

# 2017 Water Chestnut Chasers Challenge

A New (and Fun) Way to Search for a  
High Priority Invasive Species in Pennsylvania

Amy Jewitt  
Pennsylvania iMapInvasives Coordinator

June 28, 2017

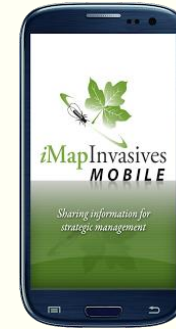
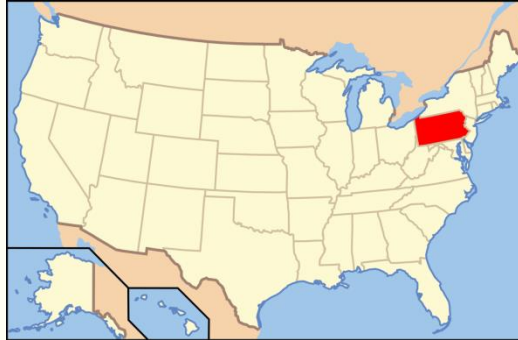


# Purpose

---

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 collected in support of EDRR efforts.





# Challenge Details

---

- Who: You and your “technology of choice”
  - Smartphone and/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.



---

- According to Pennsylvania



PA 5

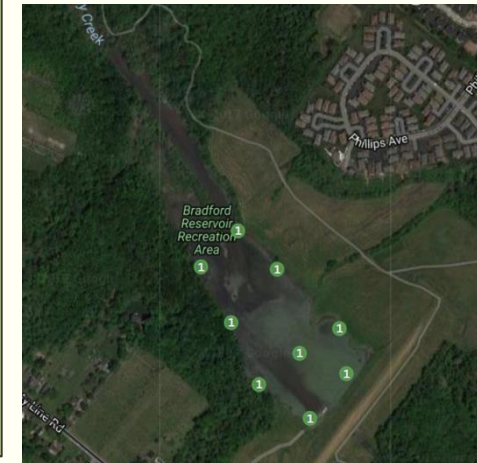
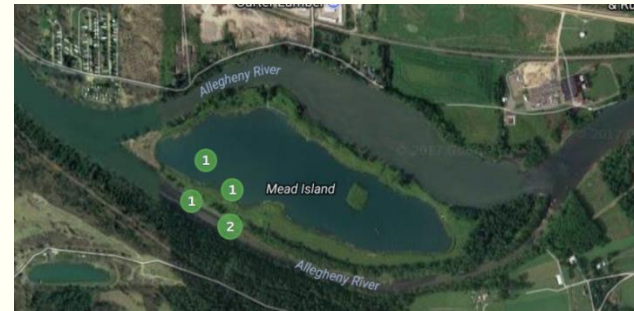


# Value of iMapInvasives

---

Using iMapInvasives, we can also 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

# Value of iMapInvasives

## Waterbodies with W.C. Reports:

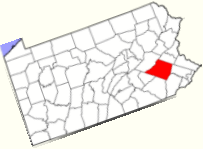
### ■ Bucks

- Lake Towhee
- Lake Nockamixon
- Bradford Reservoir
- Unnamed waterbody, NW of Sellersville



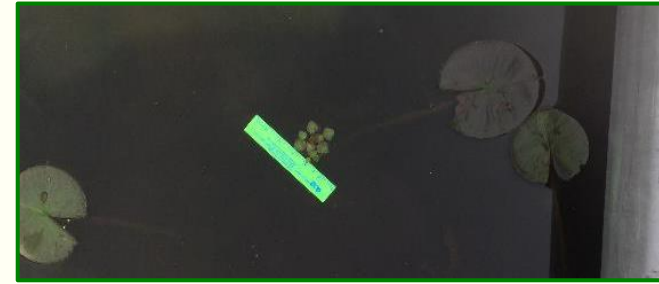
### ■ Berks

- Unnamed private pond, SE of Topton
- Hopewell Lake

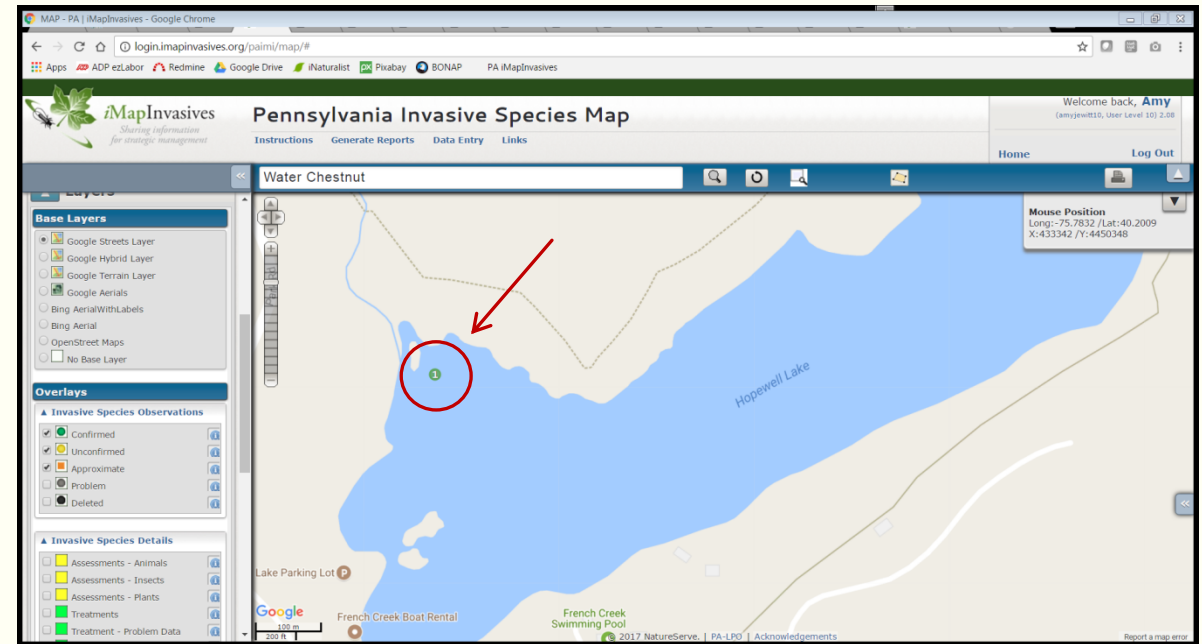


### ■ Dauphin

- Unnamed pond, eight miles east of Harrisburg (Lower Paxton Twp.)



W.C. photo taken at Hopewell Lake.  
Photo credit: Nick Decker (PA Bureau of State Parks)



W.C. report in Hopewell Lake (Berks County)



# Value of iMapInvasives

## ■ Luzerne

- Unnamed waterbody (beaver dam pond); Dorrance Twp.

## ■ Montgomery

- Maple Run Reservoir
- Unami Creek
- Knight Lake/Green Lane Reservoir
- Indian Creek
- Unnamed pond in business complex in Kulpville
- Unnamed waterbody, NE of Montgomeryville

## ■ Warren

- Allegheny River, near Mead Island
- Pond at Blueberry Hill golf course
- Pond at Cable Hollow golf course
- Unnamed waterbody, west of SGL #282
- Akeley Swamp (located in SGL #282)



W.C. photos taken at Akeley Swamp, SGL #282.  
Photo credit: D. Donachy (PGC)



W.C. reports in Akeley Swamp, State Game Lands #282 (Warren County)



# GET TO KNOW WATER CHESTNUT

Species at a Glance

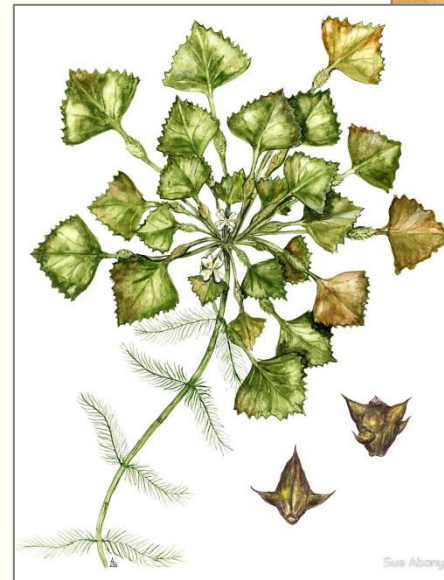
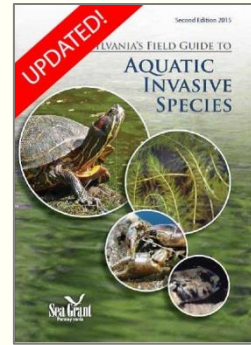




# Water Chestnut: Species at a Glance

---

- Scientific name = *Trapa natans*
- Information provided by “Pennsylvania’s Field Guide to Aquatic Invasive Species”
- 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.



# Water Chestnut: Species at a Glance

---

## Leaves:

- Come in two distinct forms: 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.
- Information provided by “[Pennsylvania’s Field Guide to Aquatic Invasive Species](#)”



Left: Triangular shaped leaves with toothed margins



Above: Inflated bladders keep water chestnut afloat



# Water Chestnut: Species at a Glance

---

## Flowers:

- Small flowers with four white petals, located in the center of the leafy rosette.
- Usually appear in mid to late July.
- Information provided by “Pennsylvania’s Field Guide to Aquatic Invasive Species”



# Water Chestnut: Species at a Glance

---

## 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.
- Information provided by [“Pennsylvania’s Field Guide to Aquatic Invasive Species”](#)





# Water Chestnut: Species at a Glance

---

## Stems/Roots:

- Numerous finely branched roots develop along the lower stem.
- Assist in anchoring the plant to the substrate.
- Information provided by “Pennsylvania’s Field Guide to Aquatic Invasive Species”



alamy stock photo

F0W93K  
www.alamy.com

# Water Chestnut: Species at a Glance

---

## 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.
- Information provided by “[Pennsylvania’s Field Guide to Aquatic Invasive Species](#)”





# Water Chestnut: Species at a Glance

---

## Spread:

- Water chestnut has a high reproductive rate, which 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!
- Information provided by “[Pennsylvania’s Field Guide to Aquatic Invasive Species](#)”





# Water Chestnut: Species at a Glance

---

## 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.
- Information provided by “Pennsylvania’s Field Guide to Aquatic Invasive Species”





# Water Chestnut: Species at a Glance

---

## 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

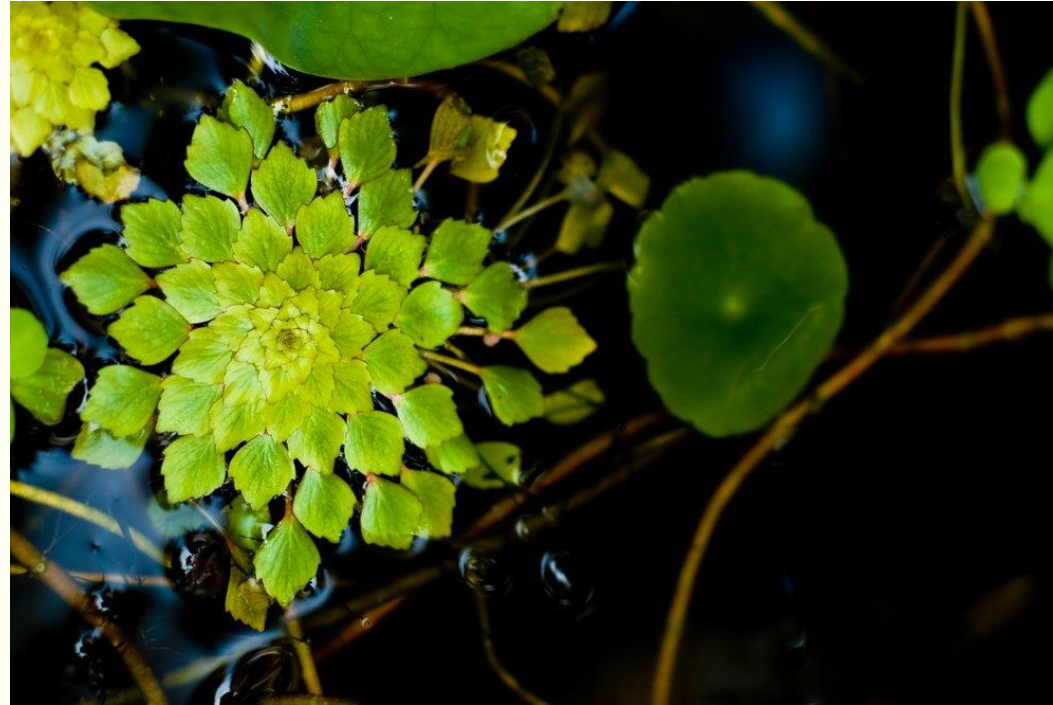


# Water Chestnut : Species at a Glance

---

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

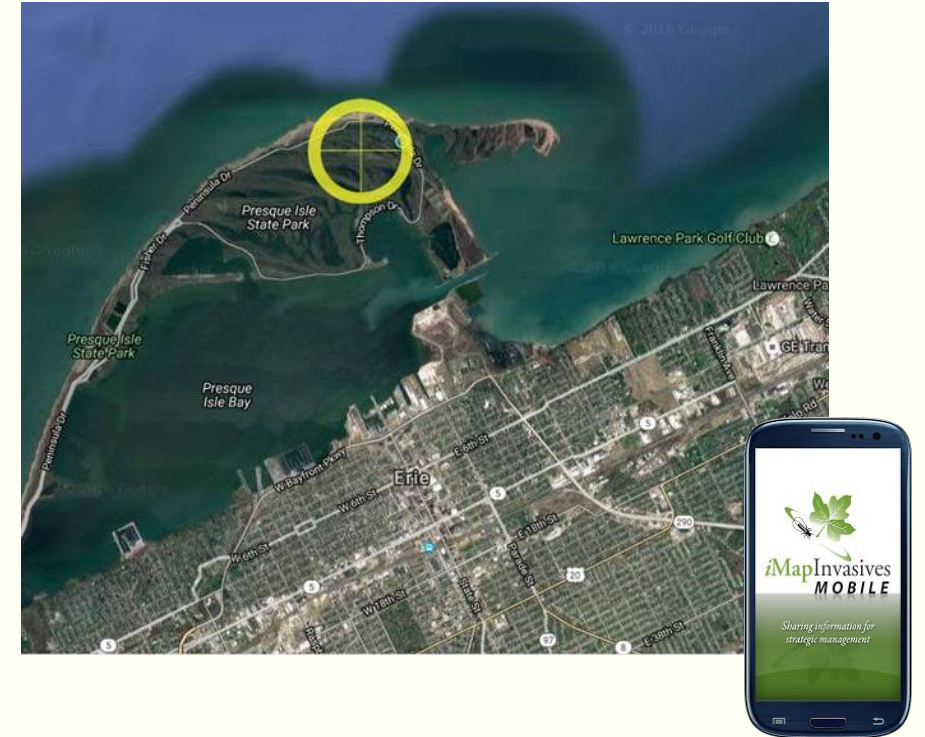


**PennState  
Extension**



# REPORT YOUR FINDINGS

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





# Report Your Findings

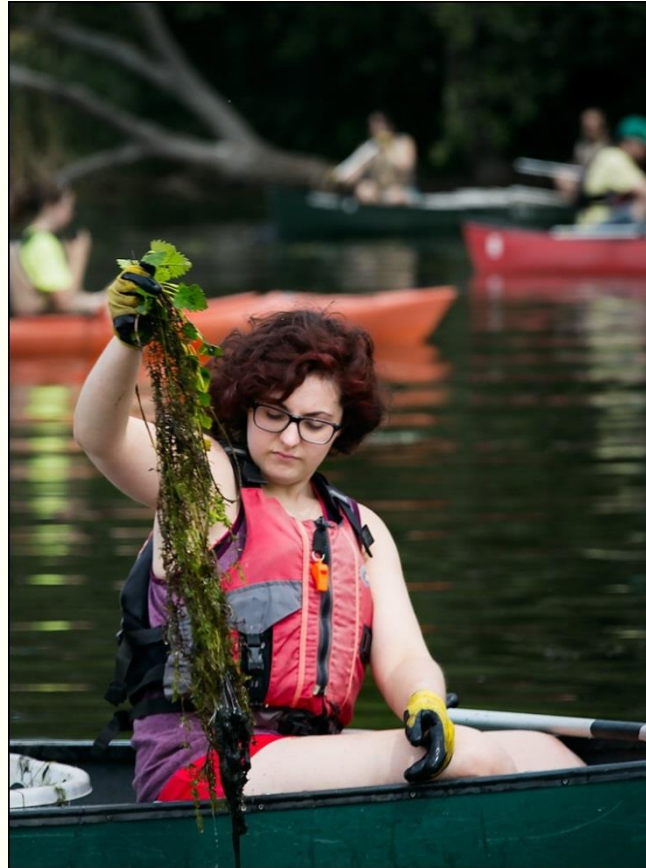
---

## 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





# Report Your Findings

---

## Why report absence data?

- Absence data shows that an area has been searched and indicates that a target species was not found there.
- If absence data were NOT recorded, it would be difficult to inform natural resource professionals in regards to prioritizing future survey efforts.

*“No water chestnut here!”*





# IMAPINVASIVES MOBILE APP

Using Your Smartphone to Report Your Invasive Species Findings



# iMapInvasives Mobile App

---

- Report invasive species data to iMapInvasives when you're outside making an observation.
- Quick and easy!
- Upload observations when Wi-fi is available.
- Full details available at [www.iMapInvasives.org](http://www.iMapInvasives.org).
- **Note:** Only observation data can be recorded on the mobile app.
  - Record Assessment, Survey, and Treatment data with a desktop computer.





# iMapInvasives Mobile App

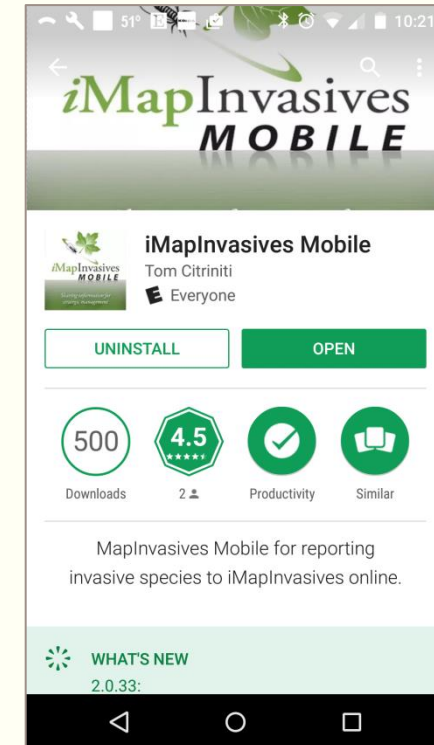
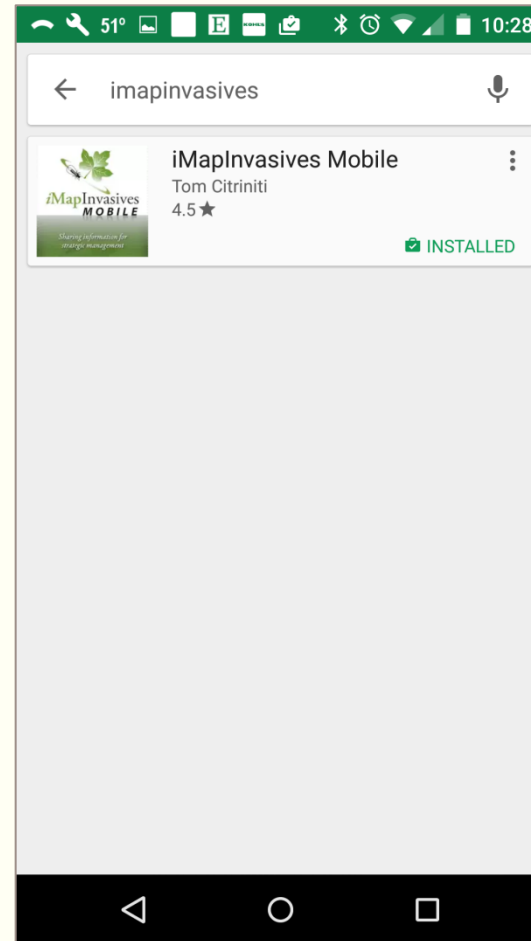
Here's how to get started...

## Download the App

- To begin reporting your findings, download the app from the [Google Play Store](#) or the [Apple App Store](#).
- Search for “iMapInvasives”.

### Your iMapInvasives login credentials:

- Username = first 3 letters of first name, full last name (all lowercase)
  - Example: John Smith = johsmith
- Password: [If you forget your password, there is an option to reset it.](#)

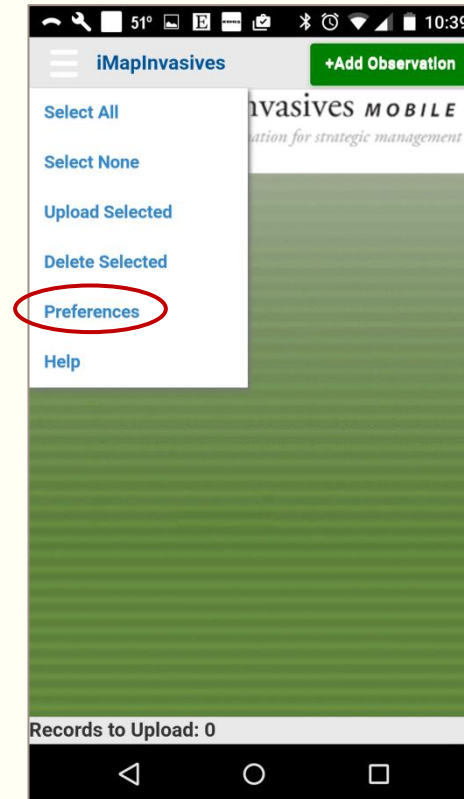
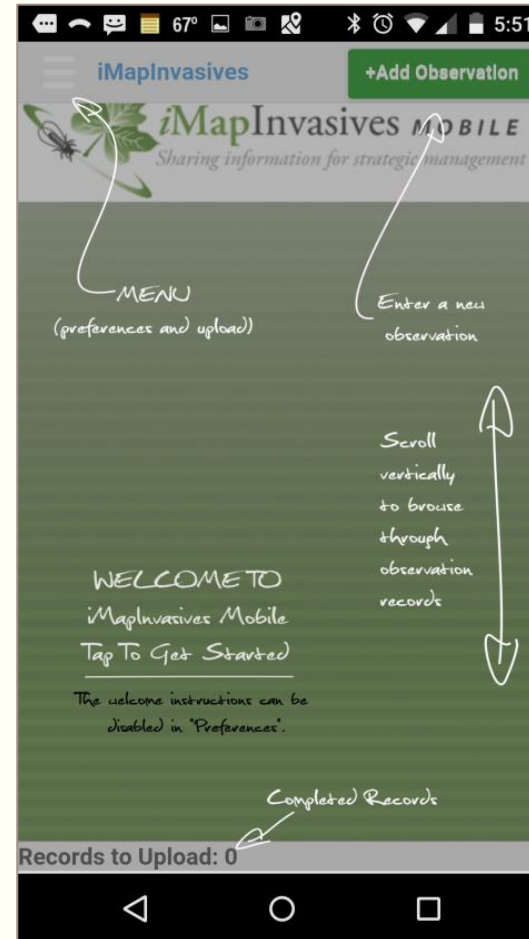


Views from Android device

# iMapInvasives Mobile App

## Access App Homepage

- Once installed, open the app on your phone and review the instructions outlined on the homepage.
- Click on the Menu in the upper left corner.
- Fill in the Preferences as appropriate.
  - Default state: Pennsylvania
  - First & last name
  - iMap username & password
  - How species list appears
  - Etc.

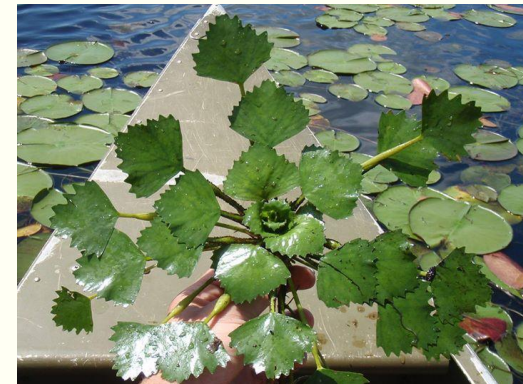
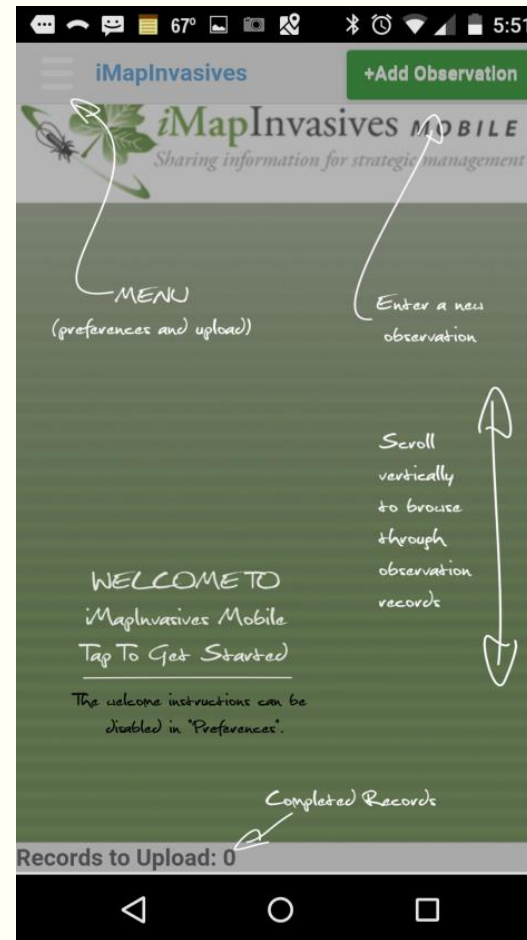




# iMapInvasives Mobile App

## Step 1. Add Observation

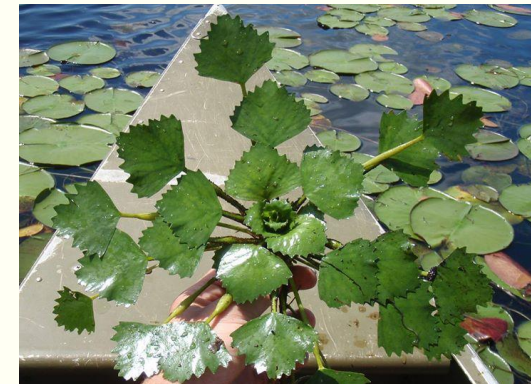
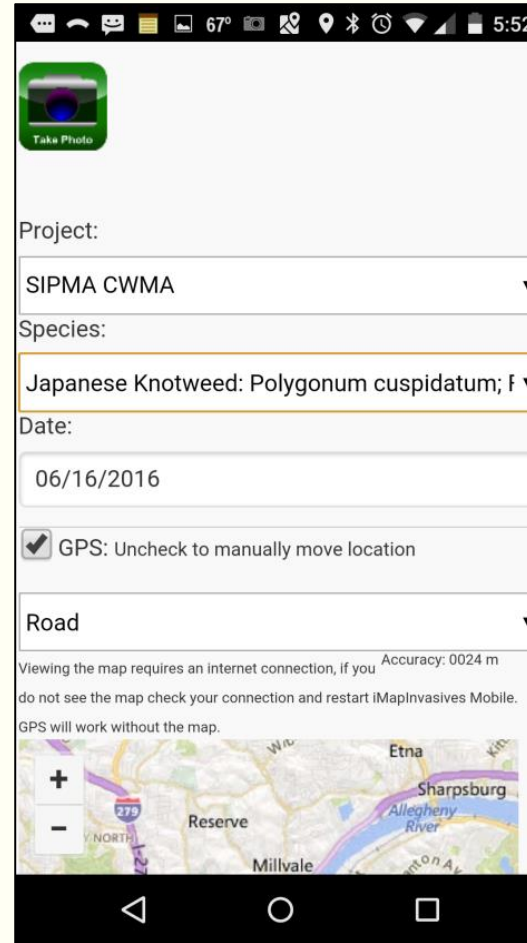
- In the upper right corner, click “Add Observation” to begin logging your invasive species findings.



# iMapInvasives 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 save only 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.





# Advice to Users

---

## 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

# iMapInvasives Mobile App

## Step 3. Fill in Observation Details

- In the Project category, choose “Water Chestnut Chasers Challenge [2017]”.
- Select the species observed (water chestnut).
- Date automatically defaults to current day, though can be changed if needed.

Take Photo

Project:  
SIPMA CWMA

Species:  
Japanese Knotweed: *Polygonum cuspidatum*; f

Date:  
06/16/2016

☒ GPS: Uncheck to manually move location

Road

Viewing the map requires an internet connection, if you do not see the map check your connection and restart iMapInvasives Mobile. GPS will work without the map.

Accuracy: 0024 m

Map showing locations: Etna, Sharpsburg, Reserve, Millvale, Allegheny River.

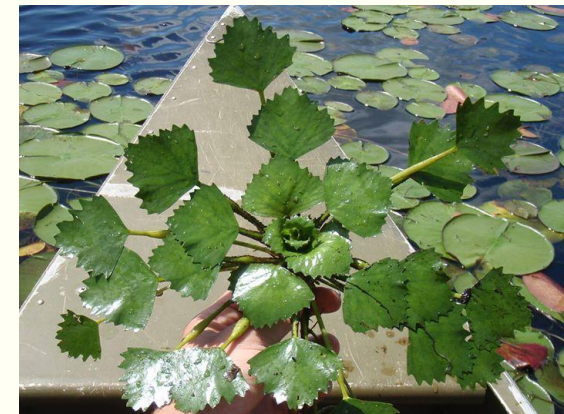
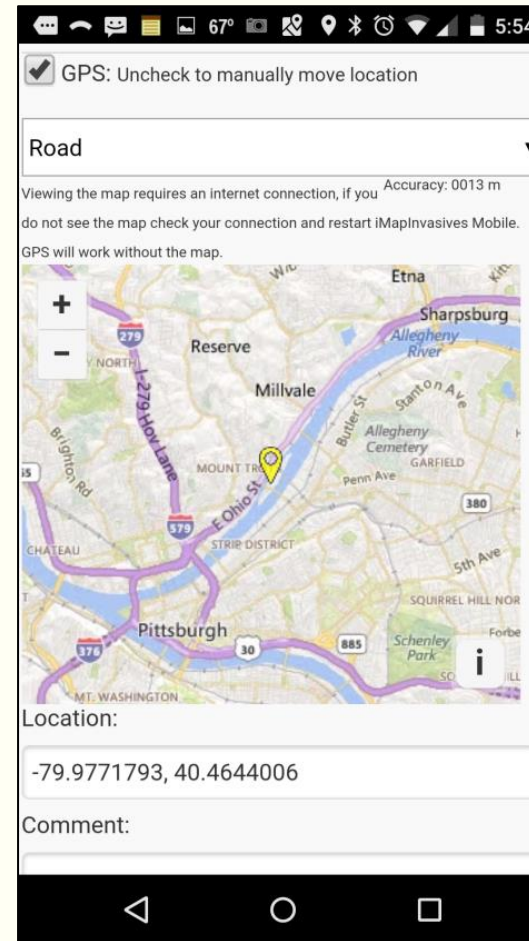




# iMapInvasives Mobile App

## Step 4. Check Observation Location

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

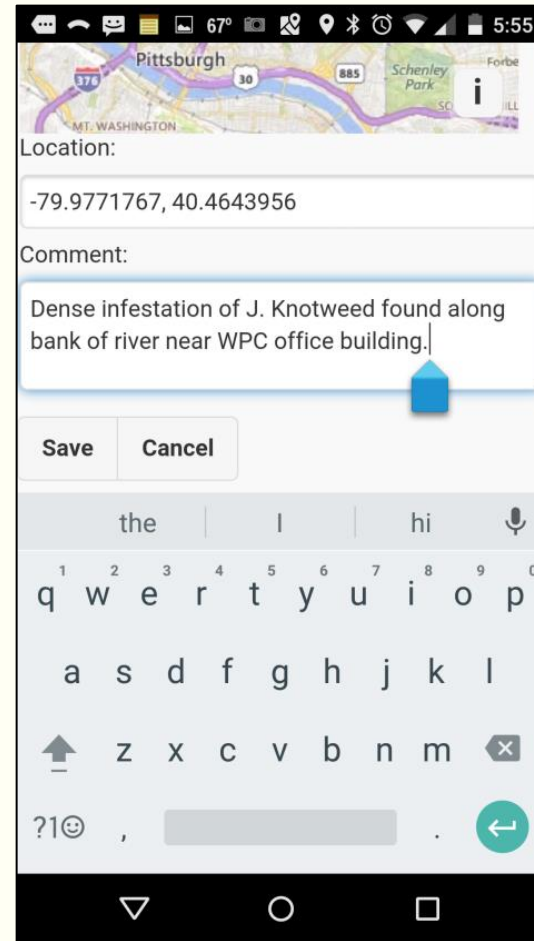


# iMapInvasives Mobile App

---

## 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.



The screenshot shows the iMapInvasives Mobile App interface. At the top, there's a map of Pittsburgh with a location pin. Below the map, the 'Location:' field displays coordinates: -79.9771767, 40.4643956. The 'Comment:' field is highlighted with a blue border and contains the text: 'Dense infestation of J. Knotweed found along bank of river near WPC office building.' A red arrow points to this comment field. Below the comment field are 'Save' and 'Cancel' buttons. At the bottom, there's a keyboard with a green back arrow button.





# iMapInvasives Mobile App

---

## Step 6. Save Your Observation

- Save your observation to a “que” of observations on the app’s homepage which will be uploaded once you’re back in data connectivity.

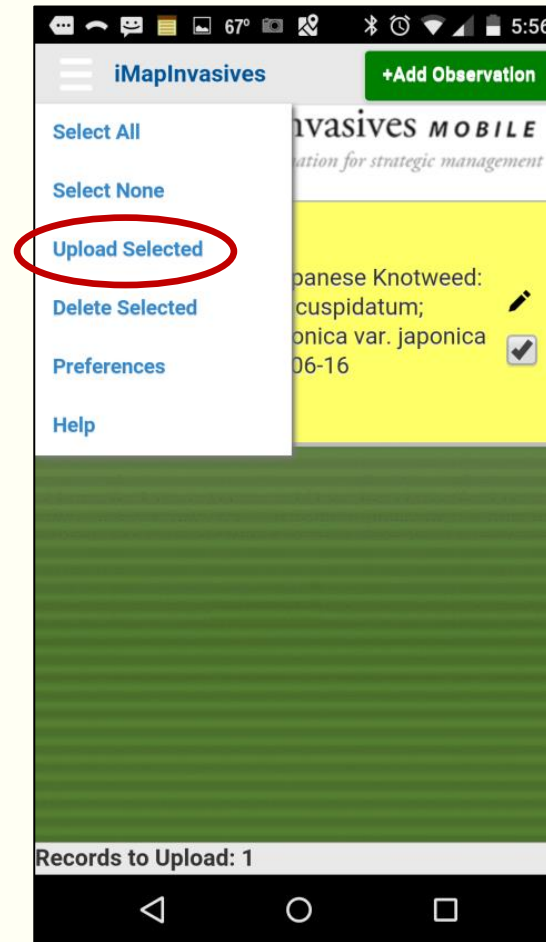


# iMapInvasives Mobile App

---

## Step 7. Upload Your Observation(s)

- To upload your observation (once you're back in an area with Wi-fi), click on the check box next to each observation record.
- Then access the main menu and click "Upload Selected".

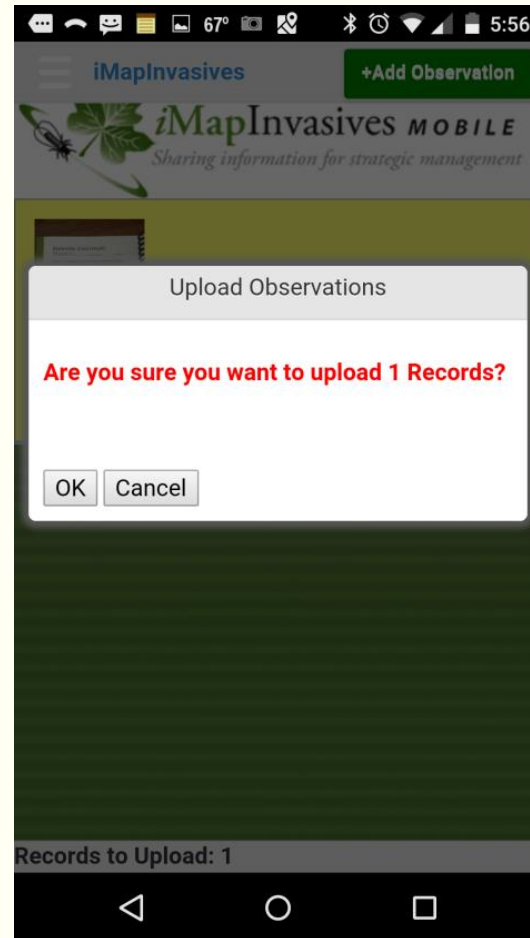


# iMapInvasives Mobile App

---

## Upload Confirmation

- Confirm that you would like to upload the selected records.
- Click “OK” to have your records uploaded to the main iMapInvasives database. Note that the records will then disappear from your iMapInvasives app.
- **Hint:** If you continue to see the observation in the que, this means it has NOT been uploaded into the main iMapInvasives database.
  - If this happens, try uploading again.

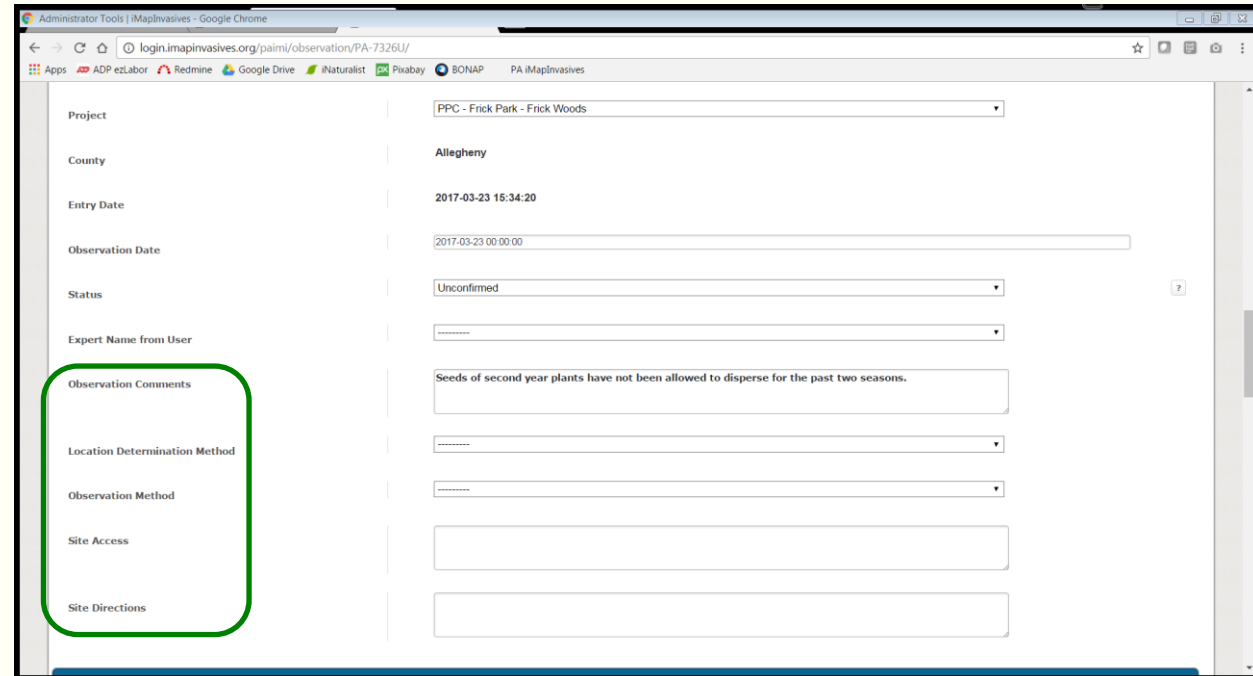




# iMapInvasives Mobile App

## Step 8. Add Additional Comments and Photos

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



The screenshot displays the iMapInvasives web interface for editing an observation record. The left sidebar contains a navigation menu with a red arrow pointing to the 'View Table' button. The main content area shows the following details:

- 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: [Redacted]
- Observation Comments: Seeds of second year plants have not been allowed to disperse for the past two seasons.
- Location Determination Method: [Redacted]
- Observation Method: [Redacted]
- Site Access: [Redacted]
- Site Directions: [Redacted]

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

# iMapInvasives Mobile App

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

- Once your report is received to iMapInvasives, it will be logged as “Unconfirmed” data.
- An Administrator will review your record details and photo(s).
- If the species ID is correct, your record will be confirmed.
- If there are questions regarding your record, the Administrator will contact you with follow-up questions.
- **Note:** All data in iMapInvasives is quality-checked to ensure species ID and locational accuracy.

The screenshot displays the 'Observation Information' page for a specific record (PA-5544U) in the iMapInvasives Pennsylvania Administrator Tools. The page is divided into two main sections: a left-hand form and a right-hand map.

**Left-hand Form:**

- Data Entry Person:** amyjewitt10
- 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 (highlighted with a red arrow)
- Geographic Data:** County: Allegheny, ID: PA-5544U
- Observation Location:** Latitude: 40.464422, Longitude: -79.977214
- Buttons:** 'Return to the initial Map Location' and 'Save New Map Location'

**Right-hand Map:**

- Shows a Google Map of the Allegheny River area in Pennsylvania.
- Coordinates: 77954, 4451218. State based Coordinates: 79°58'38"W, 40°27'51.9"N.
- Buttons:** 'View Observation on Map'

The top of the page includes a navigation bar with the iMapInvasives logo, the title 'Pennsylvania Administrator Tools', and a user welcome message for Amy Jewitt.

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.

# iMapInvasives Mobile App

---

For more details on how to use the iMapInvasives mobile app, please view the [Mobile Tools](http://www.iMapInvasives.org) page found at [www.iMapInvasives.org](http://www.iMapInvasives.org).



*Sharing information for strategic management*

**iMapMobile App** NEW  
(Android & iPhone)

The iMapMobile app allows for quick and easy invasive species reporting for citizen scientists and natural resource professionals. With iMapMobile, you can report invasive species locations to your online iMapInvasives account by using your mobile device's camera and GPS, even when you're out of connectivity range. You need to have an active iMapInvasives account in a participating state or province for your iMapMobile observations to sync. ([Request a free iMapInvasives account here.](#)) After submitting a batch of records, be sure to log into iMapInvasives when you're back at your computer to add additional photos and comments to each observation record.

[Mobile App User Manual](#)

GET IT ON  
 Google play

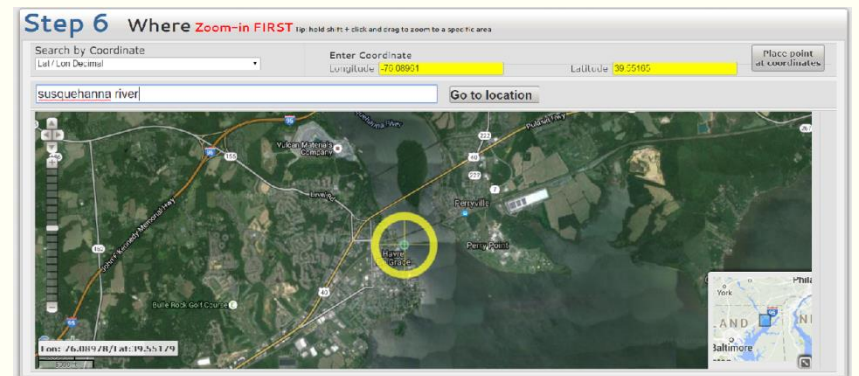
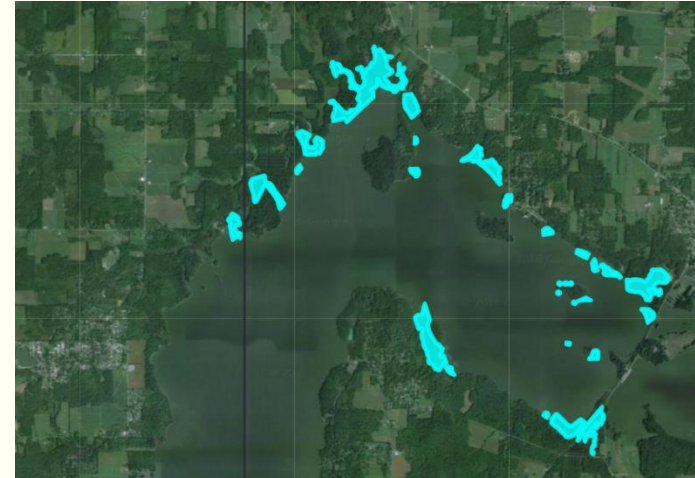
Available on the  
 App Store

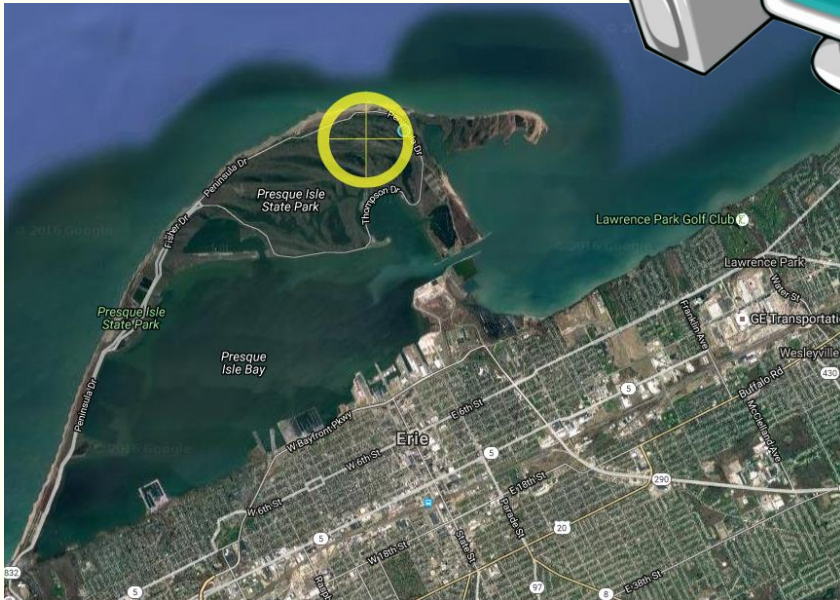




# ONLINE INTERFACE

Learn how to enter Observation, Assessment, and Survey data into iMapInvasives using your desktop computer.





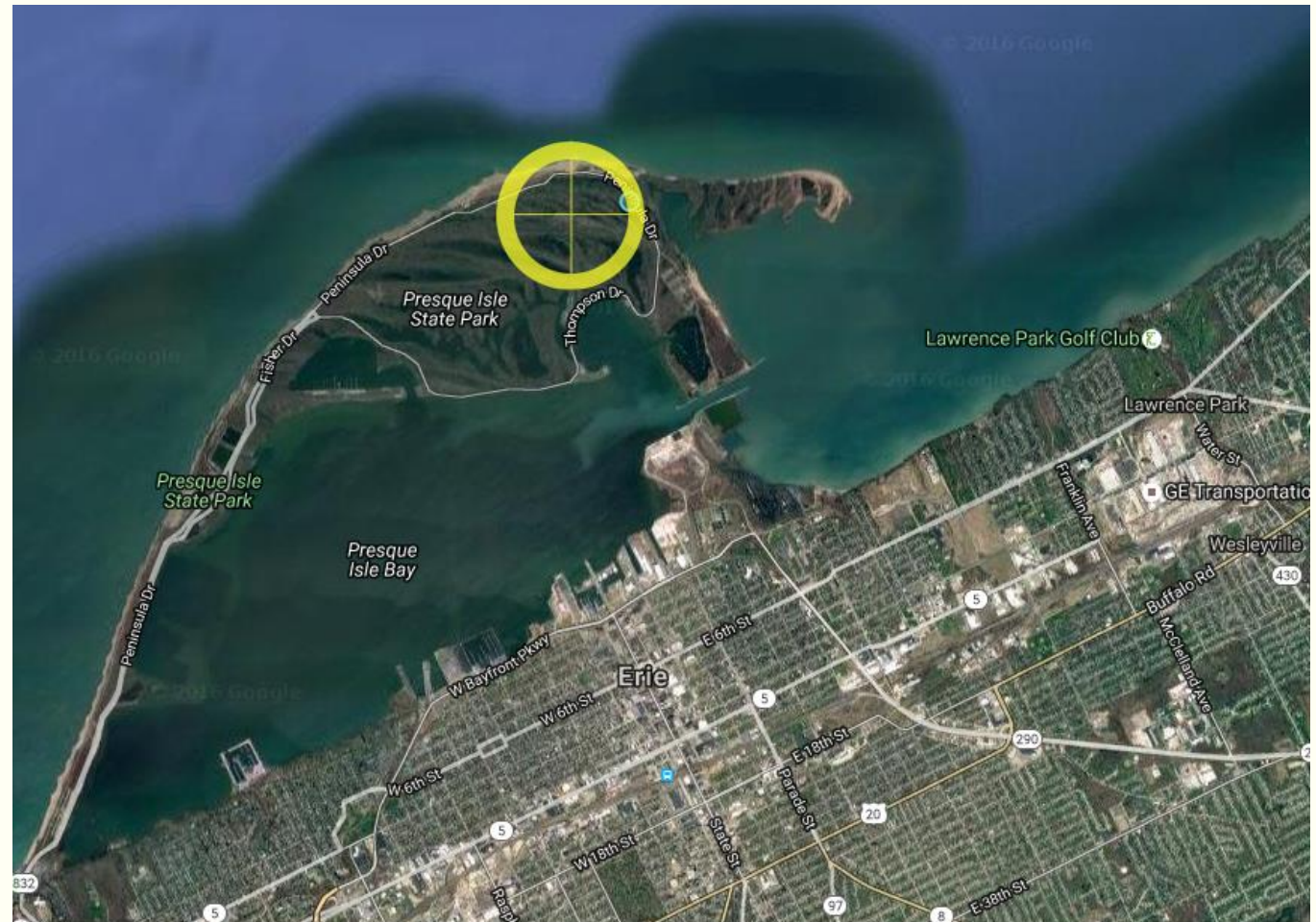
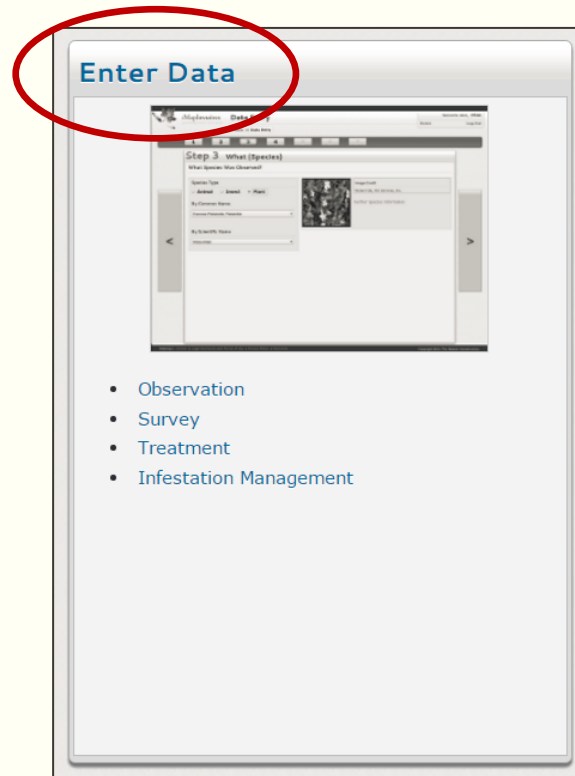
# OBSERVATION DATA ENTRY

## 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 [2017]
- 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

Insurance and Terms of Use | Privacy Policy | Financials | Contact your iMap Administrator

Copyright © 2017

# 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

Home | Legal Disclosure and Terms of Use | Privacy Policy | Financials | Contact your iMap Administrator

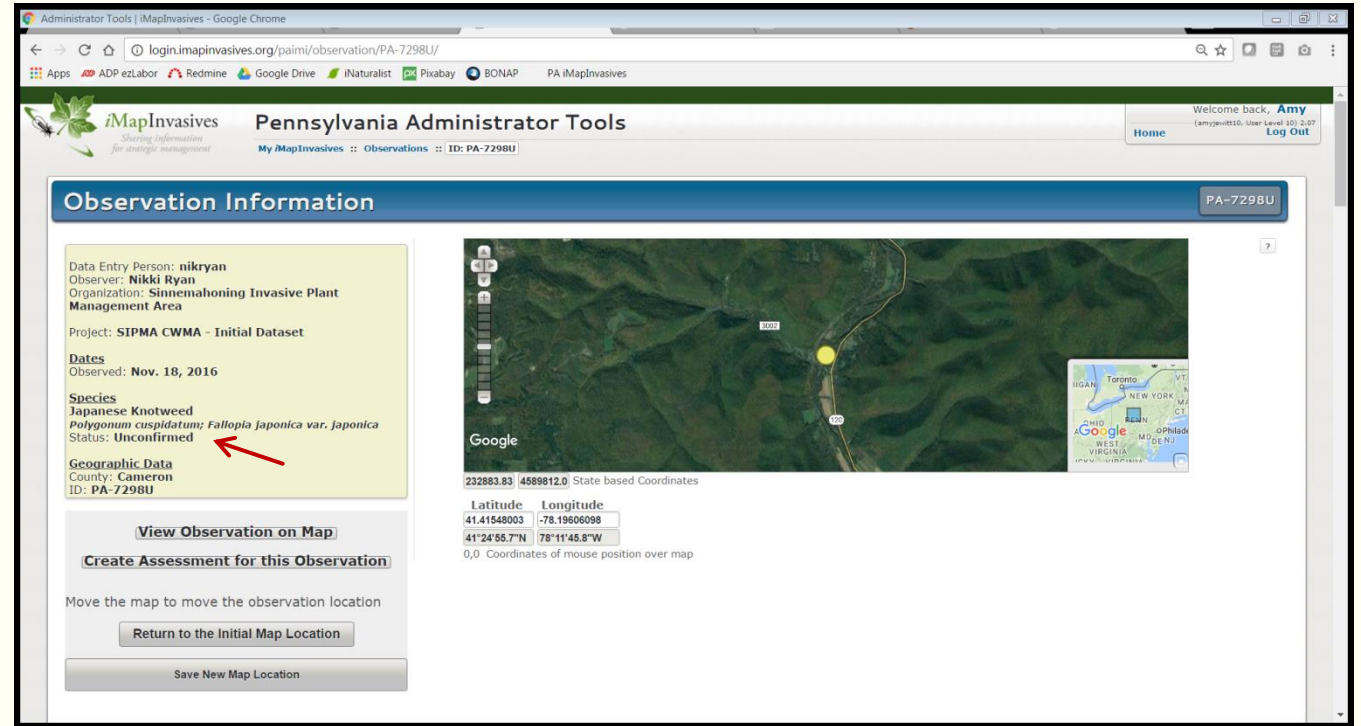
Copyright © 2017 NatureServe.



# 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.



\*Note that your observation(s) will always appear as “Unconfirmed” once submitted. When the administrator reviews your record and confirms the species ID is accurate, your record will be labeled as either “Confirmed” or “Approximate” depending on the locational data.

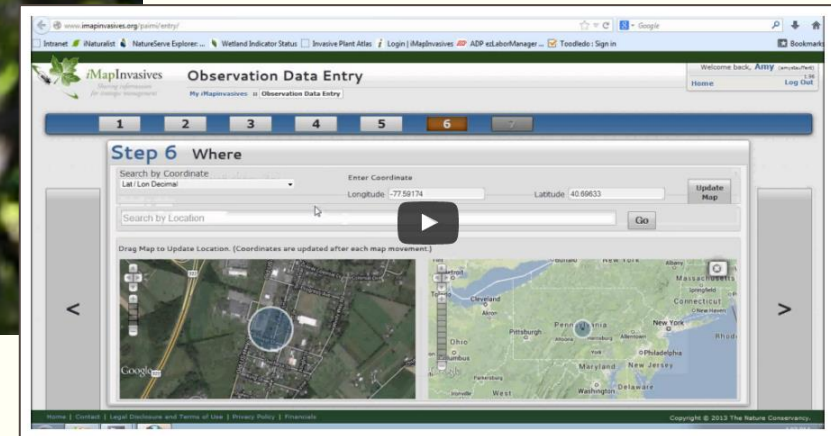


# Observation Data Entry – Refresher Training

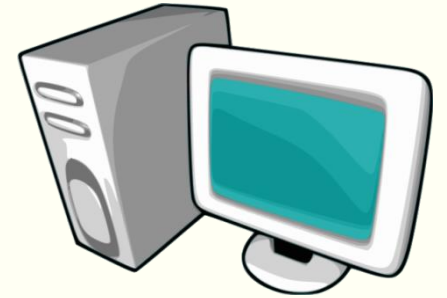
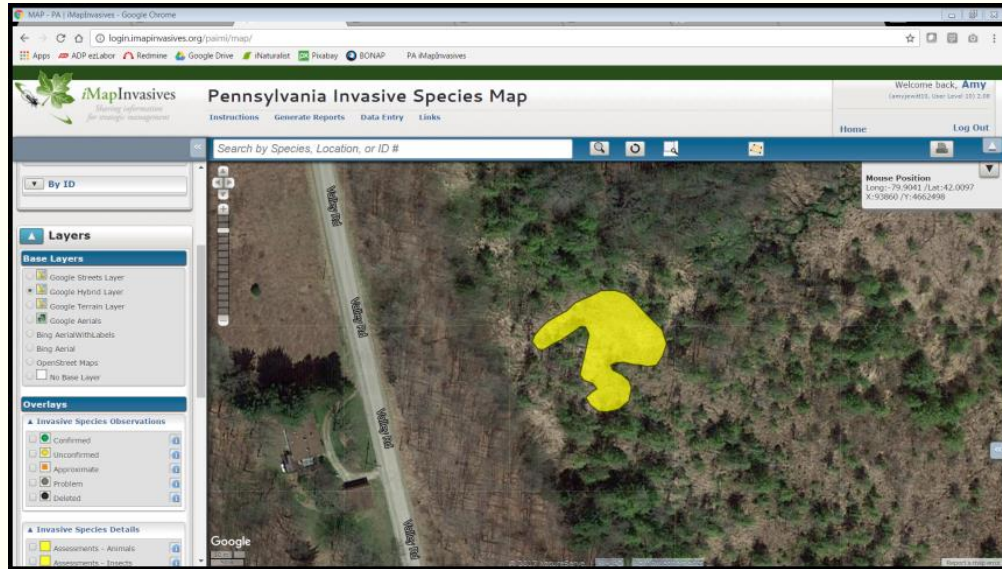


Photo credit: National Geographic Press Room

- To refresh on observation data entry training, watch our YouTube training video anytime!
- Video is available on the [Training page](#) of the Pennsylvania iMapInvasives website.



Click on me to  
find out more



# ASSESSMENT DATA ENTRY

Found water chestnut?

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

# Importance of Documenting Assessment Data

---

- Bethany Bradley, a professor at UMass Amherst, uses invasive species abundance data to inform invasion risk assessments.
  - “Assessment data is a huge boon for biogeographical analysis.”
- The most scientifically useful form of abundance data includes an estimate of percent cover or stem count plus an estimate of the infested area.
- More info can be found in the [Spring/Summer 2017 iMapInvasives newsletter](#).
- \*Participants of the Challenge are encouraged to record both observation and assessment data if water chestnut is found (i.e., presence data).



Bethany Bradley, Professor at  
UMass Amherst



# How to Enter an Assessment Record

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

The screenshot shows the Pennsylvania Administrator Tools web application. The browser address bar displays `login.imapinvasives.org/paimi/home/`. The page header includes the iMapInvasives logo, the title "Pennsylvania Administrator Tools", and a user welcome message: "Welcome back, Amy (amyjewitt10, User Level 10) 2:08". Navigation buttons for "Home" and "Log Out" are present. A secondary navigation bar contains "My iMapInvasives", "Resources", "Data Management", and "System Management". Below this, four main sections are visible: "Enter Data", "View the Map", "View Table" (circled in red), and "Query and Reports".

**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 browser address bar displays the URL: `login.imapinvasives.org/paimi/observation_table/?user_type=all_data#?offset=0&rows=25&columns=obsid,obsdatastatus,state_scientific_name,stateCommonName,observername,obsorg,obsdate,obs`. The page header includes the iMapInvasives logo, the title "Pennsylvania Administrator Tools", and a user welcome message: "Welcome back, Amy (amyjewitt10, User Level 10) 2:08". Below the header, there are navigation links: "My iMapInvasives", "Custom Query", and "Observations Table".

The main section is titled "Observations Table" and includes a "Custom Data Query" button. Under "Active Custom Query", the "Data Set" is set to "all\_data" with a "Clear Query" button. A search bar contains the text "sanderson" (circled in red), with a "Search" button next to it. Below the search bar, a dropdown menu shows "sanderson" selected, with a "Clear" button. To the right of the dropdown, it says "0 - 2 of 2 results".

Two red arrows point to the first two rows of the table:

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

# 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, PA-3315U, is highlighted with a red box. It is a confirmed observation of Trapa natans (Water Chestnut) by observer allsanderson on 2014-07-16 in Warren County.

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”.

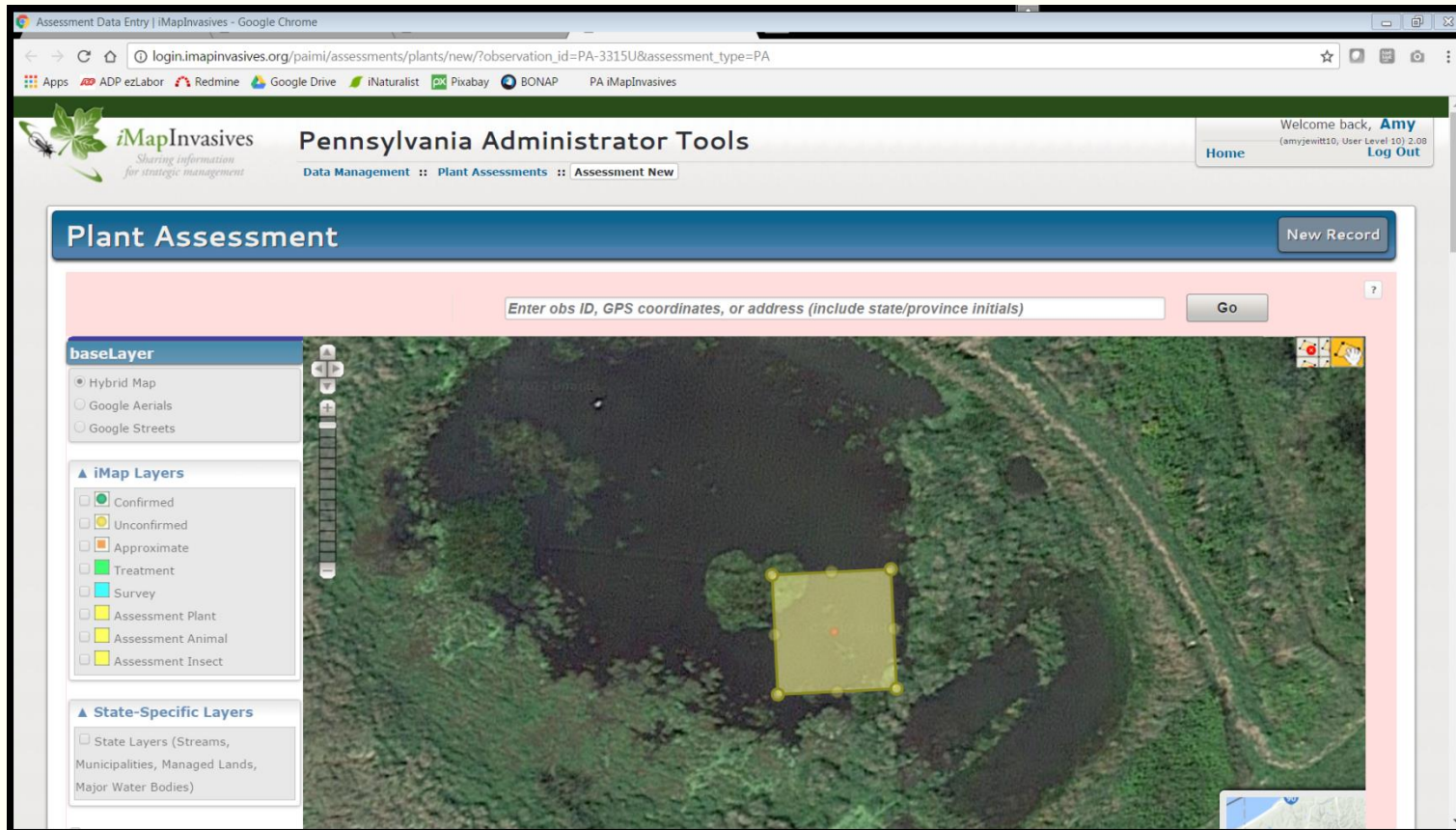
The screenshot shows the iMapInvasives web application interface. The browser address bar displays the URL `login.imapinvasives.org/pairmi/observation/PA-3315U/`. The page is divided into several sections:

- 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 field with the value "0" and a help icon.
  - Suspicious Distance Flag:** A field with the value "0" and a help icon.
  - Data Entry Method:** A field with the value "On-line".
  - Species ID Method:** A dropdown menu with the selected value "c) ID by expert".

# How to Enter an Assessment Record

---

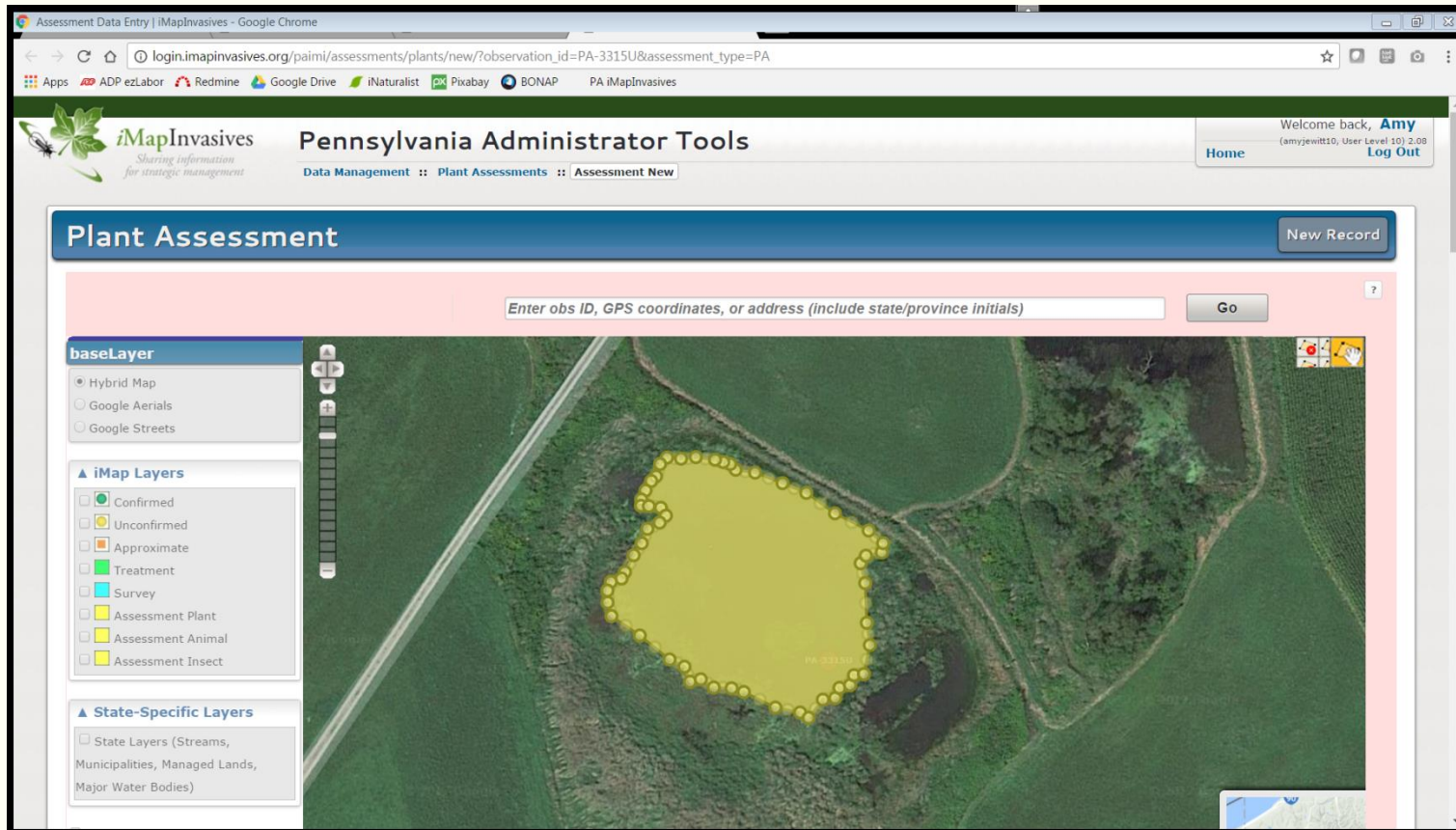
5. A new window appears, allowing you to begin creating an assessment record. Note that the map automatically zooms to your observation area.



# 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.

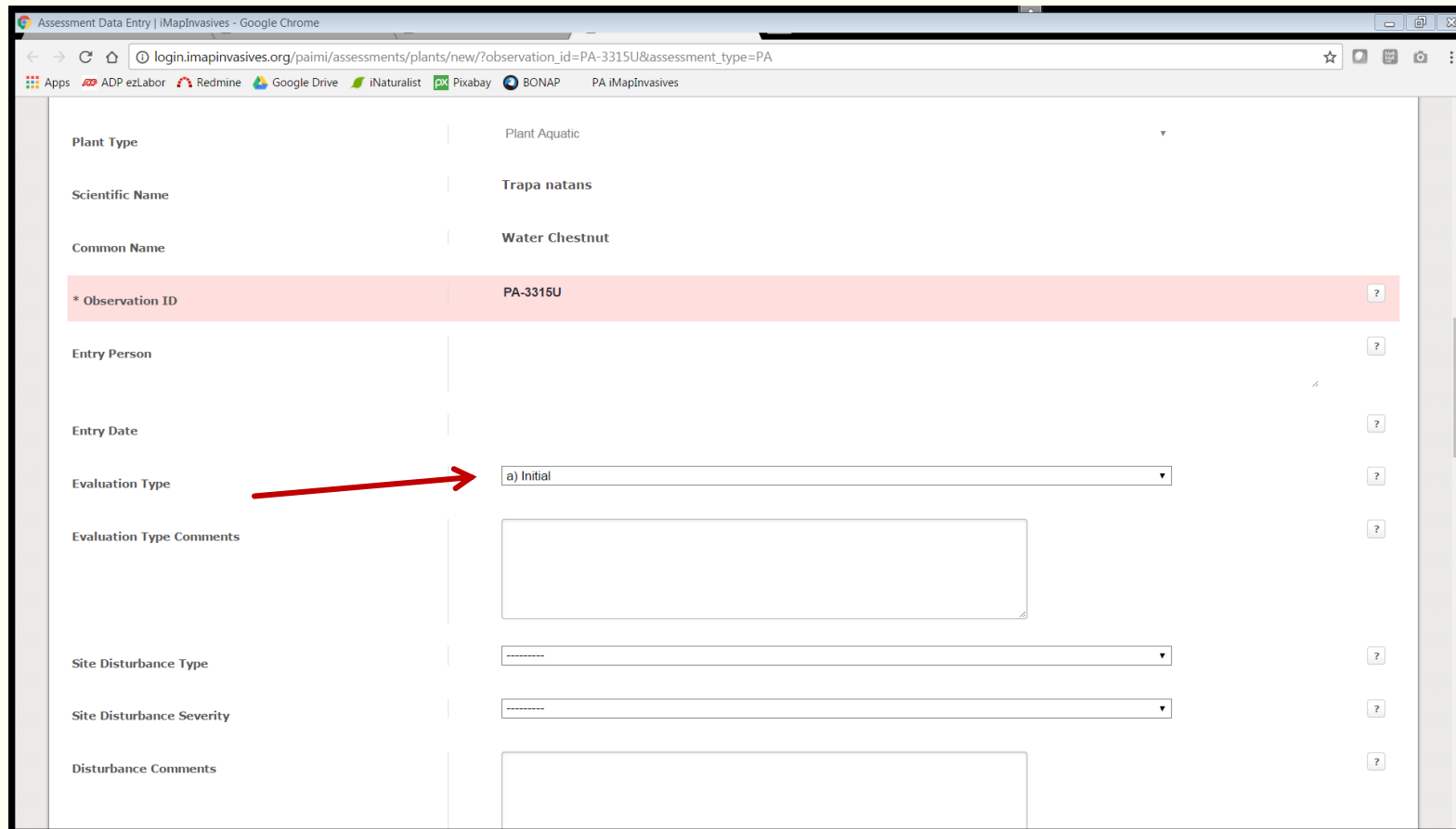




# How to Enter an Assessment Record

---

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:

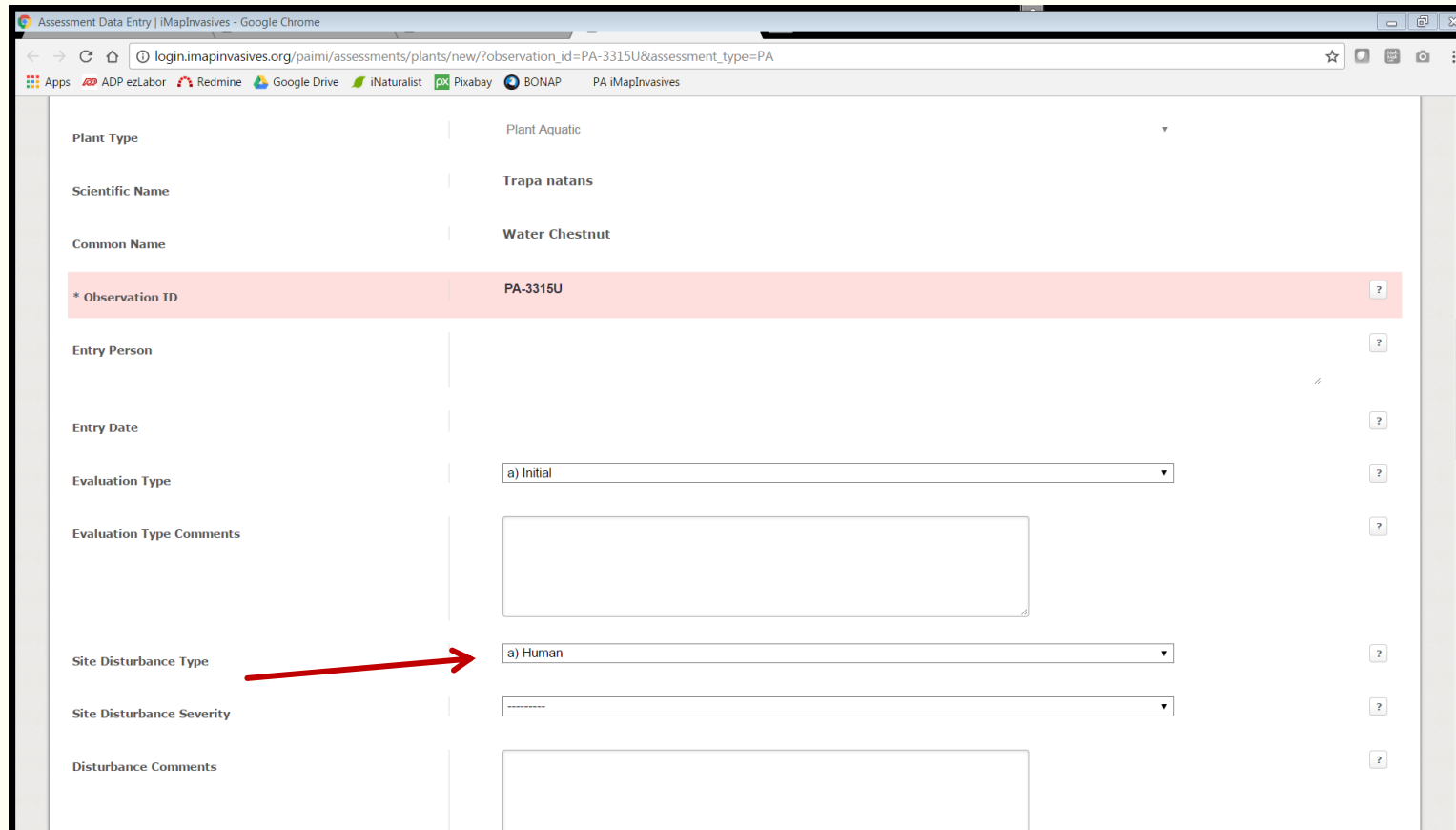
Plant Type	Plant Aquatic	
Scientific Name	Trapa natans	
Common Name	Water Chestnut	
* Observation ID	PA-3315U	?
Entry Person		?
Entry Date		?
Evaluation Type	a) Initial	?
Evaluation Type Comments		?
Site Disturbance Type		?
Site Disturbance Severity		?
Disturbance Comments		?

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:

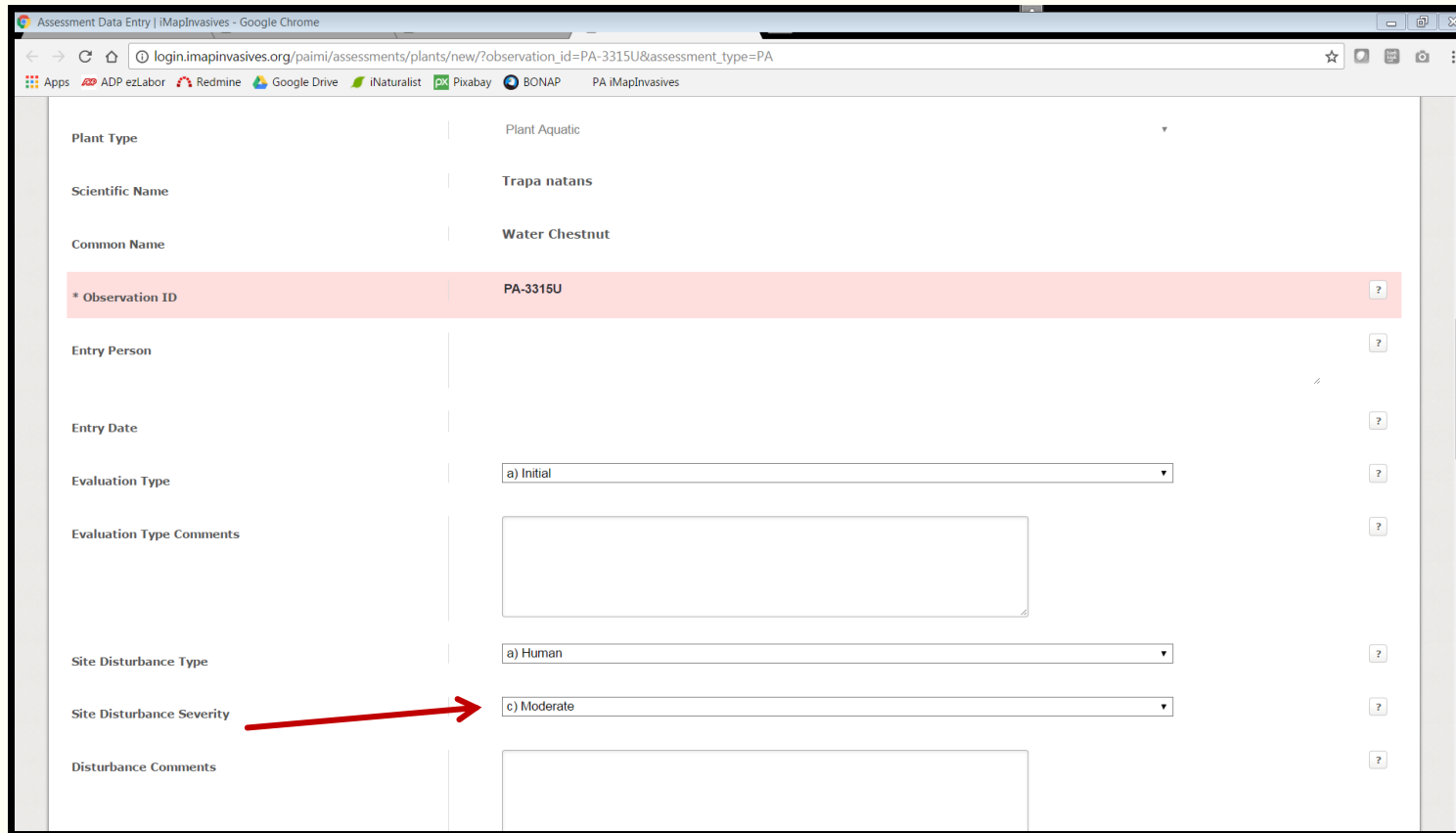
- Plant Type: Plant Aquatic
- Scientific Name: *Trapa natans*
- Common Name: Water Chestnut
- \* Observation ID: PA-3315U (highlighted in red)
- Entry Person: (empty)
- Entry Date: (empty)
- Evaluation Type: a) Initial
- Evaluation Type Comments: (empty text area)
- Site Disturbance Type: a) Human (indicated 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 is titled "Assessment Data Entry | iMapInvasives - Google Chrome". It contains the following fields:

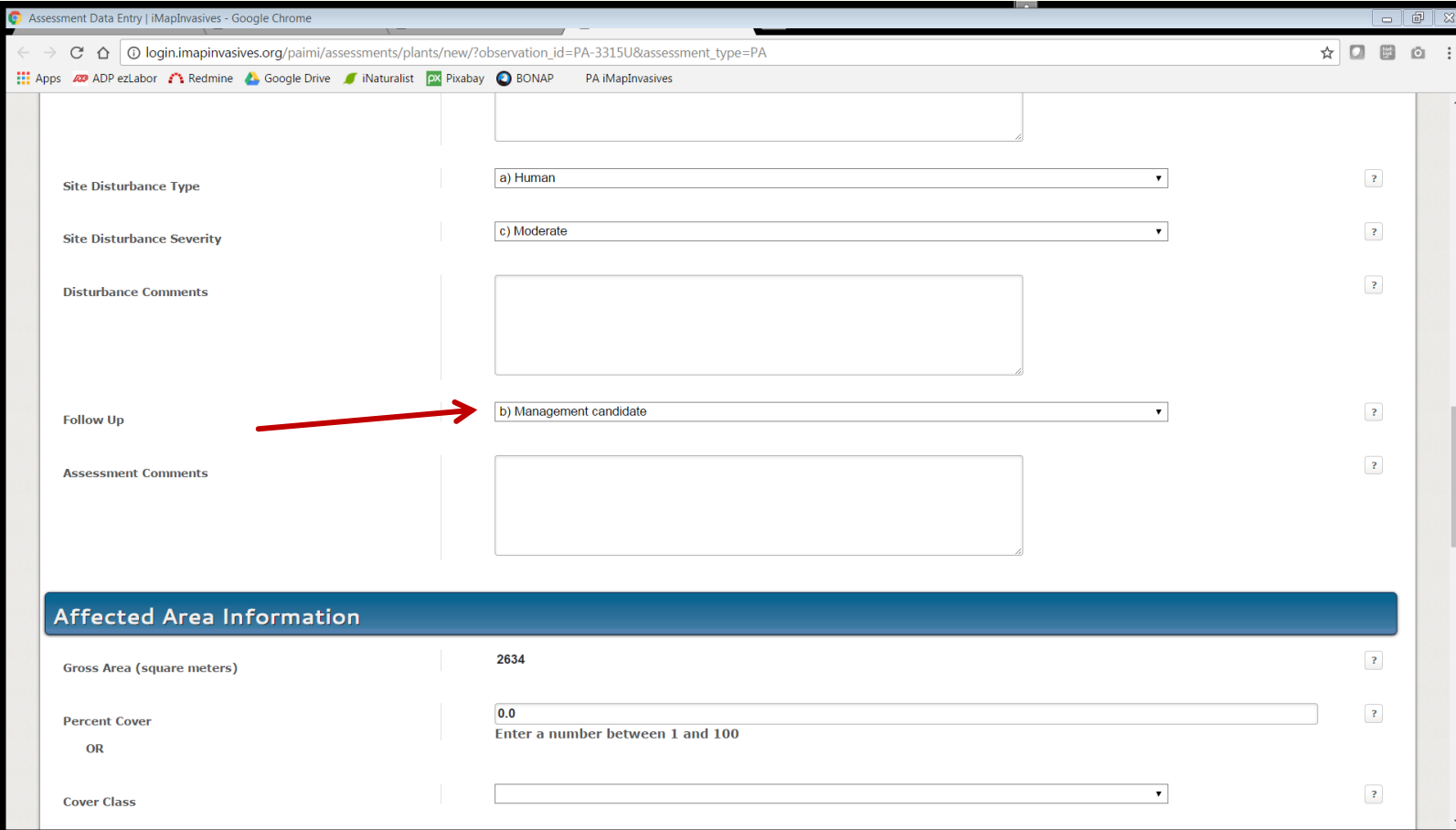
Plant Type	Plant Aquatic	
Scientific Name	<i>Trapa natans</i>	
Common Name	Water Chestnut	
* Observation ID	PA-3315U	?
Entry Person		?
Entry Date		?
Evaluation Type	a) Initial	?
Evaluation Type Comments		?
Site Disturbance Type	a) Human	?
Site Disturbance Severity	c) Moderate	?
Disturbance Comments	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

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)
- 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 is titled "Assessment Data Entry | iMapInvasives - Google Chrome". The main section is "Affected Area Information". It contains the following fields:

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

Below the "Affected Area Information" section is the "Invasive Plant Information" section, which contains:

- Plant Distribution: (empty dropdown)
- Plant Distribution (if other): (empty text area)



# 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**

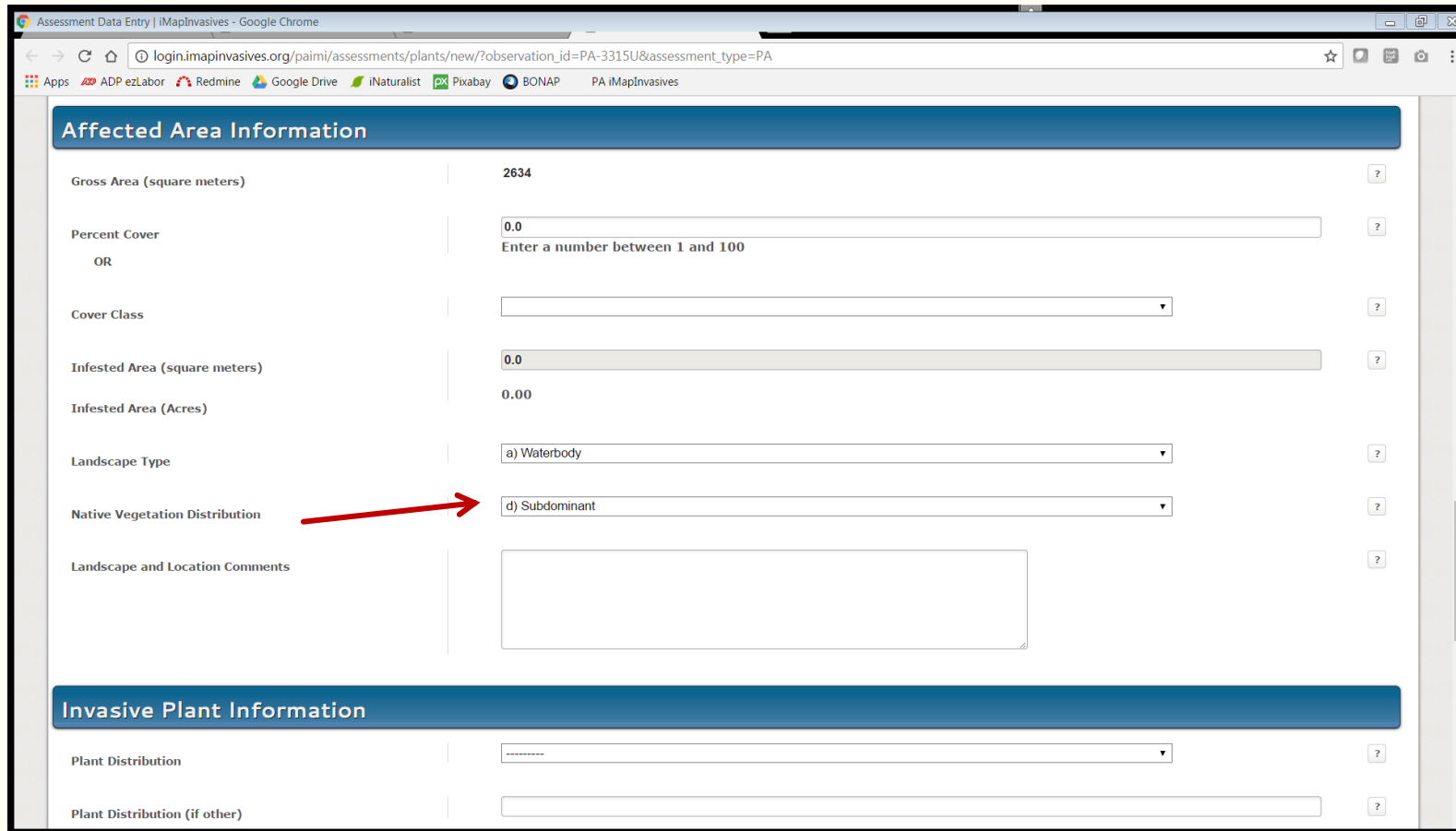
Gross Area (square meters)	2634	?
Percent Cover	0.0	?
OR	Enter a number between 1 and 100	
Cover Class		?
Infested Area (square meters)	0.0	?
Infested Area (Acres)	0.00	
Landscape Type	a) Waterbody	?
Native Vegetation Distribution		?
Landscape and Location Comments		?

**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	<input type="text" value="0.0"/>	?
Enter a number between 1 and 100		
OR		
Cover Class	<input type="text"/>	?
Infested Area (square meters)	<input type="text" value="0.0"/>	?
Infested Area (Acres)	0.00	
Landscape Type	<input type="text" value="a) Waterbody"/>	?
Native Vegetation Distribution	<input type="text" value="d) Subdominant"/>	?
Landscape and Location Comments	<input type="text"/>	?

**Invasive Plant Information**

Plant Distribution	<input type="text" value="....."/>	?
Plant Distribution (if other)	<input type="text"/>	?

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. The "Native Vegetation Distribution" section has a dropdown menu set to "d) Subdominant". The "Landscape and Location Comments" section has a text input field. The "Invasive Plant Information" section is highlighted with a blue header. It contains the following fields:

- Plant Distribution:** A dropdown menu set to "c) Dense plants/clumps". A red arrow points to this field.
- Plant Distribution (if other):** A text input field.
- Plant Maturity:** A field with three buttons: "a) Vegetative x", "b) Flowers x", and "c) Seeds x". A red arrow points to this field.
- Plant Maturity (if other):** A text input field.

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

- Water Body Type:** A dropdown menu.
- Substrate Type:** A dropdown menu.
- Substrate Type (if other):** A text input field.



# 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 displays the 'Invasive Plant Information' section, which includes 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 includes fields for Water Body Type, Substrate Type, Substrate Type (if other), Substrate Comments, Water Depth Code, and Boating Regulations. Red arrows point to the following fields:

- Water Body Type: c) Lake/pond
- Substrate Type: a) Mud
- Water Depth Code: d) 15 - 20 ft
- Boating Regulations: b) No motorized boats

# 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

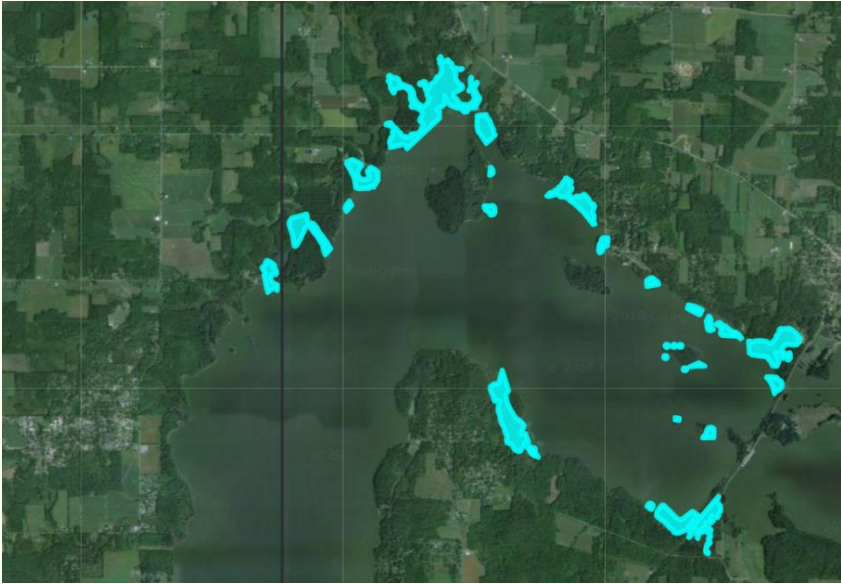
**Administrative Information**

Data Status: a) Not Reviewed

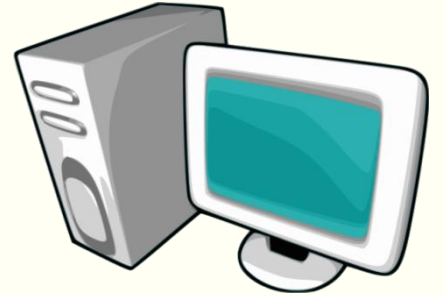
**Update Assessment**

Home | Legal Disclosure and Terms of Use | Privacy Policy | Financials | Contact your iMap Administrator

Copyright © 2017 NatureServe.



# 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 main navigation page in Enter Data section, click “Survey”.

The screenshot shows the Pennsylvania Administrator Tools web application. The browser address bar displays `login.imapinvasives.org/paimi/home/`. The page header includes the iMapInvasives logo, the title "Pennsylvania Administrator Tools", and a user welcome message: "Welcome back, Amy (amyjewitt10, User Level 10) 2:08". Navigation buttons for "Home" and "Log Out" are present. A "Show Your iMap Stats" link is also visible.

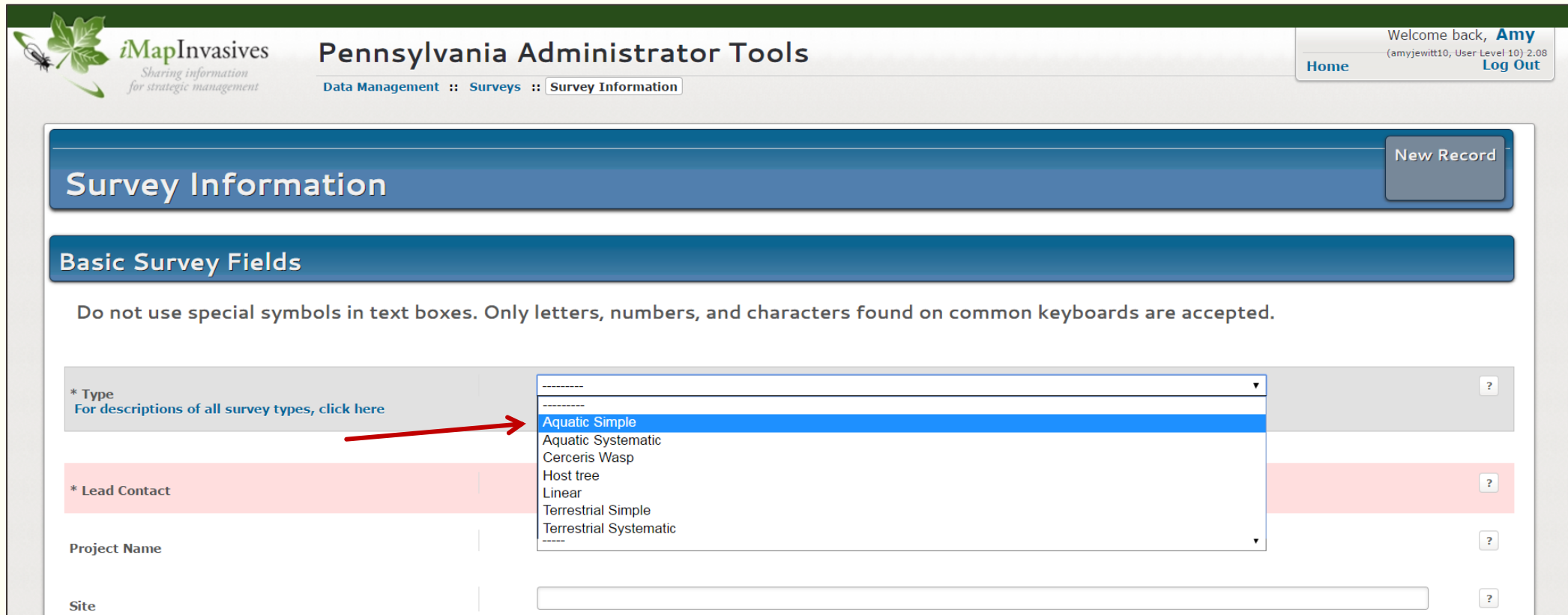
The main content area is divided into four sections:

- Enter Data**: Contains a thumbnail of the data entry interface and a list of links: Observation, Survey, Treatment, and Infestation Management. A red arrow points to the "Survey" link.
- View the Map**: Contains a thumbnail of the map interface and a list of links: View the Map and Not using a high-speed internet connection?
- View Table**: Contains a thumbnail of a data table and a list of links: All Observations, Surveys, Treatments, Infestation Management, Assessments, Animals, Insects, Plants, and IPMDAT Shared Results.
- Query and Reports**: Contains a thumbnail of a query interface and a list of links: 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.



# How to Enter a Survey Record (Absence Data)

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



The screenshot displays the 'Survey Information' page in the 'Pennsylvania Administrator Tools' system. The page header includes the 'iMapInvasives' logo, the title 'Pennsylvania Administrator Tools', and a user welcome message for 'Amy'. The breadcrumb trail shows 'Data Management :: Surveys :: Survey Information'. A 'New Record' button is located in the top right corner of the form area.

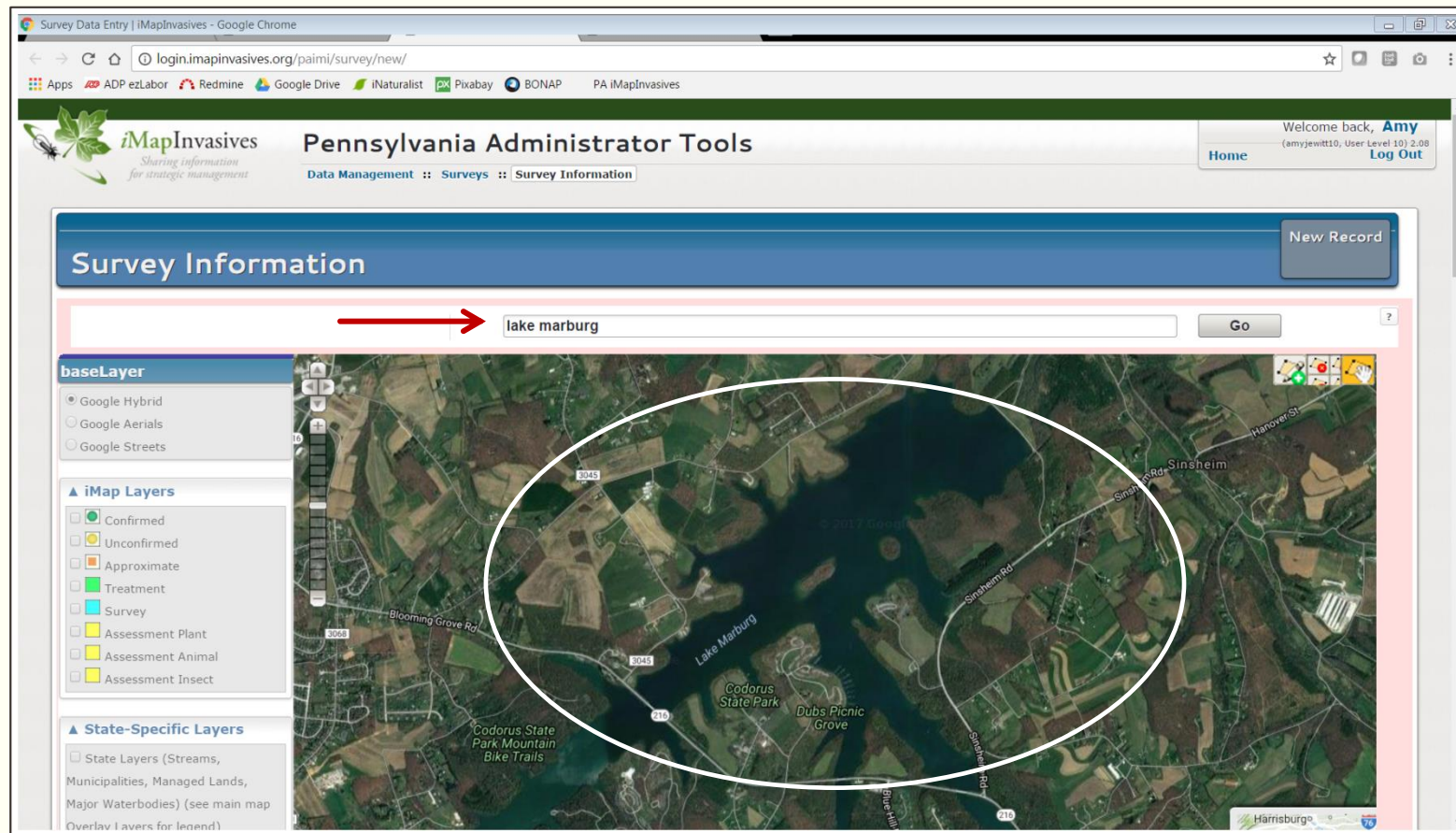
The main section is titled 'Basic Survey Fields'. Below this title, a note states: 'Do not use special symbols in text boxes. Only letters, numbers, and characters found on common keyboards are accepted.'

The form contains several fields:

- \* Type:** A dropdown menu with a red arrow pointing to it. The menu is open, showing options: 'Aquatic Simple' (highlighted in blue), 'Aquatic Systematic', 'Cerceris Wasp', 'Host tree', 'Linear', 'Terrestrial Simple', and 'Terrestrial Systematic'. A question mark icon is visible to the right of the dropdown.
- \* Lead Contact:** A text input field with a question mark icon to its right.
- Project Name:** A text input field with a question mark icon to its right.
- Site:** A text input field with a question mark icon to its right.

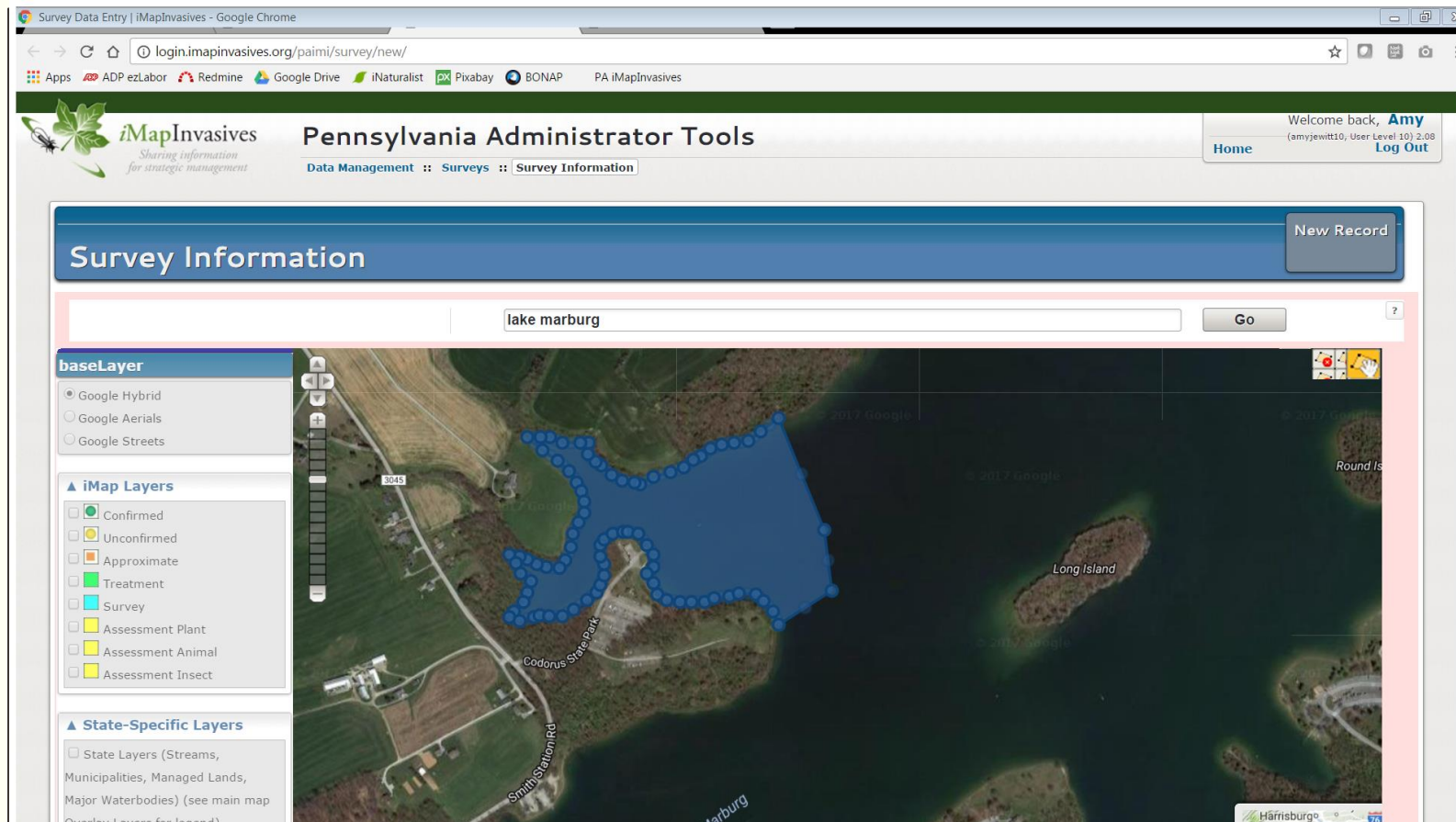
# How to Enter a Survey Record (Absence Data)

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.



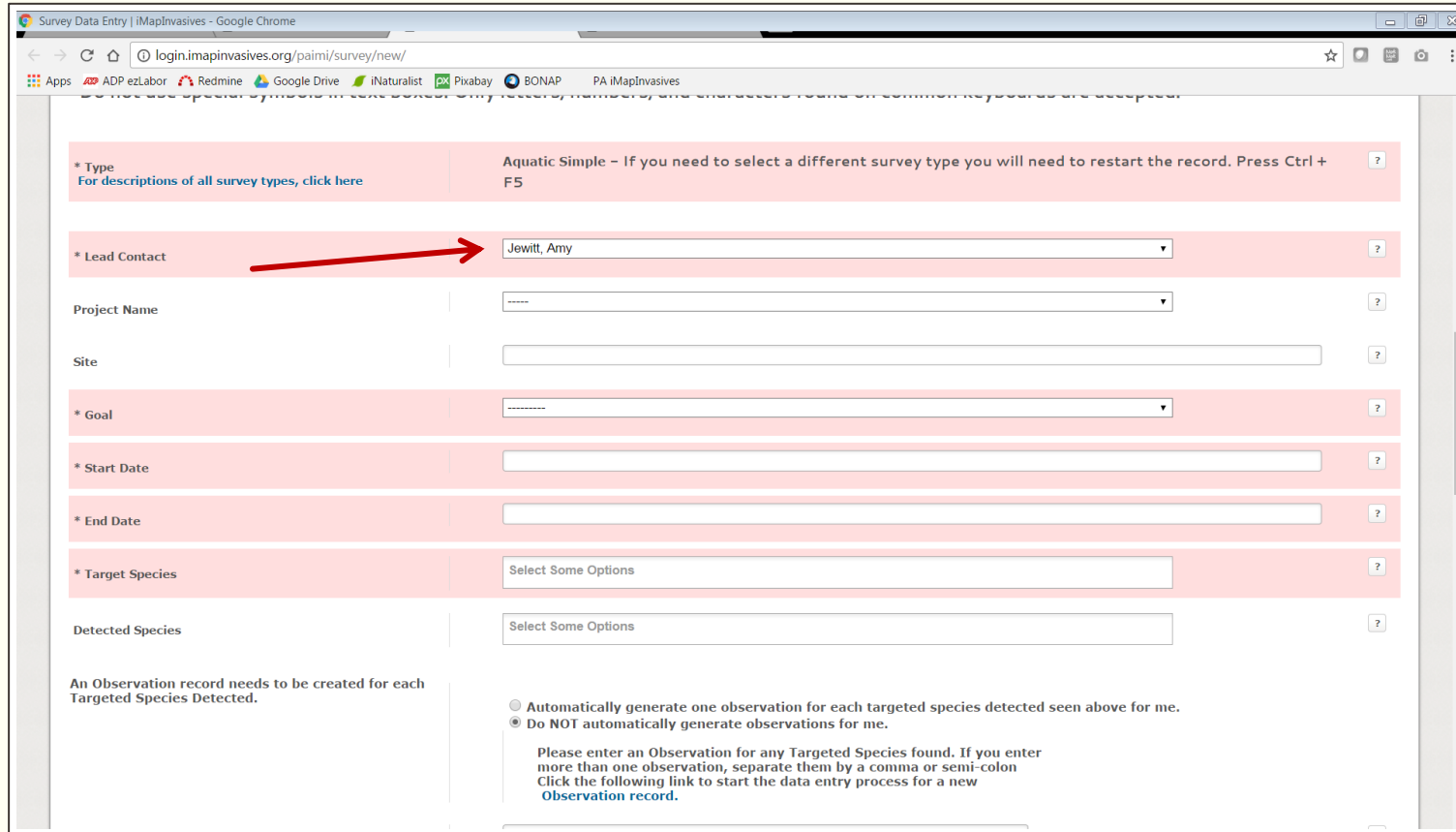
# How to Enter a Survey Record (Absence Data)

4. Use the drawing tools in 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 text input field]
- \* End Date**: [Empty text 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.

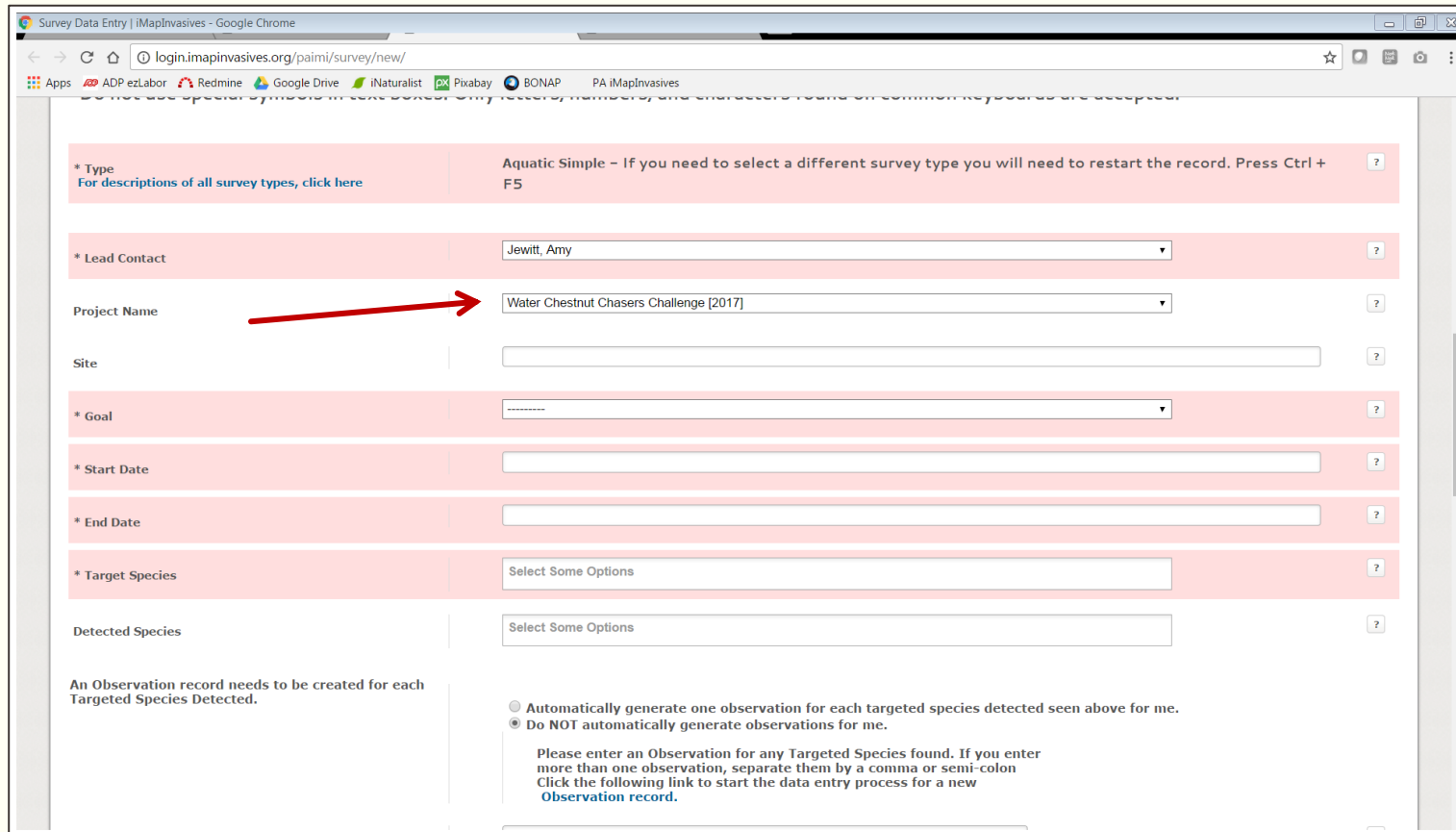
Below the radio buttons, there is a text box with the following text:

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 [2017]” 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 text field)
- \* Goal**: (empty dropdown menu)
- \* Start Date**: (empty date field)
- \* End Date**: (empty date field)
- \* Target Species**: Select Some Options
- Detected Species**: Select Some Options

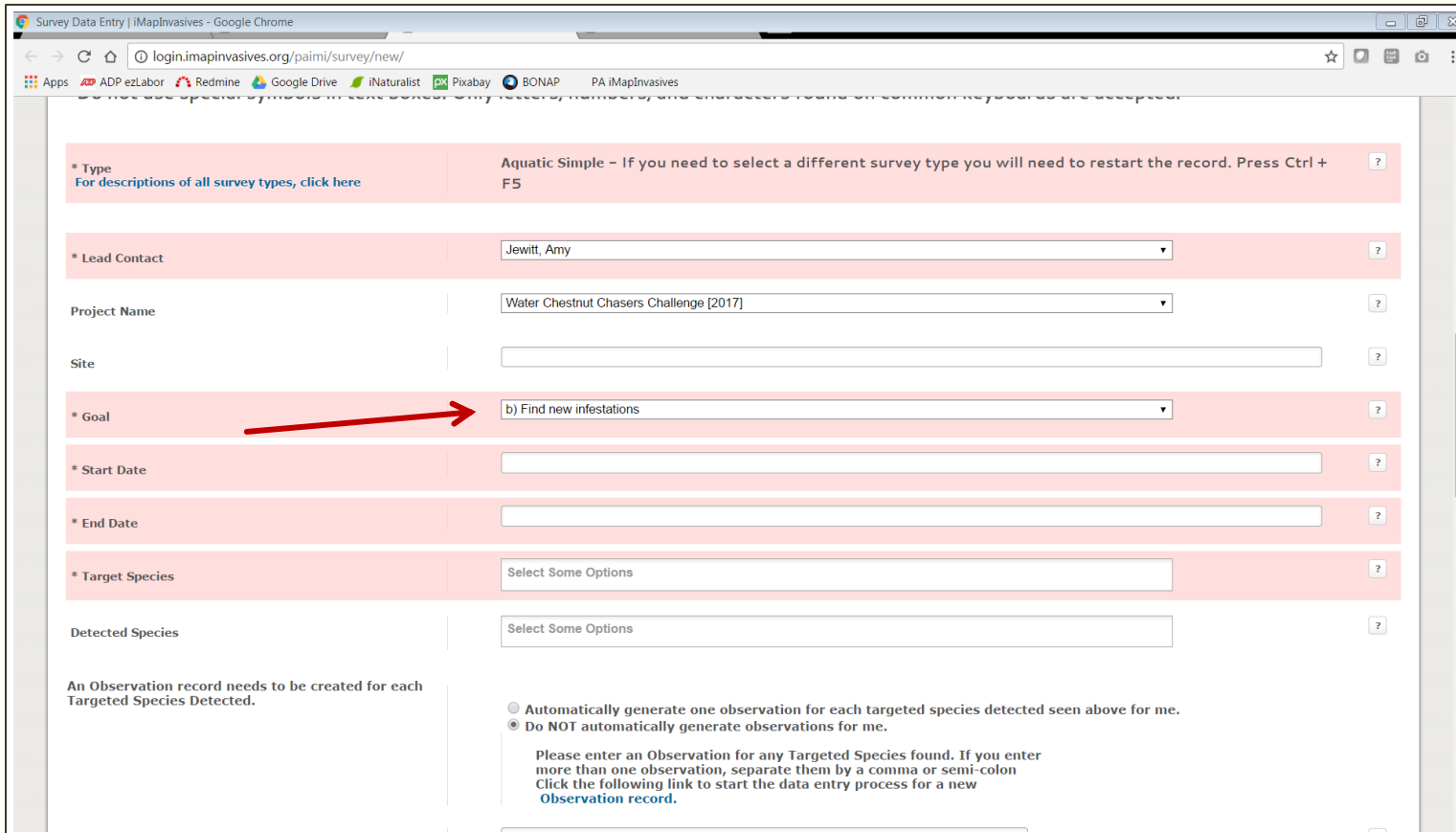
At the bottom, there are radio buttons for observation generation:

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

Below the radio buttons, a note states: "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." with a blue link.

# How to Enter a Survey Record (Absence Data)

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



The screenshot shows the 'Survey Data Entry' form in a Google Chrome browser. 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 with red borders and question mark icons for help:

- \* 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 text field)
- \* Goal**: b) Find new infestations (highlighted with a red arrow)
- \* Start Date**: (empty text field)
- \* End Date**: (empty text 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 instructions: '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 the 'Survey Data Entry' form in a Google Chrome browser. 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 with red arrows pointing to the 'Start Date' and 'End Date' fields, which both contain the date '2017-07-04'.

**\* 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**

**\* 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

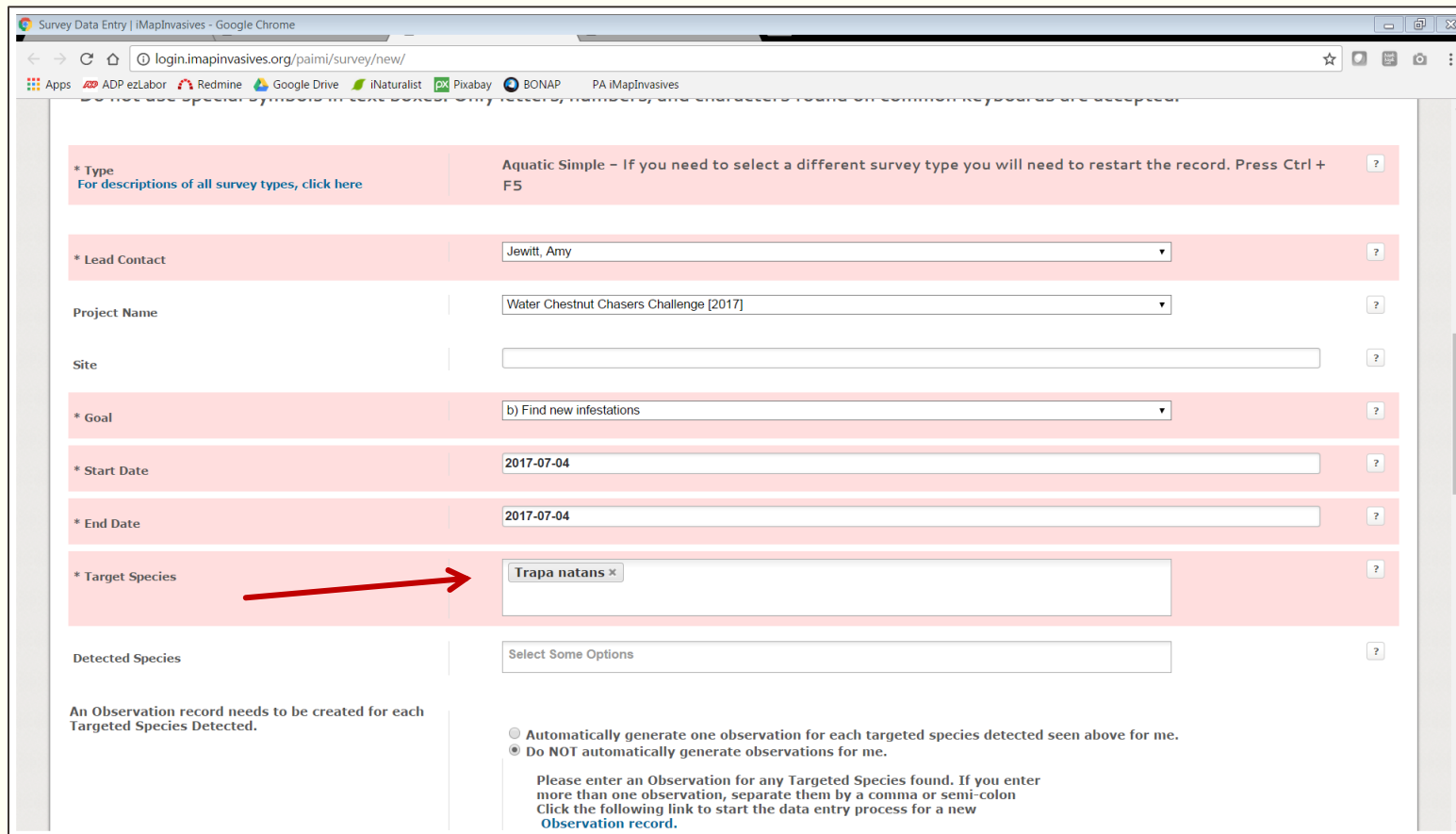
An Observation record needs to be created for each Targeted Species Detected.

☐ 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)

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". Below this, the "Detected Species" section has a dropdown menu with the text "Select Some Options". At the bottom, there are radio buttons for "Automatically generate one observation for each targeted species detected seen above for me." and "Do NOT automatically generate observations for me." (which is selected). A note at the bottom states: "An Observation record needs to be created for each Targeted Species Detected. 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."

Survey Data Entry | iMapInvasives - Google Chrome

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

Apps ADP ezLabor Redmine Google Drive iNaturalist Pixabay BONAP PA iMapInvasives

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

\* 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

\* 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 with red highlights and question marks for help:

- \* 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 x
- Detected Species**: \*\* None Detected \*\* x (indicated by a red arrow)

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.

At the bottom, there is a text box for 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 for iMapInvasives. The form is divided into several sections, each with a label on the left and a corresponding input area on the right. The 'General comments' section is highlighted with a red arrow pointing to its text area.

**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**

ID Numbers (e.g. NY-123456U; NY-316017U or NY-123456U, NY-316017U)

OBSID	Scientific Name	Observe Date	Observer	Assessment ID	Area (square meters)
-------	-----------------	--------------	----------	---------------	----------------------

**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)

---

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 with the text "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 field.
- 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)

---

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)

---

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

Home | Legal Disclosure and Terms of Use | Privacy Policy | Financials | Contact your iMap Administrator

Copyright © 2017 NatureServe.



# CHALLENGE FOLLOW-UP

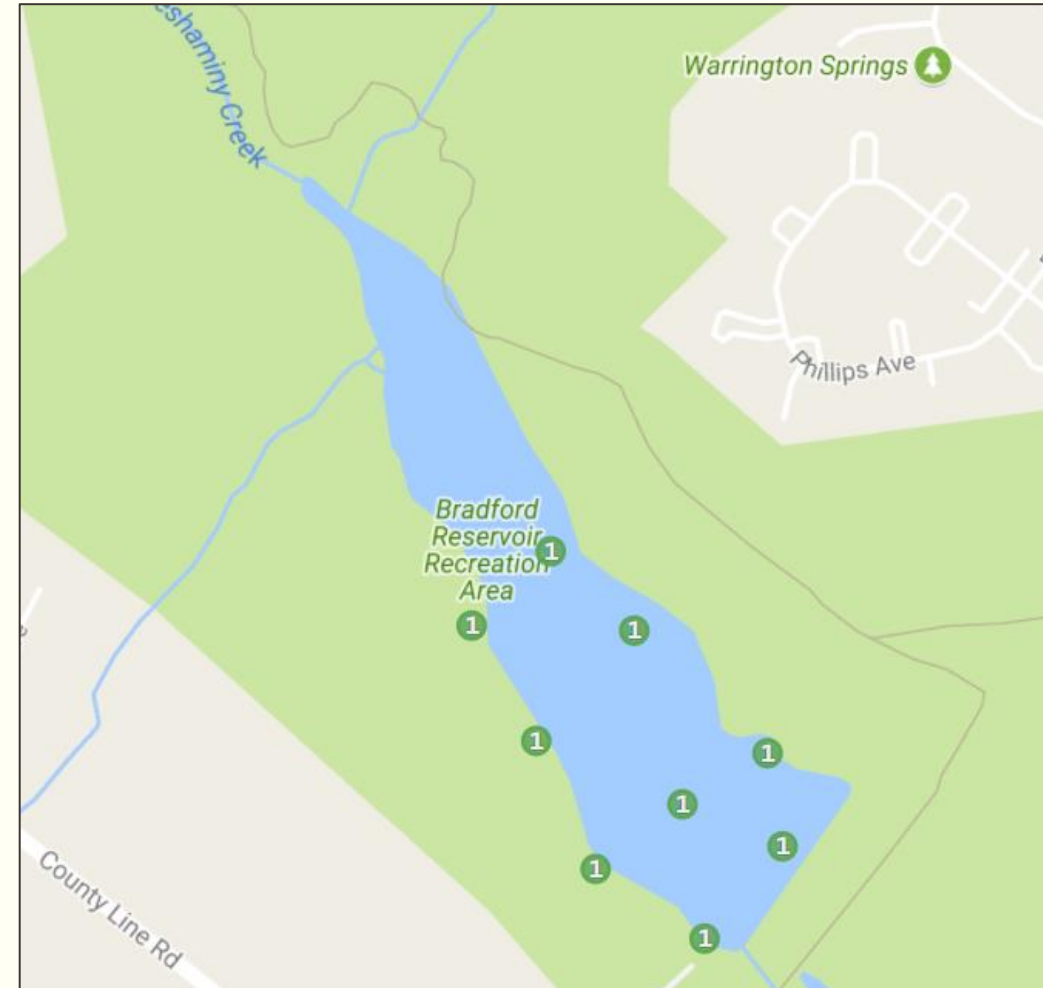
What happens once the challenge is over?



# Data Results and Analysis

---

- An important component of the Challenge will be analysis of all data entered into iMapInvasives.
- Data highlights will include:
  - Any new water chestnut infestations found
  - Waterbodies that require continued treatment efforts
  - Knowledge of places 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**





# Grand Prize Winner



The winner of the Challenge will be the person who enters the most water chestnut data into iMapInvasives.

- Includes both presence and absence data.

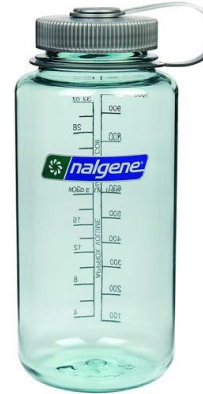
**Winner will be announced on August 31<sup>st</sup>!**

Prize items can be used while outside enjoying your local pond, lake, or river this summer!

- Grand Prize Package:

- Nalgene bottle
- Baseball cap
- Beach towel
- Dry bag
- REI gift card

- *Note: Items pictured here may look differently than the prizes to be awarded.*



# 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

---

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



Flowering rush (*Butomus umbellatus*)

# Other Aquatic Invasives to Look For

---



Hydrilla (*Hydrilla verticillata*)



Curly-leaf pondweed  
(*Potamogeton crispus*)

Brazilian elodea (*Egeria densa*)





# Other Aquatic Invasives to Look For

---



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

---



Purple loosestrife (*Lythrum salicaria*)

Narrowleaf cattail (*Typha angustifolia*)





# STAY INVOLVED!

If you live in eastern Pennsylvania,  
volunteer your time for a water chestnut  
pulling event this summer.



# 2017 Lake Towhee Water Chestnut Pull

---

- Where: Lake Towhee Park Boat Launch (Bucks County)
  - 800 Old Bethlehem Road, Quakertown, PA 18951
- When: July 18<sup>th</sup>, 19<sup>th</sup>, and 20<sup>th</sup>
  - Tuesday, Wednesday, and Thursday
  - 9:00am – 2:00pm
- Lunch, gloves, and heavy duty trash bags will be provided for all volunteers who pre-register.
- How to register:
  - Contact Meghan Rogalus at [mrogalus@bucksccd.org](mailto:mrogalus@bucksccd.org) or 215-345-7577 x107.
  - Sign up online: <http://signup.com/go/DNIDRJc>





# Questions?

---

Amy Jewitt  
Pennsylvania iMapInvasives Coordinator  
[ajewitt@paconserve.org](mailto:ajewitt@paconserve.org)  
412-586-2305  
[www.paimapinvasives.org](http://www.paimapinvasives.org)



Good luck Water Chestnut Chasers!