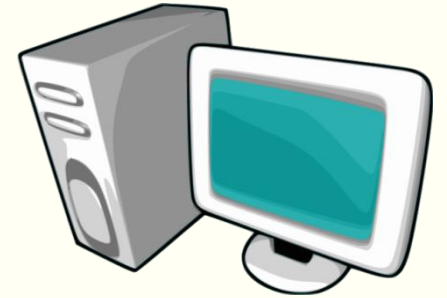
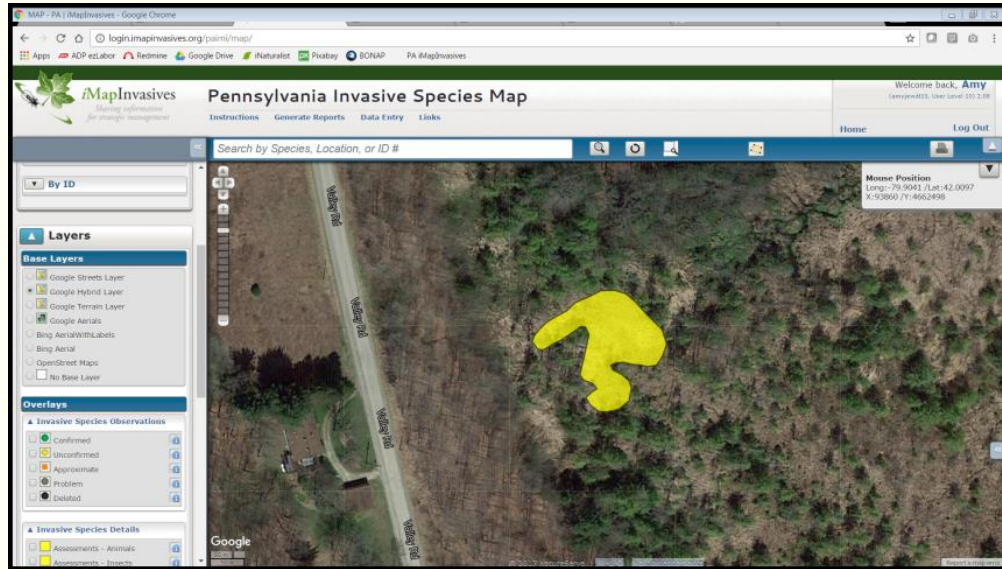


# Observation Data Entry – Refresher Training

To refresh on how to enter an observation record using a desktop computer, watch our training video anytime!

- Available on the Training page of [www.paimapinvasives.org](http://www.paimapinvasives.org) OR on YouTube.com.





# ASSESSMENT DATA ENTRY

Found water chestnut?

In addition to recording an observation record, document population abundance using your desktop computer.



# How to Enter an Assessment Record

1. On the main navigation page, click on “View Table”.

The screenshot shows the Pennsylvania Administrator Tools interface. At the top, there is a navigation bar with the iMapInvasives logo and the text "Pennsylvania Administrator Tools". Below this is a secondary navigation bar with four main sections: "My iMapInvasives", "Resources", "Data Management", and "System Management". The "Data Management" section is highlighted in blue. Below this, there are four main content areas: "Enter Data", "View the Map", "View Table", and "Query and Reports". The "View Table" area is circled in red. It contains a list of links: "All Observations", "Surveys", "Treatments", "Infestation Management", "Assessments", "Animals", "Insects", "Plants", and "IPMDAT Shared Results". The "Query and Reports" area contains links for "Custom Observation Query", "All Data Summary Report", "All Species by County: Report Table", "Infested Lakes: Table Report", "Report with Observation IDS", "Active Projects: All Projects", "My Projects with Details", and "Admin: Summary Report".

Administrator Tools | iMapInvasives - Google Chrome

login.imapinvasives.org/paimi/home/

Apps ADP ezLabor Redmine Google Drive iNaturalist Pixabay BONAP PA iMapInvasives

Welcome back, Amy (amyjewitt10, User Level 10) 2:08  
Home Log Out

Show Your iMap Stats

My iMapInvasives Resources Data Management System Management

Enter Data

- Observation
- Survey
- Treatment
- Infestation Management

View the Map

- View the Map
- Not using a high-speed internet connection?

View Table

- All Observations
- Surveys
- Treatments
- Infestation Management
- Assessments
- Animals
- Insects
- Plants
- IPMDAT Shared Results

Query and Reports

Custom Observation Query

All Data Summary Report

All Species by County: Report Table

Infested Lakes: Table Report

Report with Observation IDS

Active Projects: All Projects

My Projects with Details

Admin: Summary Report

# How to Enter an Assessment Record

2. In the Table, type your last name into the top search bar. This will show all your observation records.

The screenshot shows the iMapInvasives Pennsylvania Administrator Tools interface. The page title is "Observations Table". Below the title, there is a search bar with the text "sanderson" entered. The search results show two records:

ID	Status	Scientific Name	Common Name	Observer	Organization	Date	County	Photo(s)	Entry Date	Entry Person
PA-3316U	Confirmed	Hydrocharis morsus-ranae	Common Frogbit	allsanderson	_No Organization Provided	2014-07-29	Warren	Yes	2014-07-30 13:52:25	allsanderson
PA-3315U	Confirmed	Trapa natans	Water Chestnut	allsanderson	_No Organization Provided	2014-07-16	Warren	Yes	2014-07-30 13:31:28	allsanderson

Two red arrows point to the first two rows of the table. The search bar is circled in red.



# How to Enter an Assessment Record

3. Click the water chestnut record that you would like to enter a related assessment record for.

The screenshot shows the 'Observations Table' in the iMapInvasives Pennsylvania Administrator Tools. The table displays two records. The second record, for 'Water Chestnut' (Trapa natans), is highlighted with a red box.

ID	Status	Scientific Name	Common Name	Observer	Organization	Date	County	Photo(s)	Entry Date	Entry Person
PA-3316U	Confirmed	Hydrocharis morsus-	Common Frogbit	allsanderson	_No Organization Provided	2014-07-29	Warren	Yes	2014-07-30 13:53:25	allsanderson
PA-3315U	Confirmed	Trapa natans	Water Chestnut	allsanderson	_No Organization Provided	2014-07-16	Warren	Yes	2014-07-30 13:31:28	allsanderson

# How to Enter an Assessment Record

---

4. Once the observation record opens, scroll down to the “Related Records” section and click on the phrase “Enter an Assessment for this observation”.

The screenshot shows a web browser window with the URL `login.imapinvasives.org/pairmi/observation/PA-3315U/`. The page is titled "Administrator Tools | iMapInvasives - Google Chrome". The main content area is divided into several sections:

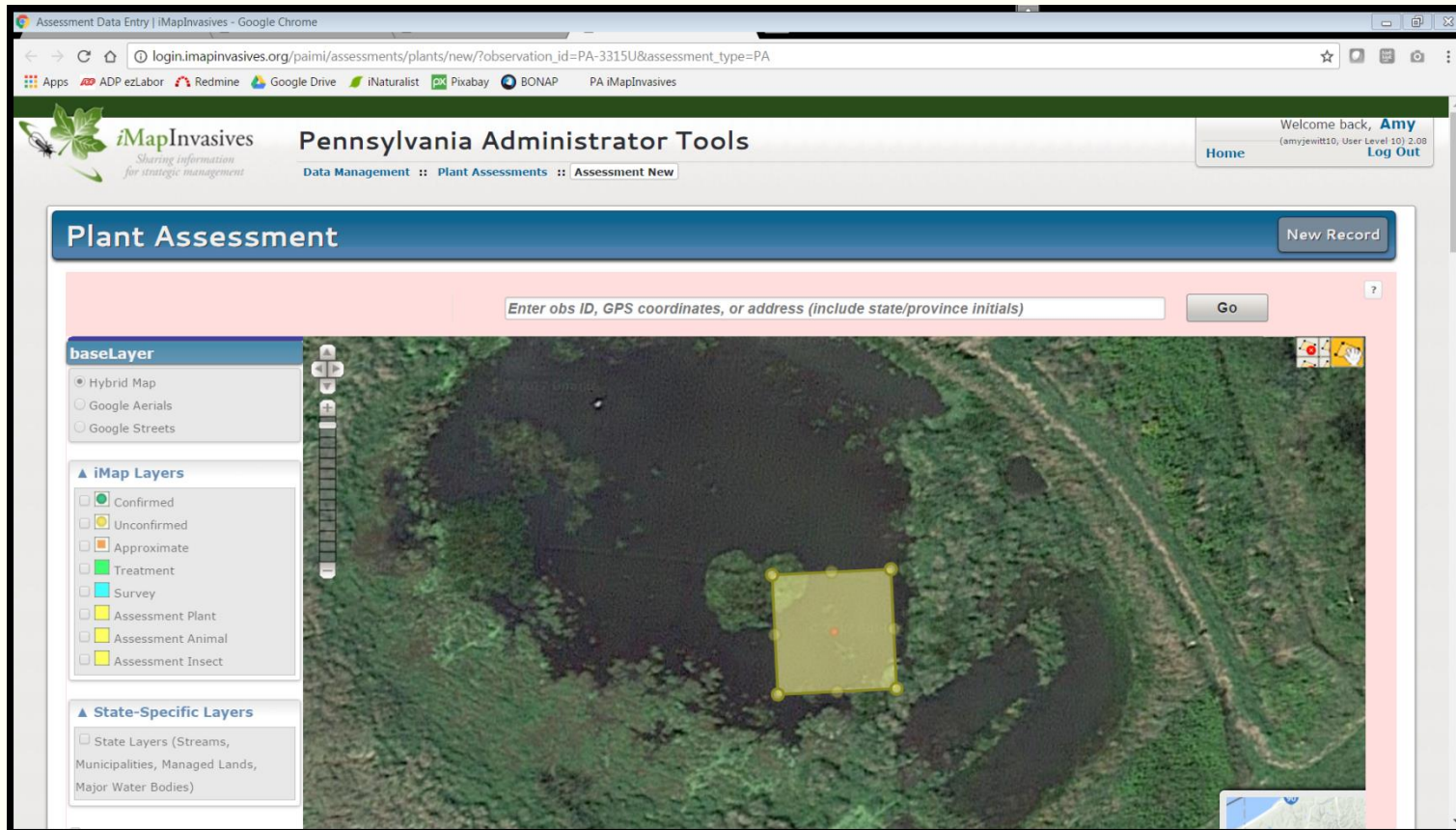
- Observation Comments:** A text input field.
- Location Determination Method:** A dropdown menu.
- Observation Method:** A dropdown menu.
- Site Access:** A text input field.
- Site Directions:** A text input field.
- Related Records:** A blue header bar. Below it, the text "Assessment ID" is followed by a link "Enter an Assessment for this observation" which is circled in red.
- Specific Information:** A blue header bar. Below it, there are several fields:
  - Is Significant Record:** A radio button labeled "0" with a help icon.
  - Suspicious Distance Flag:** A radio button labeled "0" with a help icon.
  - Data Entry Method:** A dropdown menu labeled "On-line".
  - Species ID Method:** A dropdown menu labeled "c) ID by expert".



# How to Enter an Assessment Record

---

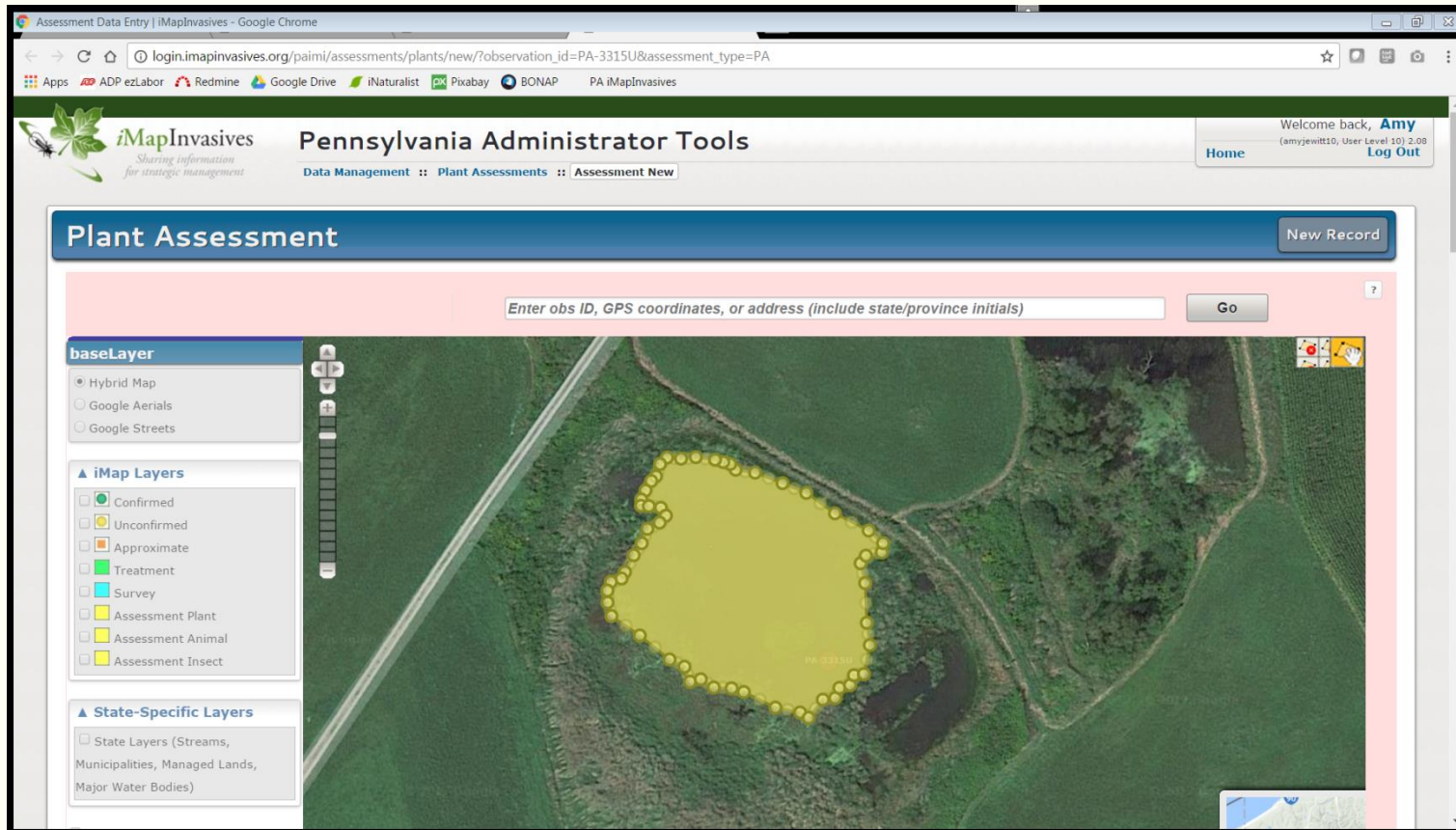
5. A new window appears, allowing you to begin creating an assessment record. Note that the map automatically zooms to your observation area.



# How to Enter an Assessment Record

---

6. Reshape the polygon (already on the map) to cover the entire infested area, using the polygon's vertices. Pan the map, and zoom in and out as needed.

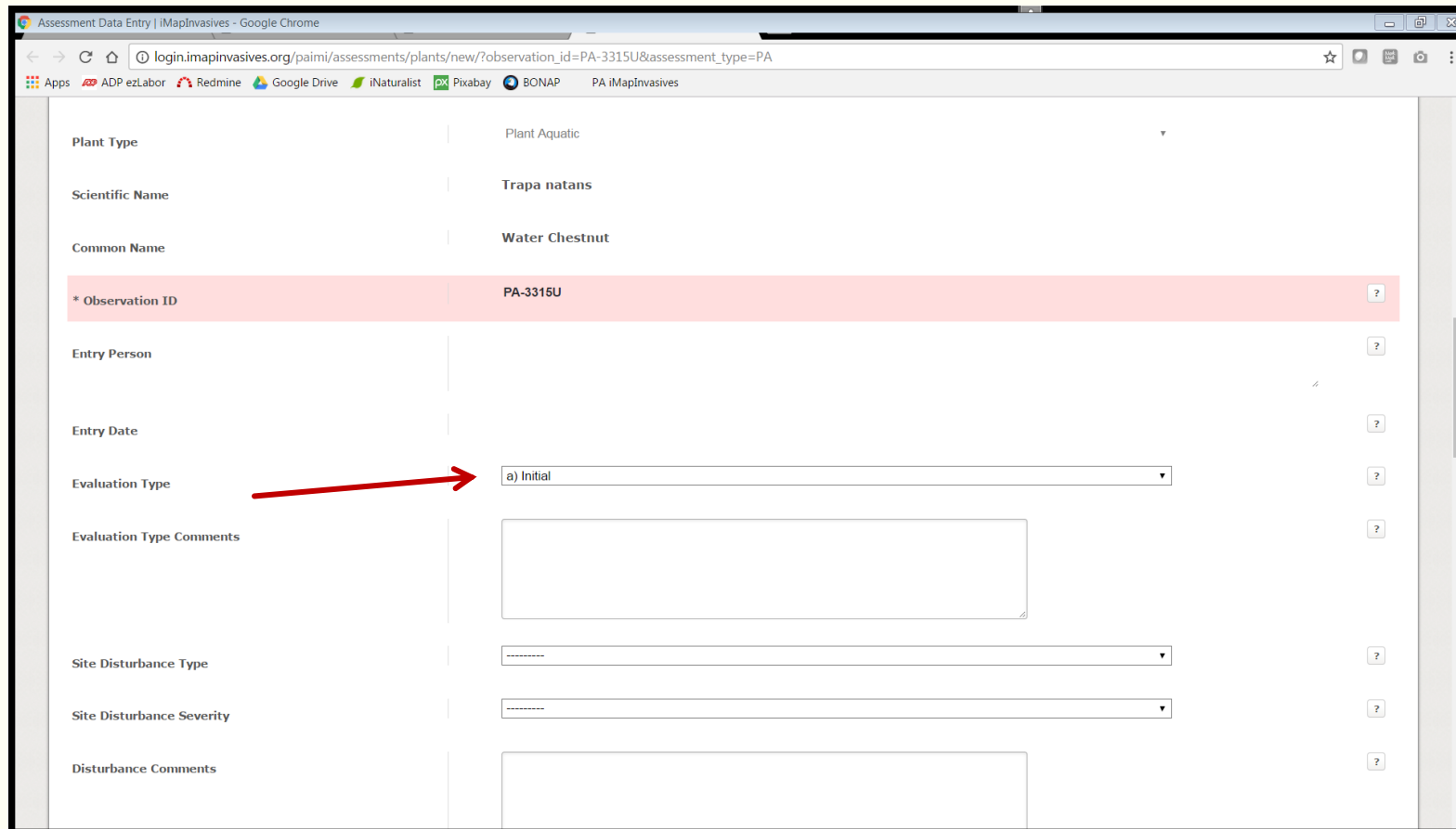




# How to Enter an Assessment Record

---

7. Now scroll to the data portion of the record. For the Evaluation Type, choose from “Initial”, “Pre-treatment”, or “Post-treatment”.



The screenshot shows a web browser window with the URL `login.imapinvasives.org/paimi/assessments/plants/new?observation_id=PA-3315U&assessment_type=PA`. The form contains the following fields:

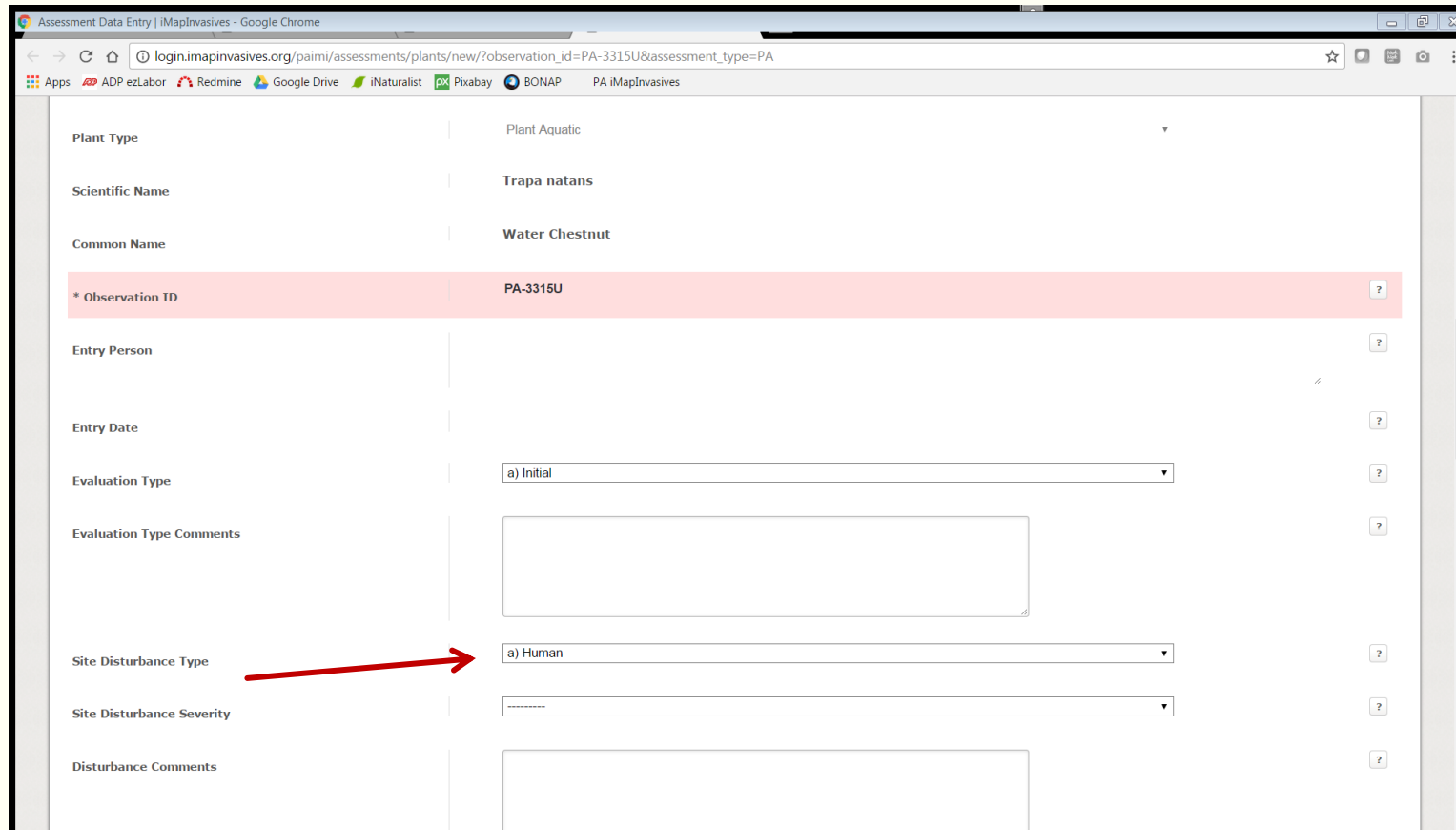
Plant Type	Plant Aquatic	
Scientific Name	Trapa natans	
Common Name	Water Chestnut	
* Observation ID	PA-3315U	?
Entry Person		?
Entry Date		?
Evaluation Type	a) Initial	?
Evaluation Type Comments		?
Site Disturbance Type		?
Site Disturbance Severity		?
Disturbance Comments		?

A red arrow points to the "Evaluation Type" dropdown menu, which is currently set to "a) Initial".

# How to Enter an Assessment Record

---

8. In the Site Disturbance Type category, choose from “Human”, “Natural”, “Both”, or “None”.



The screenshot shows a web browser window with the URL `login.imapinvasives.org/paimi/assessments/plants/new/?observation_id=PA-3315U&assessment_type=PA`. The form is titled "Assessment Data Entry | iMapInvasives - Google Chrome". It contains the following fields:

- Plant Type: Plant Aquatic
- Scientific Name: *Trapa natans*
- Common Name: Water Chestnut
- \* Observation ID: PA-3315U (highlighted in red)
- Entry Person: (empty)
- Entry Date: (empty)
- Evaluation Type: a) Initial
- Evaluation Type Comments: (empty text area)
- Site Disturbance Type: a) Human (indicated by a red arrow)
- Site Disturbance Severity: (empty)
- Disturbance Comments: (empty text area)

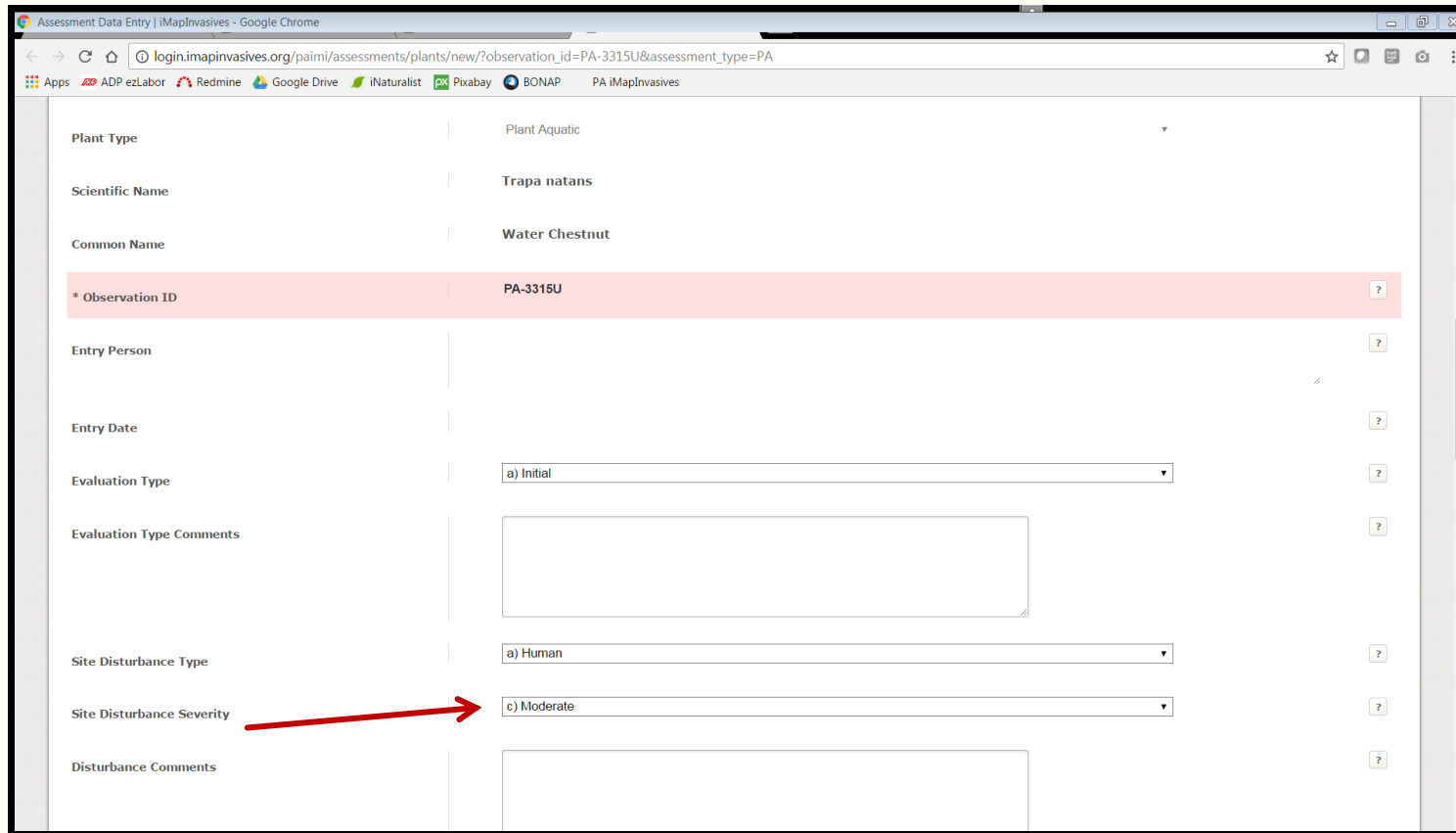
Each field has a small question mark icon to its right.



# How to Enter an Assessment Record

---

9. In the Site Disturbance Severity category, choose from “None”, “Light”, “Moderate”, or “Heavy”.



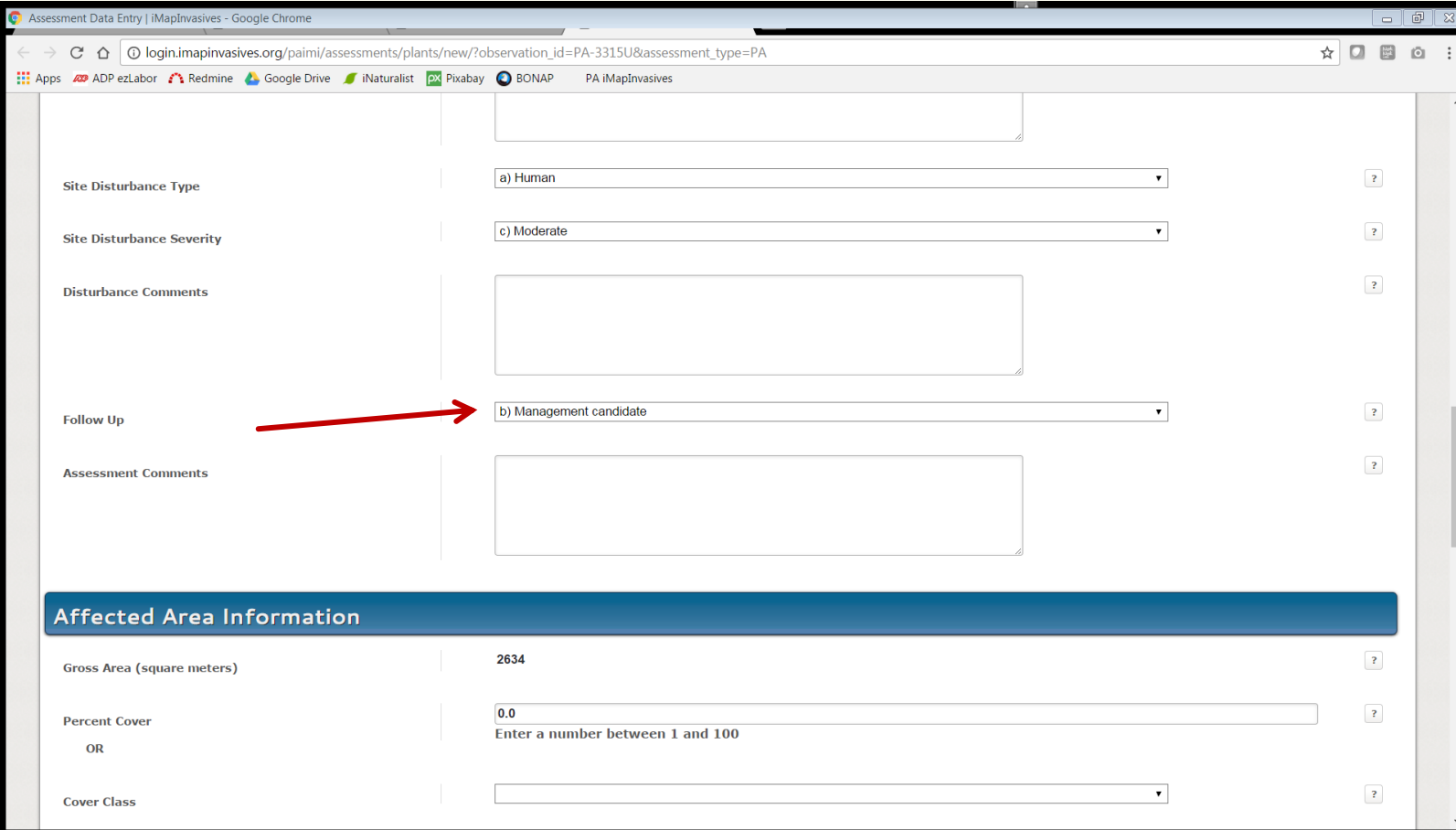
The screenshot shows a web browser window with the URL `login.imapinvasives.org/paimi/assessments/plants/new/?observation_id=PA-3315U&assessment_type=PA`. The form contains the following fields:

Plant Type	Plant Aquatic	
Scientific Name	<i>Trapa natans</i>	
Common Name	Water Chestnut	
* Observation ID	PA-3315U	?
Entry Person		?
Entry Date		?
Evaluation Type	a) Initial	?
Evaluation Type Comments		?
Site Disturbance Type	a) Human	?
Site Disturbance Severity	c) Moderate	?
Disturbance Comments		?

A red arrow points to the "Site Disturbance Severity" dropdown menu, which is currently set to "c) Moderate".

# How to Enter an Assessment Record

10. In the Follow-up category, choose an appropriate response.



The screenshot shows the 'Assessment Data Entry' form in a Google Chrome browser. The URL is [login.imapinvasives.org/paimi/assessments/plants/new?observation\\_id=PA-3315U&assessment\\_type=PA](https://login.imapinvasives.org/paimi/assessments/plants/new?observation_id=PA-3315U&assessment_type=PA). The form includes several fields for data entry:

- Site Disturbance Type**: a) Human
- Site Disturbance Severity**: c) Moderate
- Disturbance Comments**: (empty text area)
- Follow Up**: b) Management candidate (indicated by a red arrow)
- Assessment Comments**: (empty text area)

Below these fields is a section titled **Affected Area Information** with the following fields:

- Gross Area (square meters)**: 2634
- Percent Cover**: 0.0 (with a note: Enter a number between 1 and 100)
- OR**
- Cover Class**: (empty dropdown menu)



# How to Enter an Assessment Record

11. If you desire, leave additional remarks in the “Evaluation Type”, “Disturbance”, and “Assessment” comment boxes.

The screenshot displays the 'Assessment Data Entry' form in the iMapInvasives web application. The form is organized into several sections, each with a label on the left and a corresponding input field on the right. Red arrows point to the comment boxes for 'Evaluation Type Comments', 'Disturbance Comments', and 'Assessment Comments'.

Field Label	Value / Content
Entry Date	
Evaluation Type	a) Initial
Evaluation Type Comments	This was the first time I have been to this site, though based on the surrounding landscape (developed), I assumed that any disturbance I found at this site would be from humans.
Site Disturbance Type	a) Human
Site Disturbance Severity	c) Moderate
Disturbance Comments	Noted some pollution in an area to the SW corner of the pond.
Follow Up	b) Management candidate
Assessment Comments	Overall, this area would benefit from having some type of treatment effort imposed on it.

**Affected Area Information**

Gross Area (square meters) 2634

# How to Enter an Assessment Record

12. In the “Affected Area” section, fill in either the Percent Cover or Cover Class sections. (Note that making a selection in one category will fill in the other automatically.)

The screenshot shows a web browser window with the URL `login.imapinvasives.org/paimi/assessments/plants/new/?observation_id=PA-3315U&assessment_type=PA`. The page title is "Assessment Data Entry | iMapInvasives - Google Chrome". The browser's address bar and tabs are visible at the top.

The main content area is titled "Affected Area Information" in a blue header. Below this header, the form is organized into two columns. The left column contains labels for various fields, and the right column contains the input fields and their current values or options. Each input field has a small question mark icon to its right.

The fields and their values are as follows:

- Gross Area (square meters):** 2634
- Percent Cover:** 60.0 (with a red arrow pointing to the input field). Below the input field is the text "Enter a number between 1 and 100".
- Cover Class:** d) 51% - 75% (with a red arrow pointing to the dropdown menu).
- Infested Area (square meters):** 1580.6
- Infested Area (Acres):** 0.39
- Landscape Type:** (empty dropdown menu)
- Native Vegetation Distribution:** (empty dropdown menu)
- Landscape and Location Comments:** (empty text area)

Below the "Affected Area Information" section is the "Invasive Plant Information" section, which is also highlighted with a blue header. It contains the following fields:

- Plant Distribution:** (empty dropdown menu)
- Plant Distribution (if other):** (empty text field)



# How to Enter an Assessment Record

13. For Landscape Type” choose “Waterbody”.

The screenshot shows a web browser window with the URL `login.imapinvasives.org/paimi/assessments/plants/new?observation_id=PA-3315U&assessment_type=PA`. The page is titled "Assessment Data Entry | iMapInvasives - Google Chrome". The main content area is divided into two sections: "Affected Area Information" and "Invasive Plant Information".

**Affected Area Information**

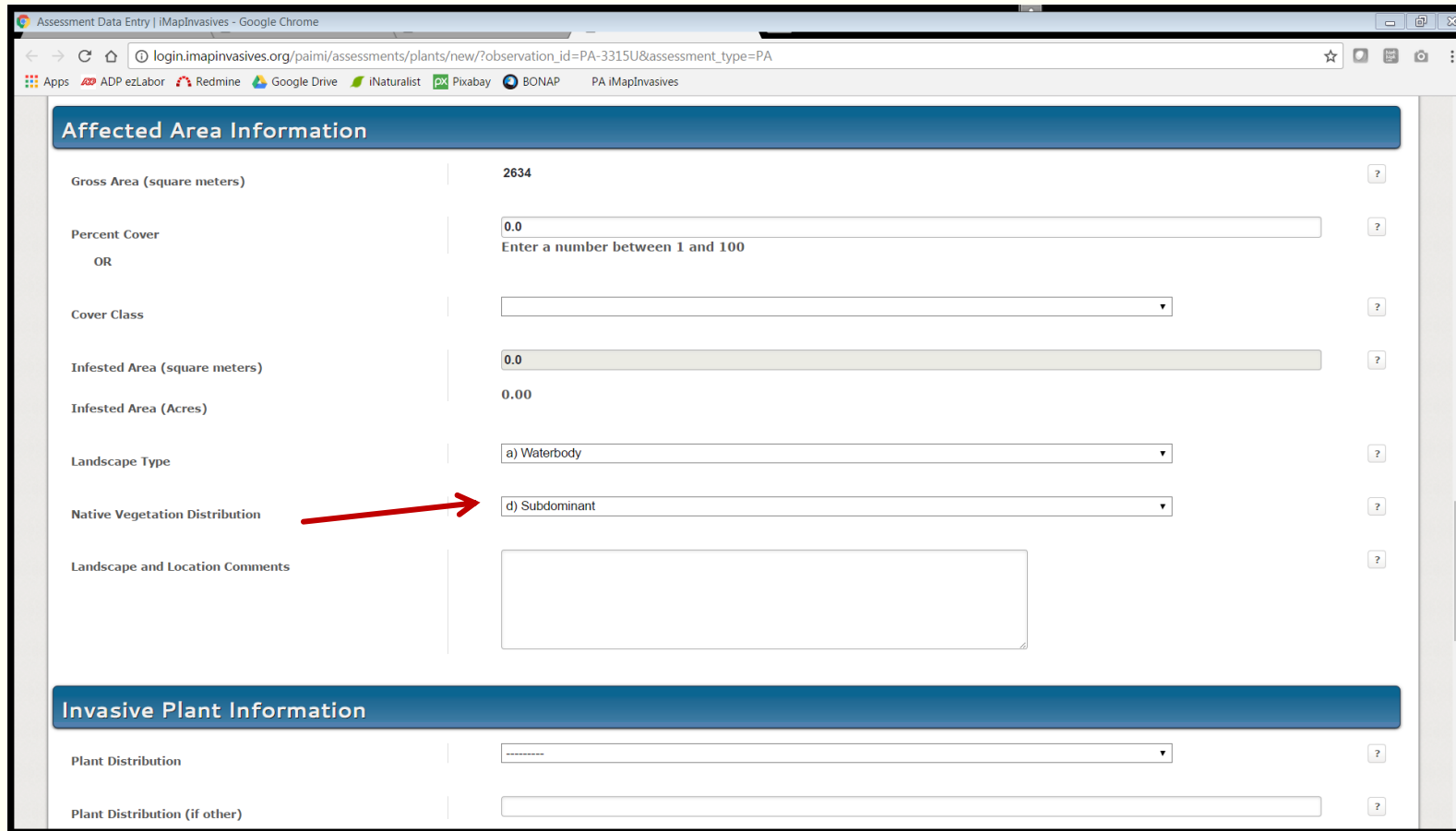
Gross Area (square meters)	2634	?
Percent Cover	0.0	?
OR	Enter a number between 1 and 100	
Cover Class		?
Infested Area (square meters)	0.0	?
Infested Area (Acres)	0.00	
Landscape Type	a) Waterbody	?
Native Vegetation Distribution		?
Landscape and Location Comments		?

**Invasive Plant Information**

Plant Distribution		?
Plant Distribution (if other)		?

# How to Enter an Assessment Record

14. For “Native Vegetation Distribution”, choose the most appropriate option.



The screenshot shows a web browser window with the URL `login.imapinvasives.org/paimi/assessments/plants/new/?observation_id=PA-3315U&assessment_type=PA`. The page is titled "Assessment Data Entry | iMapInvasives - Google Chrome". The form is divided into two main sections: "Affected Area Information" and "Invasive Plant Information".

**Affected Area Information**

Gross Area (square meters)	2634	?
Percent Cover	0.0	?
OR	Enter a number between 1 and 100	
Cover Class		?
Infested Area (square meters)	0.0	?
Infested Area (Acres)	0.00	
Landscape Type	a) Waterbody	?
Native Vegetation Distribution	d) Subdominant	?
Landscape and Location Comments		?

**Invasive Plant Information**

Plant Distribution		?
Plant Distribution (if other)		?

A red arrow points to the "Native Vegetation Distribution" dropdown menu, which is currently set to "d) Subdominant".



# How to Enter an Assessment Record

15. In the “Invasive Plant Information” section, fill in data for Plant Distribution and Plant Maturity.

The screenshot shows a web browser window with the URL `login.imapinvasives.org/paimi/assessments/plants/new/?observation_id=PA-3315U&assessment_type=PA`. The page is titled "Assessment Data Entry | iMapInvasives - Google Chrome". The form is divided into several sections:

- Native Vegetation Distribution**: A dropdown menu with the selected option "d) Subdominant".
- Landscape and Location Comments**: A large text input area.
- Invasive Plant Information**: A section with a blue header. It contains:
  - Plant Distribution**: A dropdown menu with the selected option "c) Dense plants/clumps". A red arrow points to this field.
  - Plant Distribution (if other)**: A text input area.
  - Plant Maturity**: A section with three buttons: "a) Vegetative x", "b) Flowers x", and "c) Seeds x". A red arrow points to this section.
  - Plant Maturity (if other)**: A text input area.
- Invasive Aquatic Plant Information**: A section with a blue header. It contains:
  - Water Body Type**: A dropdown menu.
  - Substrate Type**: A dropdown menu.
  - Substrate Type (if other)**: A text input area.

# How to Enter an Assessment Record

16. In the “Invasive Aquatic Plant Information” section, fill in data for Water Body Type, Substrate Type, Water Depth Code, Boating Regulations, and Comments as appropriate.

The screenshot shows a web browser window with the URL `login.imapinvasives.org/paimi/assessments/plants/new/?observation_id=PA-3315U&assessment_type=PA`. The page is titled "Assessment Data Entry | IMapInvasives - Google Chrome". The "Invasive Plant Information" section is partially visible, showing fields for Plant Distribution, Plant Distribution (if other), Plant Maturity, and Plant Maturity (if other). Below this is the "Invasive Aquatic Plant Information" section, which contains the following fields:

- Water Body Type: A dropdown menu with the selected value "c) Lake/pond". A red arrow points to this field.
- Substrate Type: A dropdown menu with the selected value "a) Mud". A red arrow points to this field.
- Substrate Type (if other): A text input field.
- Substrate Comments: A text input field.
- Water Depth Code: A dropdown menu with the selected value "d) 15 - 20 ft". A red arrow points to this field.
- Boating Regulations: A dropdown menu with the selected value "b) No motorized boats". A red arrow points to this field.

Each field has a small question mark icon to its right. The browser's address bar and tabs are visible at the top of the window.



# How to Enter an Assessment Record

17. Click “Update Assessment” to save your Assessment record.

Assessment Data Entry | iMapInvasives - Google Chrome

login.imapinvasives.org/paimi/assessments/plants/new/?observation\_id=PA-7703U&assessment\_type=PA

**Invasive Aquatic Plant**

**Information**

Water Body Type: c) Lake/pond

Substrate Type: a) Mud

Substrate Type (if other):

Substrate Comments:

Water Depth Code: d) 15 - 20 ft

Boating Regulations: b) No motorized boats

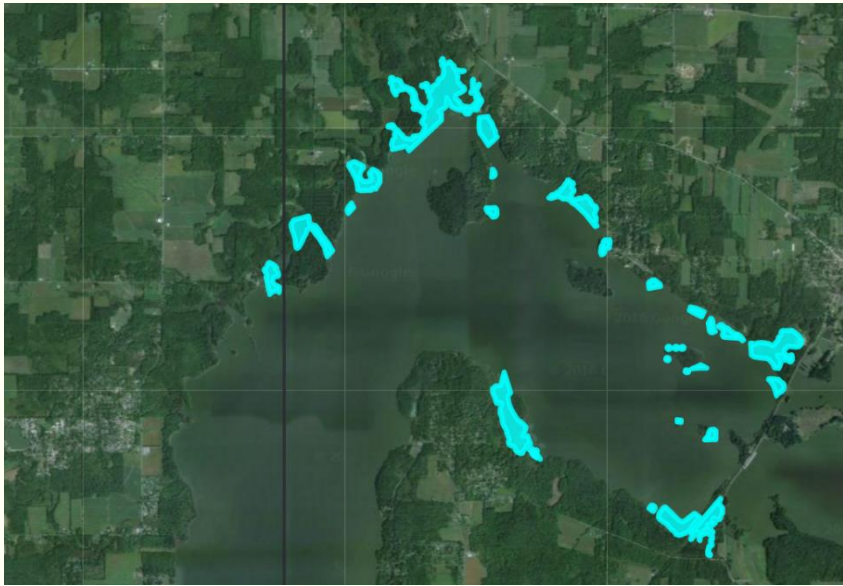
**Administrative Information**

Data Status: a) Not Reviewed

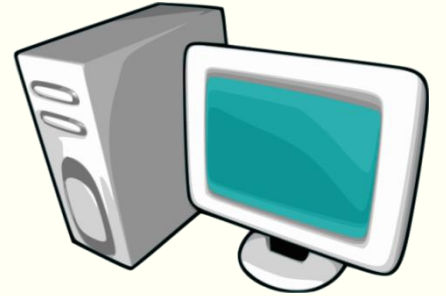
**Update Assessment**

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# SURVEY DATA ENTRY



Searched for water chestnut but didn't find it?

Document the area you searched as “absence data” using your desktop computer.



# How to Enter a Survey Record (Absence Data)

1. On the main navigation page in the Enter Data section, click “Survey”.

The screenshot shows the iMapInvasives Pennsylvania Administrator Tools interface. The browser address bar shows `login.imapinvasives.org/paimi/home/`. The page header includes the iMapInvasives logo, the title "Pennsylvania Administrator Tools", and a welcome message for user Amy (amyjewitt10). Below the header is a navigation bar with four tabs: "My iMapInvasives", "Resources", "Data Management", and "System Management". The main content area is divided into four sections: "Enter Data", "View the Map", "View Table", and "Query and Reports". The "Enter Data" section contains a list of links: "Observation", "Survey", "Treatment", and "Infestation Management". A red arrow points to the "Survey" link. The "View the Map" section contains links for "View the Map" and "Not using a high-speed internet connection?". The "View Table" section contains a list of links: "All Observations", "Surveys", "Treatments", "Infestation Management", "Assessments", "Animals", "Insects", "Plants", and "IPMDAT Shared Results". The "Query and Reports" section contains a "Custom Observation Query" section with links for "All Data Summary Report", "All Species by County: Report Table", "Infested Lakes: Table Report", "Report with Observation IDS", "Active Projects: All Projects", "My Projects with Details", and "Admin: Summary Report".

Administrator Tools | iMapInvasives - Google Chrome

login.imapinvasives.org/paimi/home/

Apps ADP ezLabor Redmine Google Drive iNaturalist Pixabay BONAP PA iMapInvasives

iMapInvasives Sharing information for strategic management

Pennsylvania Administrator Tools

Location: My iMapInvasives

Welcome back, Amy (amyjewitt10, User Level 10) 2:08

Home Log Out

Show Your iMap Stats

My iMapInvasives Resources Data Management System Management

Enter Data

- Observation
- Survey
- Treatment
- Infestation Management

View the Map

- View the Map
- Not using a high-speed internet connection?

View Table

- All Observations
- Surveys
- Treatments
- Infestation Management
- Assessments
- Animals
- Insects
- Plants
- IPMDAT Shared Results

Query and Reports

Custom Observation Query

All Data Summary Report

All Species by County: Report Table

Infested Lakes: Table Report

Report with Observation IDS

Active Projects: All Projects

My Projects with Details

Admin: Summary Report

# How to Enter a Survey Record (Absence Data)

2. Once new survey record appears, choose the type of survey: “Aquatic Simple”.

**iMapInvasives**  
Sharing information  
for strategic management

**Pennsylvania Administrator Tools**

[Data Management](#) :: [Surveys](#) :: [Survey Information](#)

Welcome back, **Amy**  
(amyjewitt10, User Level 10) 2.08  
[Home](#) [Log Out](#)

**Survey Information** [New Record](#)

**Basic Survey Fields**

Do not use special symbols in text boxes. Only letters, numbers, and characters found on common keyboards are accepted.

\* Type  
For descriptions of all survey types, click here

\* Lead Contact

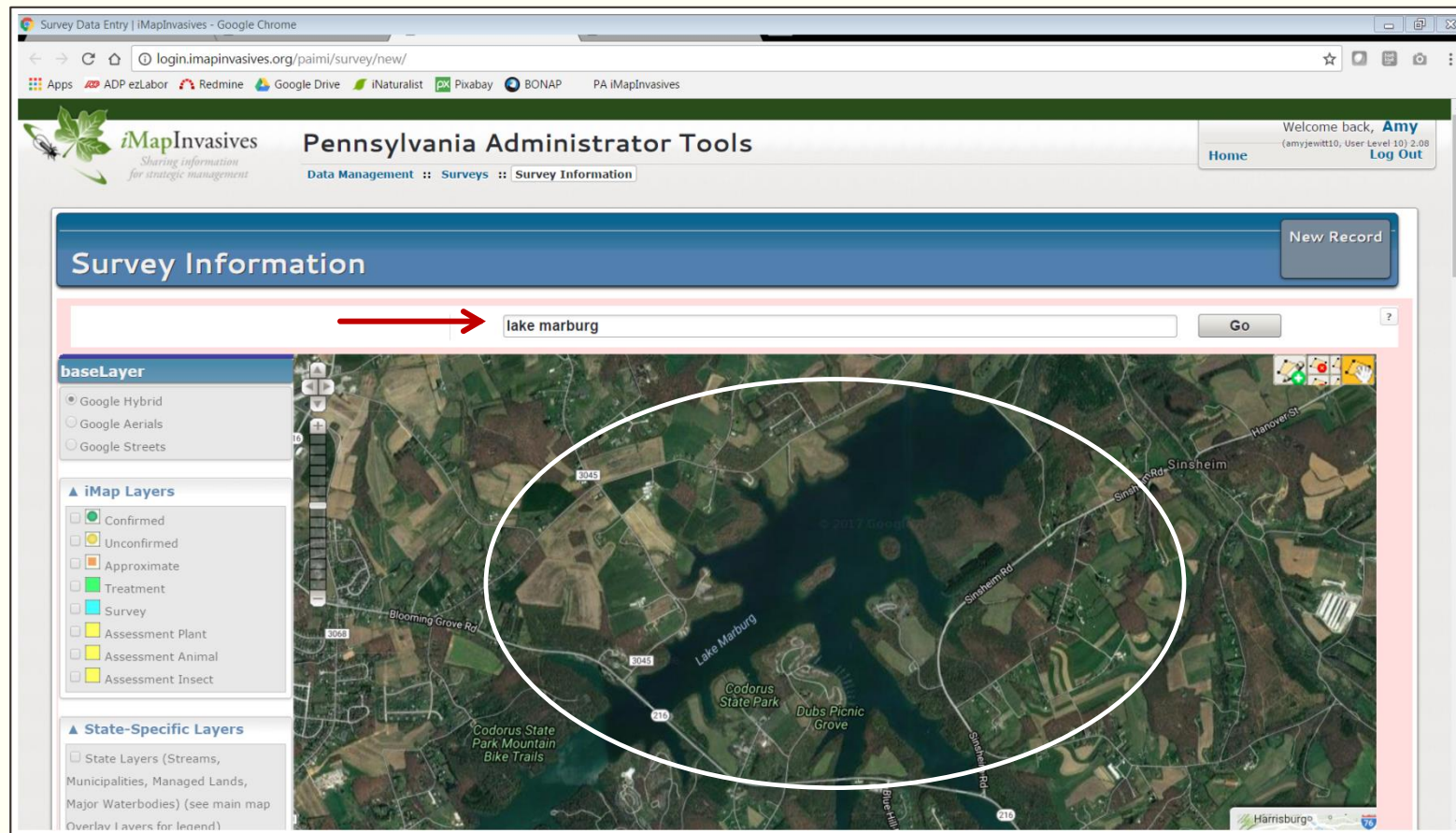
Project Name

Site

-----  
-----  
**Aquatic Simple**  
Aquatic Systematic  
Cerceris Wasp  
Host tree  
Linear  
Terrestrial Simple  
Terrestrial Systematic  
-----

# How to Enter a Survey Record (Absence Data)

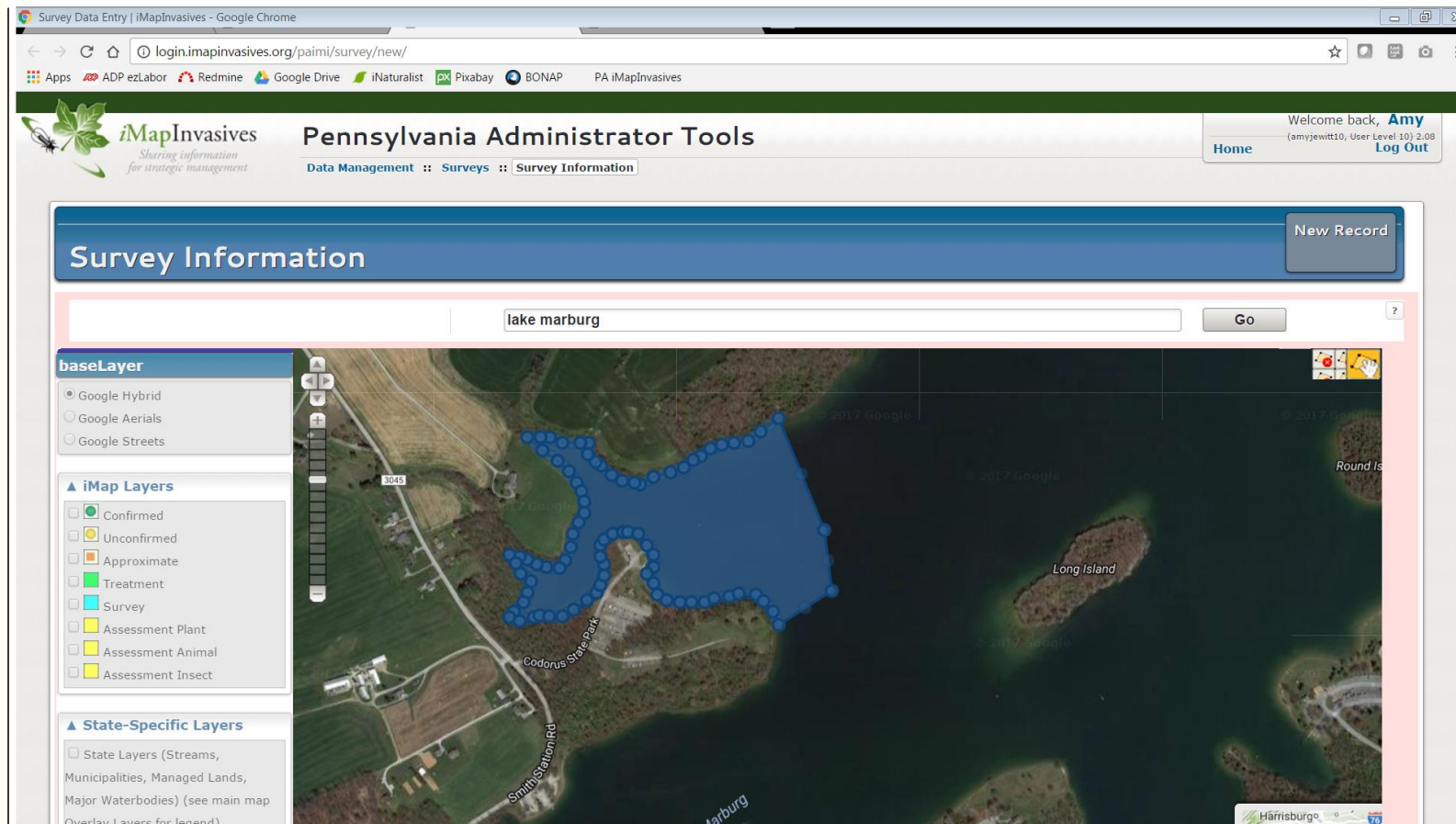
3. When map appears, zoom into the area where you searched for water chestnut. Use the search bar to type in the name of the waterbody.





# How to Enter a Survey Record (Absence Data)

4. Use the drawing tools in the upper right corner of the map to draw a polygon that encompasses the entire area searched. Double click to finish drawing your polygon.



# How to Enter a Survey Record (Absence Data)

## 6. Choose yourself as the Lead Contact.

The screenshot shows a web browser window with the URL `login.imapinvasives.org/palms/survey/new/`. The form is titled "Survey Data Entry | iMapInvasives - Google Chrome". The form fields are as follows:

- \* Type**: Aquatic Simple – If you need to select a different survey type you will need to restart the record. Press Ctrl + F5. [For descriptions of all survey types, click here](#)
- \* Lead Contact**: Jewitt, Amy (highlighted with a red arrow)
- Project Name**: [Empty dropdown menu]
- Site**: [Empty text input field]
- \* Goal**: [Empty dropdown menu]
- \* Start Date**: [Empty date input field]
- \* End Date**: [Empty date input field]
- \* Target Species**: Select Some Options
- Detected Species**: Select Some Options

Below the form fields, there is a section titled "An Observation record needs to be created for each Targeted Species Detected." with two radio button options:

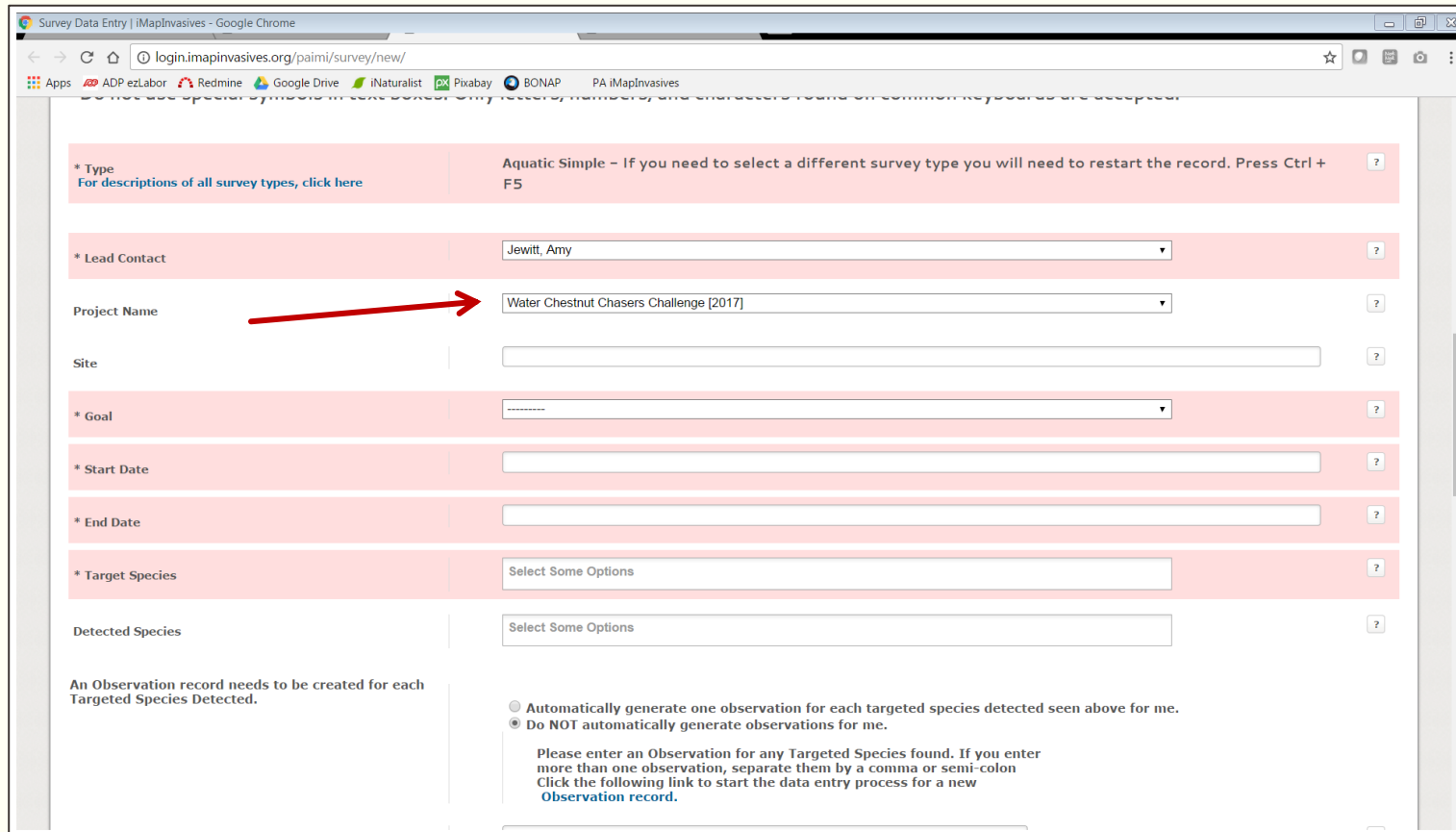
- ☐ Automatically generate one observation for each targeted species detected seen above for me.
- ☒ Do NOT automatically generate observations for me.

Below the radio buttons, there is a text box with the following text:

Please enter an Observation for any Targeted Species found. If you enter more than one observation, separate them by a comma or semi-colon  
Click the following link to start the data entry process for a new [Observation record](#).

# How to Enter a Survey Record (Absence Data)

7. Choose “Water Chestnut Chasers Challenge [2018]” as the project name.



The screenshot shows the 'Survey Data Entry' form for iMapInvasives. The browser address bar shows 'login.imapinvasives.org/paimi/survey/new/'. The form has several fields with red headers and help icons:

- \* Type**: Aquatic Simple – If you need to select a different survey type you will need to restart the record. Press Ctrl + F5
- \* Lead Contact**: Jewitt, Amy
- Project Name**: Water Chestnut Chasers Challenge [2017] (highlighted with a red arrow)
- Site**: (empty)
- \* Goal**: (empty)
- \* Start Date**: (empty)
- \* End Date**: (empty)
- \* Target Species**: Select Some Options
- Detected Species**: Select Some Options

Below the fields, there is a note: "An Observation record needs to be created for each Targeted Species Detected." and two radio button options:

- ☐ Automatically generate one observation for each targeted species detected seen above for me.
- ☒ Do NOT automatically generate observations for me.

Below the radio buttons, there is a text box with the following text: "Please enter an Observation for any Targeted Species found. If you enter more than one observation, separate them by a comma or semi-colon. Click the following link to start the data entry process for a new Observation record."



# How to Enter a Survey Record (Absence Data)

8. For the Goal, choose “Find new infestations”.

The screenshot shows a web browser window with the URL `login.imapinvasives.org/paimi/survey/new/`. The form is titled "Survey Data Entry | iMapInvasives - Google Chrome". The form fields are as follows:

- \* Type**: Aquatic Simple - If you need to select a different survey type you will need to restart the record. Press Ctrl + F5
- \* Lead Contact**: Jewitt, Amy
- Project Name**: Water Chestnut Chasers Challenge [2017]
- Site**: (empty)
- \* Goal**: b) Find new infestations (indicated by a red arrow)
- \* Start Date**: (empty)
- \* End Date**: (empty)
- \* Target Species**: Select Some Options
- Detected Species**: Select Some Options

Below the form fields, there is a section titled "An Observation record needs to be created for each Targeted Species Detected." with two radio buttons:

- ☐ Automatically generate one observation for each targeted species detected seen above for me.
- ☒ Do NOT automatically generate observations for me.

Below the radio buttons, there is a text box with the following text:

Please enter an Observation for any Targeted Species found. If you enter more than one observation, separate them by a comma or semi-colon. Click the following link to start the data entry process for a new [Observation record](#).

# How to Enter a Survey Record (Absence Data)

## 9. Start & End dates = Observation date

The screenshot shows a web browser window with the URL `login.imapinvasives.org/paimi/survey/new/`. The form is titled "Survey Data Entry" and contains several fields for entering survey information. The fields are as follows:

- \* Type**: Aquatic Simple – If you need to select a different survey type you will need to restart the record. Press Ctrl + F5
- \* Lead Contact**: Jewitt, Amy
- Project Name**: Water Chestnut Chasers Challenge [2017]
- Site**: (empty)
- \* Goal**: b) Find new infestations
- \* Start Date**: 2017-07-04
- \* End Date**: 2017-07-04
- \* Target Species**: Select Some Options
- Detected Species**: Select Some Options

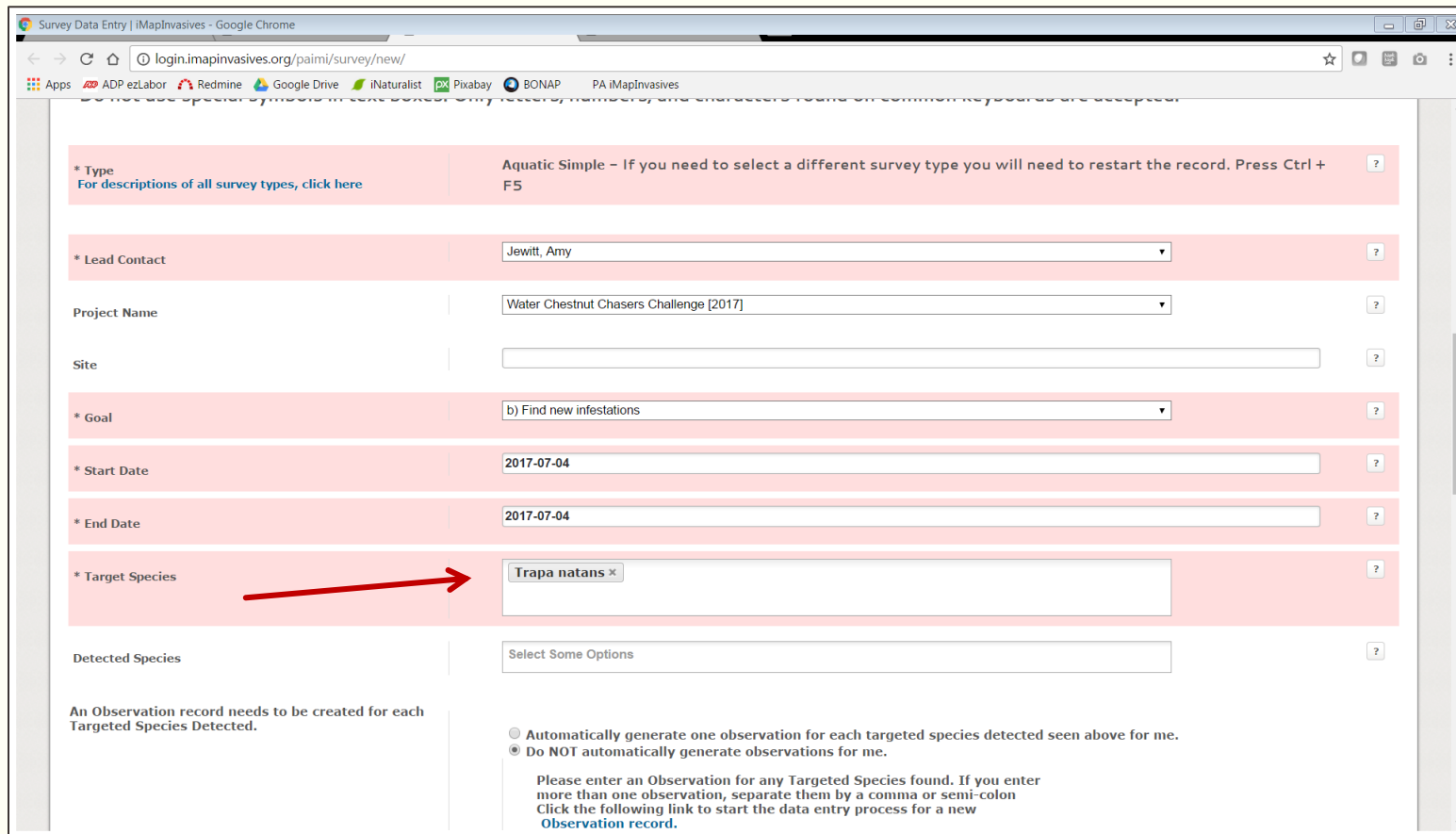
Two red arrows point to the **\* Start Date** and **\* End Date** fields, indicating that these dates are used for the observation date. Below the **Detected Species** field, there is a note: "An Observation record needs to be created for each Targeted Species Detected." and two radio buttons:

- ☐ Automatically generate one observation for each targeted species detected seen above for me.
- ☒ Do NOT automatically generate observations for me.

Below the radio buttons, there is a text box with the following text: "Please enter an Observation for any Targeted Species found. If you enter more than one observation, separate them by a comma or semi-colon. Click the following link to start the data entry process for a new Observation record." and a link labeled "Observation record."

# How to Enter a Survey Record (Absence Data)

10. Choose “*Trapa natans*” as the Target Species.



The screenshot shows a web browser window with the URL `login.imapinvasives.org/paimi/survey/new/`. The page is titled "Survey Data Entry | iMapInvasives - Google Chrome". The form is divided into several sections with red headers. The "Target Species" section is highlighted with a red arrow pointing to the dropdown menu, which currently displays "Trapa natans x".

**\* Type**  
For descriptions of all survey types, click here  
Aquatic Simple – If you need to select a different survey type you will need to restart the record. Press Ctrl + F5

**\* Lead Contact**  
Jewitt, Amy

**Project Name**  
Water Chestnut Chasers Challenge [2017]

**Site**  
[Empty text box]

**\* Goal**  
b) Find new infestations

**\* Start Date**  
2017-07-04

**\* End Date**  
2017-07-04

**\* Target Species**  
Trapa natans x

**Detected Species**  
Select Some Options

An Observation record needs to be created for each Targeted Species Detected.

☐ Automatically generate one observation for each targeted species detected seen above for me.  
☒ Do NOT automatically generate observations for me.

Please enter an Observation for any Targeted Species found. If you enter more than one observation, separate them by a comma or semi-colon  
Click the following link to start the data entry process for a new [Observation record](#).



# How to Enter a Survey Record (Absence Data)

11. To report absence data, select “None detected” in the “Detected Species” category.

The screenshot shows the 'Survey Data Entry' form on the iMapInvasives website. The form is titled 'Survey Data Entry | iMapInvasives - Google Chrome' and the URL is 'login.imapinvasives.org/paimi/survey/new/'. The form contains several fields for survey information:

- \* Type:** Aquatic Simple - If you need to select a different survey type you will need to restart the record. Press Ctrl + F5
- \* Lead Contact:** Jewitt, Amy
- Project Name:** Water Chestnut Chasers Challenge (2017)
- Site:** (empty field)
- \* Goal:** b) Find new infestations
- \* Start Date:** 2017-07-04
- \* End Date:** 2017-07-04
- \* Target Species:** Trapa natans
- Detected Species:** \*\* None Detected \*\*

A red arrow points to the 'Detected Species' field, which is currently set to 'None Detected'. Below the 'Detected Species' field, there is a note: 'An Observation record needs to be created for each Targeted Species Detected.' and two radio buttons for generating observations:

- ☐ Automatically generate one observation for each targeted species detected seen above for me.
- ☒ Do NOT automatically generate observations for me.

Below the radio buttons, there is a text box for entering observations: 'Please enter an Observation for any Targeted Species found. If you enter more than one observation, separate them by a comma or semi-colon'.

# How to Enter a Survey Record (Absence Data)

12. Fill in “General comments” as needed.

The screenshot shows the 'Survey Data Entry' form in a Google Chrome browser. The form is titled 'login.imapinvasives.org/paimi/survey/new/'. The browser's address bar shows the URL. The form has several sections, each with a label on the left and a corresponding input field on the right. The sections are: 'End Date' (2017-07-04), 'Target Species' (Trapa natans x), 'Detected Species' (\*\* None Detected \*\* x), 'An Observation record needs to be created for each Targeted Species Detected.' (with radio buttons for 'Automatically generate one observation for each targeted species detected seen above for me.' and 'Do NOT automatically generate observations for me.'), 'Resulting Obs IDs' (empty text box), 'General comments' (highlighted with a red arrow, containing the text 'Performed search along with other members of my organization including John Smith, Sally Mae, and Tom Price.'), and 'Data Status' (a) Not Reviewed). Below the 'General comments' field, there is a table header with columns: OBSID, Scientific Name, Observe Date, Observer, Assessment ID, and Area (square meters). At the bottom of the form, there is a reminder to 'Remember to save your data often'.

Survey Data Entry | iMapInvasives - Google Chrome

login.imapinvasives.org/paimi/survey/new/

Apps ADP ezLabor Redmine Google Drive iNaturalist Pixabay BONAP PA iMapInvasives

\* End Date 2017-07-04

\* Target Species Trapa natans x

Detected Species \*\* None Detected \*\* x

An Observation record needs to be created for each Targeted Species Detected.

☐ Automatically generate one observation for each targeted species detected seen above for me.  
☒ Do NOT automatically generate observations for me.

Please enter an Observation for any Targeted Species found. If you enter more than one observation, separate them by a comma or semi-colon  
Click the following link to start the data entry process for a new [Observation record](#).

Resulting Obs IDs

General comments Performed search along with other members of my organization including John Smith, Sally Mae, and Tom Price.

Data Status a) Not Reviewed

Remember to save your data often

# How to Enter a Survey Record (Absence Data)

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14. For “Waterbody Type”, choose the most appropriate option, and list the waterbody name, if known.

The screenshot shows a web browser window with the URL `login.imapinvasives.org/pairmi/survey/new/`. The page title is "Survey Type: Aquatic\_simple Details". The form contains the following fields:

- Waterbody Type:** A dropdown menu with the selected option "c) Lake/pond". A red arrow points to this field.
- Waterbody Name:** A text input field with a dropdown arrow.
- Waterbody Name Other:** A text input field containing "Lake Marburg". A red arrow points to this field.
- General Survey Method:** A dropdown menu.
- Specific Survey Method:** A text input field with the placeholder "Select Some Options".
- Survey Method Comments:** A large text input area.
- Usage of Area:** A dropdown menu with options "a) Boats - motorized" and "b) Boats - non-motorized".
- Usage of Area Comments:** A text input field.
- Aquatic Survey Comments:** A text input field.

Each field has a small question mark icon to its right.



# How to Enter a Survey Record (Absence Data)

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15. For “General Survey Method”, choose from “Top water”, “Underwater”, or “Dry land”.

The screenshot shows a web browser window with the URL `login.imapinvasives.org/paimi/survey/new/`. The page title is "Survey Type: Aquatic\_simple Details". The form contains several fields:

- Waterbody Type:** A dropdown menu with the selected value "c) Lake/pond".
- Waterbody Name:** A dropdown menu with the selected value "-----".
- Waterbody Name Other:** A text input field containing "Lake Marburg".
- General Survey Method:** A dropdown menu with the selected value "a) Top Water". A red arrow points to this field.
- Specific Survey Method:** A text input field containing "Select Some Options".
- Survey Method Comments:** A text input field.
- Usage of Area:** A dropdown menu with the selected value "a) Boats - motorized".
- Usage of Area Comments:** A text input field.
- Aquatic Survey Comments:** A text input field.

Each field has a small question mark icon to its right.

# How to Enter a Survey Record (Absence Data)

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16. For “Specific Survey Method”, choose the most appropriate option.

The screenshot shows a web browser window with the URL `login.imapinvasives.org/paimi/survey/new/`. The page title is "Survey Type: Aquatic\_simple Details". The form contains several fields with labels on the left and input areas on the right. A red arrow points to the "Specific Survey Method" field, which contains the text "i) Top-side (visual) x".

Field Label	Field Value
Waterbody Type	c) Lake/pond
Waterbody Name	
Waterbody Name Other	Lake <u>Marburg</u>
General Survey Method	a) Top Water
Specific Survey Method	i) Top-side (visual) x
Survey Method Comments	
Usage of Area	a) Boats - motorized b) Boats - non-motorized
Usage of Area Comments	
Aquatic Survey Comments	

# How to Enter a Survey Record (Absence Data)

17. Click “Update Main Survey” to save your record.

The screenshot shows a web browser window with the URL `login.imapinvasives.org/paumi/survey/new/`. The page is titled "Survey Data Entry | iMapInvasives - Google Chrome". The form is divided into several sections on the left and right. The left sidebar contains the following labels: "General Survey Method", "Specific Survey Method", "Survey Method Comments", "Usage of Area", "Usage of Area Comments", and "Aquatic Survey Comments". The right side of the form contains the following fields: a dropdown menu for "General Survey Method" with the value "a) Top Water", a text input field for "Specific Survey Method" with the value "i) Top-side (visual) x", a text input field for "Survey Method Comments", a dropdown menu for "Usage of Area" with the values "a) Boats - motorized" and "b) Boats - non-motorized", a text input field for "Usage of Area Comments", and a text input field for "Aquatic Survey Comments". At the bottom of the form, there is a red oval highlighting the text "Remember to save your data often" and a button labeled "Update Main Survey". The footer of the page contains the following links: "Home", "Legal Disclosure and Terms of Use", "Privacy Policy", "Financials", and "Contact your iMap Administrator". The copyright notice "Copyright © 2017 NatureServe." is also present.

Survey Data Entry | iMapInvasives - Google Chrome

login.imapinvasives.org/paumi/survey/new/

Apps ADP ezLabor Redmine Google Drive iNaturalist Pixabay BONAP PA iMapInvasives

General Survey Method a) Top Water ?

Specific Survey Method i) Top-side (visual) x ?

Survey Method Comments ?

Usage of Area a) Boats - motorized b) Boats - non-motorized ?

Usage of Area Comments ?

Aquatic Survey Comments ?

Remember to save your data often

Update Main Survey

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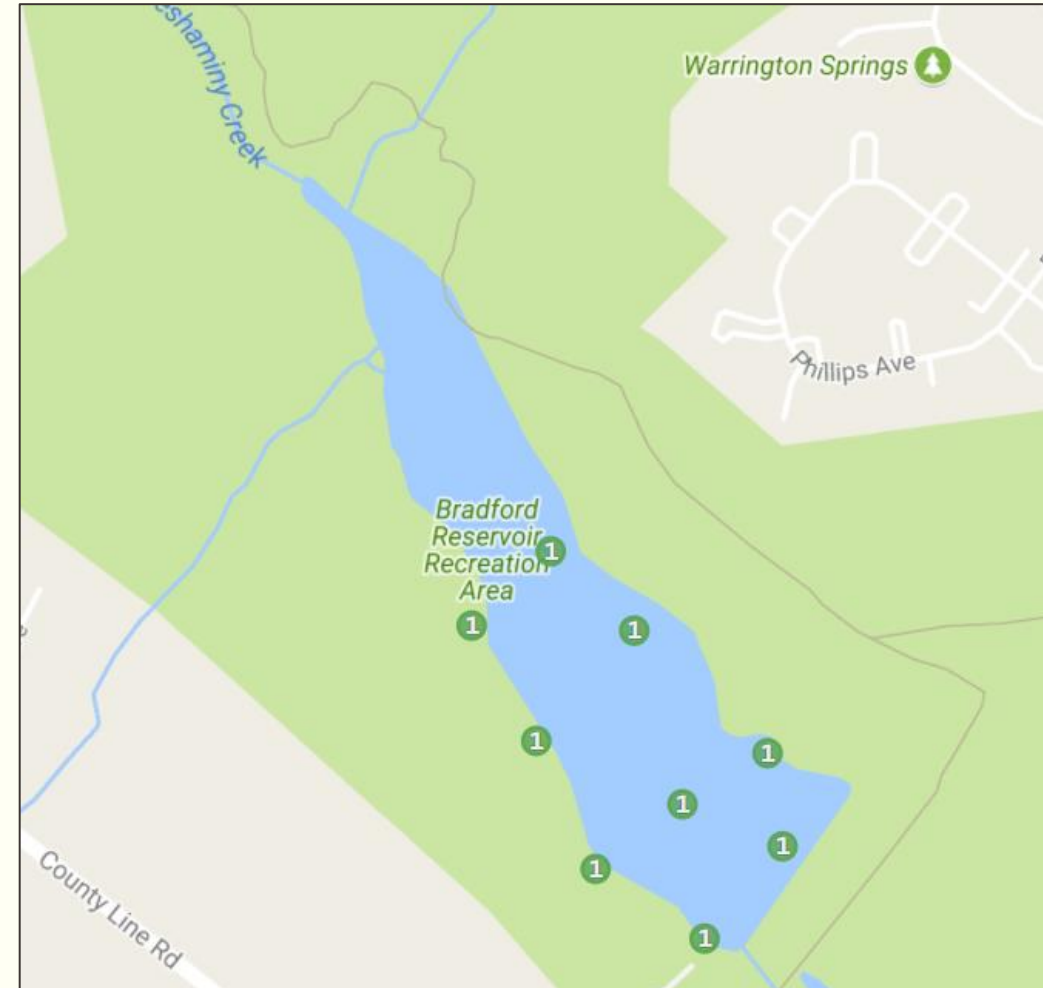
## CHALLENGE FOLLOW-UP

What happens when the challenge is over?

# Data Results and Analysis

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- Once the Challenge is over, the PA iMapInvasives administrator will compile all collected data and create a data analysis.
- Data analysis info will include:
  - Any new water chestnut infestations found
  - Waterbodies that require continued treatment efforts
  - Knowledge of areas surveyed that are free of water chestnut (absence data).
- All participants and natural resource professionals from across Pennsylvania will be notified of the results from the Challenge.
- Data will aide in prioritizing future survey and treatment efforts.
- **Data entry deadline for Challenge participants: August 15th**







Whoever enters the most data for water chestnut into iMapInvasives will be the winner of the 2018 Water Chestnut Chasers Challenge!

The winner will be announced on August 31st, 2018 and that person will receive the grand prize package!

## THE GRAND PRIZE PACKAGE

Nalgene bottle  
Dry bag  
REI gift card

Beach towel  
Baseball cap





# EXTRA CHALLENGE...

In addition to searching for water chestnut,  
keep your eyes peeled for other aquatic invaders.



Didymo (*Didymosphenia geminata*)

# Other Aquatic Invasives to Look For

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European frog-bit (*Hydrocharis morsus-ranae*)



Flowering rush (*Butomus umbellatus*)



# Other Aquatic Invasives to Look For

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Hydrilla (*Hydrilla verticillata*)



Curly-leaf pondweed  
(*Potamogeton crispus*)

Brazilian elodea (*Egeria densa*)





# Other Aquatic Invasives to Look For

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Parrot feather (*Myriophyllum aquaticum*)

Eurasian water-milfoil  
(*Myriophyllum spicatum*)



## Other Aquatic Invasives to Look For

---



Yellow floating heart (*Nymphoides peltata*)

Yellow iris (*Iris pseudacorus*)





# Other Aquatic Invasives to Look For

---

Didymo

(*Didymosphenia geminata*)



Variable-leaf milfoil

(*Myriophyllum heterophyllum*)

Mudmat (*Glossostigma cleistanthum*)





# Other Aquatic Invasives to Look For

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Purple loosestrife (*Lythrum salicaria*)

Narrowleaf cattail (*Typha angustifolia*)







**STAY INVOLVED!**

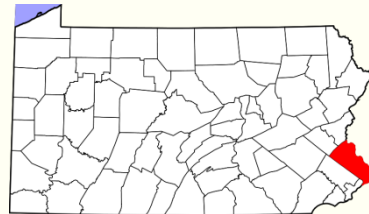
Participate in a water chestnut  
pulling event this summer!



# 2018 Paddle with a Purpose: Lake Towhee Water Chestnut Removal

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- Where: Lake Towhee Park Boat Launch (**Bucks County**)
  - 800 Old Bethlehem Road, Quakertown, PA 18951
- When: July 17<sup>th</sup>, 18<sup>th</sup>, and 19<sup>th</sup>, 2018
  - Tuesday, Wednesday, and Thursday
  - 9:00am – 2:00pm
- Choose to participate for one day, or all three!
- Lunch, gloves, and heavy duty trash bags are provided for all volunteers.
- Register at [VolunteerMatch.org](https://www.volunteermatch.org)!





# Questions?

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[www.paimapinvasives.org](http://www.paimapinvasives.org)



Good luck Water Chestnut Chasers!