



OziExplorerCE Training and Help Manual

for use with
Soil Effectiveness
Evaluation Cards

Version 1.0

November 2006



BRITISH
COLUMBIA

Ministry of Forests and Range
Ministry of Environment



Citation:

Province of British Columbia. 2006. OziExplorerCE Training and Help Manual for Use with Soil Effectiveness Evaluation Cards. FRPA Resource Evaluation Program. B.C. Min. For. and B.C. Min. Water, Land and Air Protect.

Prepared by
Amy Barnes and Stéphane Dubé
Northern Interior Forest Region
BC Ministry of Forests and Range
Prince George, BC

Copies of this report may be obtained, depending on supply, from:
Government Publications
PO Box 9452, Stn Prov Gov't
Victoria BC V8W 9V7

In Victoria (250) 387-6409
Outside Victoria 1-800-663-6105

<http://www.publications.gov.bc.ca>

For more information on Forest Practices Branch publications, visit our web site at:
<http://www.for.gov.bc.ca/hfp/pubs.htm>

© 2006 Province of British Columbia

When using information from this or any FREP publication, please cite fully and correctly.

OziExplorer and OziExplorer CE Mapping software © D&L Software Pty Ltd.,
Brisbane, Australia.

Table of Contents

A. Starting Up.....	1
B. Loading in the Image and Ozi Basics.....	1
Data Conversion from Images to OZFX File Format	1
Loading Tracks and Waypoints into OziExplorerCE.....	6
Opening OziExplorerCE and Viewing an Image File	8
Loading Tracks and Waypoints from OziExplorer	9
Viewing Saved Track Files	9
Changing Track Files	13
Viewing Saved Waypoint Files	14
Showing or Hiding Waypoints	14
Navigating Around OziExplorerCE.....	15
Map Zoom Levels.....	15
Measuring Distances	16
C. Disturbance Assessment, Working with a GPS.....	16
Map Set Up and Configuration Settings	16
Setting Up a GPS Receiver.....	17
D. Indicator 1. Identifying lost productivity due to access construction .	20
Adding a New Track	20
Clearing a Track File	23
Deleting a Track Point	24
E. Indicator 2. Estimating in-block area affected or potentially affected by landslides, drainage diversion or significant erosion from roads, landings or trails	25
F. Indicator 3. Estimating in-block area affected by disturbance to natural drainage patterns as a result of forestry operations	25
G. Indicator 4. Description of the in-block soil disturbance hazards, areas affected by dispersed soil disturbance, potentially inordinate disturbance, and roadside work areas	25
Creating Waypoints	25
Clearing a Waypoint File.....	27
Deleting a Waypoint	27
Creating a Route.....	29
Working with Routes.....	30
H. Automatic Data Collection	31
Track Logging	31
Trouble with Track Logging.....	32

A. Starting Up

This document will describe how to do tasks needed to describe soil disturbance on georeferenced images while using your PDA. Before you start make sure OziExplorer and ActiveSync are installed on your desktop computer and that OziExplorerCE is installed on your PDA. You will also need MAP files that have been created in OziExplorer.

B. Loading in the Image and Ozi Basics

Data Conversion from Images to OZFX File Format

This section will show you how to get images into OziExplorerCE and how to open them.

OziExplorerCE can only recognize two file formats, ECW and OZFX3. The OZfx3 is preferred because it is a highly compressed image (like ECW) and it loads faster than the ECW format. To make this file type you need to convert an OziExplorer MAP file. To do this you use the Img2Ozf plug-in in OziExplorer. The conversion process does not always complete properly, use the Show Log button check for errors.

1. Connect the PDA to your desktop computer using the USB cable.
2. Open OziExplorer and open the map file you want to convert by going to File > Load from File > Load Map File.

This will allow you to navigate to the folder containing the map you want to load.

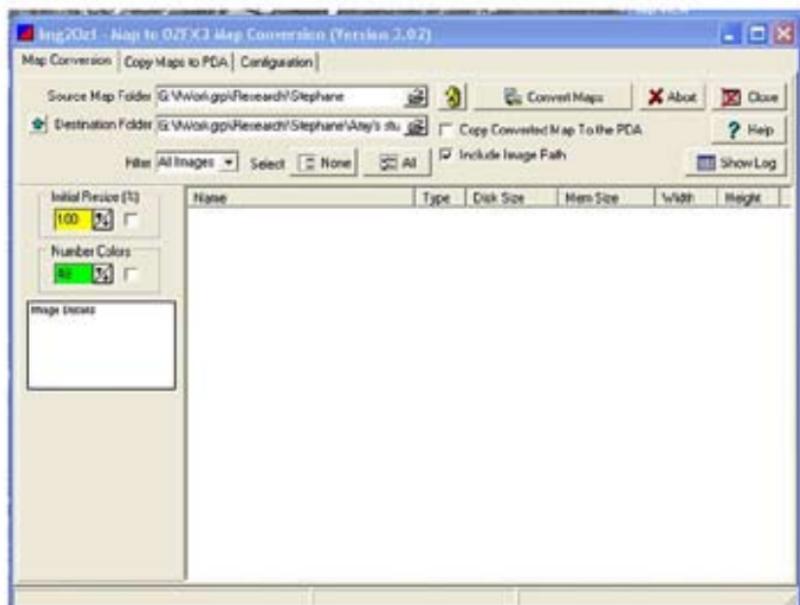


3. Select and load the map by pressing the Open button.

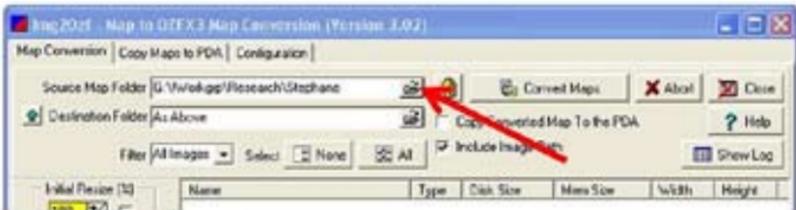


4. Once the map has loaded go to File > Save Map to Image File > Run Img2Ozf program to open the OZFX3 conversion plug-in.

A new window will pop up:



- Use the dropdown menu from the Source Map Folder box to navigate to the folder containing the image you would like to convert.



A second window will pop up; navigate to the folder that contains the map image you would like to convert. Select the **Folder** that contains the image you want to convert. (Here the folder is Blkwater_Hald and the image is home.map). Select the OK button.



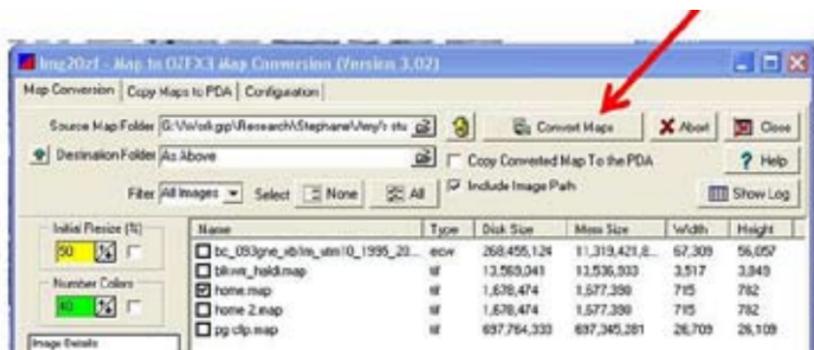
The available images from the selected folder will now be visible in the conversion window.

6. Select the **checkbox** beside the image file you would like to convert. The destination folder is where the new OZFX3 file will be created. Leave the destination folder the same as the containing folder; it makes it easier to find files later.

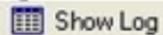
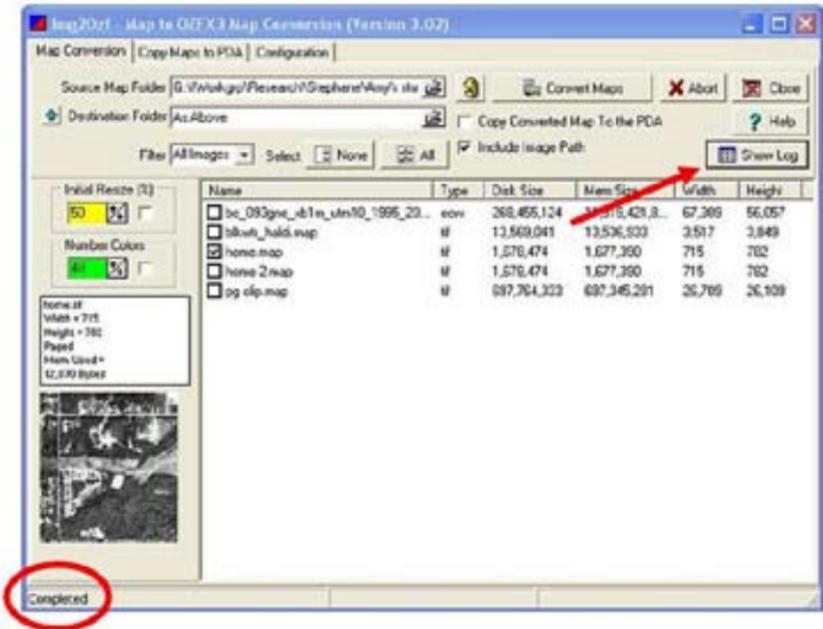


7. If you have the PDA connected to the computer you can have the new OZFX3 file copied to the PDA after it is converted. Select the check box next to “Copy Converted Map to the PDA,” shown by the blue arrow.

8. Press the **Convert Maps** button to start the process. This can take some time especially if you are working with a very detailed image (large file size).



9. After the process is finished, “Completed” will be displayed at the bottom of the window. Use the Show Log button to check that the map was converted and copied properly.

The message should be error free (errors would be displayed in red) and show the path of the created and the transferred files (if you selected that option) as well as “1 image File(s) Processed.”



10. If you are copying maps to the PDA you can set the location of where they will be copied to by selecting the Configuration tab from the Conversion window and navigating to the appropriate location on the PDA. Both the image file and the map file will be copied to the PDA, keep both files in the same folder so they are easy to find.

NOTE: If you copy a new file with the same name as a file already on the PDA the old file will be overwritten.

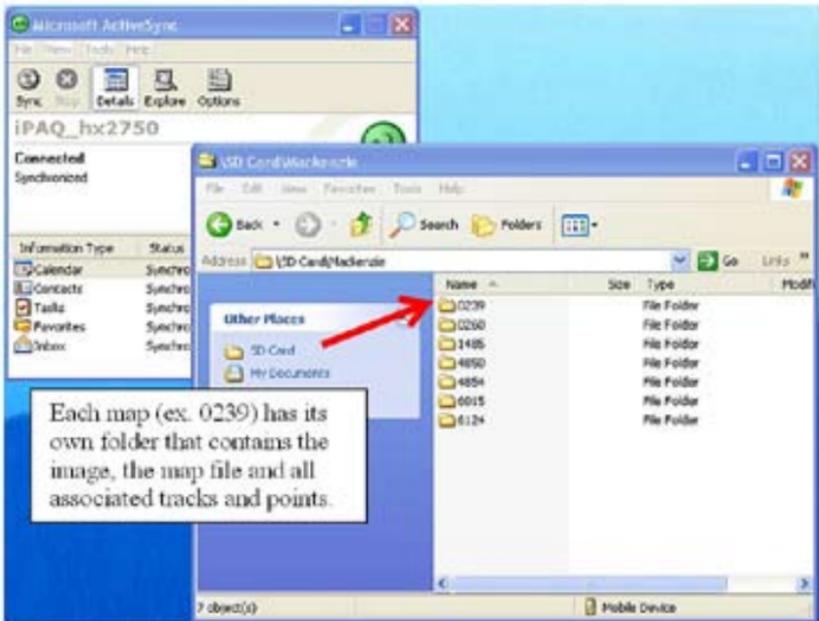
Loading Tracks and Waypoints into OziExplorerCE

Tracks and points that have already been saved in OziExplorer can be used on the PDA. These map features have to be moved to the PDA separately from the map file.

1. To move the files you need to use ActiveSync. Open ActiveSync > Explore.



2. Navigate to where you would like to store the files on the PDA (normally CF or SD card or \OziExplorer\Maps). It is a good idea to keep them in a folder with the map and image file and have a folder for each map. The image and associated files can be quite large so it is a good idea to save them to a memory card.



3. Open Windows Explorer on your computer (right click on the Start menu).
4. Navigate to where the tracks are stored.
5. Copy and paste the tracks from Windows Explorer to ActiveSync Explorer. Right click and select Copy from the popup menu. Move to the destination folder in ActiveSync, right click and select Paste.
6. A window will popup to track the progress of the transfer. To check that the files transferred properly look them up using File Explorer on the PDA.

Opening OziExplorerCE and Viewing an Image File

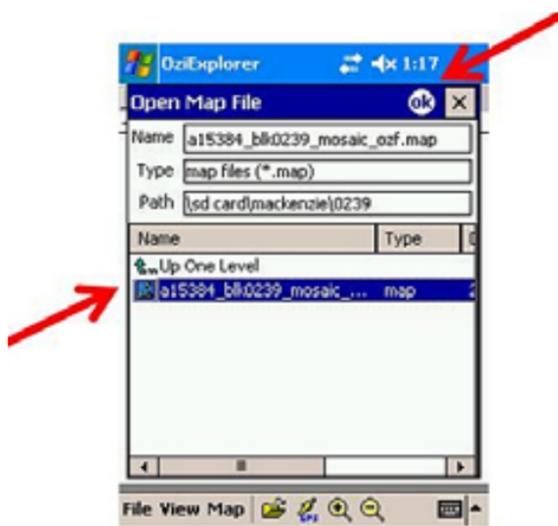
Here are two methods to open map files that have already been stored on the PDA.

1. To open OziExplorerCE select Start > OziExplorer **or**, Start > Programs > OziExplorer.
2. Ozi will open; select the **File** menu on the bottom left corner of the screen.



Then select Open Map File. Now you can navigate to the folder that contains the map file.

3. Select the **map file** and choose **ok** at the top of the window.



Or open map files by:

1. Select the **yellow folder** at the bottom of the screen.



2. Navigate to where your map is stored, select it and select ok at the top of the navigation window.

Loading Tracks and Waypoints from OziExplorer

This section describes how to work with data created in OziExplorer including displaying and hiding data as well as navigation techniques and distance measuring.

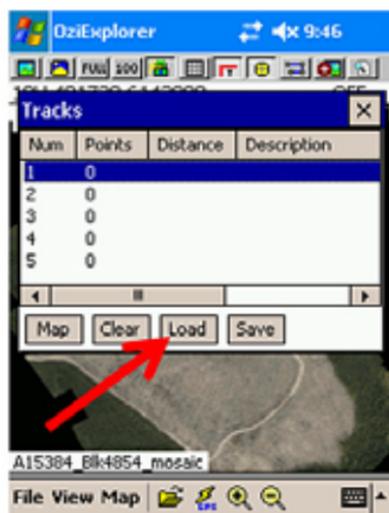
Viewing Saved Track Files

OziExplorerCE can only display five tracks at one time but can store many more for any one map. In OziExplorer you can have different types of tracks such as lines, polygons and alarm zones this is not the case in OziExplorerCE. All tracks that are imported or created in OziExplorerCE are display as lines even if they were saved as polygons in OziExplorer. Here are two ways to add tracks to view.

1. Start the Track toolbar by opening the **View menu** > Toolbars > Track Toolbar from the bottom toolbar.
2. On the Track Toolbar select the List of the Tracks button.



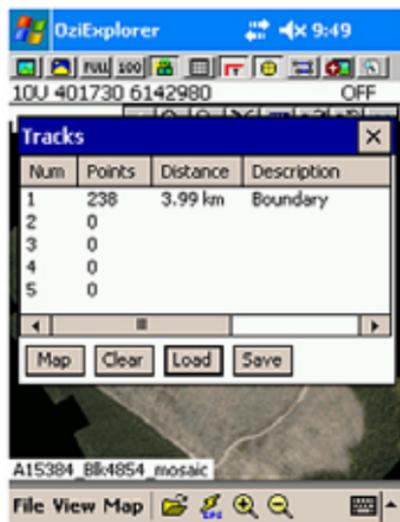
3. Select a line from the list (it will be highlighted in blue) and press the **Load** button.



4. Navigate to the desired **track file**, select it and press ok.



It will now be listed on the selected line and be displayed on the map.



- Repeat this process for each track that you would like to add.
- When you are finished close the Track List by selecting the X button at the top of the Track List screen.

Or you can add tracks this way:

- Open the Track toolbar by selecting View > Toolbars > Track Toolbar.
- On the Track Toolbar select the yellow file folder (**Load Track File**) button.



3. Navigate to where the needed track is located, select it and then press ok at the top of the navigation window.



4. To **load multiple tracks**, change the active track by selecting the first button (displaying a number 1 through 5) on the Tracks Toolbar.

The currently **active track number** is displayed in white (here it is 1). By pressing the Active Track button you *change the active track* to the next track (track 2 which is empty right now) and the number is displayed in blue.



5. Repeat steps 2 through 4 to add each successive track.

Changing Track Files

OziExplorerCE can only display five tracks at one time. To display different combinations of tracks you will need to change the loaded track files.

1. On the Track Toolbar select the **Track List** button.



2. The list of loaded tracks will appear. Select the track you want to change from the list.
3. Press the **Clear** button from the bottom of the window.



This only clears the track from the screen, it does not delete it. You can now load a new track into that line (see Viewing Saved Tracks).

Viewing Saved Waypoint Files

You can only view one waypoint file at a time. Multiple waypoints are stored in a single waypoint file.

1. Open the file by selecting File > Waypoints > Load Wp file from the bottom toolbar.
2. Navigate to where the file is located and select it.
3. Press ok at the top of the navigation window. The waypoints will now be displayed on the map. If they are not visible you may need to turn them on (see Showing or Hiding Waypoints).



Showing or Hiding Waypoints

If loaded waypoints are not visible you may need to turn the feature class on. Turning off waypoints can reduce the amount of clutter on your screen and help decrease screen reloading time.

1. Select the yellow **Show/Hide Waypoints** button from the main toolbar. The waypoints should now be displayed on the screen.



Navigating Around OziExplorerCE

Map Zoom Levels

On the main tool bar there are two buttons for easy zooming, FULL which allows you to see the whole map on the screen and 100 which shows features at their 100% zoom level.



There are also two zoom buttons at the bottom of the screen, a +magnifier and a -magnifier. These buttons move between the preset zoom levels (these levels can be modified in Configuration Settings).



You can also access Full and 100% Zoom actions by holding the stylus on the map for about 1 second until a red circle appears. Let up from the screen and a pop-up menu will appear with zoom and other options.

You can also access Full and 100% Zoom actions by holding the stylus on the map for about 1 second until a red circle appears. Let up from the screen and a pop-up menu will appear with zoom and other options.

On some PDAs the task buttons can also change the zoom on the map.

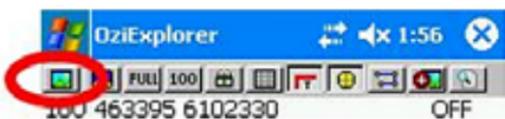
Moving Around the Screen

With the stylus you can move the view around the map image. Tap a spot on the map image and hold and drag the image to move the map to the area you would like to view.

You can also manoeuvre with the MapView window. This is a pop-up window that displays the entire map (regardless of the current zoom level of the main map window) and the area you are currently viewing in a red box.

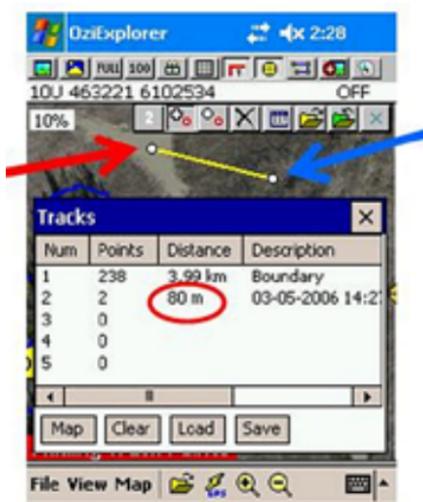


You can move this box around the map to view other parts without changing the zoom level. The MapView window is displayed by selecting View > Map View or by selecting the first button on the Main toolbar.



Measuring Distances

1. Open the Track Toolbar by selecting View > Toolbars > Track Toolbar.
2. Add a track point at the beginning of the distance you want to measure and place a second track point at the end of the distance (see Adding Track Points).
3. Open the Track File List from the Track Toolbar. The distance between the two points is displayed on the information line for the track you just created.



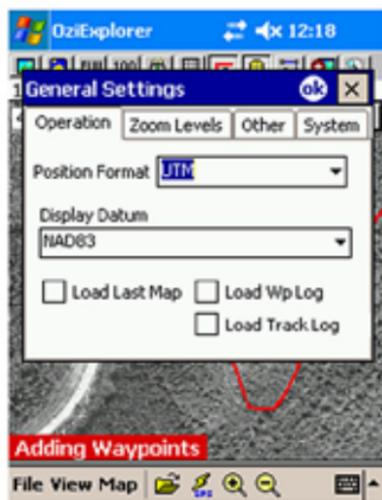
C. Disturbance Assessment, Working with a GPS

This section describes how to set up and use a GPS with the PDA.

Map Set Up and Configuration Settings

This is where you can define the map projection and datum (this is the same as your map file) and set up OziExplorerCE to interact with GPS receivers.

1. Open the Configuration menu by selecting File > Configuration and select General Settings.
2. On the Operation tab select the appropriate coordinate system (e.g., UTM) and map datum (often NAD83) for your map. There are also other options such as opening your last loaded map at start-up, and loading automatically saved waypoints and tracks.
3. When you are done select the ok button at the top of the Configuration window.



Setting Up a GPS Receiver

You will need to know the specific settings for your GPS receiver; these should be included in the owner's manual. You will need to have a map loaded to be able to Configure your GPS.

1. Start the Configuration menu by opening File > Configuration > NMEA (GPS) > Port Settings tab and select the Communication Port that your GPS uses to communicate with your PDA from the dropdown menu.

Wireless, Bluetooth devices usually connect through ports 5 or 8. Flash cards should have something about CF in the name (e.g., Com4: CF_CARD_GENERIC_DDEA).

NOTE: If you are using a flash card (CF) GPS insert the card before opening the NMEA (GPS) menu. If you are having problems with Ozi recognizing your card (its name will not show in the dropdown menu) try restarting Ozi or try a soft reset of the PDA.

2. Choose the Baud rate for your specific GPS (the higher the better) 4800 is the most common.
3. The Sentence type defines the way the information supplied by the GPS is read by OziExplorerCE. Check your GPS for its specific structure if possible use GPRMC because it supplies the most information.
4. Match your GPS NMEA Output Datum to the datum of your map (e.g., NAD 83) using the drop down menu.
5. Press ok at the top of the Configuration window.



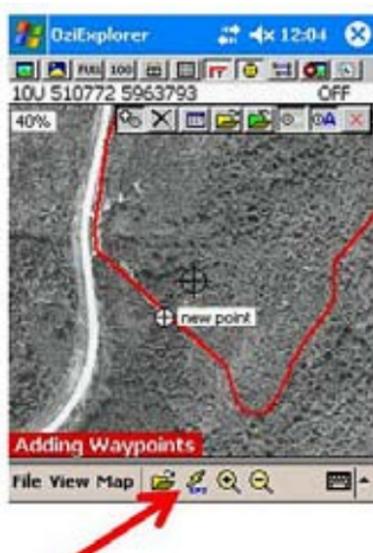
6. If you are using a Bluetooth GPS turn on the PDA's wireless receiver. Close OziExplorerCE by using the X button on the top right of the window. Outside of OziExplorerCE on the bottom of the main screen, select the wireless icon.



7. In the wireless menu, select the Bluetooth option and then select ok at the top of the wireless window.



- Return to OziExplorerCE (through Start > OziExplorer or the recall program button) and activate the GPS receiver by selecting the GPS button on the bottom menu. This starts starting Moving Map mode.



- The Bluetooth Browser will open and ask you to select the correct device. Highlight your receiver and close the window with the X button.



10. Return to OziExplorerCE. There will be a new display at the bottom of the screen with information from the GPS receiver.

After taking a few moments to set up, a red arrow showing your position (as long as it is on the map) will appear. This arrow will move and change heading as you move and change heading as you move with the PDA/GPS.



D. Indicator 1. Identifying lost productivity due to access construction.

This section will describe how to use the track function to create features such as roads, landings and areas of disturbance.

Adding a New Track

Tracks are very useful for marking an area such as retention or a patch of disturbance. Unlike track files created in OziExplorer tracks in OziExplorerCE can only be created as lines even if you intend to use them as polygons. You can not measure areas in OziExplorerCE only distances (see section B, Measuring Distances).

1. Zoom into where you would like to add your new track.
2. Turn on the Track Tool bar, View > Toolbars > Track Toolbar.
3. From the Track Toolbar menu, select an empty track line. This can be done with the Active Track button or by using the Track File List.



- On the Track Toolbar menu select the Add Track Point button (the second button from the left).



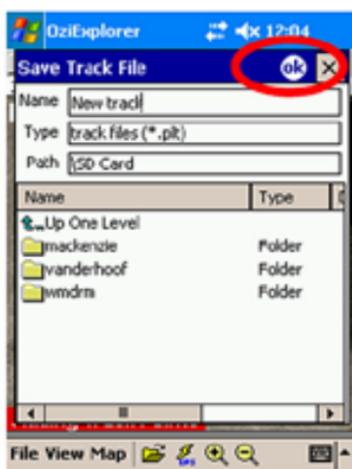
- Add points to your line by touching the screen with the stylus.



- When you are finished adding track points you can save the track by selecting the green Save to File button on the Track Toolbar menu.



- A new window will pop up where you can rename the file and choose where to save it. Once you are finished saving select ok at the top of the Save Track File window.



Clearing a Track File

1. To delete a track file you just created make sure the track is active by checking the Track List or by the Active Track (first toolbar button). Here the blue track on the screen is the one we are going to delete.



2. Press the X button on the Track Toolbar menu, you will be asked if you really want to clear the track, select yes.

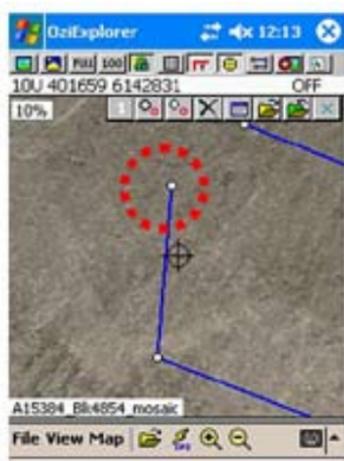


This removes the track from the screen. To completely delete a saved track use the file navigator to select and delete the file.

Deleting a Track Point

You can delete a new or existing track points.

1. Zoom into the track point you would like to delete.



2. Select and hold the point with the stylus for about a second then a blue circle will appear and a new menu will popup.
3. Select Delete Track Point.
4. You will be asked to confirm the clearing of the point.



5. This will clear the point from the display, to make this change permanent you will need to save the track file. You will be asked to save changes when you close OziExplorerCE.

E. Indicator 2. Estimating in-block area affected or potentially affected by landslides, drainage diversion or significant erosion from roads, landings or trails.

For this section delineate disturbed area with the same procedure used for marking landings and roads from Indicator 1.

F. Indicator 3. Estimating in-block area affected by disturbance to natural drainage patterns as a result of forestry operations.

For this section delineate disturbed area with the same procedure used for marking landings and roads from Indicator 1.

G. Indicator 4. Description of the in-block soil disturbance hazards, areas affected by dispersed soil disturbance, potentially inordinate disturbance, and roadside work areas.

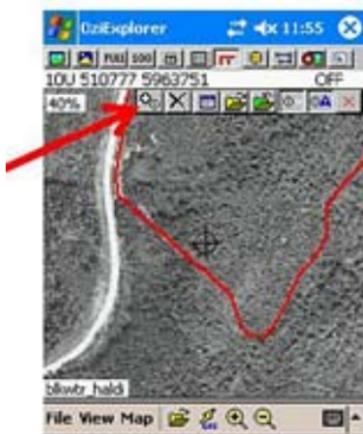
For section 4.2 describe disturbed areas with the same procedure as delineating landings and roads from Indicator 1.

For section 4.3 create transects using routes.

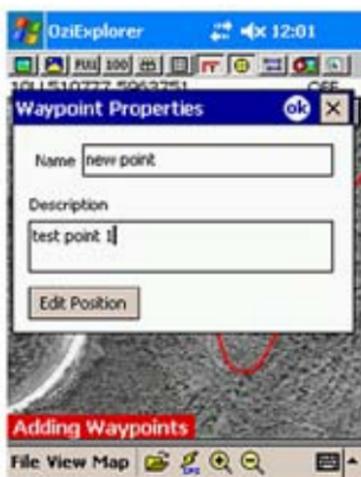
Creating Waypoints

Waypoints are used to mark point locations such as a POC and other stops along a transect.

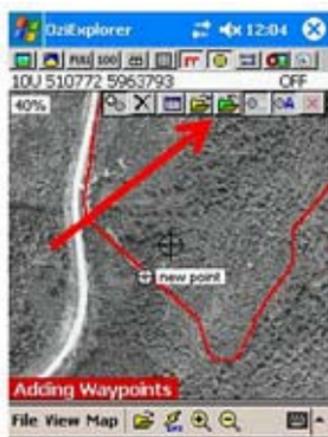
1. Zoom into the area where you want to place your waypoint.
2. Turn on the Waypoint menu by selecting View > Toolbars > Waypoint toolbar.
3. Select the **Add Waypoint** button, which is the first button on the Waypoint toolbar.
4. Use the stylus to tap the map at the location where you would like to add your waypoint.



5. A popup window will open that will let you name and give a description for the waypoint. You can also edit the coordinates of the waypoint by selecting the Edit Position button. Select ok at the top of the Waypoint properties window.



6. Your new point will now be displayed on the map.
7. To save this point to memory select the green **Save to File** button on the Waypoint menu.

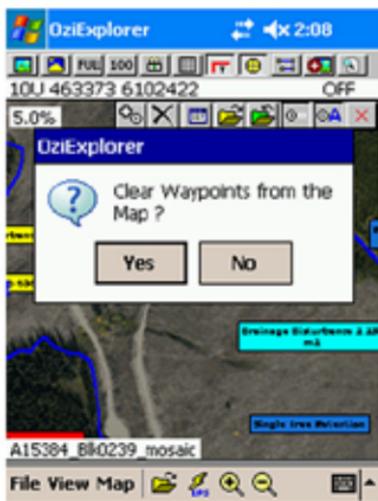


8. You will be prompted to create a waypoint file. You will need to name and save your file to a location (e.g., in the map folder). Select ok at the top of the Properties window.

Clearing a Waypoint File

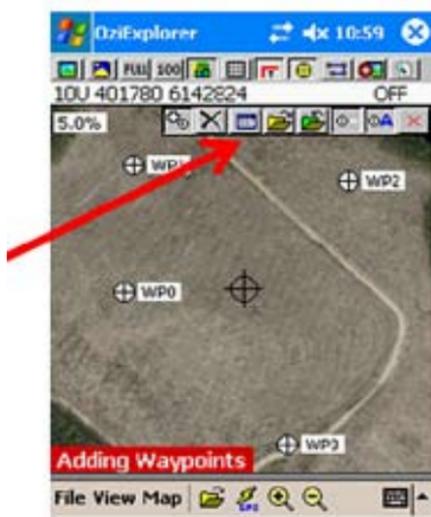
This will remove all the waypoints from a file from the screen.

1. Press the X button on the Waypoint Toolbar menu, you will be asked if you really want to clear the points, select yes.

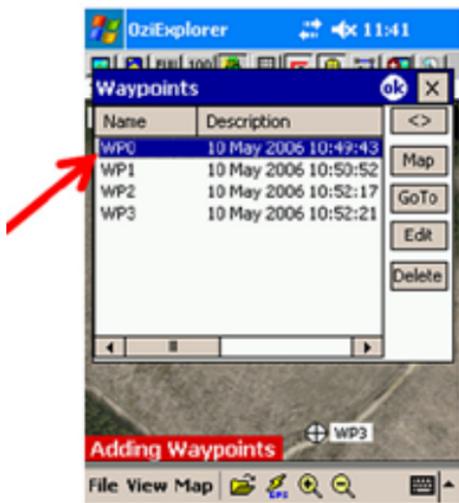


Deleting a Waypoint

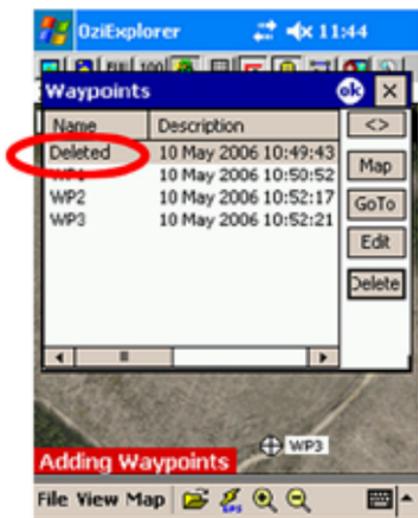
1. Select the View Waypoint List button from the Waypoint toolbar.



- This will bring up a list of the currently loaded waypoints. Select the waypoint(s) that you would like to delete.



- Press the Delete button. The waypoint will now say deleted instead of the waypoint name.

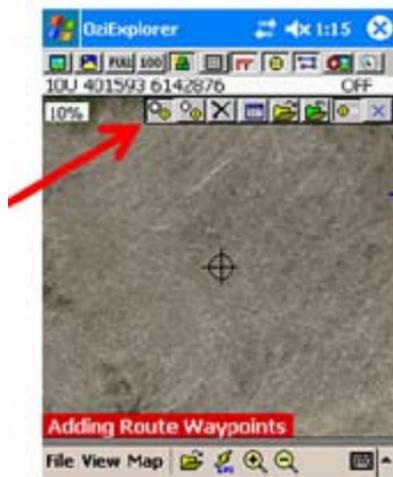


- Select ok from the top of the Waypoint List window. The deleted point will be cleared from the screen.

Creating a Route

Routes are made of connected waypoints. Routes can be created with the Route toolbar function or by inserting waypoints into a route.

1. Zoom into where you want to start a route.
2. Open the Route toolbar by selecting View > Toolbars > Route Create Toolbar.
3. To create a new route choose Add a Waypoint to the End of a Route function by selecting the first button on the Route toolbar.



4. Use the stylus to place a route waypoint where you would like to start the route.



5. Use the stylus to keep adding route points.



Working with Routes

The waypoints in a route can be named, moved, deleted and alarms can be added to them. The bearing and distances between waypoints can be viewed. Use the Route Properties function to do these tasks.

1. Open the **Route Properties** by selecting the button on the Route toolbar menu.



- This brings up a route waypoint list with bearings and distances between the points. From this menu you can change the name of the points (Edit), delete points (Delete) and add waypoints (Wp). Waypoints can also be inserted into a route by using the Insert button on the Route toolbar.

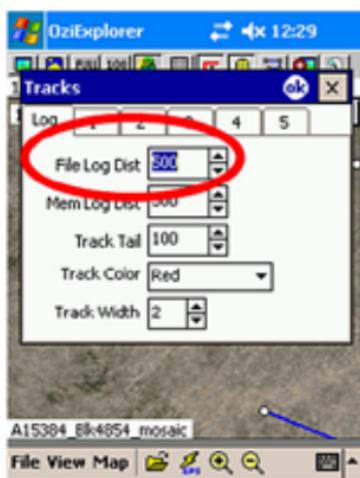


H. Automatic Data Collection

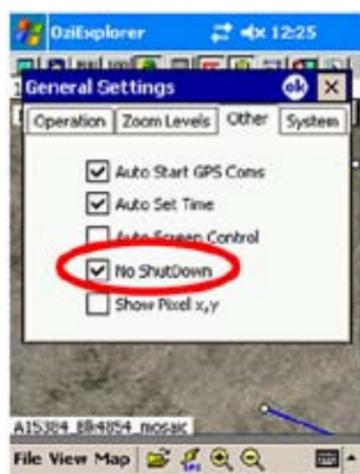
Track Logging

OziExplorerCE can automatically log locations from the GPS when you are moving around in the field. This will create an exact path that you walked.

- The option can be turned on or off with File > Track Log menu. (The parameters are defined in File > Configuration > Tracks.) Keep the minimum distance between logged track points at a reasonable distance (e.g., 500 m) so that the file does not become too large.



- The PDA will shutdown the screen and the connection with the GPS receiver if it is left idle for a few minutes. This will stop the logging of GPS data. To prevent this change the shutdown setting in File > Configuration > General Settings > Other and select **No ShutDown**.



Trouble with Track Logging

If you area receiving incorrect fixes from the GPS, this can be caused by the screen not being able to update in between receiving GPS fixes.

1. Increase the time between screen updates to 2 or 3 or greater in File > Moving Map > Operation.
2. Have the Chk Sum option selected in File > Configuration > NMEA (GPS).
3. Keep the visible track tail length short or turn it off completely (set the length to 0) in File > Configuration > Tracks > Track Trail.
4. Keep the width of the track to 1 or 2 pixels in File > Configuration > Tracks > Track Width.