

# Coordinate Transformations with Geographic Calculator

819 Marianne Okal January 24, 2022 [Technical How-To](#) 7165

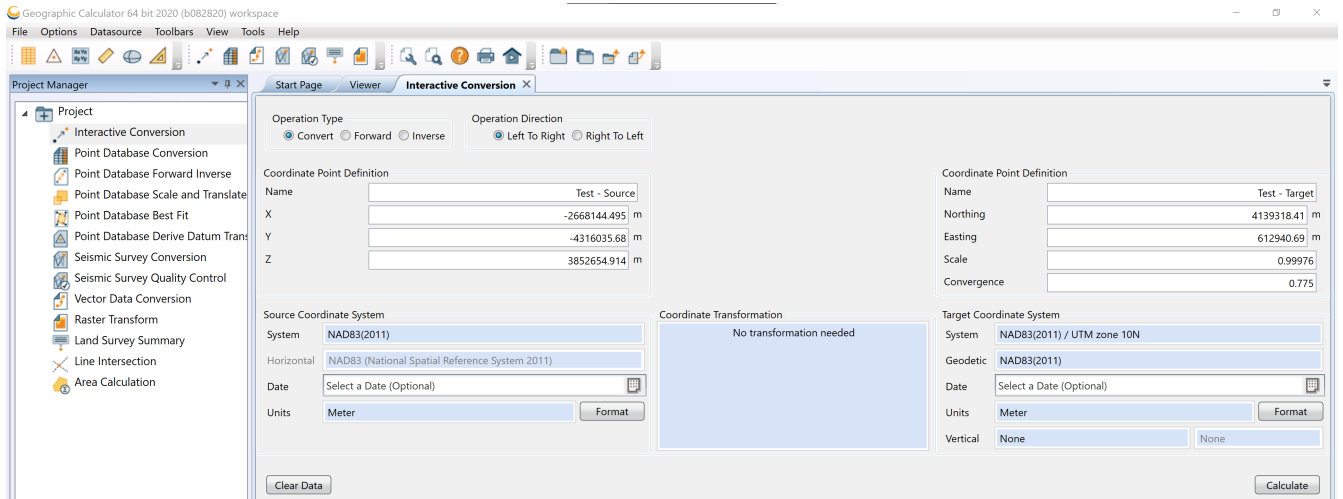
This document outlines how to use **Blue Marble Geographic Calculator** to convert:

- **Single coordinates**

## Converting Single Coordinates

1. Open Geographic Calculator, check out a license if necessary.
2. Click on "Interactive Conversion" in the Project Manager pane on the left. (see below)
3. Double click on the "System" entry under Source Coordinate System and select the original coordinate system in the new window.
4. In the Target Coordinate System area (right), do the same and select the desired output coordinate system. These actions will update the top of the window, where you will enter in the coordinate you wish to convert.
5. At the top left of the conversion window, enter the coordinates of the point you wish to convert, and push the Calculate button to convert.

**Note:** You may need to provide a Coordinate Transformation depending on the type of the correct transformation in the window that pops up. The target side go and select

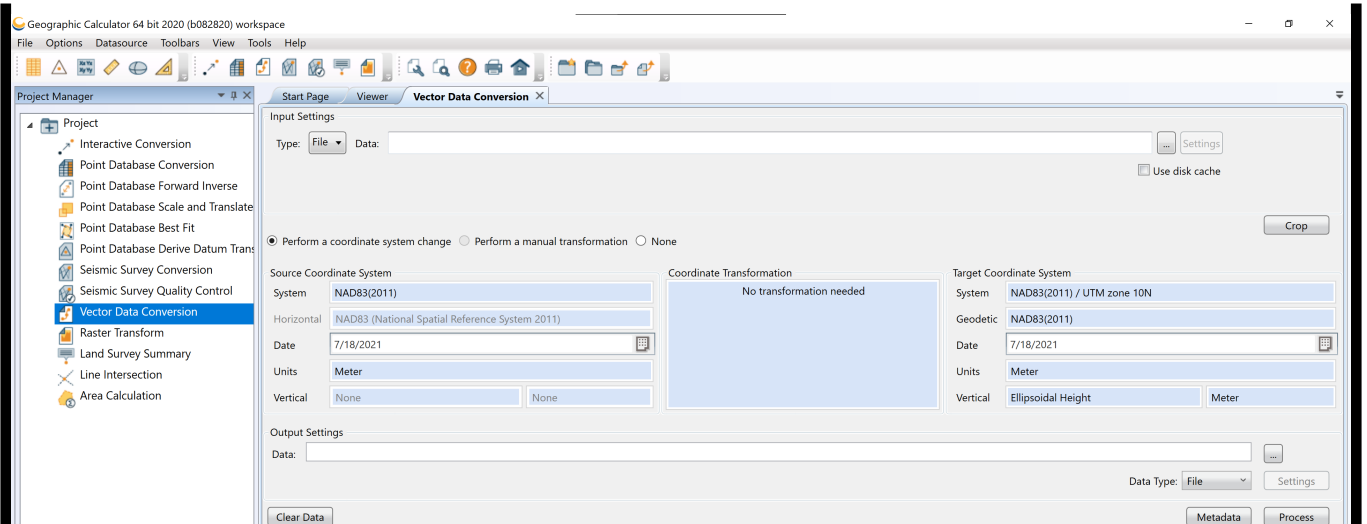


## Converting Single Data File

Open Geographic Calculator, check out a license if necessary.

1. Click on "Vector Data Conversion" in the Project menu on the left. (see below)
2. Double click "System" boxes in the Source Coordinate System **and** Target Coordinate System columns to select as desired. If prompted, do **not** limit available coordinate systems by geographic area.
3. Option: Set the dates for when the survey was carried out.
4. Check to see if the units make sense.
5. Set vertical datum if applicable.
6. If you have multiple files to process, see "**Batch Add Multiple Files**" instructions below. Otherwise, continue on here.
7. Use the [...] button to select your file. (e.g. .las)
8. Set your output filename and location.

**Note:** You may need to provide a Coordinate Transformation depending on the type selected for the source and target systems in the window that pops up. Click on the box and type



## Batch Add Multiple Files

1. Follow steps 1-6 in "Converting Single Data File" above.
2. Right click "Vector Data Conversion" in the Project Manager pane at left, and select "Batch Add...".
3. Use the "Add Data" button to select your files. (see below)
4. Check that the transformation settings shown are correct.
5. Enter output prefix or suffix if desired.
6. Specify the output folder.
7. Click "Generate".

### Generate Vector Data Conversions

**Input Data**

C:\Users\sbeane\Documents\PROJECTS\U-078 Postfire Steepland Ravel\not for archive\test.las  
C:\Users\sbeane\Documents\PROJECTS\U-078 Postfire Steepland Ravel\not for archive\test\_ellipsoidal.las

**Add Data** | **File** | **Settings**

**Operation**

None  
 Coordinate System Change  
 Manual Transform

Hide file paths    Data count: 2

**Remove**    **Clear All**

**Input Coordinate System**

Do not set the coordinate system  
 Use data's coordinate system if it exists  
 Use coordinate system selected below

**Coordinate Transformation**

Do not apply coordinate transformation  
 Validate and apply coordinate transformation  
 Apply coordinate transformation (no validation)

**Output Coordinate System**

Do not set the coordinate system  
 Use data's coordinate system if it exists  
 Use coordinate system selected below

**Source Coordinate System**

System: NAD83(2011)  
Horizontal: NAD83 (National Spatial Reference System 2011)  
Date: 7/18/2021  
Units: Meter    **Format**  
Vertical: None    None

**Coordinate Transformation**

No transformation will be applied.

**Target Coordinate System**

System: NAD83(2011) / UTM zone 10N  
Geodetic: NAD83(2011)  
Date: 7/18/2021  
Units: Meter    **Format**  
Vertical: Ellipsoidal Height    Meter

**Output Modifier**

Use Prefix    out\_    **Format**  
 Use Suffix       **Format**

**Output Format**

Same As Source  
 Use Format    AutoCAD DWG (\*.dwg)    **Settings**

**Output File Folder**

C:\Users\sbeane\Desktop    **...**

**Generate**    **Cancel**

Online URL:

<https://kb.unavco.org/article/coordinate-transformations-with-geographic-calculator-819.html>