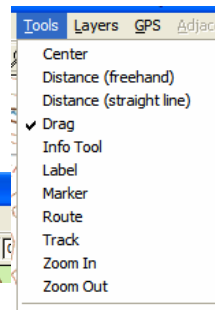
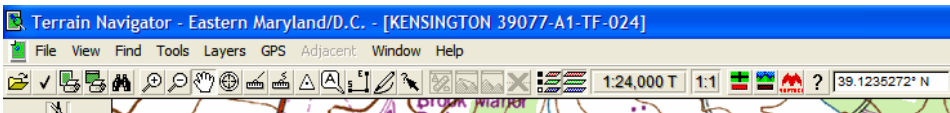


# Activity 2

## Terrain Navigator Tools

All of the tools in Terrain Navigator can be accessed in two ways: 1) by clicking on “Tools” on the navigation bar at the top of the program, or 2) by clicking on the symbol on the toolbar that represents the specific tool you want to use.



### The Hand

The hand is the default tool when you open Terrain Navigator. By clicking on the map and dragging your mouse, the map moves with the hand.



### Center

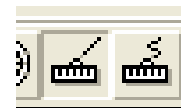
The center tool looks like a circle with crosshairs. This tool allows you to bring your work area into the center of the screen. Wherever you click on the map while using this tool, the map will shift, making that point the center of the screen.



### Distance Tools

Distance Tools allow you to draw lines on a map and obtain distance and area information.

**To draw straight lines:** Select the distance tool that looks like a ruler with a straight line above it. On the map, click where you would like to start your line. Move your cursor to where you'd like the end of the line to be, and click there. You can make as many of these connected lines as you would like. Use the Backspace key on your keyboard to erase the last segment you've made. To erase the whole line, press Escape, or right-click on the line and select Clear.

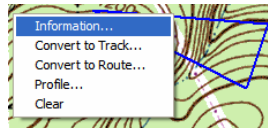


**To draw freehand:** Select the freehand distance tool, which is a ruler with a curvy line above it. Click and drag on the map to draw a line freehand. Use the Backspace key on your keyboard to erase part of the line. To erase the whole line, press Escape, or right-click on the line and select Clear.

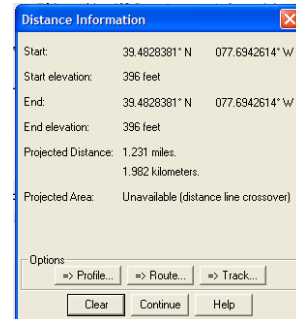
**Find Distance:** To find the distance of the line you've made, right-click on the line and select Information. If you've outlined an enclosed shape, the information will include area in acres, square feet, etc, as well as the elevation of the start and end points.

**Potential problems:** If your line overlaps itself, the information will not include area. To prevent this from happening, zoom in as close as possible (2:1 zoom level), press Backspace to delete the overlapping line, and re-draw so that the line does not overlap itself.

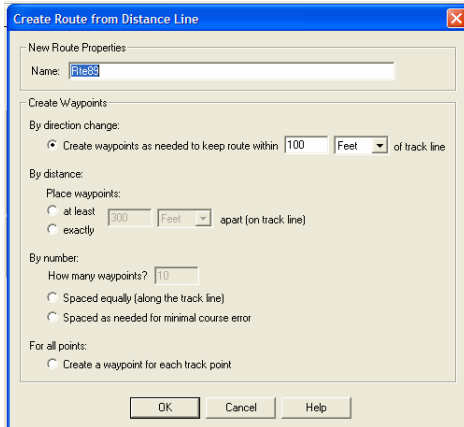
## Right-click on a distance line for several options



**Information:** This brings up information about that line including elevations, distance, and area.



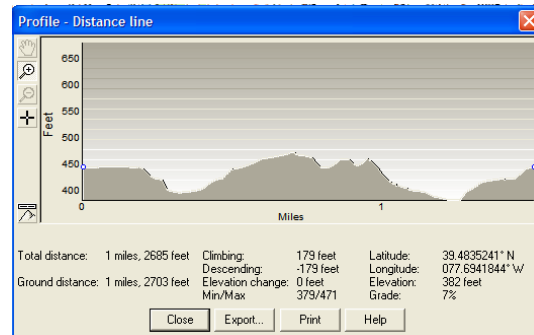
**Convert to Track:** This makes a track out of the line. The track can be sent to your GPS unit. (Lines cannot be sent to your GPS unit.)



**Convert to Route:** Since a route is a series of waypoints, the program must create waypoints along your line to make a route out of it. You are given 4 options to create waypoints:

- 1) when there is a direction change
- 2) by a certain distance (like every 300 feet)
- 3) by spacing out a certain number of waypoints evenly distributed along the line
- 4) at every track point (track points are close together, so this isn't recommended unless you have a very short route).

**Profile:** Selecting Profile allows you to view a cross-cut view of the line as if it were stretched out to make a straight line. You can see the changes in elevation as if you were walking the path of the line.



**Clear:** This deletes the line.

## Marker Tool

In Terrain Navigator, waypoints are called Markers.

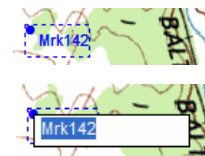
**To create a marker** on a map, select the Marker Tool, which is a triangle with a spot. Your cursor will now be a white triangle. Place your cursor where you wish to create a marker and left-click. Once created, the marker is saved in the program and will be there the next time you open it. However, it is best to back up your work by saving markers and routes somewhere else when you are done with a session (like on your GPS unit or in a program like EasyGPS).



**To move a marker**, move your cursor so that it is directly on the marker; the cursor will change to a hand with a triangle on the palm. Click and drag to move the marker.

**To delete a marker**, hover over the marker (cursor will change to the hand) and right-click; select Delete.

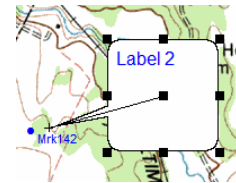
**To rename a marker**, place your cursor over the name box next to the marker; the cursor will change. Click to open the name box, type in the new name, and press Enter.



## Label Tool

The label tool allows you provide explanation about a particular point using a label balloon that can be resized and redirected.

**Create a label:** Select the tool that looks like a quote balloon with an 'A' in it. On the map, click where you would like the point of the balloon to be. To move the point, just click on it and drag. To change the size of the balloon, click and drag one of the corners. To move the balloon, click in the center and drag. Click on the text to edit.

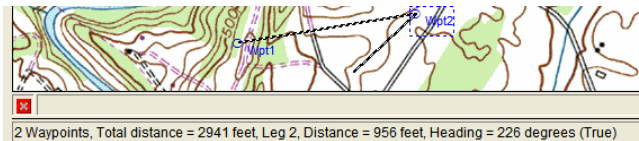


## Route Tool

The Route Tool is two connected lines labeled E and S. Once selected, your cursor is a shaded triangle.



**Drawing a Route (a series of waypoints):** Select the starting point for the route on the map and left-click. This will create a waypoint, which by default is named Wpt#. Click where you want your next point and so on until you have completed your route. Look below the map – you can see the distance and heading of the legs of your route.



If you would like to loop back to your first point, right-click on the first waypoint and select Toggle Route Loop. Right click again and select Finish Route. At any time, a waypoint can be moved by clicking and dragging. Once a route is created, it will be saved in Terrain Navigator even after you close the program.

**To delete a waypoint,** right-click on the waypoint and select Delete Waypoint. The waypoints on either side of the one deleted will then connect.

**To find out information about a route,** right-click on one of the waypoints in the route and select Information.

**To add a waypoint to a route,** click on the line connecting the waypoints between which you want to insert a waypoint. Your cursor will change to a white triangle with a + in the center. Click to create a new waypoint which can be moved by dragging. The waypoint will be connected to the adjacent route points.

## Route Information

When you create a route, additional options become available on the toolbar:



**Layer Information** – provides information about the route such as length, area, and distance between waypoints.



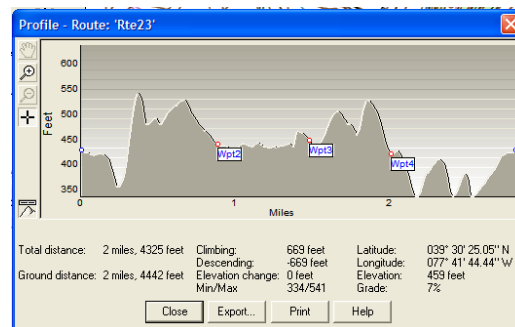
**Line of Sight** – This option is only applicable for a route made up of two waypoints. It shows the elevation change in a direct line between points.



**Profile** – illustrates the change in elevation through the course of a route.



**Delete** – deletes the selected route.



## **Track Tool**

This allows the user to draw a track around a location or from one place to another. The track is made up of small trackpoints that can then be converted into a route with waypoints according to preferences set by the user.

**To create a track by hand**, select the Track Tool (a pencil with a curved line). Click and drag to draw a curved track; or click, move your cursor, and click again to create a straight segment.



**To erase** the last portion that you drew, press Backspace or Delete once to erase a straight segment, or hold down the button to point-by-point erase a curved section. When you are finished, right-click on the track and select Finish Track. Once finished, the path of the track can not be changed.

**To convert a track to a route with waypoints** right click on the track and select Create Route. The window that appears allows you to name the route and provide a number of options on how waypoints will be located. If you want the route to closely follow your track, you may want to select By direction change: and within 10 feet of track line. Make your selections and press okay. Information on the new route will be displayed.

## **Information Tool**

The arrow pointing to a question mark allows you to find out information about an item. While using this tool, clicking anywhere on the map will open a window displaying the information for that point, including the map name, lat/long coordinates, and elevation.



## **Layers**

The three layers used in the program are markers (or waypoints), routes, and tracks. By clicking Layers on the navigation bar, you can then click on either Markers, Routes, or Tracks. A window will open listing the markers, routes, or tracks saved in Terrain Navigator. You can edit and delete these items in this window.

If you keep markers from many different projects, they will all show up in Terrain Navigator unless they are deleted. This can become confusing since the program will allow the same name to be used repeatedly. After saving your layer data in another program under a specific folder name, it is best to delete the data in Terrain Navigator to avoid confusion.