

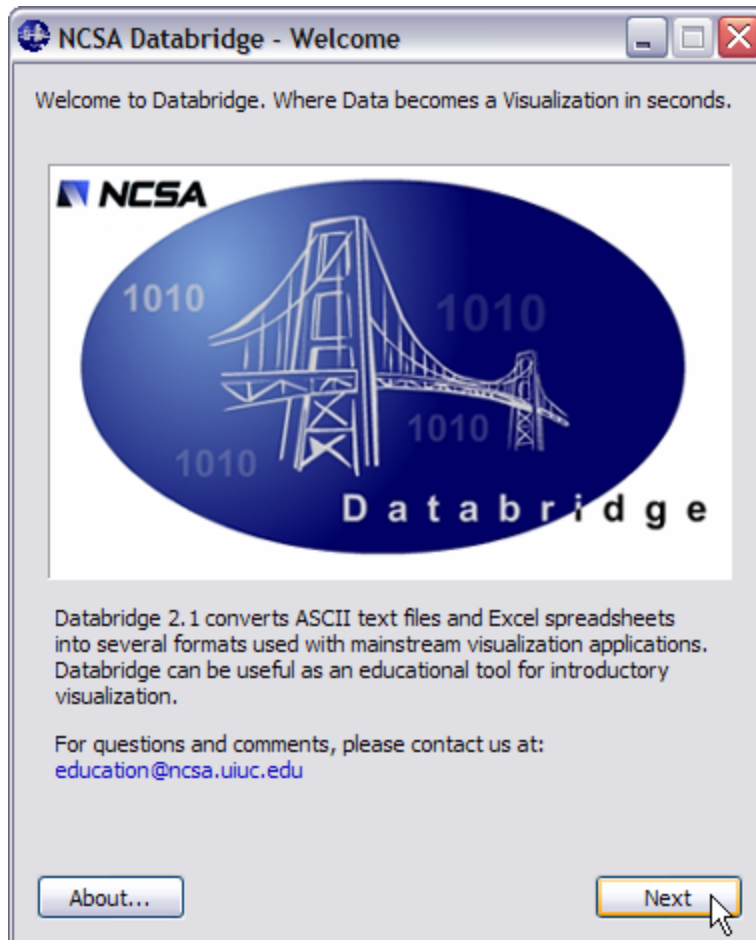
# Databridge 2.1 Tutorials – Pollutant

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Dataset: Dr. Garrett Love, Shodor Education Foundation

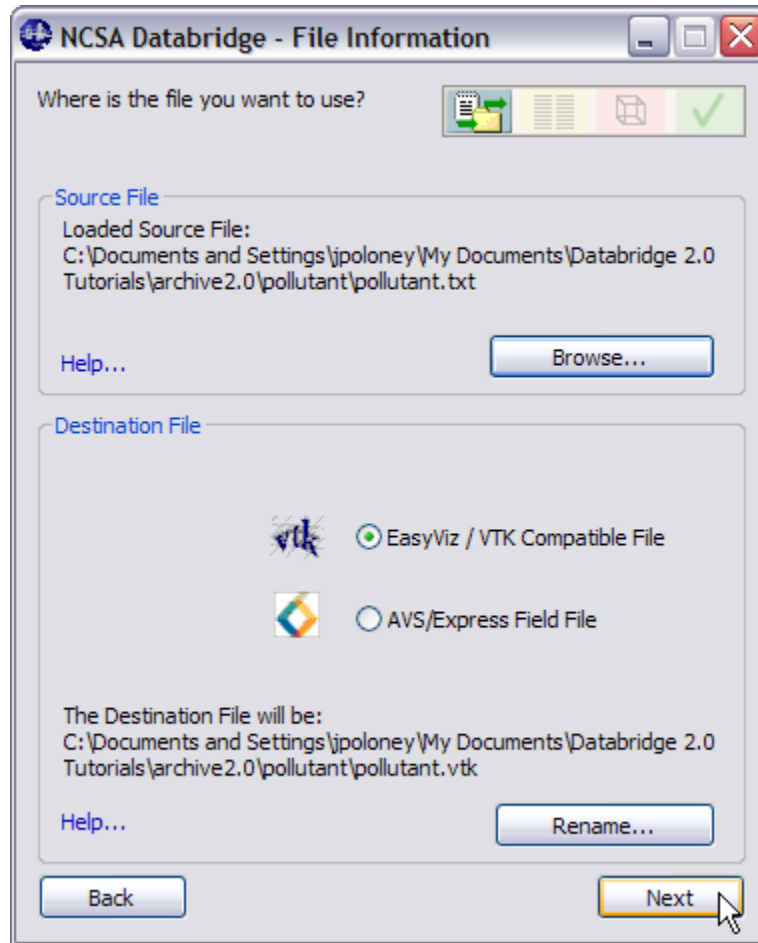
<http://www.morehead.unc.edu/revitalise/feb/case.html>

1. Load Databridge and you will be presented with this screen:



2. Click the Next button to continue.

3. On this screen, click Browse... and load the pollutant.txt file that came with this tutorial.



4. Choose a Destination File type. It will place the file in the same folder as the Source File. If you wish to change this, click the Rename button, and you can move it wherever you would like. For this tutorial, we will be using the EasyViz File format. Click the Next button to continue.

5. For this particular dataset, you will need to select the following options:
  - a. Other; in the text box type ,
  - b. No
  - c. Yes

Make sure Databridge is the same as below.

NCSA Databridge - Data Organization

How is your data organized?

What separator does the data use?

Spaces, Tabs, and/or Linebreaks

Other ,

Help...

Does the data have a header line?

Yes

No

Help...

Is your data in block format?

Yes

No

Help...

Back Next

6. Click the Next button to continue.

- Under Data Value, select All Data. If it isn't already, enter 0.000000 for the Null Value. Make sure Databridge is the same as below.

NCSA Databridge - Column Setup

Choose the columns of data that you want visualized.

What is the data's column format?

X Value    Y Value    Z Value    Data Value

           All Data

Please choose which data column you want as your block data. If all of your data is block data, choose the default "All Data" option. Refer to the links below for extra help.

Examples...    [Help...](#)

What Null Value will you assign?

Data Bridge will fill in missing data value(s) with this number:

   [Help...](#)

- Click the Next button to continue.

9. Make sure the 3-D Uniform button is selected. In the text boxes to the right of it, make sure they read:
  - a. Num. X: 20
  - b. Num. Y: 20
  - c. Num. Z: 20
  - d. Step X: 1
  - e. Step Y: 1
  - f. Step Z: 1

Make sure Databridge is the same as below.

NCSA Databridge - Data Type

What type of data are you dealing with?

**Scatter Data**

2-D Scatter  Interpolate

3-D Scatter  Interpolate

[Help...](#)

**Uniform Data**

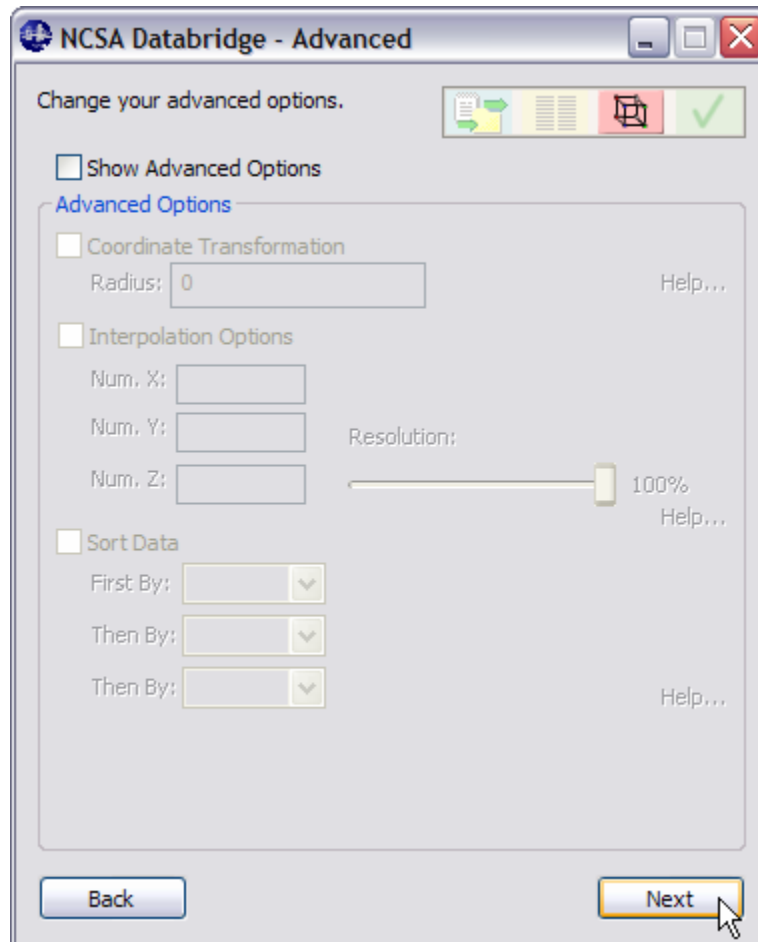
2-D Uniform Num. X: 2 Step X: 1  
Num. Y: 2 Step Y: 1

3-D Uniform Num. X: 20 Step X: 1  
Num. Y: 20 Step Y: 1  
Num. Z: 20 Step Z: 1

[Help...](#)

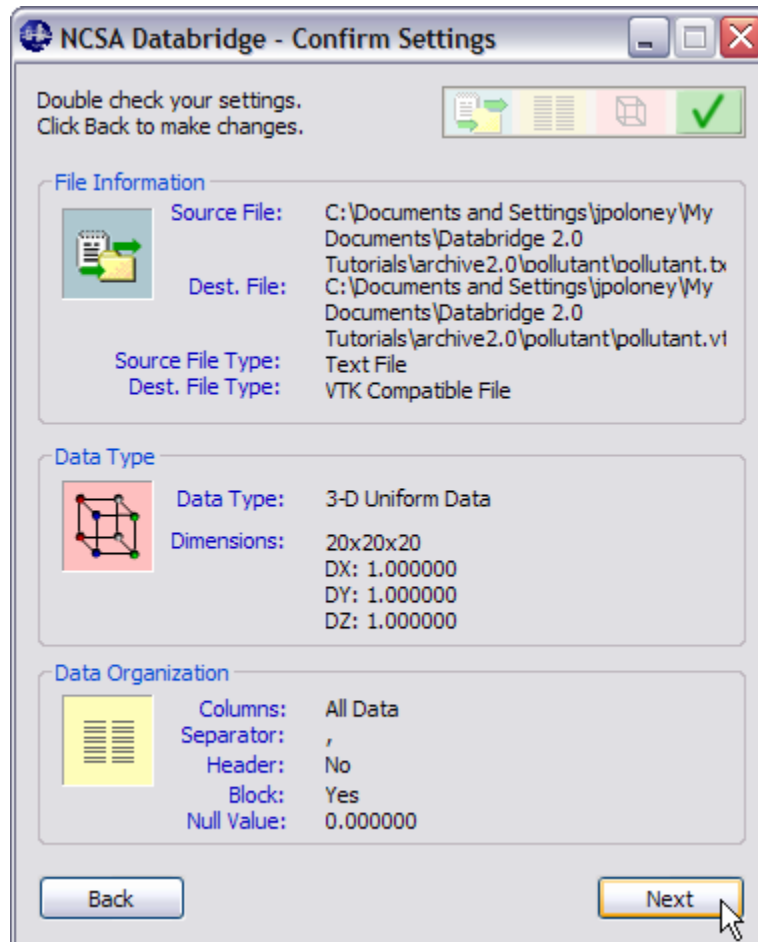
10. Click the Next button to continue.

11. Leave the Show Advanced Options checkbox unchecked.



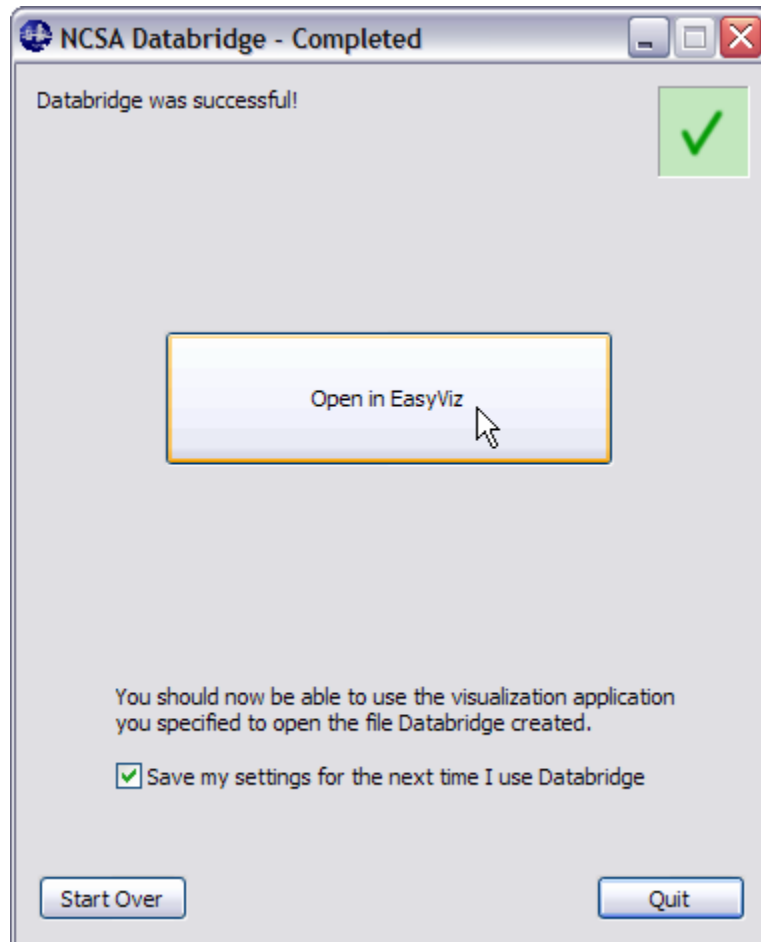
12. Click the Next button to continue.

13. This is a summary page of the settings that you have inputted.



14. Click the Next button to continue.

15. You can choose to save the settings for the next time you use Databridge or not.



16. Click the Open in EasyViz button to continue. This will close Databridge and open the file in EasyViz for you.

## So what exactly are you looking at??

This example helps with the difficulties in "seeing" how a pollutant permeates into soil when the soil itself obscures most observation. Study of such systems generally requires extracting data with probes or samples taken throughout the volume of interest - the data can then be reconstructed in a virtual environment.

Pollutants move through soil according to different mechanisms. Pollution above the water line (the "unsaturated zone") flows through the soil according to its own viscosity and the occasional mixing with rainwater during storm events. In the "saturated zone" below the water line, a pollutant will move both with the primary flow of the water and also diffuse, spreading out within the water itself. The pollutant occupies a volume known as a "plume".

Once loaded into EasyViz, you will notice that it looks like a large blue box. If you select Tools -> 3-D Tools -> 3-D Cross Section, you can set it up to view certain sections. Set Plane 1 to be X, Plane 2 to be Y, and Plane 3 to be Z. You should be able to move the slider-bars next to each plane to move the planes around. This is a great example to see how the pollution diffuses as you move each plane from one end to the other.

