

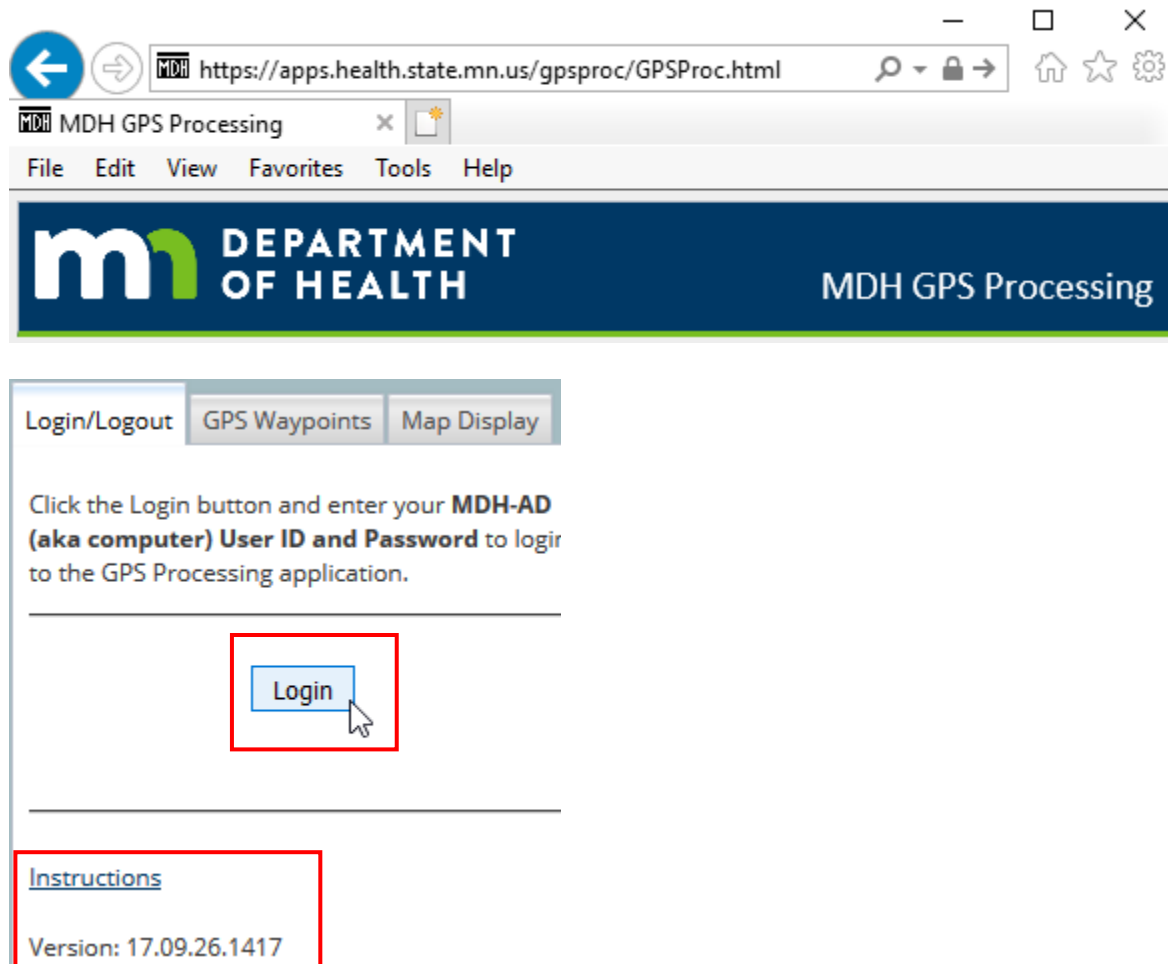
Instructions for using the MDH GPS Processing web browser data editing application

Last updated October 3, 2017.

LOGGING IN

To begin, open your web browser and go to the following web site:

<https://apps.health.state.mn.us/gpsproc/GPSProc.html>.

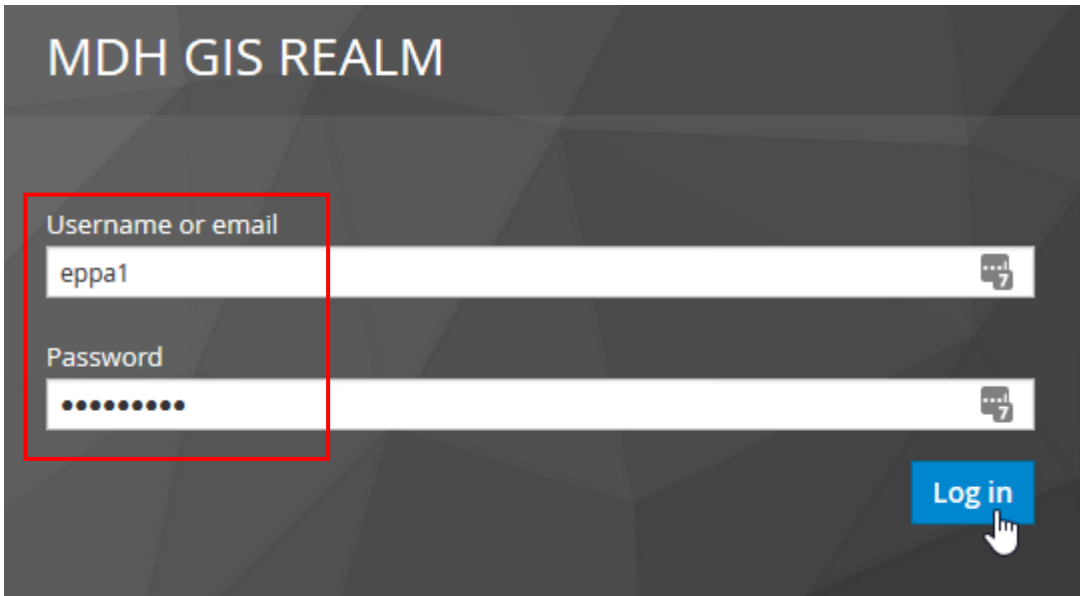


Click the Login button to open the login page.

NOTE: the **Instructions** link opens up this PDF document, and the current version of this application is also shown.

LOGGING IN (continued)

On the **MDH GIS Realm** page, enter your **MDH-AD (aka computer) Username and Password** and click the **Log in** button to login to the GPS Processing application.

The image shows the login interface for the MDH GIS REALM application. The title "MDH GIS REALM" is at the top left. Below it are two input fields: "Username or email" containing "eppa1" and "Password" containing masked characters. Both fields have a red rectangular highlight box around them. To the right of each field is a small icon of a speech bubble with the number 7. At the bottom right is a blue "Log in" button with a hand cursor icon pointing at it.

NOTE: There is no session time limit for this application, but if you navigate away from this web page and try to return to it using the back arrow you will have to log in again.

SELECTING A GPS FILE TO WORK WITH

Once you've logged in, the application focuses on the **GPS Waypoint** tab (the application is initially zoomed in on the State Capitol building). Click on the **Select a GPS File** combo box to display a list of downloaded GPS files that have GPS waypoints that still need to be processed. By default, this list only includes GPS files downloaded within the last year. If you want to search for older files, click the **Show files more than 1 year old** check box and then click the **Select a GPS File** combo box again. When you select a GPS filename the program will immediately select and zoom to the first waypoint of that file (see next page).

Login/LogoutGPS WaypointsMap Display

Select a GPS File: Select a GPS File
☐ Show files more than 1 year old

Select a Waypoint: Waypoints..
FirstNextPrevLast
SaveCancel

County:

GPS Read Date/Time:

Unique Well#:

Alternate ID:

Reader:

Data Type:

Agency:

Program:

Location (max. length = 40 characters):

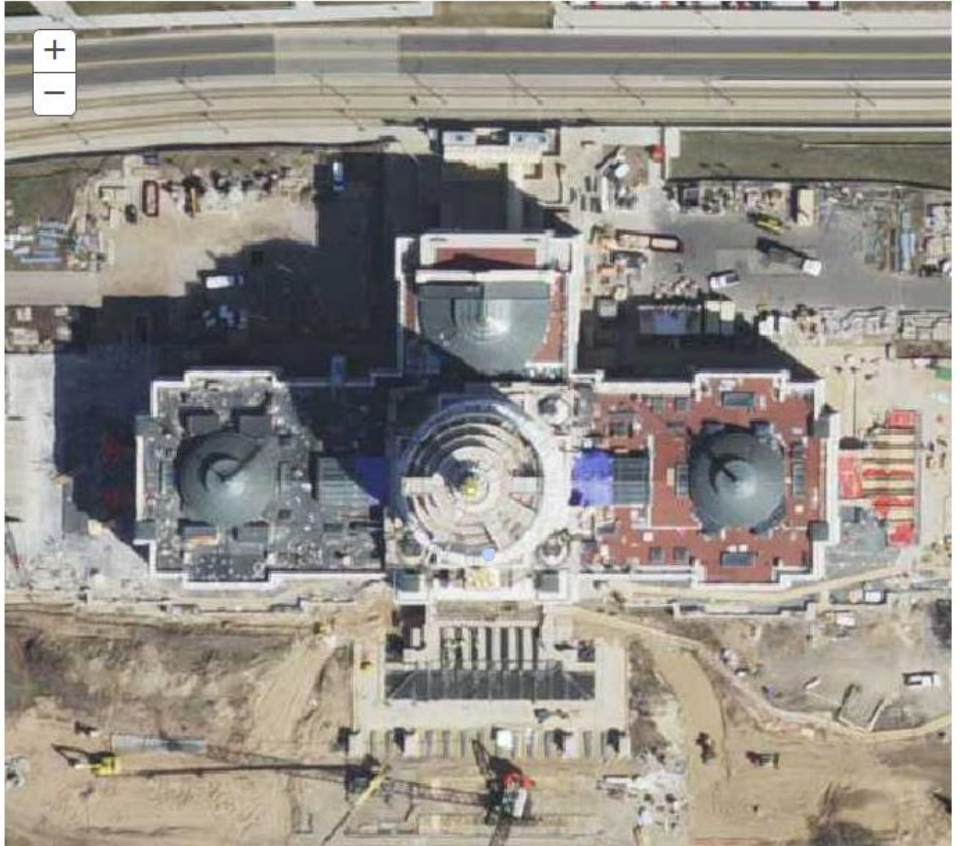
Remarks (max. length = 60 characters):

GPS Location:

☐ Point OK ☐ Adjust

☐ Don't include this waypoint in master GPS database.

Next Map Action: Identify features on map



INITIAL DISPLAY

The currently selected waypoint will display in the center of the image as a **yellow circle**, and its name is displayed to the left of the image.

At this point you can modify which layers and graphics to show on the map, change the map scale, type and select data for this waypoint, verify or adjust the current waypoint location on the map, save or cancel any changes you've made to this waypoint, navigate to a different waypoint of GPS file, or log out of the application.

The following pages show examples of how to perform these functions.

Login/LogoutGPS WaypointsMap Display

Select a GPS File: 1705051

☐ Show files more than 1 year old

Select a Waypoint: 001

FirstNextPrevLast

SaveCancel

County: Hennepin

GPS Read Date/Time: 5/3/2017 2:08:20P

Unique Well#:

Alternate ID:

Reader:

Data Type:

Agency:

Program:

Location (max. length = 40 characters):


Remarks (max. length = 60 characters):

GPS Location: not verified

☐ Point OK ☐ Adjust

☐ Don't include this waypoint in master GPS database.

Next Map Action: Identify features on map



GPS FILE AND WAYPOINT NAVIGATION

You can step through the waypoints of the current GPS file by using the **First**, **Next**, **Prev** (previous), and **Last** buttons. You can also move to a specific waypoint by clicking the **Select a Waypoint** combo box and clicking on the waypoint you want to work with. You can even work with a different GPS file by clicking the **Select a GPS File** combo box and selecting a different GPS file.


Login/LogoutGPS WaypointsMap Display

Select a GPS File: 1705051
☐ Show files more than 1 year old

Select a Waypoint: 001
FirstNextPrevLast
SaveCancel

County: Hennepin
GPS Read Date/Time: 5/3/2017 2:08:20P
Unique Well#:
Alternate ID:
Reader:
Data Type:
Agency:
Program:
Location (max. length = 40 characters):
Remarks (max. length = 60 characters):
GPS Location: not verified
☐ Point OK ☐ Adjust
☐ Don't include this waypoint in master GPS database.

Next Map Action: Identify features on map



EDITING

You can edit various fields by typing in data (text boxes) and by selecting values from the combo boxes. Any changes you make will be shown in **red text**. If you do make changes, both the **Save** and **Cancel** buttons will be enabled, and you will not be able to navigate away from this waypoint until you either save or cancel the changes you've made.

Use the **Alternate ID** text box for anything other than a unique well number. For example, if your waypoint was for a Public Water Supply well you could enter in the PWSID and Sample Point ID (e.g. 5040010S01) in the **Alternate ID** text box and the unique well number in the **Unique Well#** text box.

If the current GPS waypoint is a test point, personal point (e.g. fishing location), or is otherwise not needed, you can just click the check box labeled **Don't include this waypoint in the master GPS database** and then save the record without entering in any other information.

By default, the map uses MNGeo regional imagery. The current waypoint you are working with will appear as a **yellow circle** in the middle of the view.

The screenshot displays the 'GPS Waypoints' application interface, divided into a form on the left and a map on the right.

Form Fields (Left Panel):

- GPS Waypoints Tab:** Includes 'Select a GPS File: 1705051', a checkbox for 'Show files more than 1 year old', 'Select a Waypoint: 001', and navigation buttons (First, Next, Prev, Last, Save, Cancel).
- Metadata:** 'County: Hennepin' and 'GPS Read Date/Time: 5/3/2017 2:08:20P'.
- Waypoint Identification (Red Boxed):** 'Unique Well#: 123456', 'Alternate ID:', 'Reader: Epp, Al', and 'Data Type:'.
- Location Details:** 'Agency:', 'Program:', 'Location (max. length = 40 characters):', and 'Remarks (max. length = 60 characters):'.
- GPS Status:** 'GPS Location: not verified' with radio buttons for 'Point OK' and 'Adjust'.
- Database Inclusion (Red Boxed):** A checkbox labeled 'Don't include this waypoint in master GPS database.'.

Map View (Right Panel):

- Next Map Action:** Identify features on map.
- Map Imagery:** Aerial view of a landscape with a road and trees.
- Waypoint Marker:** A yellow circle at the center of the map.
- Map Overlay:** Concentric circles representing distances (50ft, 100ft, 150ft, 200ft) and radial lines for bearings (0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°).
- Map Controls:** Zoom in (+) and zoom out (-) buttons.
- Powered by:** esri logo.

EDITING (con't.)

WELL LOCATION VERIFICATION

If the current point appears to be at the right location, click the **Point OK** radio button. If you need to adjust the point location, click the **Adjust** radio button. In both cases note that the **Save** and **Cancel** buttons become enabled and the **GPS Location** text line changes to **Verified**, and when you click the **Adjust** button the text above the map changes to **Next Map Action: Click on Map to Adjust GPS location**.

To adjust the location of the current waypoint simply click on the map where the waypoint should be and the **yellow circle** will appear at the new location, moving away from the center of the bull's-eye. You can click the map as many times as you need to in order to get the waypoint in the correct location. The **pale red circle** at the original location will remain until you save your changes. Also, the map will re-center itself on the new location when you save your changes.

The screenshot displays the 'GPS Waypoints' application interface. On the left is a form with various input fields and buttons. On the right is a map view showing a bullseye target overlaid on an aerial photograph. A yellow circle is placed on the map, and a pale red circle is at the center of the bullseye. The 'GPS Location' field in the form is set to 'Verified'. The 'Adjust' radio button is selected. The 'Next Map Action' text at the top of the map view is 'Click on Map to Adjust GPS location'.

Form fields and buttons:

- Login/Logout | GPS Waypoints | Map Display
- Select a GPS File: 1705051
- ☐ Show files more than 1 year old
- Select a Waypoint: 001
- First | Next | Prev | Last
- Save | Cancel
- County: Hennepin
- GPS Read Date/Time: 5/3/2017 2:08:20P
- Unique Well#: 123456
- Alternate ID:
- Reader: Epp, AI
- Data Type:
- Agency:
- Program:
- Location (max. length = 40 characters):
- Remarks (max. length = 60 characters):
- GPS Location: Verified
- ☐ Point OK ☒ Adjust
- ☐ Don't include this waypoint in master GPS database.

Map view details:

- Next Map Action: Click on Map to Adjust GPS location
- Bullseye target with concentric circles at 50ft, 100ft, 150ft, and 200ft.
- Compass rose showing angles: 0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°.
- Powered by esri

EDITING (con't.)

SAVING AND CANCELLING

Any attribute or location changes you make to this waypoint will require you to either **Save** or **Cancel** your changes before proceeding to another record or quitting the editing session. If you click **Save** and you have entered in all the necessary attribute information and verified the point location, a message box will appear stating that the record appears to be complete and will be transferred to the main GPS database. If there are missing required data, a message box will appear listing the data that are still needed.

If you click **Cancel** all your attribute changes will be discarded and the waypoint location will return to its original location.

If a waypoint record has already been transferred to the main GPS database you will not be able to make further edits through this application (descriptive [blue text](#) appears at the bottom of the waypoint tab, the **Save** and **Cancel** buttons and all text boxes and combo boxes are disabled, and there is no way to adjust the waypoint location on the map).

The screenshot displays the 'GPS Waypoints' application interface. On the left is a form for editing a waypoint, and on the right is a map view.

Form Fields (Left Panel):

- Buttons: Login/Logout, GPS Waypoints, Map Display
- Select a GPS File: 1708113
- ☐ Show files more than 1 year old
- Select a Waypoint: 003
- Buttons: First, Next, Prev, Last
- Buttons: Save, Cancel
- County: St. Louis
- GPS Read Date/Time: 5/30/2017 17:52
- Unique Well#: 820941
- Alternate ID:
- Reader:
- Data Type: Water Well
- Agency: Minnesota Department of Health
- Program: WELL MANAGEMENT (MDH)
- Location (max. length = 40 characters):
- Remarks (max. length = 60 characters):
- GPS Location: not verified
- ☐ Point OK ☐ Adjust
- ☐ Don't include this waypoint in master GPS database.
- NOTE: This record has been transferred to the main GPS database. Contact Al Epp at (651) 201-4693 if further changes are needed.**

Map View (Right Panel):

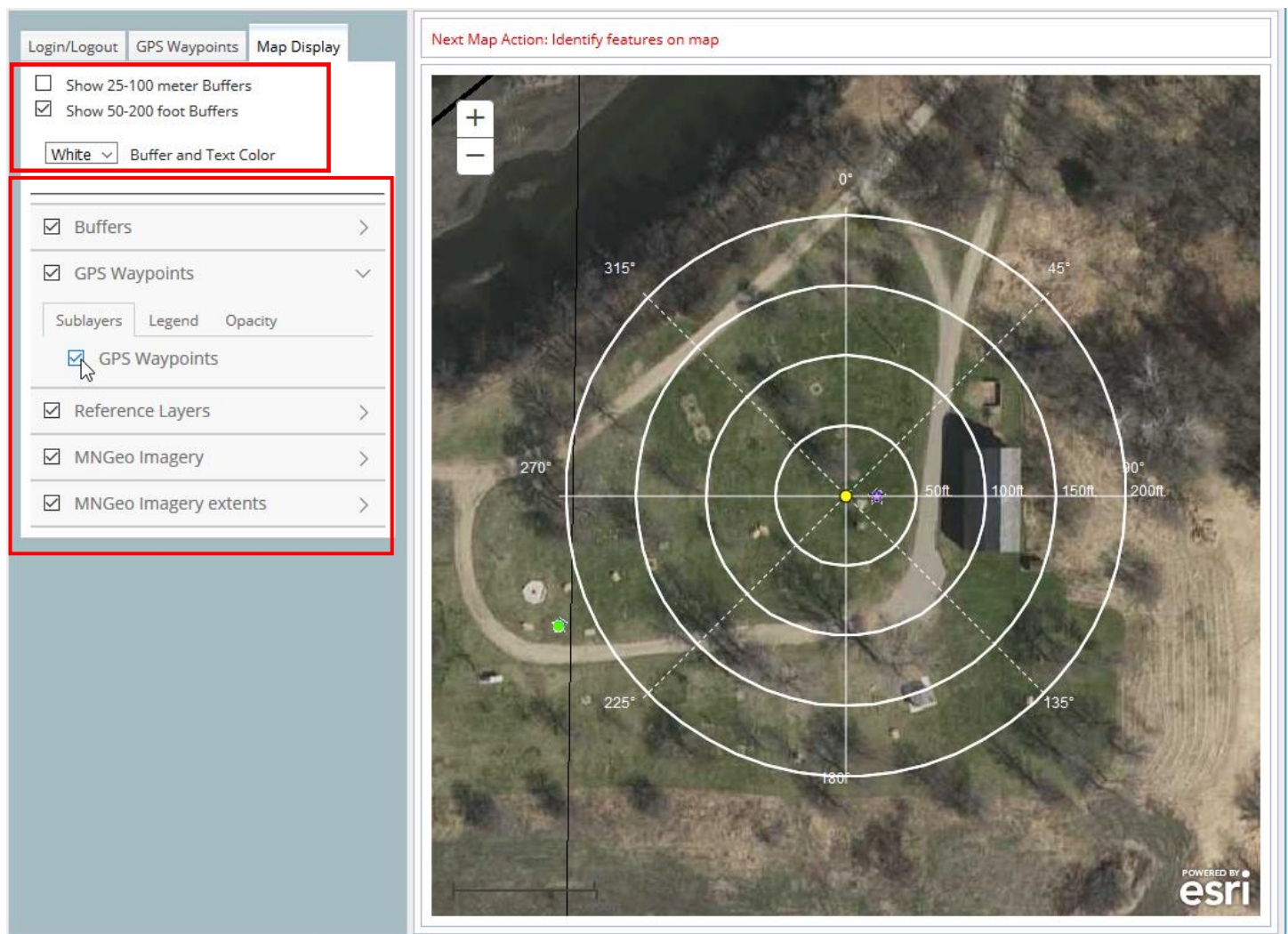
- Next Map Action: Identify features on map
- Map: Aerial view of a wooded area with a yellow dot representing the waypoint location.
- Map Controls: +, - (Zoom in/out), Switch Basemap (click to close)
- Map Grid: Concentric circles at 50ft, 100ft, 150ft, 200ft. Radial lines at 0°, 45°, 90°, 135°, 180°, 225°, 315°, 360°.
- Map Footer: DigitalGlobe, Microsoft | Esri, HERE, Garmin, iPC, esri

WORKING WITH THE MAP

To change the map display click the **Map Display** tab.

Map Scales, Buffers, Bearing Lines, and Text - This application allows you to zoom in and out using your mouse wheel, or by clicking the + and – buttons in the upper left corner of the map. You can also display buffer circles (in meters or feet) and bearing lines by using the **Show 25-100 meter Buffers** and **Show 50-200 foot Buffers** check boxes. You can also change the color of these graphics and associated text in order to make them easier to see, depending on the imagery displayed.

Map Layers - The map layers are listed in the map layer list. You can expand the layer groups, check Sublayers on and off, view the layer symbology in the Legend (see next page), and change the Opacity of each layer. Checking a layer on or off will redraw the map accordingly. In this application the **MnGeo Imagery** layer is on by default, and the application will display imagery based on the location of the facility you're currently working with.



WORKING WITH THE MAP (continued)

Map Layers (continued) – This page is just showing how to view the layer symbology.

☒ Reference Layers

Sublayers

Legend

Opacity

Public Water Supply Sources

● Community

▲ Non-Transient Non-Community

☆ Transient Non-Community

■ Non-Public

Unsealed County Well Index

●

Sealed County Well Index

●

PWS Removed From Flow

● Community

▲ Non-Transient Non-Community

☆ Transient Non-Community

■ Non-Public

all GPS waypoints

● Not yet in Master GPS Database

● Completed/Transferred

PLSS sections

□

City, Township, & Unorganized Territories

□

County


□

☒ MNGeo Imagery

Next Map Action: Identify features on map

+

–

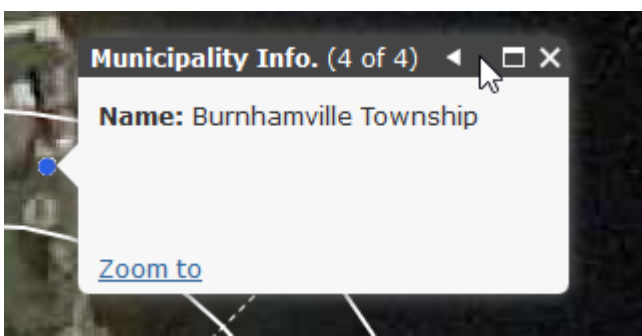
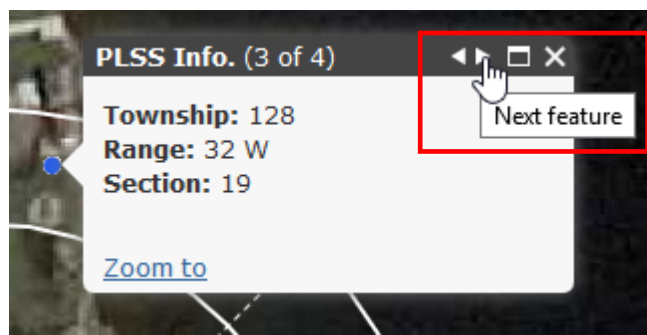
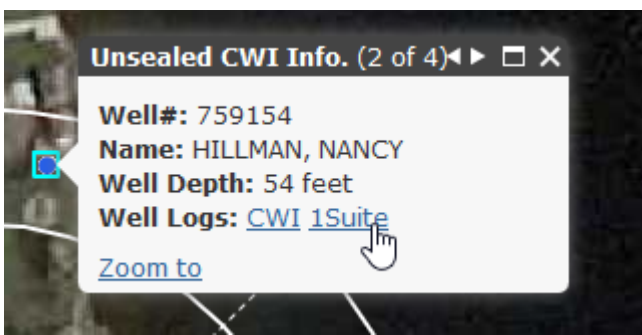


POWERED BY
esri

WORKING WITH THE MAP (con't.)

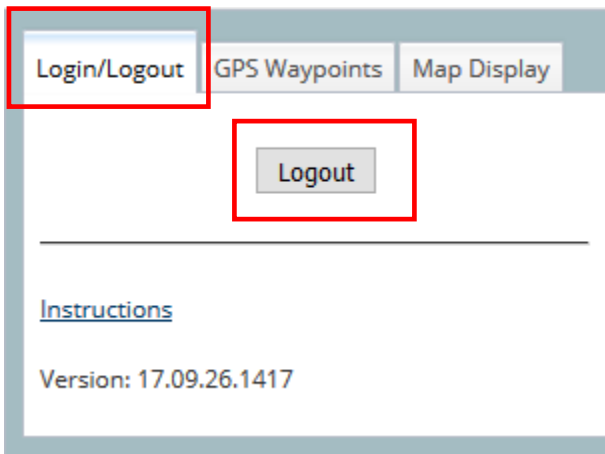
Unless you have clicked either the **Point OK** or **Adjust** buttons, clicking on the map will open up a series of popup boxes identifying the feature(s) at that location. If there is more than one feature you can display information about each one by clicking the left and right arrows on the popup boxes. Click the **X** in the upper right corner of any popup box to close the box.

Next Map Action: Identify features on map



LOGGING OUT

When you are done working, click on the **Login/Logout** tab and click the **Logout** button to log out of your current session of this application.



That's about it. Hopefully you will be able to successfully use this application and find it valuable, worthwhile, and not too confusing. Please contact Alan Epp at (651) 201-4693 or alan.epp@state.mn.us if you have any questions or problems with this application.