

Coordinate Conversion with Corpscon

Introduction

This tutorial shows how to convert multiple coordinates at the same time using the Corpscon program created by the U.S. Army Corps of Engineers. Coordinate conversion is needed in two cases: when sources or receptors in a model cross a UTM zone boundary and when coordinates are supplied to a modeler in a coordinate system that's different from the coordinate system of a model.

Installation

The Corpscon program can be obtained by going to the website <http://crunch.tec.army.mil/software/corpscon/corpscon.html>. The most recent version of the program is version 6. Once the website loads, scroll down to the "Installation Procedures" section of the site. Five installation files are available; download the fourth file, corpscon_base_alaska.exe, to your computer. To begin downloading the file, click the file's name and click OK when a disclaimer prompt pops up within your browser.

Open the folder on your computer where you saved the file and double-click the file to run the Corpscon installation program. Click the Run button if you see a security warning from Windows. Click the Next button several times when the installation program opens, then click the Finish button. This will install the latest version of Corpscon on your computer, which is currently version 6.0.1.

Preparing the input spreadsheet

Open a new spreadsheet within Excel. Enter each coordinate on a separate line, formatted as shown in the table below. Don't enter the first row in the table into your spreadsheet. The first column is the coordinate ID, the second is the easting, and the third is the northing for the coordinate. Buildings, tanks, and fencelines have multiple coordinates. The IDs can reflect this; for example, BLDG1_C1 and BLDG1_C2 can be the IDs for the first and second corners of the first building in the model. IDs may contain spaces and have a maximum length of 50 characters.

ID	X	Y
Source1	358263.96	3936257.91
Receptor1	357924.4	3936260.4

Once all coordinates have been entered into Excel, Click File → Save As to save the file. Select the "CSV (Comma delimited)" option in the "Save as type" dropdown list and give the file a name, such as input.csv. Click the Save button and then close the file in Excel.

Conversion setup

Open Corpscon by clicking Start → Programs → Corpscon6 → Corpscon6. When the program opens, click Convert → Setup on the menu bar within Corpscon. A set of tabs will open, as shown in Figure 1. Enter the coordinate system for the input file on the left side of the screen and the system to convert the coordinates to on the right side of the screen. If converting to or from UTM coordinates, make sure the Units input field matches the way coordinates are defined in the model (meters or feet). Click OK when finished to save the conversion settings.

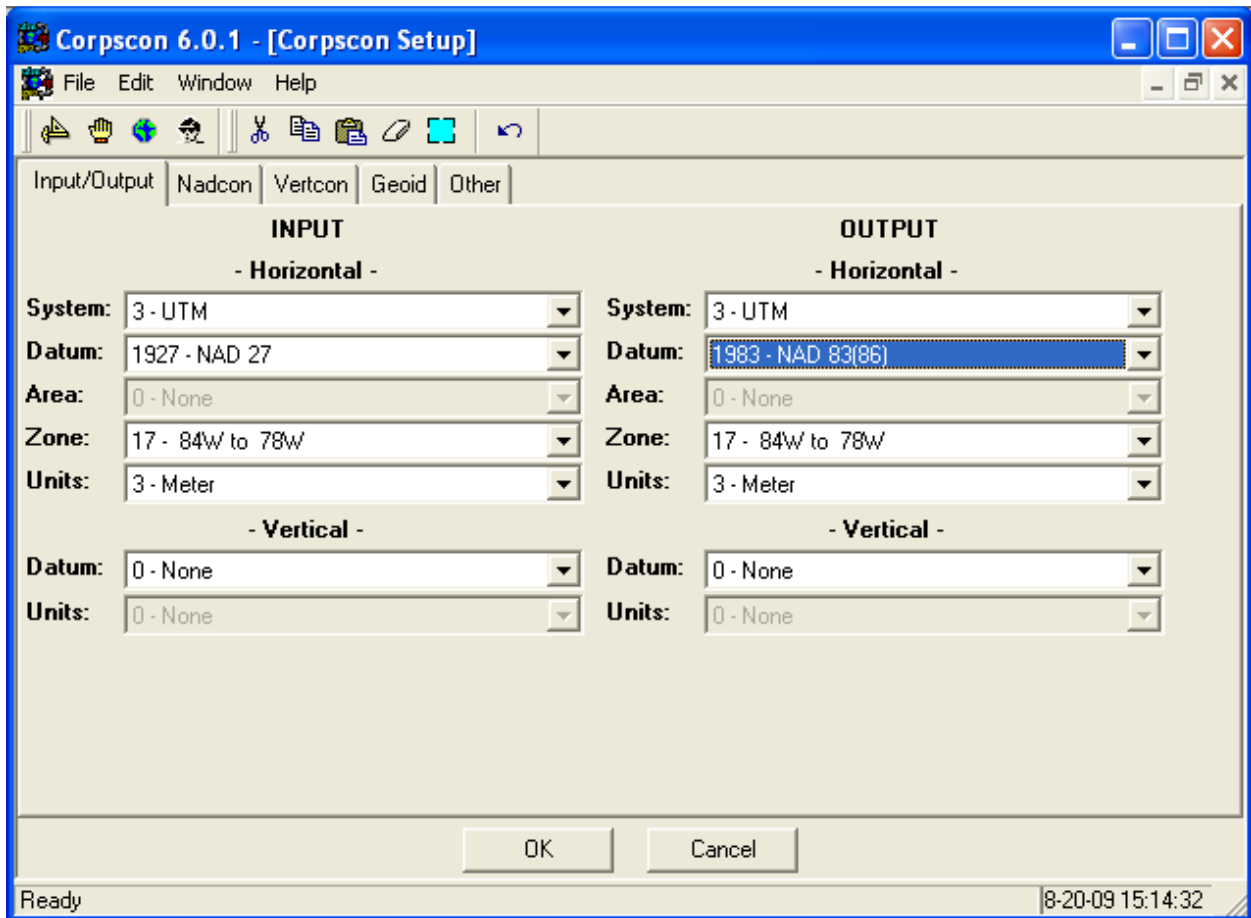


Figure 1: Corpscon setup.

Converting coordinates

Click Convert → User Defined Data File on the main menu in Corpscon. A screen will be shown for selecting the input file and the location of the output file. Click the Browse button to find your input file or type its name into the “Input Filename” field. Similarly, locate or type the name of the output file. Set up the input and output fields as shown in Figure 2 and click the Convert button to convert the coordinates and create the output file.

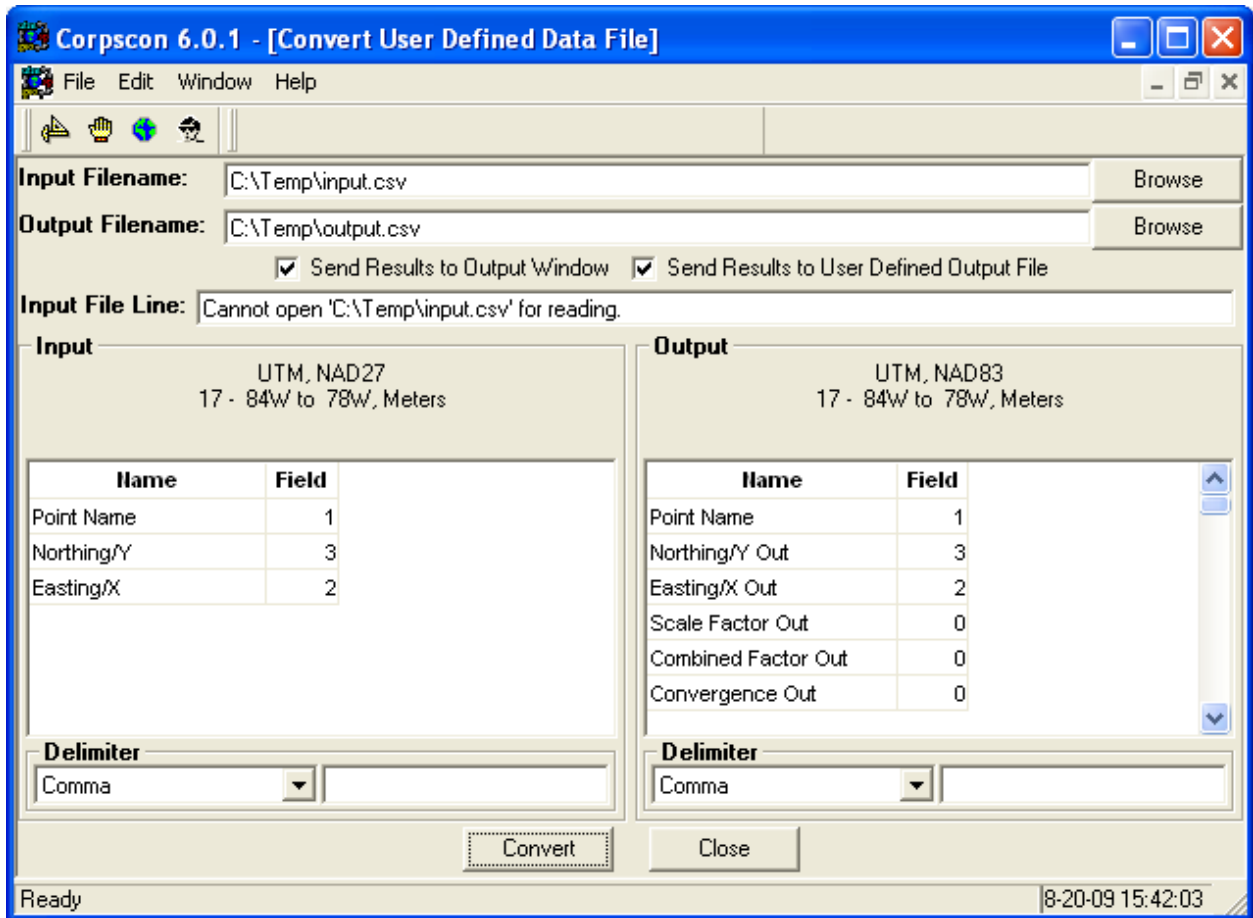


Figure 2: Specify data fields.

After creating the output file, double-click the file name to open the file in Excel. The file will have all coordinates have the same ID as before but new values in the second and third columns. You can then copy the new values into your model.