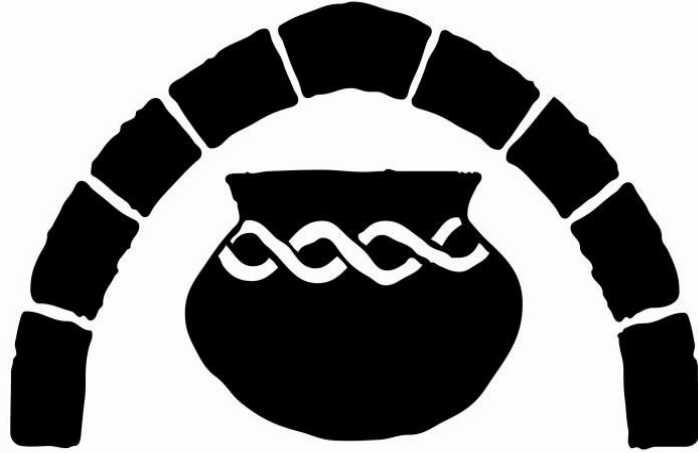


Indiana Historic Buildings, Bridges, And Cemeteries Map



**INDIANA DIVISION OF
HISTORIC PRESERVATION
AND ARCHAEOLOGY**

DNR

Indiana Department
of Natural Resources

Public's User Guide

Last Updated April 2020

Indiana Historic Buildings, Bridges, And Cemeteries Map

You can use the Indiana Historic Buildings, Bridges and Cemeteries Map (IHBBC) to search for the locations of cemeteries, historic structures (IHSSI County Survey), historic bridges, and sites listed in the National Register of Historic Places. Many GIS programs will show you similar information, like the location of a cemetery near a community, but the unique piece to the IHBBC is that it will connect the user to the printable page found on the Division of Historic Preservation and Archaeology's online database – State Historic Architecture and Archaeology Resource Database (SHAARD). This means that you can learn more information about the cemetery or historic structure you select from the map. The following guide will help you best utilize the program in order to find the information for which you are searching.

To open the Indiana Historic Buildings, Bridges, and Cemeteries Map, go to <http://www.in.gov/dnr/historic/4505.htm>. This brings you to the home page of the IHBBC.

Map Updates for Returning Users:

- The layers will be combined into one layer and you may now select any point with any layer selected.
- Silverlight will no longer be used for SHAARD GIS and, as a result, will no longer be available to be viewed.
- Users will be able to access shape files without asking DHPA staff to send desired files.

Search Tips:

- You can zoom to a certain area by holding the “shift” key and dragging your arrow over the map.
- There are four counties (Marion, Morgan, Hancock, and Johnson) that have yet to be entered into SHAARD, though they are mapped in the IHBBC map. This means that the IHSSI number is accurate, but there will be no further information on the site either on SHAARD or the IHSSI. These counties will be resurveyed as soon as sufficient funds are made available to the DHPA office. Should you wish to view the IHSSI records for these counties, you may contact our office for a record check at DHPARecordscheck@dnr.IN.gov.
- Once you exit out of the map, all the information you left on the map will NOT be saved. Once you exit the map, you will start again from the map as it first appears on page 4 of this User Guide.**

Opening the IHBBC Map:

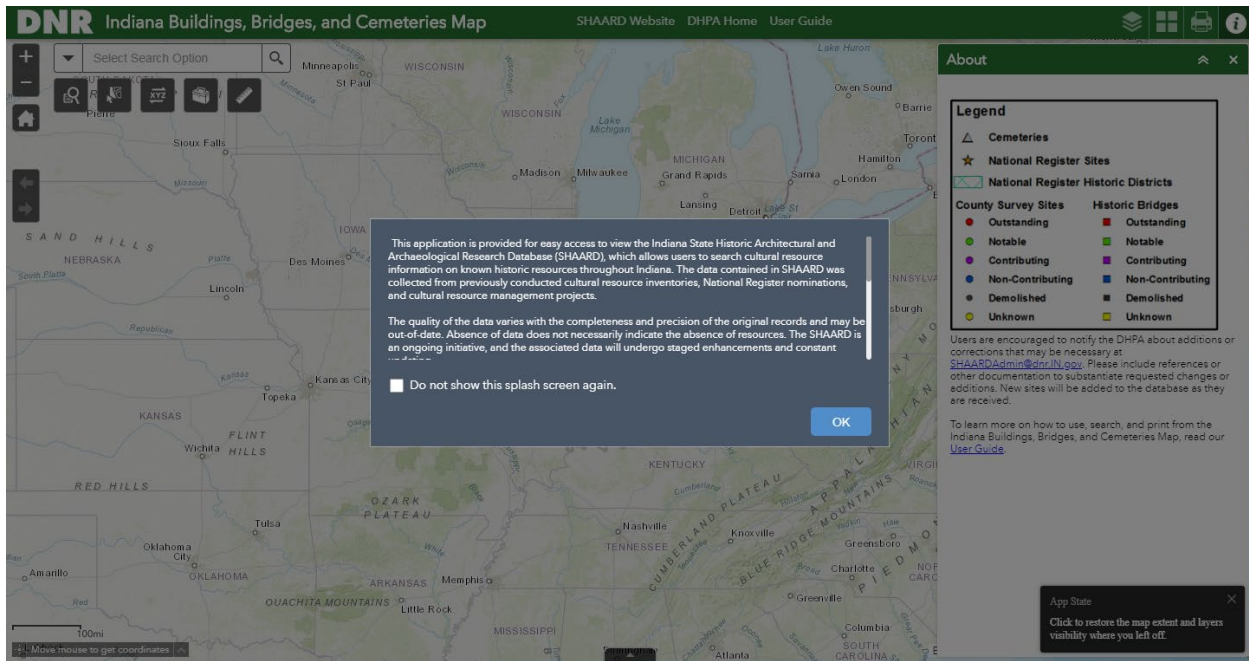
The Indiana Historic Buildings, Bridges, and Cemeteries Map is supported and powered by Esri. You do not need to download any software in order to use this new map. Esri is available on any internet search engine and can be accessed at anytime. Keep in mind that the different search engines may present the map in different ways, so if the map and tools look slightly different than the screen shots used in the User Guide, do not be alarmed. This User Guide was created by accessing the map in Chrome.

Once you follow the link to the Indiana Historic Buildings, Bridges, and Cemeteries Map, click the Map App (circled in red). This will take you to the map.

The screenshot shows a web browser window displaying the 'Indiana Historic Buildings, Bridges, and Cemeteries Map' application page. The browser's address bar shows the URL: <https://indnr.maps.arcgis.com/home/item.html?id=1593429c17c34942a0d1d3fac03c4a80>. The page features a blue header with the title 'Indiana Historic Buildings, Bridges, and Cemeteries Map'. Below the header, there is a navigation menu with 'Home', 'Gallery', 'Map', 'Scene', and 'Groups'. A 'Sign In' button and a search bar are also present. The main content area is divided into sections: 'Overview', 'Description', 'Details', 'Owner', 'Tags', and 'Credits (Attribution)'. In the 'Overview' section, a 'Map App' icon is circled in red. The 'Description' section provides information about the application's purpose and data sources. The 'Details' section lists technical specifications like size and API. The 'Owner' section identifies the user as 'dnrgis_indnr'. The 'Tags' section includes 'SHAARD, structures, cemeteries, county survey sites, historic bridges, national register, DHPA'. The 'Credits (Attribution)' section mentions the 'Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology'. The browser's taskbar at the bottom shows various application icons and the system clock indicating 8:30 AM on 12/13/2017.

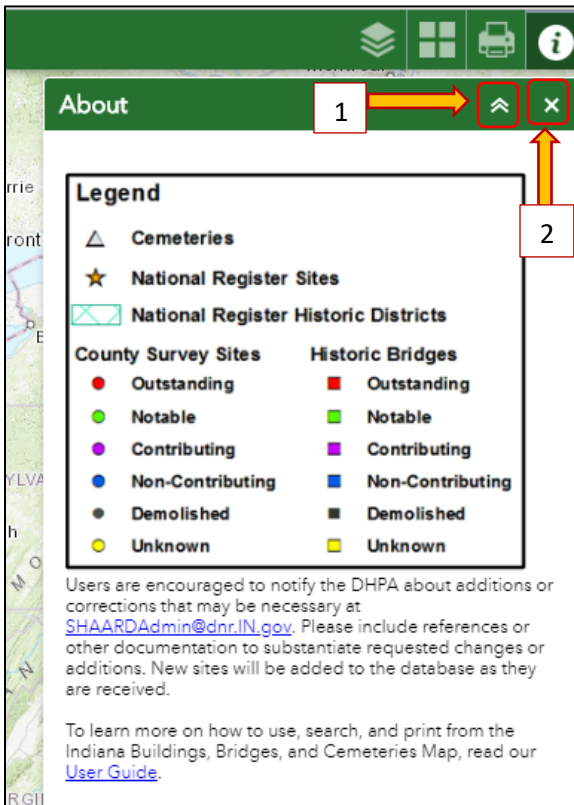
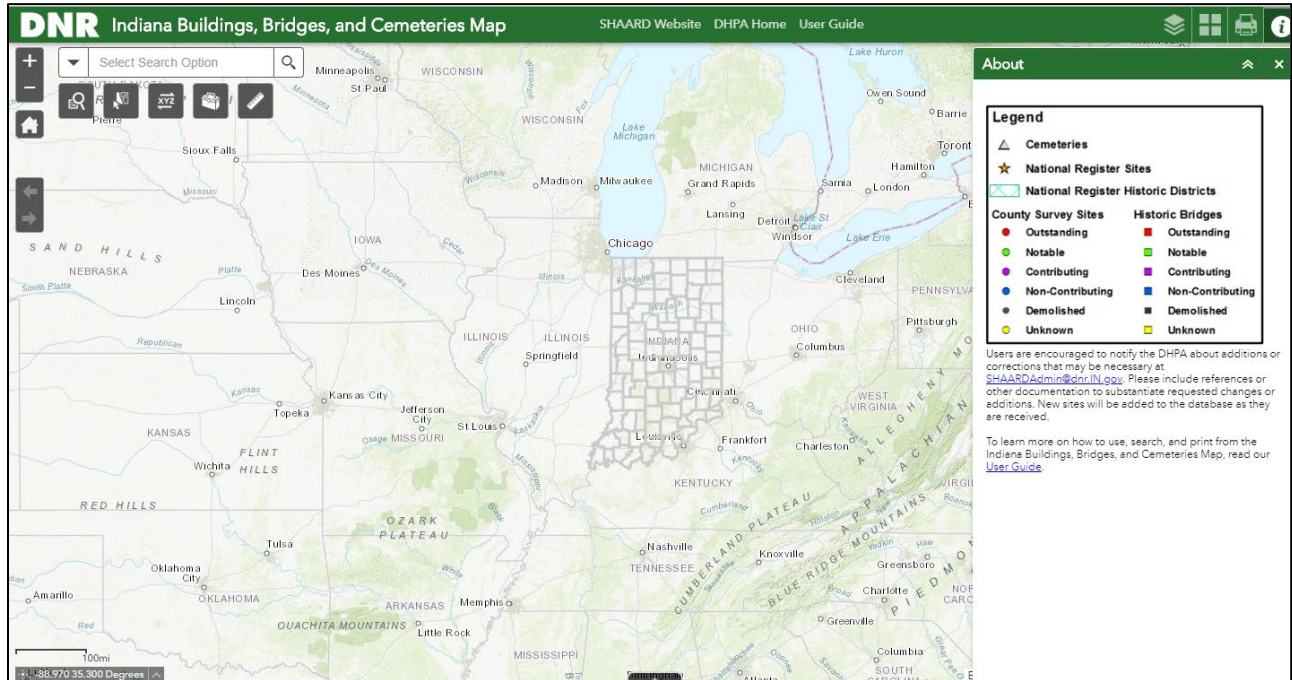
Viewing the Map – Splash Screen:

The map as it first appears will contain a legend which will include a splash screen that explains the use of the application and the regulations associated with SHAARD. Scrolling to the bottom of the splash screen will offer direct access to this user guide as well as the SHAARDAdmin email for corrections and direct questions. Click “OK” to remove the splash screen.



Viewing the Map:

This is the map as it first appears after the splash screen has been closed.



The "About" Feature

- 1) To minimize this feature, click on the double arrow.
- 2) To close this feature, click on the "x" in the top right hand corner.

Map Legend:

The key for all the symbols appear on the right hand side of the map. This key will also contain some information regarding responsibilities of SHAARD users and information concerning SHAARD updates.

-Cemeteries are represented by triangles.

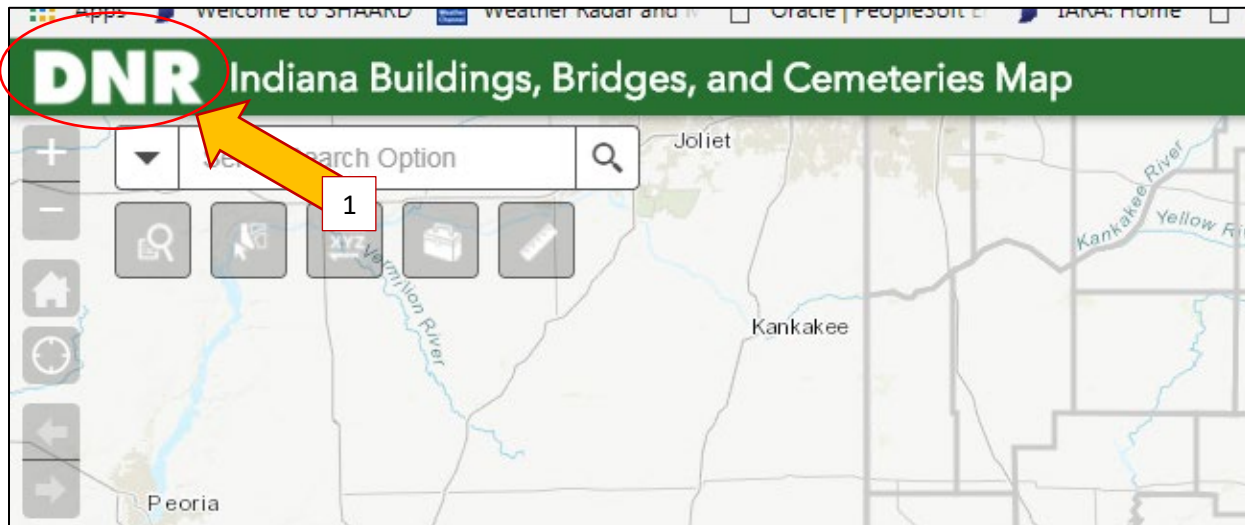
-National Register Sites are represented by stars.

-National Register Historic Districts are represented by blue cross hatched areas.

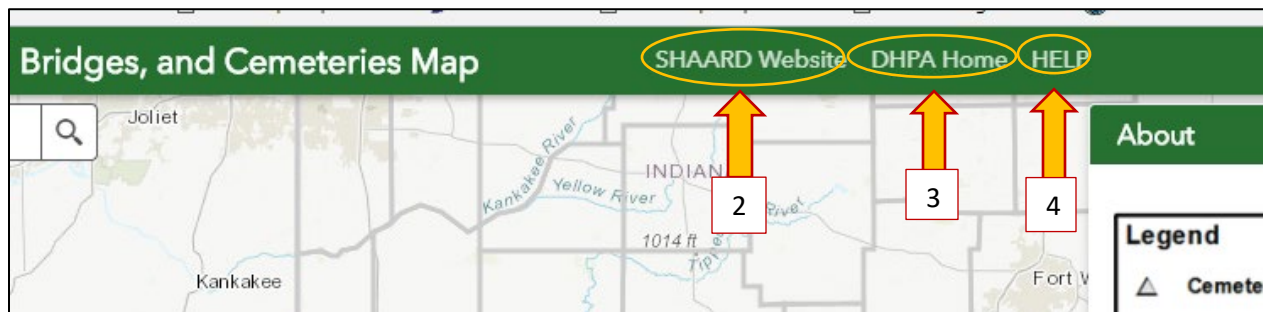
-County Survey Sites are represented by dots of varying color according to the current rating.

-Historic Bridges are represented by squares of varying color according to the current rating.

Easy Access to SHAARD Resources:

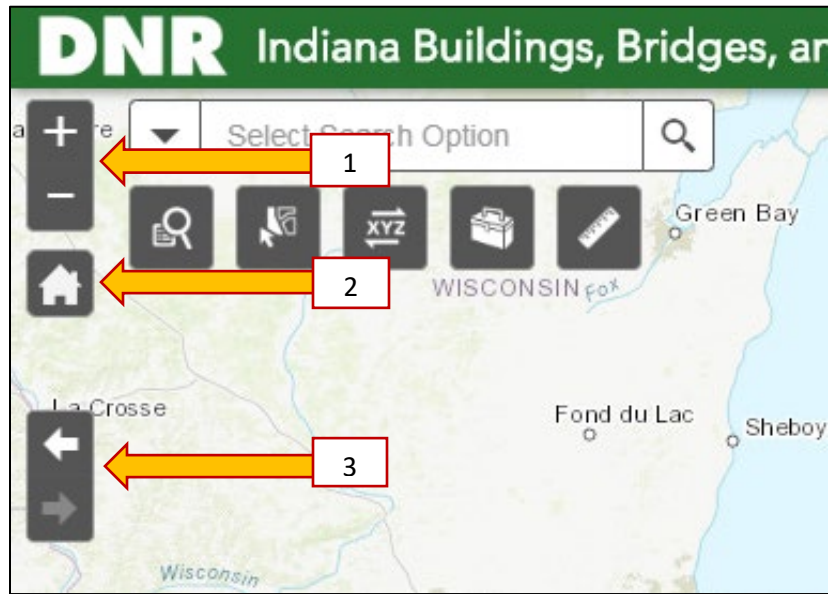


- 1) This option is a quick link that will take the user directly to the DNR website in a separate tab. This allows the user to gain quick access to other DNR resources.



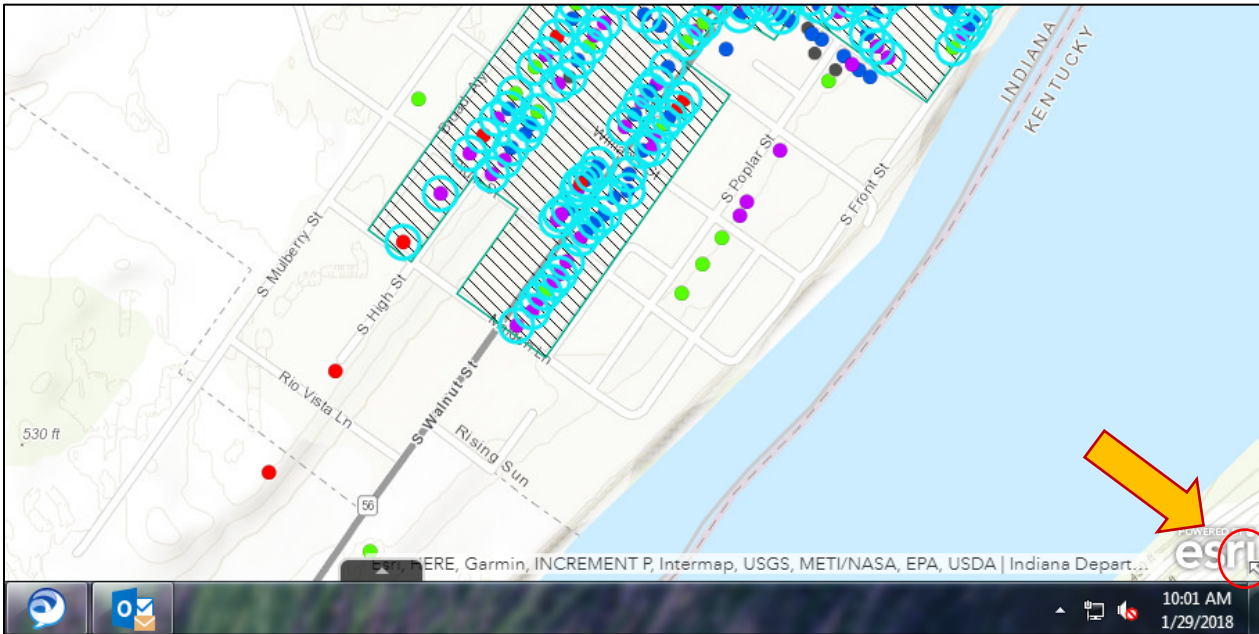
- 2) This option is a link that will take the user directly to the SHAARD website home page in a separate tab. This way, while searching for certain sites, the user will be able to search a site in SHAARD. In the SHAARD database, users will have access to the pdfs and additional photos on a given site available in the database.
- **As a reminder, you do NOT need to sign into SHAARD to look at any sites that are available on the Indiana Historic Buildings, Bridges, and Cemeteries Map. Simply enter as a Guest and happy searching!**
- 3) This option is a link that will take the user directly to the to the Division of Historic Preservation and Archaeology (DHPA) homepage in a separate tab. This allows the user to travel quickly to this page and other DHPA resources.
- 4) This option is a quick link that will take the user directly to this User Guide as a pdf which appears in a separate tab.

Moving Around the Map:

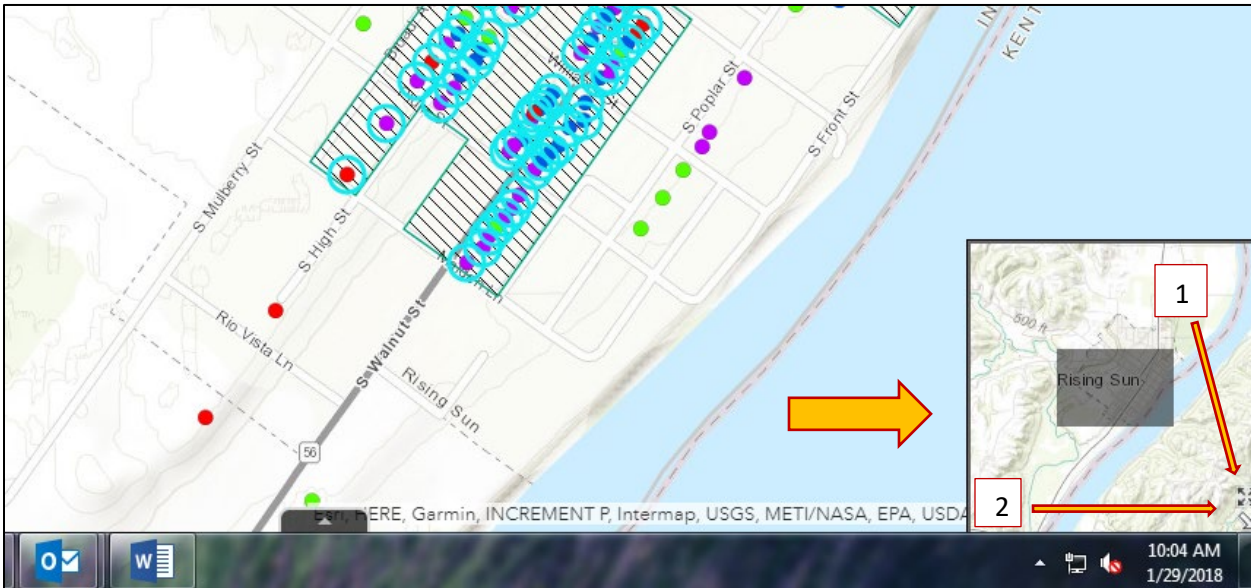


- 1) This tool in the upper left hand corner will allow the user to zoom in and out of the map. You can also zoom in and out by using the roller on your mouse. ****Tip:** when first conducting a search, no sites will appear until the user zooms in. Be patient and allow the sites to load once zoomed in.
- 2) This tool will take the user back to the first setting of the map. If the user is zoomed in, this will zoom the user back to the original setting.
- 3) This tool will allow the user to go back to the previous extent. The first arrow will act as a backspace button and the second will act as a forward button.

Tracking the Map's Extent:

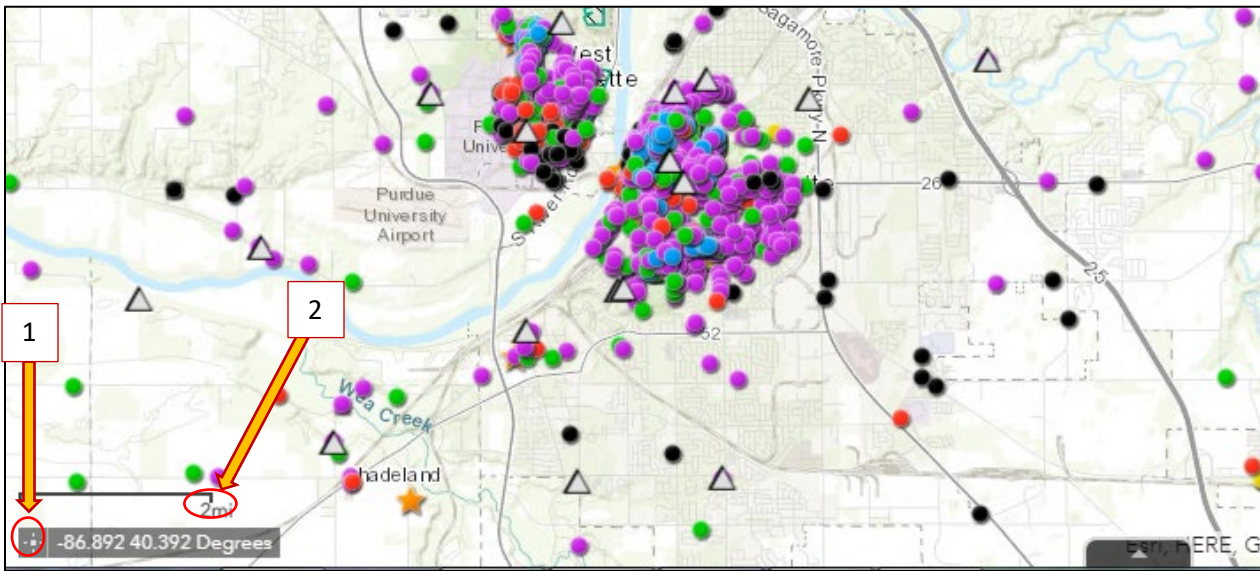


The small white arrow located at the bottom right hand corner of the screen will open a little box that will allow the user to see the map's extent within a larger view of the map (as seen in the image below).

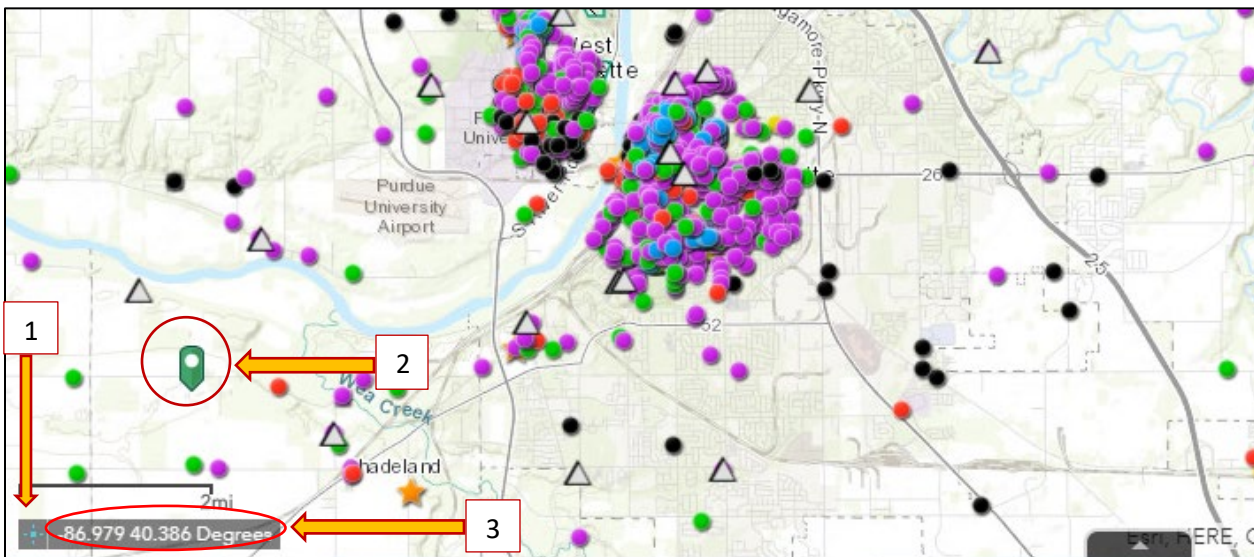


- 1) This symbol will expand the map as it appears in the box to the full screen.
- 2) Clicking on the arrow again will shrink the box back down.

Reading the Coordinates by Point:

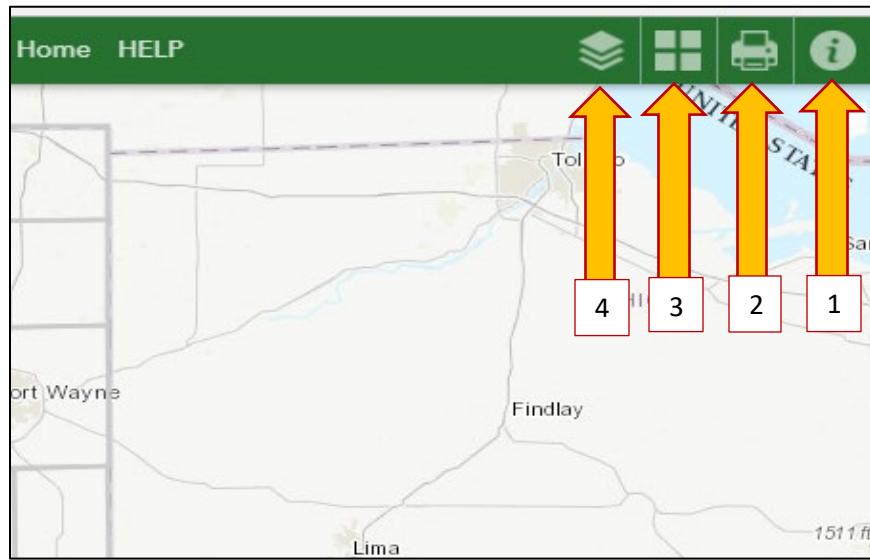


- 1) By clicking on this symbol, you can choose a point and read the degrees of latitude and longitude.
- 2) This corner will also show a map scale that refers to the relationship between distance on the map and the corresponding distance on the ground. In this example, there is a 2 mile distance. However, as you scroll in or out of the map, this distance will change.



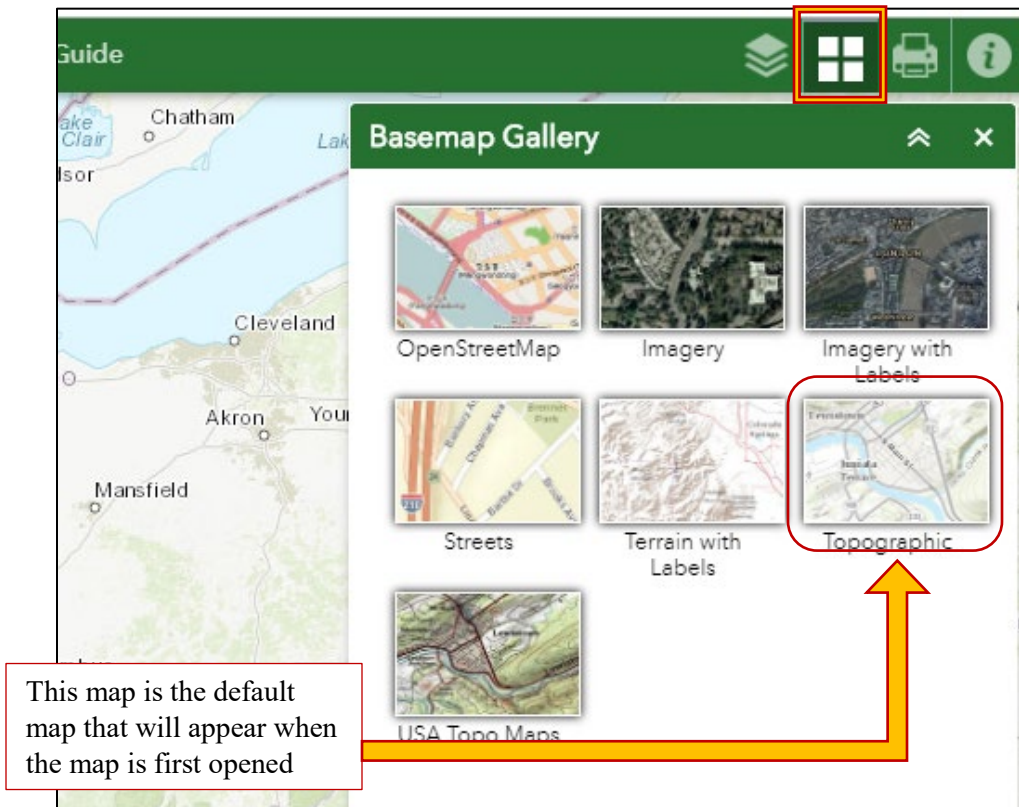
- 1) Once you click this symbol, it will turn blue and you may select your point.
- 2) Once you select your point, click anywhere on the map and this point will appear.
- 3) The degrees shown in this box will then reflect the coordinates chosen on the pin.

Getting the Map the Way You Want It:



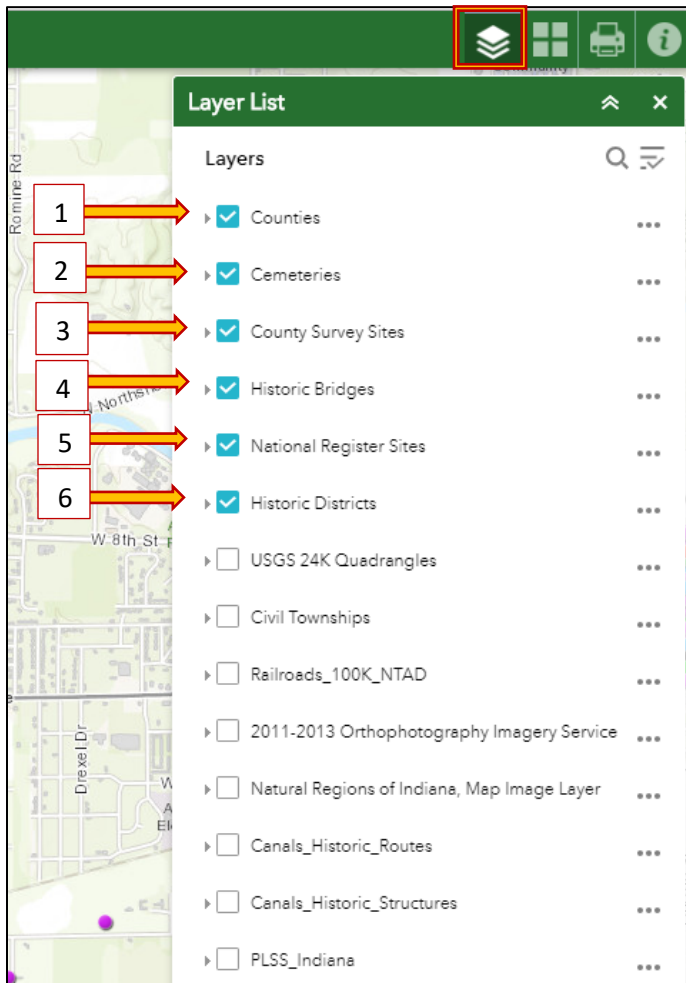
- 1) This tool allows the user to view the information box that as it appears when you first open the map. By clicking on this tool, you may open and close the Legend at any point during your search.
- 2) This tool allows the user to print a map once you've got it the way you need it. You may print a map as a pdf (among other options). This will only print the map and will not be a means of printing information about selected sites within a given map.
 **This process will be further explained on page #51.
- 3) This tool allows the user to select the basemap desired for the search. There are nine different maps the user can choose to view. The options are Dark Grey Canvas, Imagery, Imagery with Labels, Light Grey Canvas, Streets, Terrain with Labels, Topographic, USA Topo Maps, and USGS National Map. Note that if you zoom in too close to the map, the selected map will disappear. **This option will be further explored on page #11.
- 4) This tool allows the user to select the layers you wish to view during your search.
 **These instructions will be further explained on page #12.

Basemap Gallery:



These are the options that come up for the map type. You can select any of these maps according to your preference. ******Just note that if you zoom in too close to the map, some of the maps will disappear. If you zoom back out, the map details will reappear. The options are Open Street Map, Imagery, Imagery with Labels, Streets, Terrain with Labels, Topographic and USA Topo Maps.

Navigating the Layers – Default Layers



Default Layers

1) Click on this box to display the boundaries of Indiana **Counties**. Click again to remove them from the map.

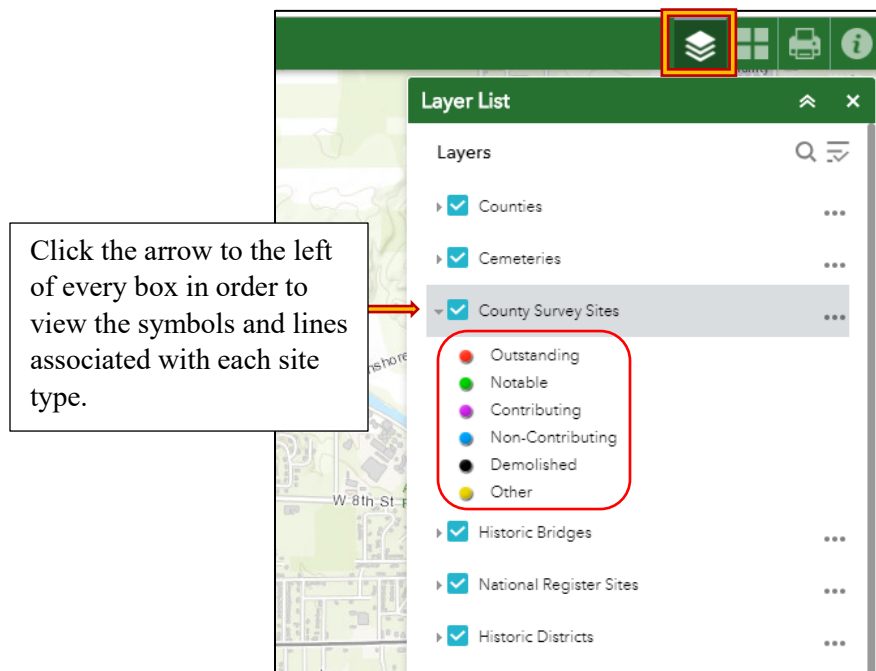
2) Click on this box to display all the historic **Cemeteries** on the map. Click again to remove the points from the map.

3) Click on this box to display all the historic **County Survey Sites** on the map. Click again to remove the points from the map.

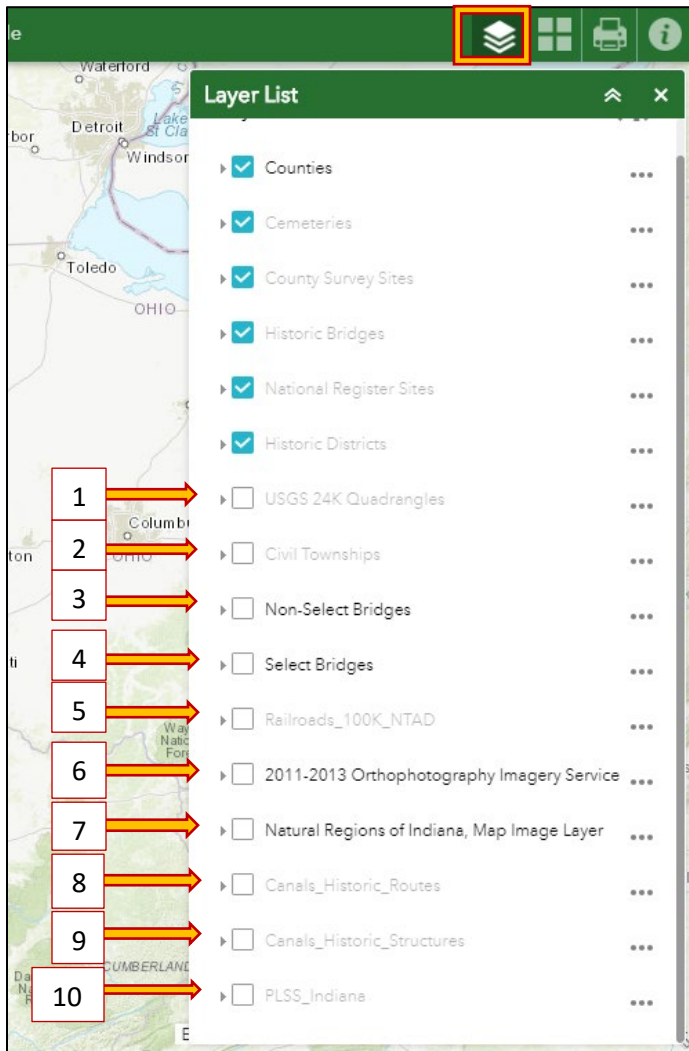
4) Click on this box to display all the historic **Bridges** sites on the map. Click again to remove the points from the map.

5) Click on this box to display all the **National Register Sites** on the map. Click again to remove the points from the map.

6) Click on this box to display all the **Historic District** areas on the map. Click again to remove the areas from the map.



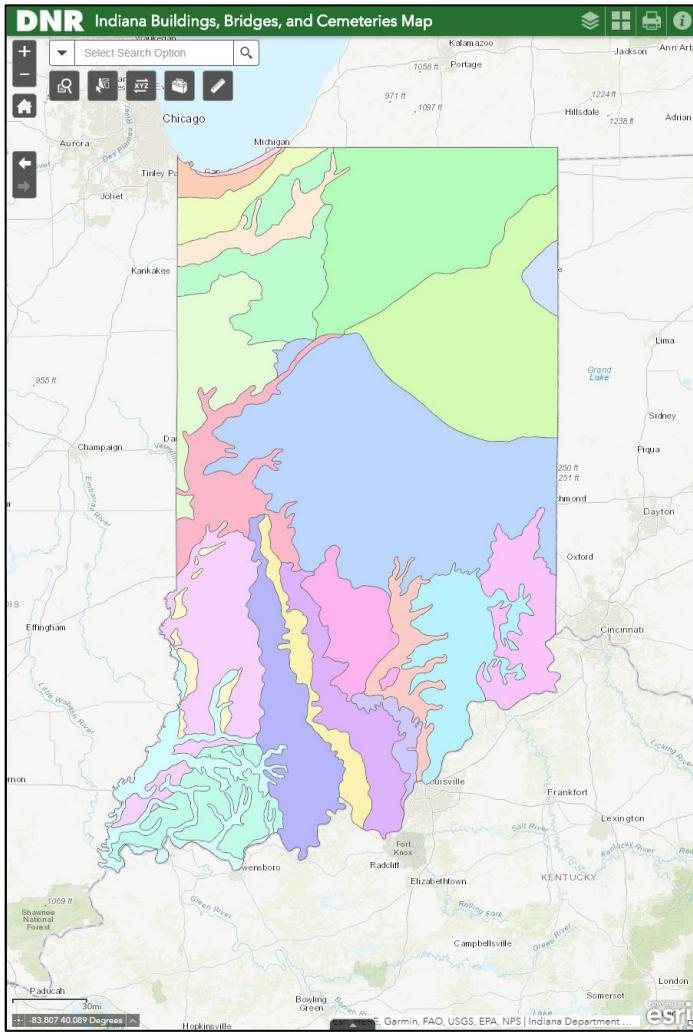
Navigating the Layers – Additional Layers



Additional Layers

- 1) Click this box to add the **USGS 24K Quadrangles** layer. Click again to remove. Note: This layer will be explained on page #15.
- 2) Click this box to add the **Civil Townships** layer. Click again to remove.
- 3) Click this box to add the **Railroads_100K_NTAD** layer to the map. Click again to remove. Note: users cannot click on the lines for more information.
- 4) Click this box to add the **2011-2013 Orthophotography Imagery Service** layer to the map. Click again to remove.
- 5) Click this box to add the **Natural Regions of Indiana, Map Image** layer to the map. Click again to remove. ****Further information found on next page.**
- 6) Click this box to add the **Canals Historic Routes** layer to the map. Click again to remove. Note: users cannot click on the lines for more information.
- 7) Click this box to add the **Canals Historic Structures** layer to the map. Click again to remove. Note: users cannot click on the lines for more information.
- 8) Click this box to add the **PLSS Indiana** (section, township, range) layer to the map. Click again to remove. Note: this layer will only break sections down into four equal quarters (NW, NE, SW, and SE).

Navigating the Layers – Natural Regions of Indiana



☑ Indiana Natural Regions

☑ NaturalRegions DNR NP IN

- BLACK SWAMP NATURAL REGION
- BLUFFTON TILL PLAIN SECTION
- BROWN COUNTY HILLS SECTION
- CHICAGO LAKE PLAIN SECTION
- CRAWFORD UPLAND SECTION
- DRIFTLESS SECTION
- ENTRENCHED VALLEY SECTION
- ESCARPMENT SECTION
- GLACIATED SECTION
- GRAND PRAIRIE SECTION
- KANKAKEE MARSH SECTION
- KANKAKEE SAND SECTION
- KNOBSTONE ESCARPMENT

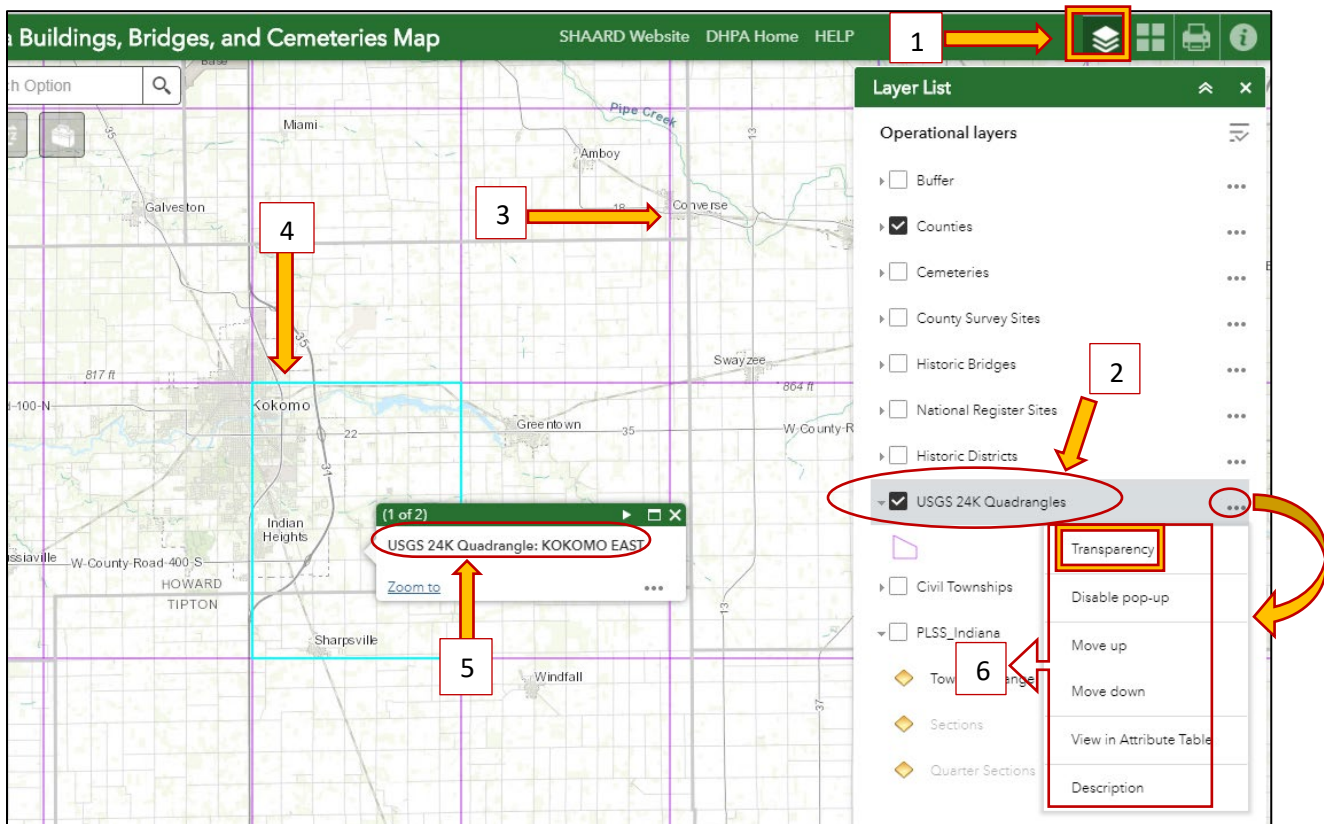
Natural Regions of Indiana

- The Natural Regions of Indiana, Map Image Layer unfortunately does not allow the user to click on the regions to view the region’s name.

- This layer is only not able to be added to the map itself due to Web Map application limitations.

- LAKE MICHIGAN BORDER SECTION
- MITCHELL KARST PLAIN SECTION
- MUSCATATUCK FLATS AND CANYONS SECTION
- NORTHERN LAKES NATURAL REGION
- PLAINVILLE SAND SECTION
- SCOTTSBURG LOWLAND SECTION
- SOUTHERN BOTTOMLANDS NATURAL REGION
- SWITZERLAND HILLS SECTION
- TIPTON TILL PLAIN SECTION
- VALPARAISO MORaine SECTION

Navigating the Layers - Viewing Quads and Townships:

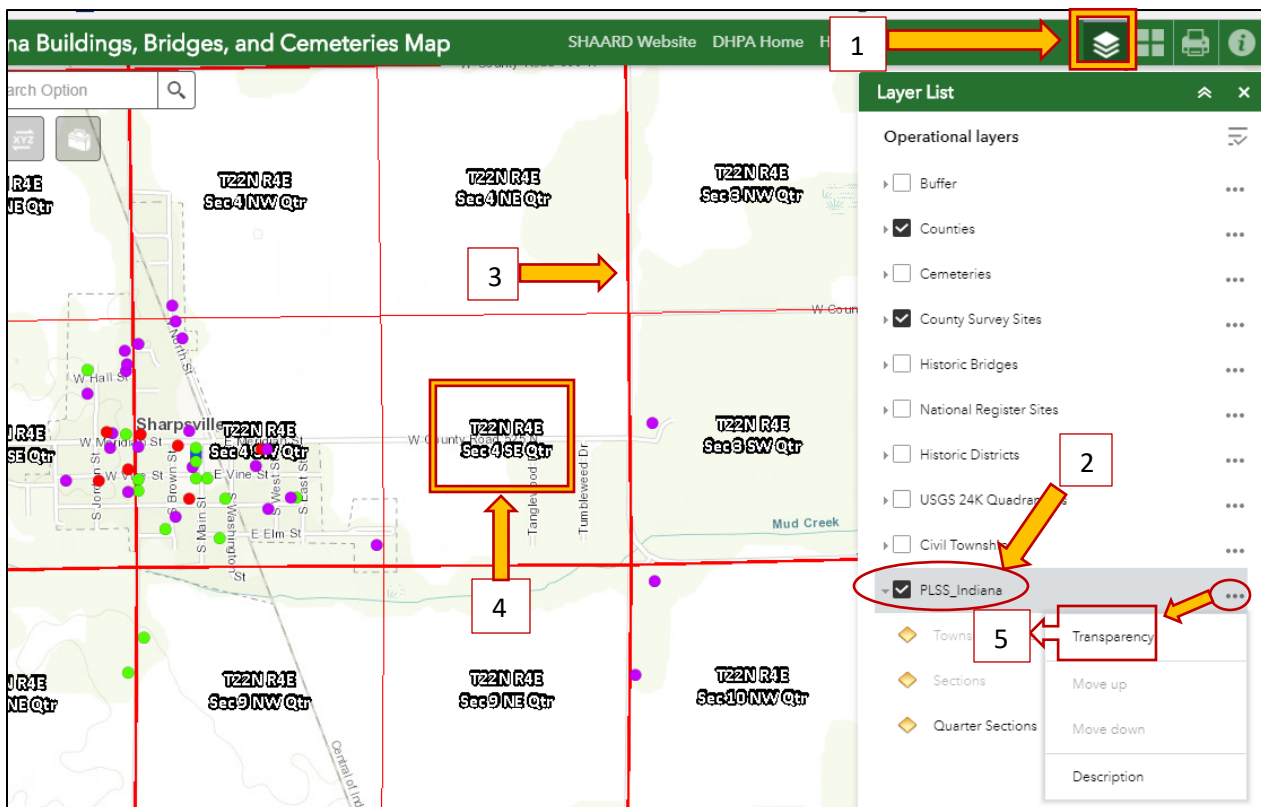


- 1) In order to access the Quads, click on the “Layers” icon.
- 2) In order to view the Quads, click on the box next to the USGS 24K Quadrangles.
- 3) The purple lines are the Quad borders.
- 4) If you click on an area within the Quad, the quad will be highlighted in a light blue and an information box will pop up.
- 5) This information box will display the name of the Quad.
- 6) If you want to dim the lines of the Quads, you can click on the “Transparency” option (accessible by clicking on the ellipses) and you can scale the brightness of the lines.

**Notice all the layers (except the Counties layer) have been turned off for this example.

**Follow these steps in order to manipulate the Township layers.

Navigating the Layers - Viewing Section, Township, and Range:

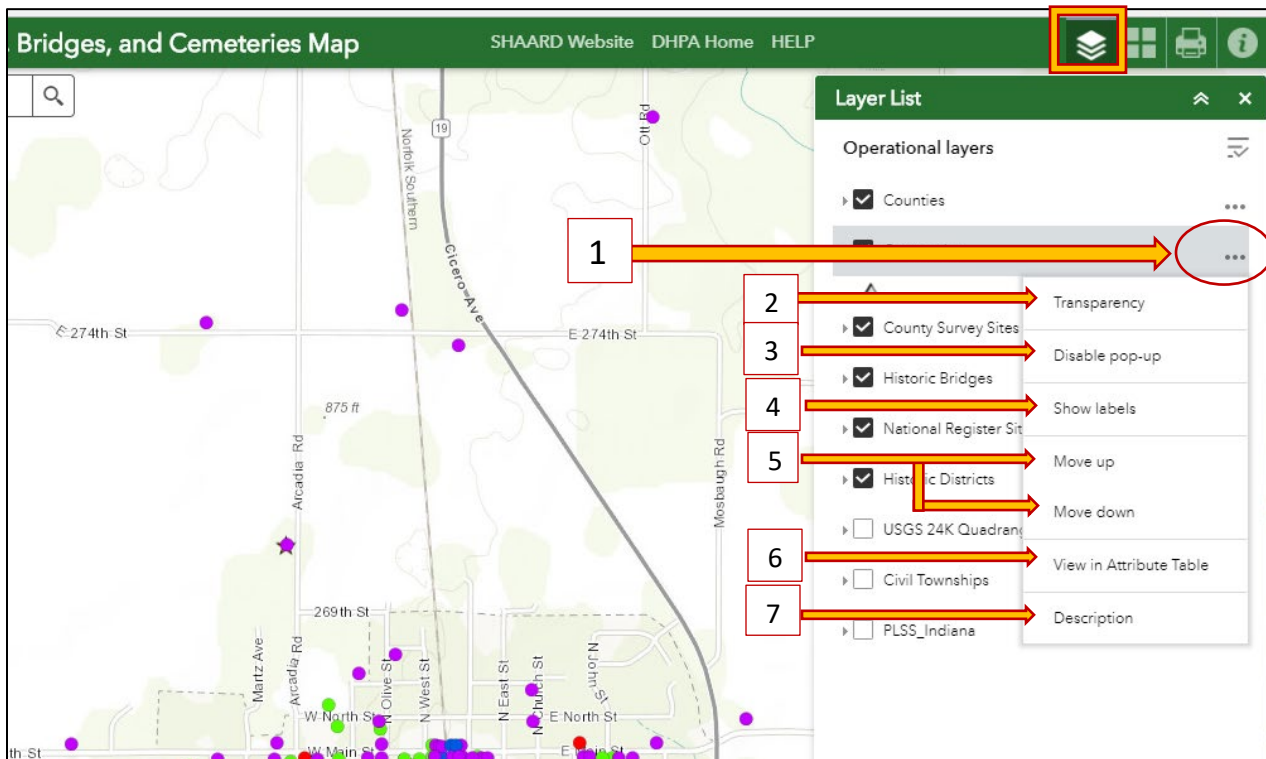


- 1) In order to access the Section, Township, and Range, click on the “Layers” icon.
- 2) In order to view the Section, Township, and Range, click on the box next to PLSS_Indiana in order to activate the layer.
- 3) When this layer is turned on, bright red lights will outline the sections.
- 4) This layer will label each section, as well as the quarters of the section, and the township and range numbers and where they are in relation to the principle meridian and base line.
- 5) As with the other layers, you can dim the lines and the labels using the “Transparency” option in the ellipses.

******Currently, the default of the map does not display the Public Land Survey System (PLSS). Once this layer is turned on, this information will not be seen at the State Overview level. As you zoom in closer to an area, the red boxes outline the sections.

******Note that this map will only show the sections down to the quarters and will not show any further divisions in the sections.

Navigating the Layers - Ellipsis:



- 1) By clicking on the ellipsis, you will be given several options for manipulating a search. This option will be available for each layer displayed.
- 2) By clicking on the “Transparency” option, you can dim and brighten the symbols on the map for each layer. This allows the user to clear the map of certain symbols without removing them from the map completely.
- 3) The “Enable pop-up” option allows the user to view the information box when you click on a given site. The pop-up option will be enabled by default but can be disabled by the user. ******In this screenshot, the pop-up is automatically enabled, so the option to “Disable” the pop-up is available.
- 4) The “Show Labels” option allows the user to display the numbers assigned to the sites in the SHAARD database.
- 5) The “Move Up” and “Move Down” options allow the user to move the layers up and down on the Layer List.
- 6) The “View in Attribute Table” option will be explained on page #21.
- 7) The “Description” option will open a new tab which will give users the technical details of the GIS programming. This option will allow users to view the meta data associated within a selected layer.

******You can open these options for every layer.




What are all the dots I see on the map?

As you scroll in closer to the map, colored dots, squares, triangles and stars will begin to appear. These items will not appear at the State overview level.

Circles represent sites identified in the IHSSI (County Survey) program. Triangles represent cemeteries identified in the Cemetery and Burial Ground Registry Program, squares are historic bridges identified in the historic bridge database, and stars represent those sites listed in the National Register of Historic Places.

Along with the dots, you will see blue, striped polygons over areas. These are National Register listed historic districts. You cannot currently click on these boxes to view further information, but future enhancements will allow for this.

For County Survey Sites (circles) and Historic Bridges (squares), the symbol will have a color associated with it. This represents the rating given to the property through the DHPA's IHSSI County Survey Program. The Colors represent:

- Red – Outstanding 
- Green – Notable 
- Purple – Contributing 
- Blue – Non-Contributing 
- Black – Demolished 
- Yellow – Unknown 

One site might have three symbols over it. For example a cemetery would have a triangle since it is listed in the Cemetery and Burial Ground Registry. Then it might have next to the triangle a circle, for when it was identified in the IHSSI County Survey Program. And finally, if that cemetery were also listed in the National Register of Historic Places, a star would also be over the site. Each symbol will pull information from a different part of the SHAARD database and in most cases, reviewing all three symbols (and the data which it pulls) is necessary to fully understand the history, integrity, and importance of the site.

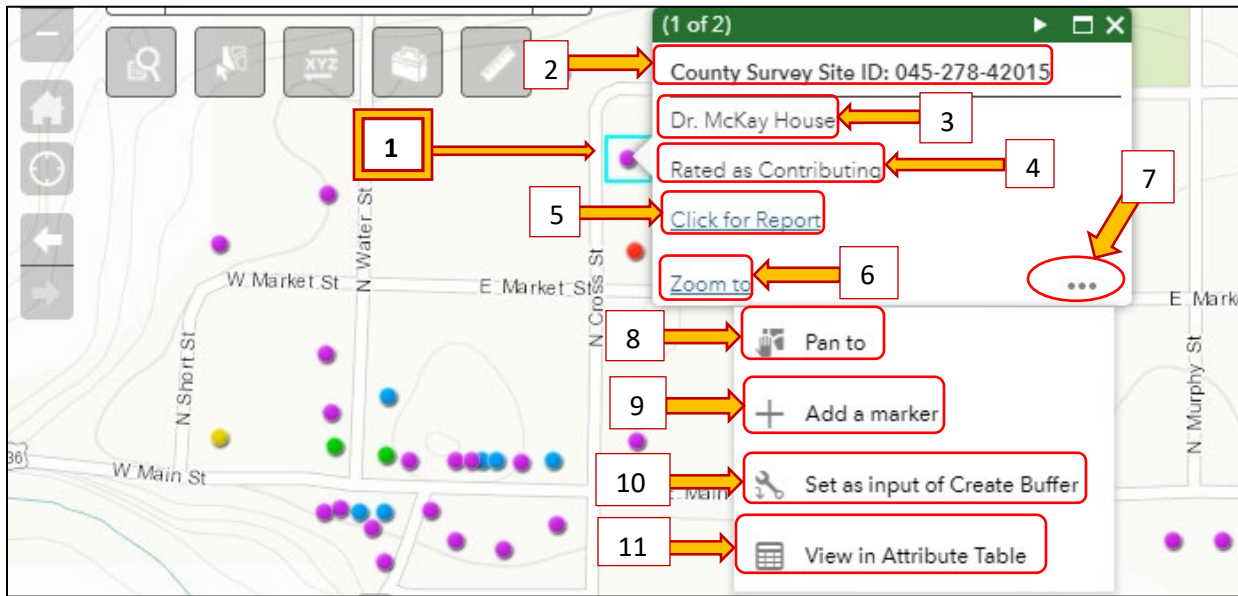
Along with having a colored symbol, each site will have a label. Cemeteries, historic bridges, and National Register Sites will have the proper name of the site. It will only include one name (which it pulls from the SHAARD Database) and will not show all names by which the property is known. For example, a cemetery might be known locally as the Smith Cemetery, Johnson

Road Cemetery, and Catholic Cemetery, but on the SHAARD GIS map it is labeled as "Smith." This does not make the legal name of the cemetery "Smith Cemetery," only that it was the first name listed in the database. For more information on naming of properties, contact the DHPA at 317-234-1268.

Those sites listed in the IHSSI County Survey (marked by circles) will have a number label. The number represents its IHSSI County Survey Number. The first three-digit block identifies the county. The National Park Service assigns this number to identify the county for National Register nominations; the survey program retains this number to represent the county in the survey. The second three-digit block identifies the USGS topographic quadrangle map in which the resource is located. The last five-digit block forms a discrete site number for the resources. A site might also have a name

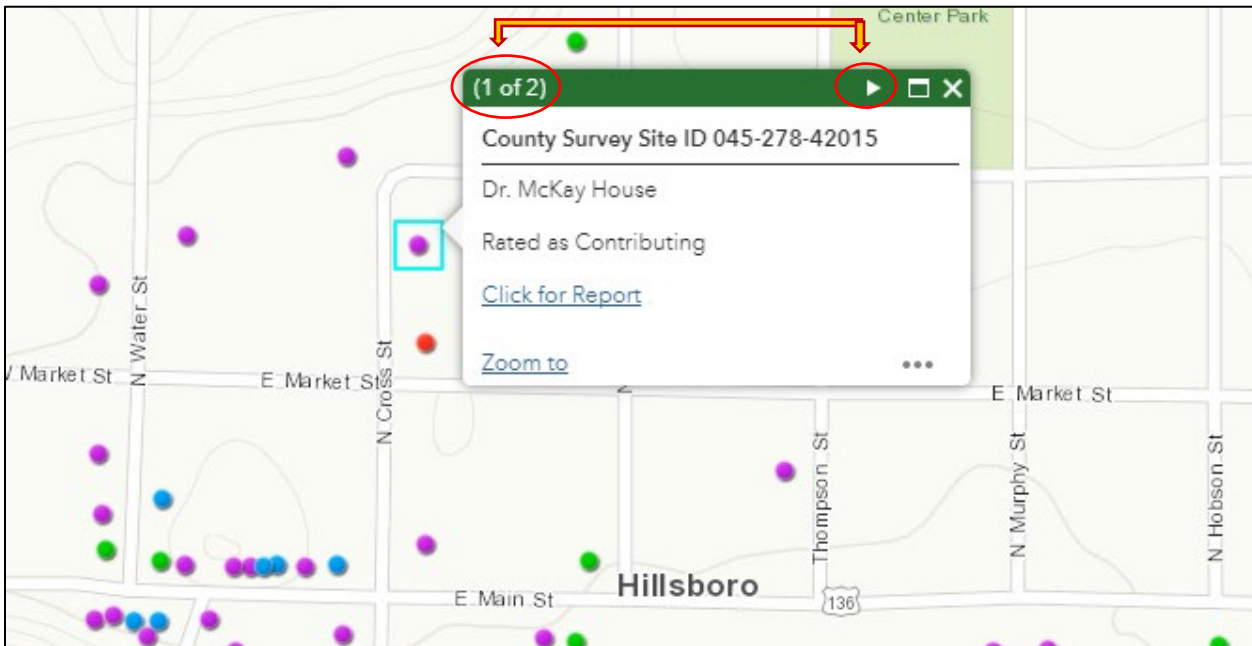
(Example: Beck's Mill), but through the IHSSI County Survey representation, will be identified by a number (Example: 175-037-45020).

Viewing a Site: Part 1

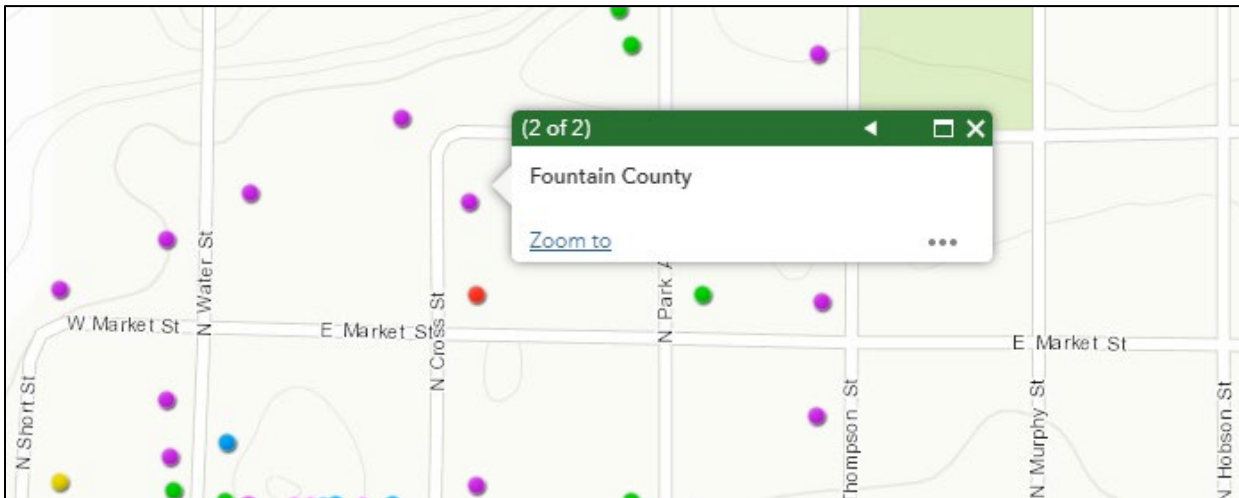


- 1) When you click on a site, a bright blue square will appear around the site and an information box will appear.
- 2) This portion of the information box will display the County Survey number for an IHSSI site, the National Register number, the Historic Bridge number, or the Cemetery number.
- 3) This portion of the information box will display the historic name under which the record is entered in SHAARD.
- 4) This portion of the information box will display the rating awarded to the site during survey.
- 5) The “Click for Report” option will bring up a printable version of the SHAARD entry. This allows the user to gain quick access to the report in the data entry. ****For returning users, this feature is different than the SHAARD GIS map which would take you directly to the SHAARD entry page for the desired site**
- 6) The “Zoom To” option will zoom the user closer to the selected site.
- 7) At the bottom right corner of the information box there will be a set of ellipsis. When you click on this, options 7-10 will drop down below the original info box.
- 8) The “Pan To” option will bring your site to the center of the map’s extent.
- 9) The “Add a Marker” option will drop a pin so you can easily see a specific point as you move around the map.
- 10) The “Set as input of Create Buffer” will allow the user to draw a buffer around the selected site. To learn how to create a buffer, see page #40.
- 11) This option will allow the user to view the sites in the Attribute Table which is further explained on page #21.

Viewing a Site: Part 2

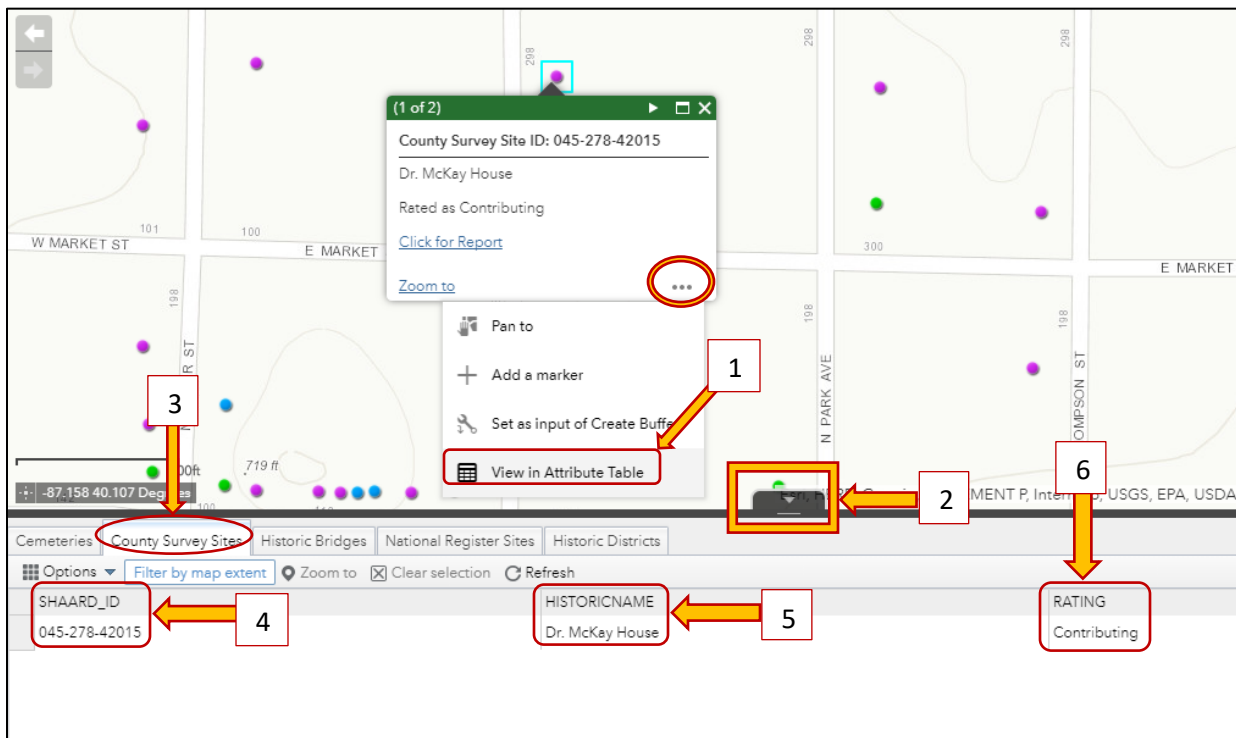


In the information box, the user will notice that the pages are 1 of 2. The second page will show the user the county in which the site is located.



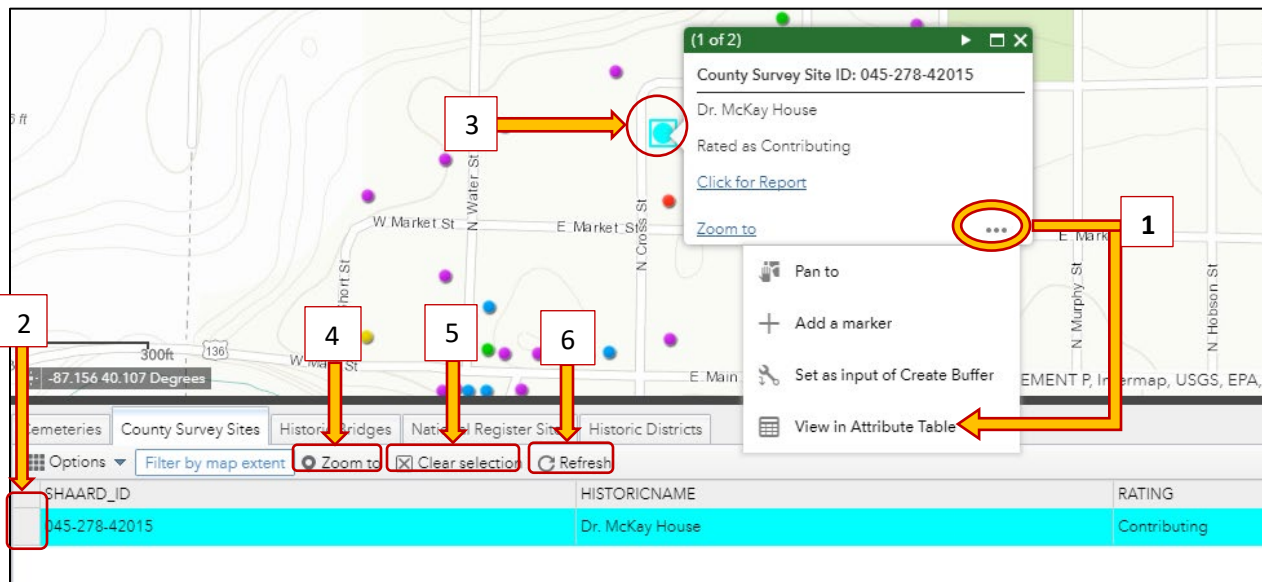
In this example, this site is located within Fountain County. This is just a quick means of displaying the county to the user.

Viewing a Site - Attribute Table:



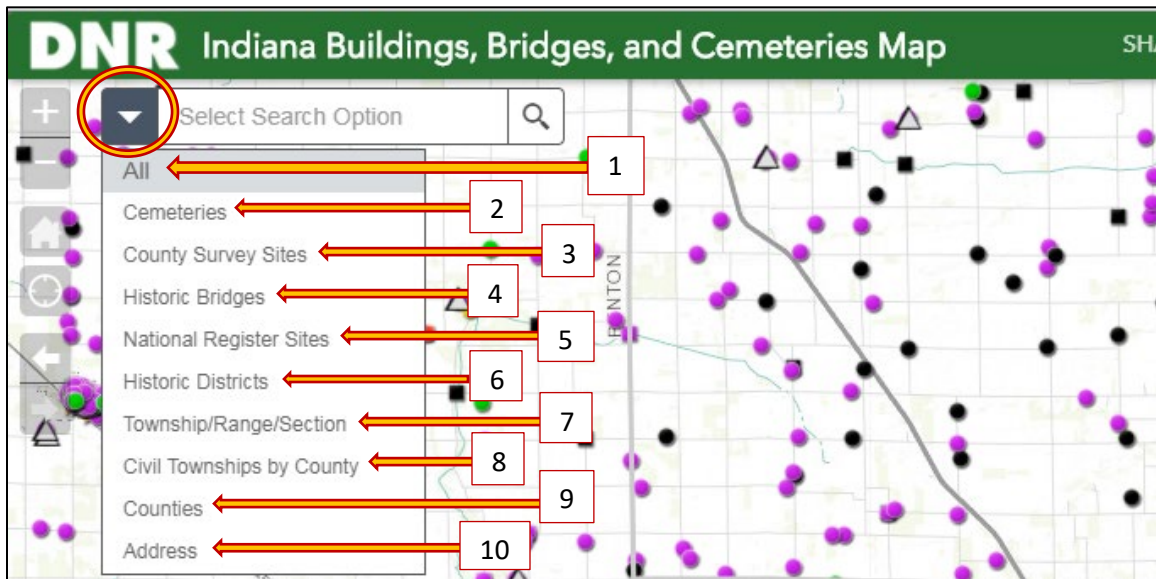
- 1) Once a site is clicked on, the user may view the site in the Attribute Table.
- 2) This tab (located at the bottom of the map) will open the Attribute Table. By clicking on the downward pointing arrow, you can collapse the attribute table.
- 3) There are several tabs within the Attribute Table showing the options for the different site types that may be viewed. You must view the site type's one layer at a time. These tabs include: cemeteries, county survey sites, historic bridges, national register sites, and historic districts.
- 4) The SHAARD ID is the first piece of information given in the Attribute Table. This is the number assigned to the site as it was recorded in the survey.
- 5) The Historic Name is the second piece of information given in the Attribute Table. This is the name recorded by the surveyor.
- 6) The Rating is the third piece of information given in the Attribute Table. This is the rating given to the site during the county survey.

Viewing a Site - Attribute Table:



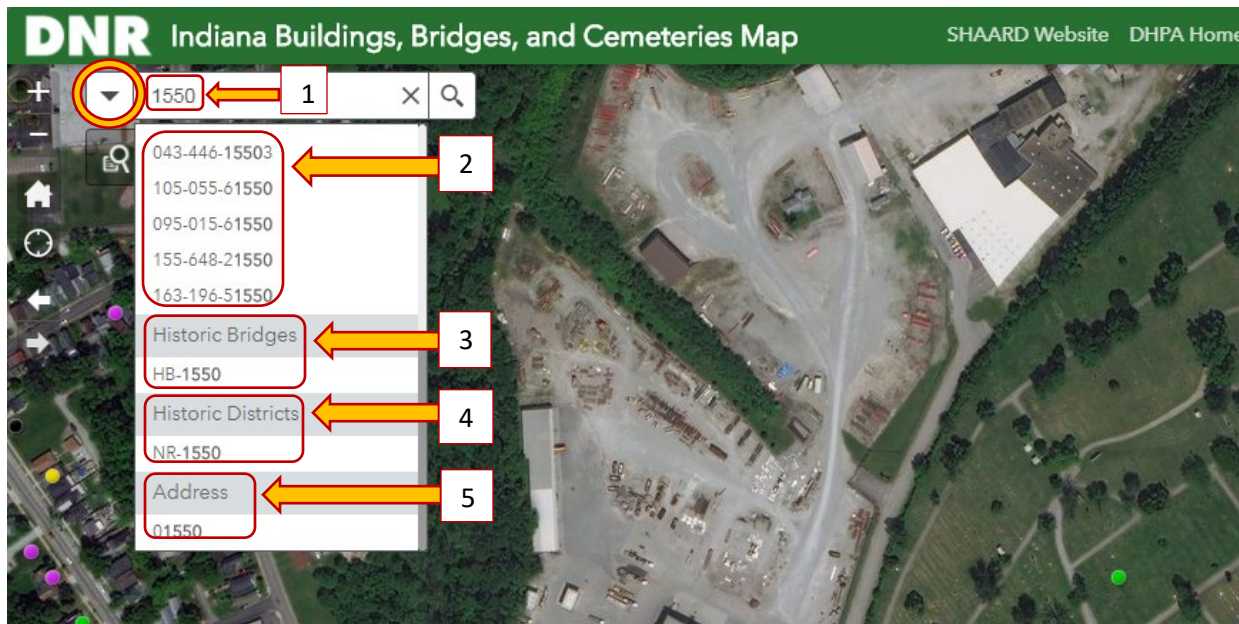
- 1) As shown in the previous page of the User Guide, click on the ellipses and click on the “View in Attribute Table”.
- 2) In order to select a site, click on this box to the left of the site number. This will highlight the site information as well as the site.
- 3) Once you click on the box next to the SHAARD ID the site will be highlighted in bright blue.
- 4) When you click on the “Zoom to” option, the screen will bring the user closer to the site.
- 5) Click on the “Clear selection” option to de-select a site. This will take the light blue highlight off within the Attribute Table as well as the site. ****This is the only way you can de-select a site.**
- 6) Click on this option in order to view all sites within the maps extent (if the “Filter by map extent” option is selected) OR to view all the sites mapped within the map (if the “Filter by map extent” option is NOT selected).

Making a Search:



- 1) The “All” option will broaden the search to include all the other categories. ****For further examples and explanation, refer to page: #24.**
- 2) The “Cemeteries” option will narrow the search by the Cemetery ID or the first name given on SHAARD that was assigned to the site upon its survey. Example: 107-460-55028, CR-54-152.
- 3) The “County Survey Sites” option will narrow the search by the IHSSI number that the site was given when it was surveyed. Example: 011-349-26008.
- 4) The “Historic Bridges” option will narrow the search by the Historic Bridge ID that was assigned to the bridge when it was surveyed. Example: HB-2324.
- 5) The “National Register Sites” option will narrow the search by the National Register ID that was assigned to the district when it was approved by the DHPA office. Example: NR-0017.
- 6) The “Historic Districts” option will narrow the search by the Historic District number that was assigned to the district as it was approved. Example: NR-1550 (not case sensitive).
- 7) The “Township/Range/Section” option will narrow the search by the PLSS area. You may also search by section only, but keep in mind that in order to make a search with all three numbers, the format must adhere to the following pattern: Example: T5S R14W 34.
- 8) In order to use this option, you must first enter the name of the county in which you are conducting your search. Once you have entered your county name, you may then select one of the townships located within that county.
- 9) The “Counties” option will narrow the search by county name as well as by the county number. The county number is the number assigned to each county alphabetically. Example: Adams 1, 01, 001, etc.
- 10) The “Address” option will narrow the search by the street number, street name, and city. These three criteria are necessary for making a search. Example: 1000 W Granary St New Harmony. You can also search for a zip code and town/city name only.

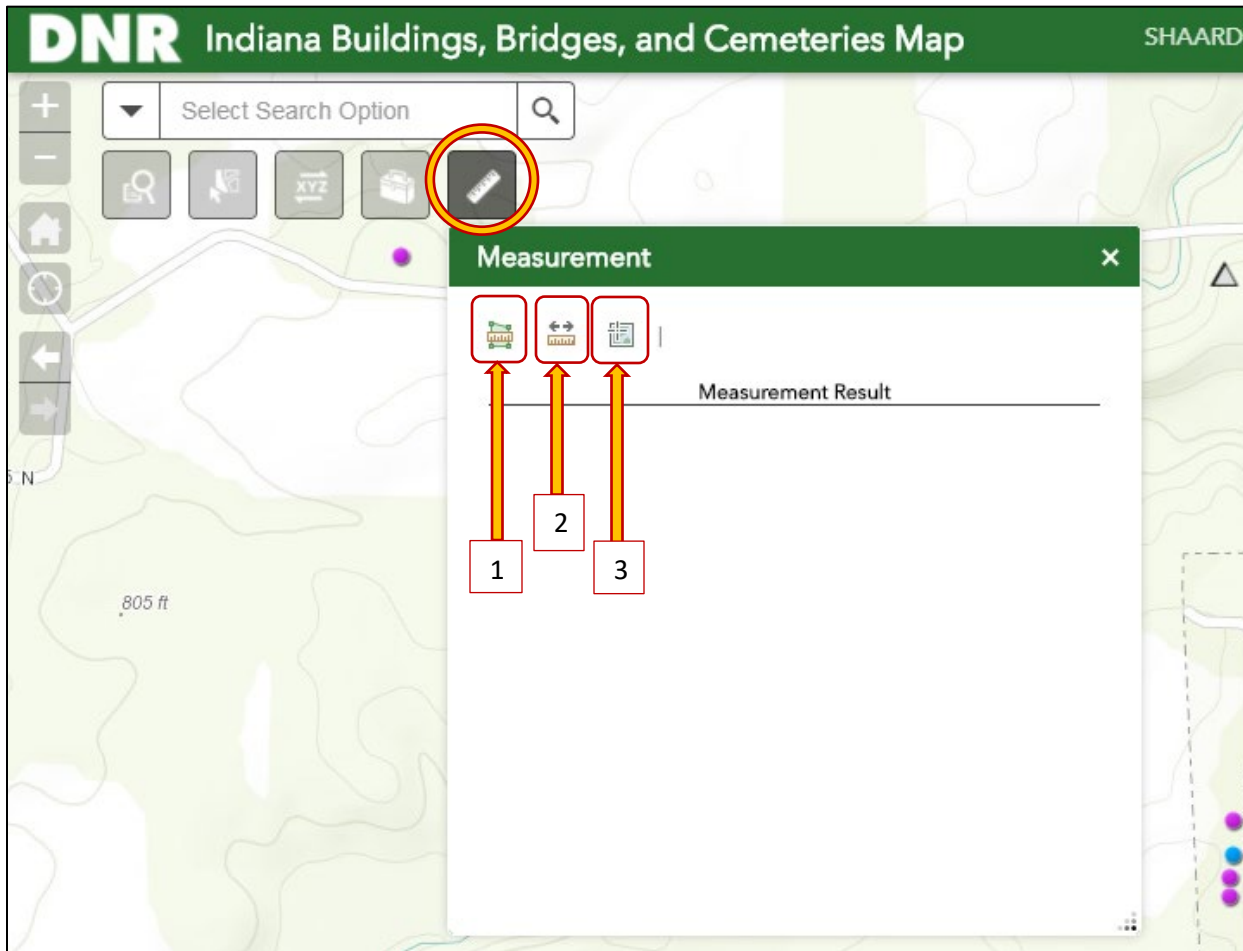
Making a Search: “All Search Category” Example



- 1) In this example, we have entered the numbers “1550” into the “All” search category.
- 2) The first results offered in this example are the “County Survey Site” numbers. Notice that these sites show every result including the numbers entered. These results are taken from several different counties and several different townships. Be aware of this when searching from the “All” option.
- 3) The second result type offered in this example are the Historic Bridges results. There is only one Historic Bridge result in this example as the numbers are assigned in sequence as they are surveyed. Example: HB-1550.
- 4) The third result type offered in this example are the Historic Districts results. There is only one Historic District in this example as the numbers are assigned in sequence as they are surveyed. Example: NR-1550.
- 5) In this example, the Address is attempting to bring up a zip code that held the matching numbers. Since it is incomplete, no zip code was found.

****** Note that this option will pull information from all other options in no particular order. This is not the most efficient means of searching. **However**, this method of searching will broaden the search to the greatest extent and will pull information from all search categories.

Using the Measuring Tool:

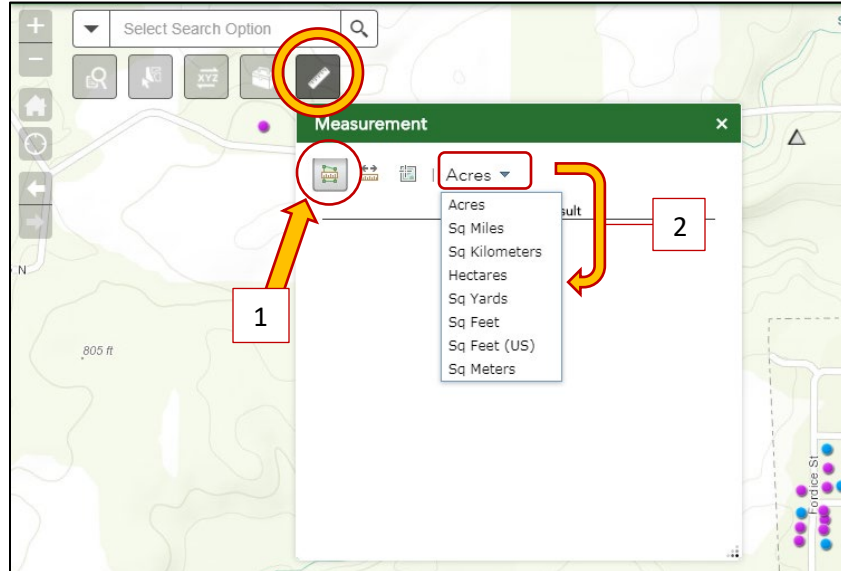


The Measuring Tool gives three options when you first click on the button. These will be further explained in the following images.

- 1) This option will allow you to Measure by Area. This option will be explored on the following page: #26.
- 2) This option will allow you to Measure by Distance. This option will be explored on the following page: #27.
- 3) This option will allow you to Measure by Location. This option will be explored on the following page: #28.

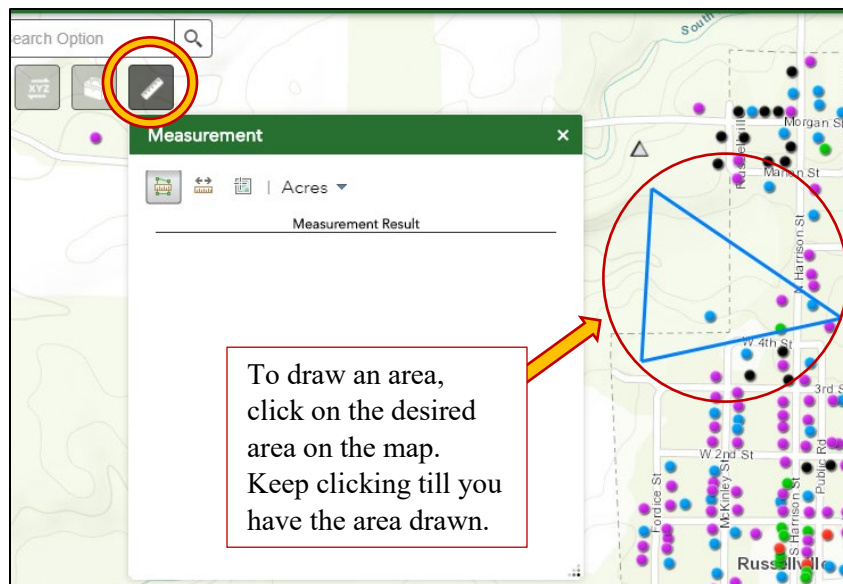
Measure by Area

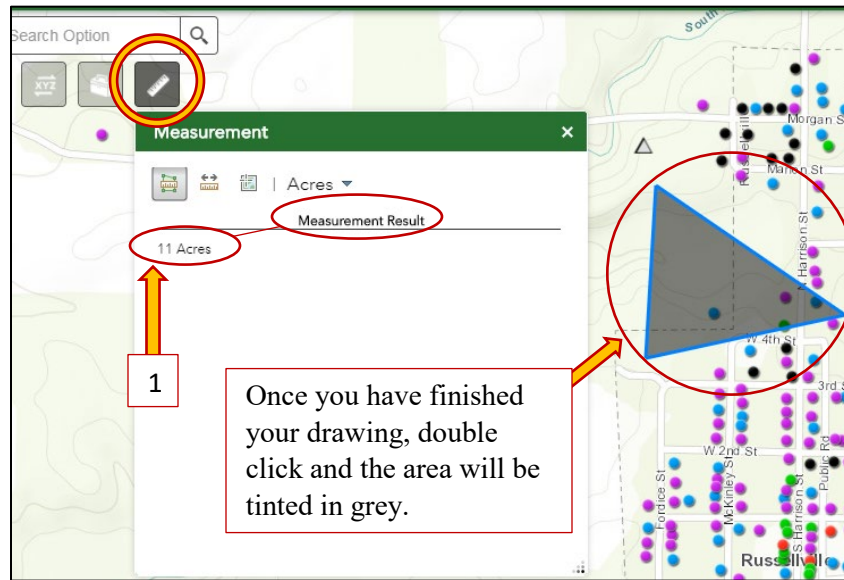
Step 1:



- 1) Click on the button to measure by Area.
- 2) By clicking on the unit of measurement (in this example, we will be using “Acres”). Note that the units can be changed even after you draw your area. You can choose the following units of measurements: acres, square miles, square kilometers, hectares, square yards, square feet, square feet (US), and square meters.

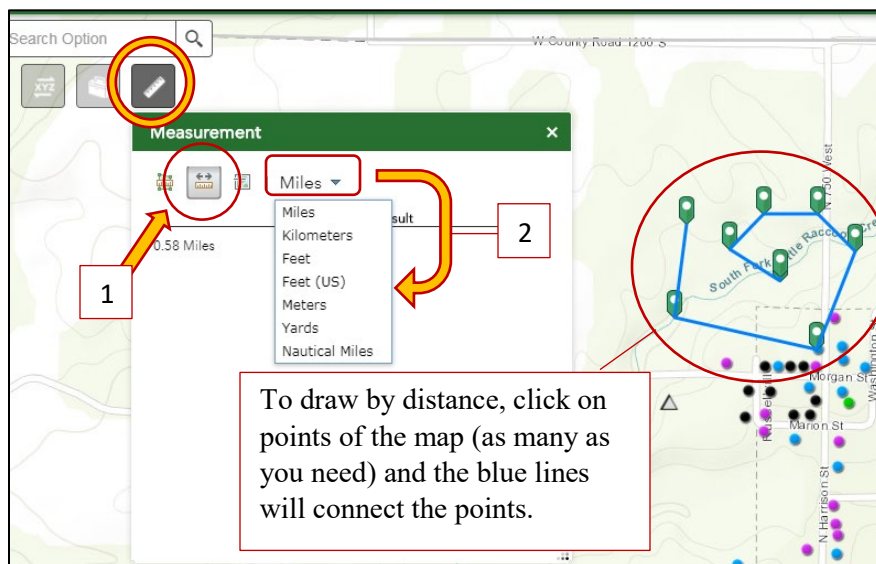
Step 2:



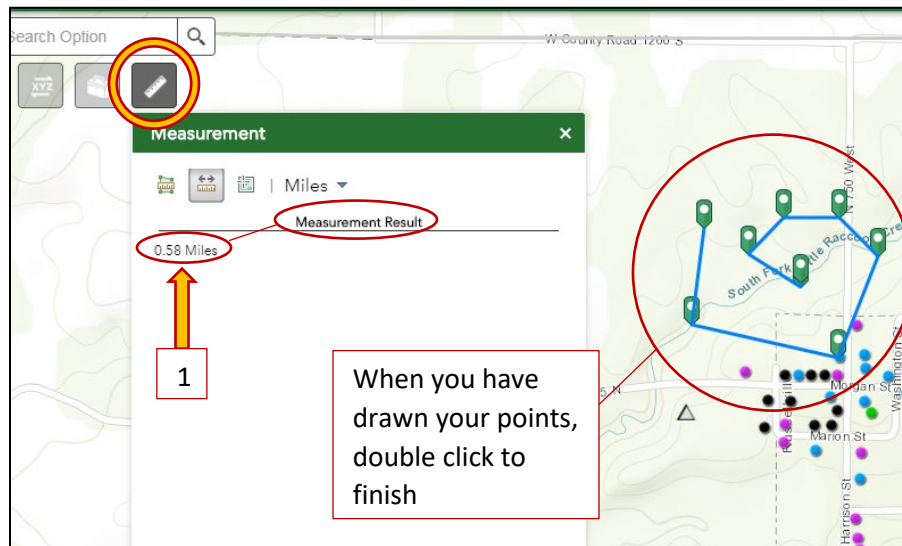
Step 3:

- 1) Once you have double clicked, the “Measurement Result” will appear below the line. This will display the area within the connected lines but does not measure the perimeter of the drawing.

******Note that once you draw your area, you can go back to the units of measurement to edit the unit and the results will appear in place of the results currently displayed in acres.

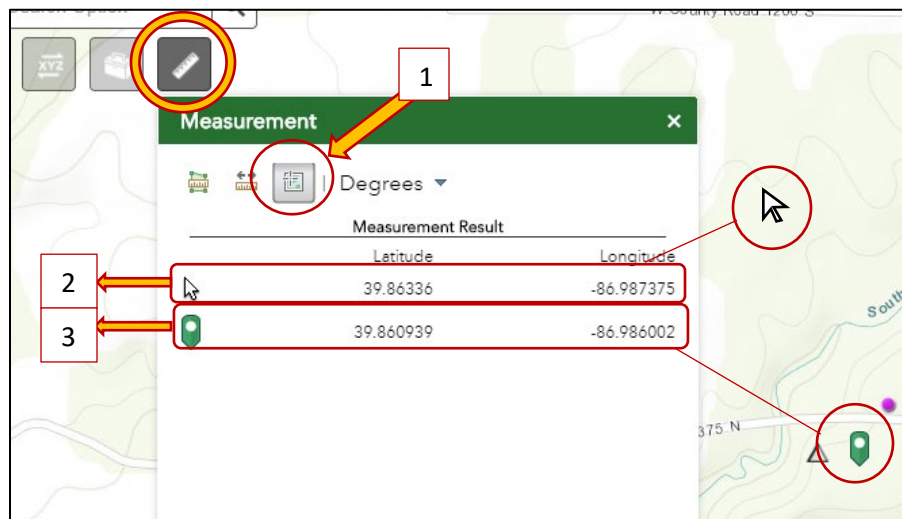
Measure by Distance**Step 1:**

- 1) Click on this button to measure by Distance.
- 2) By clicking on the unit of measurement (in this example, we will be using “Miles”). Note that the units can be changed even after you draw your area. You can choose the following units of measurements: miles, kilometers, feet, feet (US), meters, yards, or nautical miles.

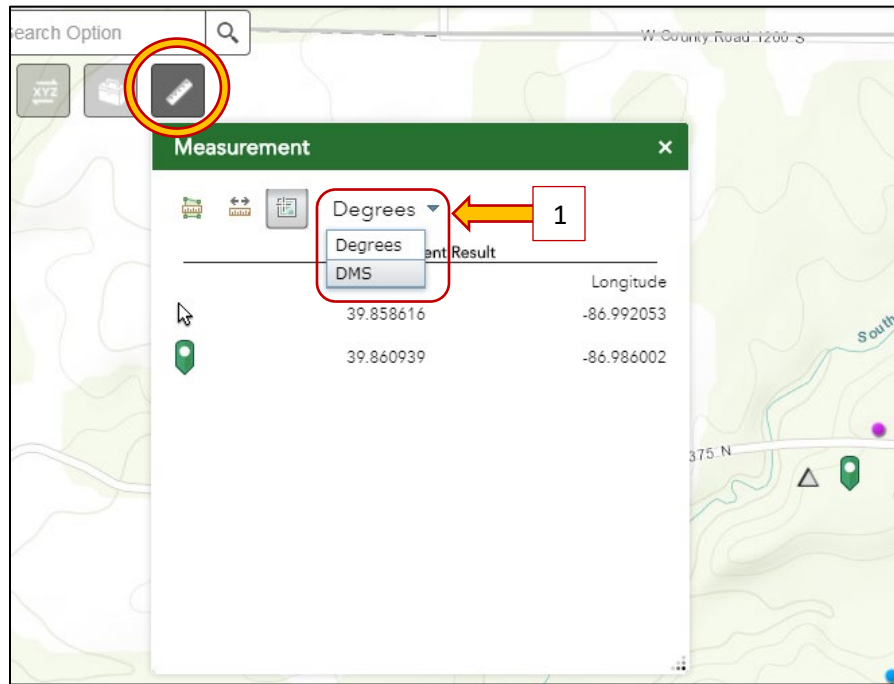
Step 2:

- 1) Once you are finished drawing your line(s), the Measurement Result will display the distance accumulated by the distances between the points.

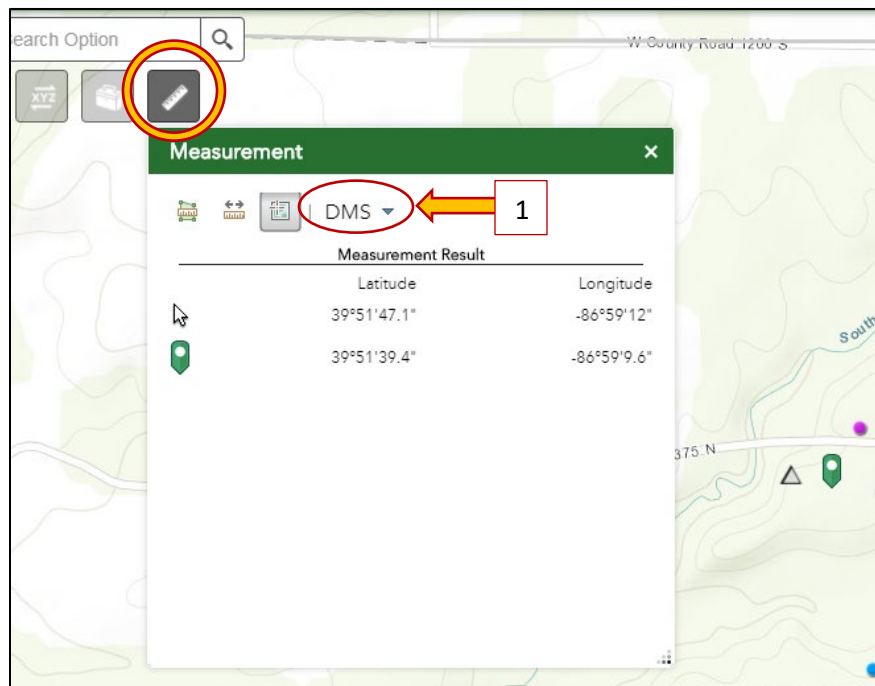
****Note** that once you draw your lines, you can go back to the units of measurement to edit the unit and the results will appear in place of the results currently displayed in miles.

Measure by Location**Step 1:**

- 1) Click on this button to measure by location.
- 2) The measurement by location will measure the distance between a chosen green point and the mouse cursor. This section will give the coordinates of the mouse cursor.
- 3) This green point was placed on the map by clicking on a section of the map. This section gives the coordinates of the green point.

Step 2:

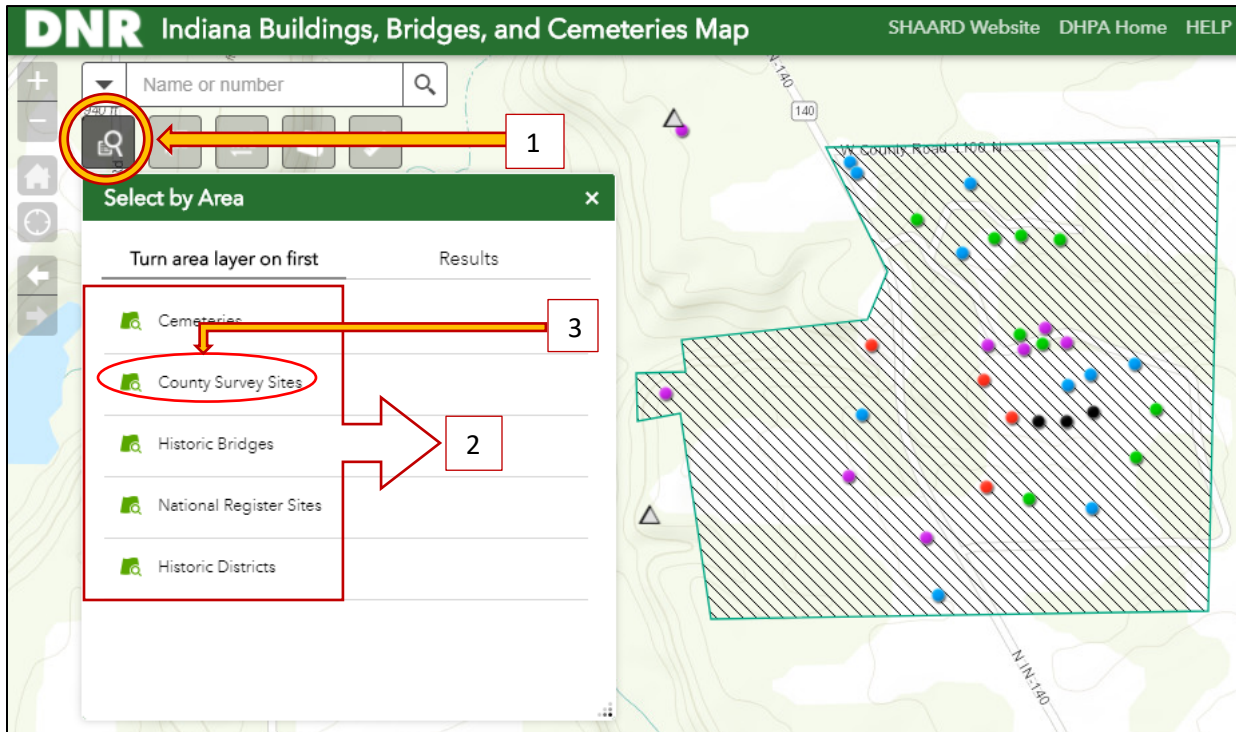
- 1) You can change the location system to reflect the Degrees, Minutes, Seconds by clicking on the downward pointing arrow shown in the image below.



Select by Area:

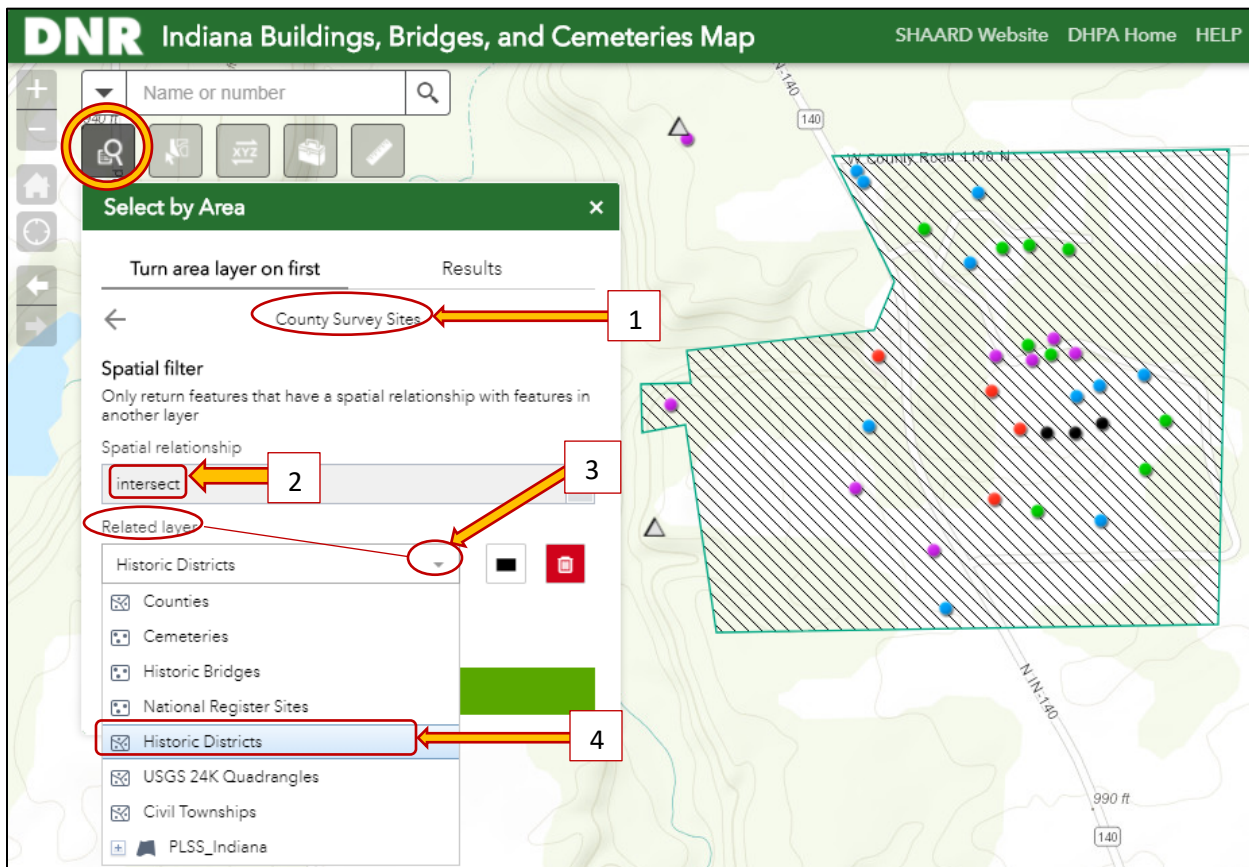
The “Select by Area” option will allow the user to find out how many sites exist within a given limitation. In this example, we will be finding out how many County Survey Sites are mapped within The Indiana Soldiers’ and Sailors’ Children’s Home Historic District in Rush County. The following will be a step by step guide of how to use this tool to explore this example.

Step 1:

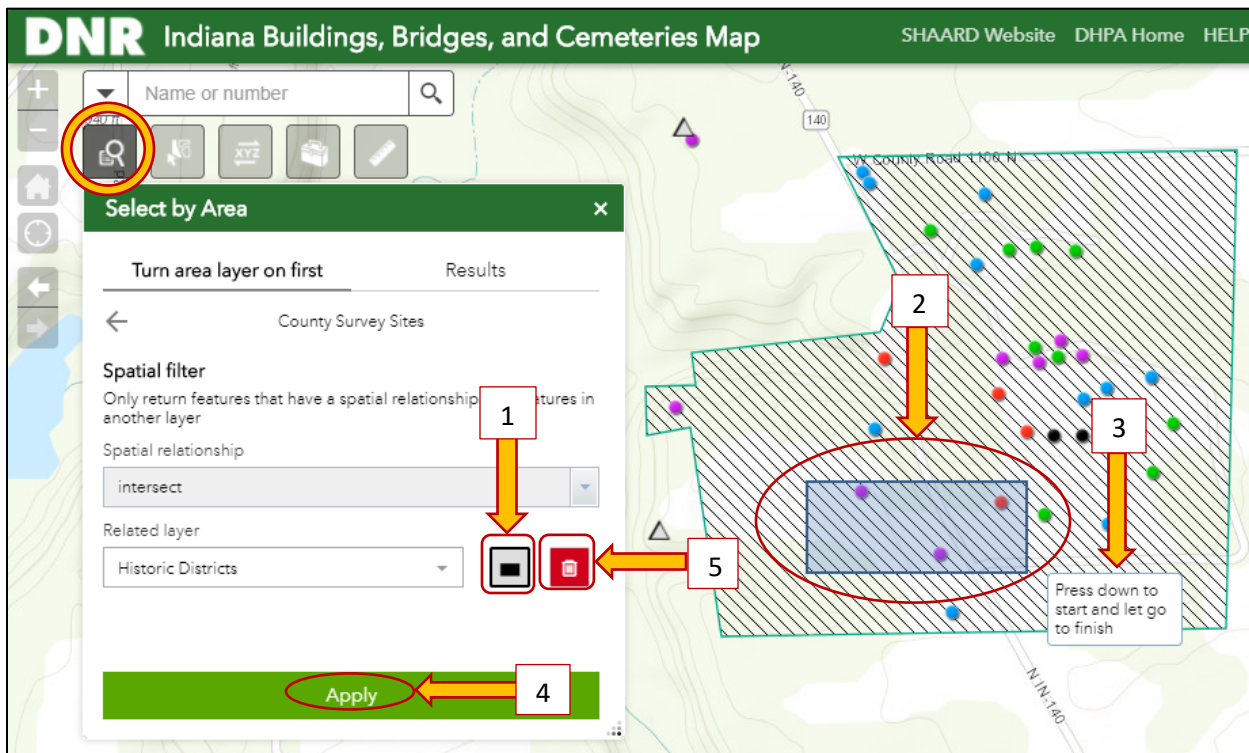


- 1) Select this button to open the “Select by Area” option.
- 2) To start, choose the site type that you want to find within the area. You can choose any of the following site types: Cemeteries, County Survey Sites, Historic Bridges, National Register Sites, and Historic Districts. In this example, we will be searching the number of County Survey Sites within our search parameter.
- 3) In this example, we will be exploring this option with the County Survey Sites.

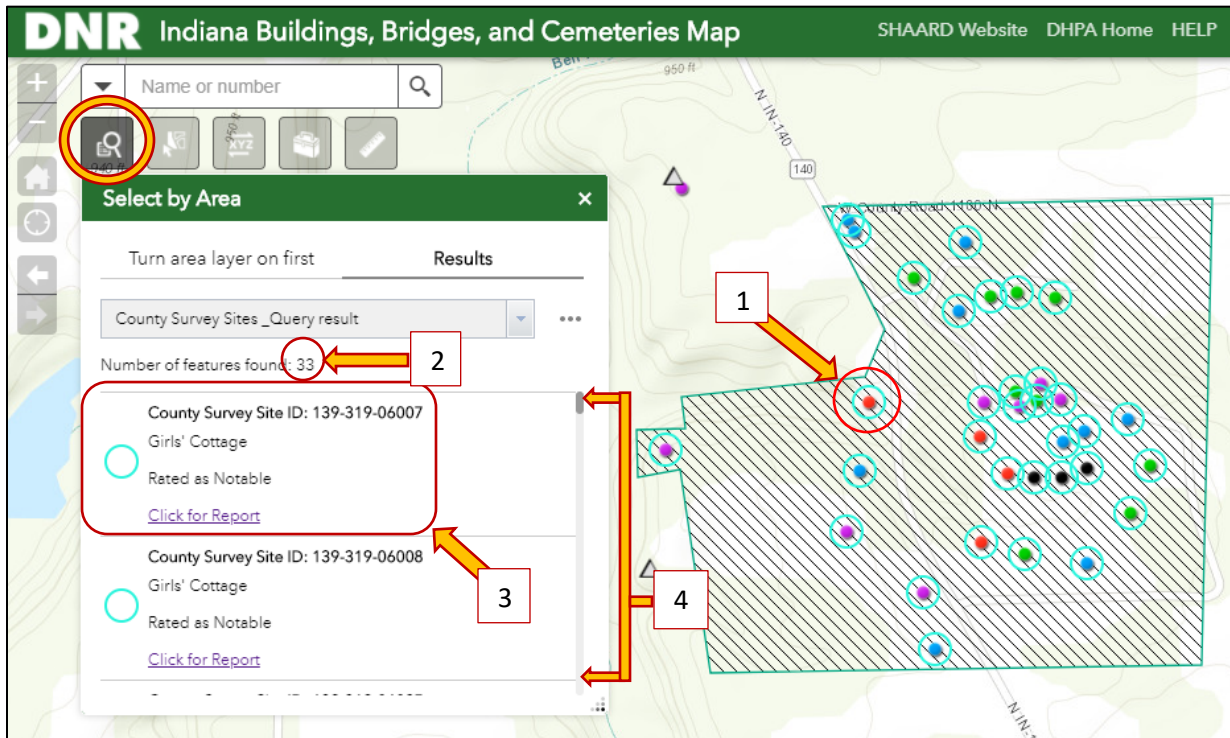
Step 2:



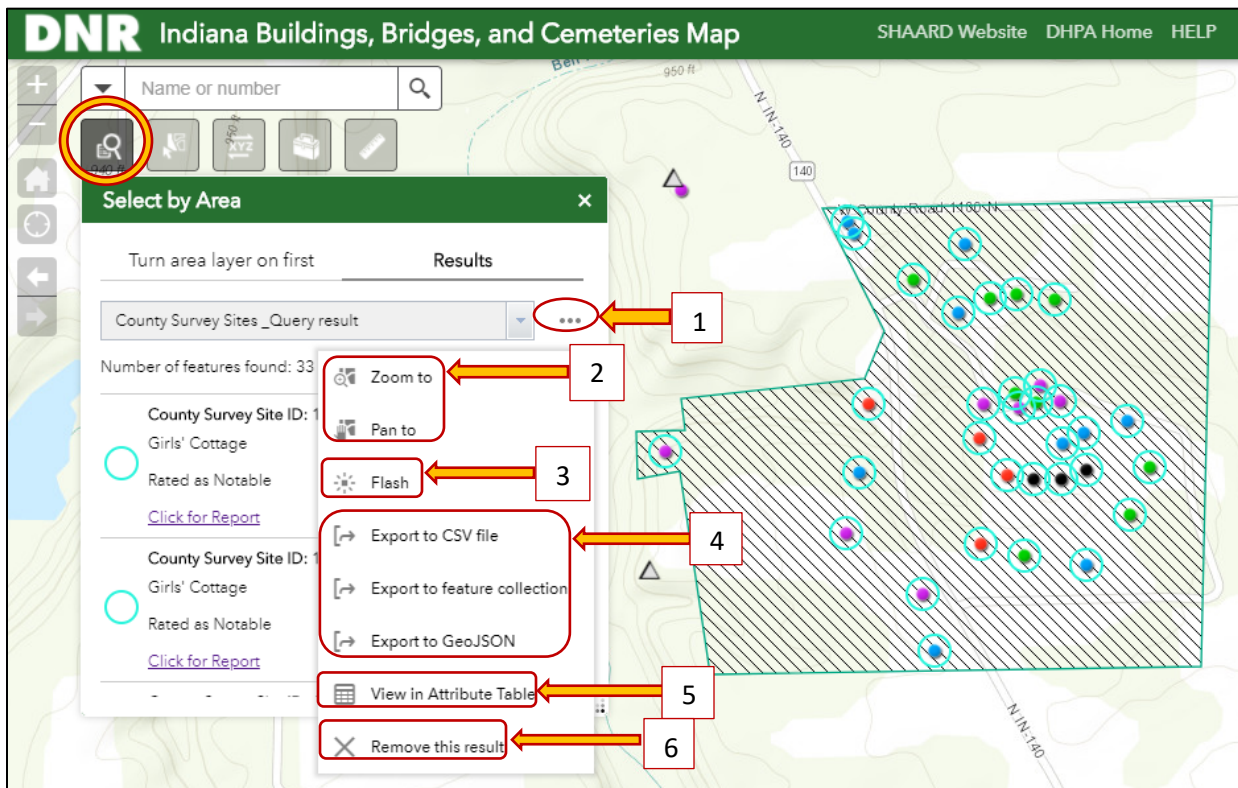
- 1) Once you have selected your site type, the following options will appear. The County Survey Sites will display which site type is selected.
- 2) The “Spatial Relationship” portion of the tool denotes that the County Survey Sites selected will appear “intersect” a related layer. (Intersect essentially means “within”).
- 3) The “Related Layer” option will allow the user to choose which layer within which you would like to conduct your search. The options include Counties, Cemeteries, Historic Bridges, National Register Sites, Historic Districts, USGS 24K Quadrangles, and Civil Townships. ****Note that you must have each layer turned on in the Layer List (covered on page: #12) to properly execute the search.**
- 4) In this example, we are looking to see how many County Survey Sites exist within the Historic District (the striped area highlighted in blue).

Step 3:

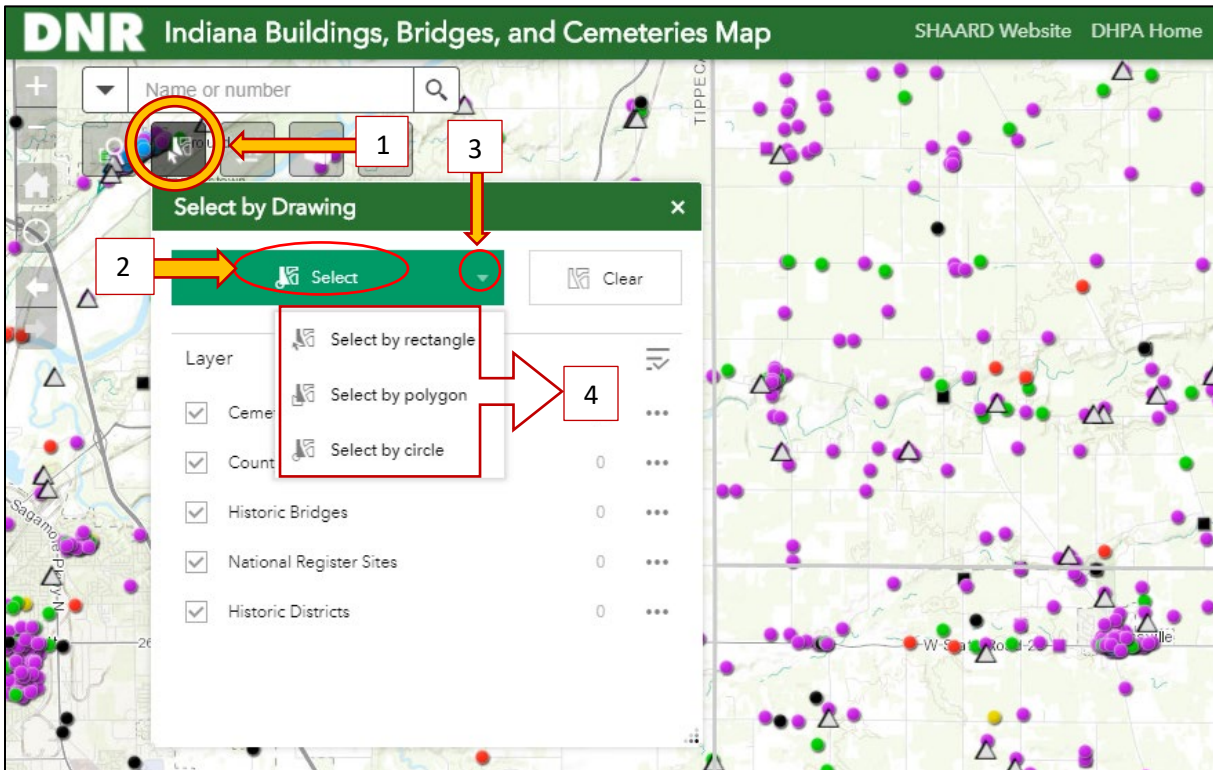
- 1) Once you have selected your search parameters, you are ready to highlight your area. You must select this button in order to draw within your area.
- 2) Once you have selected the symbol described in the first portion of this explanation, you are ready to select your area. Use your mouse to click within your desired area and drag your arrow to create the blue area shown. Note you do not need to make the area exact. Just draw the blue box within desired area and release.
- 3) This message will appear once you click within your desired area. As you drag your mouse across the area, follow the instruction as it appears and let go once you have selected your area.
- 4) Once you have released the selection, click “Apply”. This will execute your search.
- 5) If you want to delete the area selected, click on this button.

Step 4:

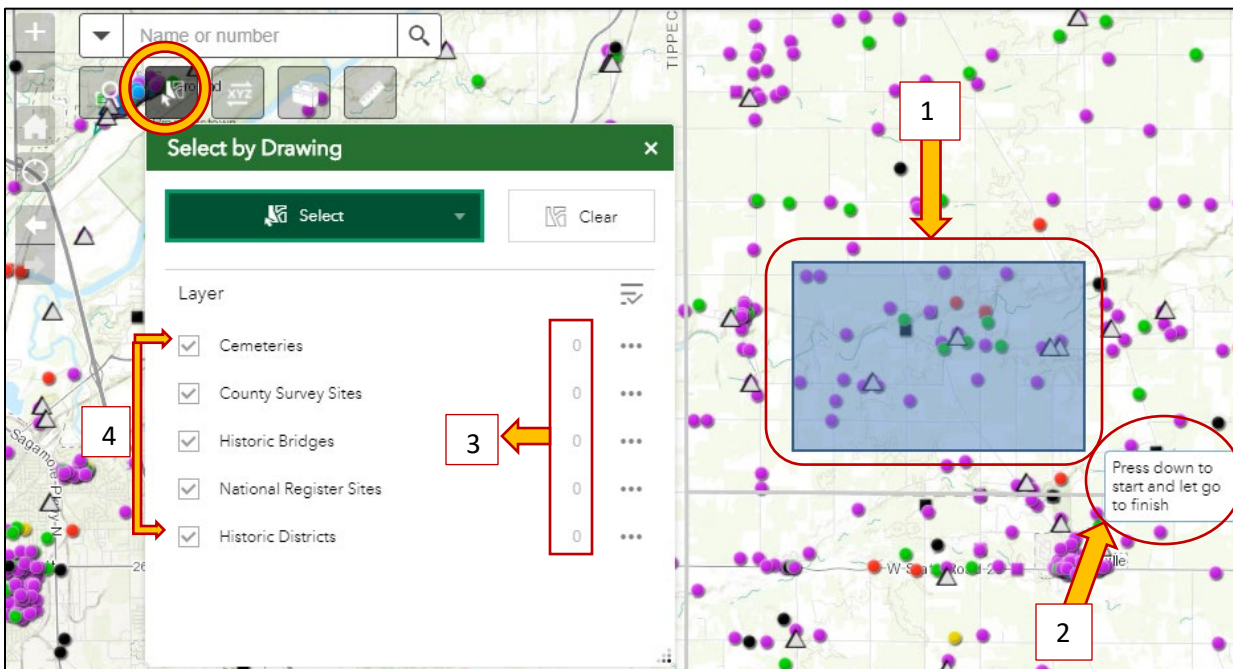
- 1) Once your area is selected, the sites will be surrounded by highlighted blue circles.
- 2) The “Number of Features Found” will show the total number of sites found within the Historic District. In this example, 33 sites have been found within the given parameters.
- 3) The sites within the area will appear in a list in this section of the tool. This information will include the County Survey Site ID number, the historic name of the site, the rating assigned to the site, and the report.
- 4) To access all the sites within this page, scroll down the list using this scroll bar.

Step 5:

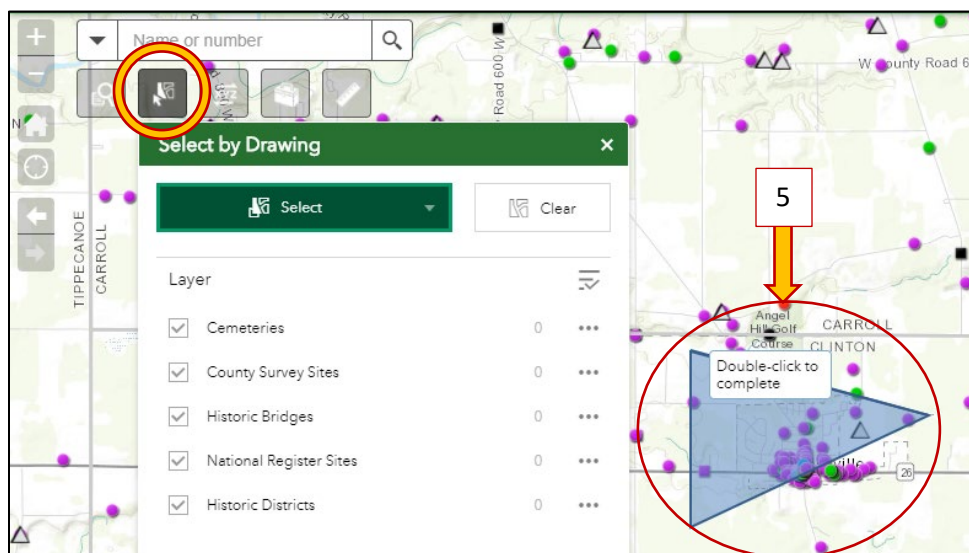
- 1) The ellipses will pull up the options to “Zoom to”, “Pan to”, “Flash”, “Export to CSV file”, “View in Attribute table”, and finally “Remove this result”.
- 2) The “Zoom to” and “Pan to” options will take the user closer to the selected area.
- 3) The “Flash” option will cause the selected points to flash yellow and red for easy identification. The flashing will only last for a few blinks and will return to their normal colors.
- 4) The “Export to CSV file”, “Export to feature collection”, and “Export to GeoJSON” options will open up various files that will list all the sites found within the query result. These lists are available to print depending on the desired format.
- 5) The “View in Attribute Table” option has been further explained on page: #21.
- 6) To remove the blue highlight surrounding the sites, click on the “Remove this result” option. This will also remove all the results listed in the query result.

Select by Drawing:**Step 1:**

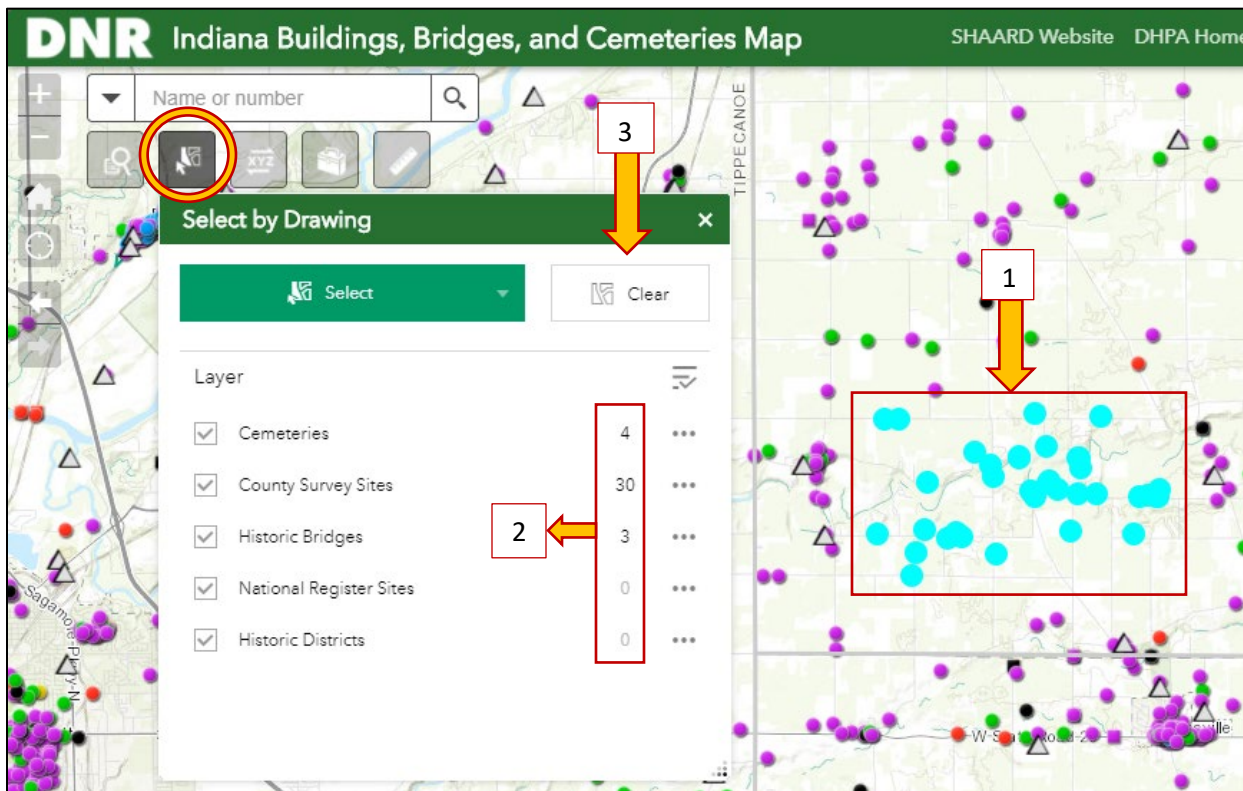
- 1) Click this button to “Select by Drawing” to use this tool.
- 2) Click on the “Select” to utilize the tool.
- 3) In order to choose the shape of the area, click on the little arrow.
- 4) Once you click on the arrow, you can choose to create an area by rectangle, polygon, or by circle.

Step 2:

- 1) Once you have selected the shape of your area, select your area.
- 2) As this box suggests, “Press down to start and let go to finish”.
- 3) This area of the box will display the results of the search. Since at this point the user has yet to release the drawing, there are no results.
- 4) Note that you can select or unselect the layers by clicking on the boxes to the left of the list. This way, you can draw an area and only search one or all site types available in the layer list.

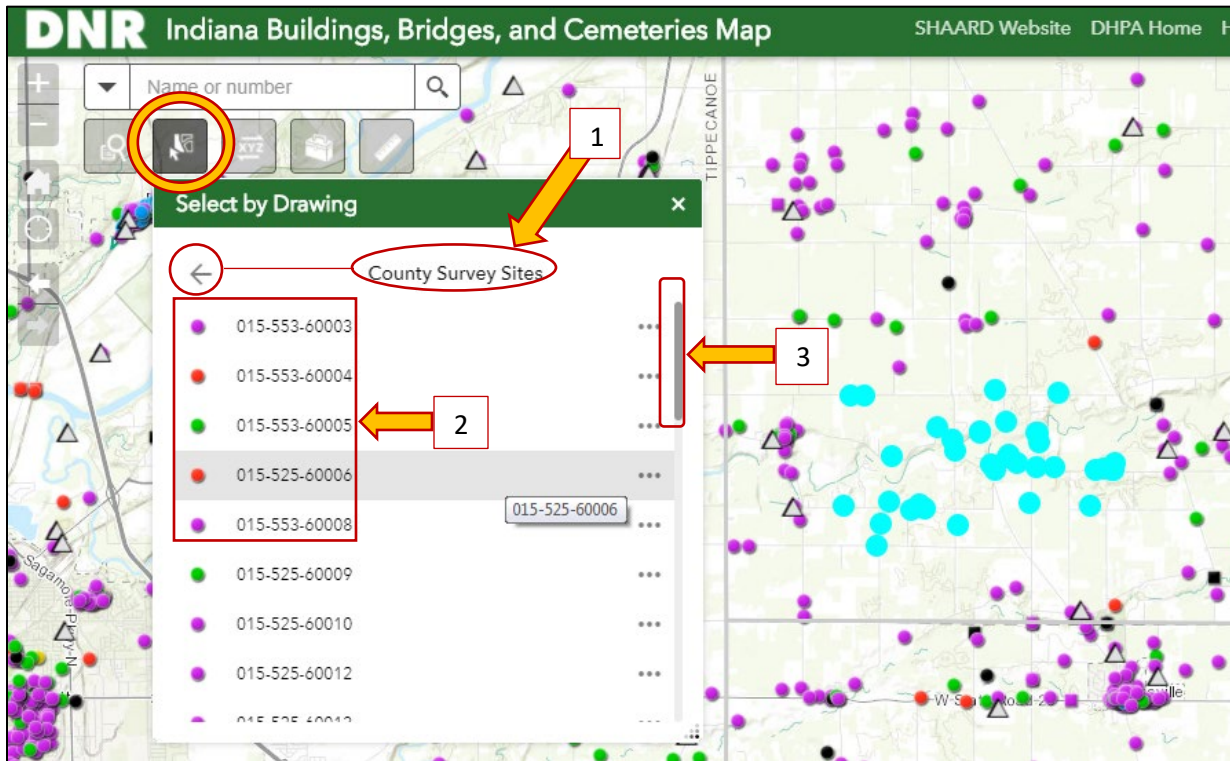


- 5) When you select the polygon option, make sure to Double-click to complete the drawing. If you do not double click, you will continue to alter the polygon.

Step 3:

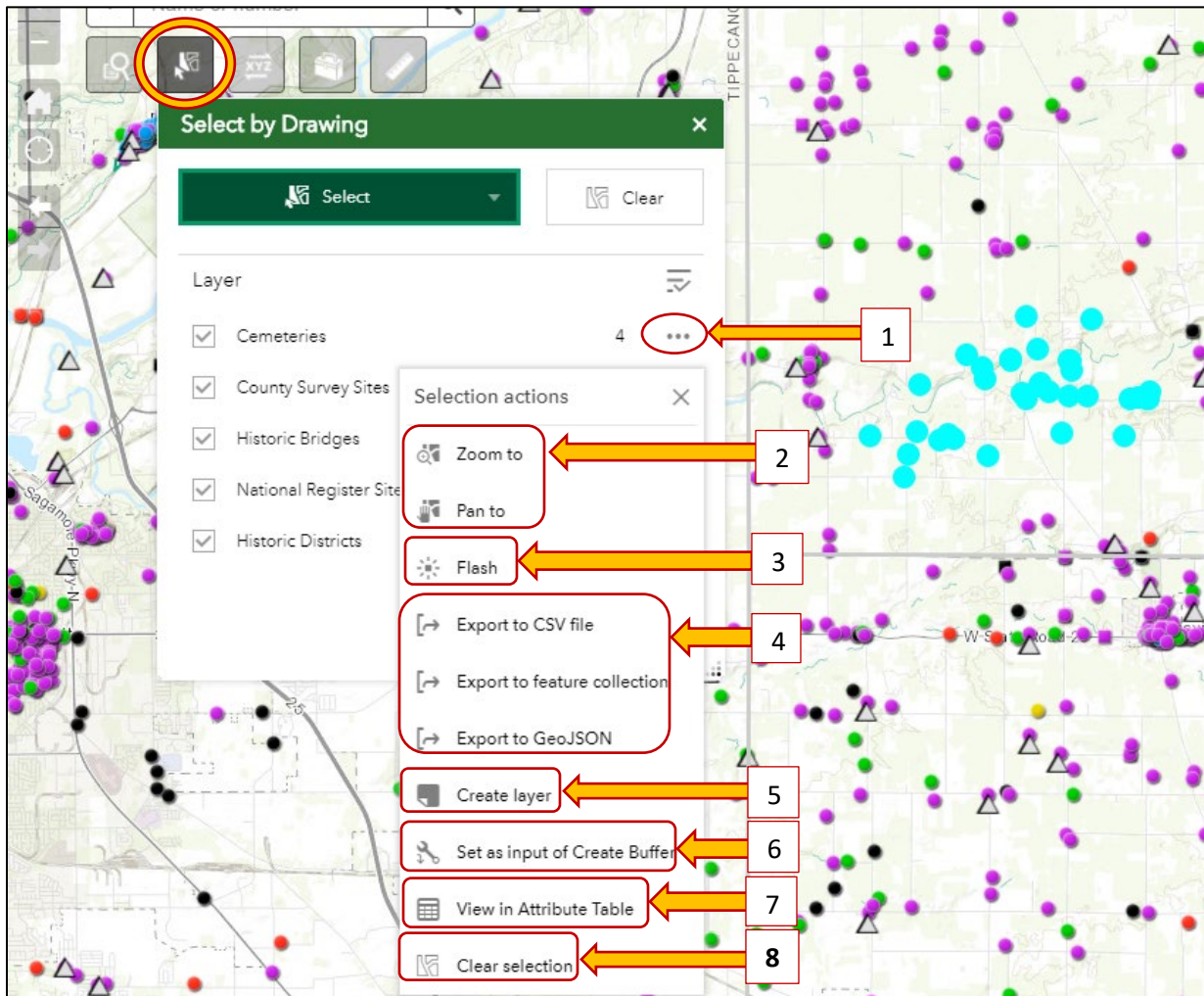
- 1) The sites once selected will be highlighted blue. Note that the shape drawn initially will disappear and the highlighted sides will only be differentiated by being highlighted.
- 2) Once you release the drawing, the results of your search will be listed in this portion of the tool. In this example, there are four cemeteries, thirty county survey sites, and three historic bridges. There are no national register sites or historic districts located within the boundaries of the drawing selected so these results are zero.
- 3) If you want to delete the results of the drawing, just click on the “Clear” button.

****Remember to clear your searches/selections before moving on to the next search. Clicking on the “x” in the upper right hand corner of the box will only exit the tab but will not clear a selection.**

Step 4:

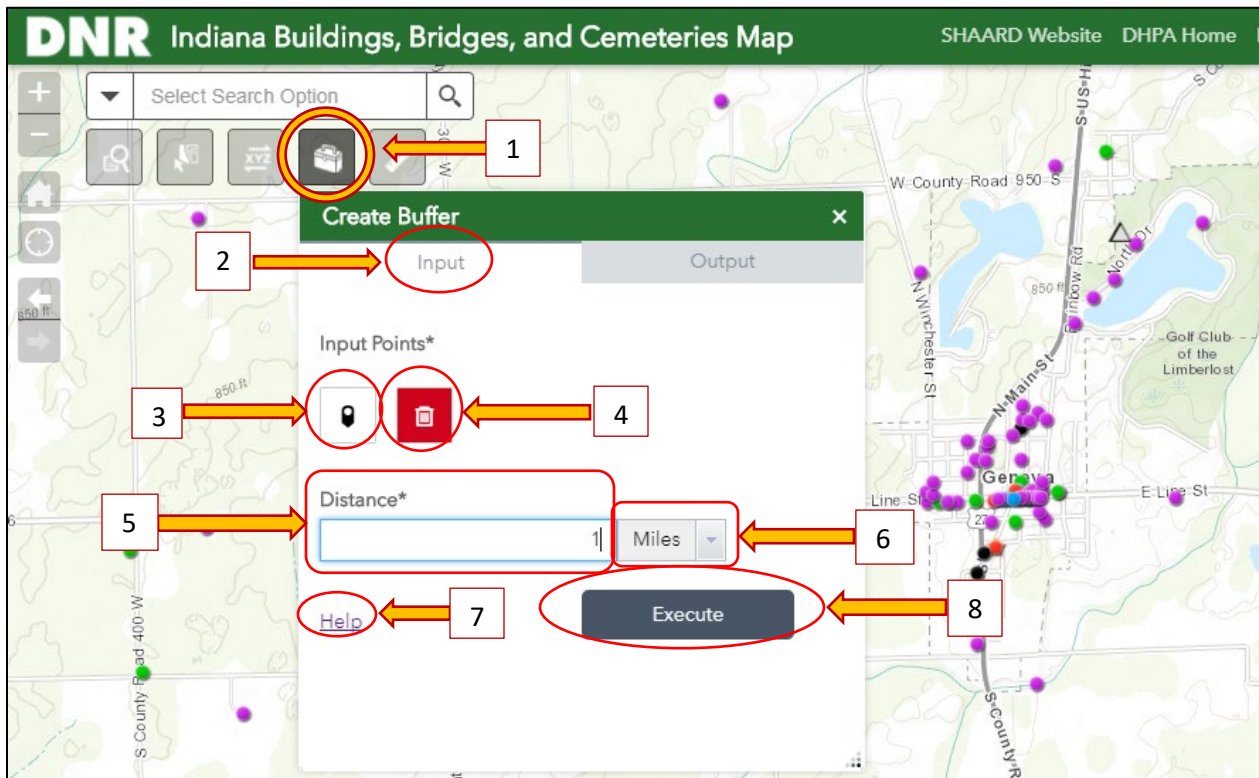
- 1) When you click on a site type, this list of the sites found within the Drawing for County Survey Sites will appear. (If you wish to select a different site type, click on the arrow to the left of the selected site type).
- 2) The site types will include the site number, the symbol corresponding to the site type, and its rating.
- 3) In this example, there are thirty-three sites which you may scroll through. These will be listed numerically according to the SHAARD number.

Step 5:



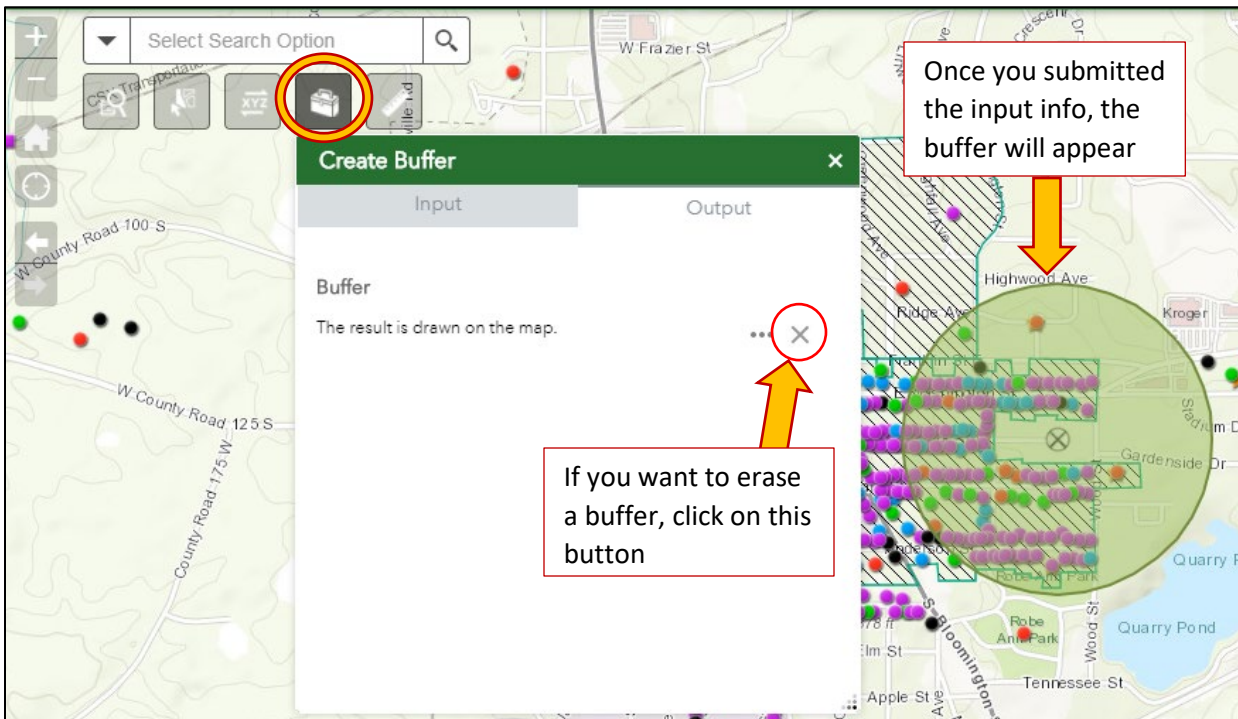
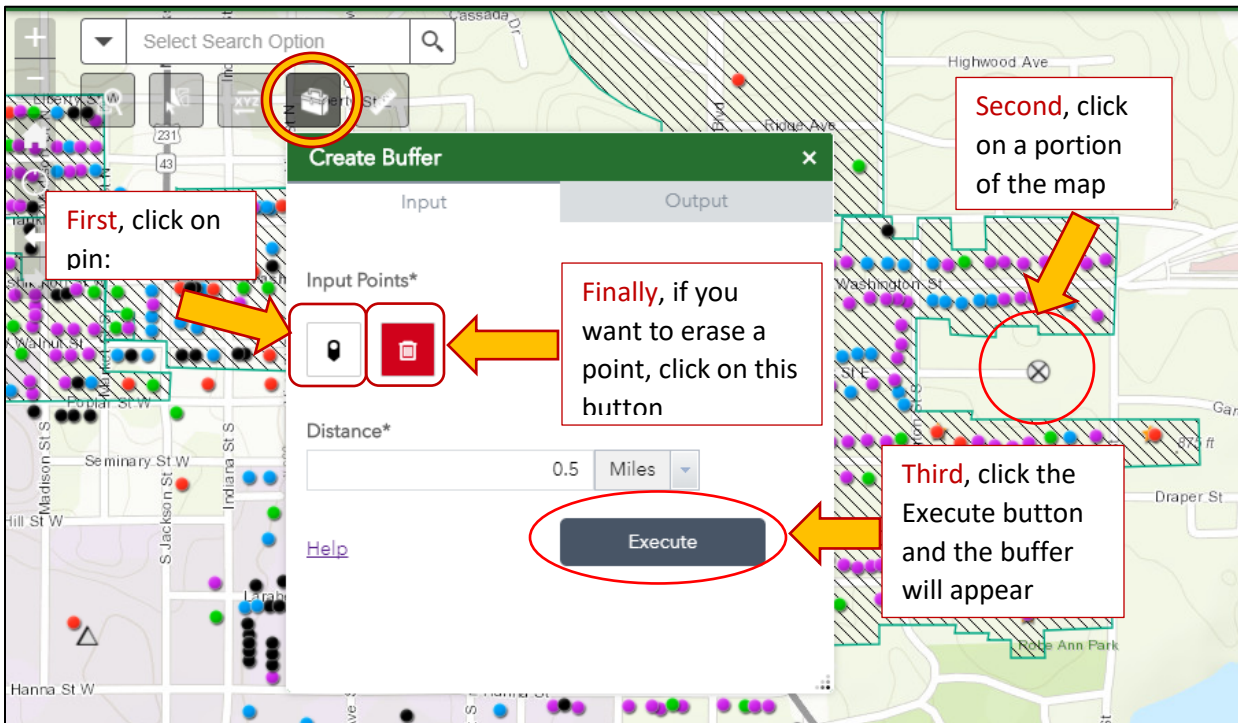
- 1) Click on the ellipses to open the Selection actions.
- 2) The “Zoom to” and “Pan to” options will bring the screen closer to the selected sites.
- 3) The “Flash” option will cause the selected points to flash yellow and red for easy identification. The flashing will only last for a few blinks and will return to the highlighted blue colored.
- 4) The “Export to CSV file”, “Export to feature collection”, and “Export to GeoJSON” options will open up various files that will list all the sites found within the query result. These lists are available to print depending on the desired format.
- 5) The “Create layer” option will allow you to save the selected sites within the drawing so you can refer to them anytime. This option will not provide a list of the sites within the layer, but it will highlight the sites selected.
- 6) The “Set as input of Create Buffer” option will allow you to use the sites selected within the Draw By Area as points for the buffers. To learn more about creating a buffer, see page #40.
- 7) The “View in Attribute Table” option will allow the user access to selected sites in table format.
- 8) **If you want to delete the selected site, click on the “Clear selection” option.**

Using the Buffer by Distance - Basics:



- 1) Click on this button to open the “Create Buffer” box. A buffer in GIS is an area defined by the bounding region at a specified maximum distance from an object. Buffering is the process of creation of a zone of specified distance, called Buffer zone, around features such as point, line or polygon feature.
- 2) The “Input” tab will allow you to select your points, adjust the desired distance between the point and the buffer, and will allow you to execute the buffer. **The “Output” tab will be explained on page #41.
- 3) This symbol is the point that the user can place on any area in the map. You must click on this symbol in order to drop a pin.
- 4) This button will erase the point on the map. You must click on this symbol in order to erase the pin.
- 5) The “Distance” section will allow the user to submit the quantity of the distance between the buffer and the point.
- 6) The “Miles” section can be changed by clicking on the down pointing arrow to the right of the button. The other options are: meters, kilometers, feet, nautical miles, and yards.
- 7) The “Help” link will lead to a brief step-by-step.
- 8) The “Execute” button will activate the user’s ability to draw a buffer. After you draw the buffer, the “Output” tab will give you more options for manipulating the buffer.

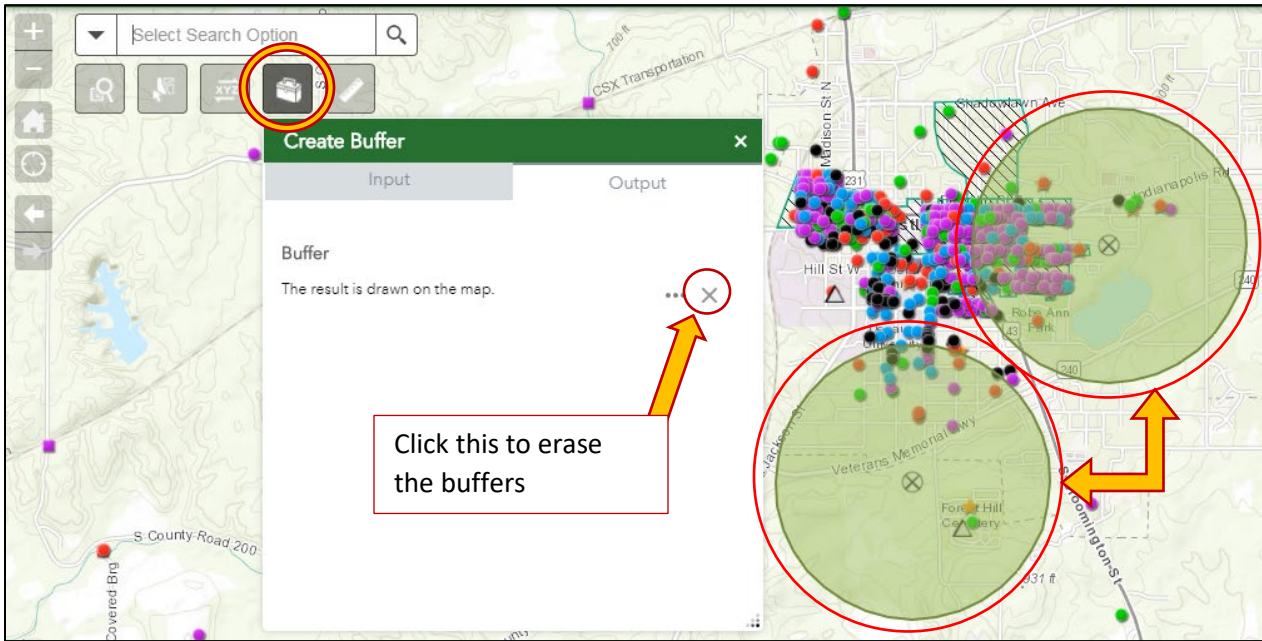
Using the Buffer by Distance: Step-By-Step



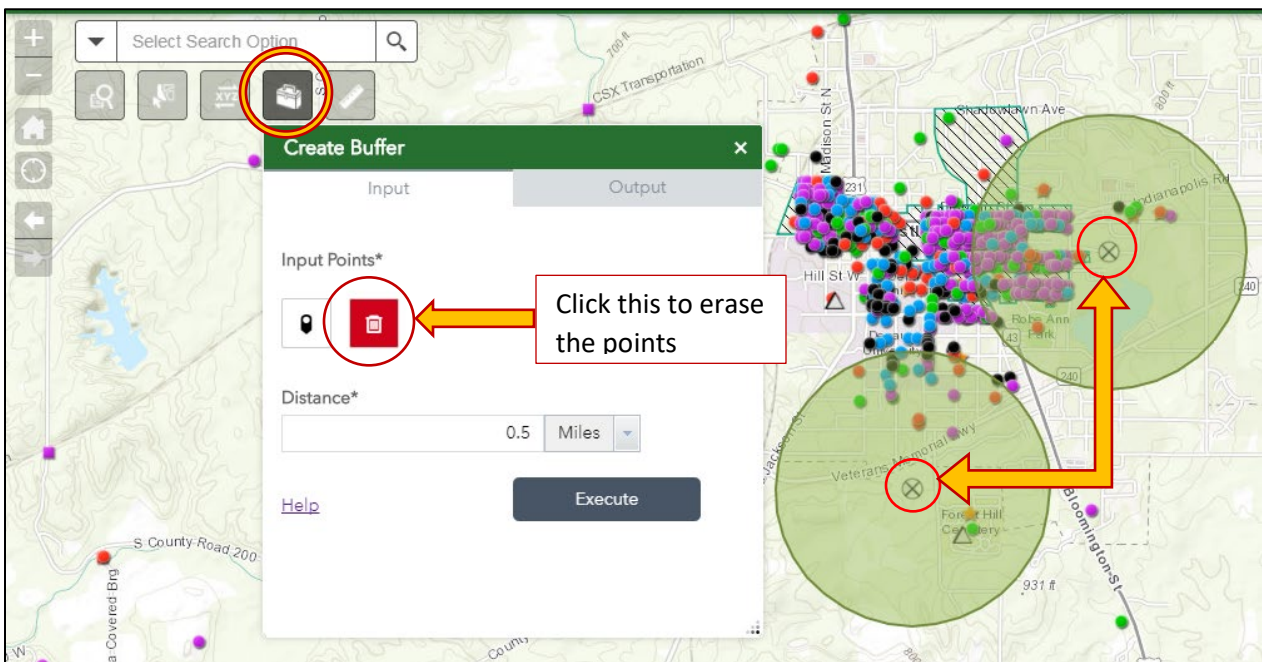
****In order to view the list of the sites within the buffer, follow the directions on page: #45.**

Creating Multiple Buffers:

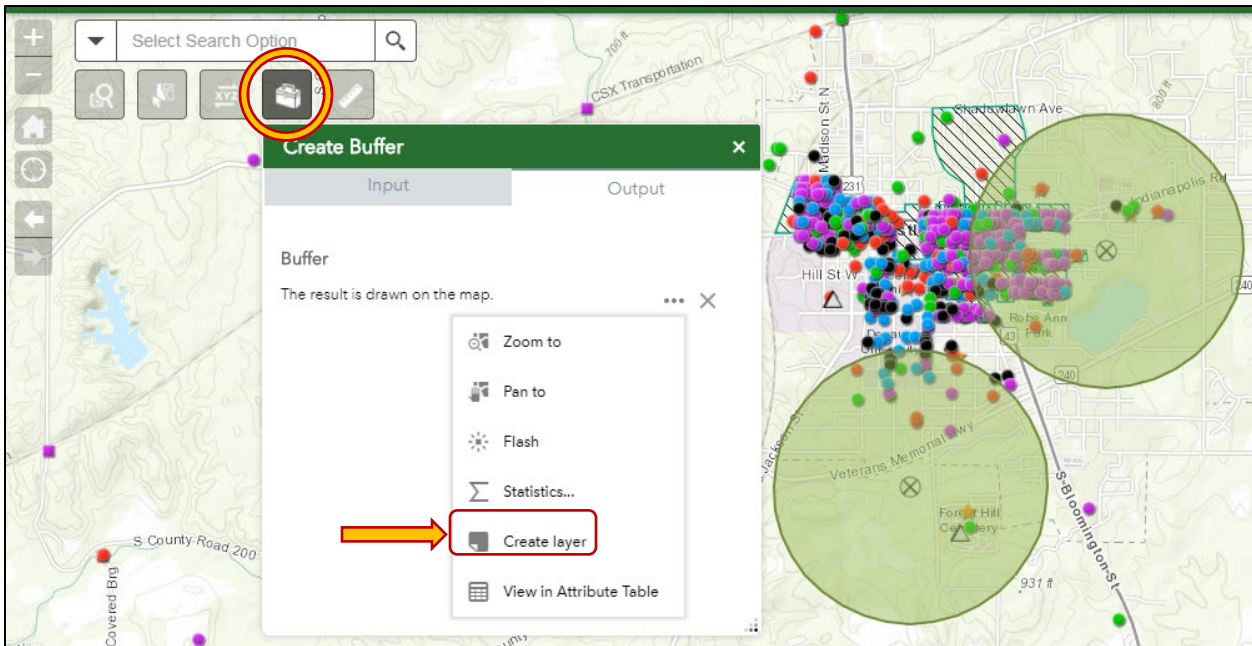
You can create multiple buffers by repeating the steps illustrated above.



You can create multiple buffers by repeating the steps illustrated above. **However, if you click the “X” to erase a buffer, ALL of the buffers will be erased.** Similarly, if you click on the Trash Can button (shown in the image below) in the Input tab ALL points will be erased.

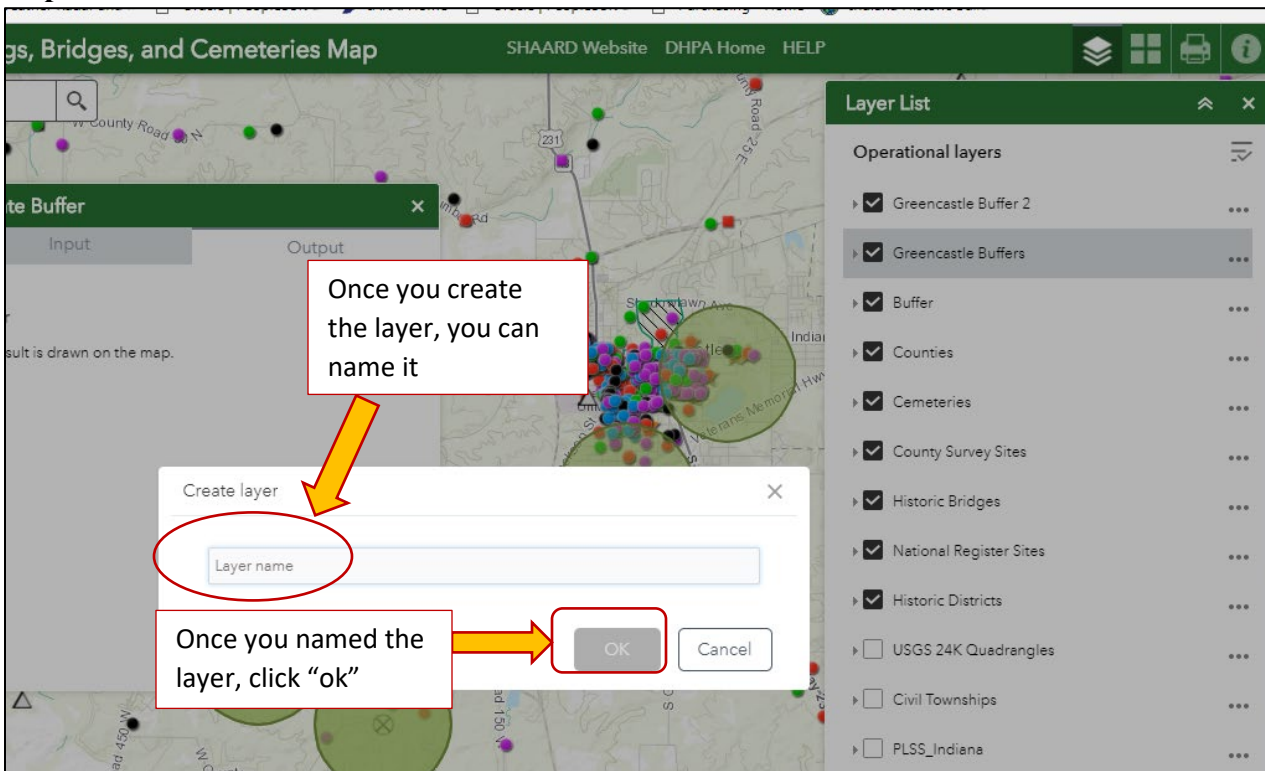


Creating Layers with a Buffer: Step 1

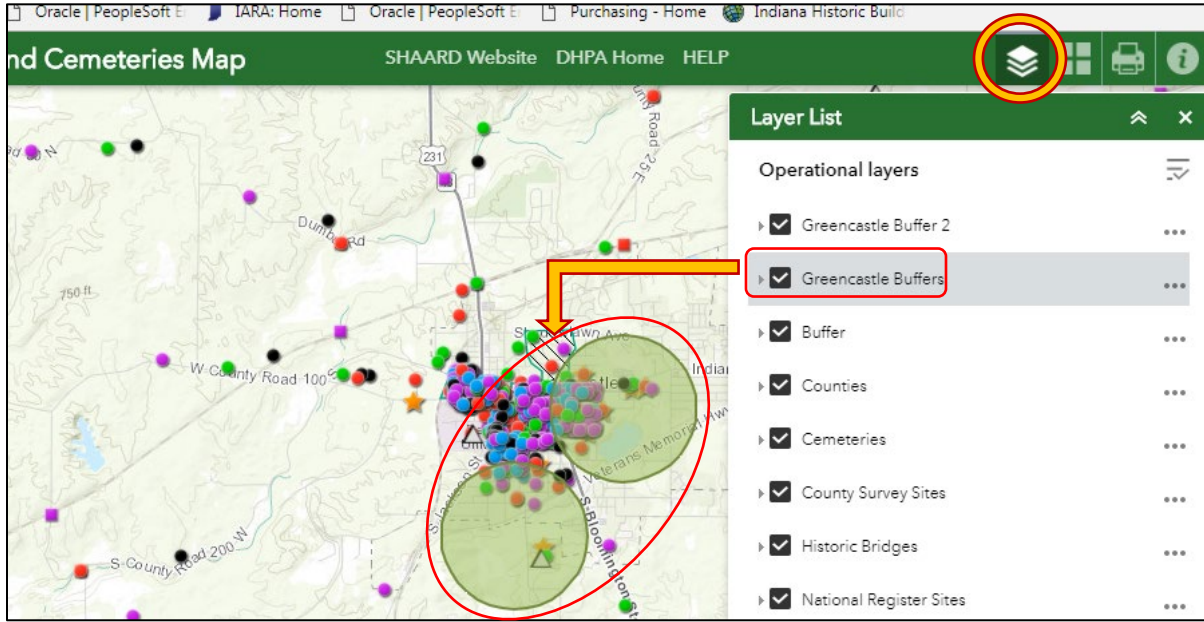


Click on the “Create layer” option. Note that when you create a buffer, ALL the points in the map will be part of the same layer. However, once a layer is created, you may generate new buffers. This way, you may keep track of several buffers at once.

Step 2



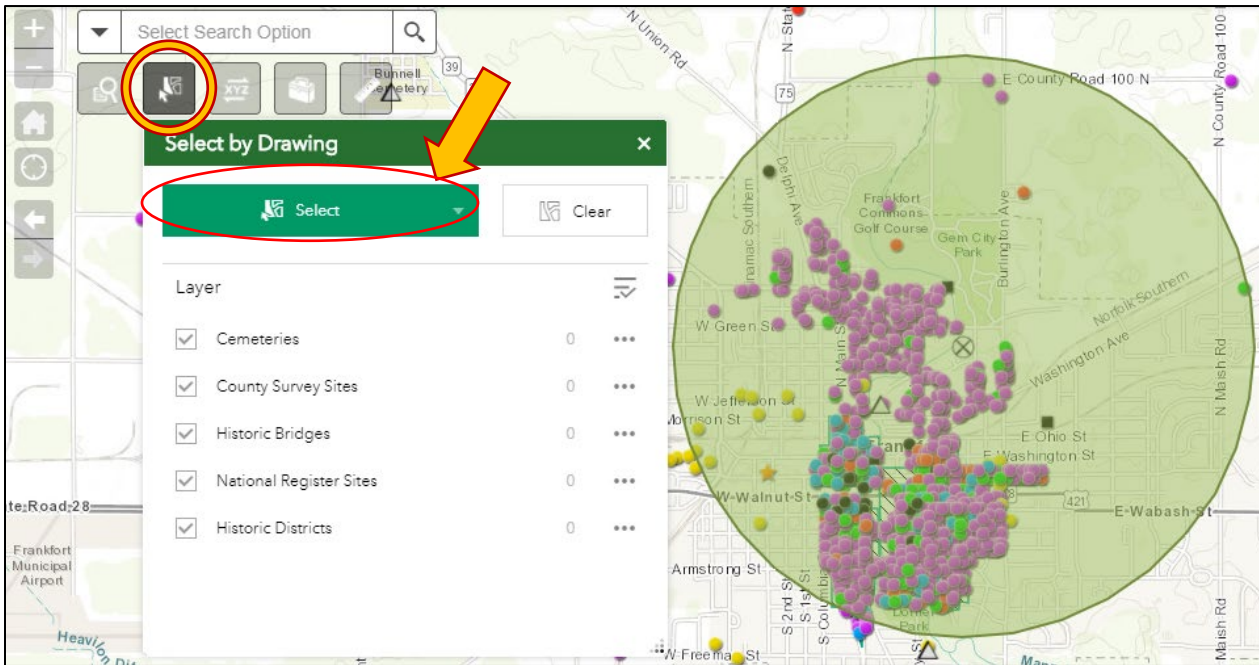
Step 3



Once you draw a buffer (or several buffers), you may save them as a layer. Once the layer is created, you may dim the buffers, turn the layer off, and adjust the transparency. Once you create a layer, that layer cannot be added to. You may create a different layer, but you may not edit the existing layer.

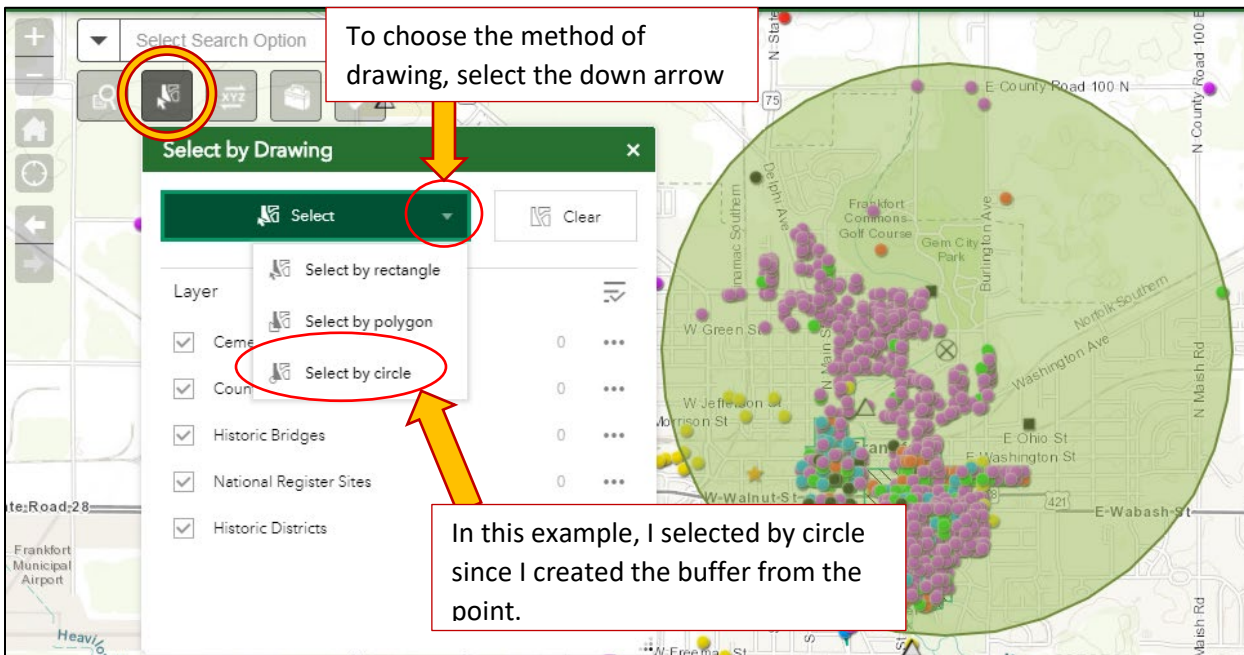
****Note that once the buffer is created, it cannot be removed from the Layer List. However, keep in mind that you will have to start over completely every time you close out the map.**

Viewing Sites within the Buffer: Part 1



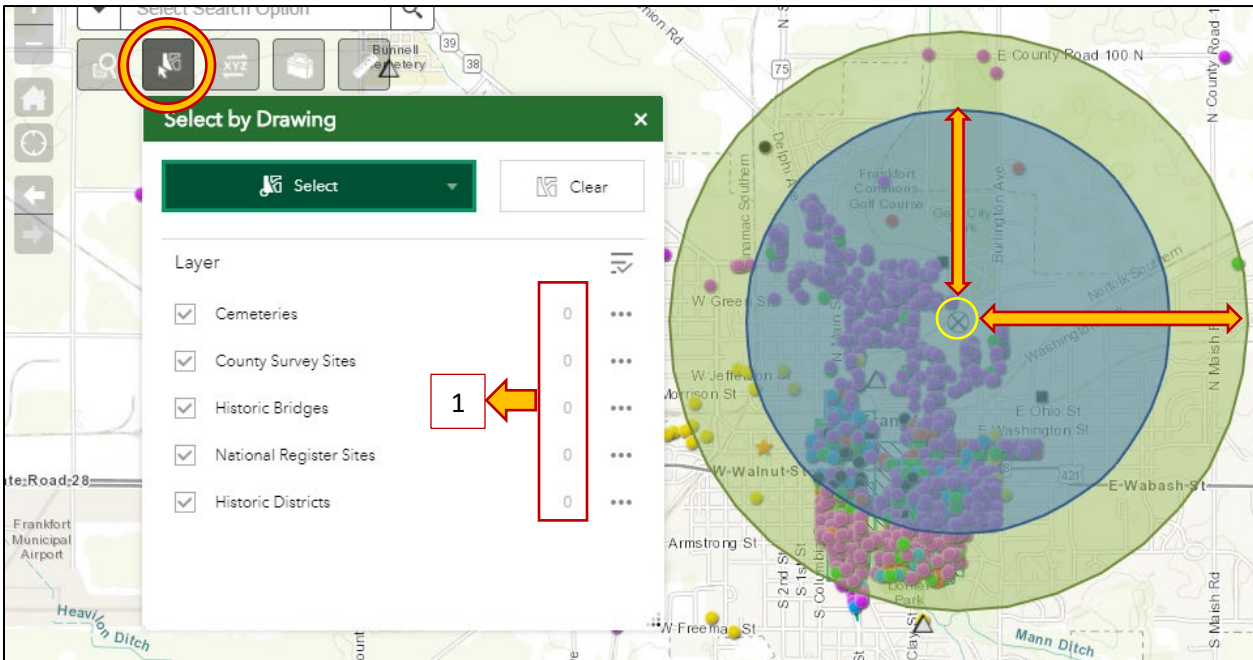
Once you have drawn the buffer by distance, you must open the Select by Drawing button to view the sites within the buffer. Start by clicking on the “Select” button.

Part 2

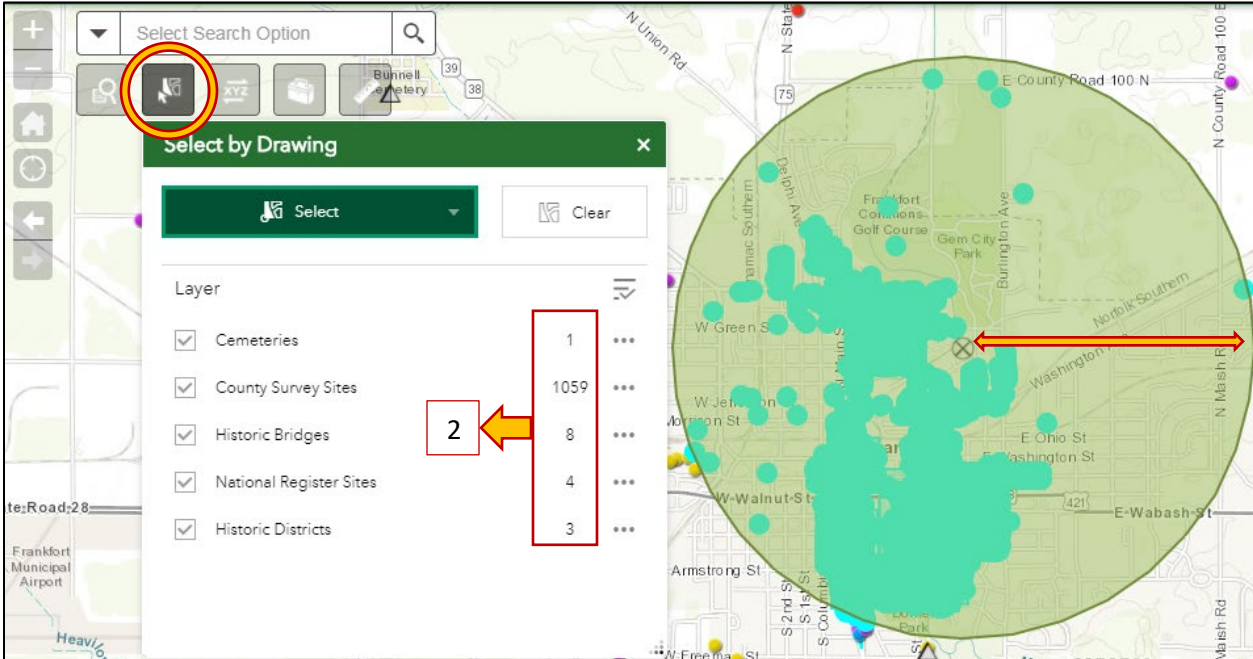


Note that the default for the “Select” button will be set to the “Select by Rectangle” option. In order to select by circle, click the down pointing arrow.

Viewing Sites within the Buffer: Part 3

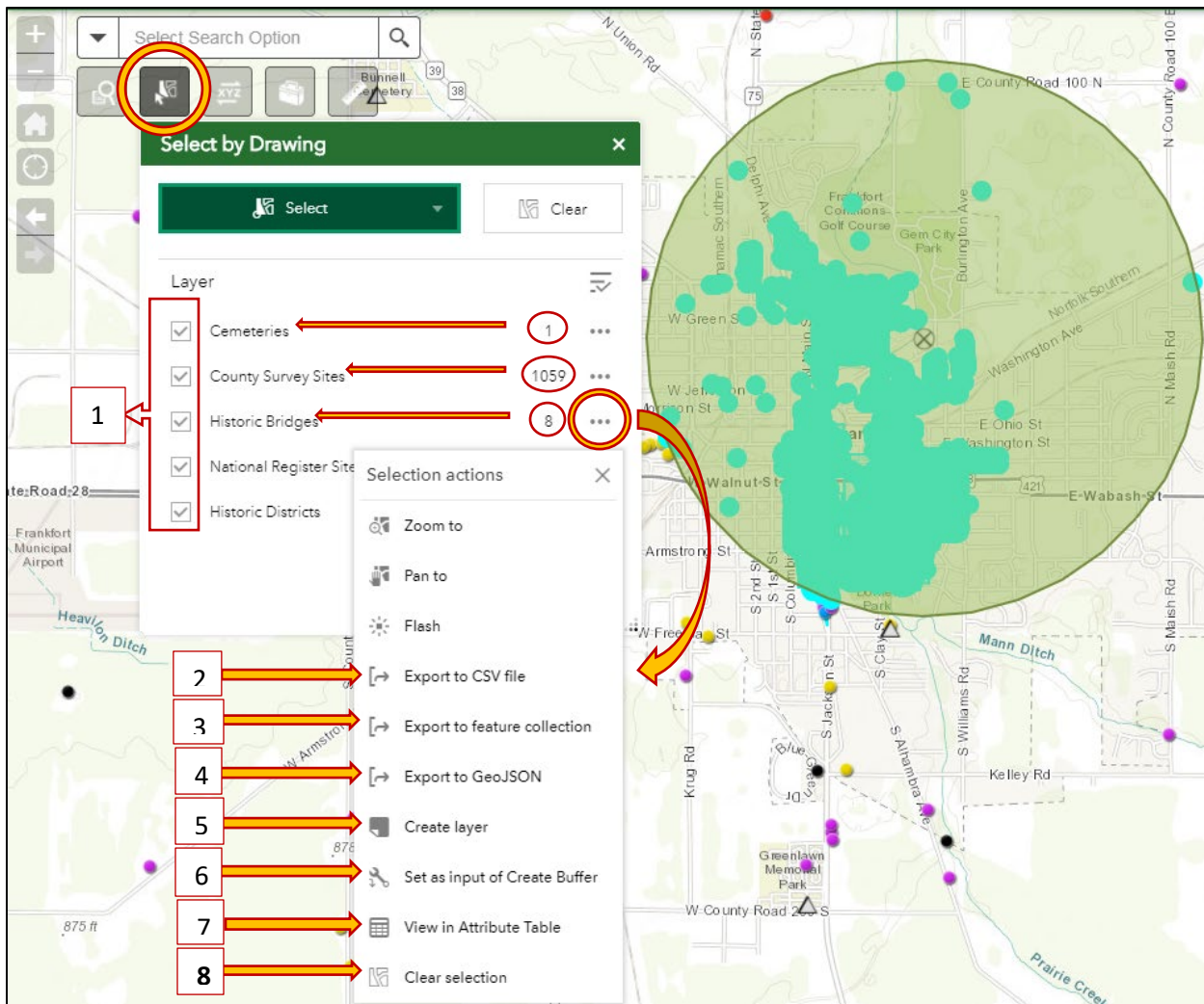


- 1) Once you select the drawing type, click on the pin that was dropped “⊗” in the center of the x and draw the circle out to the edge of the buffer cast by the distance chosen (in this example I used a mile buffer). **The blue tint is the “Select by Drawing” and the green tint is the buffer by distance. The numbers corresponding to the site types will be zero till you draw the circle to the edge of the buffer.



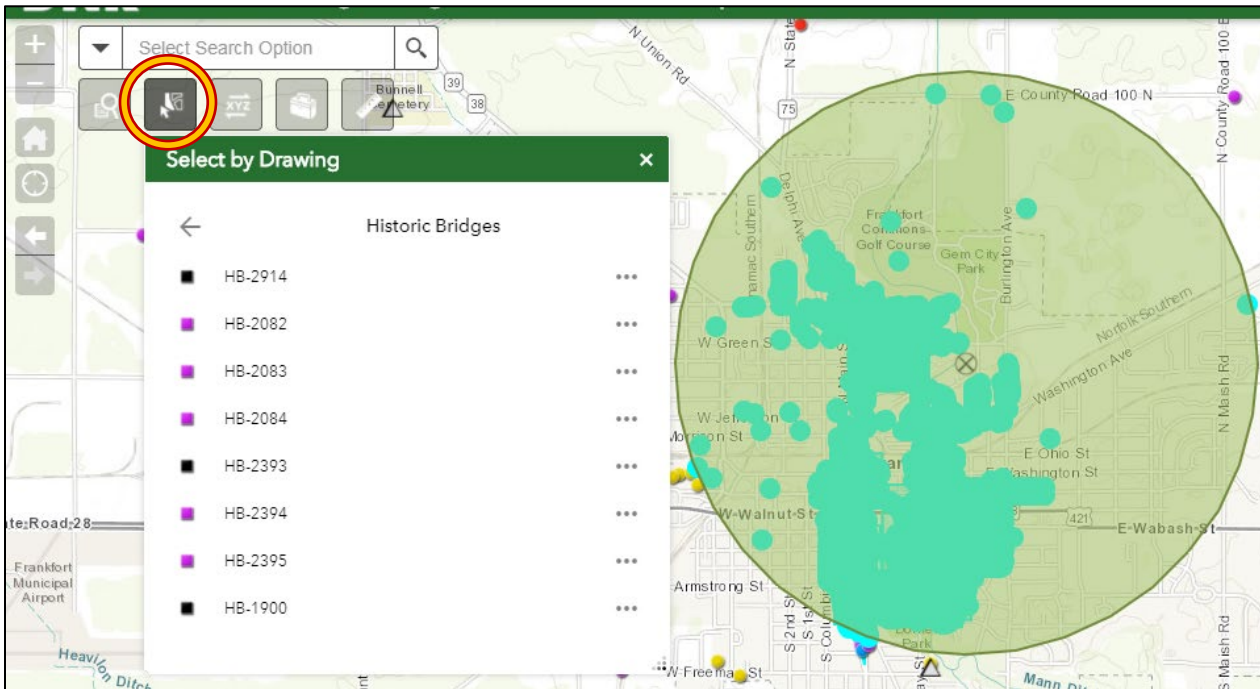
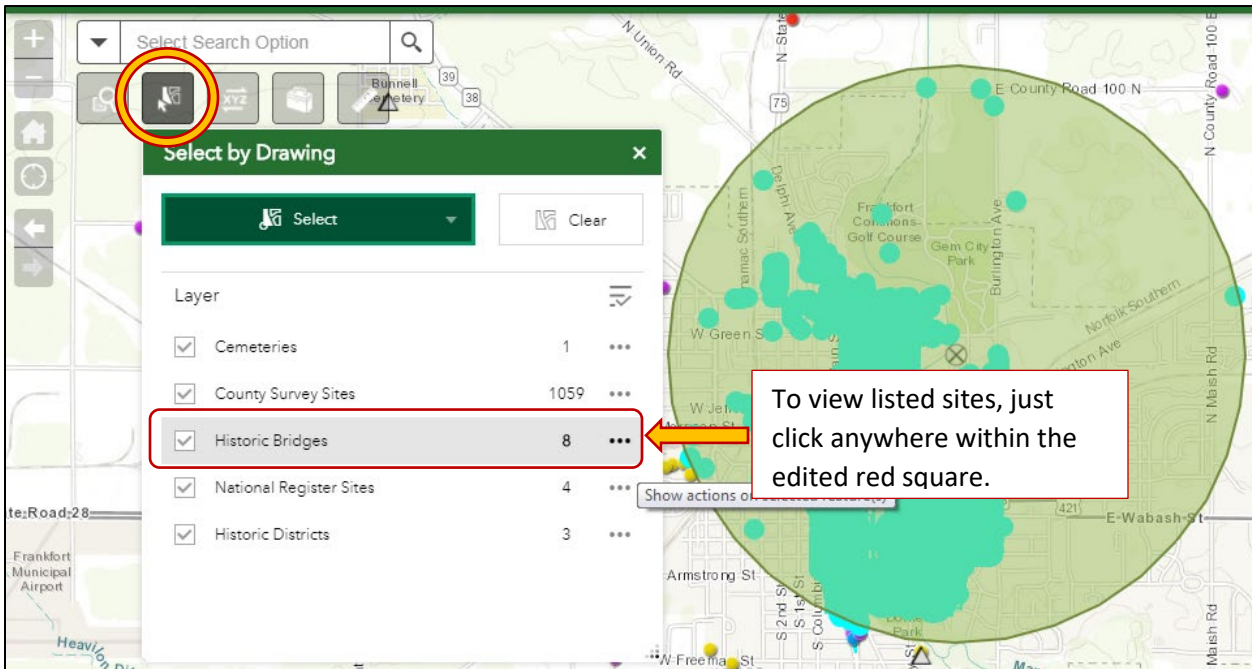
- 2) Once you have drawn the circle to the edge of the buffer, the sites within the buffer will turn bright blue. The numbers corresponding to the site types will then show the number of sites within the buffer.

Viewing Sites within the Buffer: Part 4



- 1) These are the site types within the buffer. In this example, the corresponding numbers for the site types for the National Register Sites and Historic Districts are covered up by the options opened by the ellipses in the circle: to the right of the Historic Bridges.
****Note that 2-8 open as a result of clicking on the ellipses.**
- 2) The “Export to CSV file” option will open up an excel file that lists the Historic Bridges within the buffer. This is available to print.
- 3) The “Export to feature collection” option will open up a pdf that lists the Historic Bridges within the buffer.
- 4) The “Export to GeoJSON” option will open up a GeoJSON file.
- 5) You can create a layer for your buffer. This will appear in the layer list.
- 6) You can set a point as an input in order to create a buffer.
- 7) The “View in Attribute Table” option will open a list up in the attribute table and will show the SHAARD ID, Historic Name, and Rating
- 8) **The “Clear Selection” will take the Historic Bridges off the sites highlighted in the buffer.**

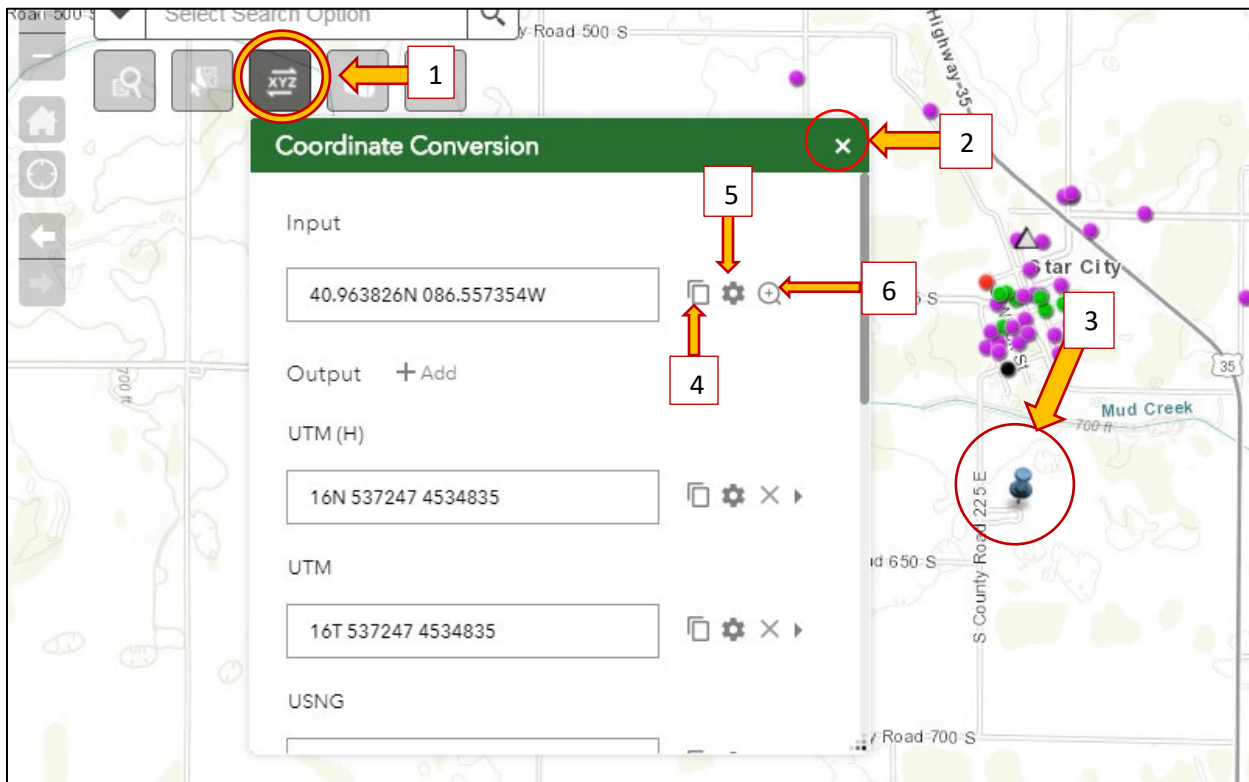
Viewing Site Types within the Buffer: Part 5



Once you click on the Historic Bridges, a list will appear including the number assigned to the bridge and a colored symbol that will show the bridge's rating. In this example, the Black squares show that those sites have been demolished and the Purple show that the site is contributing.

Navigating the Coordinate Conversion Option

Step 1:

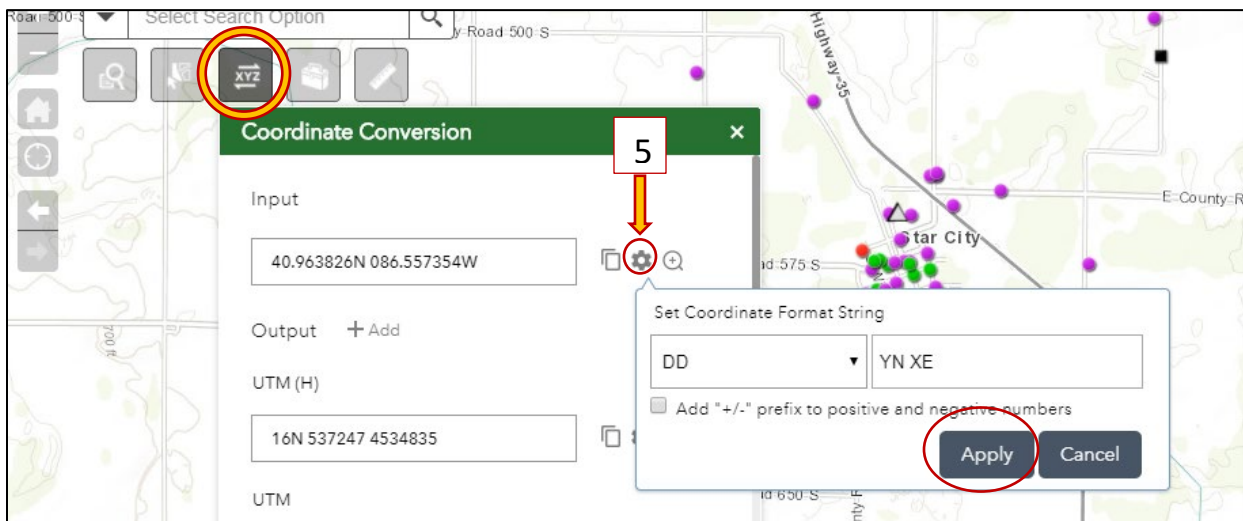


- 1) This is the “Coordinate Conversion” option. Clicking on this option will bring up the following methods for pinning down a location:
 - DD: Decimal Degrees expressed as decimal fractions
 - UTM (H): Universal Transverse Mercator expressed as a two-dimensional Cartesian coordinate system
 - USNG: United States National Grid expressed as a spatial address in the Grid Zone Designation system which assigns a unique world-wide address
 - MGRS: Military Grid Reference System expressed as an alpha numeric system which assigns a unique address for the entire earth
 - GEOREF: World Geographic Reference System is a grid based method of specifying locations on the surface of the earth which is based on the geographic system of longitude and latitude with a more simple and flexible notation
 - GARS: Global Area Reference System is the standardized battlespace area reference system across Department of Defense
 - DMS: Decimals, Minutes, and Seconds are an alternative to using Decimal Degrees
 - DDM: Degrees Decimal Minutes are another alternative to using Decimal Degrees
- 2) By clicking the “X” option, you can clear the Coordinate Conversion drop box.
- 3) This pin will show the desired location. This pin will appear as a result of a search within the state. This pin can also be moved by clicking on any different place in the map, so you do not have to make a search to drop the pin

on any given area. This way, you may open the Coordinate Conversion option, click on an area, and find the UTM (or any of the expressions listed above) of the location marked by the pin. In this screenshot, the pin rests on an IHSSI Notable site. This option can allow the user to view the approximate coordinates of a given site.

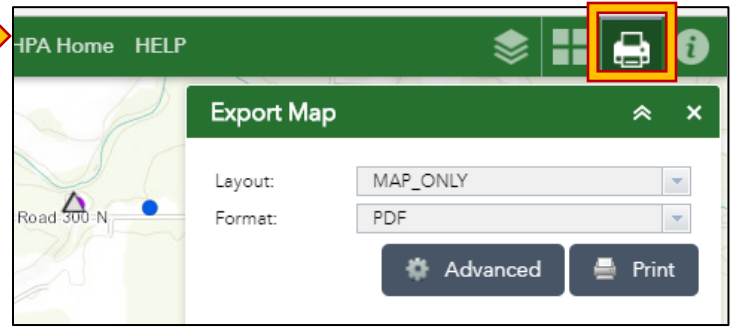
- 4) This option will allow you to copy your coordinates to the clipboard. Copying coordinates to the clipboard just means the values are copied on the computer and can then be pasted in another application (email, notepad, Word, etc.).
- 5) You can set the coordinate format string and apply. See Step 2.
- 6) This option will take you to the location of the pin. Keep in mind that you can still move away from the pin by clicking and dragging the mouse toward surrounding areas. This option will bring you back to the pin after you have wandered from the location.

Step 2



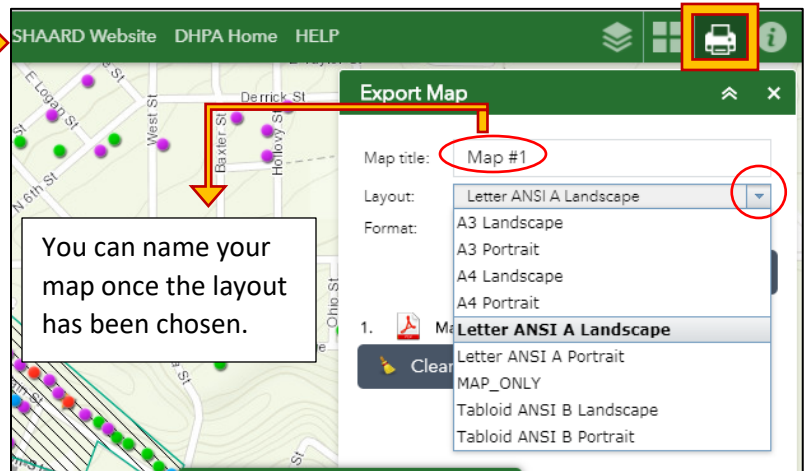
How to Print the Map

Step 1: Select the print symbol in the upper right hand corner of the map. The Export Map drop box will appear and will give you access to the Layout of your print as well as the format in which they are printed.

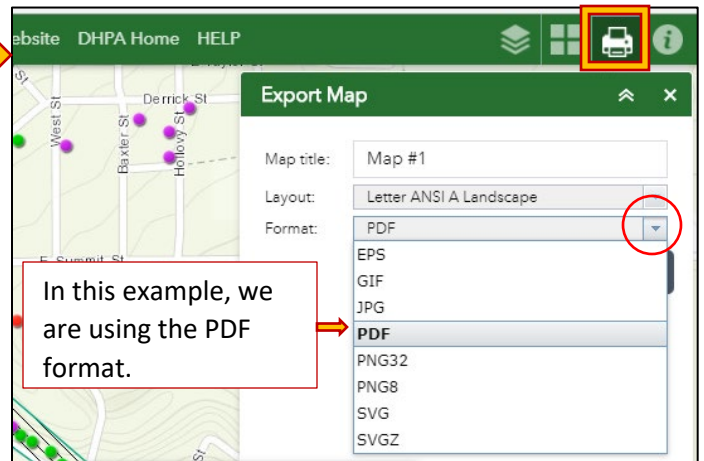


Step 2: Choose the layout of your print. The following choices will drop down: A3 Landscape, A3 Portrait, A4 Landscape, A4 Portrait, Letter ANSI A Landscape, Letter ANSI A Portrait, Map Only, Tabloid ANSI B Landscape, Tabloid ANSI B Portrait. For this example, we will be printing from the Letter ANSI A Landscape option.

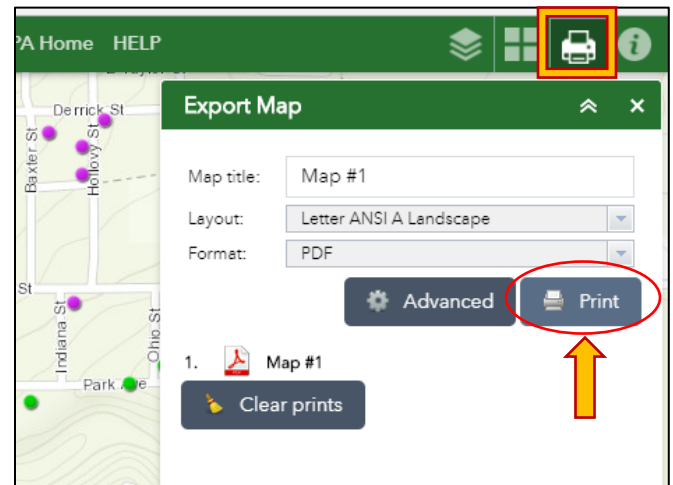
****Note that you can name all the maps EXCEPT for the Map_Only option.**



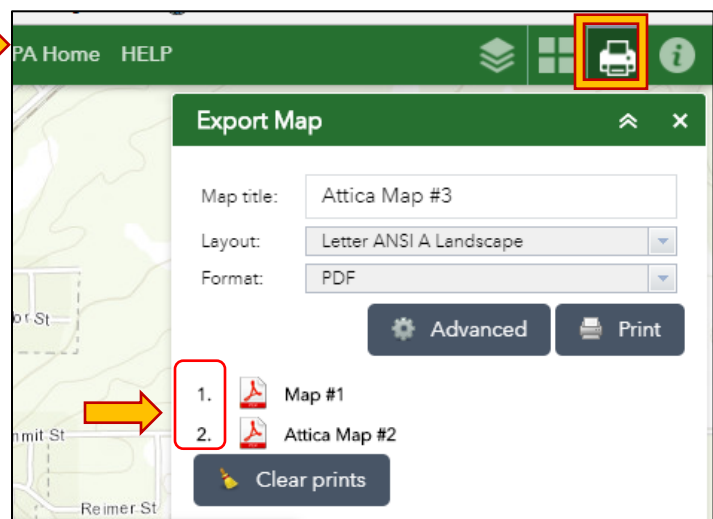
Step 3: Choose the Format of your print. The following choices will drop down: EPS (encapsulated postscript – Adobe Illustrator), GIF (graphic interchange format), JPG (Joint Photographic Experts Group), PDF (portable document format), PNG32 and PNG8 (portable network graphics), and SVG and SVGZ (scalable vector graphics). In this example we will be using the PDF format.



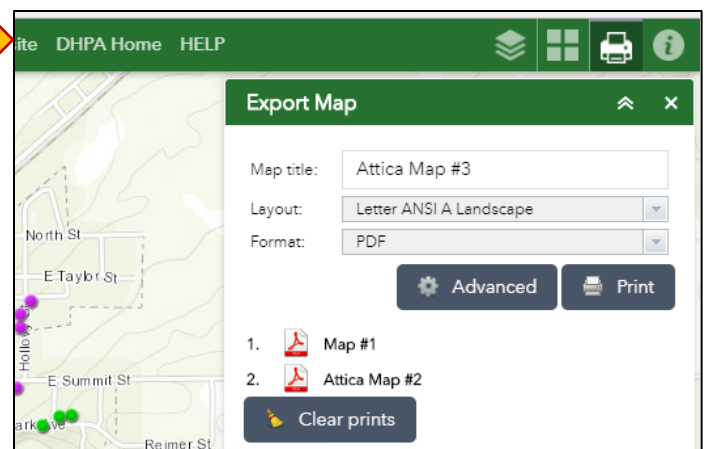
Step 4: Once you have selected your desired layout and format, click on the “Print” button.



Step 5: After checking the “Print” button, all the maps that you want to print will be stored in the list displayed below the printing options. Clicking on the map you want to print will open the map in a separate tab.



Step 6: To erase the prints, just click on the “Clear prints”. Note that this will clear ALL the created prints.



Step 7: This example of the Letter ANSI A Landscape map.

