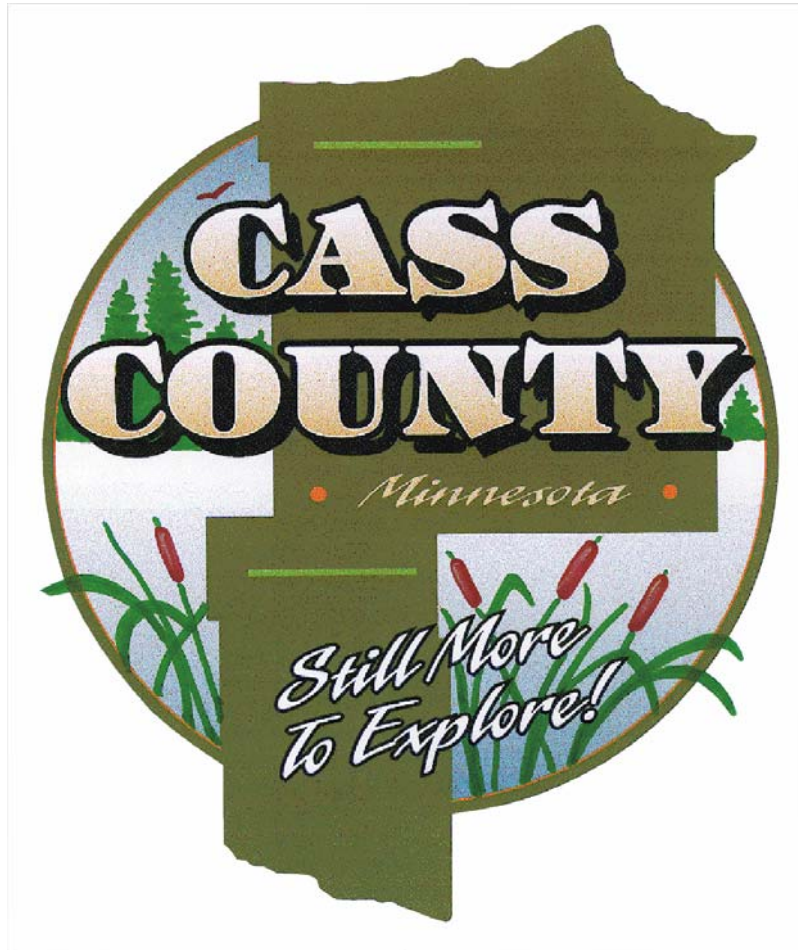


Cass County Web Mapping Manual



Version: 9.2.2.0.
Date: 12/20/2007

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Opening the Web Mapping Application

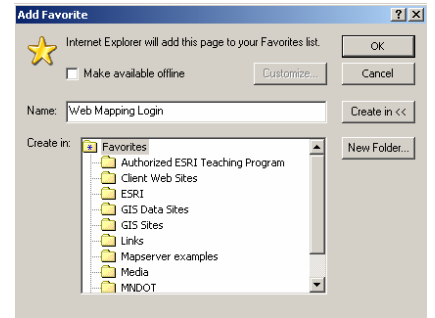
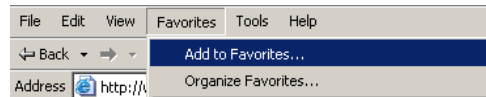
The WebFusion mapping application is accessed through the Internet browser on your computer. Not all computers will use the same browser, although most will have Microsoft Internet Explorer as the default Internet browser.

*Internet Explorer 6.0 + is needed to run this application

- ❑ Double click the Internet browser icon on your computer desktop.
- ❑ Type in the following URL in the Address box of the application:
 - <http://www.co.cass.mn.us/cassmnpublish>

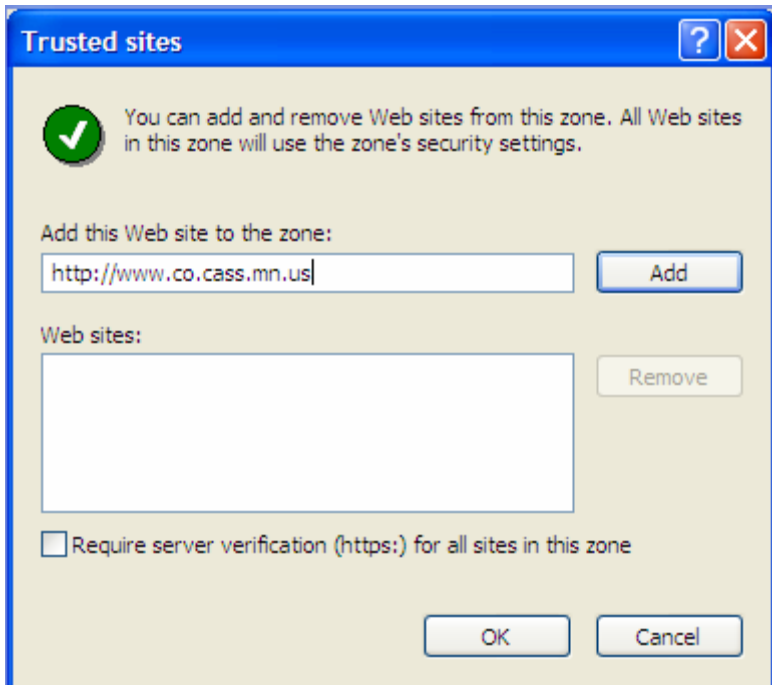
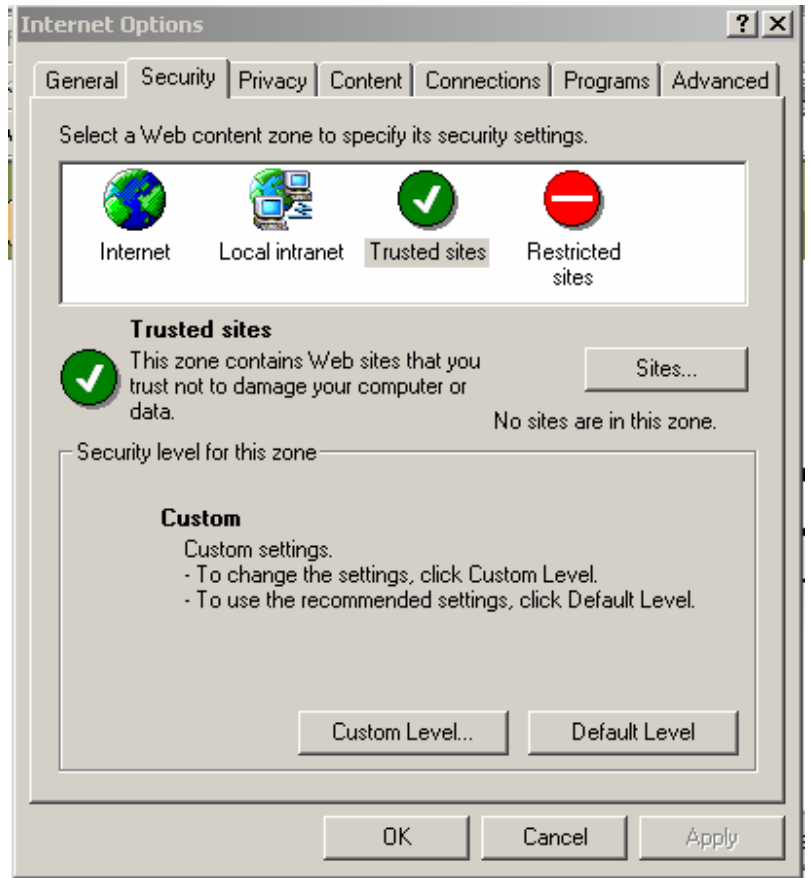
To make it easy to access the login page in the future, follow the next steps to add the URL to your browser “Favorites” list.

- ❑ Click *Favorites* from the browser menu bar.
- ❑ Click *Add to Favorites*.
- ❑ Type *Web Mapping Login* in the *Name* box.
- ❑ Click *OK*.



To view reports and utilize other WebFusion features you will also need to disable your pop-up blocker and add the website as a trusted site.

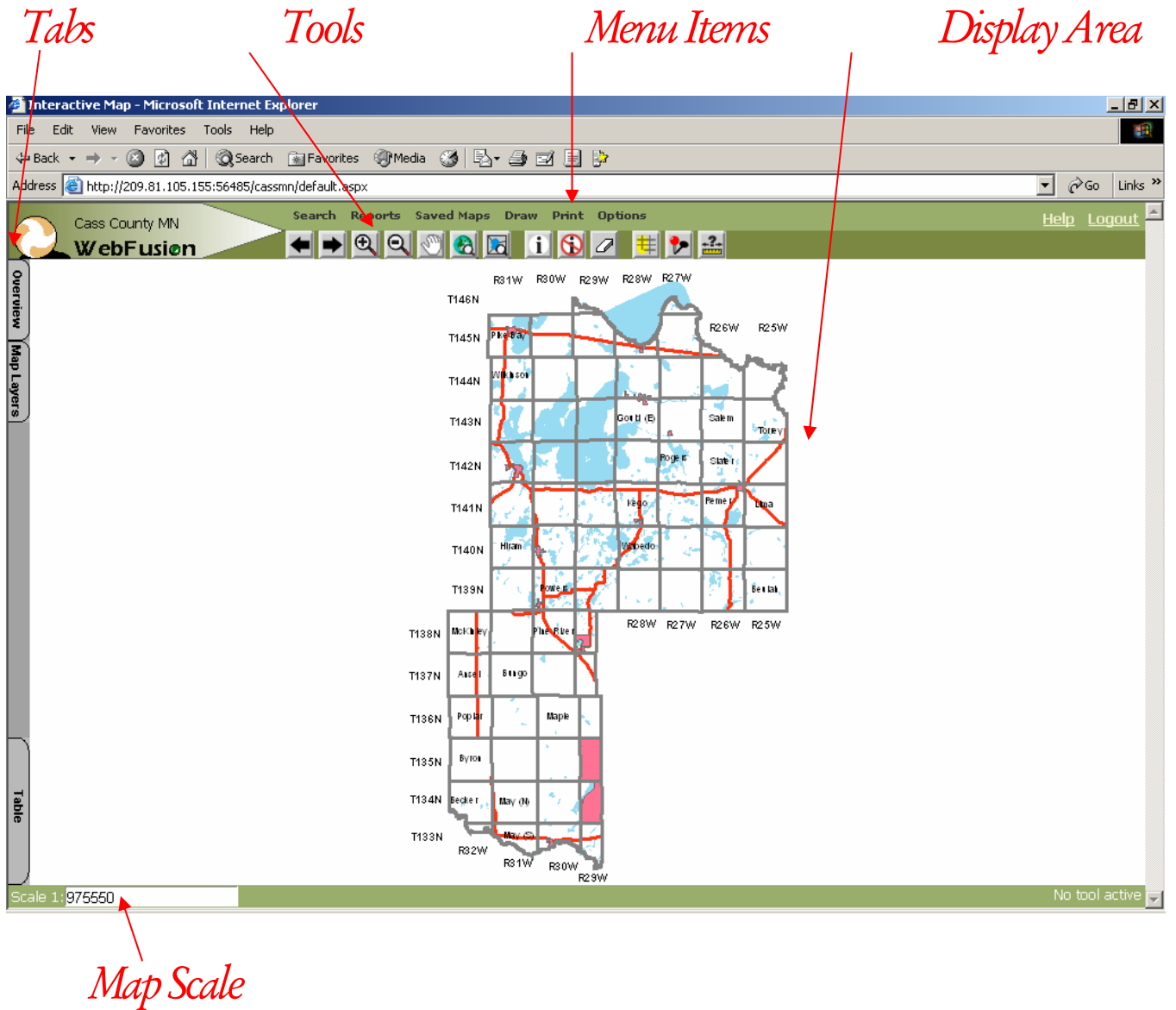
- ❑ Click *Tools* from the browser menu bar.
- ❑ Click *Internet Options*
- ❑ Click on the *Security Tab*
- ❑ Click on the *Trusted Sites* icon
- ❑ Click the *Sites* button



- ❑ Type in the address of your Web Mapping application and click the *Add* button
- ❑ Uncheck *Require server verification for all sites in this zone*
- ❑ Click *OK*


WebFusion Interface

The WebFusion Interface looks much like other Windows application interfaces. The application, which is being served from a web server, is accessed through Internet Explorer. The tools have been created to decrease the time it takes to complete tasks, improve public service efficiency, and increase the accessibility of GIS data. This manual will walk through the various tools and tasks that can be accomplished using the Cass County Web Mapping Application.



Map Layers Tab


The map layers tab displays a list of available spatial information.

- ❑ Click on the map layers tab to display the map layers.
- ❑ Clicking on the checkbox to the left of the layer name turns the layer on and off.
- ❑ The  symbol to the left of the checkbox displays the layer legend.

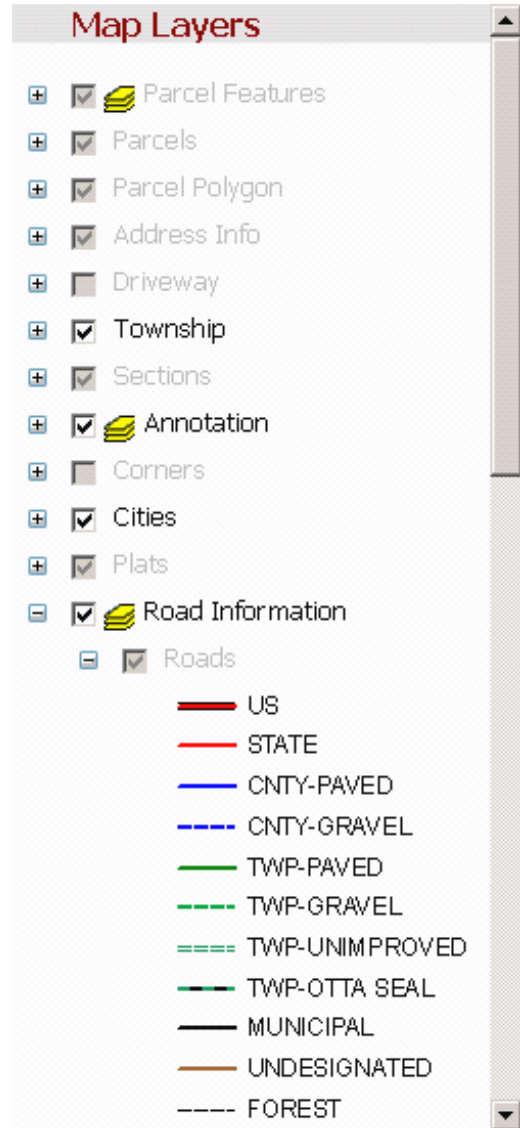
Tip: The map will automatically refresh when a layer is turned on or off.

Layers that are scale dependent are grayed out in the map layers display. The layer has been programmed to display only when zoomed in to a specific scale.

Similar layers in the map layers tab are grouped together in “group layers”. Group layers are used to quickly turn on and off groups of layers.

- ❑ Click the  next to the Road Information Layer.







You will now see the individual road layers. You can check them on and off to view them. Zoom into your map, if needed, and click on or off the individual road layers to view the layers.







Tools

When you first open the application you are zoomed to the full extent of the County by default. The Navigation Tools provide the ability to zoom in and out of the display, and pan throughout the display area. In addition they allow you to select features in order to gather and display attribute information.



-  To zoom in to an area on the display, click on the *Zoom In* tool.
 - Click in the upper left of the area you want to zoom in to. Hold down the left mouse button and drag a box around the area. Release the left mouse button to complete the zoom in function.
 - You may also click anywhere on the map for a fixed zoom in.
 - **The features of the scale dependent layers don't display until you are zoomed in below a set scale.**
-  To zoom out click and drag a box. The smaller the box, the further you will be zoomed out.
 - You may also click anywhere on the map for a fixed zoom out.
-  Zoom back to the previous extent by clicking on the *Previous* button. Zoom to Next by clicking on the *Next* button.
-  Click the *Pan* tool, then click in the display and drag it to a different location in the display.
 - The *Pan* tool can also be used by used to center the map on a clicked point, simply click anywhere on the map with the *Pan* tool and the map will pan so that the clicked point is the new center.
-  Zoom to the full extent of the display by clicking on the *Full Extent* button.
 - This will take you back to the countywide view.
-  The *Identify/Select* tool is used to identify one or more features and view database information.
 - The identify tool has 4 options for selecting features; New Selection, Add to Selection, Select from Selection, and Remove from Selection.

-  Individual features can be unselected from the group of selected set of features by clicking on the *Remove Selection* tool
 - Click on the features you want to remove, or you can click and drag a box that touches multiple features to remove more than one feature at a time.
-  Click on the *Clear All Selections* button to clear all selected features at one time.
-  The *Zoom to Selected* button is used to zoom to selected features.
-  The *Find Lat Long* tool.
 - Click the *Find Lat Long* tool.
 - Click anywhere on the display map.
 - A dialog box will open displaying the latitude and longitude of the point clicked in Decimal Degrees and Degrees Minutes Seconds as well as the UTM X, Y values.

Find Lat/Long ✕

Latitude (DD):

Longitude (DD):

Latitude (DMS):

Longitude (DMS):

UTM X Coord:

UTM Y Coord:




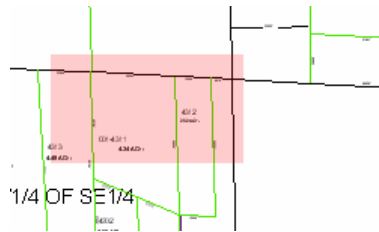
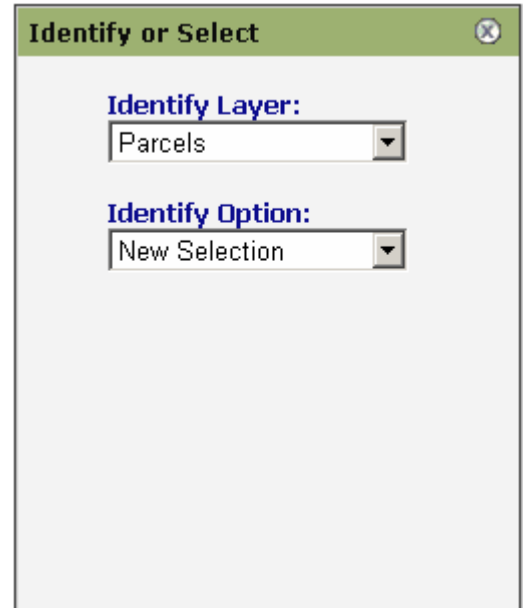
-  The *Buffer* tool explained on page (14).
-  The *Measure* tool explained on page (17).
- You can also zoom to a specified scale by typing in the desired scale and pressing enter.

Table Tab

When using the identify/select tool, search options, or buffer tool the table tab will automatically open when a feature is selected. Within this tab you will have the option to select features.


- ❑ Click the *Identify/Select* button  and the identify dialog box will open.
- ❑ Select the layer you wish to identify in the Identify Layer drop down list (All Layers will appear in alphabetical order.)
- ❑ Select the Identify option: new selection, add to selection, select from selection, or remove from selection.
- ❑ Click on the feature you want to identify/select on the map (multiple features can be selected by holding down the left mouse key and dragging. A red rectangle will display to show the area being selected).



When multiple features are selected the Table tab will open and display tabular information for the selected features.

NOTE: If only one feature is selected the *Single Feature* dialog box will open.

		Parcel #	Twp/City	Taxpayer	Addr1	Addr2	Addr3
Remove	Select	15-111-4400	GOULD TWP	USA IN TRUST FOR MERTON JAMES LEGO			
Remove	Select	15-123-1408	GOULD TWP	MACHART, EARL F SR & ROSE M	C/O BARBARA J VICTORS	5547 PARKVIEW CT	CRESTWOOD IL 60445-1134

-  Expands the table for easier viewing.


To select an individual feature click on the underlined [Select](#).

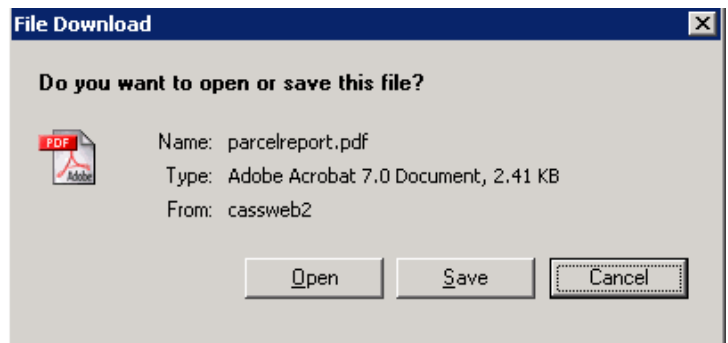
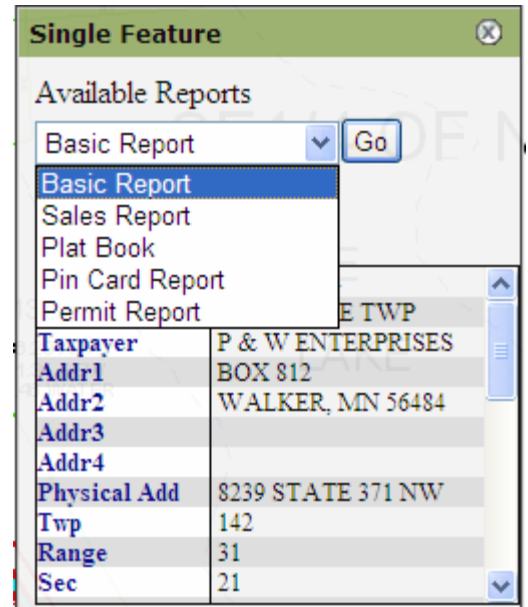
A Single Feature dialog box will open and display information for that feature, as well as any reports that are available for the selected feature. From this dialog box you have the option to zoom to the individual selected feature

Report Tools

The Report tools aren't functional until a feature(s) is selected from the display map. A selection can be completed using the *Search Menu* (Pg. 11), *Identify/Select* tool, or the *Buffer Tool* (Pg. 14).


Single Feature Reports

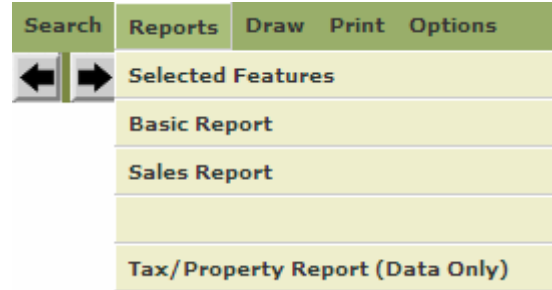
- ❑ Click the  button, and select parcels as your identify layer.
- ❑ In the display area, click on the Parcel you wish to view.
- ❑ When only one feature is selected the *Single Feature* dialog box will open. Tabular information for the feature will be displayed as well as the available reports.
- ❑ Select the type of report you wish to view in the dropdown list. For parcels these include: Basic Report (taxpayer & current tax year information), Sales Report (basic report with sales information included), Plat book (page of Township where parcel located), Pin Card (current ownership information), and Permit Report (list of permits issued for this parcel).
- ❑ Click the *Go* button to open the selected report.
- ❑ The report will display in .pdf file format (Adobe Acrobat format).
 - Click *Open* in the *File Download* pop-up dialog box.
 - Choose to save the report if you want to view the report at a later time or attach the report to an email.
 - You must have Adobe Reader loaded on your computer to view the report.
- ❑ Click on *File > Print* to print the report.



Multi-Feature Reports

Reports can also be viewed by utilizing the Reports Menu. The options available through the Reports Menu allow you to view reports for multiple features.

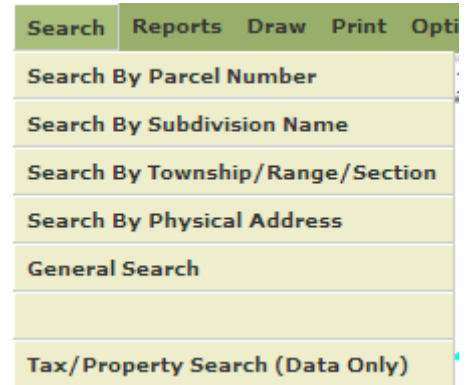
- ❑ Click the  button, and select parcels as your identify layer.
- ❑ In the display area, hold down the left mouse button and drag to select multiple parcels.
- ❑ The table tab will open displaying attribute information for the selected parcels.
- ❑ Click on the Reports Menu to display the available reports.
- ❑ Select the multi-feature report you wish to view. The multi-feature report will open in the same manner as the single feature reports.



Search Menu

The Search Menu gives you several options for searching and selecting features. The map display will automatically zoom to the features returned by any of the search options. The results will also be automatically displayed in the table tab.

The Parcel Number, T/R/S, and Physical Address search options are predefined searches that utilize data from the **Parcels** layer. These searches find parcels which can be displayed geographically. Lease lot, personal property and severed mineral parcels can not be found using these search options.

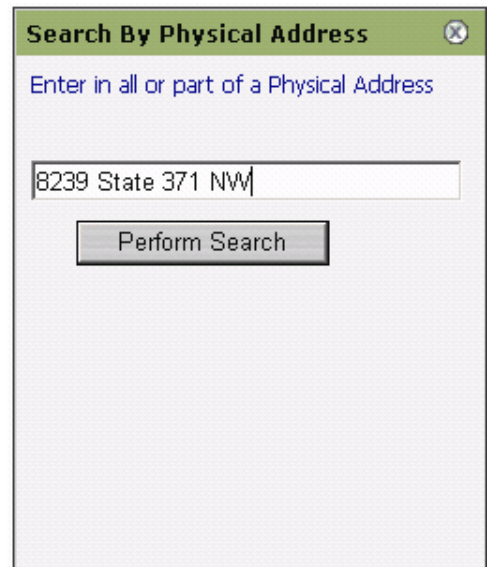


Predefined Searches

The first four search options are predefined searches. The options are Search by; Parcel Number, Taxpayer, Subdivision, Township-Range-Section, and Physical Address.

Example: Search by Physical Address

- Select *Search by Physical Address* from the Search Menu.
- In the text box enter all or part of a Physical Address.
- Click the *Perform Search* button.



- The *Table* will display the results and the display area will automatically zoom to the parcel returned by the search. If more than one feature is found using your search parameters, all will be shown in the *Table* and the map will zoom to display all of the selected parcels. You can select the correct feature, view a *Single Feature* report and zoom to that individual parcel. All the other features will remain selected in the *Table*.

General Search

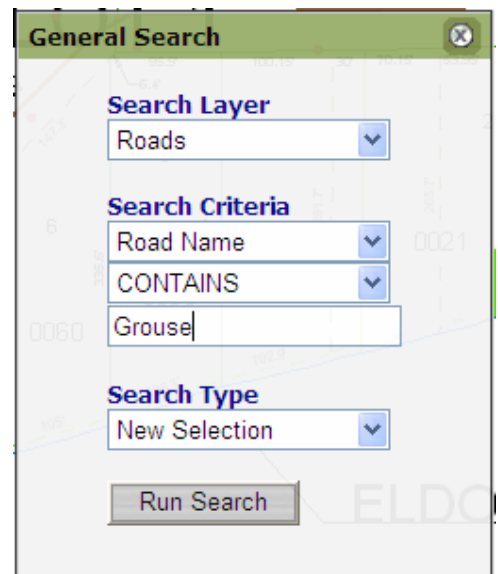
General Search is used to search any layer which is active.

The steps for performing a General Search include;

- Select *General Search* from the Search Menu; a dialog box will open displaying search options
- Choose the *Search Layer*.
- Choose a *Search Field*.
- Set the comparison method;
 - If the *Search Field* is a text field your comparison options are: =, Starts With, Ends With, or Contains
 - If the Search Field is a numeric field your comparison options are: <, >, =, <=, >=
- Enter a value in the *Value Box*.
- Select a search type; New Selection, Add to Selection, Select from Selection, Remove from Selection (All of these, except the *Value Box*, are set by using the drop-down menus in the context window.)
- Click the *Run Search* button.
- The Table Tab will display the results. And the display area will automatically be zoomed to the returned features.

Example:

- Selection Layer: **Roads**
- Field: **Road Name**
- Comparison method: **Contains**
- Value Box: **Grouse**



- Search Type: **New Selection**

- This example will search the Roads layer for features where the Road Name has Grouse in the road name.

Two roads are located that have Grouse in the road name.

Tax/Property Data Search

The Tax/Property Data Search is completed outside the mapping application. This search method will locate any parcel in our property database, including leases, personal property, and severed mineral parcels. When clicked on this item in the Search menu, a new browser window will open.

This search gives you the ability of finding and printing parcel reports using the interface to the right. You have the option of searching by: parcel number, property address, plat, township or city name, or Twp/Rng/Sec.

The last two methods use a drop-down menu to complete the search value.

The search by *Parcel #* is completed as a “begins with” search. You only need to complete a portion of the parcel number and all parcels containing that string of characters will be located.

The search by *Property Address* is completed as a “contains” search. For example, if you wish to locate all parcels with a physical address on a specific road, you just need to enter a partial or complete road name.

Example:

- Search item: Property Address
- Value Box: **Grouse**

The following style window will open which locates 29 parcels that have a property or physical address which contains *Grouse* in the address

Parcel #	Property Address	Taxpayer Name
20-393-0232	11390 GROUSE LOOP NW	EVERETT, ROGER A & ROCHELLE D
20-420-0160	6720 RUFFED GROUSE DR NW	MOENING, CLIFFORD
20-393-0116	11387 GROUSE LOOP NW	HENSEL, FREDERICK & KAROL
20-393-0114	11389 GROUSE LOOP NW	JENSEN, ORIN & MARY

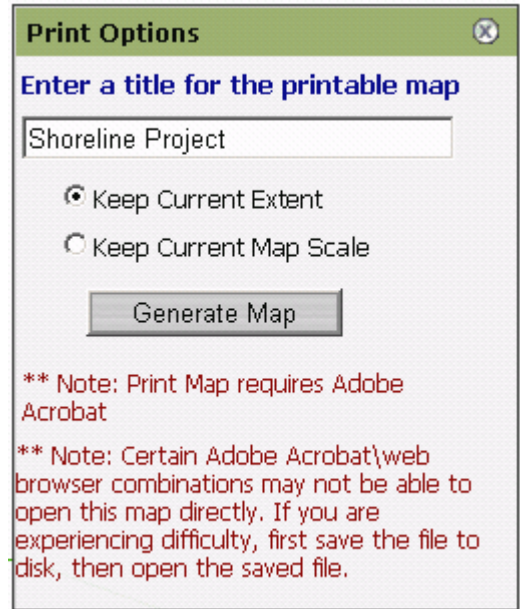
The parcels that are located can be sorted by ascending or descending order by clicking on the column headers.

To view and print an individual report, click on the report icon .

Printing a Map

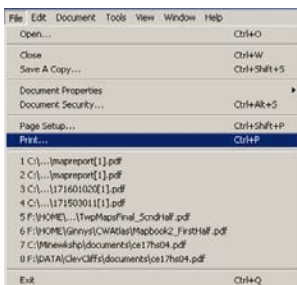
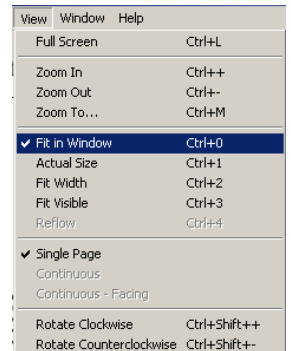
Your intranet WebFusion application contains a map template that makes it easy to create and print maps of the display area. The template includes common map elements (north arrow, scale bar, title, neat-line, etc.)

- ❑ Zoom in/Zoom out of the desired map or pan to get the features to appear on the map, as you want them.
- ❑ Click the *Print Menu*; a dialog box will open.
- ❑ Type in a *Title* for your map.
- ❑ Choose to keep the *current map extent or current map scale*.
- ❑ Click the *Generate Map* button.



The map will open in Adobe Acrobat. If your Adobe Acrobat Reader is an earlier version than 4.0, you may have trouble viewing the map.

- ❑ Click *View > Fit in Window* to be able to view the full map in the display area of your monitor.
- ❑ Click *File > Print* to print the map.
- ❑ Select the printer



File > Save a Copy.

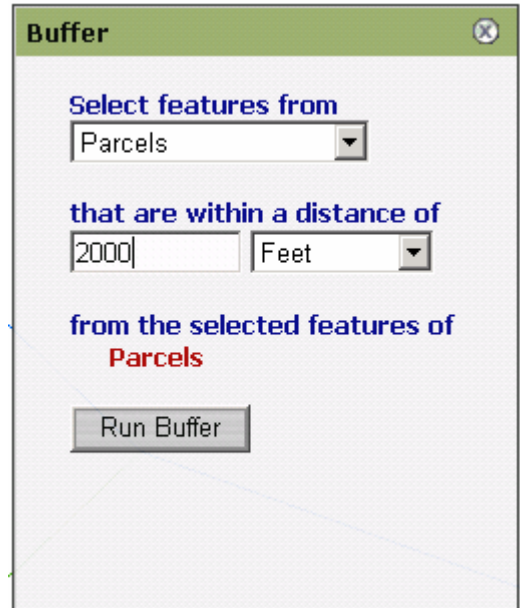
- ❑ Each printer has a different set up. The map template is set to 8.5 x 11 inches. You will need to make sure that the “shrink oversized paper to paper size” option is checked on (the wording may vary dependent on printer). You want the paper that is in the printer to dictate what size the map is.
- ❑ You can save a copy of the map for printing or emailing later by clicking on
 - Browse to the directory location you want to save the .pdf file to. The map will be named *mapreport(1).pdf* by default. Change the name if you need to.
- ❑ Click *File > Exit* to exit the map.

Buffer Tool



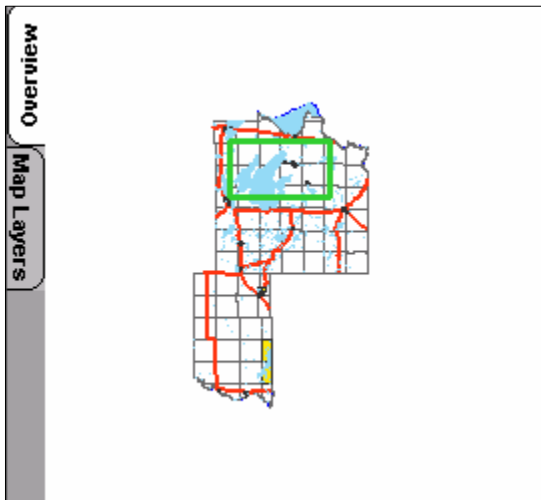
The buffer tool allows you to select a feature or features and buffer the selection by a specified distance. The buffer selects features within the buffer distance. For example, if you select a group of parcels utilizing the buffer tool you could then make and print mailing labels.

- ❑ To perform a buffer you must first have at least one feature selected.
 - This can be completed using any of the selection options. Search, or identify, or the select tool.
- ❑ Click the *Buffer tool*; a dialog box will open.
- ❑ Choose a selection layer in the drop down list.
- ❑ Specify a distance and unit of measurement.
- ❑ Click *Run Buffer*.



The buffer tool will now select all of the features in the specified layer within the specified distance of the selected feature.

Overview Tab



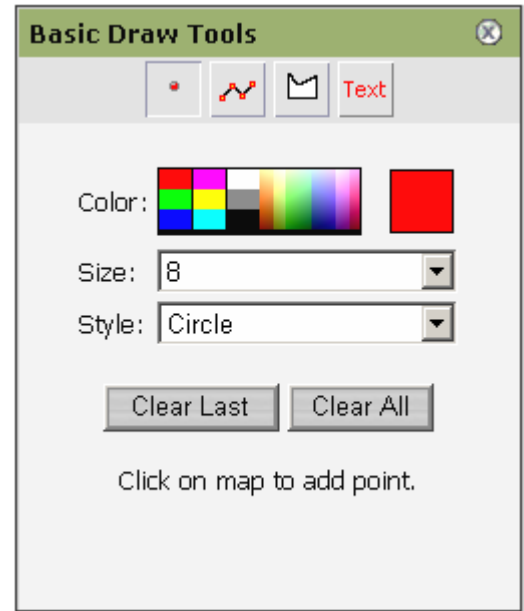
The Overview Tab gives the user a tool to reference where they are zoomed. The overview tab will display a green square where the user is zoomed within the display map. If you are zoomed into a very small area on the display map, the green square will appear to be a green dot on the overview map.

Draw Menu

The draw menu includes options for adding graphics to the map display. There are two options in the Draw menu; advanced draw and basic draw. The basic draw options allow you to draw a simple point, line, polygon, or text. The advanced draw options include the ability to draw a point at a give coordinate, draw a line based upon distance and direction, and place a symbol on the map. The markups added using the draw tools will remain with a saved map.

Basic Draw

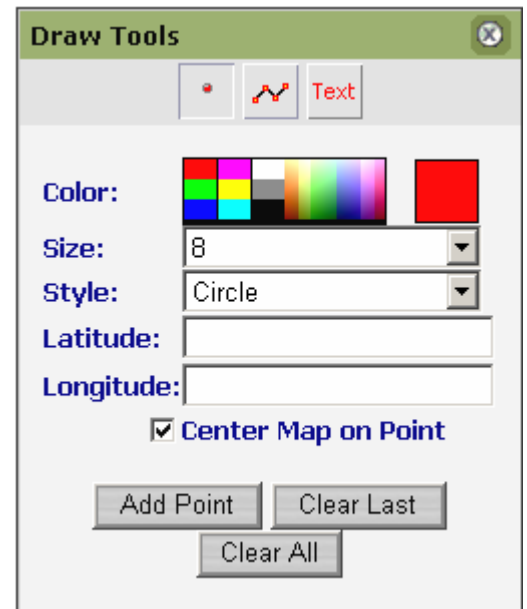
- ❑ Click on the *Draw Menu*.
- ❑ Select *Basic Draw*.
- ❑ Select the draw tool (Line, Point, Polygon or Text); the draw dialog box will open.
- ❑ Select the color, size, and style to draw.
- ❑ Click to add the point to the map, if drawing a line or polygon, double-click when you are done to add the object to the map.



Advanced Draw

GPS Point

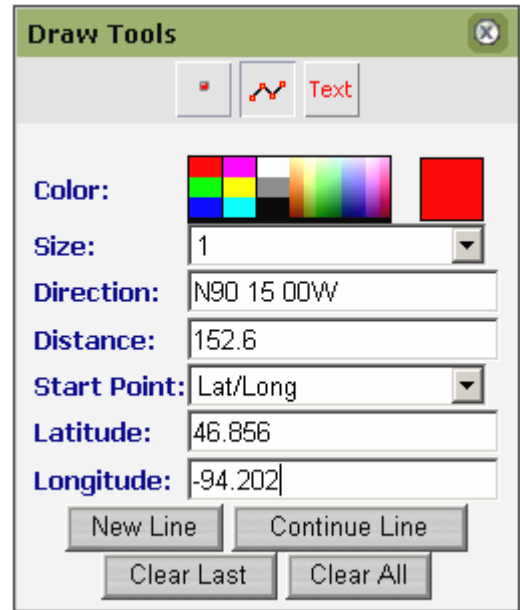
- ❑ Click on the *Draw Menu*.
- ❑ Select *Advanced Draw*.
- ❑ Select *GPS Point*.
- ❑ Enter in latitude and longitude coordinates in the appropriate text boxes.
 - Decimal Degrees (ex. 123.12)
 - Degree Minutes Seconds (ex 123 07 12)
- ❑ Select the style, size, and color for the GPS point.
- ❑ Check *Center Map on Point* to automatically pan to the supplied GPS Point
- ❑ Click the *Add Point* button.



Distance/Direction Tool

Another feature in this application is the Distance/Direction tool. This tool allows you to draw lines based on bearings and distances you provide.

- ❑ To begin select the *Distance/Direction* option from the advanced draw menu.
- ❑ Select the color and size of the graphic line.
- ❑ Type in the line direction.
 - Degrees Minutes Seconds (ex. N90 15 00W)
 - Decimal Degrees (ex. N12.25W)
 - Azimuth Direction (0-360) the Azimuth directions are calculated from North: East = 90° West = 270° etc.
- ❑ Type in the line distance. (Distance is in feet)
- ❑ Select the start point. Determine if you want to start by entering latitude/longitude coordinates or start from a mouse click that you will provide later.
- ❑ Select to Draw New Line or Continue Previous Line. If you click to Draw New Line and have selected the manual select start point option, then click a point on the map for the beginning point for the line.



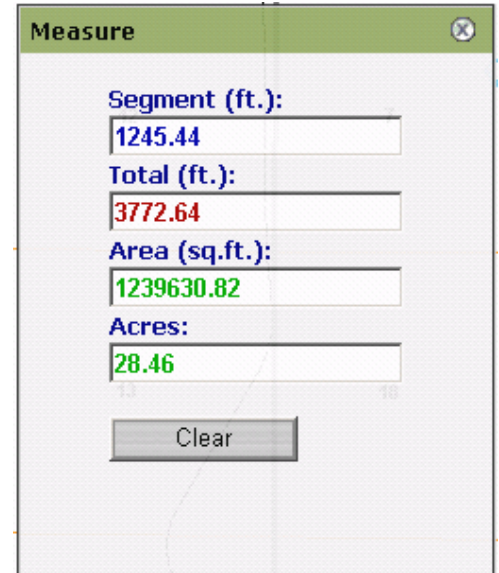
Tip: The *Clear Last* button will clear the last line drawn. The *Clear All* button will remove all graphics that you have added to the display.

Measure Tool



The Measure tool can be a very useful tool to calculate an approximate distance or area of a feature(s) on the map. The measure tool measures the distance of each individual segment, the total of all segments, the total square feet or the acres of an area.

- ❑ *Zoom In or Zoom Out* of the map to the desired viewing scale.
- ❑ Click on the Measure tool: the Measure window will open.
- ❑ Click the map at the point you want to begin measuring.
 - Each time you click on the map, the measure tool will add another segment to the measurement and display the segment length, as well as the total length of all segments.
- ❑ Click around or along the feature until you are back to the beginning of the feature.
- ❑ Double click to stop measuring.
 - The last segment measured will be displayed, the total perimeter of the feature and the acres are displayed in the Measure window.
- ❑ To begin a new measurement, click the *Clear* button at the bottom of the measure window.



As you measure, a red line will display the segments included in the total, the blue line will represent the current segment not yet added, the green line will display the best fit line that completes a polygon. For your convenience these line colors are coordinated with their numerical values in the measure dialog box.

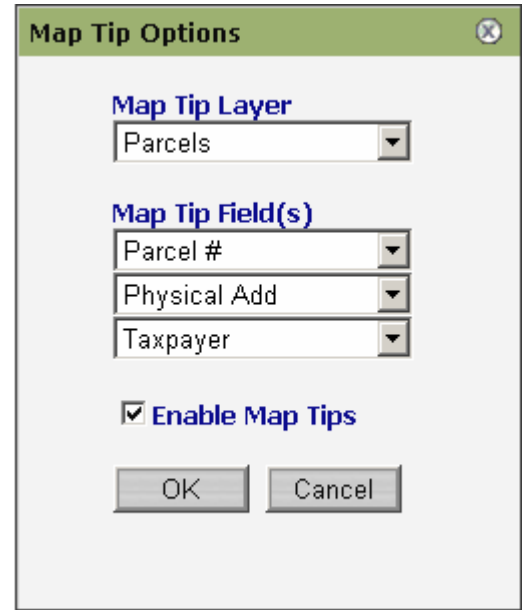
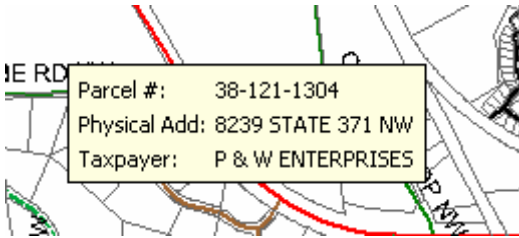
Map Tips

A quick method of viewing attribute information for certain features is by using the Map Tips option. Map Tips are found under *Options* on the Menu bar.

Map Tips allows the user to select one Layer and display feature attributes when hovered over with the mouse. You may use up to three different attribute fields to display.

- ❑ Select *Map Tips* from the Options Menu; a dialog box will open.
- ❑ Select *Map Tip Layer*.
- ❑ Select the *Map Tip Field(s)*.
- ❑ Click the *Enable Map Tips* Checkbox.
- ❑ Click *OK*.
- ❑ Move the mouse over a feature.

- The map tip will display the field and field value for the feature.



- ❑ To turn map tips of simple uncheck *Enable Map Tips* and press *OK*.

Note: Map tips will revert to the default settings each time you log in.