

CONVERTING BETWEEN NAD83 AND NAD27

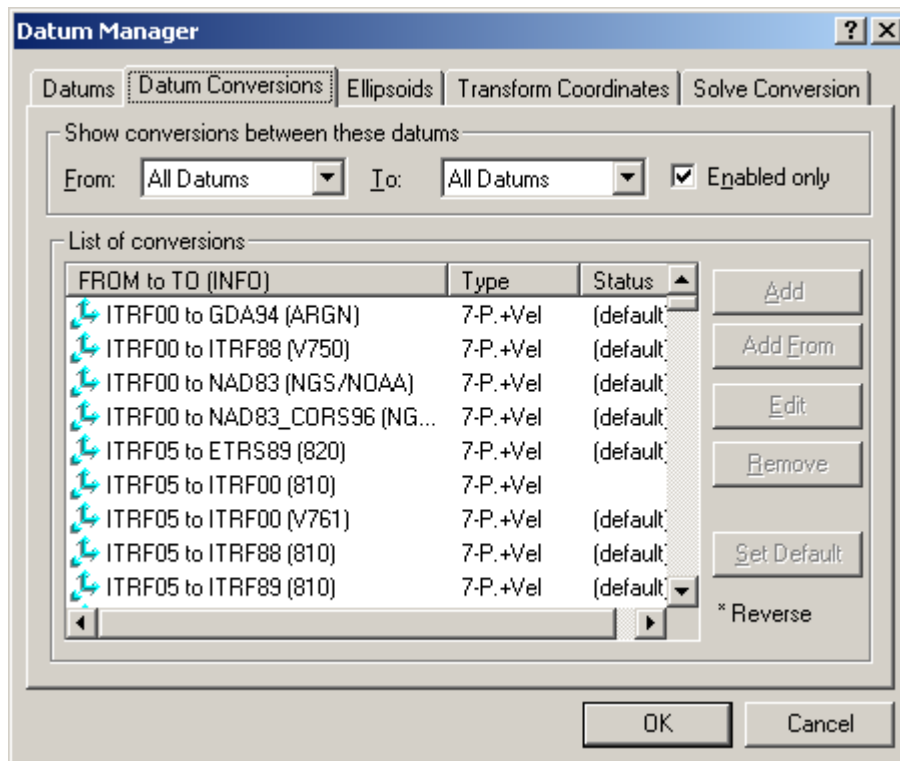
This document is aimed at helping you to implement a conversion between the North American Datum of 1927 (NAD27) and 1983 (NAD83) using data provided by National Geodetic Survey's NADCON program.

Step 1: Download NADCON Grid Files

Visit the NGS website at <http://www.ngs.noaa.gov/> and download the NADCON program from the *Tools* section of the website. Unzip the contents of the file into their own directory and make a note of its location. The file of most importance here is the *conus.las* file.

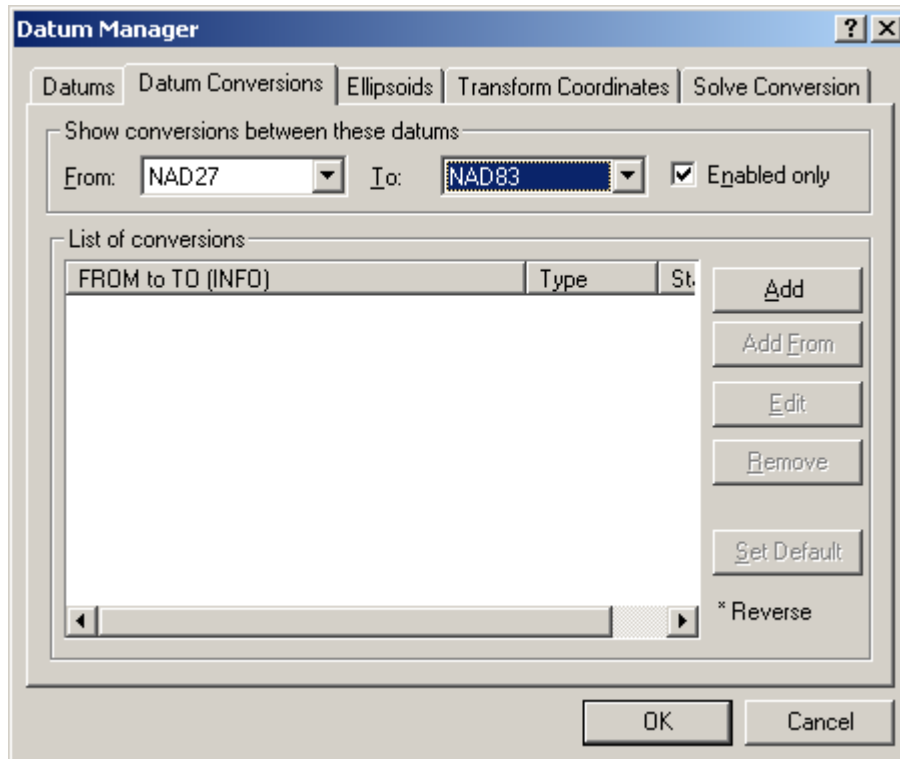
Step 2: Open the Datum Manager

Open the Waypoint software, go to *Tools | Datum Manager* and select the *Datum Conversions* tab.



Step 3: Select Datums for Conversion

Select **NAD27** under the *From* drop-down menu and select **NAD83** under the *To* drop-down menu.



Step 4: Add a New Conversion

Click the **Add** button to open the *Add/Edit Conversion* window. Enter a meaningful name under the *Info string* field. Then select **Nadcon (NGS)** from the *Type* option list. This will give you access to the *Nadcon* box at the bottom of the window, where you must click the **Browse** button to locate the *conus.las* file obtained in **Step 1**. Set the *Height* option to **Leave 'As Is'**. Click **OK** when you are done.

Add/Edit Conversion -- "

Datum/Info
From: NAD27 Info string: NADCON
To: NAD83 Set as default conversion

Type
 3 parameter (Molodensky)
 7 parameter (similarity/Helmert)
 7 parameter + time dependency
 Nadcon (NGS)
 Combination of two conversions

Combined Conversion
Conversion #1: NAD27 to WGS84 (VER602)
Conversion #2: ITRF00 to NAD83 (NGS/NOAA)

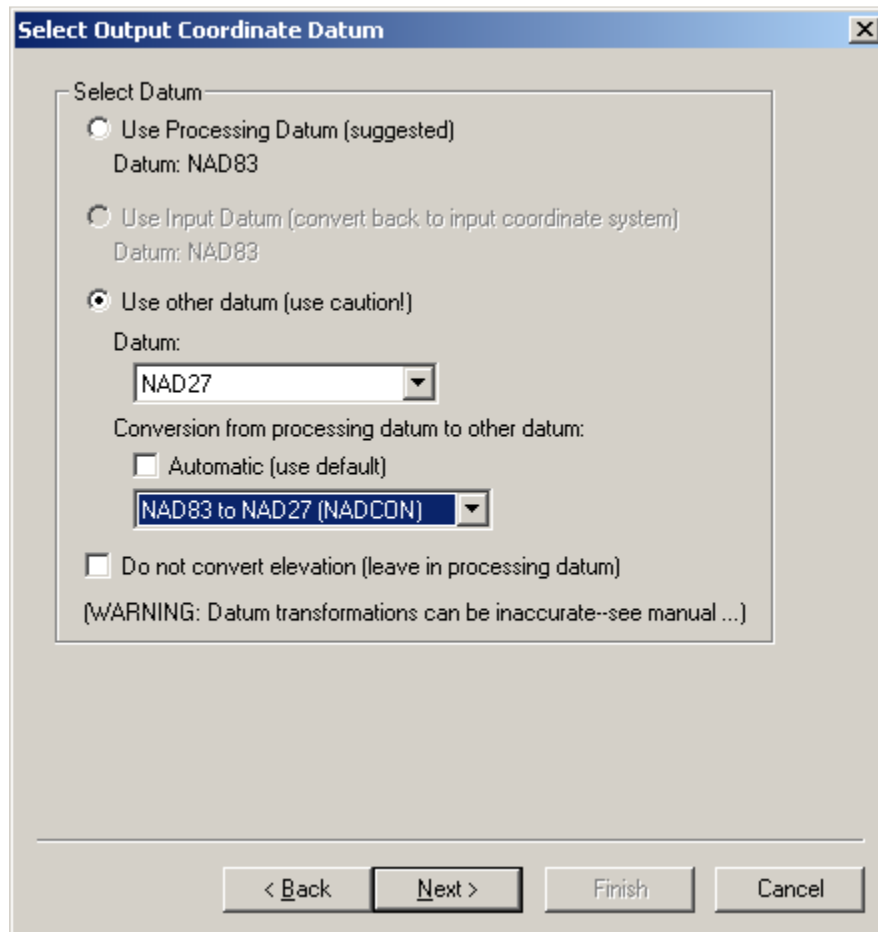
Transformation Parameters
Scale: (ppm) + (ppm/y)
 --X-- --Y-- --Z--
Offset: (m)
Rotation: (arcsec) Use reverse sign for rotations
Rot. Vel.: (mas/y)
Velocity: (cm/y) Ref. Year:

Nadcon
Horiz. file: C:\Utils\NADCON\conus.las Browse
Height: Leave 'As Is' Use:

OK Cancel

Step 5: Use the Conversion

The transformation will now be available for use throughout the software, including the *Transform Coordinates* tab of the **Datum Manager**, as well as through the *Export Wizard* (if you need to convert your processed results from either of these datums to the other).



Note: Using the *conus.las* file will define the NADCON conversion only for the conterminous United States. If you need to convert between NAD27 and NAD83 for points located in Alaska or Hawaii, you will need to repeat the procedure outlined here using the *alaska.las* and *hawaii.las* files, respectively, in **Step 4**. Furthermore, this is a horizontal conversion only, so the height component will not be modified when converting between the datums.