



Applications of Milwaukee County's *Interactive Mapping Service*

<http://io.milwaukeecounty.org/mcamlis/>

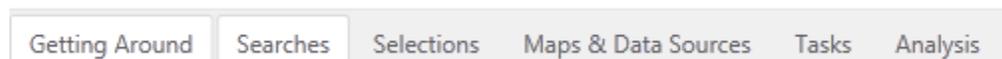
Exercise 1:

An Introduction to Layers and Tools

The Main Map Window is the focal point of the *Interactive Mapping Service*, and is surrounded by panels containing tools and functions that allow you to move around the map, change the appearance of the map, and gather information about map features. Features are mapped points, areas, and lines that have data associated with them, such as tax parcels.

- A) Click on the “Zoom In” tool at the top left corner of the Main Map Window and zoom into a location in Milwaukee by drawing a box on the map. In the center of the “Getting Around” tools above the Map Window, there is a scale box along with a “Jump to a map bookmark” menu that allows you to zoom to the extent of several pre-defined areas (cities and villages by default), or “bookmarks.” You may also add your own bookmarks to the default list. Type “1200” in the scale box and hit “Enter”. Notice how the appearance of the map changes as the scale changes. By default, certain layers (or groups of features) are set to be “not visible” when the map is open, while some layers are set to turn on or off automatically, or change in appearance, as the map’s scale changes.
- B) Open the Layer List to the left of the Main Map Window by using the small arrow button to the left of the “I want to” menu. This presents all the available layers that can be turned on or off to compose your map. Layers are organized into group folders. Click on the + button next to “Base Maps”; this folder contains pre-set map configurations. “Operational Layers” contains the list of data layers used in the map. At this scale, street centerlines and parcel addresses are the prominent map features. Note that the “Tax Parcels” layer and “Operational” folder are checked on. This means that the “Tax Parcel” layer is labeled with addresses, and other layers are available for selections, which will be covered in the next exercise. Click the checkbox to the left of the “Street Labels” under “Base Maps” to turn labels off.
- C) The “TaxParcels” layer is labeled with its associated house number. Click the check box next to “TaxParcels” to turn the labels off and on.

- D) Click on the Topographic group layer to expose the list of available layers that are maintained for planimetric mapping (the mapping of physical features, both natural and cultural, such as rivers, streets, and buildings), along with layers maintained to map changes in elevation (topography). Be sure the group is checked so that the layers will be visible. Click on the “Contour Lines” and the “Planimetric Lines” layers to display topographic contours and structure footprints in the map. Click “Show/Hide Legend Swatch” buttons to the left of each layer to display the symbology (the appearance of features in the map using line color, line type, etc.) associated with each layer.
- E) The Cadastral group layer displays layers maintained for the mapping of real property across Milwaukee County. Click on the Cadastral group layer to expose the layers that are available in that group. Under the Cadastral group layer name, notice that all of the layers are checked on. Next, click the checkbox to the left of the Cadastral group layer. Notice that the all layers within the Cadastral group layer are now visible in the map. Turn all the layers in the group off by clicking again on the group layer checkbox.
- F) A utilities group layer that includes gas, electric, communications, water, and sewer features is also available to those with login credentials. At the current scale of 1:1200, turn on a combination of the We Energies layers to display gas and electric features in the map. (Be sure you are logged in to see the utilities layers.)
- G) Hit “Reload” within your browser to reset the map. This will restore all the map’s defaults, such as visible layers and the extent (scale and visible area) of the map.
- G) The bar at the top of the Map Window houses all available tools, which are group together in tabs. By default, the “Getting Around” toolbar is exposed. This contains basic tools for moving around the map. Click on the tabs and take a look at the tools in each toolbar. We will be covering many of the tools today.

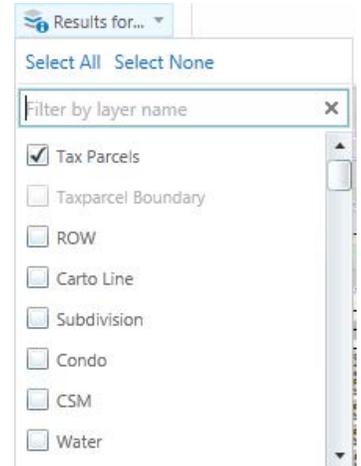


Exercise 2:

Select a Group of Non-Contiguous Parcels, Generate a Parcel Report, and Print a Map

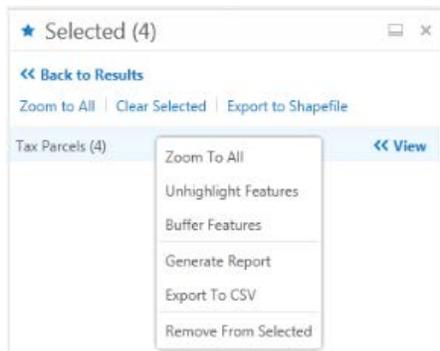
- A) From the Searches Toolbar, click on the “Taxkey Search” button. In the Taxkey search panel that appears next, type the following taxkey: 4210281000. The corresponding parcel will be the first parcel added to a new selection set (a group of selected parcels), and the Results panel will appear on the left to provide additional tools for working with Results.
- B) In the Results panel, click on “Select All” to create a selection set from the results.
- C) In the scale box in the “Getting Around” tab, type “2800” which will zoom out to make the entire block visible.

- D) Open the Selections Toolbar, choose the “Point” selection tool. By default, the tool will select any layers on the map which are available for selection. To change this option, click on the “Results for…” drop-down on the right side of the Selections panel. Click “Select None”, then click the check box for “Tax Parcels”. Now tax parcels will be the only results. It is recommended that the aerial photo layers be turned off so that address labels are clear.



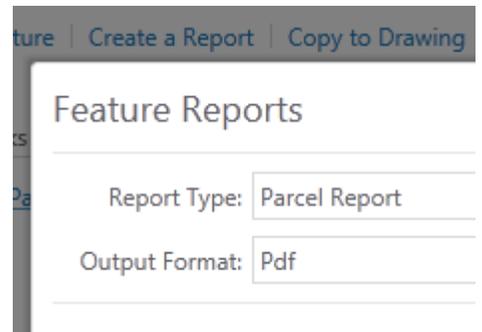
To add parcels to a selection, click on the house number on the map then click “Select All” in the Results panel. Add the following parcels on Oak Park Court to the selection: 567, 669, 515, and 698. Remember, each time you click on a parcel, you will be need to add the Results to the selection set you are creating by clicking “Select All” in the Results panel.

- E) Data associated with selected parcels, such as assessed value, legal description, and owner information, may be viewed and exported a few different ways.



In the Results Panel, click “View Selected” to see the Selected list. Hover over “Tax Parcels” in the Results panel and click “View” to see the Selected Results details containing information about the 5 selected parcels. Click on any address to open up parcel details, which gives a link to access Tax Information, create a report, and other data

available within the tabs. Alternatively, if you click “View Selected” to return to the Selected list, you can right-click on the Tax Parcels and generate Parcel Reports for the entire selection. The Parcel Report is a PDF document that includes basic parcel information, along with a map image, for each of the selected parcels. Save the PDF to a local directory, or share it via email.



Exercise 3:

Add Markups and Print Your Map

- A) Markups are custom annotations and shapes that you draw on your map to add additional information that is specific to your map's purpose. Center the map over the neighborhood containing your parcel selection. Open the Tasks Toolbar and click the "Text" button. Define your text's appearance using the options that are presented to the right on the toolbar, or accept the default settings. When finished, click on a location on the map where you wish to begin your text, and type the following text into the box that appears next: "Comparable Properties Near 596 S Oak Park Ct," and hit Enter.
- B) Next, we will draw a circle around 596 S Oak Park Ct. using the "Circle" Markup tool. As with the Text tool, a panel displaying markup appearance options will appear after the tool is chosen. Change the Border Color to red and the fill color to red, with the transparency slider near 50%. Click on the map where you want the circle's center point to be placed, and drag to establish the circle's radius. Release your mouse button when finished. If you make a mistake and wish to start over, click the "Erase" tool on the Markup Tool and click on (or drag a box around) the markup that you wish to remove. Be careful, as any markup shapes that intersect with the box you drag will be erased. To erase text, drag a box that intersects with the beginning of the text string. Use the "Clear All" tool to erase all markups at once.
- C) A simple, preformatted map that includes the extent of the 5 selected parcels along with any markups and custom layer combinations can be generated quickly and easily. Any combinations of layers from the Layer List can be displayed in the map. For example, click the "Map Layers" tab in the lower left corner of the application, and click on the "2013 Aerial Photo" base map (in the Base Maps group).
- D) In the Tasks Toolbar, click on the "Print Map" button. In the "Print Map" panel that appears next, select "8.5x11 Landscape." accept the default settings but take a moment to familiarize yourself with the options available, and insert a title and notes if desired. Click "View" when finished. Save the PDF to a local directory, or share it via email.

Exercise 4:

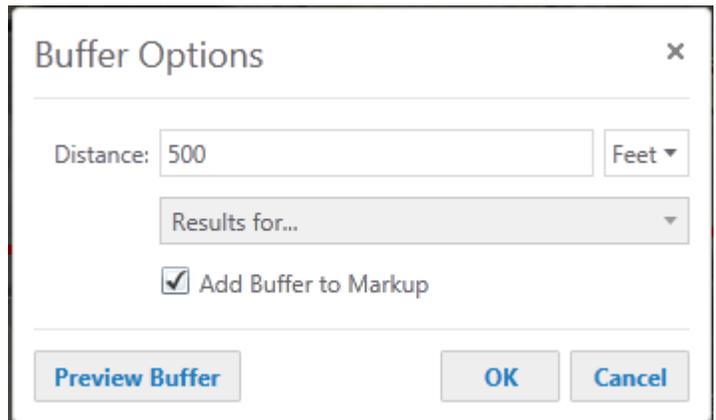
Select and Deselect Parcels within a Defined Radius, View Oblique Images of Selected Parcels, and Save Your Project

It might be useful to know more about properties that are within a certain distance from a parcel of interest. We will create a selection set from parcels within 500 feet of a property, remove parcels from the selection set that do not meet our criteria, and view oblique images of selected parcels. Since there will be a large number of parcels in this selection set, we will also save our work as a project which will allow us to return to it at a later time.

- A) If parcels remain in your selection set from previous exercises, remove them by clicking “Select None” in the Selected results panel, reachable by clicking on the “Star” tab below the layer list. Next, locate the property at 1651 S 20th St. using the “Address Search” tool in the Searches Toolbar.



- B) In the Results window, right click on the address and choose the “Buffer Feature” tool. In the “Buffer Options” panel that appears next, create a buffer with a 500-foot radius, set results for Tax Parcels **only** by de-selecting everything else, and Add Buffer to Markup. Click “OK.” When the Results are returned, choose “Select All” to create a selection set, then click “View Selected” followed by “Zoom to All”.



- C) Next, we will remove non-residential parcels from the buffer selection set. Go “Back to Results” to the Selected Results panel. Click on the “Table View” button to see all of the data for the selected parcels in one panel. Near the upper right of the panel is a button which can switch the table to “Wide View”, which may be beneficial. Scroll over in the table until you see the “Description” column. Click on the column header and drag it to the far left of the table, so that is next to the “stars” which control the selection of each parcel. Click on “Description” to sort by parcel type, and then scroll down to see where “Residential” ends. Click on the star below that parcel, then scroll to the bottom of the list, and while holding down shift, click on the bottom star. This method removes non-residential parcels from the selection set, but you could also exclude parcels with a size or value that is outside of a target range.

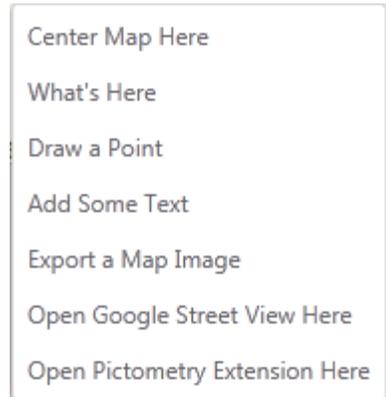
A table view showing a list of parcels. The table has a column for "DESCRIPTION" and a column for stars. The "DESCRIPTION" column is sorted by parcel type, showing several "RESIDENTIAL" entries. The stars column shows yellow stars for each row, with the bottom-most star highlighted in blue.

Tax Parcels	
	DESCRIPTION ▾
☆	RESIDENTIAL

D) Since this selection set is rather large, it would be more convenient to view and work with the data within a familiar application such as Excel. Export this information into Excel by choosing “Export to CSV” from the list of actions that become available when the selection set in the Selection results panel (right) is clicked. Once downloaded, save it to the directory of your choice and treat it as you would any other Excel spreadsheet.

[Zoom to All](#) | [Reports](#) | [Export to CSV](#) | [Export to Shapefile](#)

E) To display a selected parcel in a Pictometry oblique view, in the Selected Results panel double-click on one of the parcels to bring up the parcel details. Click the “Zoom to Feature” button. Close the Parcel Detail window and right-click on the map and choose “Open Pictometry Extension Here” option. The Pictometry window will open, and will stay in locked navigation with the Interactive Mapping Viewer. Within the window, you can choose different angles and photo collection dates. Take a minute to explore the Pictometry Extension.

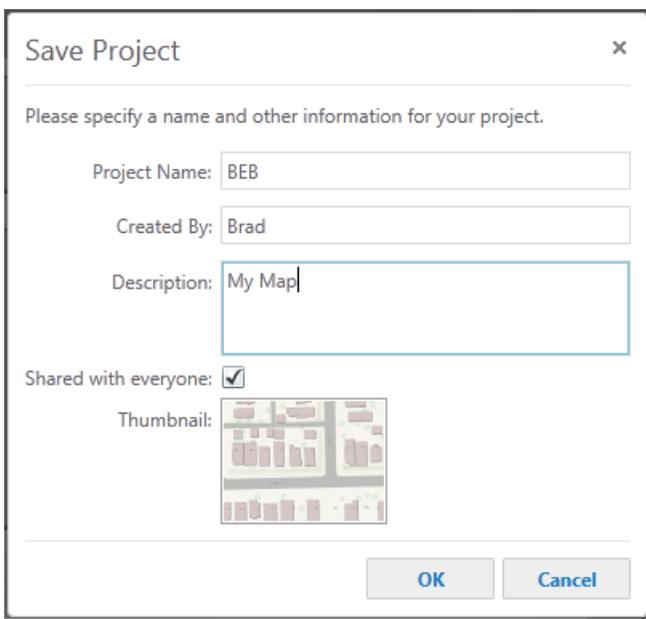


E) Several measurement tools are available in the oblique viewer. (Make sure you are logged in). To measure the footprint of a structure, choose an oblique orientation that allows the best view of a structure, zoom in or out using your mouse’s scroll wheel as necessary, and click on the oblique viewer’s Area measurement tool. Follow the instructions on screen to complete the measurement.

F) Viewing an oblique image of each of the selected parcels is time consuming. It may be necessary to move on to other tasks throughout the day or week and come back to this task later, picking up where you left off. The *Interactive Mapping Service* allows you to save your

customized map, along with your selection set, combinations of visible layers, markups, etc.

In the upper left of the application, click the “Save” button. Name your tutorial project with your three initials when prompted (if a project with that name already exists, insert a number after your three initials). Enter the other required information and click OK. You will be provided with the unique URL that is generated for your project. This URL (or hyperlink) is the link to your specific project. Use this link as you would any other internet



hyperlink: save it as a shortcut on your desktop, or copy and paste it into a Word document or into an email message to share your project with others. For this exercise, copy the URL, and create a new shortcut on your desktop. Right-click anywhere on your desktop, choose “New -> Shortcut,” paste the URL under “Type the location of the item” in the “Create Shortcut” panel, click “Next,” then click “Finish.” Give the new shortcut a name..

- G) Double-click on the desktop shortcut you created in the last step, and enter your login information when prompted. Once you have opened your project, notice that the selection set you created prior to saving your project remains, allowing you to pick up where you left off.
- H) Alternatively, you can use the “Open” button (next to “Save”) to look at and search for your project if you lose the URL.

Exercise 5:

Accessing Cadastral Documents

The *Interactive Mapping Service* provides for the retrieval of available condominium and subdivision documents, plats of survey, and certified survey maps (CSMs).

A) Refresh the map. Open the Searches Toolbar, and with the “Owner Search” search tool, locate the property owned by Joseph L Lazzara. Click “Select All” to create a selection set. Next, simply right-click on the map and choose “What’s Here”. Because the cadastral documents are on by default, they instantly become available in the Results list.

Plat of Survey Number 132 3/1/2007 12:00:00 AM
Plat of Survey Number 133 3/21/2007 12:00:00 AM
Plat of Survey Number 141 7/11/1988 12:00:00 AM
2010 N BUFFUM ST, Milwaukee
Owner: KASDORF PROPERTIES LLC
Taxkey: 3541885000 MapID: 1165768
[Link for Tax Information on Parcel 3541885000](#)
[Google Maps: 2010 BUFFUM](#)

B) In the Results List, click on the documents. The detail window will open and give a link to the document. Clicking on the link will take you to a PDF document that can be saved or printed.

2012 N BUFFUM ST, Milwaukee
Owner: LAZZARA W LLC C/O JOSEPH L LAZZARA
Taxkey: 3541886000 MapID: 1165768
[Link for Tax Information on Parcel 3541886000](#)
[Google Maps: 2012 BUFFUM](#)

C) Next, we will access the document associated with the subdivision located to the north of E. Brown St. between Hubbard and Buffum.

THE 2010-12 NORTH BUFFUM ST
[Click for document](#)
CSM 7937
[Click for document](#)

First, ensure that the Cadastral group layer is turned on. Expand the group layer and note that all of the annotation (labels) are turned on, including “Subdivision Anno” layer. This displays information about the subdivision in the map, such as its name and lot numbers. To view the subdivision document associated with “The Homes at Brewers Hill Commons,” as before, right click within the subdivision and choose “What’s here”. This PDF is downloaded via the same method used to access the condominium and CSM documents.

D) If you know its name or number, you may also search directly for a condominium, subdivision, or CSM using the search tools in the Searches Toolbar. Once the feature is located, use the steps outlined above to access a document if a document is available.

Exercise 6:

Export Map & Oblique Images, and Insert Exported Images into a Word Document

Quick “snapshots” of the views displayed in the Main Map Window and in the oblique viewer can be easily and quickly exported and shared with others.

- A) Open a new Microsoft Word document, and insert a table with 1 column and 4 rows and center the table.
- B) Move back to the *Interactive Mapping Service*, and open the Getting Around Toolbar. Use the available tools to pan and zoom in to the parcel at 2010-2012 N Buffum Street. In the Map Layers panel, turn on the 2013 Aerial Photo layer. Next, right-click and choose “Export a Map Image”. Accept the defaults that follow, and click on “View Image” when the option comes up. When the exported image appears in a new browser window, right click and select “Copy.”
- C) Return to Word, Type a caption or title in the first row, place your cursor in the second row, right click, and choose “Paste.” Use the Picture tools in Word to resize the image to 50%.
- D) Open the oblique viewer and center the Map Window’s view in the oblique viewer as you did in the previous exercise. Use your mouse’s scroll wheel to zoom the oblique view in or out as necessary. Click on the image “Export Area” tool in the oblique viewer, accept the defaults, and click “Export.” Open the image and copy it as before.
- E) Return to Word. Type a caption or title in the third row and place your cursor in the last row of the table. Paste and resize the image so that the table appears on only one page, and save your Word document if you wish. The page that follows provides an example of how your finished document might look.

Condominium Properties at 2010-2012 N Buffum St. (ortho view)	
	
Condominium Properties at 2010-2012 N Buffum St. (view looking north)	
	