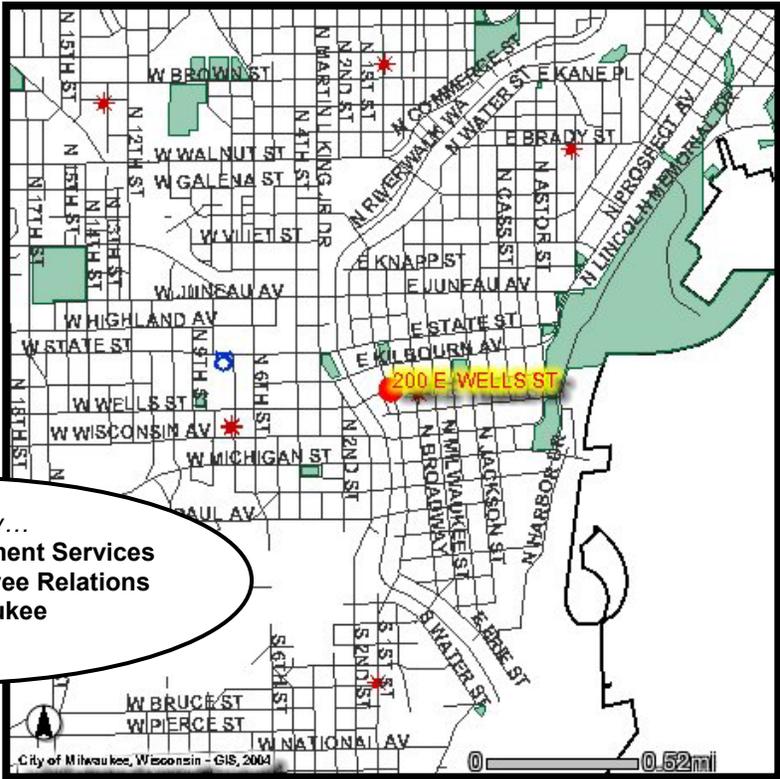




Map Milwaukee



Presented by...
**Training and Development Services
Department of Employee Relations
City of Milwaukee
2006**

Police Stations, Fire Houses, and Parks in the Vicinity of City Hall

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Introduction

Map Milwaukee is the City of Milwaukee's parcel information and map display application that allows users to gather geographic information about the City via the web. Users can not only look up a great deal of information about parcels but also customize and display detailed maps.

Who uses Map Milwaukee?

- City of Milwaukee personnel
- Other municipalities
- City residents
- Potential residents
- The Milwaukee business community
- Business owners considering a move to Milwaukee
- Media representatives
- Academic Researchers
- Historians
- Teachers
- Students

What information is available through Map Milwaukee?

You can...

- Locate points of interest such as firehouses; police stations; hospitals; libraries; and liquor licenses.
- Display bikeways, including on-street bikeways; planned/proposed bikeways; the Oak Leaf Trail; and other trails
- Display land use symbols; freeways; streets; railroads; parcels; airports; waterways; and parks and parkways.
- Find information about schools, including the location of schools and elementary, middle, and high school districts.
- Obtain election information, specifically polling places; voting wards; aldermanic districts; and county supervisor districts.
- Retrieve a great deal of property, zoning, and neighborhood data: tax delinquent properties; property violations, permits, and service requests; land use; parcels; local and national historic districts; targeted investment neighborhoods; tax incremental districts; and 2001 development zones and zoning.
- Learn about City services, such as fire battalions; police districts; health districts; summer and winter garbage routes; and recycling routes.
- Look up general reference information, specifically zip codes; city limits; quarter sections; and watersheds.
- Zoom in on a fascinating orthophoto – a copy of a photograph taken from the air in the spring of 2000 that has been corrected.

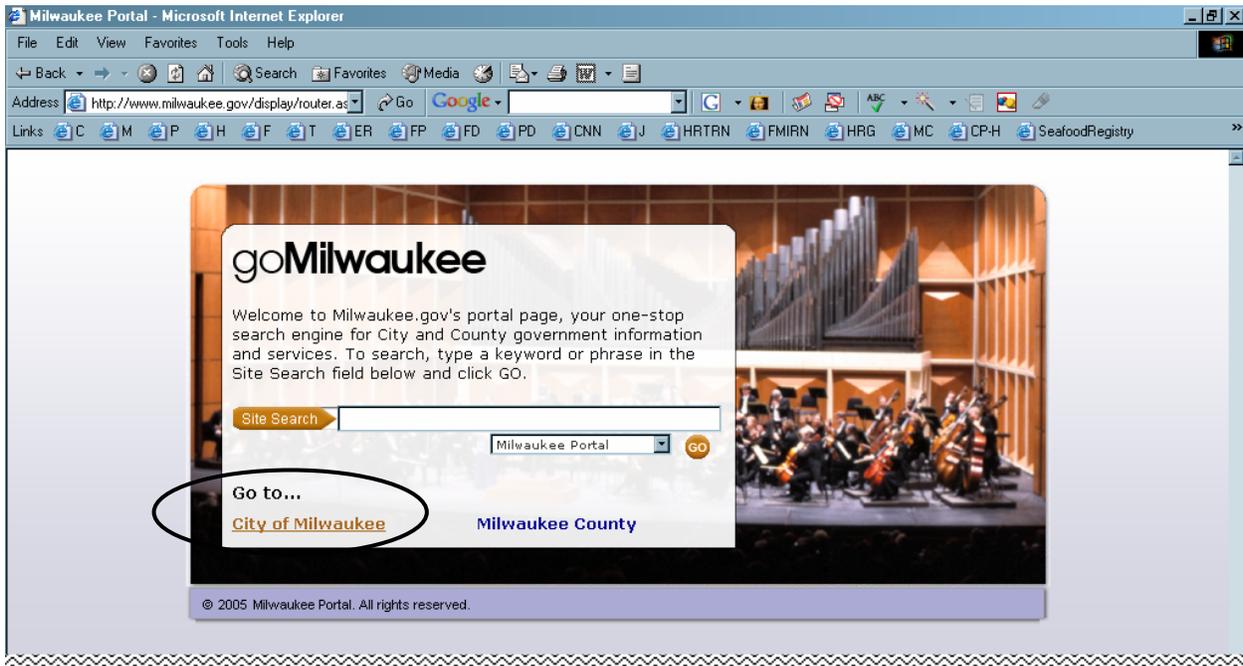
What can you do with information from Map Milwaukee?

You can...

- Display attribute data for any map feature in the active layer.
- Find features in the active layer that meet specific criteria.
- Search for specific attribute data.
- Link to another web page after finding a map feature you wish to research further, such as a library, school, or aldermanic district.
- Locate addresses or intersections.
- Measure the distance between two points or a series of points.
- Print maps, as well as save maps, for use with other programs such as Microsoft Word or PowerPoint.
- View metadata – “data about data.”

Accessing Map Milwaukee

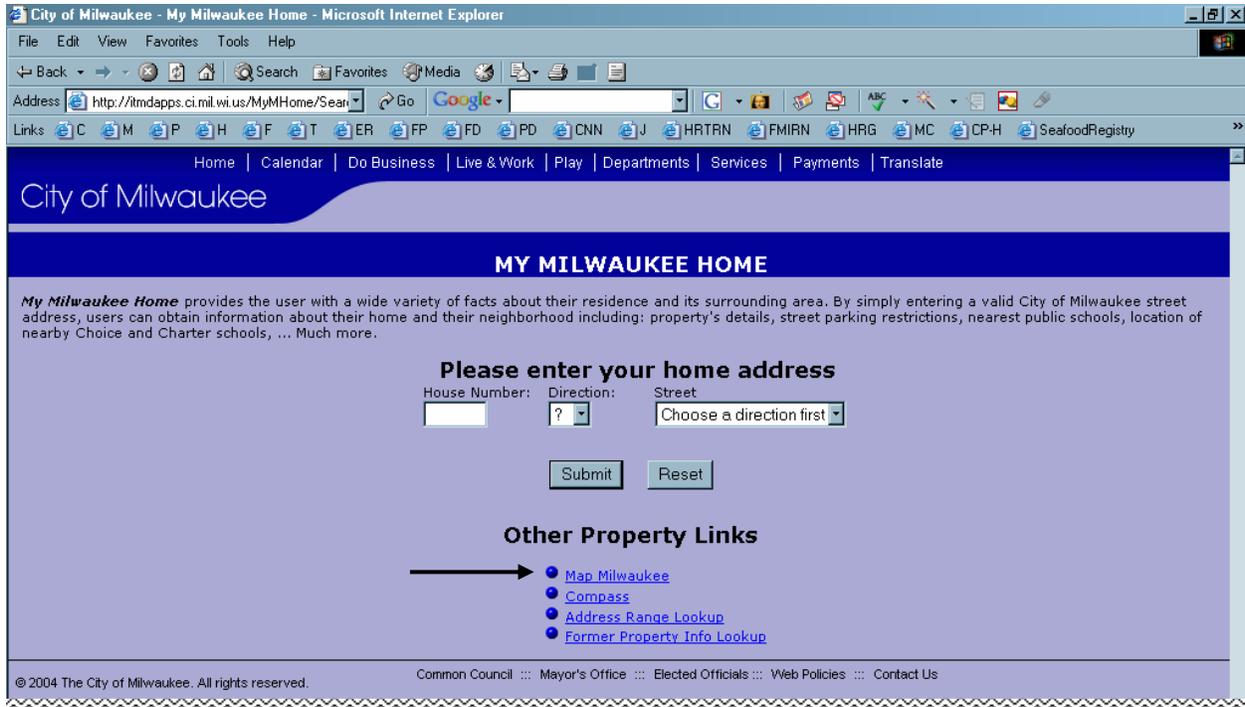
To access **Map Milwaukee**, go to www.milwaukee.gov. Then click on the City of Milwaukee link.



Then click on the Get Property Information link as shown below:



You will see this screen. Click on the **Map Milwaukee** link.



This is the page that you may wish to add to your list of favorite web sites. In the event that **Map Milwaukee** is updated, by entering the program from this page, you can be assured that you are using the latest version of the software as well as viewing any announcements. Finally, click on the **Enter Map Milwaukee** button.

Notice the note about Pop-Up Blockers!

Map Milwaukee

Note on Pop-Up Blockers

For the Print function in Map Milwaukee to work properly, you will need to disable pop-up blockers for this site. If you would like to add an exception to your pop-up blocker settings, add gis.milwaukee.gov. We have found this to be a potential issue for both Google and the Windows XP SP2 pop-up blockers.

If you continue to have problems using the print function, try holding down the **Ctrl** button on your keyboard while simultaneously clicking on the **Create Print Page** button.

Disclaimer

This is your first stop for City of Milwaukee geographic information. Before you enter the system, please click the following button to read the disclaimer (this link will open a new window):

Disclaimer

Start Map Milwaukee

Enter Map Milwaukee

To obtain the most functionality from the site, your system should meet the following minimum requirements:

- Netscape 7.0 or Internet Explorer 5.0 or higher
- Pentium Class Processor
- 64 Mb RAM
- 2Mb Video RAM

Mac Users

Geographic Information Systems (GIS)

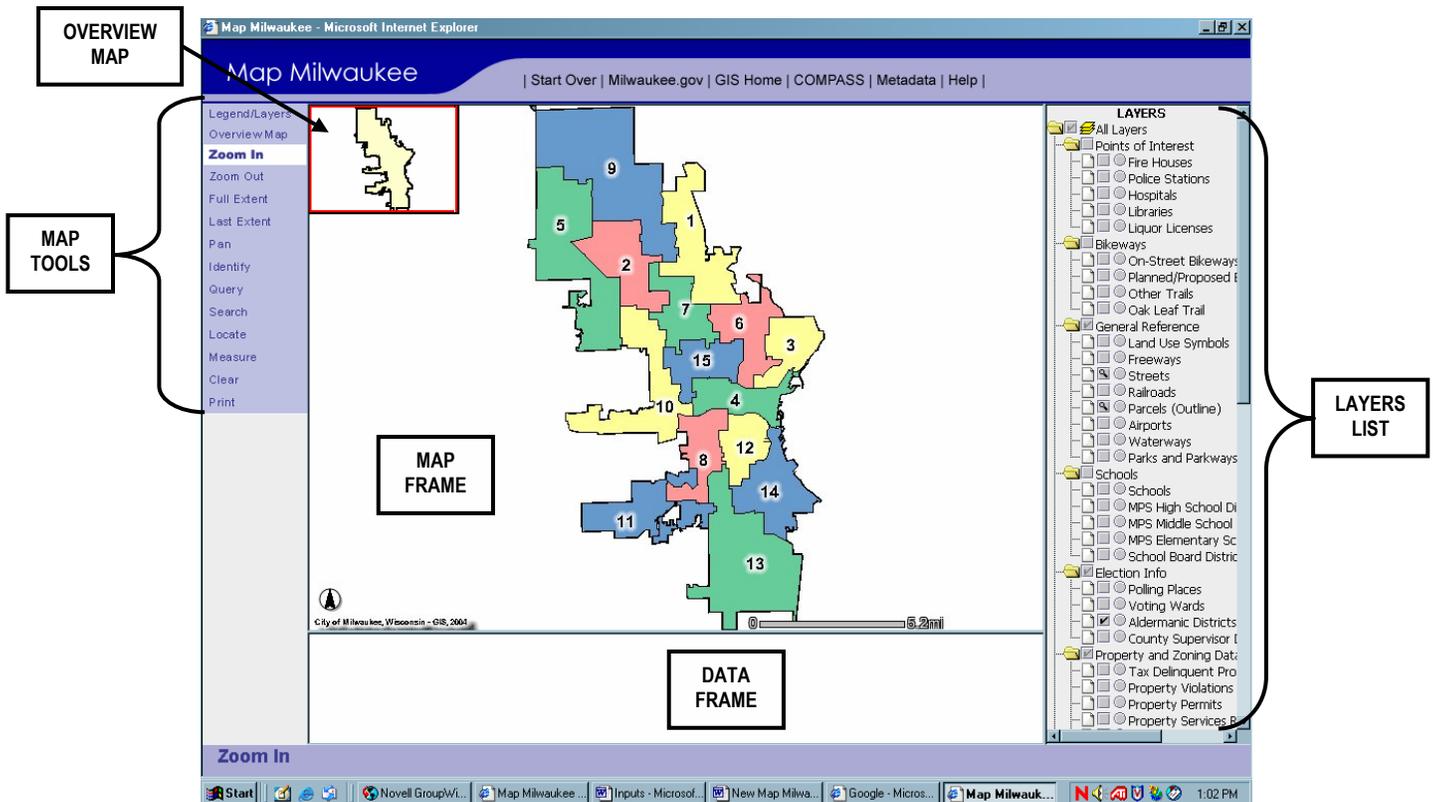
809 N. Broadway
Suite 400
Milwaukee, WI 53202

E-mail:
gis@milwaukee.gov

The **Map Milwaukee** program will open in a new window.

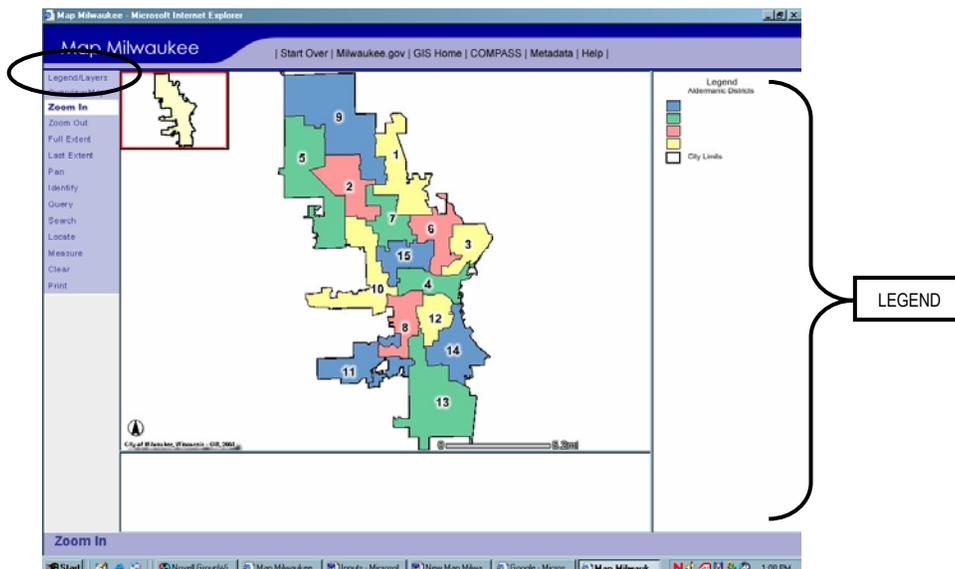
Main Map Milwaukee Page

This is the main **Map Milwaukee** page. You will learn how to use each map tool as you continue through this training.



The **Map Frame** and **Data Frame** sections of the window function independently. You'll learn a lot more about how they work in a moment.

Using the **Legend/List** map tool, the **Layers List** toggles to show the **Legend**, as shown here. Try it! Then click **Legend/List** again to return to the **Layers List**.



What Is The Layers List, And How Is It Used?

A map layer is simply data plotted on a map. Viewing a map enables your mind to quickly make sense of a lot of data. Each unique set of data, for example, National Historic Districts, Zip Codes, or Fire Houses, comprises a map layer.

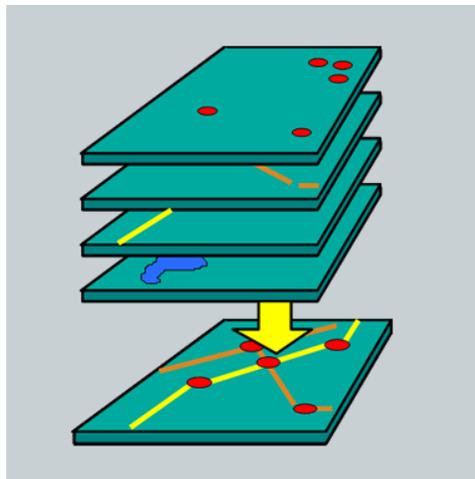
The layers on the map can be placed on top of each other to show lots of information at one time. You know how they say a picture is worth a thousand words? Well, now you can create your own picture and see a lot of information all at once.

Here is a graphic to help you understand how the map layers come together. See how all the layers on top come together on the bottom layer?

The **Layers List** on the mapping site works in the same way:

The layers listed first will always show on top of the layers below. Your final map will show all the layers you have selected.

Using the **Layers List**, you can select the active map layer as well as which layers you wish to be visible. Were all layers to be turned on at once, the resulting map would be too dense, difficult to read, and therefore not useful.



This little chart (also available in the **Map Milwaukee** application) will help you to decipher the various symbols used in the **Layers List**, shown on the next page.

-  A closed group, click to open.
-  An open group, click to close.
-  A map layer.
-  A hidden group/layer, click to make visible.
-  A visible group/layer, click to hide.
-  A visible layer, but not at this scale.
-  A partially visible group, click to make visible.
-  An inactive layer, click to make active.
-  The active layer.

You will notice several columns in **Layers List** (folders, checkboxes, radio buttons, group names, and map layer names).

The screenshot displays a GIS Layers List interface. It is divided into two main sections:

- Group Name:** This section on the left lists various categories of layers, each with a folder icon. The categories include:
 - All Layers
 - Points of Interest (containing Fire Houses, Police Stations, Hospitals, Libraries, Liquor Licenses)
 - Bikeways (containing On-Street Bikeways, Planned/Proposed Bikeways, Other Trails, Oak Leaf Trail)
 - General Reference (containing Land Use Symbols, Freeways, Streets, Railroads, Parcels (Outline), Airports, Waterways, Parks and Parkways)
 - Schools (containing Schools, MPS High School Districts, MPS Middle School Districts, MPS Elementary School Districts, School Board Districts)
 - Election Info (containing Polling Places, Voting Wards, Aldermanic Districts, County Supervisor Districts)
 - Property and Zoning Data
- LAYERS:** This section on the right lists individual layers, each with a document icon and a radio button. The layers include:
 - Tax Delinquent Properties
 - Property Violations
 - Property Permits
 - Property Services Requests
 - Land Use
 - Parcels** (highlighted in blue)
 - Residential Assessment Neighborhoods
 - Apartment Assessment Neighborhoods
 - Commercial Assessment Neighborhoods
 - Local Historic Districts
 - National Historic Districts
 - Targeted Investment Neighborhoods
 - Tax Incremental Districts
 - 2001 Development Zones
 - Zoning
 - Neighborhoods
 - City Services (containing Fire Battalions, Police Districts, Health Districts, Summer Garbage Routes, Winter Garbage Routes, Recycling Routes)
 - Base Maps (containing Zip Codes, City Limits, Watersheds, Quarter Sections, Orthophoto)

At the bottom right of the interface, there is a **Refresh Map** button and a checked **Auto Refresh** checkbox.

- One layer can be **active** at any given time.
- Multiple layers can be **visible**.

The difference between an active layer and a visible layer is that the active layer is the data you can use with the **Identify**, **Query** or **Search** tools. You will have the opportunity to practice with these shortly.

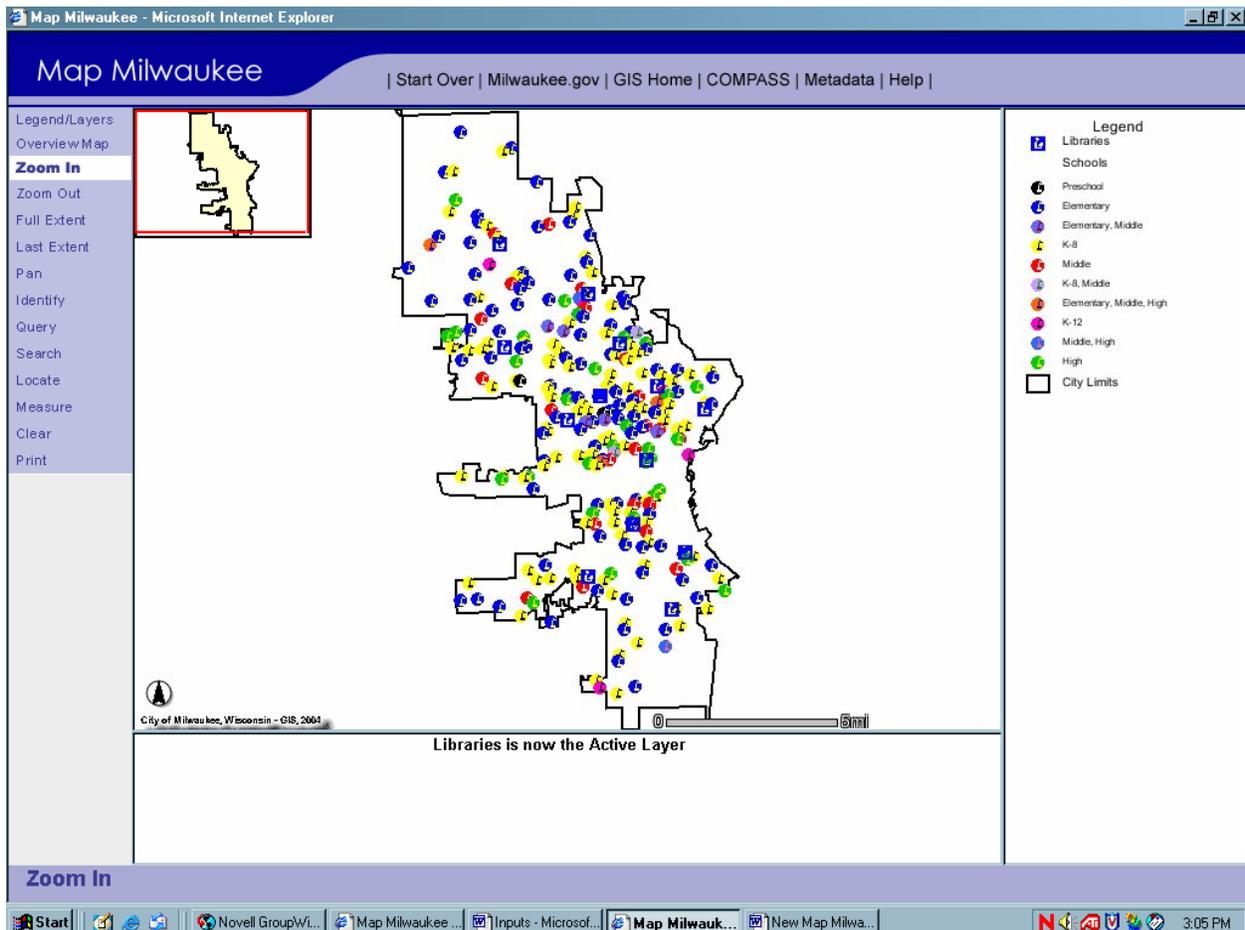
By default, the active layer upon entering **Map Milwaukee** is Parcels. The visible layers include Streets, Parcels (Outline), Aldermanic Districts, Parcels, and City Limits.

To choose the active and visible layers of your map, click on the radio button (for the active layer) and checkboxes (for the visible layers). Because **Auto Refresh** is checked by default, the map will automatically refresh each time you add a layer. However, if you wish to manually redraw the map, uncheck the **Auto Refresh** checkbox, and then you will need to periodically click the **Refresh Map** button to re-draw your map in the Map Frame.

Note: Do not use your web browser's Refresh button to try to re-draw your map.

PRACTICE Using the Layers List

- Make Libraries the active layer
- Then make the following map layers visible:
 - Libraries
 - Schools
- De-select the following map layers:
 - Aldermanic Districts
- Click the **Redraw Map** button
- Click the **Legend/List** button to see the legend, as shown here:



Using The Identify Tool

The **Identify** tool allows you to retrieve additional information about features of the active layer. Click on a feature (parcel, district, or location, depending on the current active layer), and more descriptive data will appear in the Data Frame. To practice with the **Identify** tool, follow the instructions below.

PRACTICE Using the Identify Tool

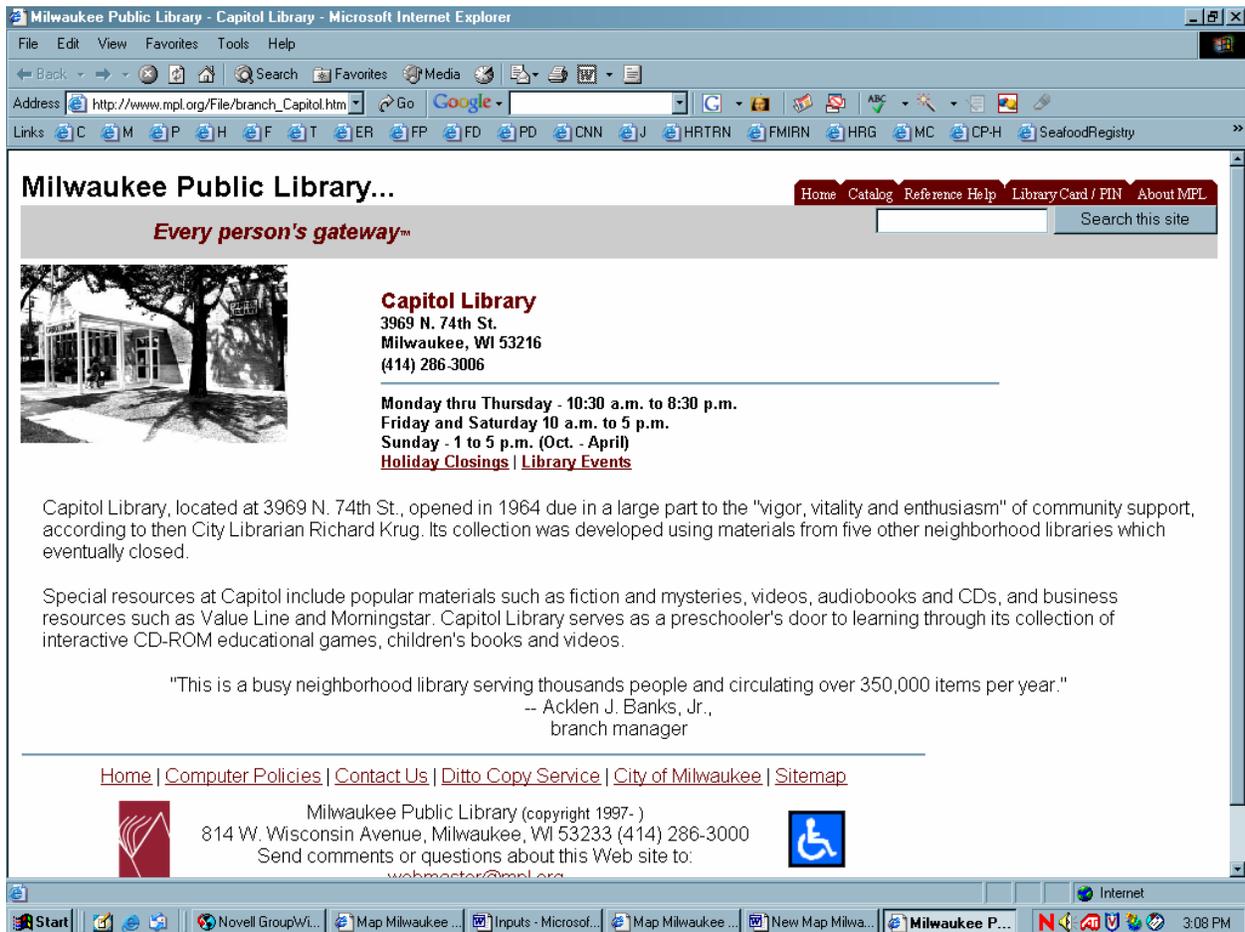
- Click on the **Identify** tool
- Then click on one of the library icons. (You may need to try this several times.) The library information will appear in the Data Frame.

The screenshot shows the 'Map Milwaukee' web application interface. On the left, a vertical menu includes 'Legend/Layers', 'Overview Map', 'Zoom In', 'Zoom Out', 'Full Extent', 'Last Extent', 'Pan', 'Identify', 'Query', 'Search', 'Locate', 'Measure', 'Clear', and 'Print'. The 'Identify' tool is selected. The main map area shows a map of Milwaukee with various school icons. A legend on the right lists 'Selected Features', 'Libraries', and 'Schools' with sub-categories: 'Preschool', 'Elementary', 'Elementary, Middle', 'K-8', 'Middle', 'K-8, Middle', 'Elementary, Middle, High', 'K-12', 'Middle, High', 'High', and 'City Limits'. At the bottom, a 'Data Frame' titled 'Libraries' displays the following information:

Reo	Library Name	Address	Web Site
1	Capitol Library	3969 N. 74th St.	http://www.mpl.org/File/branch_Capitol.htm

The 'Identify' tool name is visible at the bottom left of the application window. The Windows taskbar at the bottom shows the Start button, several open applications (Novell GroupWi..., Map Milwaukee..., Inputs - Microsof..., Map Milwauk..., New Map Milwa...), and the system tray with the time 3:07 PM.

- You can then use the blue hyperlink to open the web site for the library, as shown below.
- Use the **Close**  icon to close the library window.
- Use the **Clear** button to clear the last information retrieved by the **Identify** button.



So remember, the **Identify** tool only retrieves additional information about features of the **active** layer. Click on a feature (parcel, district, or location, depending on the current active layer), and more descriptive data will appear in the Data Frame. From there, you can link to other related web pages.

Action Buttons

When you press an action button, it turns white with navy blue text, indicating that the button is "active." As long as a button is white with navy blue text, clicking with the mouse will perform the action of the active button.

Action Buttons:
Zoom In
Zoom Out
Pan
Identify
Measure

Using Zoom In and Zoom Out

Use the **Zoom In** and **Zoom Out** action buttons to enlarge or reduce a portion of a map.

To zoom in on the map, 1) Use the mouse to define a box of the approximate area that you want to see, or 2) Select a point to magnify the area. Remember, when you press this button, it is the active button. As long as it is white with navy blue text, the mouse action will be to zoom in.

To zoom out on the map, 1) Use the mouse to define a box, or 2) Select a point to expand the area. Likewise, when you press this button, it is the active button. As long as it is white with navy blue text, the mouse action will be to zoom out.

Using Full Extent, Last Extent, and Pan

The **Full Extent** button restores the view back to the original display. It zooms to fit the entire city into the Map Frame.

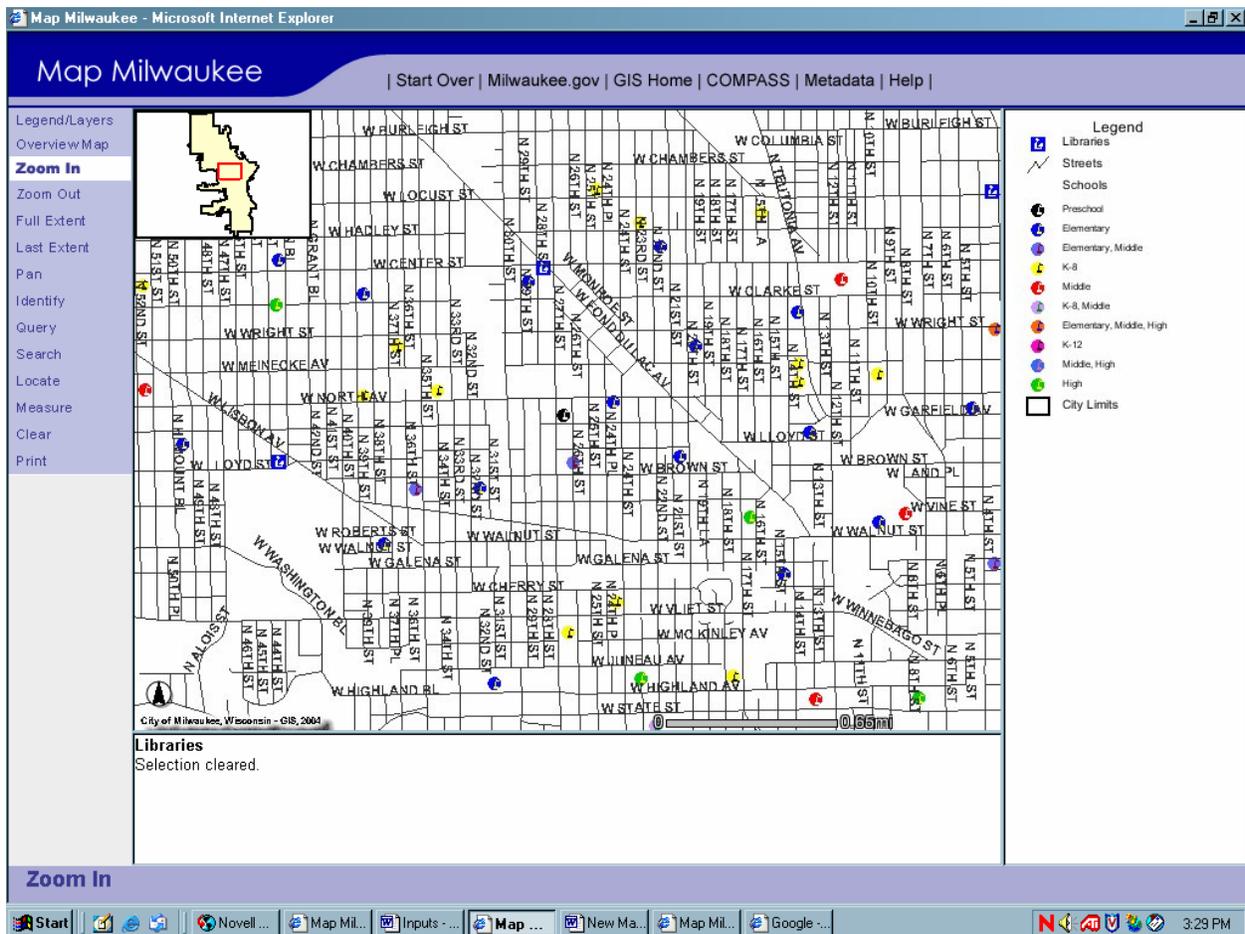
The **Last Extent** button displays the last view setting that was used. This button toggles between the last two views displayed in the Map Frame.

To display areas of the map that lie outside the Map Frame, use the **Pan** action button. Using **Pan** and then clicking inside the Map Frame with your mouse moves the map view up, down, left, and right.



PRACTICE Using Zoom In, Zoom Out, Pan, Full Extent and Last Extent

- Using the **Zoom In** action button, zoom in on a section of the map you created in the previous exercise. Continue zooming until you can read the street names readily.



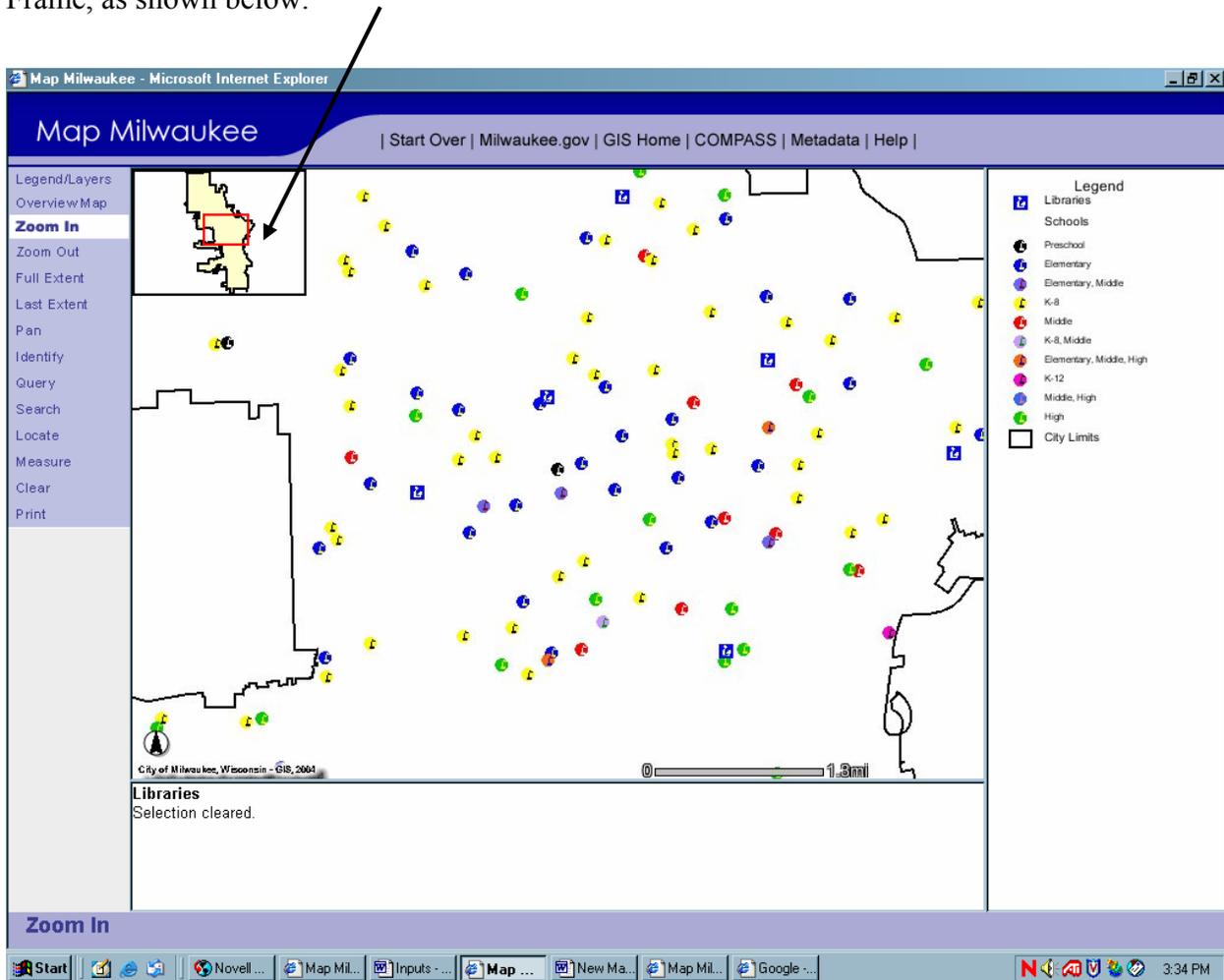
- Next, practice using the **Zoom Out** action button. You will reach the full city view in just a few clicks.
- Next, try using the **Last Extent** button to toggle between the last two views displayed in the Map Frame.
- When the Map Frame is displaying a zoomed in view, practice with the **Pan** action button to move the map view up, down, left, and right.
- Finally, click **Full Extent** to display the full city view.

Using the Overview Map Tool

Use the **Overview Map** button to cause the miniature map to appear and disappear in the upper left corner of the Map Frame. This window shows an outline of the City in the view, a red box designating the area currently shown in the Map Frame.

By default, the **Overview Map** frame is toggled “on” and displays the entire City of Milwaukee.

The **Overview Map** frame can be used to reposition the map in the Map Frame. Click once in the **Overview Map** to reposition the center of the red rectangle and the contents of the Map Frame, as shown below.



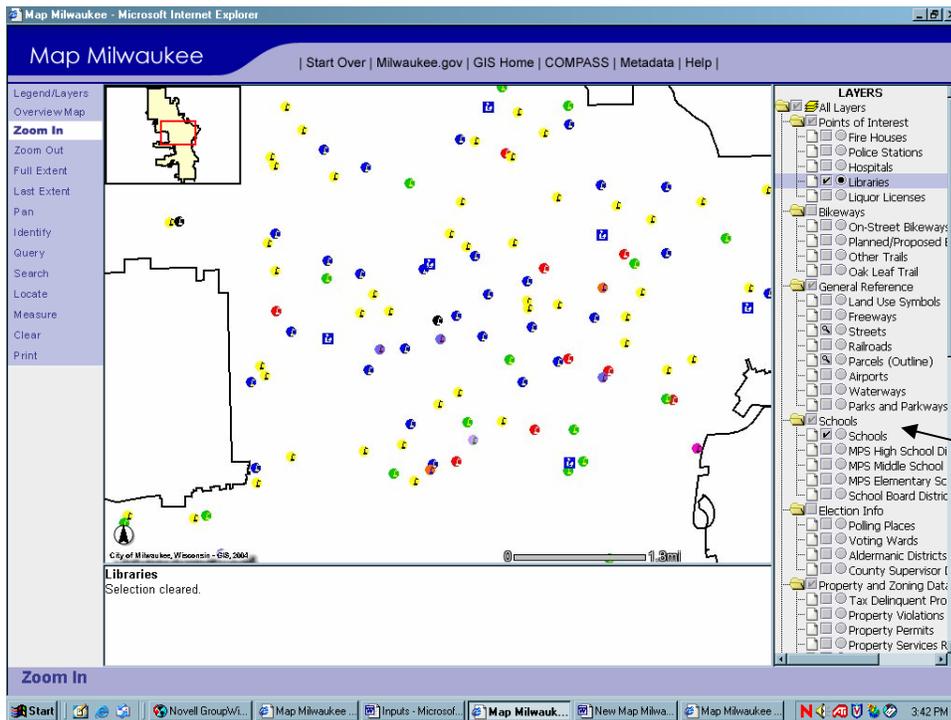
A Word About Scale Factor

Some map layers have scale-dependent visibility parameters. In other words, layers that are visible at closer zoom levels are not visible as you zoom out. Each time you resize the map by zooming in or zooming out, the scale changes. This is called the **scale factor**. Features like **Parcels** and **Streets** appear in the Map Frame only when you cross the **zoom threshold**.

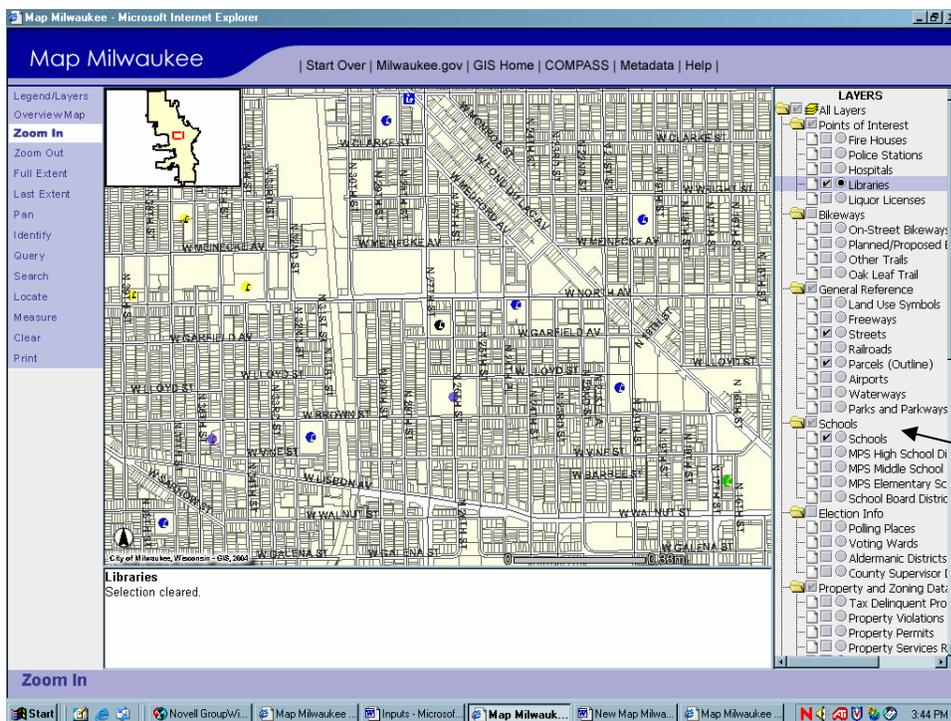
For example, even if you have the visibility checked for parcels, you will not be able to see them until you zoom in far enough.

Other layers, like zoning, have scale-dependent labels – you can see the polygons when zoomed to the entire city, but as you zoom in, zoning labels will appear. This is done for better map readability and faster display when drawing layers with large amounts of data.

In the first example shown here, streets are visible, but not street names or parcel outlines. The second example shows how the user zoomed in on a feature, and both street names and parcel outlines clearly visible.



Note Streets and Parcels (Outline) are checked, yet street names and parcel outlines do not show in the Map Frame



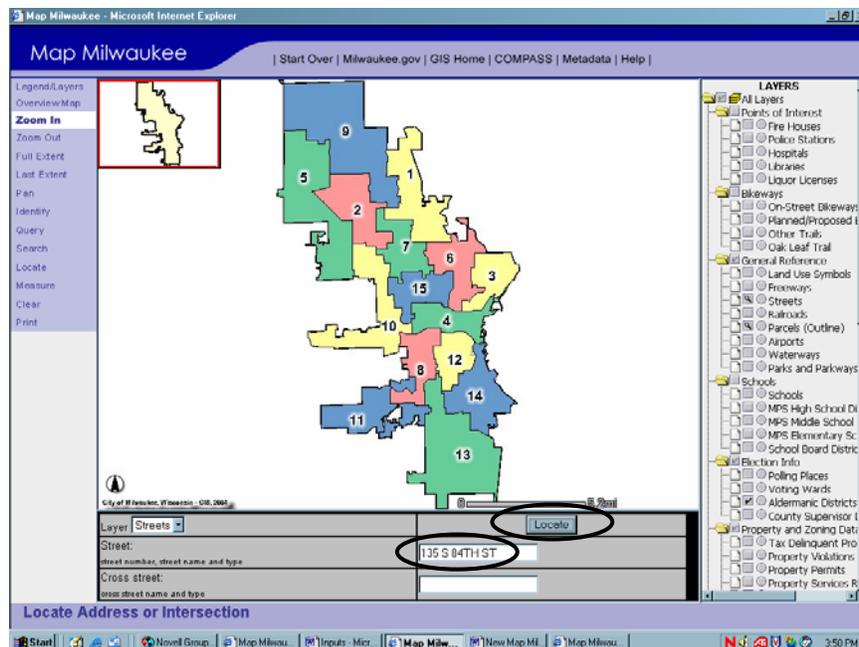
Note that both street names and parcel outlines are now visible in the Map Frame

Using Locate

To find an address with **Map Milwaukee**, you will click on the **Locate** button, and then type the house number and street name (or starting portion of street name) into the form, for example: **135 S 84TH ST**.

Keep the following tips in mind:

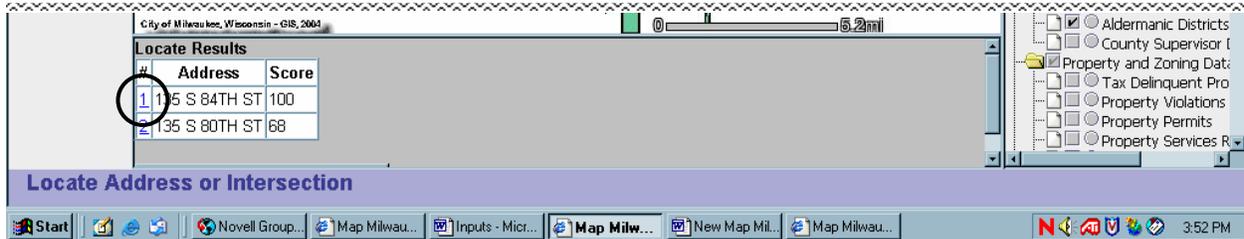
- ☞ The more specific you are – for example typing in the street direction (such as W, E, or S) and the street type (such as AV, ST, or BL) – the better “score” you will get.
- ☞ When searching for an address on a numbered street, be sure to include the ST, ND or TH after the number for the street name (for example, 1ST, 2ND, or 45TH).
- ☞ If the street you are looking for begins with Saint, abbreviate it as ST, and do not put a space between this abbreviation and the remainder of the street name. What you type in the text box would look like this: 625 W STPAUL AV.
- ☞ Exact spelling is required for a successful address match. If you are having difficulty finding an address, find the street names on the streets layer.
- ☞ Examples of unusual street names include these:
 - N Old World Third St (Enter as 700 N OLD WORLD THIRD ST)
 - N Martin L King Jr Dr (Enter as 1500 N MLK DR)
 - W Mt Vernon Ave (Enter as 6500 W MT VERNON AV or 6500 W MOUNT VERNON AV)
 - W Blue Mound Rd (Enter as 5101 W Bluemound)
 - W Fond du Lac (Enter as 4500 W Fond du Lac)
 - S Cesar E Chavez Dr (Enter as 1500 S Cesar Chavez)
 - N James Lovell St (Enter as 800 N James Lovell)
 - S Kinnickinnic Ave (Enter as 2500 S KK)
 - W Park Hill Ave (Enter as 6135 W Parkhill)



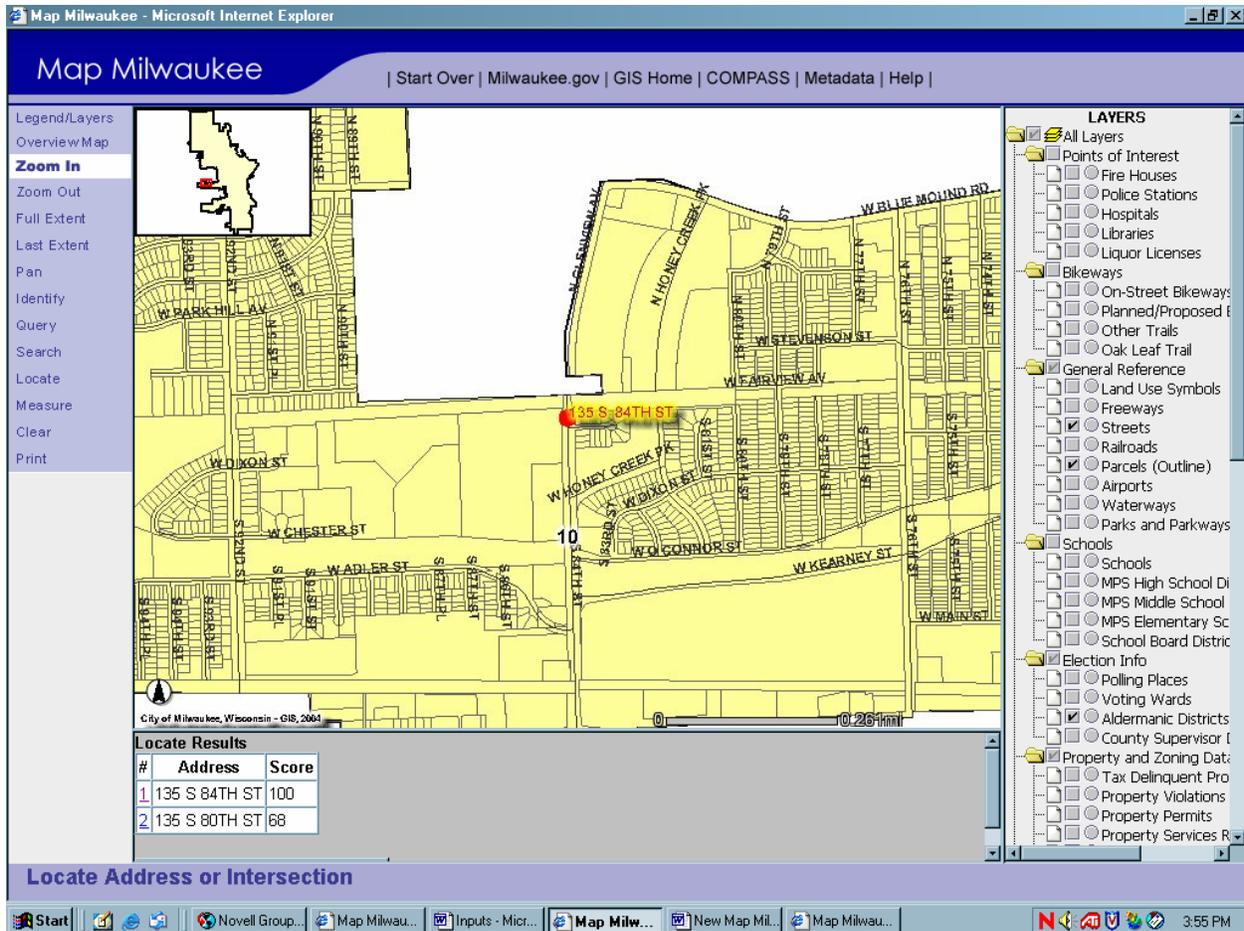
Then, you will click on the **Locate** button.

A list of one or more potential matches will display in the Data Frame. Notice that the address that was entered received a “score” of 100 because it was a perfect match.

Then you can click on the numbered link for the address you wish to view.



Map Milwaukee will zoom in on the address and highlight it with a red dot.



Use the **Clear** button to clear the last information retrieved by the **Locate** button.

To find a street intersection using the **Locate** tool, simply type in the one street in the **Street** field and another in the **Cross Street** field. The street name must include the direction and street type. Your intersection search should look something like this:

Street:
 Cross street:



PRACTICE Using the Locate Tool

1. Click the **Start Over** button
2. De-select Parcels and Aldermanic Districts
3. Make Property Permits the active layer
4. Make sure the following layers are visible: Streets, Parcels (Outline), Parks and Parkways, Property Permits, and City Limits
5. Click on the **Locate** button in the Map Tools
6. Type this address into the form: **2204 W HOPKINS ST**, and then click the **Locate** button in the Data Frame (below the Map Frame)

Step #5

Step #6

City of Milwaukee, Wisconsin - GIS, 2004

Layer: Streets

Street: 2204 w hopkins st

Cross street:

Locate Address or Intersection

7. Notice that one address meets the criteria, and it appears in the Data Frame
8. Select **2204 W HOPKINS ST** by clicking on the numbered link to the left of the address.

City of Milwaukee, Wisconsin - GIS, 2004

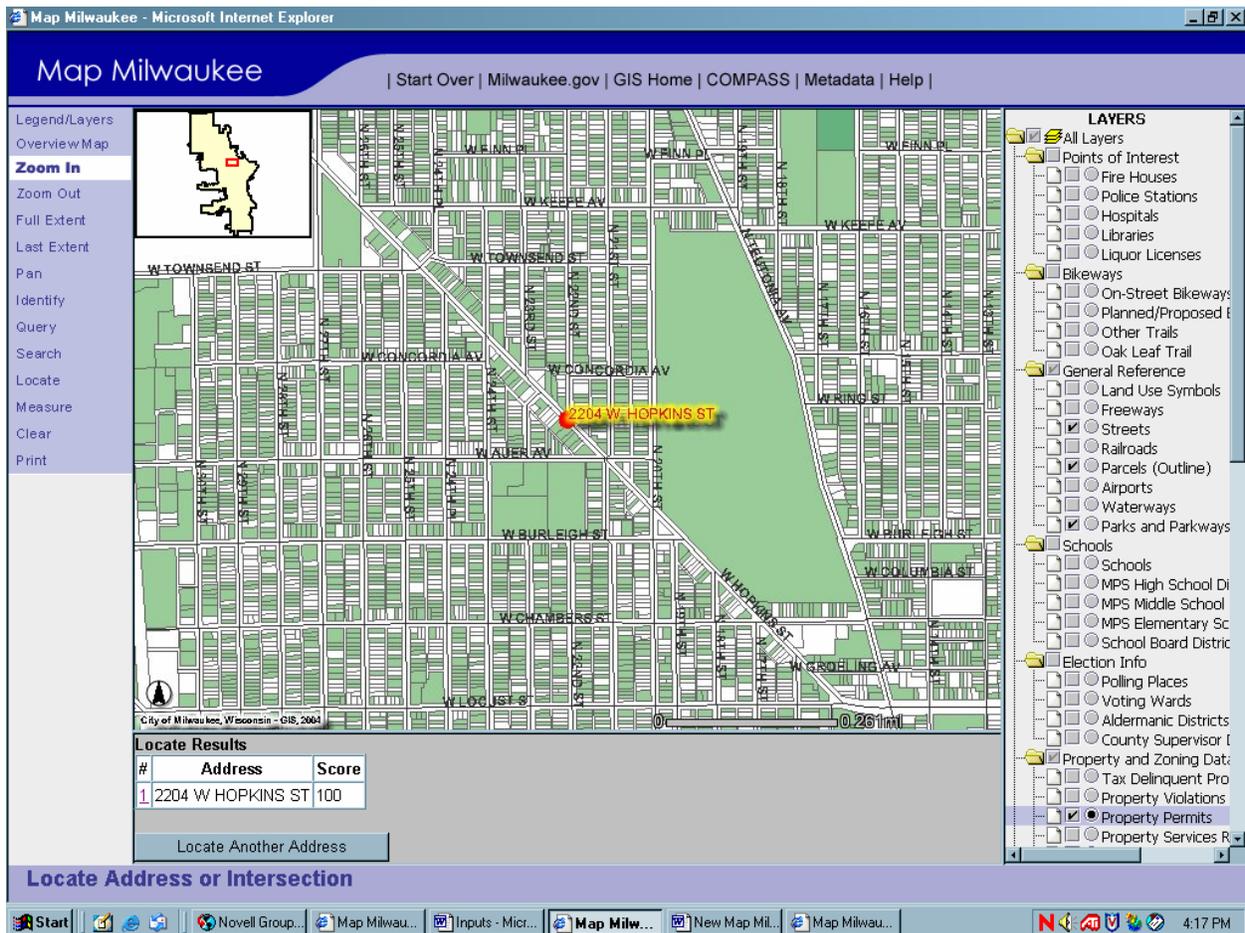
Locate Results

#	Address	Score
1	2204 W HOPKINS ST	100

Locate Another Address

Locate Address or Intersection

- You should then see the address highlighted on a close-up map (as well as the visible layers)



- Use **Identify** to determine if there are any open permits for that address.

EXTRA CREDIT!
Are there any open permits for that address?

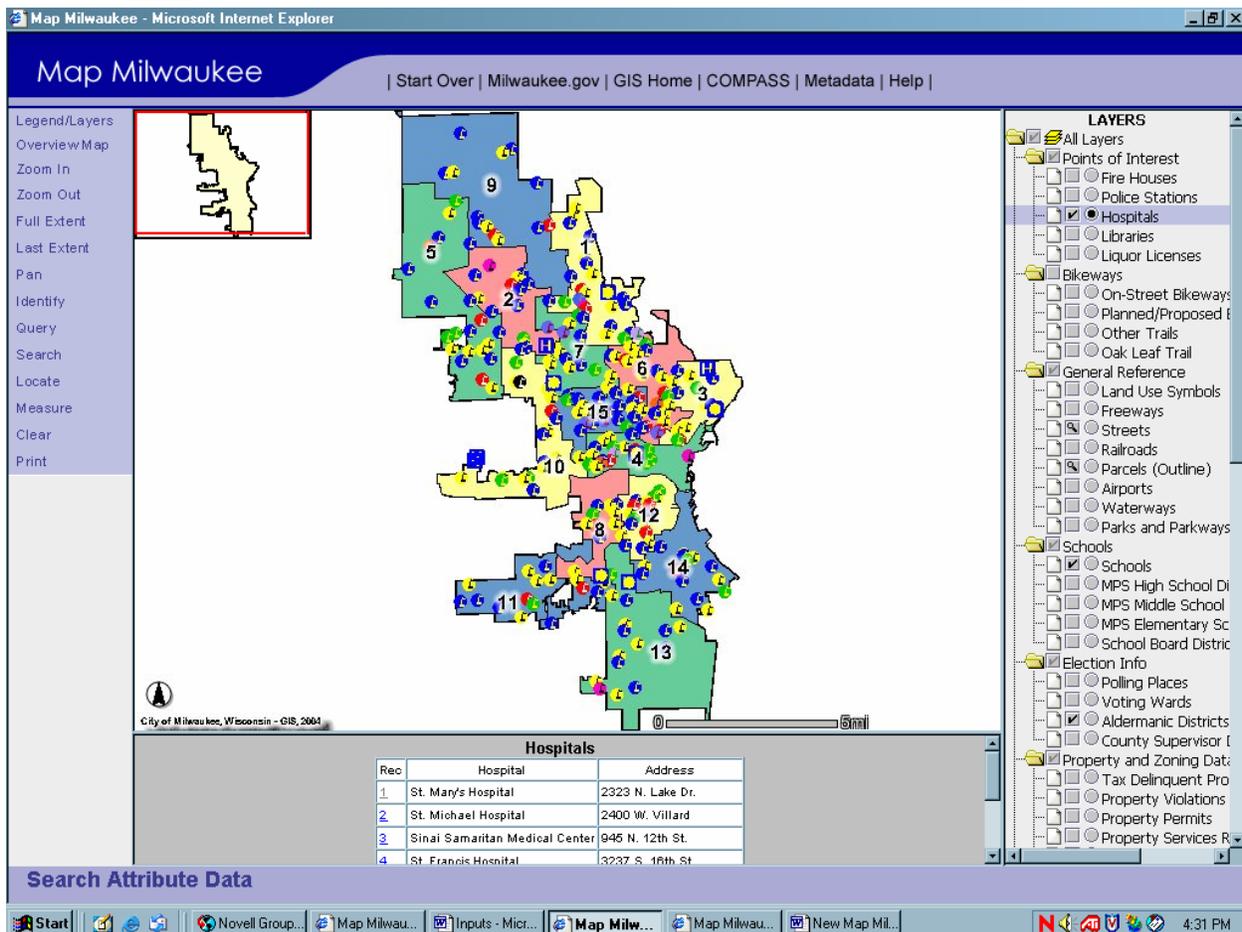


- Using **Clear** will clear the last information retrieved by the **Locate** button

Using the Search Tool

The **Search** function allows you to find specific attribute data. Keep in mind that the **Search** tool is case-sensitive.

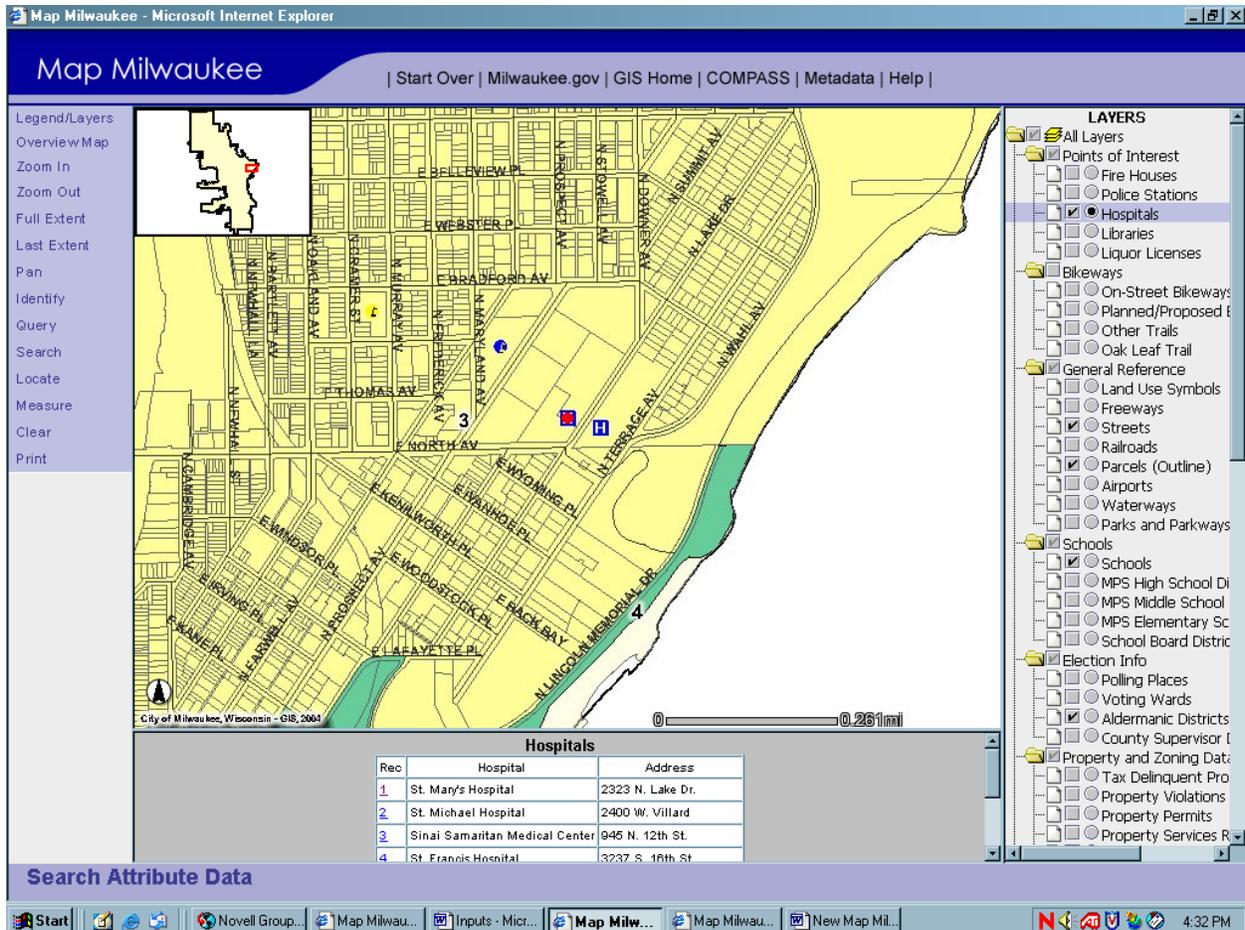
Like the **Identify** tool, the **Search** tool works on the active layer. Features of the active layer that meet your search criteria are displayed as a table in the Data Frame. For example, if the active layer is Hospitals, you may search for a hospital by name. In the example shown below, the search string was “St.” Notice that Sinai Samaritan Medical Center is in the list. **Why?** Because the **Search** tool searches all columns of the active attribute table, so “945 N.12th St.” is considered a match.



The screenshot shows the Map Milwaukee GIS application interface. The map displays various layers, and the 'Hospitals' layer is selected. A search for 'St.' has been performed, resulting in a table of search results. The table lists four hospitals, with the Sinai Samaritan Medical Center highlighted in blue. The search results table is as follows:

Rec	Hospital	Address
1	St. Mary's Hospital	2323 N. Lake Dr.
2	St. Michael Hospital	2400 W. Villard
3	Sinai Samaritan Medical Center	945 N. 12th St.
4	St. Francis Hospital	3237 S. 16th St.

If multiple features are shown, click on the number to the left of an item to zoom in.



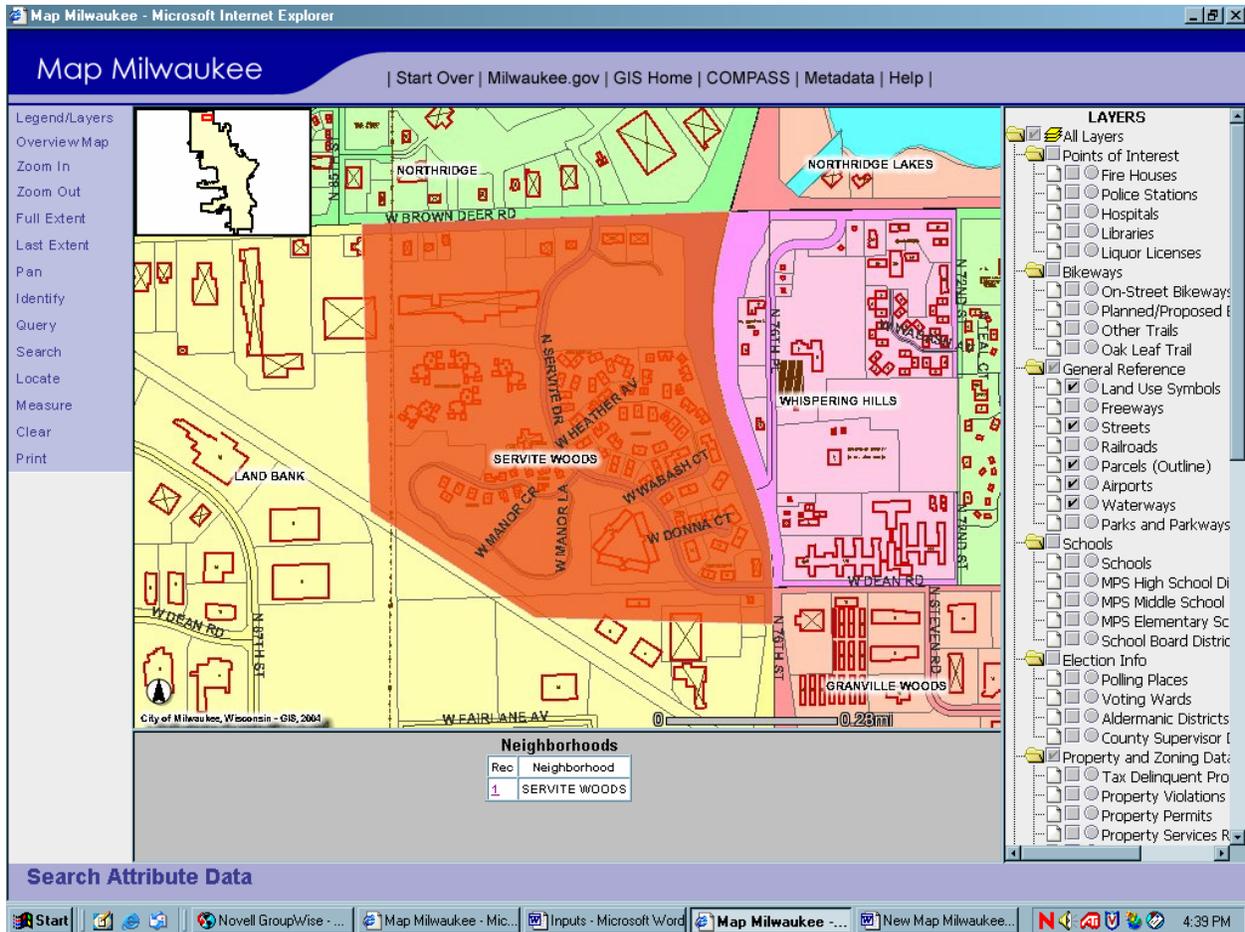
If more than 25 features are selected, only the first 25 records will be displayed in the Data Frame. To access more records, scroll down, and click the **More Records** link.

PRACTICE Using the Search Tool

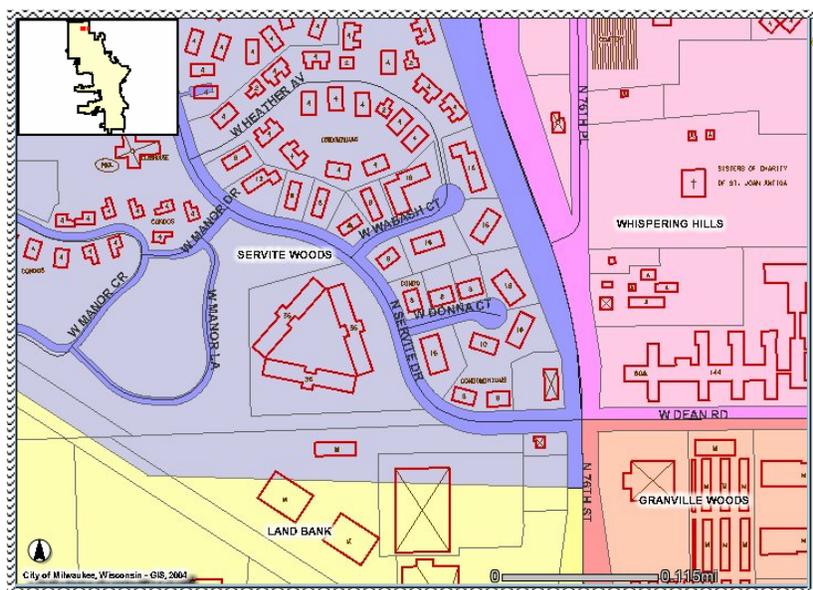
Say that you wanted to view the land use in a specific neighborhood. You could make **Neighborhoods** the active layer.

- Click on **Start Over**
- Deselect **Aldermanic Districts**
- Make **Neighborhoods** the active layer
- Make the following layers visible (in addition to those already checked): Land Use Symbols, Airports, Waterways, and Neighborhoods
- Next, click on the **Search** button, enter **SERVITE WOODS** in the Search field, and click on **Find String**
- Click on the number to the left of the item to zoom in

- **Map Milwaukee** will retrieve data for the area you selected



- To clear the last information retrieved by the **Search** button, use the **Clear** button
- Use the **Zoom In** button to view the various land use symbols in the Servite Woods neighborhood

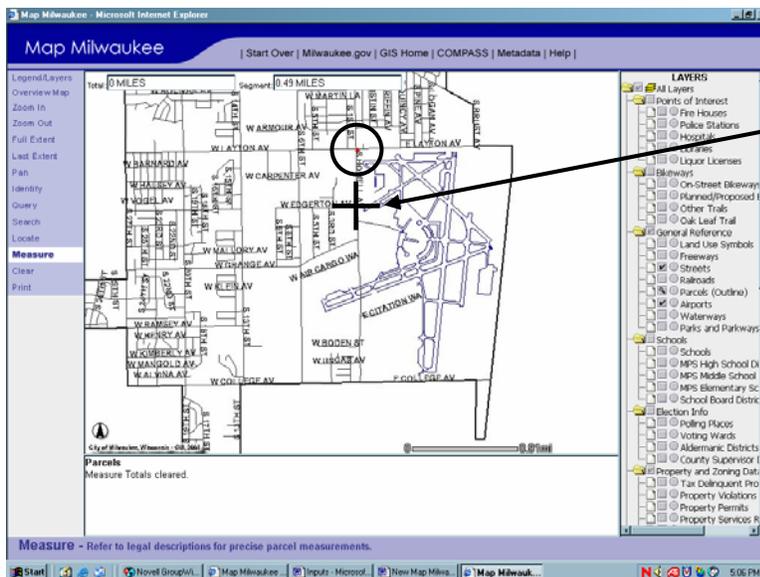


Using the Measure Tool

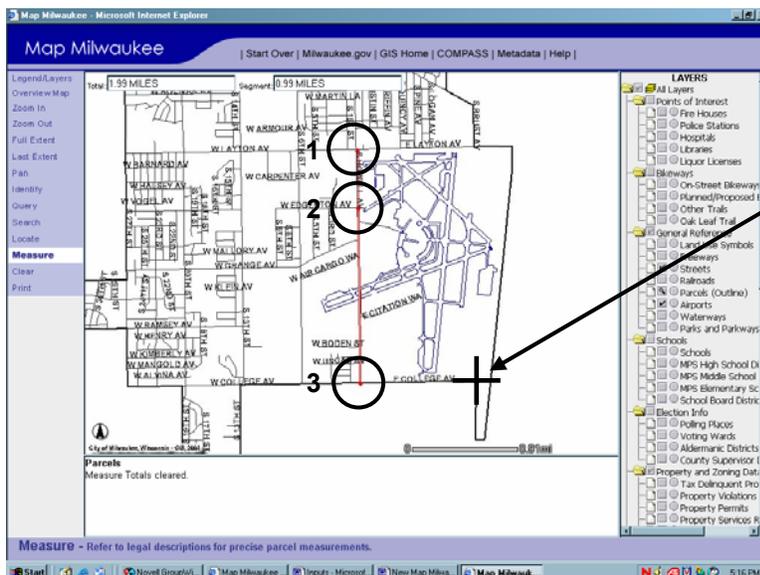
The **Measure** tool enables you to calculate the distance between two points or a series of points.

Say you wanted to know the total distance between W LAYTON AV and W COLLEGE AV along S HOWELL AV. When you click the **Measure** tool, measurement boxes appear at the top of the Map Frame. You will click once on the map at the point you wish to start, for example at the intersection of W LAYTON AV and S HOWELL AV. Once you have marked your beginning point, when you move your mouse around the map, the value in the Segment measurement box changes. The value in the Segment box indicates the distance from the beginning point to your cursor position.

You will click again to mark the end of the first segment, for example at W EDGERTON AV. A red line appears on the map, and the distance between the beginning click point and the second click point is displayed in the Total measurement box. You can then continue to click points to add to your total distance.



Notice where the cursor is now, and notice the measurement in the Segment box.



The number in the Total box (1.99 miles) is from point 1 to point 2 to point 3. Notice where the cursor is now, and notice the measurement in the Segment box. That is the measurement from point 3 to the cursor point.

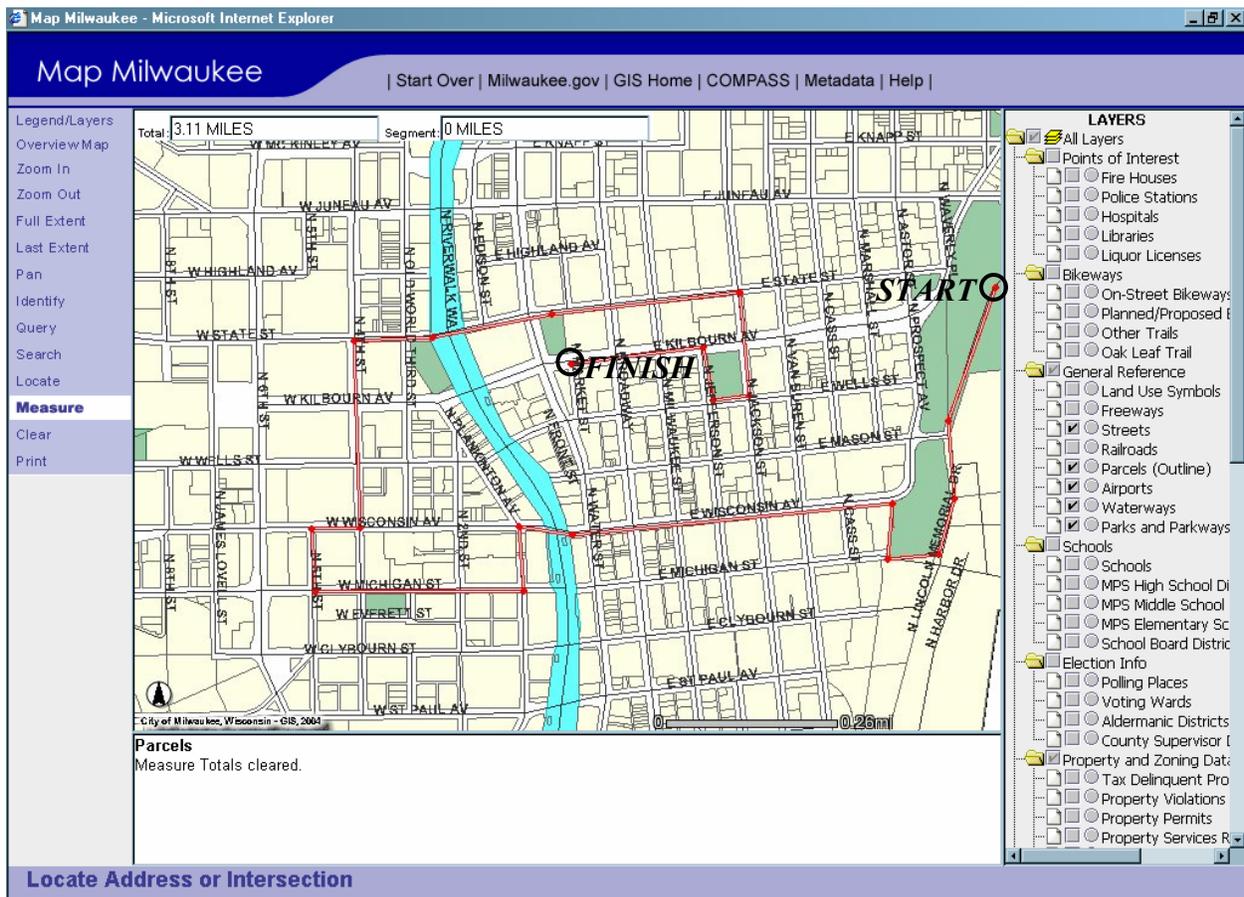
If you wish to zoom in, zoom out, or pan your map, your measurement information will be saved, and you can continue with your measurement even if you no longer see the last click point. To start a new measurement, click the **Clear** button.

PRACTICE Using the Measure Tool

Say you wanted to plot a scenic route downtown for a 5K (3.1 mile) fun run to benefit your favorite charity. Come up with a plan online.

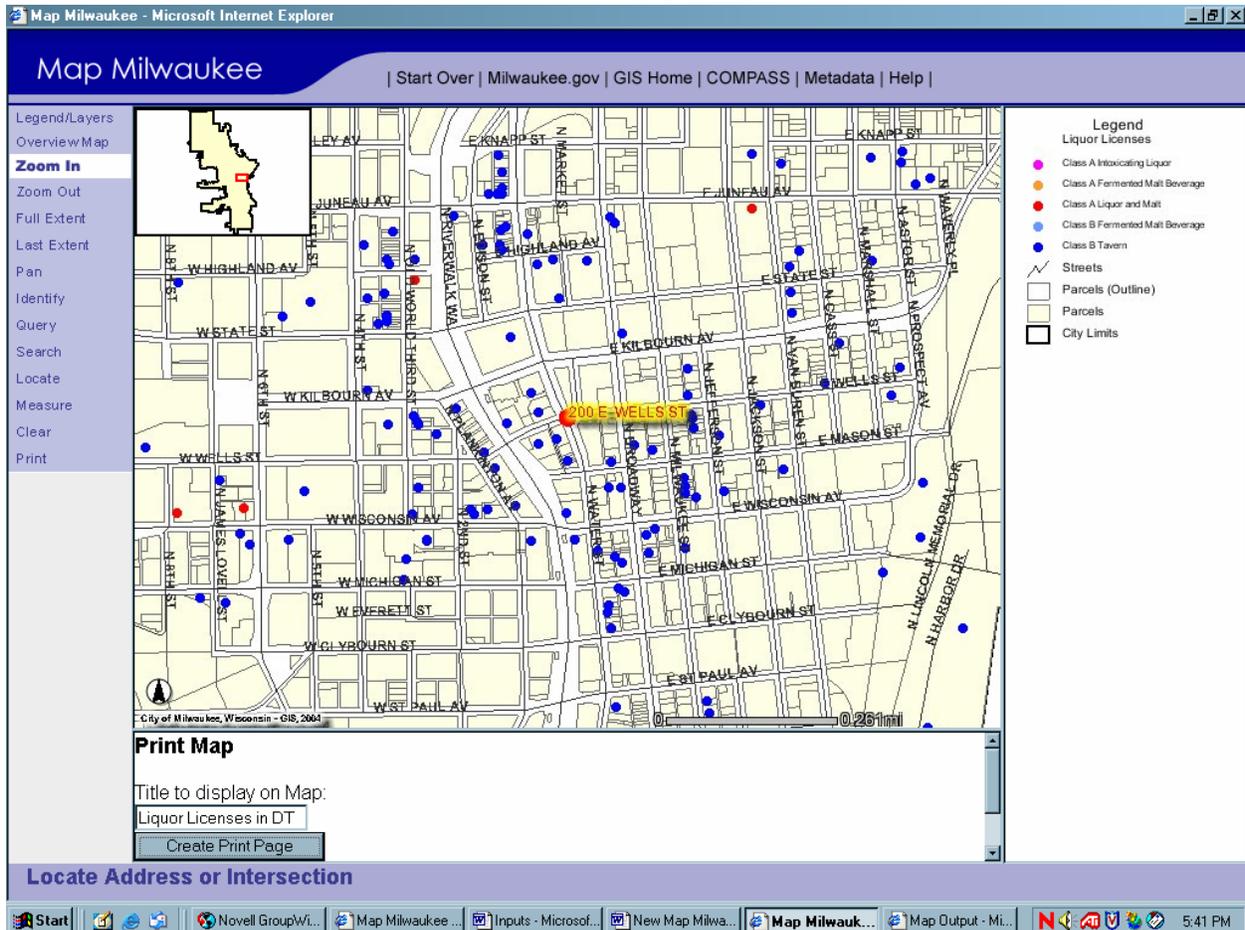
Hint: You may wish to deselect Aldermanic Districts, and make the following layers visible: Waterways and Parks and Parkways.

Sample 5K Fun Run Map:



Printing a Map

Click the **Print** button to print a map. Clicking this button displays a field in the Data Frame that will be the title of your map. The default title is: **ArcIMS HTML Viewer Map**. To create a title of your choosing, triple-click on the default title, and simply type a new name. See below for an example:

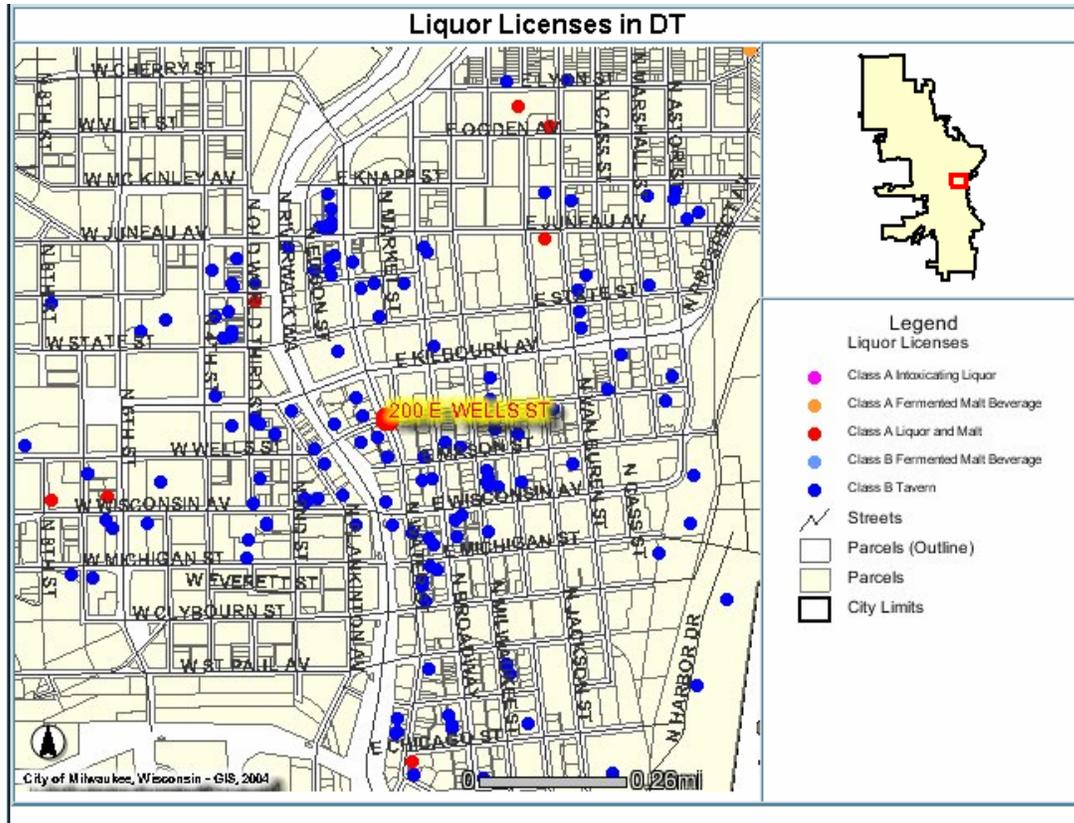


The screenshot shows the 'Map Milwaukee' web application in a Microsoft Internet Explorer browser window. The main map area displays a street grid with several colored dots representing liquor licenses. A red dot is highlighted at the intersection of E Wells St and N Jefferson St. Below the map, there is a 'Print Map' section with a text input field containing 'Liquor Licenses in DT' and a 'Create Print Page' button. The browser's taskbar at the bottom shows several open windows and the system clock set to 5:41 PM.

Click on the **Create Print Page** button to create a print quality map that will open in a new browser window. Upon previewing the print-quality map, you may then print it or save it to a diskette, your hard drive, or a network drive using your browser's **File** menu options.

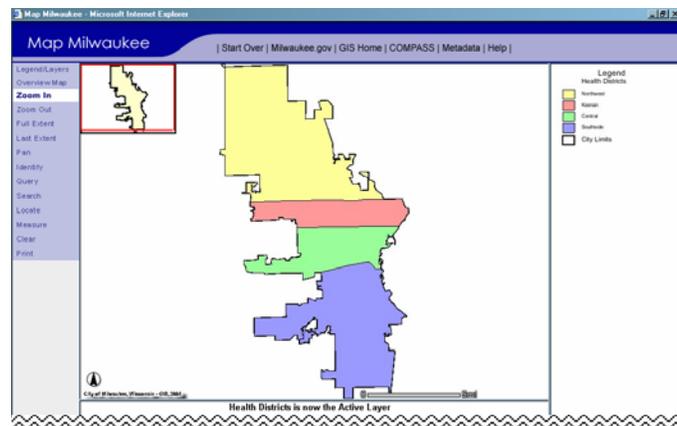


Print-quality map opened in a new browser window:



PRACTICE Printing a Map

- Click on **Start Over** to reset all of the default layers
- De-select Aldermanic Districts
- Make Health Districts the active layer
- Make the following layer visible (in addition to those already checked): Health Districts
- Click on the **Legend/List** button to show the Legend
- Click the **Print** button to print this map. A field will appear in the Data Frame with the default title of **ArcIMS HTML Viewer Map**. Triple-click on the default title, and simply type a new name, such as City of Milwaukee Health Districts.
- Click on the **Create Print Page** button to create the print quality map that will open in a new browser window.
- Upon previewing the print-quality map, you may then print it or save it to a diskette, your hard drive, or a network drive using your browser's **File** menu options.



Using The Query Tool

A “query” is simply a request for information from a database. The **Query** tool is used to find features that meet specific criteria.

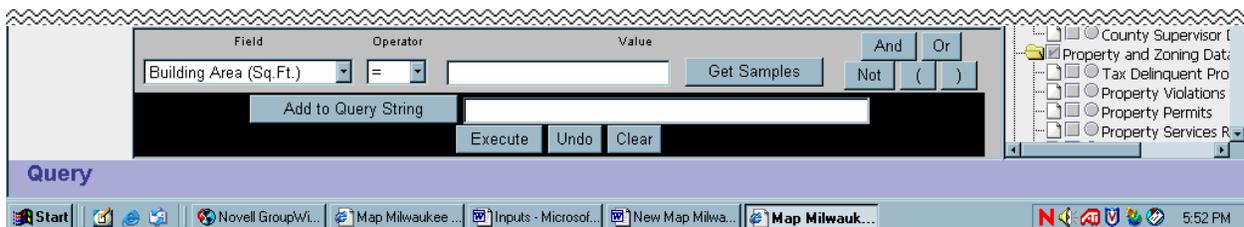
The **Query** tool allows you to perform queries on the active layer (similar to **Identify** and **Search**). Query results are displayed in the Data Frame; in addition, they are highlighted on the map.

- If only one feature is selected, the map will automatically zoom to that feature.
- If multiple features are shown, click on the number to the left of an item to zoom in.
- If more than 25 features are selected, only the first 25 records will be displayed in the Data Frame. To access more records, scroll down, and click the **More Records** link.

The more familiar you are with the data you wish to query, the better. Using the **Identify** tool first will help you to better understand the data. You can run a query on any of the fields listed in the columns. For example, you can query on any of the following columns if Parcels is the active layer:

Taxkey	Current Total Assessment	Census Tract
Parcel Address	Number of Rooms	Historic Code
Parcel Zip Code	Number of Units	Land Use
Owner Occupied?	Year Built	Land Use Group
Owner's Name	Aldermanic District	Parcel Area (Sq. Ft.)
Owner's Mailing Address	Building Area (Sq.Ft.)	Police District
Owners City and State	Building Type	Years Tax Delinquent
Owner's Zip Code	Census Block	Zoning

The query data form looks like this:



- The **Field** selection box contains all the fields that you can query for that active layer.
- The **Operator** box gives you these choices:
 - equal to (=)
 - less than (<)
 - greater than (>)
 - less than or equal to (<=)
 - greater than or equal to (>=)
 - LIKE
- The **Value** box is where you enter a comparison value. (*Note:* The **Get Samples** button gives you a list of samples, if desired.)
- The **Add to Query String** button is used to save your selection criteria. **Execute** runs your query.

PRACTICE Using the Query Tool

Perhaps you wish to see how many properties in Aldermanic District 4 were built prior to 1900.

1. You may wish to click **Start Over** to refresh the map.
2. Next, create a map, making the layer you wish to query the active layer. For this example, make **Parcels** the active layer.
3. Using the **Zoom In** tool, zoom in four times to Aldermanic District 4.
4. Next, click the **Query** tool. The query form will appear in the Data Frame.
5. From the **Field** drop-down list, select **Aldermanic District**.
6. Make sure the **Operator** drop-down selection is **=**.
7. In the **Value** text box, type the number **4**.
8. Press the **Add to Query String** button. The first part of the query string is complete.
9. Click the **And** button to add the word **AND** to your query string. The word **AND** joins the two halves of your query string and indicates you want to find features that meet **all** parts of your query. In our example, we want to find parcels that are in Aldermanic District 4 **and** were built prior to 1900. The other Boolean operators are **Not** and **Or**: **Not** negates criteria, whereas **Or** finds features that meet either (or both) criteria.
10. Next, select **Year Built** from the **Field** drop-down menu.
11. Change the **Operator** to **<=**.
12. In the **Value** textbox, type **1900**.
13. Click the **Add to Query String** button to add the second criterion.
14. Click the **Execute** button.

Rec	Taxkey	Parcel Address	Parcel Zip Code	Owner Occupied?	Owner's Name	Owner's Mailing Address	Owner
1	3590293000	1584 N PROSPECT AV	532020000	D	WI CONSERVATORY OF MUSIC	1584 N PROSPECT	MILWA
2	3590291000	1560 N PROSPECT AV	532020000	N	DANIEL J CZARNECKI	12690 W NORTH AV	BROOK
3	3590290000	1550 N PROSPECT AV	532020000	N	NEW LAND ENTERPRISES LLP	1840 N FARWELL AV, STE 203	MILWA
4	3590028000	1522 N PROSPECT AV	532020000	N	MILWAUKEE COUNTY	901 N 9TH ST	MILWA
6	3590025000	1504 N PROSPECT AV	532020000	N	DEVONSHIRE APARTMENT LTD	1007 N CASS	MILWA

15. The Map Frame will present the results highlighted in yellow, and the Data Frame will display the database records associated with those features.
16. To zoom in on a parcel you wish to locate, click on the highlighted number to the left of the parcel listing.
17. Use the **Clear** button to clear the last information retrieved by the Query button.

The LIKE Operator

1. Click the **Query** tool. The query form will appear in the Data Frame.
2. From the **Field** drop-down list, select **Owner's Name**.
3. Make sure the **Operator** drop-down selection is **LIKE**.
4. In the **Value** text box, type ***JONES*** – the asterisks are “wild card characters.”
5. Click the **Add to Query String** button.
6. Click the **Execute** button.

The screenshot shows the Map Milwaukee web application interface. The main map area displays a street grid with several parcels highlighted in red and numbered 1 through 6. Below the map is a table titled "Parcels" with the following data:

Rec	Taxkey	Parcel Address	Parcel Zip Code	Owner Occupied?	Owner's Name	Owner's Mailing Address	Owner
1	0330017000	9071 N 86TH ST	532240000	O	RUTHIE L JONES	9071 N 86TH ST	MILWA
2	0740249000	8469 N 111TH ST	532240000	O	SHANNON D JONES	8469 N 111TH ST	MILWA
3	0400959000	8627 N GRANVILLE RD	532240000	O	JOSEPH A JONES	8627 N GRANVILLE RD	MILWA
4	0400224000	8460 N 103RD ST	532240000	O	KEDNA S JONES	8460 N 103RD ST	MILWA
5	0740281000	11040 W 6RCH CT	532240000	O	TIMOTHY D JONES	11040 W 6RCH CT	MILWA

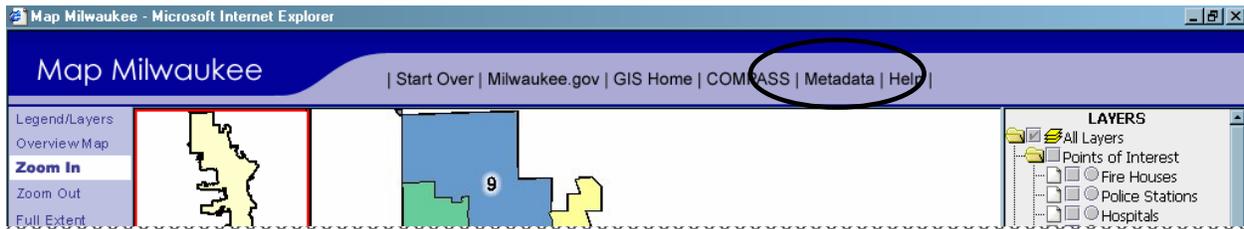
Below the table is a "Query" section with a text input field containing the query string: `*JONES*`. The interface also includes a legend on the left, a layers panel on the right, and a navigation toolbar at the bottom.

7. Use the **Clear** button to clear the last information retrieved by the Query button.

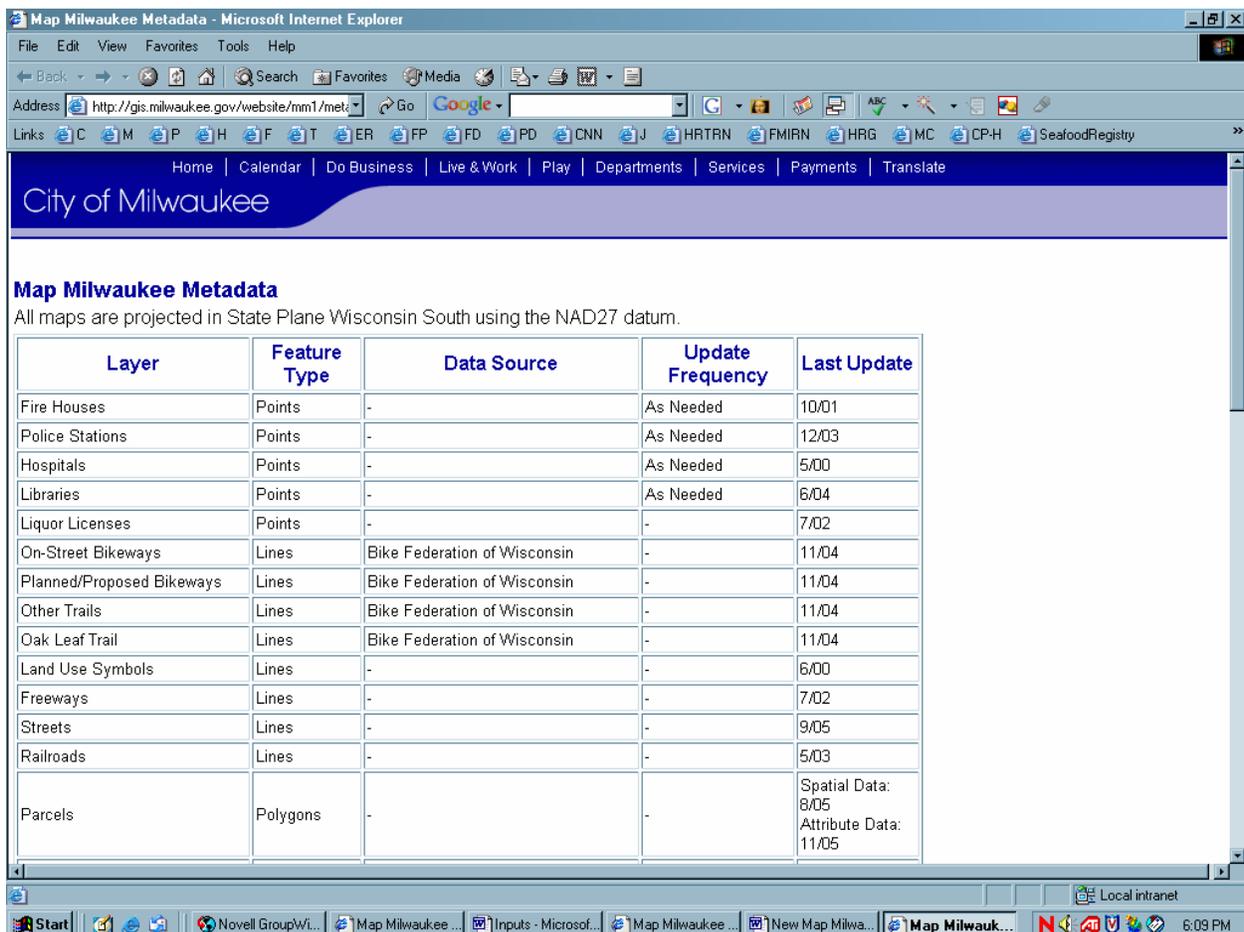
Using Metadata To View Data Descriptions

What is Metadata?

Metadata is “data about data.” Metadata includes descriptive, spatial, and attribute data about each specific spatial dataset. To access **Map Milwaukee** metadata, click on the **Metadata** link from the **Map Milwaukee** window.



A new window will appear.



Home | Calendar | Do Business | Live & Work | Play | Departments | Services | Payments | Translate

Map Milwaukee Metadata

All maps are projected in State Plane Wisconsin South using the NAD27 datum.

Layer	Feature Type	Data Source	Update Frequency	Last Update
Fire Houses	Points	-	As Needed	10/01
Police Stations	Points	-	As Needed	12/03
Hospitals	Points	-	As Needed	5/00
Libraries	Points	-	As Needed	6/04
Liquor Licenses	Points	-	-	7/02
On-Street Bikeways	Lines	Bike Federation of Wisconsin	-	11/04
Planned/Proposed Bikeways	Lines	Bike Federation of Wisconsin	-	11/04
Other Trails	Lines	Bike Federation of Wisconsin	-	11/04
Oak Leaf Trail	Lines	Bike Federation of Wisconsin	-	11/04
Land Use Symbols	Lines	-	-	6/00
Freeways	Lines	-	-	7/02
Streets	Lines	-	-	9/05
Railroads	Lines	-	-	5/03
Parcels	Polygons	-	-	Spatial Data: 8/05 Attribute Data: 11/05

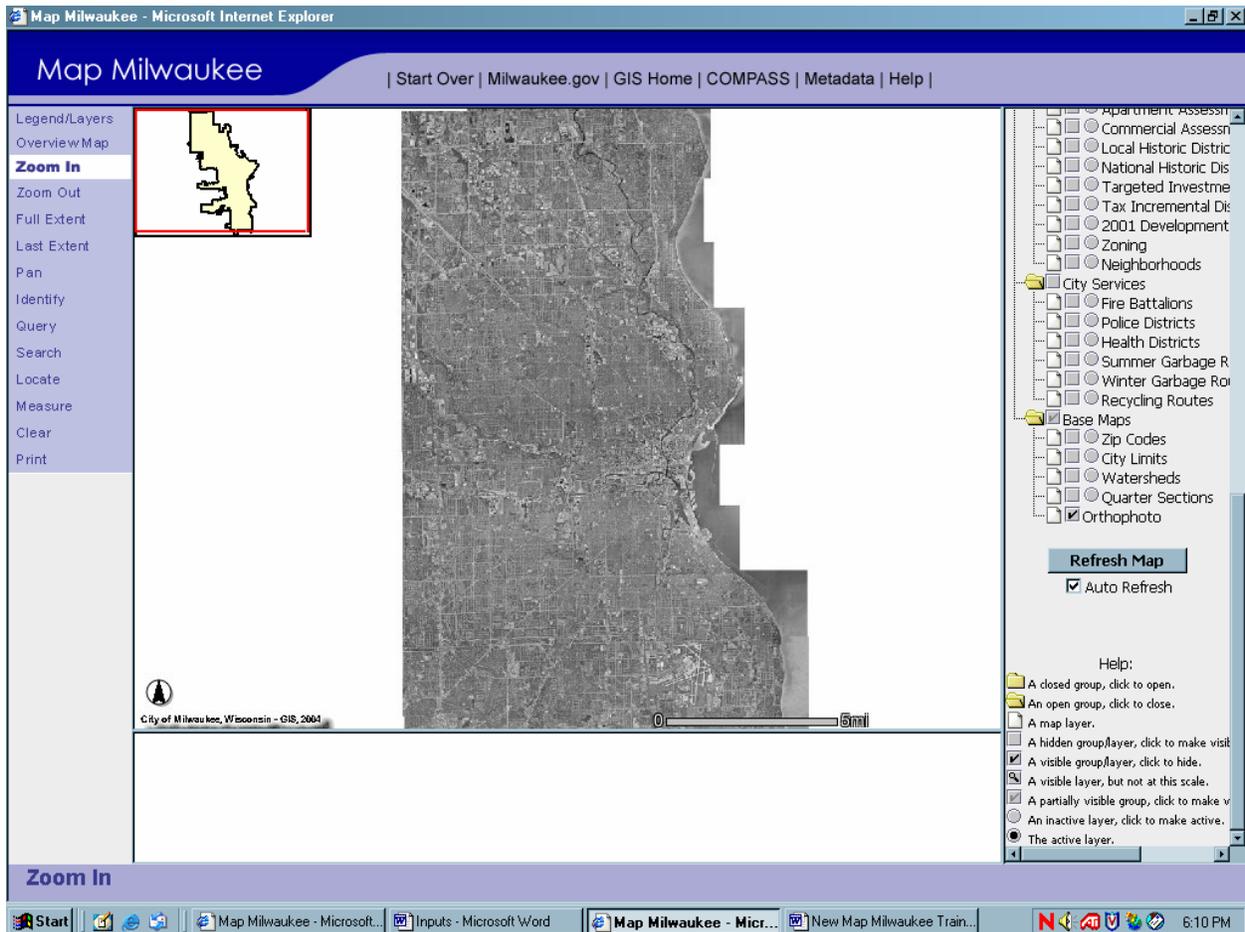
- To view additional metadata, use the scroll bar.
- To close the **Map Milwaukee Metadata** window, click on the **Close** button in the upper right-hand corner of the window (✕).

Viewing the Orthophoto

Map Milwaukee contains a fascinating orthophoto – a copy of a photograph taken from the air in the spring of 2000 that has been corrected. The source of the data is the Southeast Wisconsin Regional Planning Commission.

PRACTICE Viewing the Orthophoto

- Click **Start Over** to refresh the map.
- Next, create a map, making the orthophoto layer the only visible layer.
- Notice that you're seeing Milwaukee County in its entirety.



- You may add additional layers as you wish, such as City Limits and Parcels (Outline).

- You may zoom in on any building in the City of Milwaukee!

Map Milwaukee - Microsoft Internet Explorer

Map Milwaukee | Start Over | Milwaukee.gov | GIS Home | COMPASS | Metadata | Help |

Legend/Layers
Overview Map
Zoom In
Zoom Out
Full Extent
Last Extent

Pan
Identify
Query
Search
Locate
Measure
Clear
Print

City of Milwaukee, Wisconsin - GIS, 2004

0 0.065mi

Locate Results

#	Address	Score
1	200 E WELLS ST	100
2	200 W WELLS ST	77

Pan

Start | Map Milwaukee - Microsoft... | Inputs - Microsoft Word | Map Milwaukee - Micr... | New Map Milwaukee Train... | 6:13 PM

Appendix A

Land Use Symbology

	SINGLE FAMILY RESIDENTIAL
	TWO FAMILY RESIDENTIAL
	MULTI-FAMILY RESIDENTIAL
	CONDOMINIUM
	ACCESSORY BUILDING
	DORMITORY
	FIRE STATION
	HOTEL/MOTEL
	MANUFACTURING AND WAREHOUSING
	POLICE STATION
	PLAYGROUND
	PUBLIC SCHOOL
	ROOMING HOUSE
	STORAGE TANK
	UTILITY COMPANY
	HOSPITAL
	HOSPITAL HELICOPTER LANDING PAD
	SKILLED CARE FACILITY/GROUP HOME
	PLACE OF WORSHIP
	NON-PUBLIC EDUCATION
	GOVERNMENTAL OR QUASI-PUBLIC BUILDING
	COMMERCIAL WITH RESIDENCE
	COMMERCIAL
	MIXED COMMERCIAL
	OFFICE OR PROFESSIONAL SERVICES
	PARK
	CEMETERY
	PARKING LOT
	PARKING STRUCTURE
	BASKETBALL COURT
	TENNIS COURT
	FENCE
	ELECTRICAL LINE TRANSMISSION TOWER
	ELECTRICAL LINE
	UNDER CONSTRUCTION
	BOATER'S DOCK