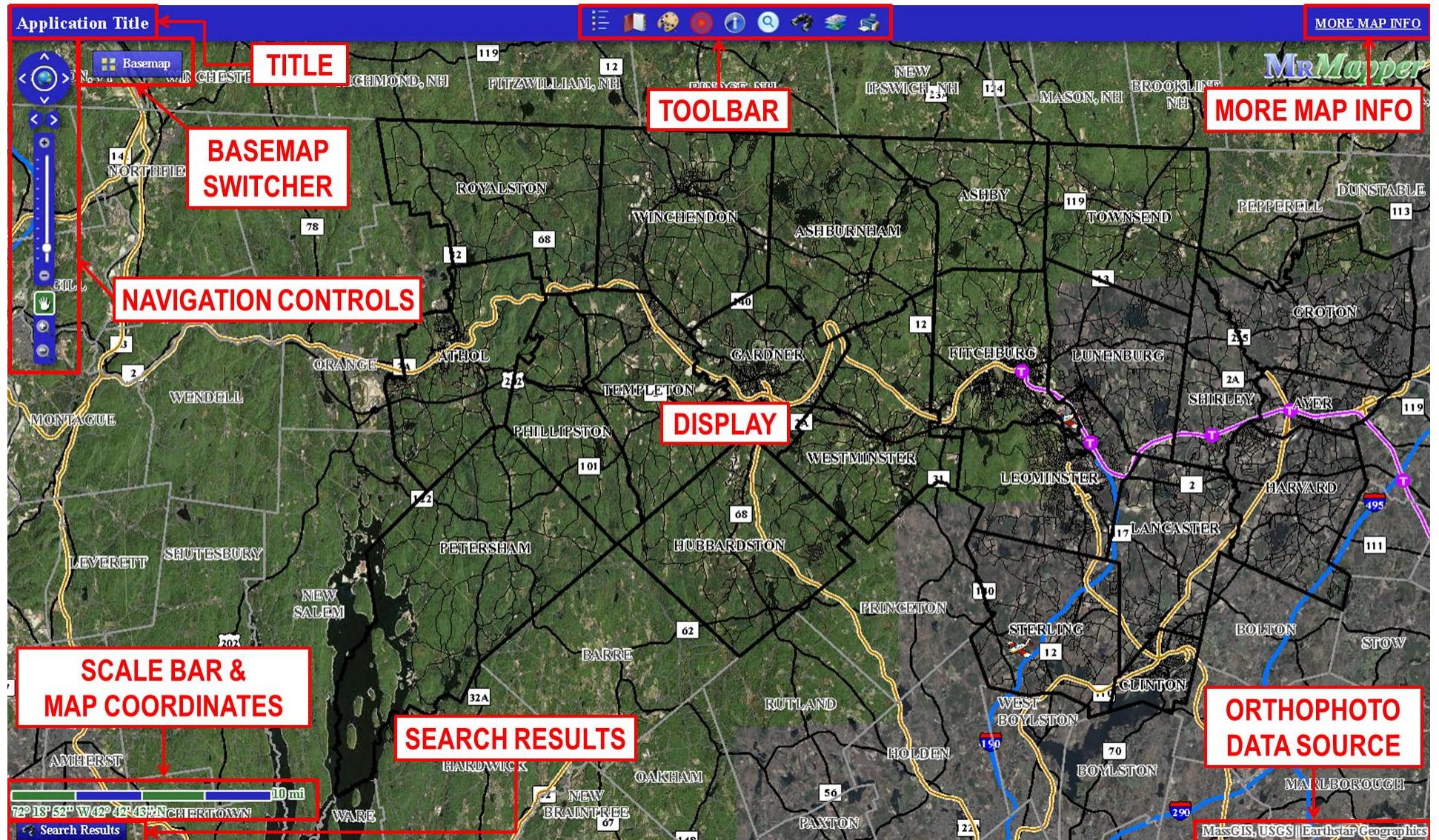


Below is what the MrMapper application interface looks like (though each application is different). There are several components to the interface, highlighted below.

Please note that other applications may have different tools available in the toolbar and other data layers included in the map contents. If you don't see a particular tool on the application that you are using, or if you would like to see additional data layers or applications added to MrMapper, please contact:

- **Jason Stanton, GIS Director, at 978-345-7376 x313 or jstanton@mrpc.org**



Additional information regarding the map components, as well as additional tools, is detailed below.

1. **TITLE**- Simply Displays the Title of the application.




Application Title

2. **TOOLBAR**- Contains tools that you are able to use in a particular application.




- A. **MAP LEGEND / TOC**- Click on this tool to bring up the “Map Legend/TOC” menu. There are a variety of options available for the “Map Legend/TOC” tool. Important notes regarding these options are below:














- i. Click the  or  sign to the left of the layer to collapse or expand the layer or display the legend symbology.
- ii. Check or uncheck the box directly to the left of a data layer to make that layer visible or not visible.
- iii. Click the  to the right of the layer to see available options:
 - a. Transparency- This enables a slider that will allow you to set the transparency of that data layer.
 - b. Move up/down- This allows you to move data layers above or below other data layers in the application.
 - c. Expand/Collapse All Layers- This allows you to expand or collapse all data layers in the application.
 - d. Description- This allows you to view detailed information regarding the layer (service) and click a link to view full metadata.

- B. **BOOKMARKS**- Click on this tool to bring up the “Bookmarks” menu. There are a variety of options available for the “Bookmarks” tool. Important notes regarding these options are below:






- i. Bookmarks- Click to display all bookmarks loaded in the application. If available, lick the  button on the right to delete that custom bookmark.
- ii. Add Bookmark- Click to create your own custom bookmark with optional comments.
- iii. Save Bookmark- Click to save your own custom bookmark to an ‘.xml’ file that can be opened later or in another application.
- iv. Load Bookmark- Click to open previously saves bookmarks in ‘.xml’ format in your application.
- v. *IT IS VERY IMPORTANT TO NOTE that closing the “Bookmark” tool will not remove your custom bookmarks from the application. Only deleting the custom bookmarks will remove them from the application. However once you close the application all custom bookmarks will disappear permanently unless saved to a bookmark (.xml) file.*




MORE INFORMATION IS DETAILED ON THE NEXT PAGE











- C. **DRAW AND MEASURE**- Click on this tool to bring up the “Draw / Measure” menu. You can add graphics as text and points as well as a variety of line and polygon options. There are a variety of options available for the “Draw / Measure” tool. Important notes regarding these options are below:
-  i. Alpha- This enables transparency of a graphic. An alpha of 1 is NOT transparent.
 -  ii. Show Measurements- Check this box (enabled by default) to enable the creating of text measurements in a variety of units as you draw points, lines and polygons. This option is available for all graphics EXCEPT text.
 -  iii. Save Graphics Layer- Click to save all graphics on the map to a ‘.txt’ file that can be opened later or in another application.
 - a. When you save graphics they will disappear from the application. They can be immediately re-opened if desired (see below).
 -  iv. Open Saved Graphics Layer- Click to open previously saved graphics in ‘.txt’ format in your application.
 - v. Editing Graphics- Once you have drawn graphics you can change the shape or location of that graphic by clicking on it.
 - a. You can move the entire graphic by clicking it and dragging it to another location
 - b. You can edit the shape of the graphic by selecting the circle or square ‘nodes’ and dragging it to another location.
 - c. You can delete an individual graphic by right-clicking it and selecting ‘Clear’.
 - vi. *IT IS VERY IMPORTANT TO NOTE that once you have selected the type of graphic you wish to draw on the application please **pay close attention to the prompts on the screen** (if applicable) to ensure that you are adding your graphic correctly.*
 - vii. *IT IS ALSO VERY IMPORTANT TO NOTE that once you close the “Draw / Measure” tool, your custom points, lines, polygons and text will disappear. If you open the “Draw / Measure” tool again your custom points, lines, polygons and text will re-appear. You must click “Clear drawings” in order to permanently remove your selections. Additionally once you close the application all custom points, lines, polygons and text will disappear permanently.*
- D. **FIND A LOCATION**- Click on this tool to bring up the “Find a Location” menu. You can find a location by (1) address or (2) coordinates.
-   i. Find a location by address- Type in the street number, street name and either community name or zip code and click “Locate”. Select the record that best matches your search in order to zoom to that location, or click the red x button to delete that result.
 - a. The “Score” represents the match success rate of the result. The higher the score, the greater the match success rate.
 -  ii. Editing Graphics Find a location by coordinates- Type in the latitude and longitude in and click “Go!”.
 - a. Coordinates may be entered in WGS84 Degree Minutes Seconds, Degree Minutes, Decimal Degrees, or in NAD83 MA Mainland Meters.
- E. **IDENTIFY**- Click on this tool to bring up the “Identify” menu. You can identify features on the map by points, lines or polygons (rectangles or irregular polygons).
-  i. You can identify from “All Layers” or click the drop-down arrow to the right to select a particular layer to identify from.
 - a. When using this tool it will identify features for pre-defined layers (not all visible layers will be ‘identifiable’) in the application and a list of results with pre-defined attribute information will appear in the window.
 - b. If you click on a result in the “Results” window it will zoom to the selected feature.
 -  ii. Copy results to clipboard- Click to copy the results of your identify to the clipboard so they can be pasted into a Word document.
 - iii. *IT IS VERY IMPORTANT TO NOTE that once you close the “Identify” tools, your identified features will disappear permanently.*
- F. **QUERY**- Click on this tool to bring up the “Query” menu. You can choose (1) Selection Options, (2) Select by Attributes, (3) Select by Location or (4) Selection Results.
-   i. Selection Options- This will allow you to select options in three sections:
 - a. Selection Method- This will allow you to either (1) Create New Selection, (2) Add to Current Selection or (3) Remove from Current Selection
 - b. Layers- Right-click any layer to (1) Zoom to Selected Features, (2) Clear Selected Features or (3) Show Results for that particular layer.
 - c. Clear All Selections- Click this to clear all selections from all layers.

MORE INFORMATION IS DETAILED ON THE NEXT PAGE

- ii.  **Select by Attributes**- This will allow you to select attribute values within pre-determined fields for a target layer. To use this tool:
 - a. Click the drop-down arrow to the right of the “Target Layer” to select the layer to query.
 - b. Double-click any pre-determined field in the “Fields” box to select that field to query.
 - Double-clicking on a field will generate acceptable values in the “Values” box.
 - c. Choose the “Operator” for your query (i.e. = (Equal To), > (Greater Than) or <= (Less Than or Equal To)).
 - d. Select the value from the “Values” box to complete your query (i.e. TOWN = ‘ASHBURNHAM’)
 - You can select more than one value within the same field by using the **or** operator (i.e. TOWN = ‘ASHBY’ and TOWN = ‘ATHOL’).
 - You can also select values for more than one field by using the **and** or **or** operator (i.e. TOWN = ‘AYER’ and StreetName = ‘MAIN ST’).
 - e. Click “Select” to run your query, zoom to the selected results and preview the results in the “Selection Results” tab (see below for information).
- iii.  **Select by Location**- This will allow you to select features that are within a spatial parameter of other features. To use this tool:
 - a. Select a layer that you want to select features from.
 - The number in after a layer represents the number of features that are currently selected in that layer.
 - ◆ If you wish to clear that selection you can do this by going to the “Selection Options” tab, right-clicking that data layer and selecting “Clear Selected Features”. Alternatively you can click the “Clear All Selections” button to clear all selections from all layers.
 - b. Select the desired spatial parameter under the “Search for features that are” option (i.e. “that are completely within”).
 - c. Select the source layer under the “Source Layer” option.
 - d. Click “Select” to run your query, zoom to the selected results and preview the results in the “Selection Results” tab (see below for information).
- iv.  **Selection Results**- When you click “Select” to run your Select by Attributes or Select by Location query the “Selection Results” tab will automatically be selected. To use this tool:
 - a. Select your desired layer using the drop-down arrow under the “Selection Results” heading to see your selections for the desired layer.
 - b. Click an individual result in the results window to zoom to that particular result.
 - c. If available, scroll through the results to see all available attributes.
 - d. Click the “Export” button to export your results to an XLS file.
 - When you open this file you will receive a warning indicating that the file “is in a different format that specified by the file extension”. This is expected, simply click yes to open the file.
- v. *IT IS IMPORTANT TO NOTE that when you close the “Query” tool, your selection results will disappear from your map. If you open the “Query” tool again your selection results will re-appear. You must click “Clear All Selections” on the “Selection Options” tab in order to permanently remove your selections. Additionally once you close the application all selection results will disappear permanently.*

G. **ENHANCED SEARCH**- Click on this tool to bring up the “Enhanced Search” menu. There are a variety of options available in the Enhanced Search tool.

- i.  **Search Layer**- This option applies to all search types. If available choose a layer to search and click the drop-down arrow to the right of the layer to choose whether to (1) Create a new selection, (2) Add to current selection or (3) Remove from current selection.
- ii.  **Graphical Search**- This will allow you to search a layer by drawn graphics (points, lines or polygons) on the map.
 - a. Select the desired drawing tool (use existing enhanced draw widget graphics (if applicable), points, lines, rectangles or polygons).
 - b. Choose whether you want to “enable multi-part graphics”.
 - This will allow you to draw multiple graphics to be used when you apply to the search.
 - c. Choose whether you want to “Add search tolerance for point selection”.
 - This will apply the search distance found in the ‘Spatial search’ tab when you apply to the search.
 - d. Choose whether you want to “Include a text query in selection criteria” (in conjunction with the “Text Search” option below).
 - e. Choose whether you want to add a “Buffer Graphic” to your search.
 - If desired, enter the buffer graphic distance and unit.
 - If desired, click the  button to configure the buffer graphic symbology.
 - ◆ Once you have selected your desired options click the “Search” button to apply your search criteria.

- iii.  Text Search- This will allow you to search a layer by entering text
 - a. If available, click the drop-down arrow  to the right of the “Search Layer Field” to define your search layer field
 - b. Enter the appropriate text (see example) in the entry box below, or click the drop-down arrow  to the right to select the desired record from a complete list of entries.
 - c. Click “Search” to apply your search criteria
- iv.  Spatial Search- This will allow you apply a spatial search to the results of your graphical or text search.
 - a. “Apply a search distance” to your current result graphics.
 - Enter the buffer graphic distance and unit.
 - If desired, click the buffer graphic properties  button to configure the buffer graphic symbology.
 - Click the “apply buffer”  button to apply your buffer settings.
 - b. Apply the spatial search criteria- (1) Entirely contained in, (2) Intersected by or (3) Intersected by envelop of:
 -  ➤ Entirely contained in- This criteria option will only select those features that are entirely within your search area.
 -  ➤ Intersected by- This criteria option will only select those features that intersect your search area.
 -  ➤ Intersected by envelop of- This criteria option will only select those features that intersect the envelope of your search area.
- v.  Search Results- Full search results will appear in a window at the bottom of the application. This feature is set to Auto Hide after 3 seconds. Uncheck this box if you do not want it to Auto Hide. Optionally you can elect to export the full search results to a CSV or TXT file by clicking the appropriate boxes on the bottom right of the window.

H. **ADD LAYERS**- Click on this tool to bring up the “Available Layers” menu. You can locate and add layers to the current map. Scroll through the list of available layers and click-and-drag the desired layer to your application.



- I. **EXPORT / PRINT**- Click on this tool to bring up the “Export / Print” menu. There are a variety of options available for the “Export / Print” tool. Important notes regarding these options are below:
- i. Title- Enter the title for your map here. own Title, Author, and Copyright information (if desired) to your map before you export /print.
 - ii. Layout Templates- You can select “MAP_ONLY” to export / print only the map contents or you can choose from a variety of layout options that will include a data frame, legend, north arrow, title, disclaimer and scale bar to your map.
 - iii. Formats- You can choose from a variety of formats to export your map to.
 - iv. Use This Scale- Check the box to the left to force the use of the current scale when creating the export.
 - a. ***This option is enabled by default and it is **HIGHLY RECOMMENDED** that you use this option. Not using this option may result in missing labels and/or data sets on the exported map.***
 - v. Results- When your export is complete your map will open in a new internet browser window. You can save this map in the format you exported it to and/or print it directly from the internet browser.
 - a. ***You may need to enable popups from <https://mrmapper.mrpc.org> in order to view your exported map***

3. **MORE MAP INFO**- Click on this tool to bring up additional information regarding the application. This will include ‘about’ information, data sources for all data layers in the application, a link to the MRMapper User Manual, and contact information regarding the application.

[MORE MAP INFO](#)

4. **BASEMAP SWITCHER**- Click this button to change the basemap of the application.



5. **SCALE BAR**- Displays the scale of the map in the English system.
6. **MAP COORDINATES**- Displays the latitude/longitude coordinates of the mouse cursor in WGS84 Degree Minutes Seconds.
7. **ORTHOPHOTO DATA SOURCE**- Displays the data source of the current image (orthophoto) layer.
8. **DISPLAY**- Displays the application data layers, toolbars and user-added components.
9. **NAVIGATION CONTROLS**- Use this component to navigate through the application.



Click these arrow markers to pan up, down, left or right.

Click the globe to zoom to the full extent of the application.



Click these arrow markers to the previous or next extent of the application (if applicable).



Click this plus sign to zoom in one level on the application.



Click-and-drag the slider button to the desired extent scale. The scale of the extent will display while you are selecting the slider button.

Please note that not all data layers and labels will be visible at all scales.



Click this minus sign to zoom out one level on the application.



Click the hand, then click-and-drag on the application to pan in any direction.



Click this zoom in button, then draw a box on the application to zoom into a specific area.



Click this zoom in button, then draw a box on the application to zoom into a specific area.