



This tutorial will teach users how about the map interface (map) and how to use its different tools and features in PA-SHARE.

Review the complete tutorial or navigate to a specific section by hovering over an entry in the Table of Contents and following the instructions.

Contents

Overview.....	2
Map Tools.....	2
Basemaps.....	7
Layers.....	9
Layers by Type:.....	9
Layers by User Type.....	11



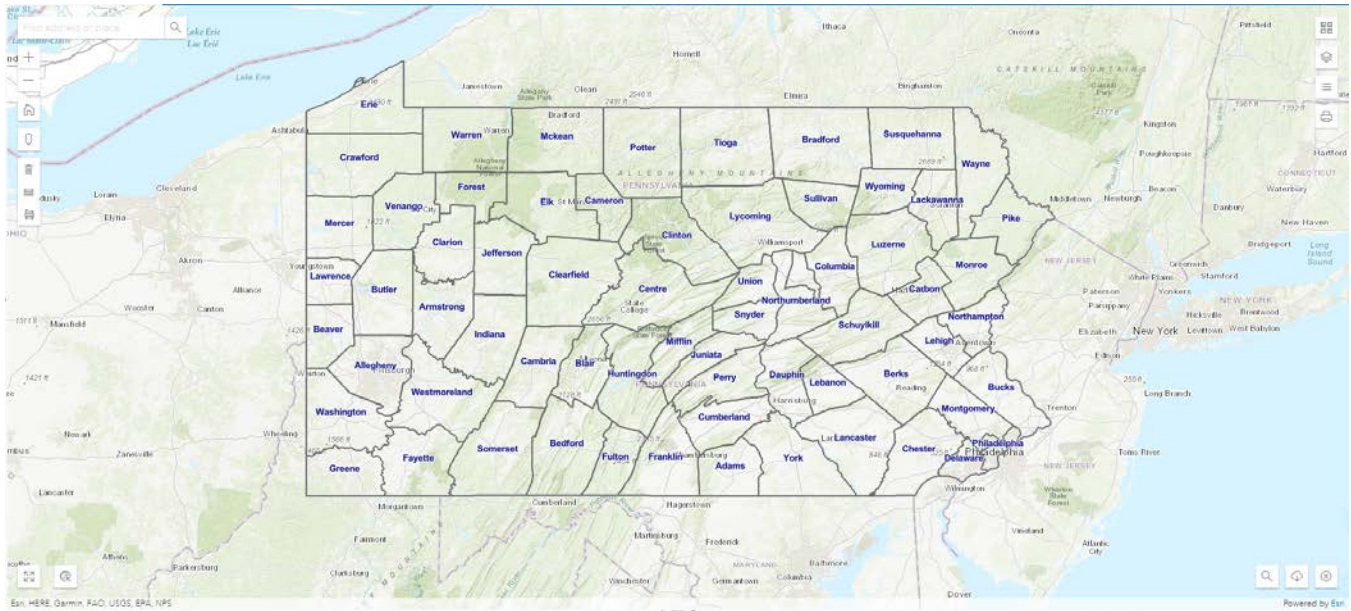
PA-SHARE Tutorial: Understanding the Interactive Map in PA-SHARE

Overview

The interactive map interface (map) is displayed in many places throughout PA-SHARE, including the Search page, Resource and Project submission screens, and details screens for Resources, Projects, Reports, and Surveys.

NOTE: For instructions on how to perform a spatial search in PA-SHARE, see the [Searching for Resources and Other Information in PA-SHARE](#) tutorial.

This is what the interactive map looks like in PA-SHARE:



Map Tools

This section will provide an overview of PA-SHARE’s interactive map interface (map). This map is present in many places throughout PA-SHARE, including the Search page, Resource and Project submission screens, and details screens for Resources, Projects, Reports, and Surveys.

Please note: Generally, all tools are included on all maps but there may be some instances where tools are only available to Basic, Pro and Business or Pro and Business subscribers only. For more information on the different types of access options and subscriptions for PA-SHARE, visit <https://www.phmc.pa.gov/PA-SHARE/Pages/Options---Subscriptions.aspx>.

These tools are explained in the following order: left side of screen from top to bottom and then right side of screen from top to bottom.



PA-SHARE Tutorial: Understanding the Interactive Map in PA-SHARE



Search Bar: Located in the upper left corner of the map. Enter a set of coordinates, place name, or full or partial address. Press Enter or click the magnifying glass icon, and the map will be panned to that location. The option for 'Use Current Location' will only work on a GPS enabled device, such as a tablet.



Zoom In/Out (+ and -): Clicking the Zoom In (plus) or Zoom Out (minus) button zooms the map in or out by a factor of 2.

Default Map View (house): Click to reset the map to the entirety of the Commonwealth of Pennsylvania.

Bing Maps (marker): Opens Bing Maps in a new window.



Delete Measurement tool: Please note: this tool is not available to Guest or Basic users.

Click the icon to remove the distance or area measurement from the map.



Distance Measurement tool: Please note: this tool is not available to Guest or Basic users.

Click the icon to open a small window in the lower left corner of the map that says, "Start to measure by clicking in the map to place your first point."

Click on the map to place your starting point for the measurement. The measurement will be a straight line. The small window will change to show unit of measurement and distance of measurement. If needed, change the unit of measurement to your preferred metric.

Drag the cursor to the second point of measurement and click to place the point. The distance will automatically calculate in the small window. Clicking once will set a new point and double clicking will



PA-SHARE Tutorial: Understanding the Interactive Map in PA-SHARE

complete the line and give you the final measurement.



Area measurement tool: Please note: this tool is not available to Guest or Basic users.

Click the icon to open a small window in the lower left corner of the map that says, “Start to measure by clicking in the map to place your first point.”

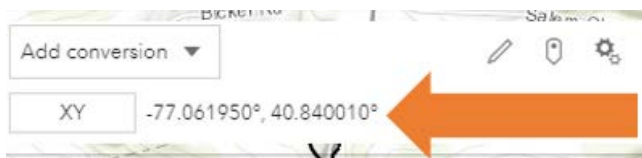
You will draw a polygon on the map. Click on the map to place your starting point for the measurement. Drag the cursor to the second point of the polygon and click to place the point. Clicking once will set a new point and double clicking will complete the polygon and give you the final measurement.

The small window will change to show unit of measurement and the area of the polygon and the perimeter of the polygon. If needed, change the unit of measurement to your preferred metric.



Enter/Exit Full Screen (box): Click to enlarge the map the full width and height of the screen or returns to the normal application layout.

View Coordinates (circle): Click to open widget to work with coordinates.



Coordinate display: As you move your cursor over the map, the coordinates will be visible in the widget. The default setting is XY coordinates.

Hover over the line and click on copy icon to copy coordinates to clipboard.



Add conversion: Click on “Add conversion” to add another type of coordinates to the widget. In this example, UTM coordinates are added to the standard XY coordinates.

To remove conversion, hover over line and click the “X”.

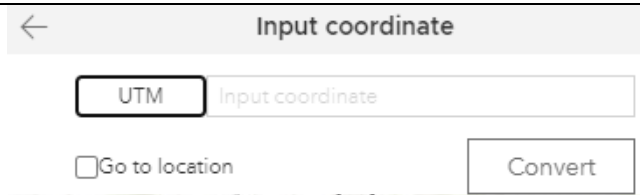


Input coordinate: Click the pencil icon in the upper right corner of the coordinate display to search for a specific coordinate.

Click in the coordinate type box to select the coordinate type for the search. Enter the coordinates.



PA-SHARE Tutorial: Understanding the Interactive Map in PA-SHARE

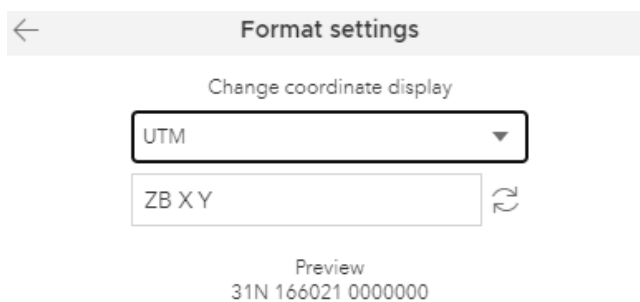


Click “Go to location” to automatically zoom to the coordinates.

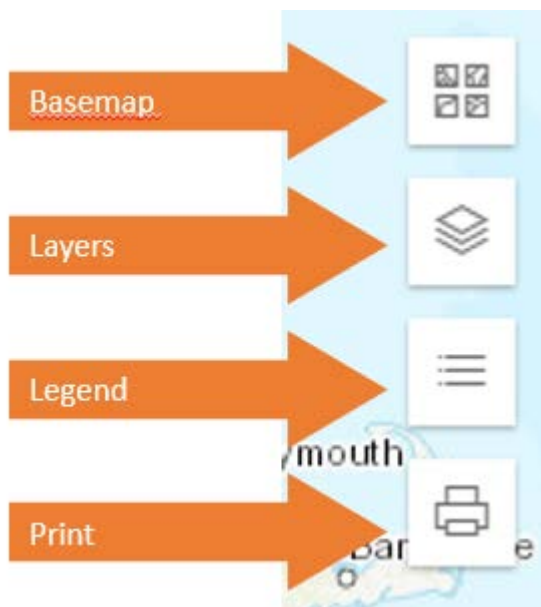
Click “Convert”.



Live Mode: Click to drop a point on the map and see the coordinates. The cursor will become a “+”. Left click to place the point.



Format Settings: Change coordinate format display. Click arrow to close.

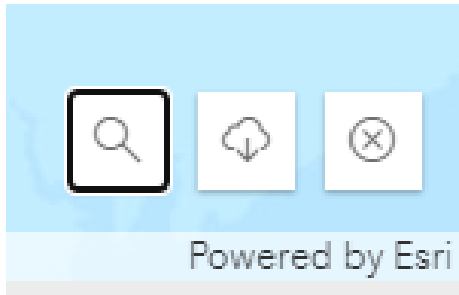


Basemap: Switches the background to labeled streets, aerial photography, or topography. See Basemaps section for additional information.

Layer Visibility: Lists the layers that are currently available for viewing. Click icon to expand and collapse this tool. Use the scroll to move through the list of layers. See Layers section for additional information.

Legend: Shows the symbols used for each layer that is currently visible on the map. Click icon to expand and collapse this tool. Use the scroll to move through the list of layers.

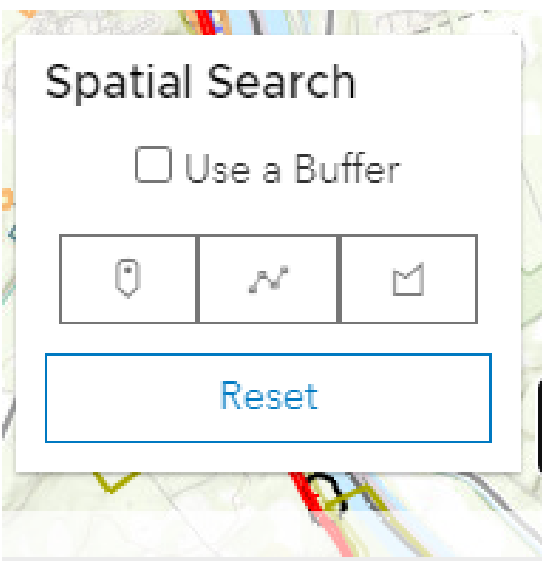
Print: Click printer icon to expand or collapse export window to print map.



Clear highlighting (circle with x): Click to remove highlighting on map from recent spatial search.

Download shapefile (cloud with arrow): Please note: this tool is not available to Guest or Basic users. Click icon to expand or collapse the Download Results Shapefile window.

Spatial Search: Click on icon to expand or collapse box Spatial Search box. The icons and buttons below are visible within Spatial Search box:



Buffer: Turn buffer search on or off by clicking in Use a Buffer box. Turning on buffer opens field for buffer distance and buffer measurement.

Search by Point: To place a point on the map, click icon, move cursor to point on map. and right click to drop point on map.

Search by single or segmented line: Click line icon and move cursor to point on map for starting point. Move cursor in any direction to place next point. Each click on the map will set a new point on the line to create a segmented line. Double click over point to set as line end point.

Search by a polygon on the map: Click polygon icon and move cursor in any direction to place next point. Each click on the map will set a new corner of the polygon boundary. Double-click at the last corner of the polygon boundary (before the first point you drew) to complete it. The drawing tool will automatically connect the last point you draw to the first one.

Reset: Click "Reset" to clear spatial searches on map and in results.



Basemaps

The following basemaps are available to all PA-SHARE users. The basemaps are Esri web maps.

Note that some landforms, water boundaries, and other details may not be accurately depicted in the Streets basemap. Photographic basemaps are generally better references for drawing accurate boundaries.



Imagery Hybrid

Imagery Hybrid: Satellite and high-resolution aerial imagery for the world with political boundaries, roads, and labels for places and roads.



Light Gray Canvas

Light Gray Canvas: This web map draws attention to your thematic content by providing a light, neutral background with minimal colors, labels, and features.



National Geographic Style Map

National Geographic Style Map: This vector web map provides a detailed view of the world featuring beautiful political boundaries, labeling, and background that highlights the differences in the physical characteristics of the land.



Oceans

Oceans: The Ocean Basemap includes a vector tile layer for bathymetry, surface and subsurface feature names, and derived depths. This map is designed to be used as a basemap by marine GIS professionals and a reference map by anyone interested in ocean data.



OpenStreetMap

OpenStreetMap: OpenStreetMap (OSM) is an open, collaborative project to create a free editable map of the world.



Streets

Streets: This layer presents highway-level data for the world and street-level data for North America, Europe, Africa, parts of the Middle East, Asia, and more.



Terrain with Labels

Terrain with Labels: This web map displays multidirectional hillshade under map content from a vector tile layer of populated place names, admin and water labels with boundary and road lines.



PA-SHARE Tutorial: Understanding the Interactive Map in PA-SHARE



Topographic

Topographic: Topographic map which includes boundaries, cities, water features, physiographic features, parks, landmarks, transportation, and buildings.



USA Topo Map

USA Topo Map: This layer presents detailed USGS topographic maps for the United States at multiple scales.



Layers

PA-SHARE includes point, line, and polygon layers. One or multiple layers can be selected and shown on the map over the base map.

Please note: Layer visibility is dependent on three things:

- Map scale: Some layers, like those related to cultural resources, are available when map is zoomed in. If layers are grayed out, zoom in to have them appear.
- User account: Guest and Basic user have access to fewer layers than Pro or Business accounts.
- Archaeological privileges: Archaeological resources and archaeological surveys are only visible to users with assigned archaeological privileges.



To view and work with layers, click Layers icon on map.



Each layer will have an eye icon for toggling the layer on or off next to the layer name.

To turn the layer on (make it visible) or off (make it hidden), click on the eye icon.

A visible layer will show the eye icon with no line. A hidden layer will show the eye icon with a diagonal line through it.



If the layer name is gray, the layer is invisible because the map is zoomed out too far.

Zoom in on the map until the name is no longer gray to make layer visible.

Layers by Type:

PA SHPO/Cultural Resources Layers



PA-SHARE Tutorial: Understanding the Interactive Map in PA-SHARE

- Project Area of Potential Effect: Boundaries of Areas of Potential Effect (APE) related to Environmental Reviews. Inclusive of all effects.
- Project Limits of Disturbance: Boundaries of Limits of Disturbance (LOD) related to Environmental Reviews. Limited to sub-surface effects.
- Above Ground Resource: Building, bridge, cemetery, other built resources, and landscapes.
- Archaeological Resource: Below ground resources, including isolated finds, submerged archaeological sites and submerged vessels.
- Pre-Contact Probability Model Boundaries
- District Resource: Boundaries for historic districts listed in an eligible for the National Register of Historic Places and for Local Historic Districts (Act 167).
- Above Ground Survey: Boundaries of surveys conducted for Above Ground Resources.
- Archaeological Survey: Boundaries of surveys conducted for Archaeological Resources.
- Certified Local Government: Boundaries of Certified Local Governments.
- Historical Marker: Point shows location of all PHMC historical markers.
- Engagement: Engagement includes meetings, education/outreach events, communications, and other activities at which PA SHPO staff interact with the public, partners, and others throughout the commonwealth. Engagements include, but are not limited to, in-person or online (virtual) interactions and published communications.
- Drawn Buffer Graphics/Buffer Graphics Layer: Spatial search boundaries drawn on map with and without a buffer.

Other Layers: Geographic

- Municipal Boundaries (PennDOT): Boundaries of Pennsylvania municipalities.
- County Boundaries (PennDOT): Boundaries of Pennsylvania counties.
- PA Zip Codes

Other Layers: Political

- PA House Districts: Boundaries of the Pennsylvania Commonwealth House districts.
- PA Senate Districts: Boundaries of the Pennsylvania Commonwealth Senate districts.
- US Congressional Districts: Boundaries of the Congressional Districts for Pennsylvania representatives.

Other Layers: Transportation

- Transportation Projects: Linear data on PennDOT transportation projects in the Commonwealth of Pennsylvania.

Other Layers: Land Management

- National Heritage Areas
- PA State Park Boundaries
- PA State Forests
- PA State Gamelands
- Protected Federal Lands



Other Layers: Land Features

- PA Soils
- NWI Wetlands
- PA Major Watersheds
- PA ERRI Small Watersheds
- PA Major River Basins
- FEMA 100 Year Floodplain
- PA Physiographic Zones
- PA Bedrock Geology

Layers by User Type

The following table indicates which layers are visible to users based on the type of user access: Guest, Basic, Pro or Business. Users with Public Service subscriptions and PA SHPO staff have access to same layers as the Pro and Business accounts.

Please note: The archaeological resource and archaeological survey layers are only visible to registered PA-SHARE users (users with a Basic, Pro or Business account) with approved archaeological privileges.

Layer Name:	Guest	Basic	Pro	Business
Above Ground Resource	X	X	X	X
District Resource	X	X	X	X
Above Ground Survey	X	X	X	X
Certified Local Government	X	X	X	X
Historical Marker	X	X	X	X
Buffer Graphics Layer	X	X	X	X
Municipal Boundaries (PennDOT)	X	X	X	X
County Boundaries (PennDOT)	X	X	X	X
US Congressional Districts	X	X	X	X
PA Senate Districts	X	X	X	X
PA House Districts	X	X	X	X
Drawn Buffer Graphics	X	X	X	X
Buffer GraphicsLayer	X	X	X	X
Project Area of Potential Effect		X	X	X
Project Limits of Disturbance		X	X	X



PA-SHARE Tutorial:
Understanding the Interactive Map in PA-SHARE

Archaeological Resource (with privileges only)		X	X	X
Archaeological Survey (with privileges only)		X	X	X
PA Major Watersheds		X	X	X
PA Soils		X	X	X
PA Physiographic Zones		X	X	X
Pre-Contact Probability Model		X (only with archaeological privileges)	X	X
PA Zip Codes			X	X
National Heritage Areas			X	X
PA State Heritage Areas			X	X
NWI Wetlands			X	X
PA State Park Boundaries			X	X
PA State Forests			X	X
PA State Gamelands			X	X
Protected Federal Lands			X	X
PA ERRI Small Watersheds			X	X
PA Major River Basins			X	X
FEMA 100 Year Floodplain			X	X
PA Bedrock Geology			X	X