

## Making a GSF file for SurvCE / FAST Survey

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Rev: 1

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### Description:

Mark's suggestions for building a GSF file for use with SurvCE or FAST Survey. The GSF file is an extraction of the GEOID grid for a particular area. Extractions are done to make the data collector faster in the field.

A typical maximum file size is 400 Kbytes, while the full GEOID model is typically 40 megabytes for the United States.

### Tools:

If you have a copy of Carlson SurvCE, a Carlson XPort license number is included. Otherwise, you can usually call Carlson support and they will give you an XPort license number at no charge.

If you are using Spectra Precision FAST Survey, you can use the Ashtech Geoid Extraction tool (see the link below.)

You can download the latest XPort tool here: <http://www.carlsonsw.com/support/software-downloads/?product=SurvCE>

Typically the XPortSetup tool is button number 1:

No	Name	File Size / File Date	Description
1	XPortSetup.exe <input type="button" value="Download"/>	15,945,477 Oct-12-2012	Carlson X-Port is a utility for data transfer and traverse adjustment among other things. Serial number is required for installation. One complimentary serial number is provided with SurvCE purchase on the back of SurvCE manual. Additional serial numbers are available for purchase.

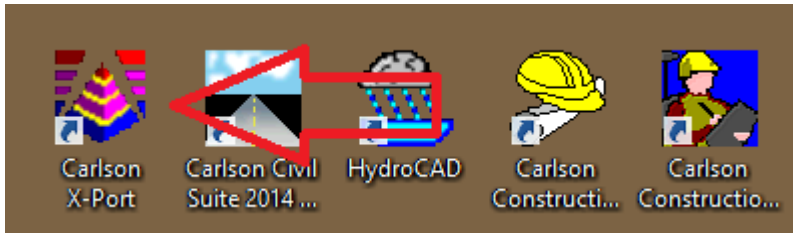
In addition, I like to have a copy of the Ashtech Geoid Extraction tool which you can download with this link: [http://resources.ashtech.com/GEOIDS/tools/Install\\_Geoids.exe](http://resources.ashtech.com/GEOIDS/tools/Install_Geoids.exe)

If you would like to download the full Geoid12A for use with the Ashtech tool, you can grab a copy here: [http://ashgps.com/ms/G2012A/Install\\_GEOID12A\\_RevC.exe](http://ashgps.com/ms/G2012A/Install_GEOID12A_RevC.exe)

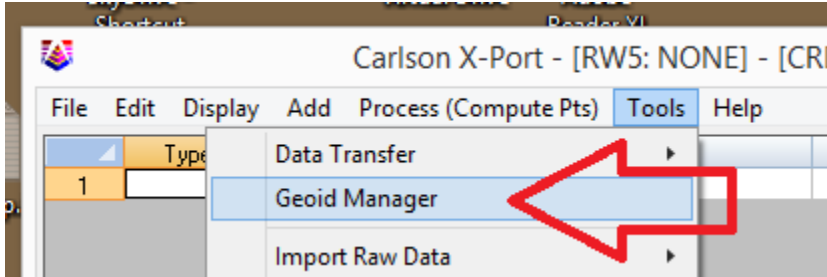
The Carlson XPort tool automatically downloads needed grid files from the internet as needed. Thus it is important to have internet access when building GEOID files in an area for the first time.

## Building a GSF file for a Project:

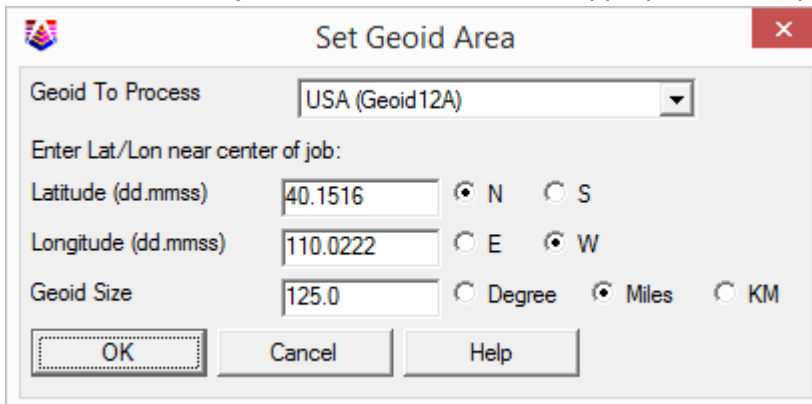
1. Start the Carlson XPort tool using the desktop icon:



2. From the main menu of the X-Port tool, select "Tools: Geoid Manager":

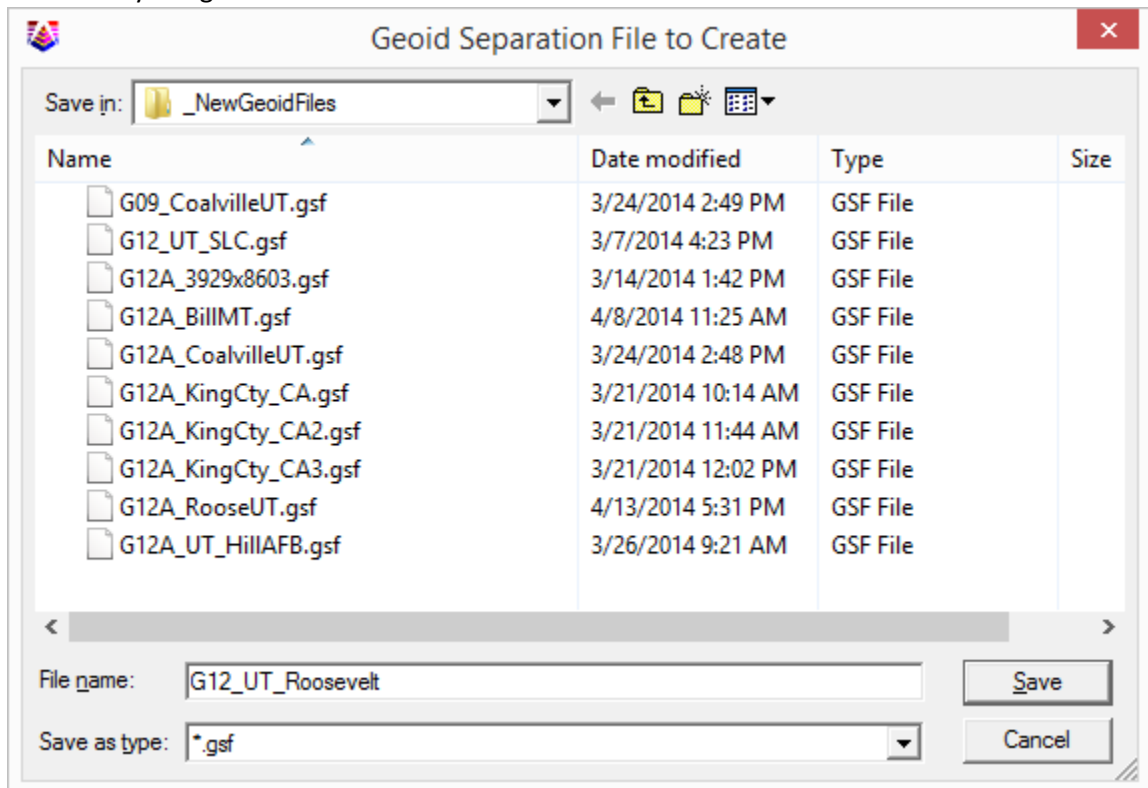


3. Choose the correct Geoid. If you are in the United States, the current correct GEOID is 'USA (Geoid 12A)', however other geoids are available for use if you need to match an older job.
4. Enter the center of job in Dd.MmSsss; select an appropriate size (I prefer 125 miles):



5. Click OK, the tool may need to go online to download the base geoid files, then choose an appropriate location for the output file. I prefer to use the Geoid name, followed by the State,

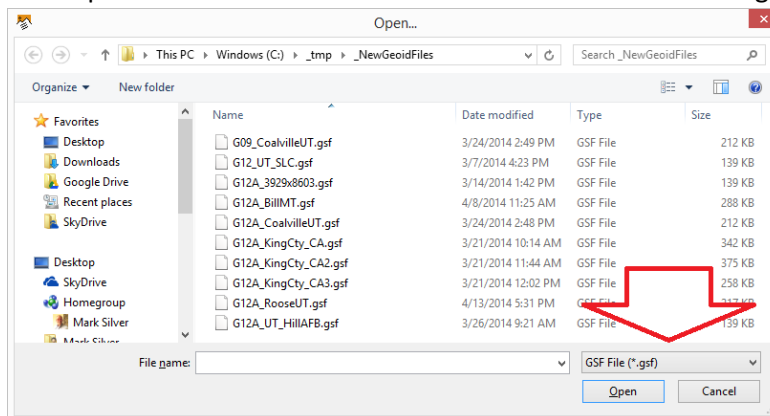
followed by the general area:



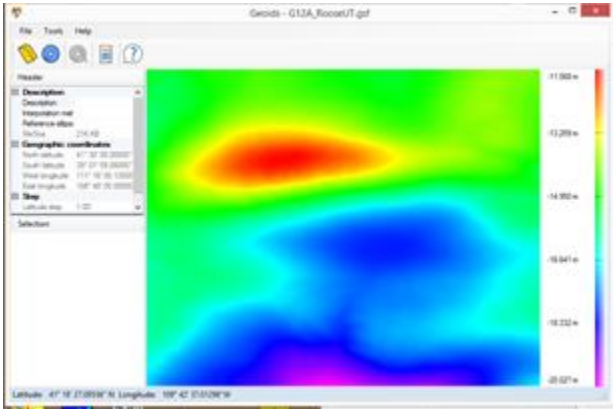
6. Click on "Save".
7. OPTIONAL: You can test the new geoid file with the Ashtech Geoids tool. Click on the



desktop icon and then browse for the new file. Be sure to change the files of type to '.GSF':



If the extraction was successful, then you will get a pretty picture:



8. In SurvCE or FAST Survey, you load the GEOID from: “Equip: 6 Localization: GPS (tab):

Click the ‘Geoid File:’ button, then browse to find the new GSF file.

You can verify that a GEOID file is loaded and in-use by going to “Equip: Monitor Skyplot: Position (tab)” where you will see the ellipsoid height, and the GEOID separation listed.