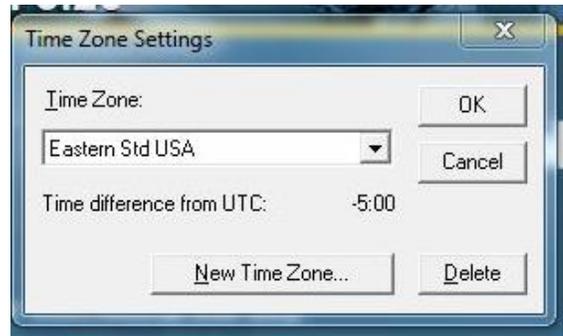


Tutorial for Processing Trimble GPS Data

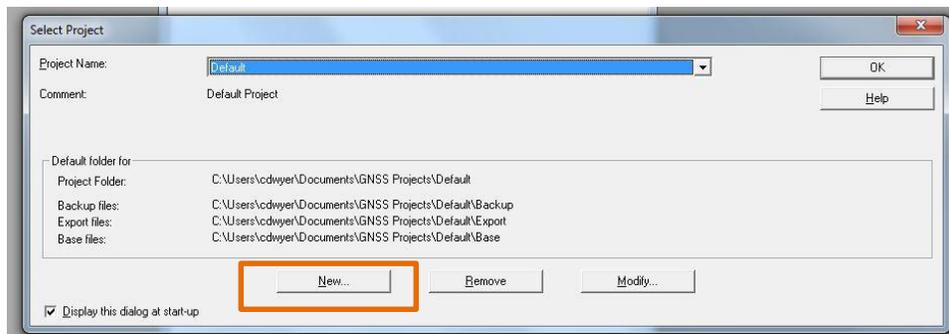
1. Turn the GPS unit on. Make sure that you have **exited the Terrasync program** on the GPS unit – the data will not transfer if Terrasync is open! Connect the GPS unit to the computer with a USB cord.
2. Find GPS Pathfinder Office on the Desktop and click to launch the program.
3. If the Time Zone Settings screen appear, select Eastern Standard or Eastern Daylight time depending on the season.



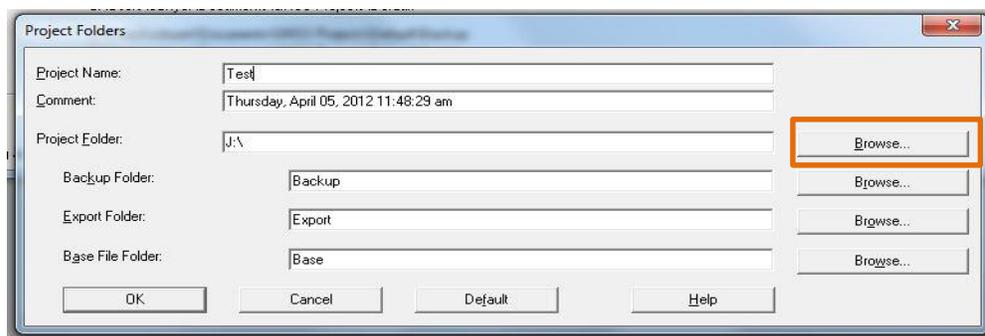
Season	Time
Winter	Eastern Standard Time USA
Summer	Eastern Daylight Time USA



4. The Select Project Window is the next window to appear. **Do not press “OK” without changing the Project Name and Project Folder.** In Select Project, click “New” and create a file name for your data (such as “GPS export June 1”).



5. In Project Name, name your project. Next to “Project Folder,” click “Browse” and choose the location where you would like to save your data (most likely the Desktop or your J: Drive).



Press OK. The “Default Folder” area should now indicate that your files will be saved to the location you chose.

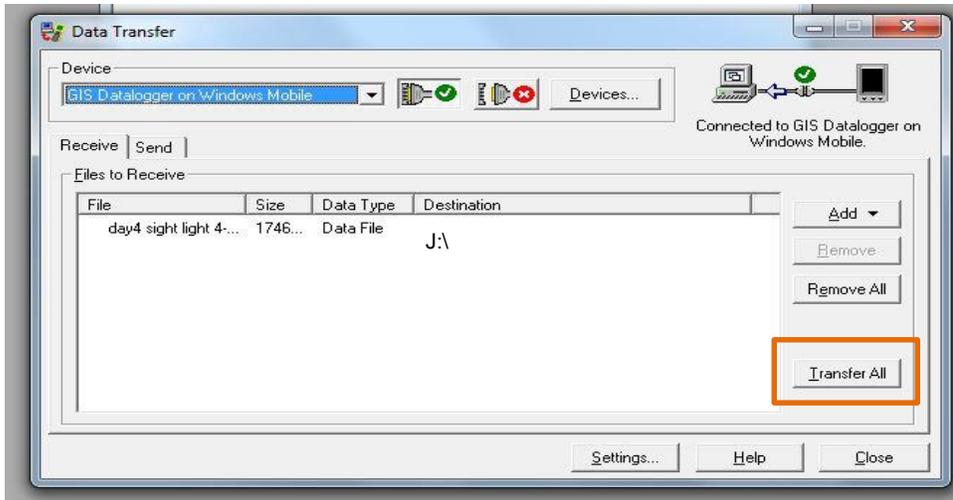
6. Click “OK” once more to close the Project Folder menu.
7. All of the tools that we use for processing data in Pathfinder Office are in the **Utilities** menu in the top menu bar of the program (between **Data** and **Options**). Open the **Data Transfer** utility (Utilities → Data Transfer).
8. In the Data Transfer Screen, make sure the GPS unit is connected to the computer (green circle). To add data from your GPS unit, click on add.



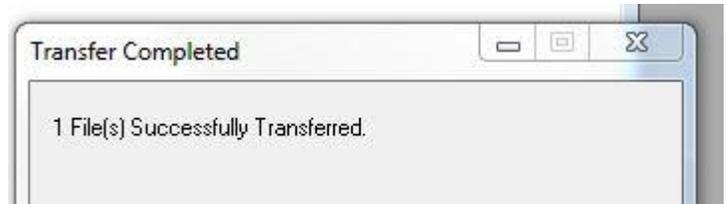
9. In the data transfer file, add data by clicking on your data files so that they turn blue. If you would like to transfer multiple files, hold down the CTRL key while clicking each file. Then, click “Open.”



10. Now the file(s) will transfer from the device to the computer. Make sure the right file(s) are attached by looking at the “Files to Receive” list. Click Transfer All (see image on next page).

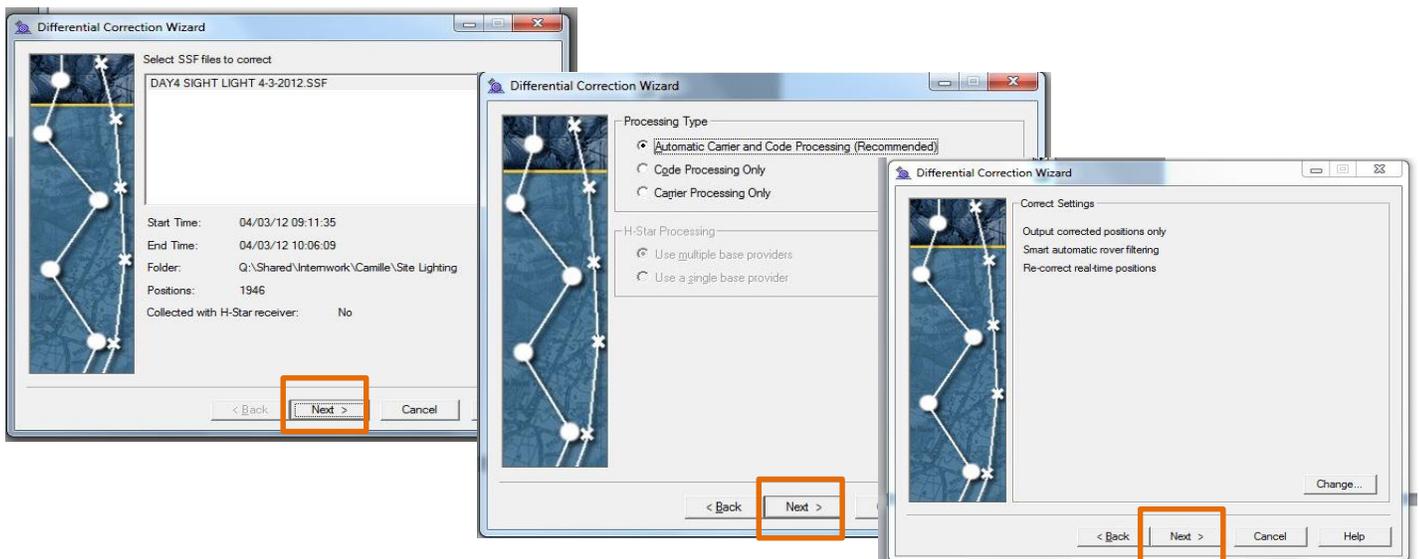


- The screen “Transfer Complete” should show up. Click close. If your data did not successfully transfer, try again, by adding the data again.

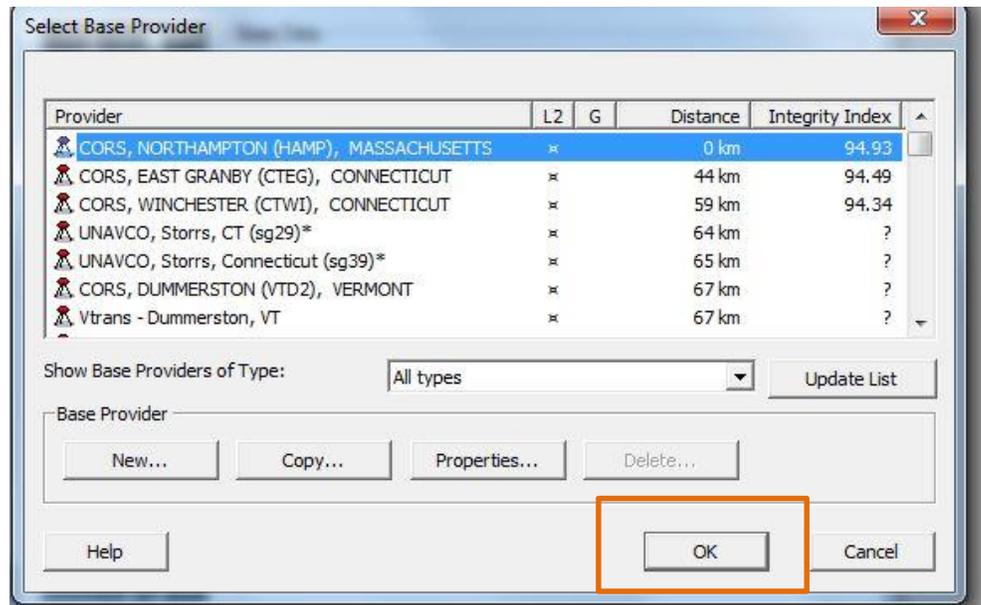


- Now, return to Utilities menu and open the **Differential Correction** utility. (If your data was not collected in Western Massachusetts and/or you don’t know if there was a GPS Base Station nearby, you can skip the Differential Correction steps).

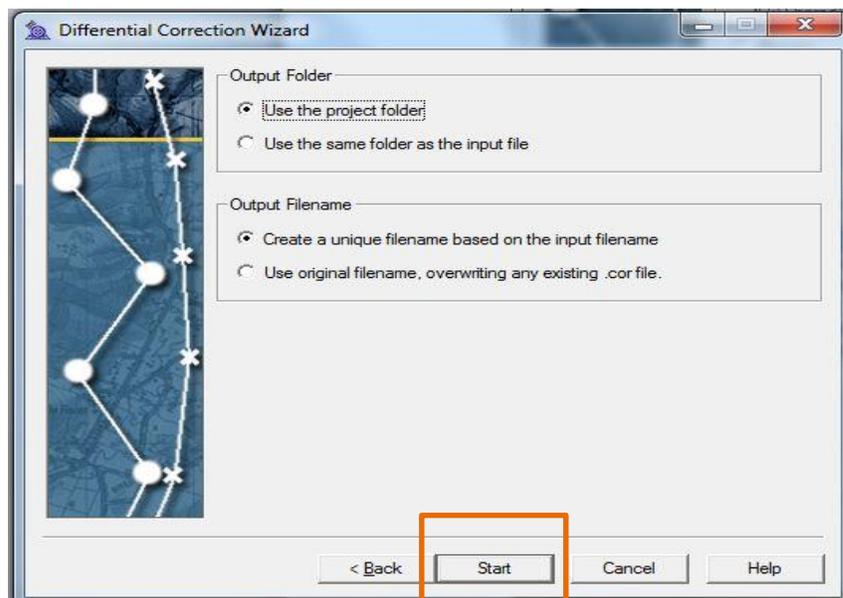
- When you open the Differential Correction Wizard, the files you transferred in steps 8-11 should show up automatically under “Select SSF Files to Correct.” Make sure all the files are highlighted. Then click “Next” for the three windows shown below.



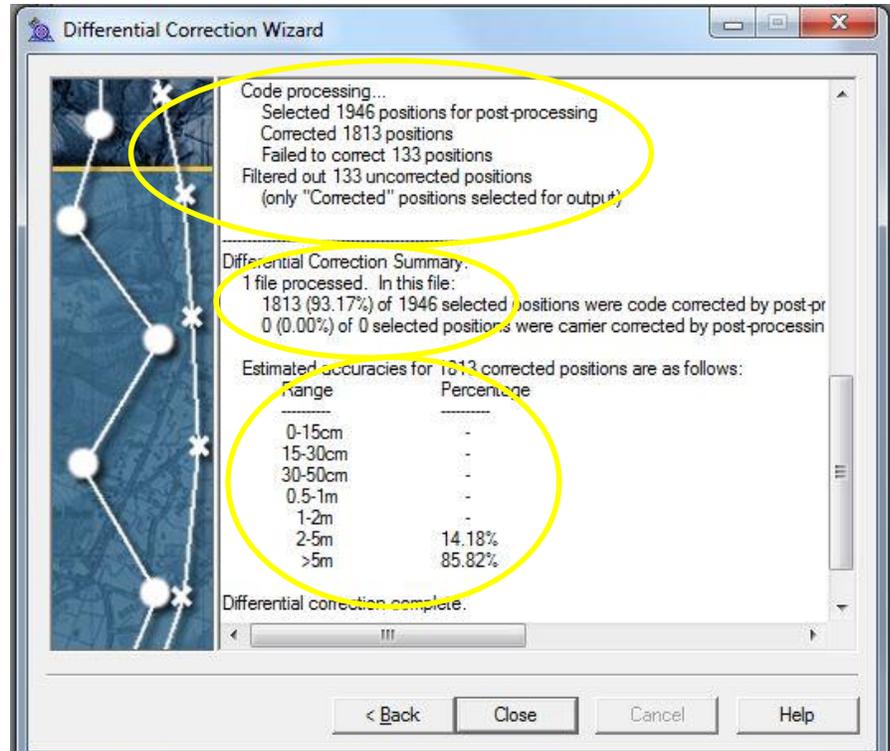
14. For the Base Provider Search press Select and choose CORS, NORTHAMPTON (HAMP), MASSACHUSETTS (or the closest base station provider if your data was not collected in Western Mass). Press OK, then click Next.



15. Click "Start" for the last window of the Differential Correction Wizard.



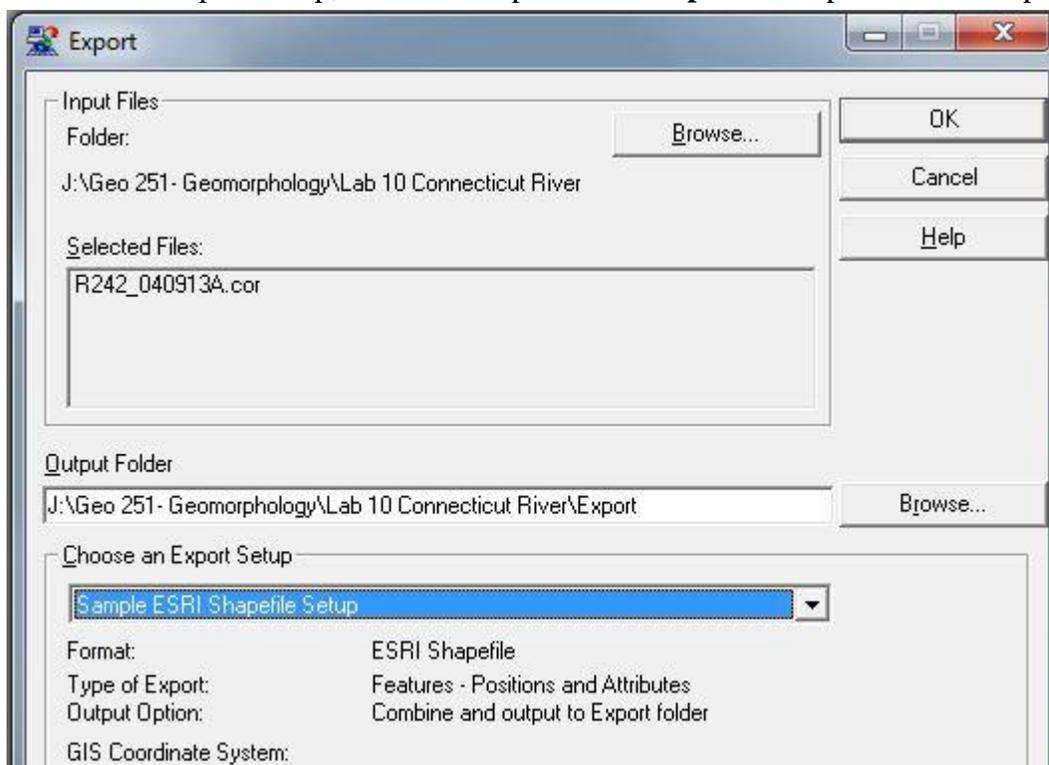
16. After pressing start, there will be a summary of the corrected positions. If you used a Trimble Juno, most of the corrected data should fall in the 2-5 meter accuracy range. Look at the “Differential Correction Summary” to make sure most of your positions were. Click close.



17. Now return to the Utilities menu and choose **Export**.

18. Your corrected file(s) from steps 12-16 should appear automatically in the “Selected Files” area. (If there is nothing there, you will need to click “Browse” and navigate to find your file.)

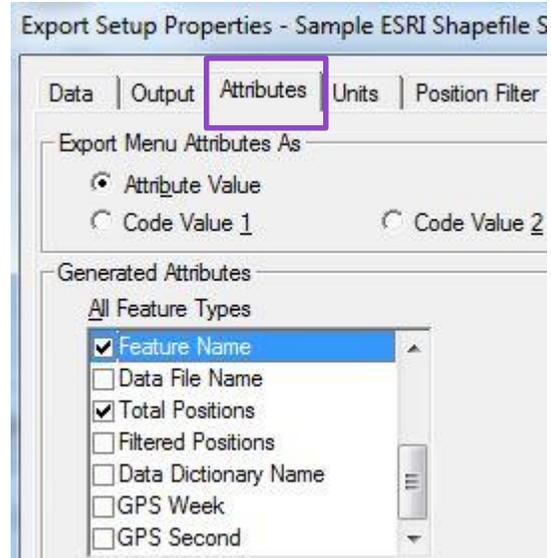
19. In “Choose an Export Setup,” select “Sample ESRI Shapefile Setup” from the drop-down list.



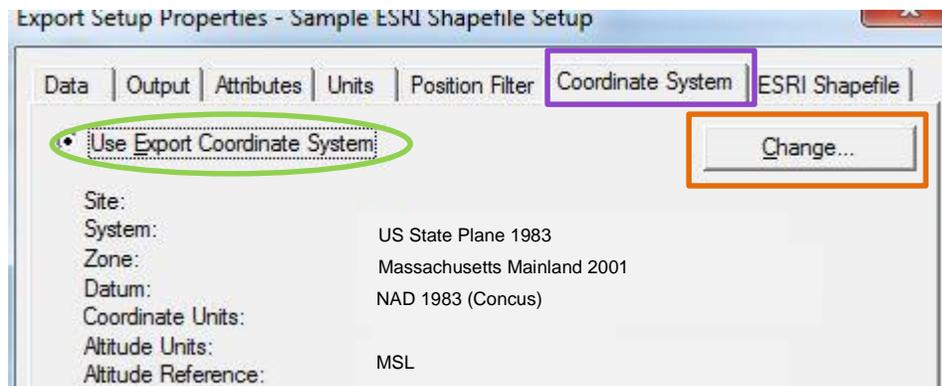
20. Press “Properties” at the lower right hand corner. Click on the Attributes tab. Under All Feature Types, select:

- Date Recorded
- Time Recorded
- Feature Name
- Total Positions
- Filtered Positions

Select other features that you find necessary. Note that any attributes you collected in the field (such as a comment, or data in a data dictionary) will be exported automatically.



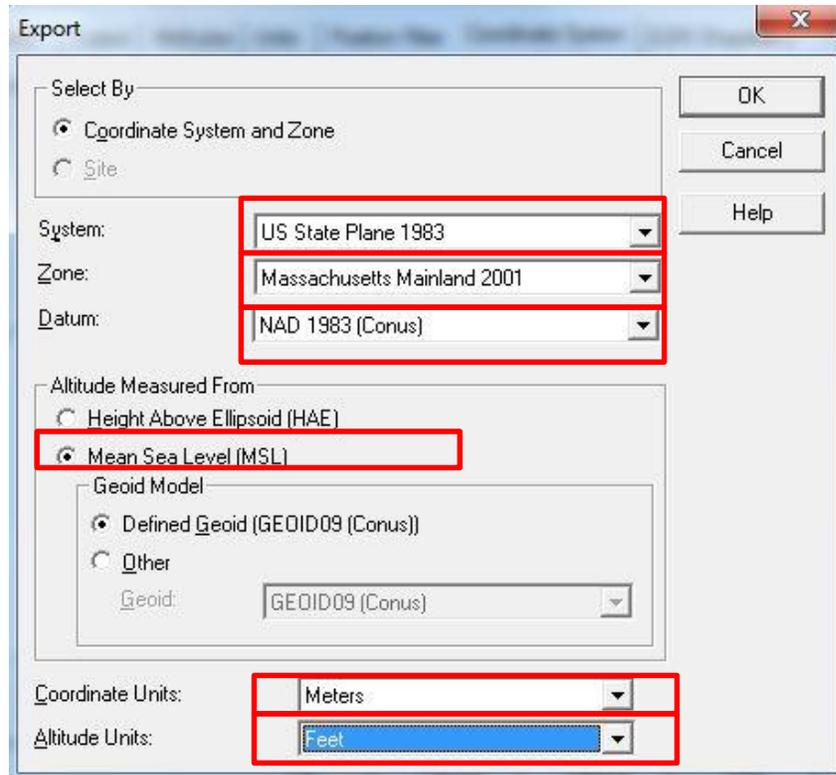
21. Now click on the Coordinate System tab. Press “Use Export Coordinate System” and click “Change”.



22. In “Use Export Coordinate System” **use the same system, zone and datum that collected the GPS points.** If the points were collected in at Smith College (or in Massachusetts), the standard is:

- System: US State Plane 1983
- Zone: Massachusetts Mainland 2001
- Datum: NAD 1983 (Conus)
- Altitude Measured From: Mean Sea Level (MSL)
- Coordinate Units: Meters
- Altitude Units: Feet

See image on next page



23. On the bottom of the Coordinate System tab, you need to set the *Projection* of the data. Under “Projection File” select “Browse”. Navigate through these folders to select: NAD 1983 StatePlane Massachusetts FIPS 2001 (Meters).Prj.

Q: → ArcGIS 10 Coordinate System Files and Projections → Coordinate Systems → Projected Coordinate Systems → State Plane → NAD 1983 (Meters) → **NAD 1983 StatePlane Massachusetts FIPS 2001 (Meters)**

Click “OK” to add this projection to the coordinate system properties screen.

24. Press “OK” to close the Properties menu, then click “OK” in the upper right of the Export window to export your data. After the export is completed, click “Close”.

