

H8 - How to import surveying data

This how-to page reviews how to import a survey data layer consisting of x and y coordinates. Currently PCSWMM is unable to import into a background layer (or non-SWMM5 layer). The layers a user can import into include: *subcatchments, junctions, outfalls, dividers, storages, conduits, pumps, orifices, weirs and outlets*.

In order to import surveying data the points will have to be imported into the junctions SWMM5 layer as we are importing point coordinates. This will be done by creating a secondary project, importing the survey points as junctions and copying and pasting the imported junctions layer into a points background layer.

This exercise assumes you have an excel sheet containing three columns: Point id, x-coordinate and y-coordinate.

How to import surveying data

1. Open PCSWMM and select the project that the new surveying data is to be projected in.
2. Click the **Scenario Manager** (*plan*)  button and click **New**.

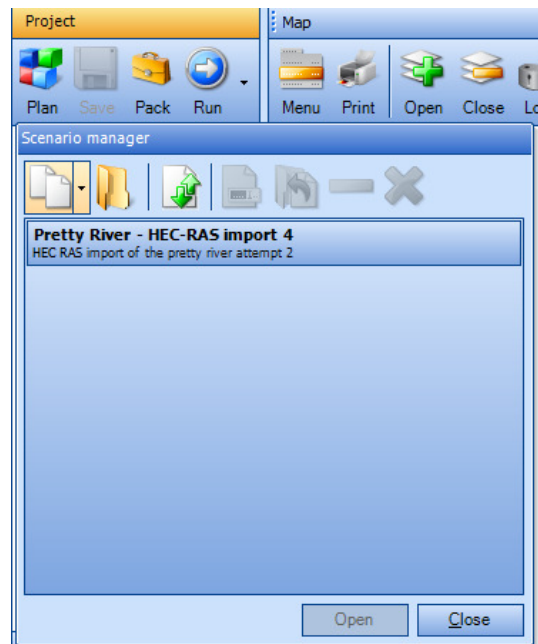





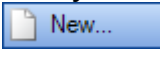


Figure 1 - Scenario manager illustrating New button

Note: The purpose of creating the new model is to import the surveying data into a new junctions layer. If the user were to import the surveying data into the current project the user may have difficulties separating the junctions that are part of the model and the junctions that are to be used for the new points layer.

3. Name the scenario as something indicating the scenarios purpose i.e. surveying import and click **Save**.
4. Open the new scenario by clicking on the **Scenario Manager**  button and selecting the scenario.
5. In the new scenario select the **Junctions** layer in the **Project Panel**.
6. Click the **Find/Select**  button and choose to **Select All**.
7. Click the **Delete Shape**  button to delete all the junctions in the model. This ensures that the only points being imported into this scenario are the surveying points that will be copied and pasted into a survey layer.

Creating and structuring surveying points layer

8. In the newly created scenario, click the **Layers**  button and select the **Open Layer**  button in the **Layers manager**.
9. Click the **New...**  button to create a new layer.
10. Select **Point** as the shape type and click **Ok**.

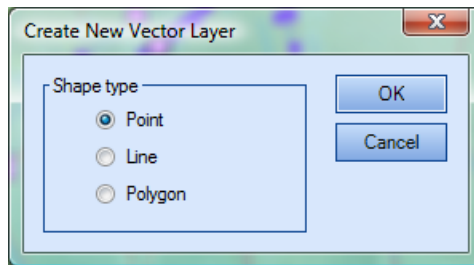




Figure 2 - Create new points layer

11. Name and Save the new points layer and click **ok**. For this help page the layer will be called *Points elevations*.
12. Click the **Layers**  button and select the new points layer or *Points elevations*.
13. Select the **Restructure**  button and click **Yes** to save the layer.
14. Click on the **Add button** and under **Name** type in **NAME** and under **Type** select **Text**.

- Repeat the previous step but add **ELEVATION (Type = Number)** and **CODE (Type = text)** and click **Save**.

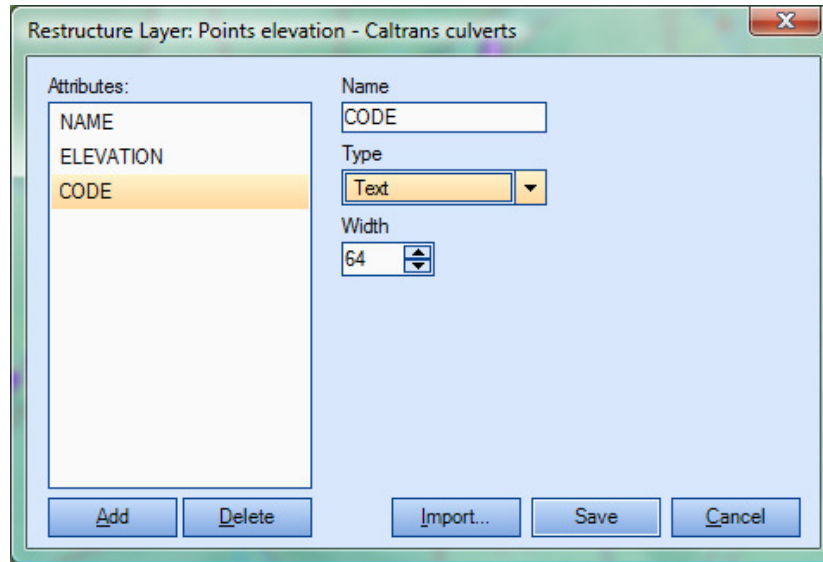



Figure 3 - Restructure dialog

Importing Surveying Data

- Click on **File** and select  **Import data...**
- Select to import **Microsoft Excel, Access or text/csv** file and click **Next**.
- Click **Browse...** and navigate to the location of the points sheet.
- Ensure the **JUNCTIONS** tab is selected and under **Source table** select the worksheet with the data to be imported.
- In the **Attributes matching** table match up the entities as shown in the screen shot below.

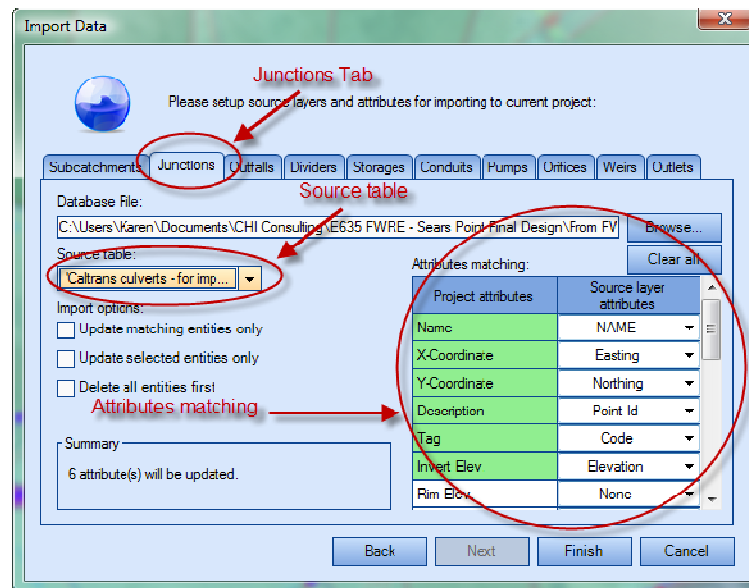











Figure 4 - Import excel junction data dialog

21. Ensure that none of the **import options** are select and click **Finish**.
22. An Import report will appear, click **Close**. The junctions should now appear in your model.
23. Select the **Junctions** layer in the **Project Panel** and click **Ctrl+A** to select all of the junctions.
24. Click **Ctrl+C** to copy all of the junctions in the junctions layer.
25. Click the **Layers**  button and select the newly created points layer and click the **Lock/Unlock**  button to unlock the layer (unless it is already unlocked) and click **Close** to close the **Layers manager**.
26. Click **Ctrl+V** to paste the junctions into the new points layer.
27. Click the **Layers**  button and uncheck the **Junctions** layer.
28. Open the **Table Panel**  and click on the **Tables**  **Tables** button and select the new points layer (**Points elevation**). You will notice that the only attribute that contains values is **Name**. We now have to populate the **ELEVATION** and **CODE** attributes using the **Replace** tool.
29. Click the **Layers**  button and select the new points layer or **Points elevations** and click **close** to close the layer manager.
30. Click **Ctrl+A** to select all of the points in the **Points elevations** layer.
31. Click on the **Tools**  button and select **Repace** under the wizards section of the tools menu.
32. In the **Multi-Attributes Editor** select to edit **ELEVATION** with the **Replace** Operation and choose to replace with an **Attribute from another layer**. Select the **Junctions** layer as the source layer, select to match entities by **NAME** and select **INVERTELEV** as the source attribute.
33. Click **Apply**.
34. Repeat the above steps and replace the **CODE** attribute from the **Points elevations** layer with the **Tag** attribute from the **Junctions** layer and click **Apply**.
35. Open the **Table Panel**  and click on the **Tables**  **Tables** button and select the new points layer (**Points elevations**). Ensure that all the attributes are populated with values.

Updated last: November 14, 2011

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