

Importing Patterns and Curves

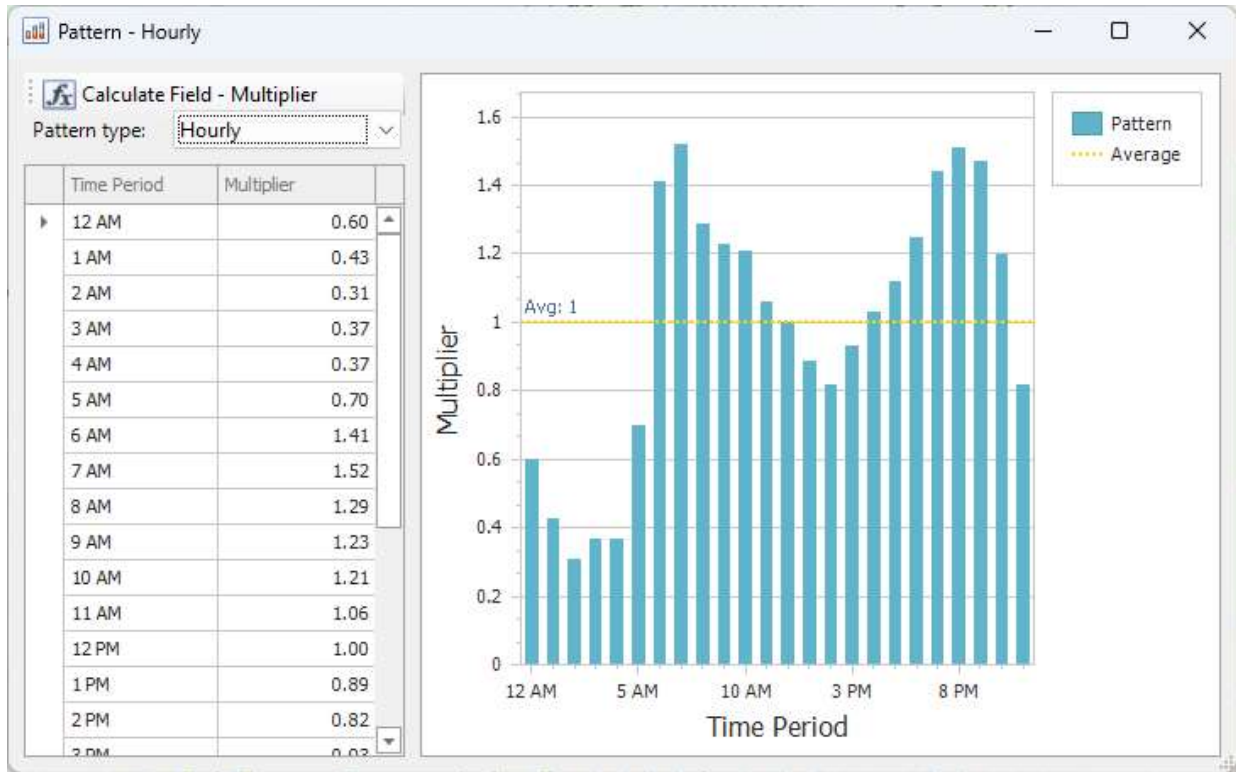


Figure 1: Example of a pattern in AquaTwin.

Contents

| | |
|----------------------|---|
| Import Patterns..... | 2 |
| Pattern Headers..... | 2 |
| Pattern Detail | 3 |
| Import Curves | 3 |
| Curve Headers | 3 |
| Curve Detail..... | 5 |

Import Patterns

Pattern Headers

1. Load a .csv file containing the pattern information into the ArcGIS Contents pane. You can do this via *Add Data* in the ArcGIS Map tab at the top of the screen.
2. Start by importing the pattern's header via the Import Center. Choose Pattern Header as the Asset type and the .csv sheet that contains the patten headers as the datasource.
3. Make sure the Update Options are set to *Create New* in the top right of the Import Center and that the Source data type is set to *Table* if a .csv file was imported in the ArcGIS contents pane. The format in the .csv file should be like **Figure 2**.

| | A | B |
|---|----------|------|
| 1 | ID Field | Type |
| 2 | Pattern1 | 2 |
| 3 | Pattern2 | 2 |

Figure 2: An example of a pattern header .csv fie.

The ID Field is used as the ID field in **Figure 3**. For AquaTwin Water, this is all that is needed, and the patterns can be imported.

The AquaTwin Sewer Pattern types (mapped from the .csv file in the *Digital Twin Data* tab in **Figure 3**) are:

- 0 for a monthly pattern.
- 1 for a daily pattern.
- 2 for an hourly pattern.
- 3 for a weekend pattern.

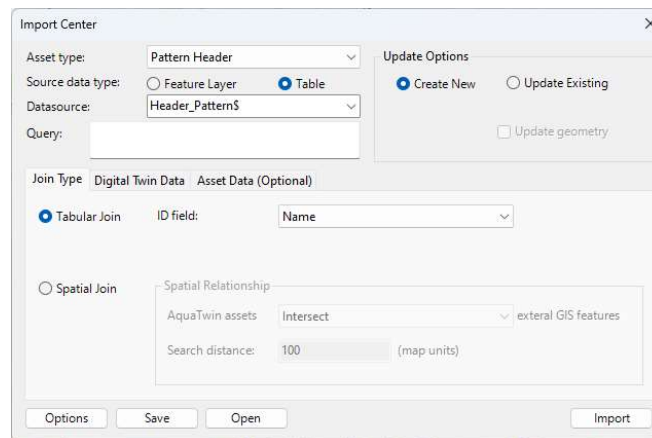


Figure 3: Importing pattern headers via the Import Center.

4. After importing, you will see the pattern(s) in the *Patterns* folder (Digital Twin tab of the Data Explorer) without the data, which will be imported in the next step.

Pattern Detail

1. Open the Import Center and choose Pattern Detail as the Asset type and the .csv sheet that contains the patten multipliers as the datasource. A *Time* field in the .csv file may come in handy when organizing the multiplier but is not needed for import (**Figure 4**).

| | A | B | C |
|---|------|----------|------|
| 1 | Name | Time | Mult |
| 2 | Test | 12:00 AM | 0.6 |
| 3 | Test | 1:00 AM | 0.43 |
| 4 | Test | 2:00 AM | 0.31 |
| 5 | Test | 3:00 AM | 0.37 |
| 6 | Test | 4:00 AM | 0.37 |
| 7 | Test | 5:00 AM | 0.7 |
| 8 | Test | 6:00 AM | 1.41 |

Figure 4: A sample of a .csv file for pattern detail import.

2. Map over the multiplier field in the Import Center as shown in **Figure 5** and click *Import*.

The screenshot shows the 'Import Center' dialog box. The 'Asset type' is set to 'Pattern Detail'. The 'Source data type' is set to 'Table'. The 'Datasource' is 'Data_Pattern\$'. The 'Update Options' are set to 'Create New'. The 'Join Type' is 'Digital Twin Data'. The 'Source data fields' list includes 'Name', 'Time', and 'ObjectID'. The 'Field mapping' section shows 'Multiplier' mapped to 'Mult'.

Figure 5: Example of the multiplier field being mapped over in the Import Center.

3. The patterns are now imported.

Import Curves

Curve Headers

1. Load a .csv file containing the curve information into the ArcGIS Contents pane. You can do this via *Add Data* in the ArcGIS Map tab at the top of the screen.
2. Start by importing the curves' header via the Import Center. Choose Curve Header as the Asset type and the .csv sheet that contains the curve headers as the datasource.
3. Make sure the Update Options are set to *Create New* in the top right of the Import Center and that the Source data type is set to *Table* if a .csv file was imported in the ArcGIS contents pane. The format in the .csv file in AquaTwin Sewer should be like **Figure 6**.

| | A | B | C |
|---|-----------|------|-----------|
| 1 | ID Field | Type | Pump Type |
| 2 | Test_Pump | 4 | 3 |

Figure 6: Example of .csv file importing curve header information for AquaTwin Sewer.

4. In AquaTwin Sewer, the curve type identifier are shown in **Table 1** and list of pump types in **Table 2**. The identifiers should be in the *Type* column in the .csv file.

Table 1: List of curve type import identifiers in AquaTwin Sewer.

| | |
|---|-----------|
| 0 | Storage |
| 1 | Shape |
| 2 | Diversion |
| 3 | Tidal |
| 4 | Pump |
| 5 | Rating |
| 6 | Control |
| 7 | Weir |

Table 2: List of pump curve type import identifiers in AquaTwin Sewer.

| | |
|---|--------|
| 0 | Type 1 |
| 1 | Type 2 |
| 2 | Type 3 |
| 3 | Type 4 |
| 4 | Type 5 |

5. For AquaTwin Water, all that is needed from **Figure 6** is the ID Field, since there is only one curve type.
 6. For AquaTwin Water, click *Import*. For AquaTwin Sewer, go the *Digital Twin Data* tab of the Import Center and map over the appropriate fields (**Figure 7**).

The screenshot shows the 'Import Center' dialog box. The 'Asset type' is 'Curve Header'. Under 'Source data type', 'Table' is selected. The 'Datasource' is 'Header_Pattern\$'. The 'Join Type' is 'Digital Twin Data'. In the 'Field mapping' section, 'Type' is mapped to 'PumpType'. The 'Update Options' section has 'Create New' selected. The 'Import' button is visible at the bottom right.

Figure 7: Import settings for pumps headers in AquaTwin Sewer.

Curve Detail

1. Open the Import Center and choose Curve Detail as the Asset type and the .csv sheet that contains the curve data as the datasource.
2. Map over the X and Y points of the curve in the *Digital Twin Data* tab of the Import Center (**Figure 7**) and click Import.