LiDAR Mapping Systems

Post Processing - Utilizing Geoid Models in SpatialExplorer

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Phoenix LiDAR Systems
10131 National Blvd.
Los Angeles, CA 90034

www.phoenixlidar.com
+1.323.577.3366
support@phoenixlidar.com

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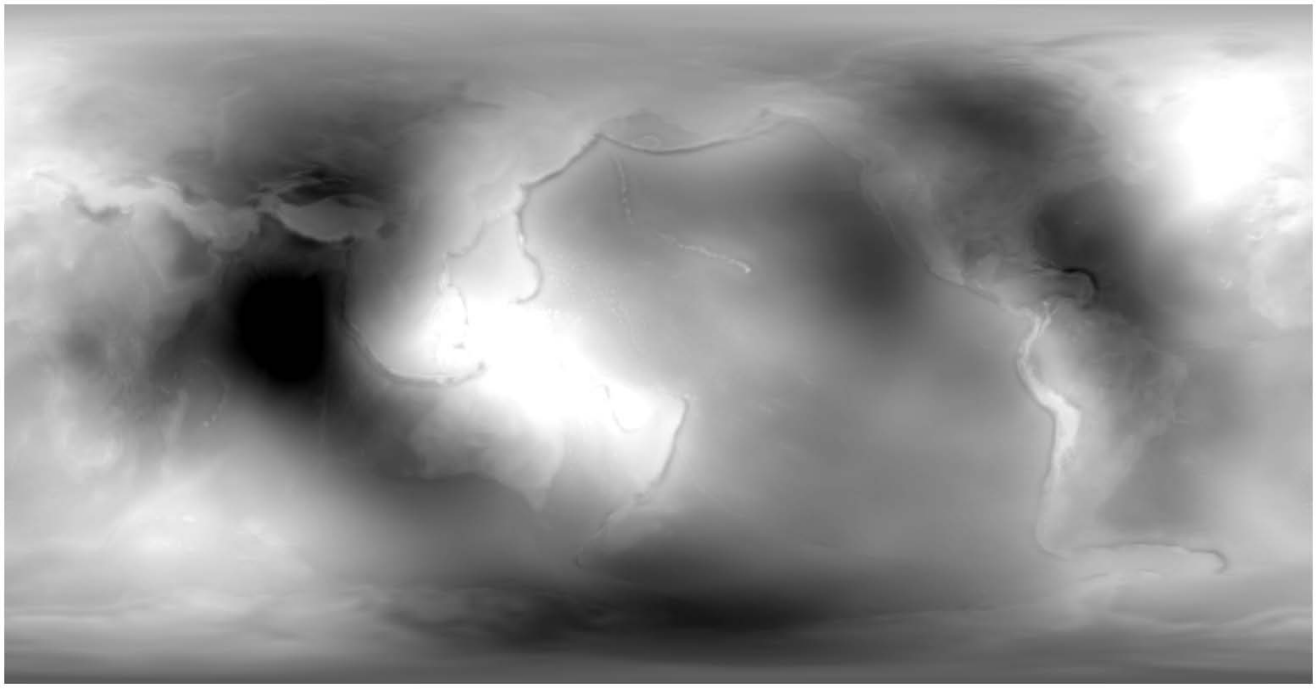
1. Introduction

Many applications of LiDAR data require the transformation of ellipsoidal height values, as recorded through GNSS, to an orthometric datum. This vertical datum adjustment can easily be made in Phoenix LiDAR's SpatialExplorer software during data export through the creation of a custom output coordinate system that includes a geoid model.



2. Obtain the necessary geoid files in .gtx format

This is the same format used by and installed with NOAA's Vdatum software.
Sources for .gtx geoid grid files:

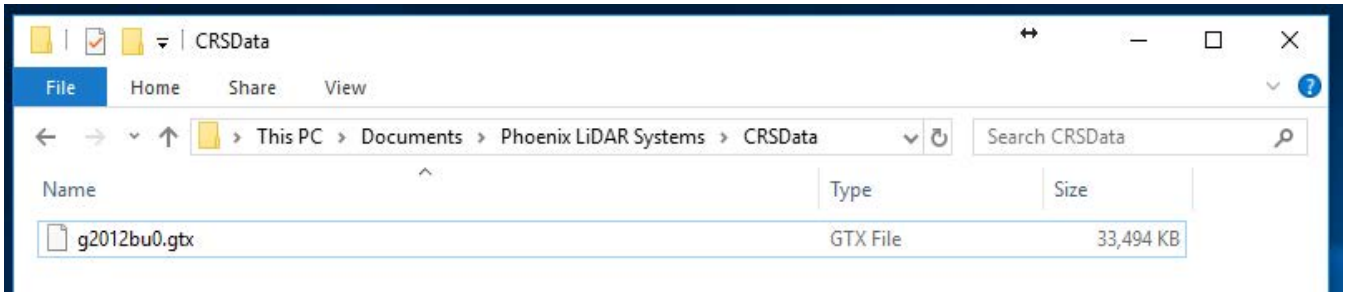
- https://vdatum.noaa.gov/download.php
- http://download.osgeo.org/proj/vdatum/

More information about the .gtx format is available from:

- https://vdatum.noaa.gov/docs/gtx_info.html

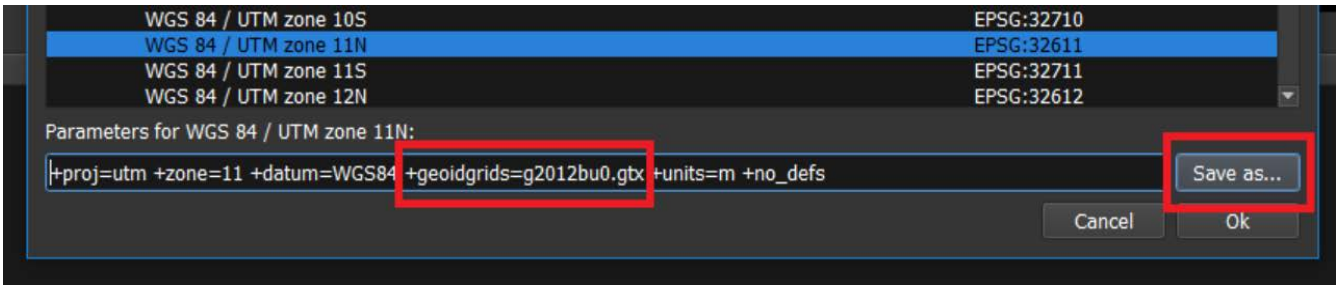
3. Make .gtx files available to SpatialExplorer

Store geoid grid .gtx files in:
C:\Users\%userprofile%\Documents\Phoenix LiDAR Systems\CRSData



4. Create a custom output coordinate system

During data export in SpatialExplorer, add the option **+geoidgrids=the name of your geoid file.gtx** to the parameters of your coordinate reference system and *Save as...* a new coordinate system definition.



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