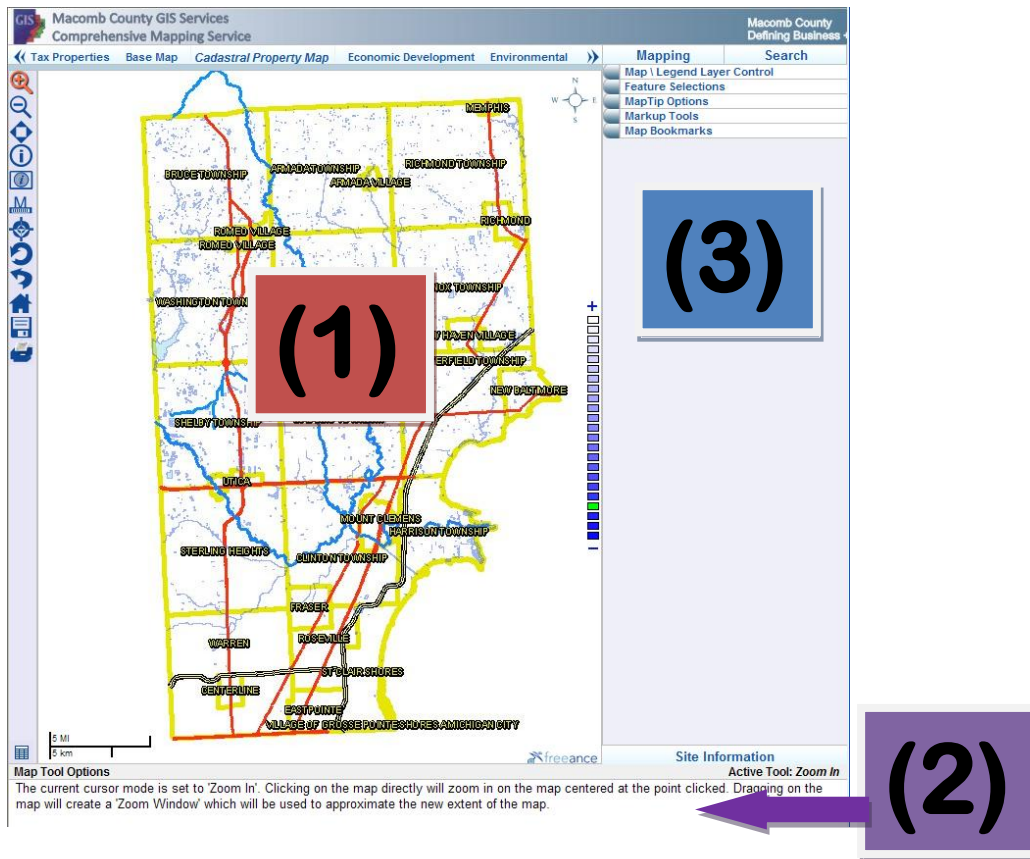


Macomb County Comprehensive Mapping Service



The layout of the Public Access Client is organized into four main partitions. The largest and most visible partition of the interface is the Main Map (1), which is where most of the user interaction with the map will take place. The operation of the Main Map is controlled primarily by the map toolbar on the left side of the screen. In its default configuration, the client has three tools available: Zoom In, Zoom Out and Pan/Recenter. Additional functions include Identify, Measure, Get Lat/Lon, Redraw Map, Previous Zoom, Home, Save Map Image and Print Map or Search Results.

Zoom In

The Zoom In utility is active by default. Clicking on the map while Zoom In is active will re-center the map at the cursor position and zoom in. Dragging on the map while Zoom In is active will create a window used to define the new extent of the map.

Zoom Out

The Zoom Out utility will re-center the map at the cursor position and zoom out.

Zoom Pan/Recenter

The Pan/Re-center utility has both a click and a drag function. A click on the map will re-center the map at the cursor position. Dragging the map will drag the map in the direction of the cursor. The map will redraw once the map has been released.

Map Control / Result Display Panel

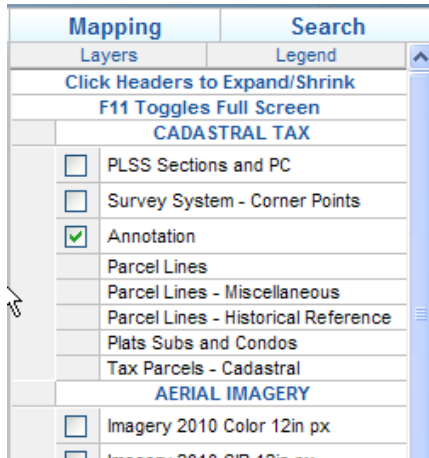
The panel below the Main Map (2) serves two purposes. Initially, the panel displays information concerning the operation of the currently active map tool. For some controls, such as the feature identify and measure, additional options will be available on this panel. This panel also doubles as a display for database search and buffer results. The type of information displayed by the panel can be toggled by clicking the button at the bottom of the map toolbar labeled 'Change Bottom Panel Mode'.

General Controls / Selection Display Panel

The panel on the right of the screen (3) serves a variety of purposes. The right panel serves as a control panel that toggles the display of various tools. This control panel can be set active by clicking the 'Mapping' link or 'Search' link at the top of the panel. The right panel contents will then be replaced by either a series of buttons to activate control panels for various enabled tools, or show a list of available queries defined for the client application.

By default, the option panel will include the 'Mapping' link at the Top. Included under the 'Mapping' link will by default be option to use the 'Map Layer\Legend control..

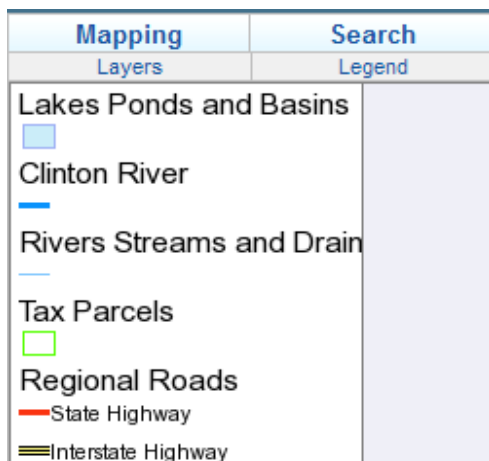
Map Layer Control



The Layers link lists the layers available in the application. Each map layer has a checkbox indicating the visibility of the layer on the map. Changing the state of these checkboxes will determine whether they are drawn or not in future map operations.

Since there can be a considerable amount of layers in a given map, the map image is not redrawn automatically, but can be redrawn by clicking the 'Update Map' button at the bottom of the Display Manager or by using any of the buttons on the map toolbar.

Selecting the Legend link will display a stylized map legend of all the active map layers.



Using Selections in the Client Application

- Click the Identify tool icon in the toolbar
- Select the feature layer to identify from the drop down box
- Locate the feature to be selected
- Click within the boundaries of the feature

Macomb County GIS Services
Comprehensive Mapping Service

Macomb County
Defining Business

Mapping Search

Show All Selections

Selection Options Clear

Zoom to selected map feature

Selected Tax Parcels

Tax ID#	14-22-452-004
Property Address	21712 MADISON ST
Community	SAINT CLAIR SHORES
Legal Description	STATLER HEIGHTS ANNEX SUB'DN LIBER 7 PG 54 OF PLATS LOT 110 CITY OF ST CLAIR SHORES
Bird's Eye View (Bing Maps)	External Link
Local Tax Assessing Data	External Link
Delinquent Tax Report	Run Delinquent Tax Report

Map Tool Options

The current cursor mode is set to 'Buffer'. Clicking on the map directly will set the features within a specified radius as a buffer. The theme to be selected on can be set to the right.

Layer: Tax Parcels

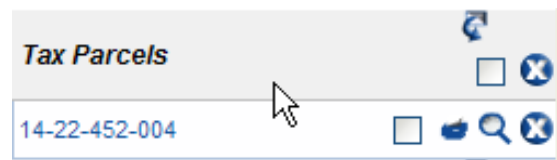
Radius: 0 Feet Clear

Notice that after selection, a polygon is now highlighted and the right-side panel now displays the feature's attributes.

Clicking on the "Zoom to selected map feature" link will cause the map to change extents and zoom to the perimeter of the selected polygon.

Mapping	Search
Show All Selections	
Selection Options Clear	
Zoom to selected map feature	
Selected Tax Parcels	
Tax ID#	14-22-452-004
Property Address	21712 MADISON ST
Community	SAINT CLAIR SHORES
Legal Description	STATLER HEIGHTS ANNEX SUB'DN LIBER 7 PG 54 OF PLATS LOT 110 CITY OF ST CLAIR SHORES
Bird's Eye View (Bing Maps)	External Link
Local Tax Assessing Data	External Link
Delinquent Tax Report	Run Delinquent Tax Report


To view the Selection Index, click the 'Show All Selections' link at the top of the Selection Panel. The Selection Index displays a table of all selectable themes and the features selected for each of them.





Clicking on the ID field will display the attribute data for the selection.


Three other options are available for each selected feature: Print, Zoom To, and Clear, represented by icons at the right of the row.



 The print function will print the attribute data as displayed in the completed template.

 The zoom to function will update the map by zooming to the perimeter of the selected feature.

 The Clear function will deselect the feature, removing it from the index and removing the highlight on the map.

 Additionally, each theme heading in the Selection Index has options to simultaneously clear all and export to Comma Delimited Text File all selected features on the theme.

Using Buffers

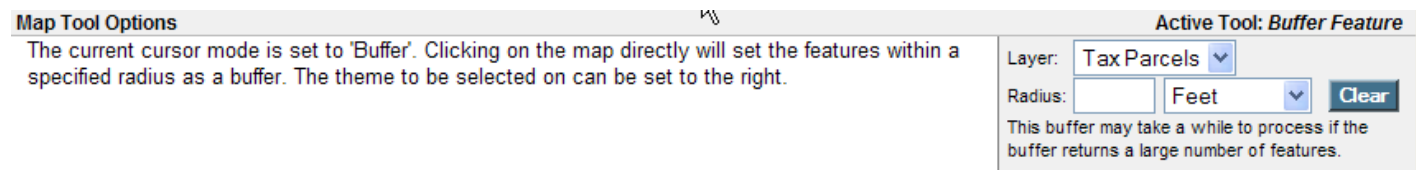
There are two methods for buffering in the Comprehensive Mapping application, buffering from a user-defined point and buffering from an existing feature selection. Buffer from point is available as a utility on the Map Toolbar; Buffer from Selection is available by clicking the 'Selection Options' link on the selection result panel.

Buffering from a Point

In the Comprehensive Mapping application, set the 'Buffer Features' map tool active.



The bottom panel will switch to the control options for the Buffer Features tool.

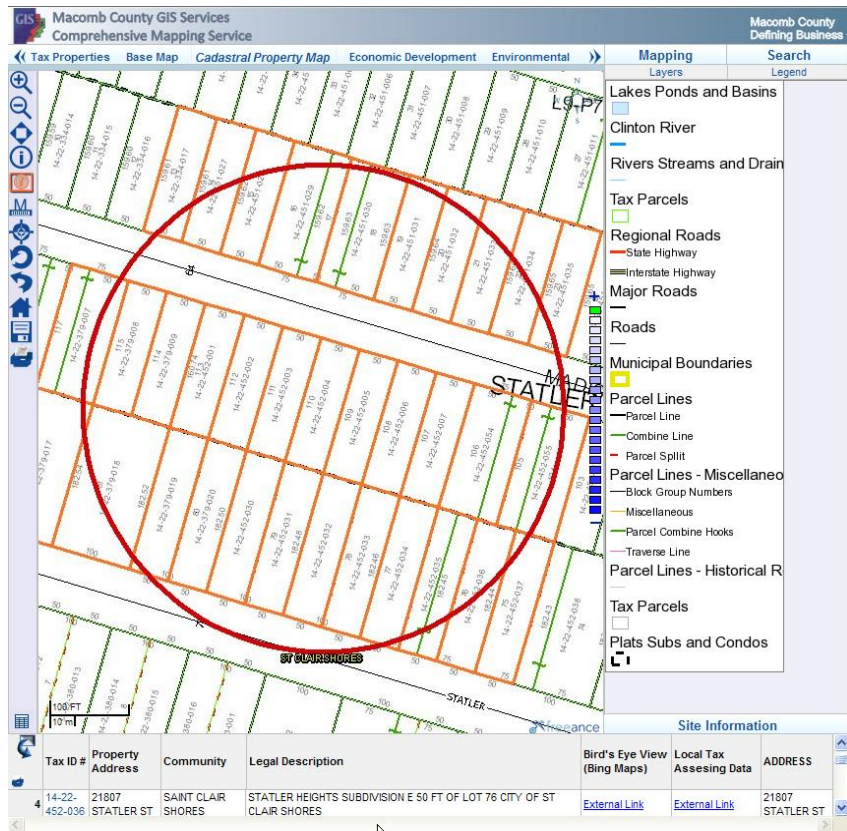
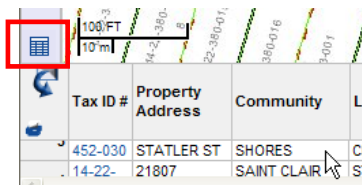


Similar to the Selection tool, the Buffer tool has a pull-down list of all bufferable layers. The Buffer also has a second option, Radius, which determines how far from point that the user clicks on the map the buffer will extend. After setting the buffer theme and radius, click on the map to create a new buffer.

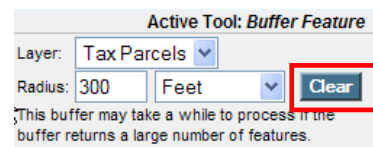
When the buffer results are returned, the bottom panel will switch modes and display the result data that was returned from the buffer.

If the ID field is included in the buffer results, it will be displayed as a link that will pass instructions to the map to select the specified result.

The button at the bottom of the map toolbar is used to toggle the bottom panel between map control and textual result display mode.

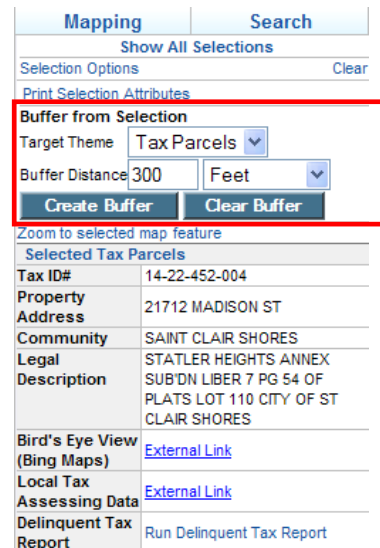


Additionally, the map control mode can be reactivated by clicking on any of the map controls in the map toolbar. Clicking the 'clear' button on the buffer options control panel will clear the buffer on the map.



Buffering from a Selection

In the Comprehensive Mapping application, use the Identify Feature tool to select one of the polygon features as in the selection instructions. When the selection results are displayed, click on the 'Selection Options' link at the top of the selection panel. As with the buffer from point tool, a Target Theme and Distance are required to create a buffer. The source of the buffer area is different, however. Instead of interactively clicking on the map to specify a point to represent the center of a buffered area, the perimeter of the entire selected feature will be used as the source for the buffer. The buffer can be cleared with either the 'Clear Buffer' button in the selection options panel or with the 'Clear' button in the buffer tool options.

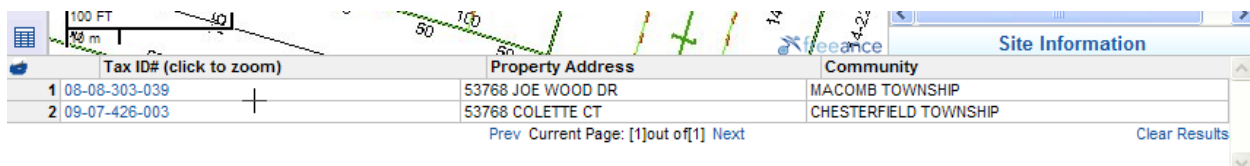


Searching for Features

The 'Search' link at the top right panel (3) will show a list of available queries available within the Comprehensive Mapping application. These queries will search the GIS databases for information entered by the user through a data entry form. Results of the search will be displayed in the search results window (2) bottom center of the application. Selected features with their linking ID's will be displayed. Selecting an individual record's ID link will zoom the map display window to the selected feature. Selecting "Clear Results" will remove all selected features



Note: if there is only one search result the application will automatically zoom to the selected feature.



Available Searches

Find Intersection – Allows user to find the intersection of two streets by entering their names into the find intersection search tool. In this example Colette and Miela streets have been entered. The result of this search type is displayed as a red diamond on the map and the map window is automatically zoomed to display the results. The "Clear Results" button will reset the street name fields and clear the red diamond marker from the map window.

Search Tax Parcels by Tax ID# - Allows user to search all known tax properties by the parcels Sidwell (Tax-ID#) number. A full or partial number can be entered in the search tool window.

Examples:

- 14-22-452-004 Returns a single tax parcel within the City of St Clair Shores
- 14-22-452 Returns all tax parcels within Section 22, Block 452 in the City of St. Clair Shores
- 14-22 Returns all tax parcels within Section 22 in the City of St. Clair Shores

Search Tax Parcels by Property Address - Allows user to search all known tax properties by the parcels site address. A full or partial address can be entered in the search tool window. Searches can be constrained to an individual community by entering it in the community field. Both the address and community fields will present valid choices based upon the information entered. Street name suffixes such as RD, DR, AVE, BLVD, CT should not be used for best search results

Search All Known Address - Allows user to search all property address in Macomb County. This search differs from *Search Tax Parcels by Property Address* in that it allows for the searching of individual apartment, condo and mobile home unit locations often times associated with a single tax parcel. In this search user entered information is queried against the counties E911 address database. As in the *Search Tax Parcels by Property Address* tool, full or partial address can be entered in the search tool window. Searches can be constrained to an individual community by entering it in the community field or to an individual apartment complex, condo or mobile home park through the property name field. All fields will present valid choices based upon the information entered. Street name suffixes such as RD, DR, AVE, BLVD, CT should not be used for best search results.

Mapping	Search
Show All Searches	
Search All Known Addresses	
Address (i.e. 123 Main or Main)	
<input type="text"/>	
Community	
<input type="text"/>	
Property Name	
<input type="text"/>	
Run Search	

NOTE: The address points layer must be selected to see results on the map.

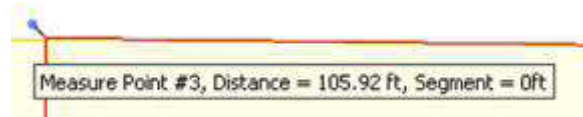
Measure Tool



The measure tool is an interactive measurement tool found on the left map window toolbar. The measure tool simultaneously reports on the length of individual line segments, the total length, the area and acreage of the drawn region.

Active Tool: Measure Distance	
Units:	Feet <input type="button" value="Clear"/>
Distance:	384.27 ft
Area:	18264.16 sq. ft
Acreage:	0.41 ac

Clicking on the map adds 'pushpins' to the map which serve two purposes. The first is to indicate the ends of line segments in the measurement. Additionally, they store measurement information that is displayed in a tool tip when the pointer is hovered over the pushpin image.



Coordinate Display/Coordinate Zoom To



The coordinate display tool allows the user to find the latitude and longitude of a point on the map. Clicking on the map with the 'Coordinate Display' tool active will display the latitude and longitude of the point clicked.

Active Tool: Find Lat/Lon Coordinates	
Latitude:	<input type="text"/>
Longitude:	<input type="text"/>
Zoom To Coordinates	

After the Coordinate Display tool has been activated, two text boxes will display that will allow you to input coordinates to zoom to. Coordinates used for zoom to can be in either decimal degrees (e.g. -84.27) or degrees minutes seconds (e.g. -84° 16' 24.65").

Save Map Image



The 'Save Map Image' tool allows the user to save the current map window to a .jpg or .bmp formatted image. Clicking the 'Save Map Image' tool opens a new internet

Active Tool: Find Lat/Lon Coordinates	
Latitude:	<input type="text"/>
Longitude:	<input type="text"/>
Zoom To Coordinates	

explorer session containing the map window image. From the Internet Explorer menu select FILE >SAVE AS to choose the save location and file format for the map window image.

Print Map or Print Selected Data



The 'Print Map' tool allows the user to print the current map image, Search Results or Selected Feature Data. Additionally, it also allows for the same data to be saved as an Adobe .PDF file. Clicking on the 'Print Map' tool displays the Freeance Print Manager Window.

The screenshot shows the 'Freeance Print Manager' window with the following settings:

- Choose Item to Print:** Map Image, Search Results, Selected Feature Data
- Map Print Template Options:**
 - Page Layout:** 8.5" x 11" Landscape (8.5in x 11) landscape
 - Scale:** Use current display scale, 1 inch = [] Feet
 - Custom Text:**

Custom Text	Description
[]	Enter Your Text Here

Buttons: Print, Cancel

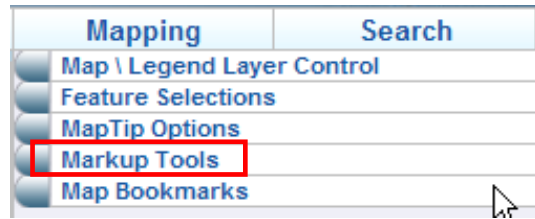
Users are presented with the following options:

1. Choose Item to Print (Map Image, Search Results or Selected Feature Data)
2. Page Layout (8.5 x 11 landscape or 11 x 17 landscape)
3. Scale
4. Custom Text (Places the user entered text on map sheet)

Once the desired options have been selected choose the print button at the lower left of the page to generate an adobe .PDF image of the selected items. This image can be printed or saved to the users machine for future printing or distribution (i.e. email).

Map Markup

Map Markup allows the user to place temporary markers on the map. Points, lines and text are all valid markup types. The Map Markup panel in the Comprehensive Mapping service can be set active from the Mapping panel menu in the upper right of the application. The markup panel has two sub-panels: New Markup and Existing Markup.



Adding Markup to a Map

To create markup on a map, set the 'New Markup' panel active and select the layer that the markup should be attached to from the 'Markup Layer' pull down menu. When the markup is added to the map its visibility will be controlled by the layer that it is attached to, so be sure to select a visible layer if it is important to see the markup immediately.

After the theme has been selected, click the radio button for the type of markup to add. Clicking on the map will now add a new markup element. For points and text, the application will prompt for a description. The description will be used in the existing markup index to identify the point for future reference. If text is being added to the map, the description will match the text content added to the map image. The positioning of the text relative to the point clicked is determined by the GIS style sheet used.

To add a line to the map, set the line type active and click on the map to set a starting point for the line. Click in a second location to set an end point for the line. A preview will be drawn on the map. Clicking on the map additional times will add new line segments. When finished with drawing, click the 'Save Currently Drawn Line' link on the markup panel. If a mistake is made when drawing the line, click the 'Erase Currently Drawn Line' link on the markup panel to clear the current line and start over.

