

# **Delta MapTool Application**

## **User Manual**

**August 2007**

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## **Introduction**

MapTool is a new application which is launched from Delta and allows the user to edit locational data for Delta sites, program interests, and stations. Using information stored in Delta and our spatial database, MapTool plots the locations of Delta features on base map layers. Roads, water ways, color aerial photos, and topographic maps, help the user verify and edit a feature's location.

When the location of a feature is modified, MapTool uses geographic analysis to determine the watershed, county, city or township, and legislative district that the feature is located in. MapTool then updates these records in Delta.

## The MapTool Application

### Opening the MapTool Application

The MapTool can be opened from the Air Quality, Hazardous Waste, Solid Waste, Tales, Water Quality, or Core Delta interfaces. Each interface has a slightly different layout. However, the MapTool can be opened from either the Site location screen or the Program Interest location screen. Those programs with Stations can also open the MapTool from the Station Definition screen. The MapTool will automatically zoom to, and highlight the Site, Program Interest, or Station.

### *Opening the MapTool Application from the Program Interest and Station Definition Screen*

Identify the feature of interest within Delta. Open the Program Interest screen or the Station Definition screen. From the program interest screen, the MapTool application can be opened in either the Site Information or Program Interest tab.

To open the Map Tool application left-click on the MapTool button, (Fig. 1). In Tales only, the MapTool can also be opened by right-clicking in the Program Interest data frame, and selecting “MapTool”.

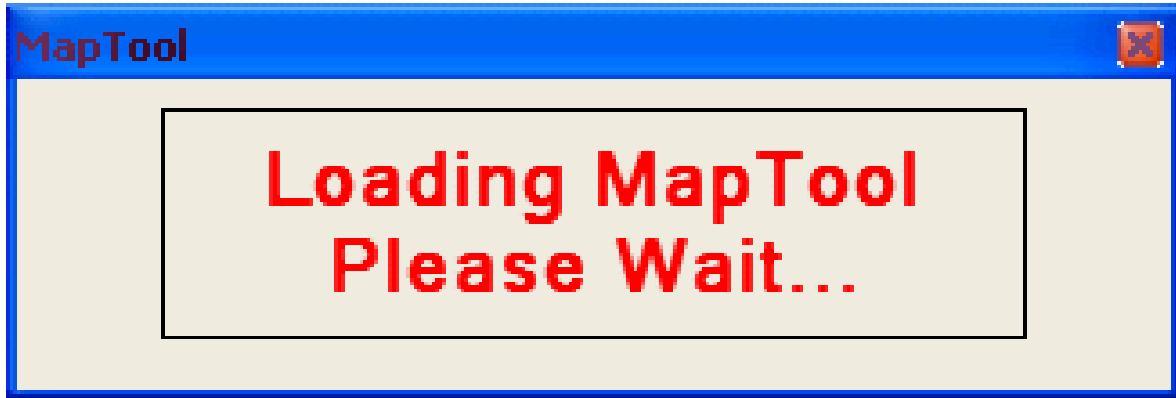
**Figure 1. MapTool Button.**

The screenshot shows the AQ DELTA (10.0.832) application window. The title bar is blue with the text "AQ DELTA (10.0.832)". Below the title bar is a menu bar with "File", "Edit", "Rows", "Program", "Tools", "Window", and "Help". Below the menu bar is a toolbar with various icons. The main window is titled "Site Description - Kerry Bio-Science (Read-Only)". It has two tabs: "Program Interest" and "Site Information". The "Program Interest" tab is active, showing fields for Site Name, Street Address, County, Township, PLS Coordinate, and MPCA Major Facility. The "Site Information" tab is also visible, showing fields for Owner, MPCA Region, EPA Region, MN Legislative District, US Congressional District, Watersheds, and Location Description. A yellow "Map Tool" button is highlighted at the bottom right of the screen.

### ***Warning***

It may take up to 20 seconds for the MapTool to open. The Map Tool is searching for an ArcGIS license, and opening large datasets. Please, be patient. (Fig, 2).

**Figure 2. MapTool Loading Screen**

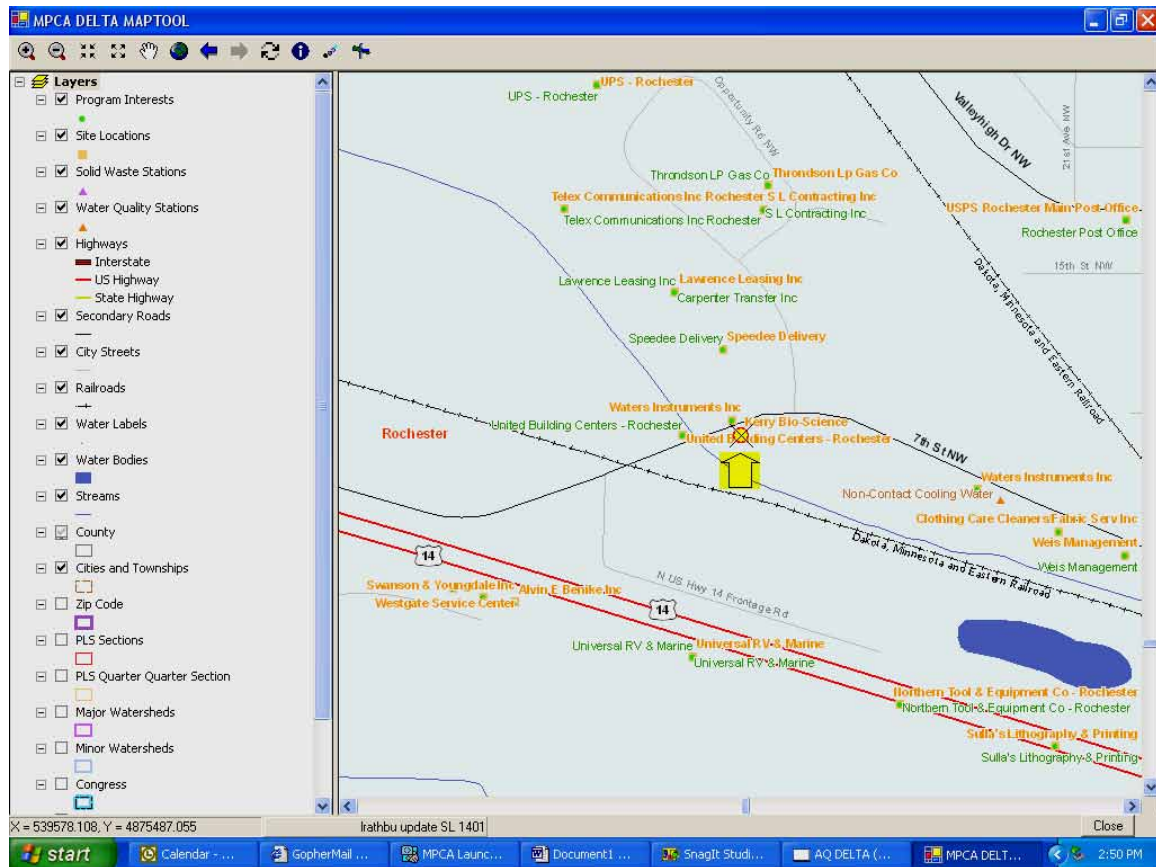


## Adding a New Record

Prior to opening the MapTool, create a new record within Delta. Open the MapTool Application as stated in the Opening the MapTool Application section on page 2.

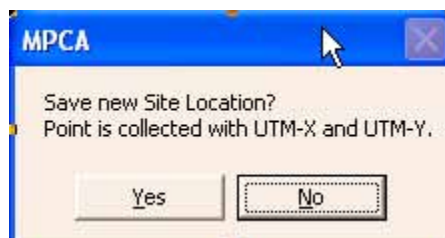
Once the MapTool has been launched a map screen will appear. In the center of the map screen denoted by a circle and cross-hair is the location of the newly entered feature of interest identified within Delta, (see the yellow arrow in Fig. 3 below).

**Figure 1. MapTool Map Screen.**



A message box will appear asking whether or not to accept the new spatial feature, (Fig. 4).\*

**Figure 2. Save New Site Location Message Box.**



\*The location of the new spatial feature can be modified after the initial location is accepted.

# Updating a Record

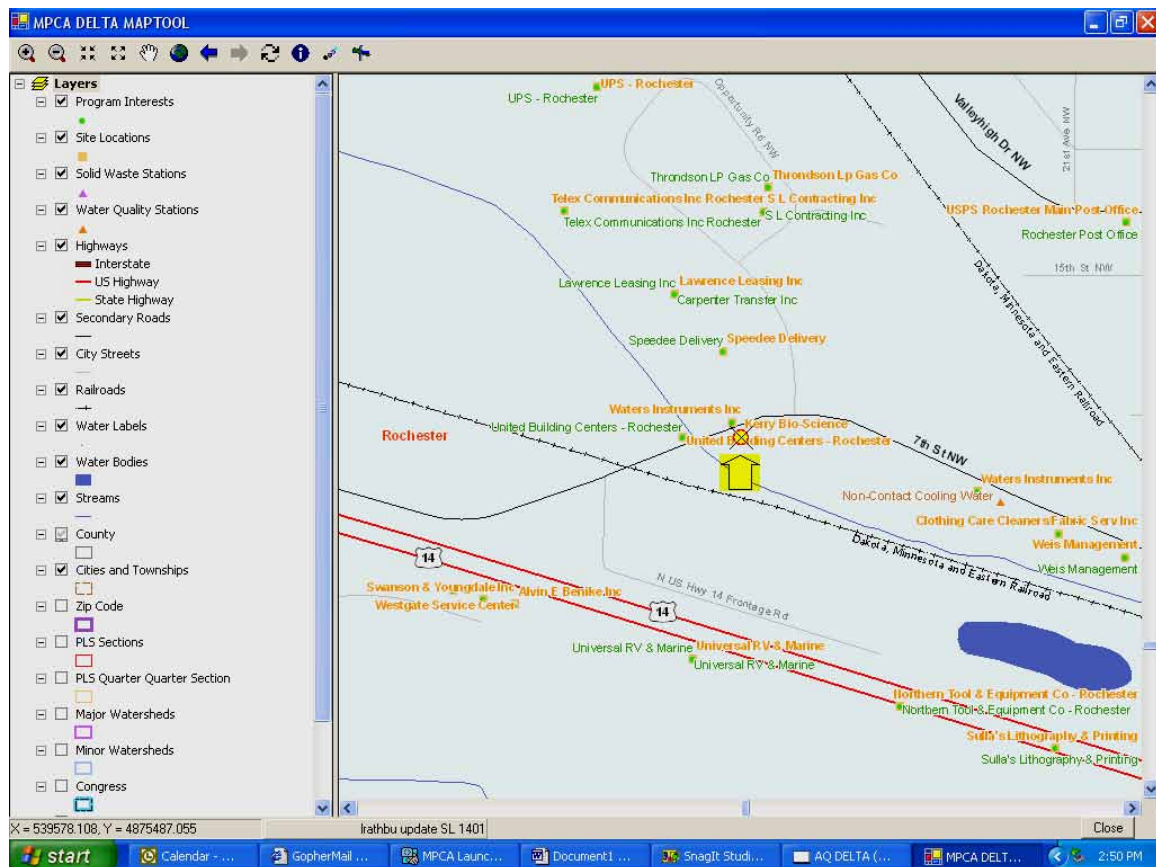
## The MapTool Map Screen

Once the MapTool has been launched from Delta, a map screen will appear. In the center of the map screen denoted by a circle and cross-hair is the current location of the feature of interest identified within Delta, (see the yellow arrow in Fig. 5 below).

The map screen contains several layers. A list of these layers can be found on the left-hand side of the map within the Table of Contents. These layers will aide you in determining the correct location for the feature of interest.

Only layers with a check mark (✓) by their name are visible on the map. To display or remove layers click the box next to the layer's name.

**Figure 3. MapTool Map Screen.**



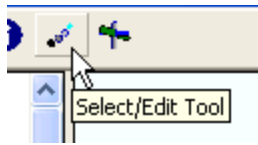
If no feature is found, a default map of the entire State of Minnesota will be displayed. If this occurs, insufficient spatial information was found within Delta for the feature of interest.



## Selecting a Record

Once the map screen is visible, a record can be selected using the select/edit tool from the toolbar, (Fig. 6).

**Figure 6. Select/ Edit Tool.**

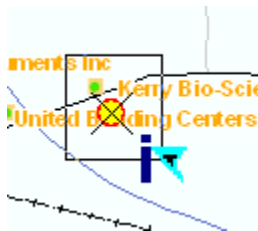


The cursor will then change to a new symbol.



Using the left mouse, click and drag to outline the location of the feature of interest. CHOOSE A SMALL BOX if possible, (Fig. 7).

**Figure 7. Choosing the Feature of Interest.**



Information for all features within the selected area of interest will be displayed within a separate window located on the screen, (Fig. 8). Select the spatial feature to be updated from the list found within the Table of Contents. Sites, Program Interests, and Stations may all have the same name; look closely at your selection to ensure that the correct record has been selected.

**Figure 8. Select Form.**

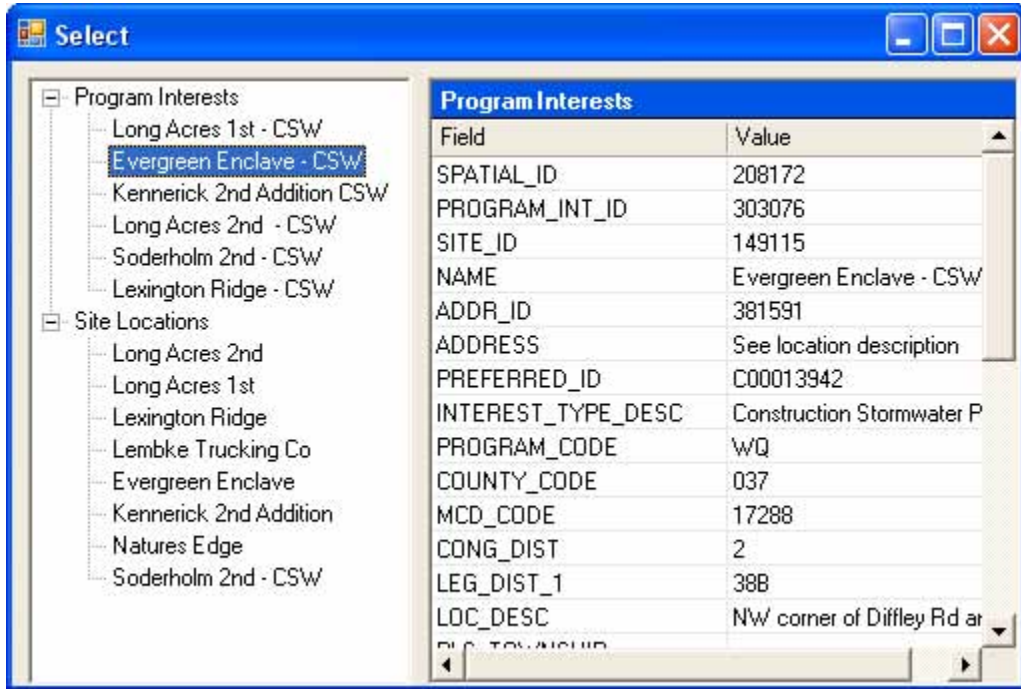
A screenshot of the "Select" window in the software. The window has a blue title bar and standard window controls. It contains two panes. The left pane is a tree view showing a list of "Program Interests" and "Site Locations". The "Evergreen Enclave - CSW" item under "Program Interests" is selected. The right pane is a table titled "Program Interests" showing the details for the selected item.

Field	Value
SPATIAL_ID	208172
PROGRAM_INT_ID	303076
SITE_ID	149115
NAME	Evergreen Enclave - CSW
ADDR_ID	381591
ADDRESS	See location description
PREFERRED_ID	C00013942
INTEREST_TYPE_DESC	Construction Stormwater P
PROGRAM_CODE	WQ
COUNTY_CODE	037
MCD_CODE	17288
CONG_DIST	2
LEG_DIST_1	388
LOC_DESC	NW corner of Diffley Rd at
LOC_DIST	

### *Identifying a Spatial Feature Using the Flash Command*

Once the spatial feature has been chosen, move the cursor to the right box within the Select form. Right click to display a small menu containing the flash command, (Fig 9).

**Figure 9. Flash Command within the Select Form.**



The 'Flash' command causes highlighted locations to flash (blink) within the map screen.

Using the 'Flash All' command for site locations causes all program interests associated with the same site ID and all stations with the same program interest ID to flash (blink).


Using the 'Flash All' command for program interests causes all stations with the same program interest ID to flash (blink), but not it's associated site location.

## Moving a Spatial Feature

Once the spatial feature has been identified, right click on the map. A small menu will appear. Click on the 'Move Feature' command to begin, (Fig. 10).

**Figure 10. Move Feature Menu.**



The cursor will then change to a new symbol. 

Move the cursor over the top of the spatial feature of interest. Notice that the spatial feature is now highlighted. Left mouse click-and-drag to grab and move the spatial feature, or simply click on the new location to place the spatial feature in its new location. Use the map layers and coordinate information for guidance while moving the spatial feature to its new location.

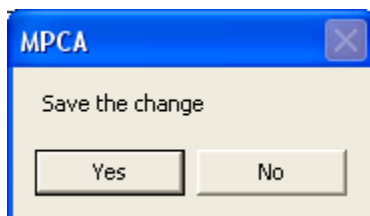
After the spatial feature is in its new location right mouse click anywhere on the map to display the small menu and choose the Stop Moving Feature command, (Fig. 11).

**Figure 11. Stop Moving Feature Command.**



A message box will then appear prompting to save the changes, (Fig. 12). If Yes is selected the MapTool will update the associated spatial information of the selected feature in the Delta Database and the spatial database. If No is selected, no changes will be made.

**Figure 42. Save Changes Message Box.**



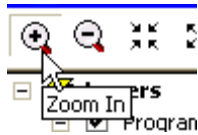
## Toolbars

There are several Tools available on the Toolbar located at the top of the map screen. Become familiar with them, they are useful for changing/moving the map extent and identifying items. To use a tool, click on it and then click on the corresponding map area of interest.\*

### Zooming In or Out

The magnifying glasses in the upper left corner can be used to zoom in or out on the map screen, (Fig. 13 and Fig. 14).

**Figure 53. Zoom In Tool.**

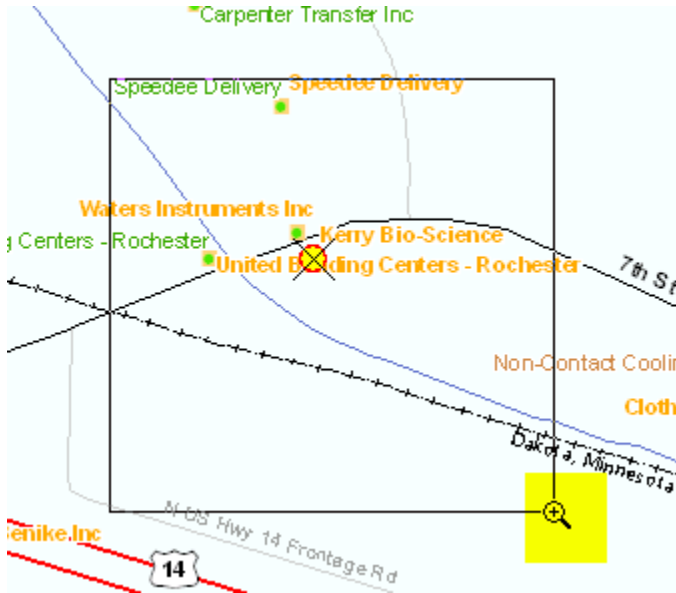


**Figure 64. Zoom Out Tool.**



Once the tool is selected, click-and-drag a box that outlines your area of interest, (Fig. 15).

**Figure 75. Outlining the Area of Interest.**



The fixed zoom in and out arrows can be used to zoom in and out gradually while maintaining the center of the map screen, (Fig. 16 and Fig. 17).

**Figure 86. Fixed Zoom In Tool.**



**Figure 97. Fixed Zoom Out Tool.**



\*After a tool has been selected, allow the screen to refresh itself.

## ***Moving the Map***

The pan tool can be used to move the map screen by using the left mouse button to click-and-drag, (Fig. 18).

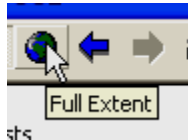
**Figure 108. Pan Tool.**



## ***Viewing Map of the Entire State***

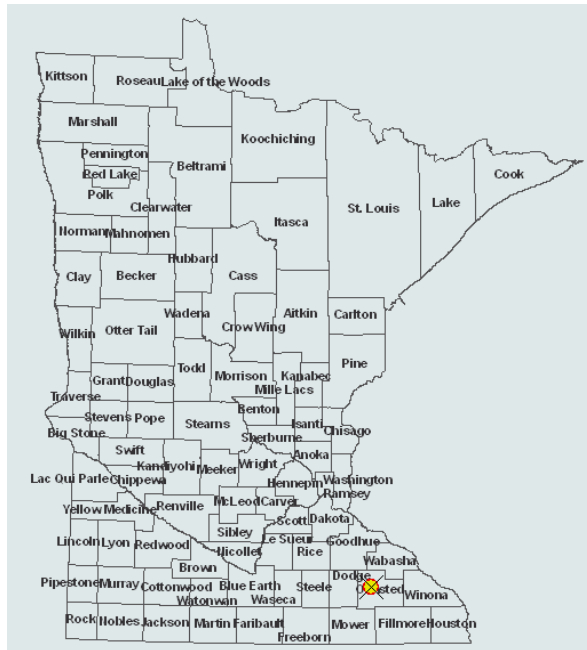
The full extent tool can be used to see the full extent of all layers, (Fig. 19).

**Figure 119. Full Extent Tool.**



The Full Extent Tool zooms the map screen to the entire state, (Fig. 20).

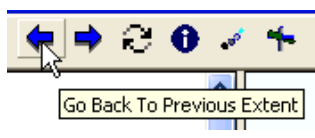
**Figure 20. Full Extent Map View.**



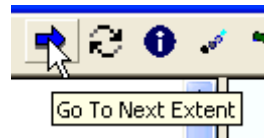
## ***Viewing Previous Map Extents***

The previous and next extent tools can be used to page between current and prior map screens, (Fig. 21 and 22).

**Figure 21. Previous Extent Tool.**



**Figure 122. Next Extent Tool.**



## ***Refreshing the Map***

The refresh tool can be used to refresh the page, (Fig. 23). This can be helpful when multiple buttons are pushed in succession without allowing the screen to update.

**Figure 133. Refresh Tool.**



## ***Identifying Map Items***

The identify tool can be used to identify an item of interest, (Fig. 24).

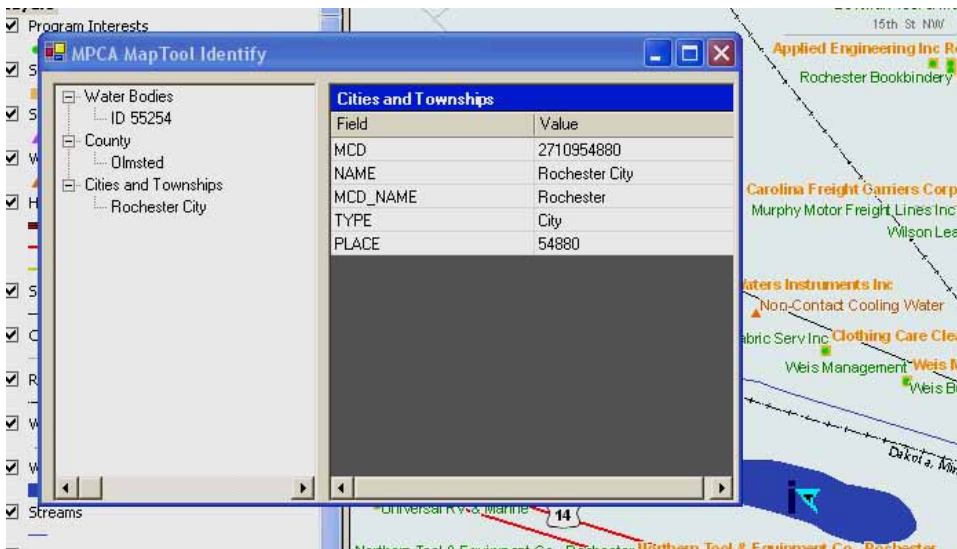
**Figure 144. Identify Tool.**



Click on the feature of interest to identify the layer it came from and any attributes associated with it.

Clicking on the lake (blue area) in the lower right corner produces a new window. The Identify window contains information identifying the water body ID as well as the other features that exist at that location, (Fig. 25).

**Figure 155. Identify Window.**



## ***Select/ Edit Tool***

See “Updating a Record” on page 5.

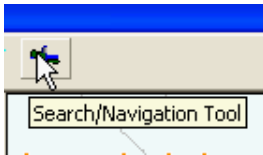
## ***Search/ Navigation Tool***

See “Navigating to Locations” on page 12.

## Navigating to Locations

The search/navigation tool can be used to find locations based upon Latitude/Longitude coordinates, UTM coordinates, Public Land Survey information, City name, site ID, program interest ID, solid waste station ID, or water quality station ID, (Fig. 26).

**Figure 166. Search/Navigation Tool.**



### *UTM Coordinate Search*

Navigating by UTM coordinates requires two inputs; an Easting Value, the X coordinate and a Northing value, the Y coordinate, (Fig. 27). Once the inputs are supplied, the map display will reset to a new map extent with the specified UTM-East and UTM-North located in the center of the map screen (UTM Zone 15 Extended, NAD 1983).

**Figure 177. UTM Coordinate Navigation Form.**



The 'NavigateForm' window has a title bar with standard Windows controls. Below the title bar is a row of tabs: 'PI', 'SW', 'WQ', 'UTM Coord', 'Lat-Lon', 'PLSS', 'City', and 'SL'. The 'UTM Coord' tab is selected. Below the tabs are two input fields: 'X: 4151783.3' and 'Y: 4915859.8'. At the bottom are two buttons: 'Zoom' and 'Close'.

### *Latitude and Longitude Search*

Navigating by latitude and longitude coordinates requires two inputs; a latitude and longitude value in decimal degree format, (Fig. 28). Once the inputs are supplied, the map display will reset to a new map extent with the specified latitude/longitude located in the center of the map screen.\*

**Figure 188. Latitude/Longitude Navigation Form.**



The 'NavigateForm' window has a title bar with standard Windows controls. Below the title bar is a row of tabs: 'PI', 'SW', 'WQ', 'UTM Coord', 'Lat-Lon', 'PLSS', 'City', and 'SL'. The 'Lat-Lon' tab is selected. Below the tabs is a label 'Decimal Degrees'. Below this label are two input fields: 'Latitude: 44.03594' and 'Longitude: -92.50152'. Below these fields is an example: 'Example: 45.3256 -94.5498'. At the bottom are two buttons: 'Zoom' and 'Close'.

\*Longitude values will be negative.

### ***Public Land Survey Search***

Navigating by public land survey information requires inputs of township, range, range direction, and section information, (Fig. 29). Once the inputs are supplied, click on Zoom and the map display will reset to a new map extent with the specified PLS section in the center of the map screen.

**Figure 199. Public Land Survey Navigation Form.**

The screenshot shows a software window titled "NavigateForm" with a blue title bar and standard Windows window controls. Inside the window, there are several tabs: "PI", "SW", "WQ", "UTM Coord", "Lat-Lon", "PLSS", "City", and "SL". The "PLSS" tab is currently selected. Below the tabs, there are four dropdown menus labeled "Township:", "Range:", "Dir:", and "Section:". The "Township:" dropdown shows "27", "Range:" shows "22", "Dir:" shows "2", and "Section:" shows "8". Below these dropdowns, there is a legend in red text: "1 = East" and "2 = West". At the bottom of the window, there are two buttons: "Zoom" and "Close". A mouse cursor is pointing at the "Zoom" button.

### ***City Search***

Navigating by city requires two inputs; the name of the minor civil division that is of interest and the type of jurisdiction, (Fig. 30). Once the inputs are supplied, click on Zoom and the map display will reset to a new map extent with the selected civil division in the center of the map screen.

**Figure 30. City Navigation Form.**

The screenshot shows the same "NavigateForm" window, but with the "City" tab selected. Below the tabs, there are two dropdown menus labeled "Name:" and "Type:". The "Name:" dropdown shows "Alaska" and the "Type:" dropdown shows "Township". At the bottom of the window, there are two buttons: "Zoom" and "Close". A mouse cursor is pointing at the "Zoom" button.



### ***Site Location Search***

Navigating by site location requires the input of the primary site location name, (Fig. 31). After the name is identified, choose the city/township location from the provided dropdown list. After the city/township is identified, choose the site ID from the provided dropdown list. Once the inputs are supplied, click on Zoom and the map display will reset to a new map extent with the specified site location in the center of the map screen

The site location will be identified by a green circle with a cross-hair.



**Figure 31. Site Location Navigation Form.**

The screenshot shows a window titled "NavigateForm" with a blue title bar and standard Windows window controls. Inside the window, there are several tabs: "PI", "SW", "WQ", "UTM Coord", "Lat-Lon", "PLSS", "City", and "SL". The "SL" tab is selected. Below the tabs, there are three input fields: "Name:" with the text "Excel", "City/Township:" with a dropdown menu showing "Chanhasen City", and "Site ID:" with a dropdown menu showing "38539". At the bottom of the form, there are two buttons: "Zoom" and "Close". A mouse cursor is pointing at the "Zoom" button.

### ***Program Interest Search***

Navigating by program interest requires the input of the program interest name (Fig. 32). After the name is identified, choose the preferred ID from the provided dropdown list. After the preferred ID is identified, choose the city/township from the provided dropdown list. After the city/township is identified, choose the interest ID from the provided dropdown list. Once the inputs are supplied, click on Zoom and the map display will reset to a new map extent with the specified program interest location in the center of the map.

The program interest location will be identified by a green circle with a cross-hair.



**Figure 202. Program Interest Navigation Form.**

The screenshot shows a window titled "NavigateForm" with a blue title bar and standard Windows window controls. Inside the window, there are several tabs: "UTM Coord", "Lat-Lon", "PLSS", "City", "SL", "PI", "SW", and "WQ". The "PI" tab is selected. Below the tabs, there are four input fields: "Name:" with the text "Evergreen Enclave", "Preferred ID:" with a dropdown menu showing "C00013942", "City/Township:" with a dropdown menu showing "Eagan City", and "Program Interest ID:" with a dropdown menu showing "303076". At the bottom of the form, there are two buttons: "Zoom" and "Close".

### ***Solid Waste Station Search***

Navigating by solid waste station requires the input of the solid waste station name (Fig. 33). After the name is identified, choose the preferred ID from the provided dropdown list. After the preferred ID is identified, choose the city/township from the provided dropdown list. After the city/township is identified, choose the solid waste station ID from the provided dropdown list. Once the inputs are supplied, click on Zoom and the map display will reset to a new map extent with the specified solid waste station location in the center of the map.

The solid waste station location will be identified by a green circle with a cross-hair.



**Figure 213. Solid Waste Station Navigation Form.**

The screenshot shows a window titled "NavigateForm" with a blue title bar and standard Windows window controls. Inside the window, there are several tabs: "UTM Coord", "Lat-Lon", "PLSS", "City", "SL", "PI", "SW", and "WQ". The "SW" tab is selected. Below the tabs, there are four input fields: "Name:" with the text "MW-5", "Preferred ID:" with a dropdown menu showing "SW-11", "City/Township:" with a dropdown menu showing "Dewald Township", and "SW Station ID:" with a dropdown menu showing "5". At the bottom of the form, there are two buttons: "Zoom" and "Close". A mouse cursor is hovering over the "Zoom" button.

### ***Navigate Using Water Quality Station Locations***

Navigating by water quality station requires the input of the water quality station name (Fig. 34). After the name is identified, choose the preferred ID from the provided dropdown list. After the preferred ID is identified, choose the city/township from the provided dropdown list. After the city/township is identified, choose the water quality station ID from the provided dropdown list. Once the inputs are supplied, click on Zoom and the map display will reset to a new map extent with the specified solid waste station location in the center of the map.

The water quality station location will be identified by a green circle with a cross-hair.



**Figure 224. Water Quality Station Navigation Form.**

The screenshot shows a window titled "NavigateForm" with a blue title bar and standard Windows window controls. Inside the window, there are several tabs: "UTM Coord", "Lat-Lon", "PLSS", "City", "SL", "PI", "SW", and "WQ". The "WQ" tab is selected. Below the tabs, there are four input fields: "Name:" with the text "Excel", "Preferred ID:" with a dropdown menu showing "MNG960028", "City/Township:" with a dropdown menu showing "Midway Township", and "WQ Station ID:" with a dropdown menu showing "333". At the bottom of the form, there are two buttons: "Zoom" and "Close". A mouse cursor is hovering over the "Zoom" button.