In this tutorial we will teach you about the tools available on the map window. These tools include the Spatial Search, Zoom, Measure, Feedback, and more.

To access these tools, log in to CRGIS. Choose an area of interest on the AOI page, and generate your map. In this example we have chosen Leechburg, Armstrong County.

Let’s orient you to our map. Starting on the left we have our Legend, AskReGIS link and Spatial Search Tool.

Along the top are our Map Tools.

On the Right we have a North Arrow. When a map is refreshing/ rebuilding you will see a blue “thermometer” that shows its progress.

Along the bottom are the scale bar and the map build time. It is important to note that the time displayed at the bottom is how long our servers took to build your requested map. This is not always how long it took for your browser to build it.

Around the entire perimeter of the map you will find small arrows. These are the pan tools.
## Tools of the Trade

Now that you know where the tools are let’s take a look at what they do.

Here is an up close look at the tool bar.

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Over (New Map)</td>
<td>Clicking on the <strong>Start Over</strong> button allows you to return to the AOI page and begin a new search.</td>
</tr>
<tr>
<td>Zoom Box</td>
<td>The <strong>Zoom Box</strong> tool is used to zoom the map to a focused area and allows greater control for zooming in. To use this tool, click to select. A crosshair will appear when over the map. Chose the upper left area of your focused zoom. Click once and release the mouse button. Drag your cursor to the bottom right of your focus area. Click the mouse again to close the box.</td>
</tr>
<tr>
<td>Zoom In</td>
<td>The <strong>Zoom In</strong> tool allows you to zoom the map in at a fixed percentage. Click this button to activate the tool. Move the crosshair to your target area. Click once more to zoom in.</td>
</tr>
<tr>
<td>Zoom Out</td>
<td>The <strong>Zoom Out</strong> tool allows you to zoom the map out at a fixed percentage. Click this button to activate the tool. Move the crosshair to your target area. Click once more to zoom out.</td>
</tr>
<tr>
<td>Center to Point</td>
<td>The <strong>Center to Point</strong> tool allows you to reposition your map at the same zoom level without using the pan tools. Click to activate the tool. Click one more where you would like the new center point to be.</td>
</tr>
<tr>
<td>Overview</td>
<td>When activated, the <strong>Overview</strong> tool opens a new window that shows you a county map of Pennsylvania. On this map is a small red box showing the extent of your current map. You can click on the red box and drag it to any other part of the state. Here is what the overview map looks like.</td>
</tr>
<tr>
<td>Print</td>
<td>The <strong>Print</strong> tool opens a print preview window where you can enter a title for your map and print it.</td>
</tr>
</tbody>
</table>
The **Cancel Action** tool allows you to deactivate a tool you are currently using, erase a point placed by the Location tool, or it can erase a previously drawn Spatial Search polygon.

The **Location** tool allows you to choose a spot on the map and receive a Lat/Long coordinate for that location. Click to activate the tool. Click once more on your targeted location. In black text your coordinate will appear next to a marker indicating where you clicked.

There are 3 different ways to measure on in CRGIS. Each will open a small box that gives you the corresponding information.

- **Linear Measure** tool measures the distance between 2 points. Activate the tool. Choose your starting point and click on the map. The line will extend from the first point to where your second point is dropped. Distance is displayed in Meters, Feet, and Miles.

- **Multi-point Line** tool allows you to measure distance in a non-linear fashion. Click to activate the tool. Move the crosshair to your first location and drop a point. Continue to drop point until you are satisfied with your drawing. When you are finished dropping points double click to close the tool. Distance is displayed in Meters, Feet, and Miles.

- **Area Measure** tool calculates the area, and the perimeter distance of the drawn polygon. You must draw at least 3 points for this tool to work. Click to activate the tool. Move the crosshair to the first location. Click to drop your first point. Continue to drop points until you are satisfied with the polygon that you have drawn. Double click on your last point to finish your drawing. Area is displayed in Square Meters, Square Miles, and square Acres. Perimeter is displayed in Meters, Feet, and Miles.

The **Map Extent** tool allows you to return to a previous map extent after panning or zooming without having to start over and rebuild the entire map. Each time you change the extent of the map by panning or zooming the CRGIS stores a version of your map. You can return to the original map created by your most recent search by clicking on Original Extent. To go back return to the map you were just on click on Previous Extent or on Next Extent. Please note that your extent history is deleted every time you build a new map. If you click on Star Over, you will start a new extent history.

The **Refresh Map** tool reloads the current map.
The **Feedback** tool allows you to submit information, questions, or errors to the CRGIS Staff. Attachments such as screenshots or pictures are encouraged. Clicking on the button will open a new window. Fill out this form and click on the submit button. If you would like to erase what you have filled out without submitting, click on the reset button.

When you click on the **Help** tool a new window will open to the [PA SHPO's CRGIS](http://website.com) webpage. Here you can view all of our tutorials, register for CRGIS access, read our Data Quality Statement, or learn how to Record Resources with our office.

**Spatial Search**

The Spatial Search tool is found on the left side of the Map window, just under the Legend. This tool allows you to select a specific area, by drawing a polygon or choosing a preset area, to generate a list of resources found within that area. Those users with [Archaeological or Planner access](http://website.com) will see a list of archaeological sites in their Spatial Summary. Public users will not see this information.

There are several choices for your Spatial Search. You can draw a Polygon, with at least 3 points; a point, or a two point line. These three options can all have a buffer zone added to them.

Each of these choices will produce a new layer on the map and a new window. This new window will give you results based specifically on your choice. A polygon will result in mapped resources that fall within the boundaries of your drawing. A line will result in resources that intersect your drawing. A point will give you the nearest of each resource type.
Once you have selected the shape can enter in a buffer zone to increase the search area. The buffer area units can be changed by using the drop down menu. The options here are feet, miles, and meters. A buffer can be added to any shape. However, when a buffer zone is added to a line or point the results displayed will be the same as if you drew a polygon and will show everything contained with its boundary.

You can also choose a preset boundary that will generate a report specific to the Congressional District, PA House District, or PA Senate District. These reports display all resources within the boundaries of the selected district.

Once you have chosen your search parameters, click on the Go button. A crosshair will appear on your cursor. If you do not see the crosshair, try clicking on the Go button again. Draw your target search area on the map. Click one time for each point that you want to drop. Double click on your last point to finish your drawing and close the tool.

A Spatial Summary window will appear and the blue thermometer on the right side of the map will activate. This shows that the CRGIS is retrieving your results. The Spatial Summary window will finish loading first. Here you will see the Historic Sites, Archaeological sites, and Archaeological Survey Reports.

The Historic Sites results are broken down into 4 categories: Mapped, Linear, Local HDAs, and Unmapped.

The Mapped Historic Sites, Linear Historic Sites, Local Historic Districts, Archaeological Sites, and Archaeological Survey Reports are the results that are contained by (polygon), intersect (line), or are nearest (point) to your search area.

Unmapped Historic site results include all of the historic resources that are unmapped within the township(s) that your search area touches.
Archaeological Sites by Watershed is a summary of sites with the watershed(s) that your search area touches.

To search for Historic Structures reports use the AskReGIS feature.

You can expand each of these rows to see the specific resources in each category like the image below.

![Image of CRGIS Spatial Summary]

To view the individual records click on one of the rows.

You can save the results of your search by clicking on the Export at the top of the page. The expanded results will be saved as a CSV file. This can be opened and viewed as a spreadsheet in Microsoft Excel.

Once the Map window has finished loading the new layer that you drew will appear in orange with a darker orange border like the image below.
To clear this layer from the drawing you can use the Cancel Action tool, draw another Spatial Search, or click on Start Over.

This concludes CRGIS Tutorials #2 Map Tools.

To learn more about the AskReGIS Search, Please see CRGIS Tutorial # 3: AskReGIS