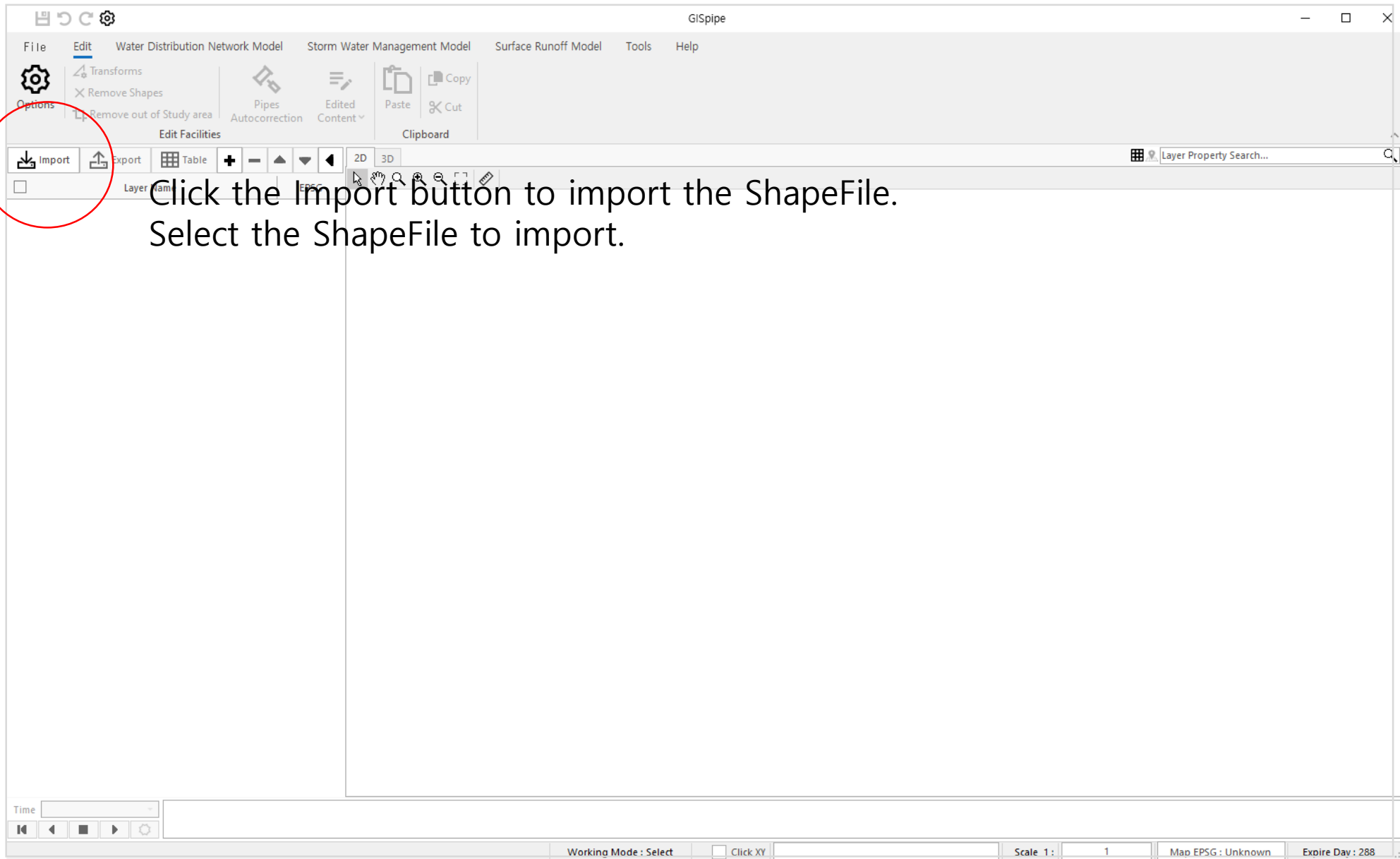
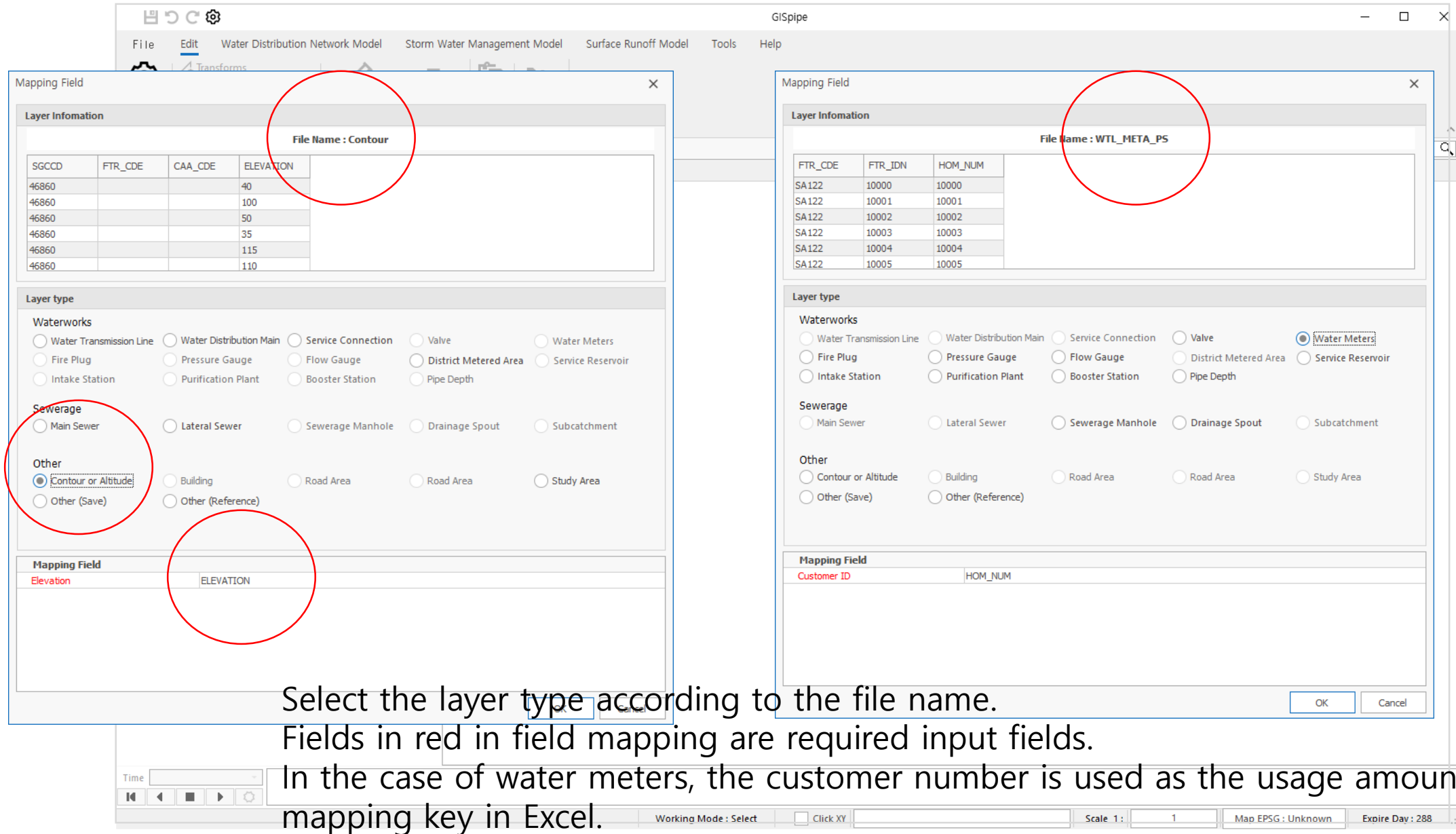


Create a Water Distribution Network model

- When creating a model, the pipeline layer and grid (elevation data) layer are absolutely necessary.
- The water meter layer is needed to distribute demand to nodes.
- A valve layer is needed to control the flow rate.

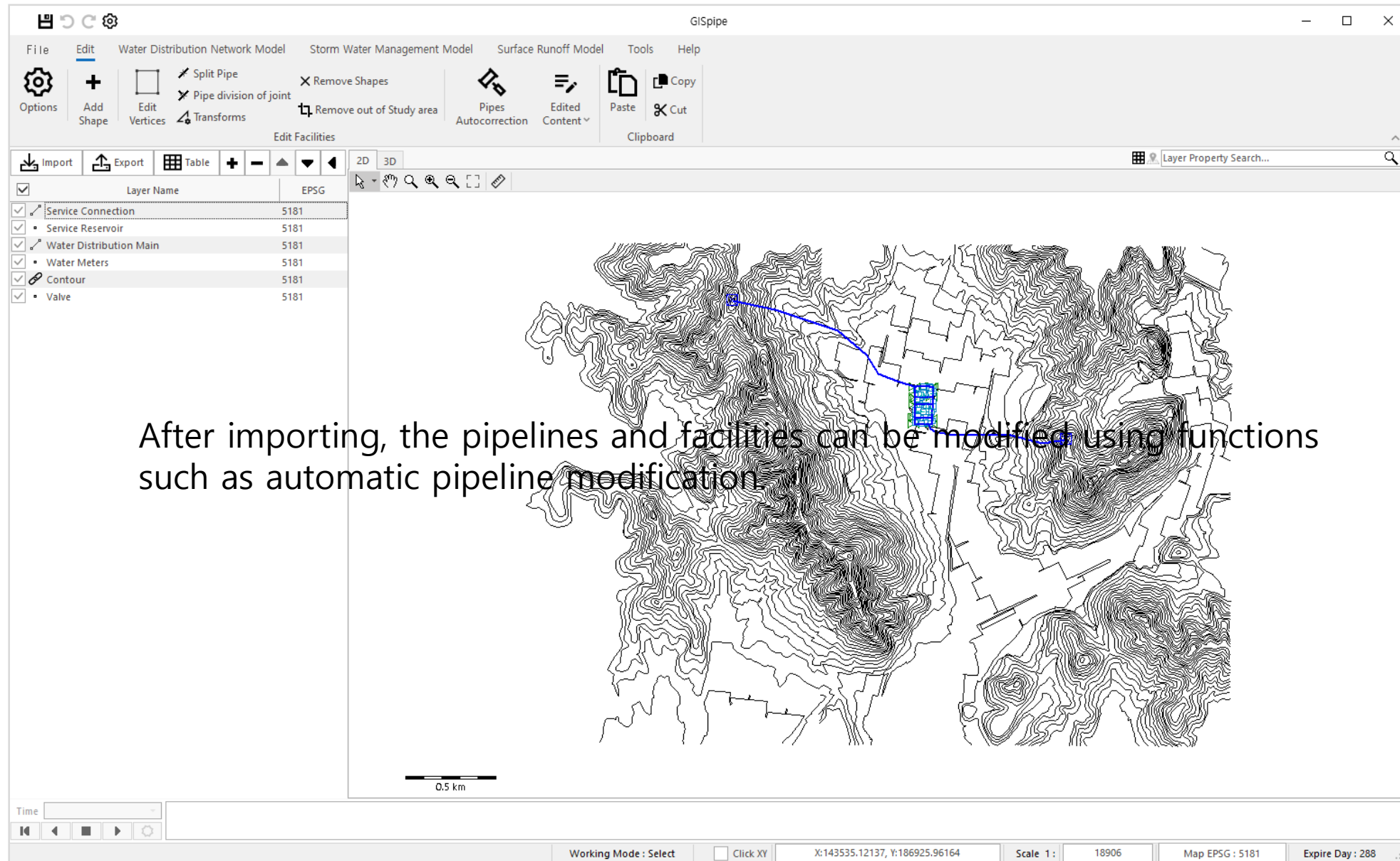


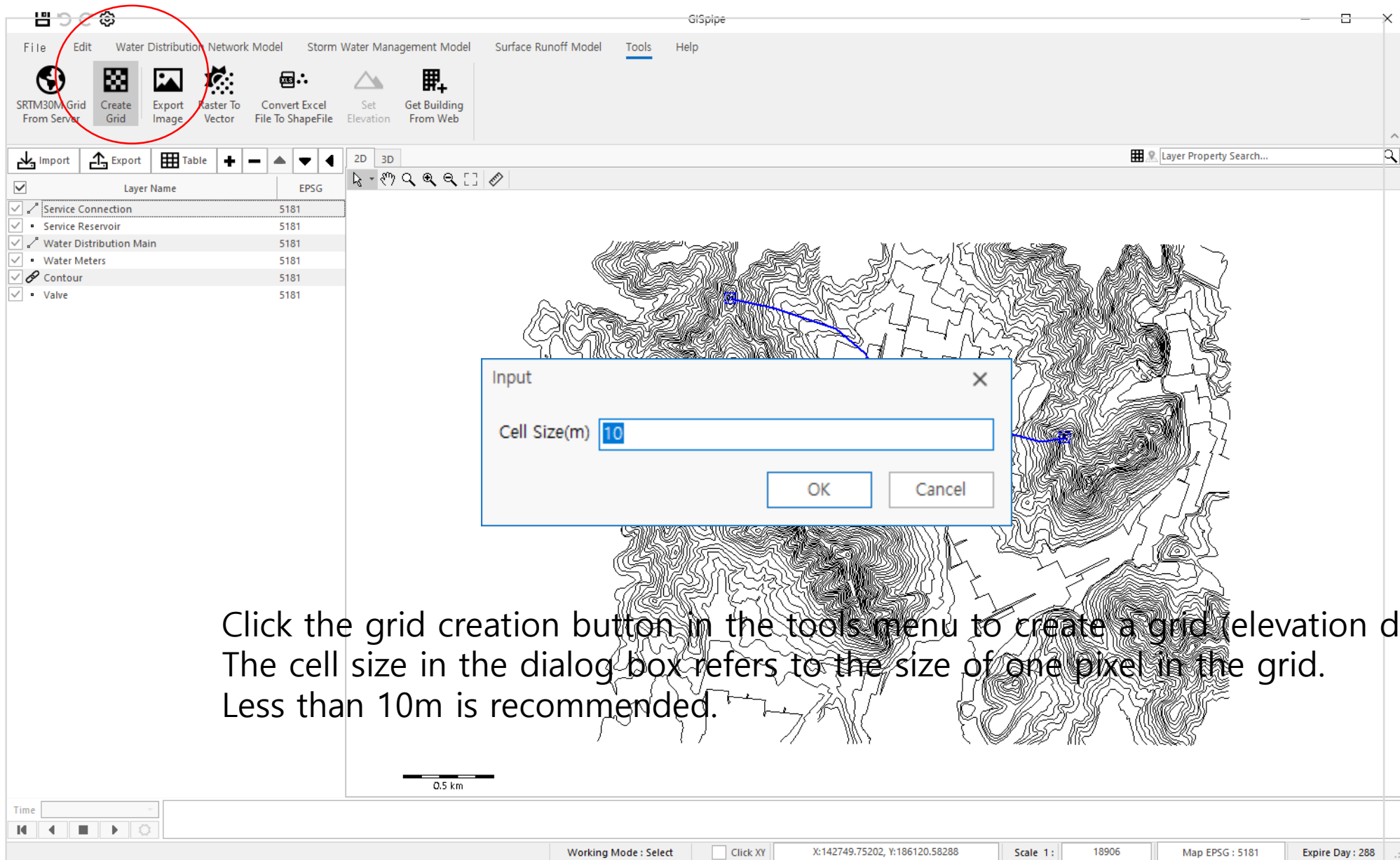


Select the layer type according to the file name.

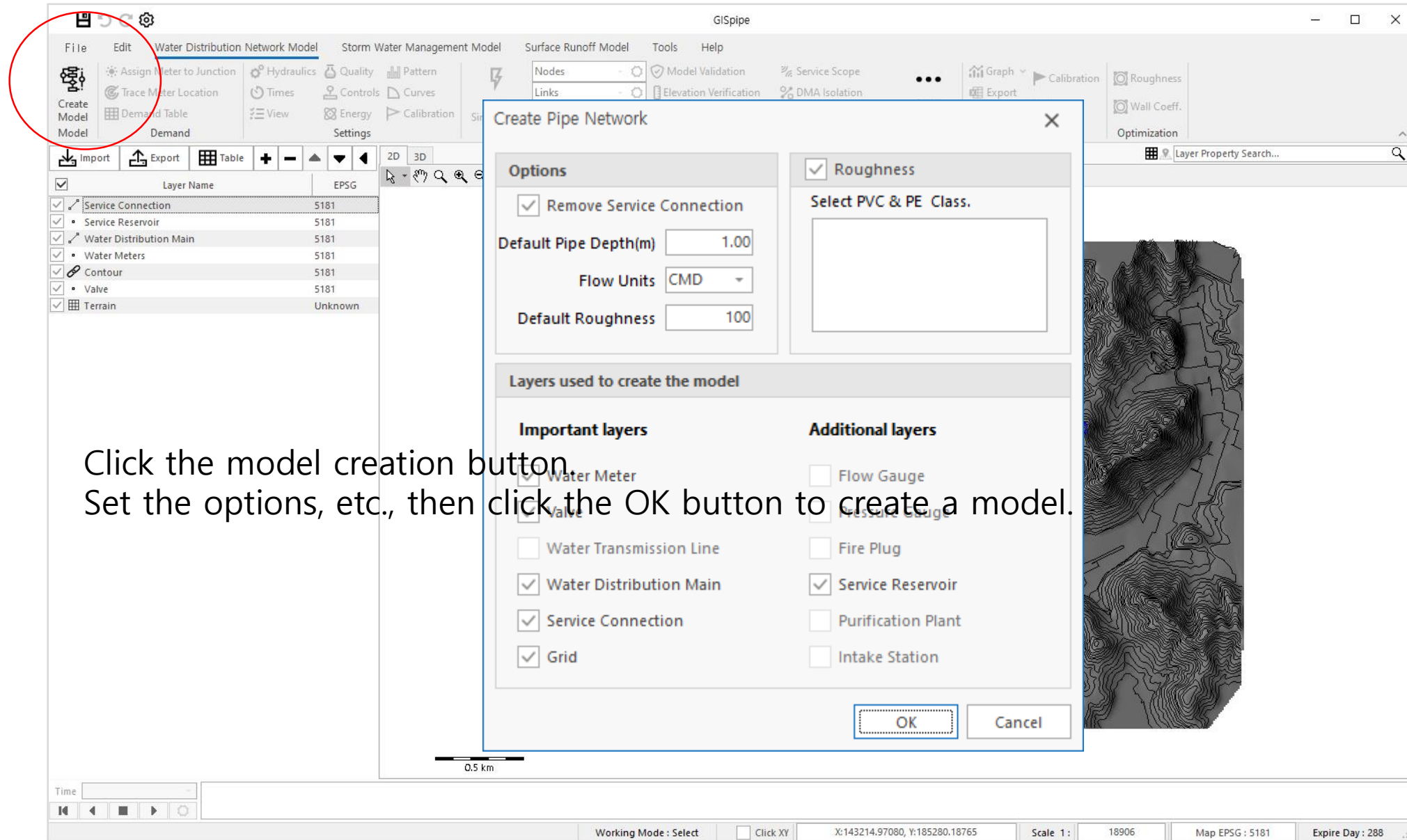
Fields in red in field mapping are required input fields.

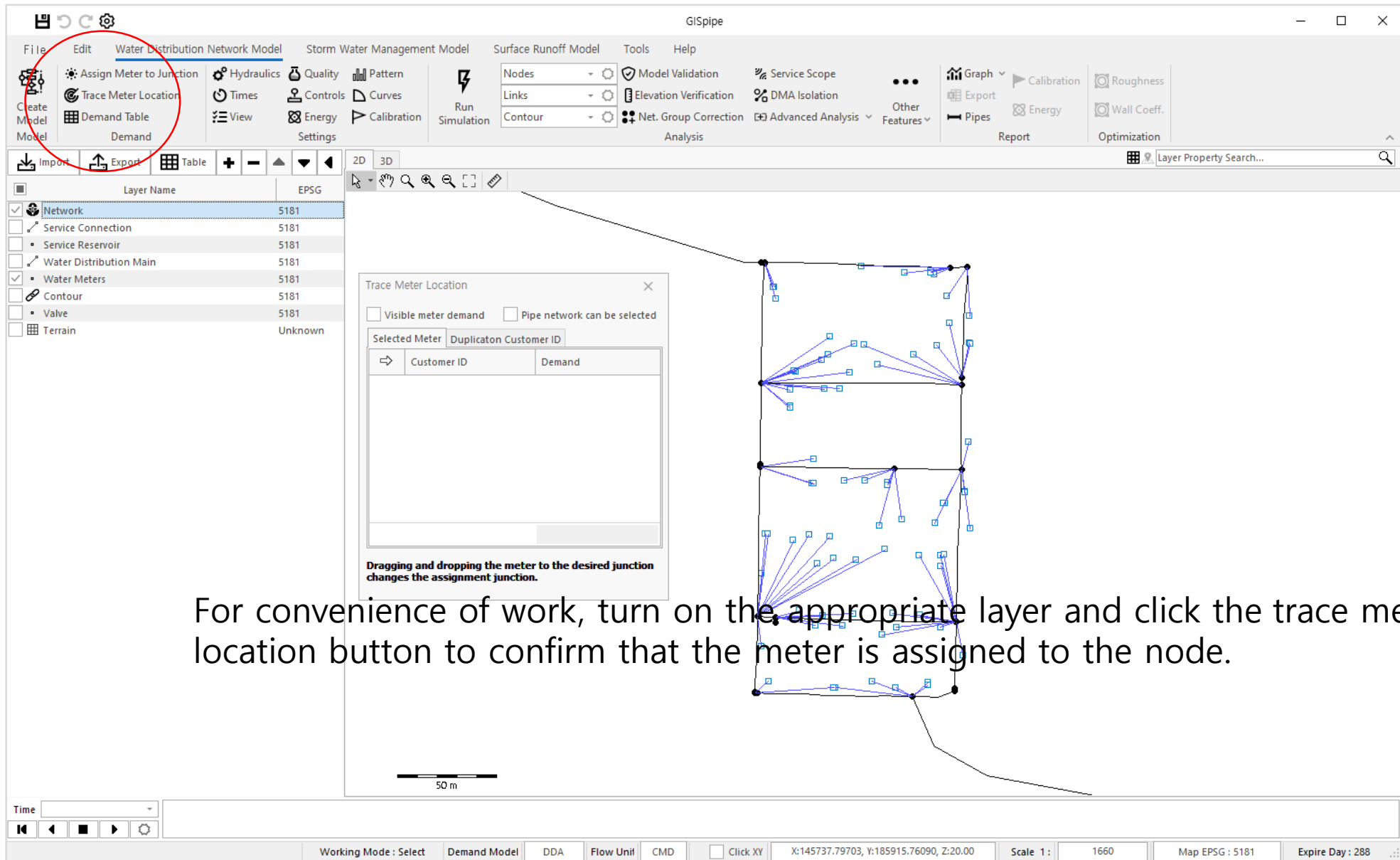
In the case of water meters, the customer number is used as the usage amount and mapping key in Excel.





Click the grid creation button in the tools menu to create a grid (elevation data). The cell size in the dialog box refers to the size of one pixel in the grid. Less than 10m is recommended.





GISpipe

File Edit Water Distribution Network Model Storm Water Management Model Surface Runoff Model Tools Help

Create Model Demand Table Assign Meter to Junction Trace Meter Location Hydraulics Times Controls Energy Settings Quality Pattern Curves Calibration Run Simulation Nodes Links Contour Model Validation Elevation Verification Net. Group Correction Service Scope DMA Isolation Advanced Analysis Graph Export Pipes Calibration Energy Report Roughness Wall Coeff. Optimization

Import Export Table + - 2D 3D Layer Name EPSG Layer Property Search...

Network 5181 Service Connection Service Reservoir Water Distribution Main Water Meters Contour Valve Terrain

Demand Table

Demand Input In Excel Category Distribution Emitter Distribution Delete Category Enter text to search... Enter text to demand... <=

Junction ID	Categories	Customer ID	Ratio	Business Sectors	Demand Patter	Demand	Customer Demand	Emitter Flow	Emitter Coeffici	DMA	Service Node
3	Base Demand		0.00			0.00		0.00	0.0000		
		10060	0.00			0.00	0.00				
		10036	0.00			0.00	0.00				
		10009	0.00			0.00	0.00				
		10050	0.00			0.00	0.00				
4	Base Demand		0.00			0.00		0.00	0.0000		
	Base Demand		0.00			0.00		0.00	0.0000		
5		10005	0.00			0.00	0.00				
		10047	0.00			0.00	0.00				
		10058	0.00			0.00	0.00				
6	Base Demand		0.00			0.00		0.00	0.0000		
		10037	0.00			0.00	0.00				
		10010	0.00			0.00	0.00				
		10049	0.00			0.00	0.00				
		10018	0.00			0.00	0.00				
		10074	0.00			0.00	0.00				
	10055	0.00			0.00	0.00					
						0.00	0.00	0.00			

Click the demand table.

50 m

Time

Working Mode : Select Demand Model DDA Flow Unit CMD Click XY X:145693.00225, Y:185916.63923, Z:20.00 Scale 1 : 1660 Map EPSG : 5181 Expire Day : 288

GISpipe

File Edit Water Distribution Network Model Storm Water Management Model Surface Runoff Model Tools Help

Create Model Model Assign Meter to Junction Trace Meter Location Demand Table Demand

Hydraulics Times View

Quality Controls Energy Settings

Pattern Curves Calibration

Import Export Table + - 2D 3D

Layer Name EPSG

Network 5181

Service Connection

Service Reservoir

Water Distribution Main

Water Meters

Contour

Valve

Terrain

Demand Table

Demand Input In Excel Category Dist

Junction ID Categories Custo

Base Demand 10060

10036

10009

10050

10007

3

Base Demand

Base Demand

10005

10047

10058

4

5

Base Demand

10037

10010

10023

10016

10074

6

Excel Batch Input

Open Excel File Remove existing data

Junction

Epanet Key Field

Excel Key Field

Water Meter ID

Description

Tag

Elevation

Base Demand 1 day

Pattern

Emitter Coeff.

Emitter Exponent

Initial Quality

Excel Sectors Field

Meta Customer ID

Junction ID

Asset ID

DMA Name

Service Node

Sheet1 Sheet2 Sheet3

Joined	Duplicate	Water Meter ID	1 day
		10000	6.66666666666667
		10001	6.66666666666667
		10002	6.66666666666667
		10003	6.66666666666667
		10004	6.66666666666667
		10005	6.66666666666667
		10006	6.66666666666667
		10007	6.66666666666667
		10008	6.66666666666667
		10009	6.66666666666667
		10010	6.66666666666667
		10011	6.66666666666667
		10012	6.66666666666667
		10013	6.66666666666667
		10014	6.66666666666667
		10015	6.66666666666667
		10016	6.66666666666667
		10017	6.66666666666667
		10018	6.66666666666667
		10019	6.66666666666667
		10020	6.66666666666667
		10021	6.66666666666667

Run Close

Time

Working Mode : Select Demand Model DDA Flow Unit CMD Click XY X:145693.00225, Y:185916.63923, Z:20.00 Scale 1: 1660 Map EPSG : 5181 Expire Day : 288

50 m

Click the Open Excel File button to load the Excel usage file.
Select the Excel key field (to retrieve usage that matches the meter customer number)
Select the base demand field.
Click then Run button.

The screenshot shows the GISpipe software interface with the Demand Table window open. The table displays the following data:

Junction ID	Categories	Customer ID	Ratio	Business Sectors	Demand Patter	Demand	Customer Demand	Emitter Flow	Emitter Coeffici	DMA	Service Node
3	Base Demand		0.00			33.33		0.00	0.0000		
		10060	0.20			0.00	6.67				
		10036	0.20			0.00	6.67				
		10009	0.20			0.00	6.67				
		10050	0.20			0.00	6.67				
		10007	0.20			0.00	6.67				
4	Base Demand		0.00			0.00		0.00	0.0000		
	Base Demand		0.00			20.00		0.00	0.0000		
5		10005	0.33			0.00	6.67				
		10047	0.33			0.00	6.67				
		10058	0.33			0.00	6.67				
6	Base Demand		0.00			0.00		0.00	0.0000		
		10037	0.09			0.00	6.67				
		10010	0.09			0.00	6.67				
		10049	0.09			0.00	6.67				
		10018	0.09			0.00	6.67				
		10074	0.09			0.00	6.67				
		10055	0.09			0.00	6.67				
						0.00	6.67				
						528.33	528.33	0.00			

A red circle highlights the total demand for junction 6, which is 528.33. The text "Check demand." is overlaid on the table.

