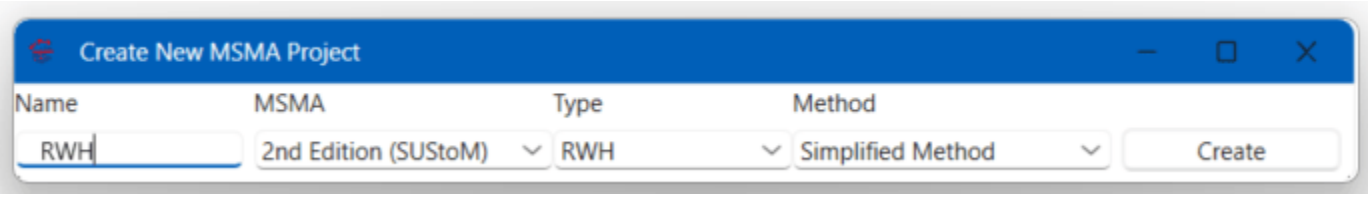
Designing Rainwater Harvesting Pond

MSMA 2nd Edition · https://mes100.com/docs/designing-rainwater-harvesting-pond-2/

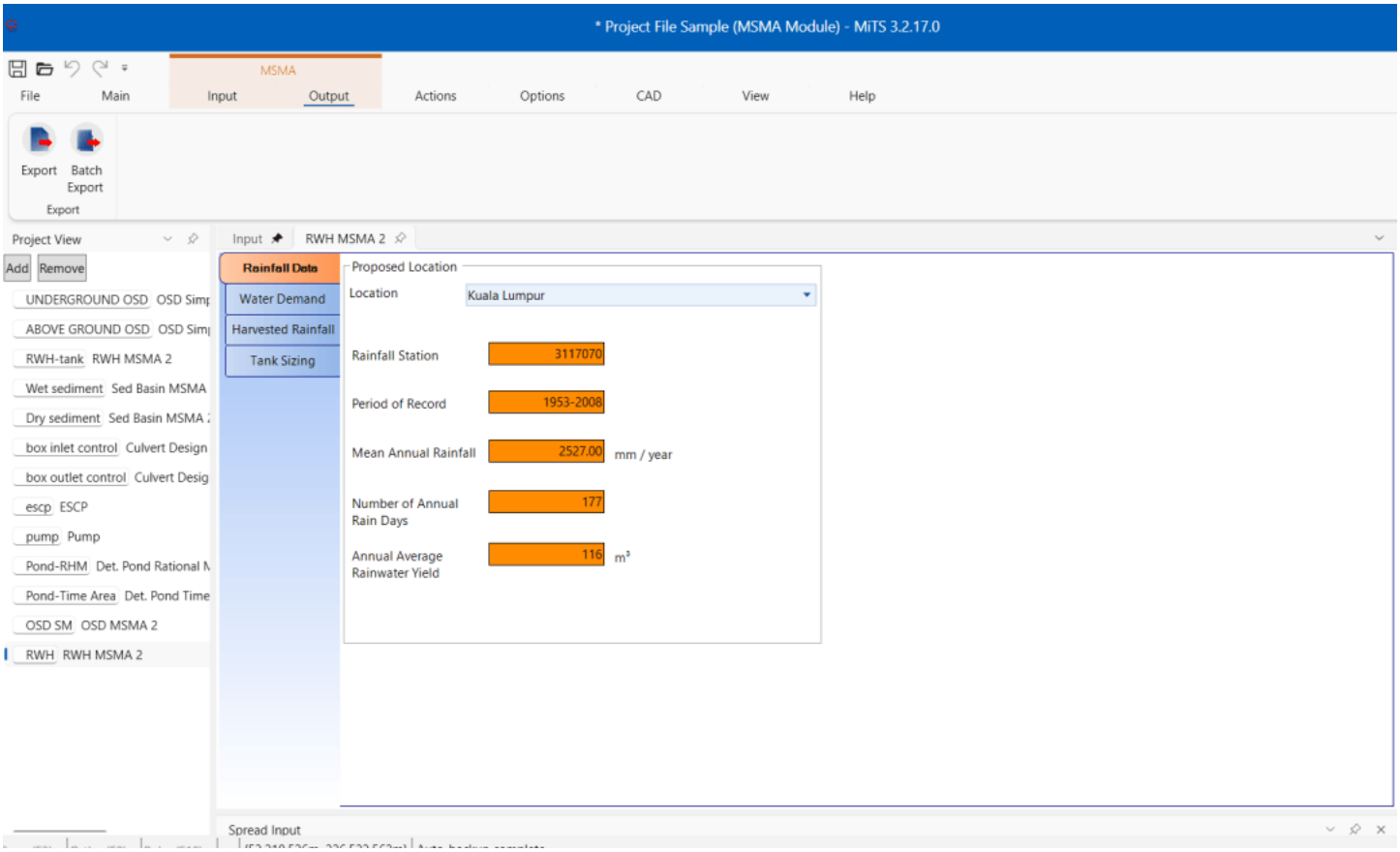
RWH (Simplified Method)

Click Add in Project View to create a new MSMA project. Choose RWH, select MSMA 2nd Edition, create the name of the project, select the method to be used and click Create. Method used in section 4.1 is Simplified Method.



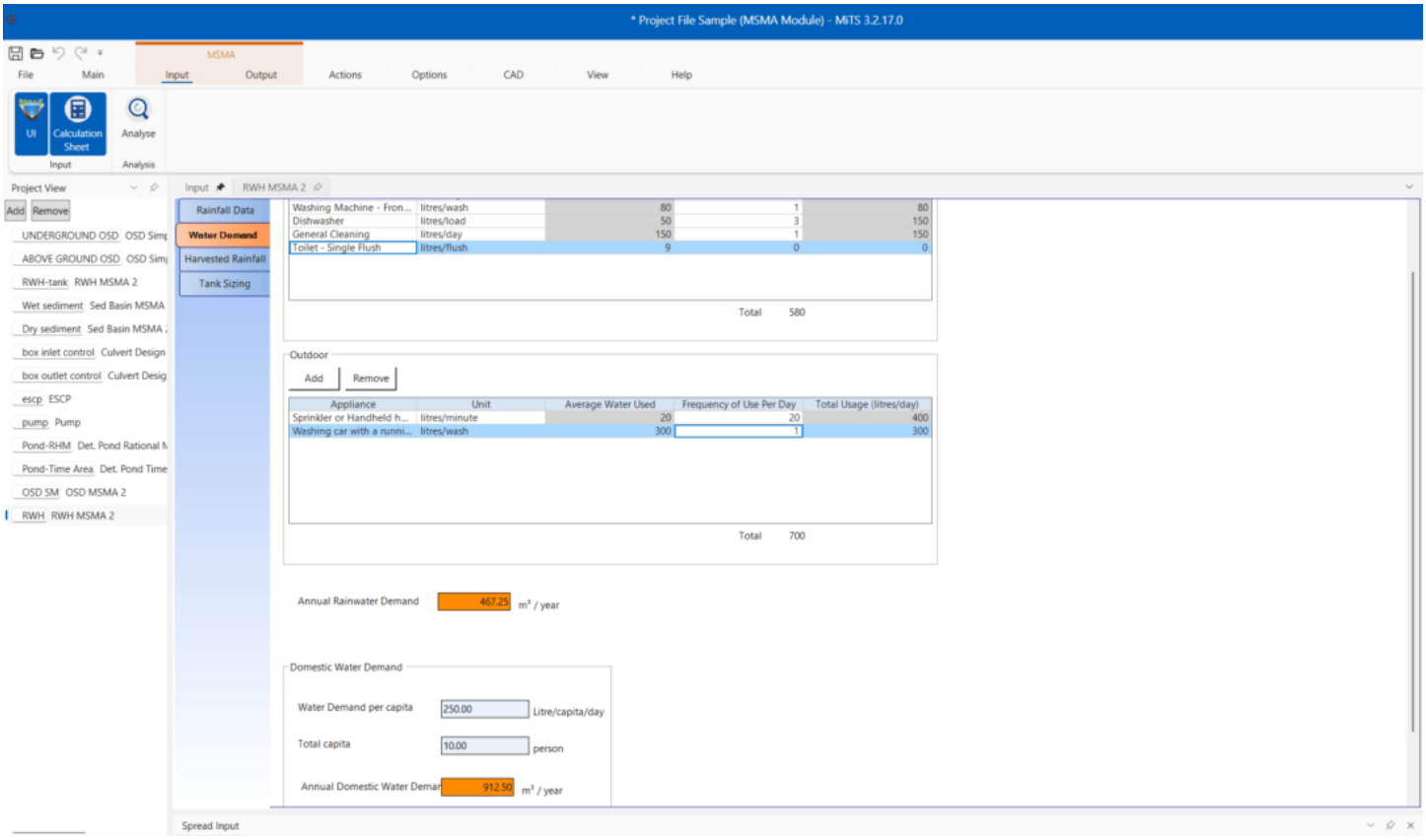
Rainfall Data

Select a location from dropdown list; Locations and values can be added/edited via options parameters RWH Rainfall Details.



Water Demand

Determine the amount of annual rainwater and domestic water demand by inputting data in the Water **Demand** tab.



For annual rainwater demand:

1. Choose the Appliance (outdoor/indoor).

2. Select the Unit.

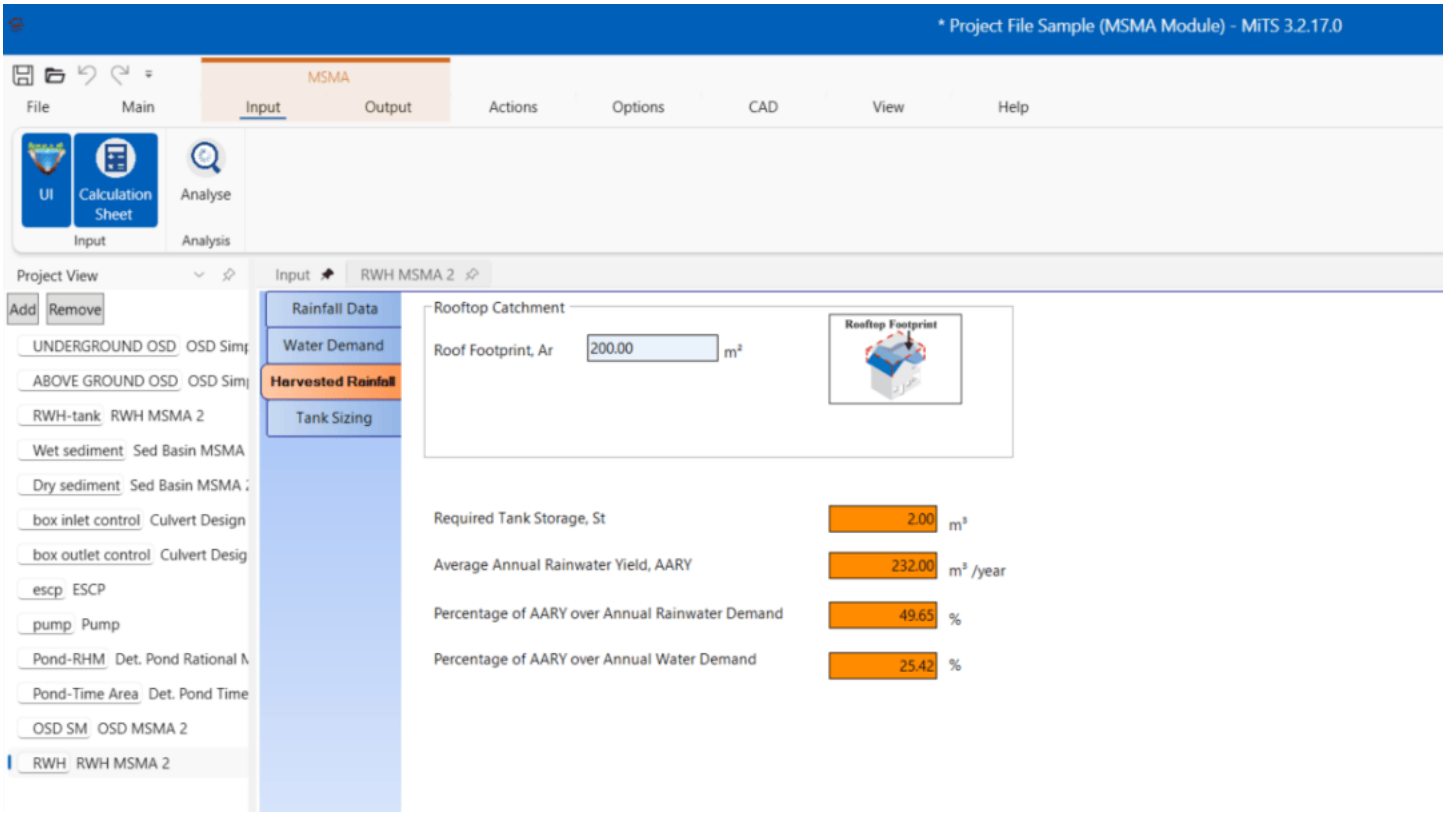
3. Input the Frequency of Use.

4. Provide water demand per capita, followed by total capita

5. Annual rainwater demand and annual domestic water demand will be computed automatically.

Harvested Rainfall

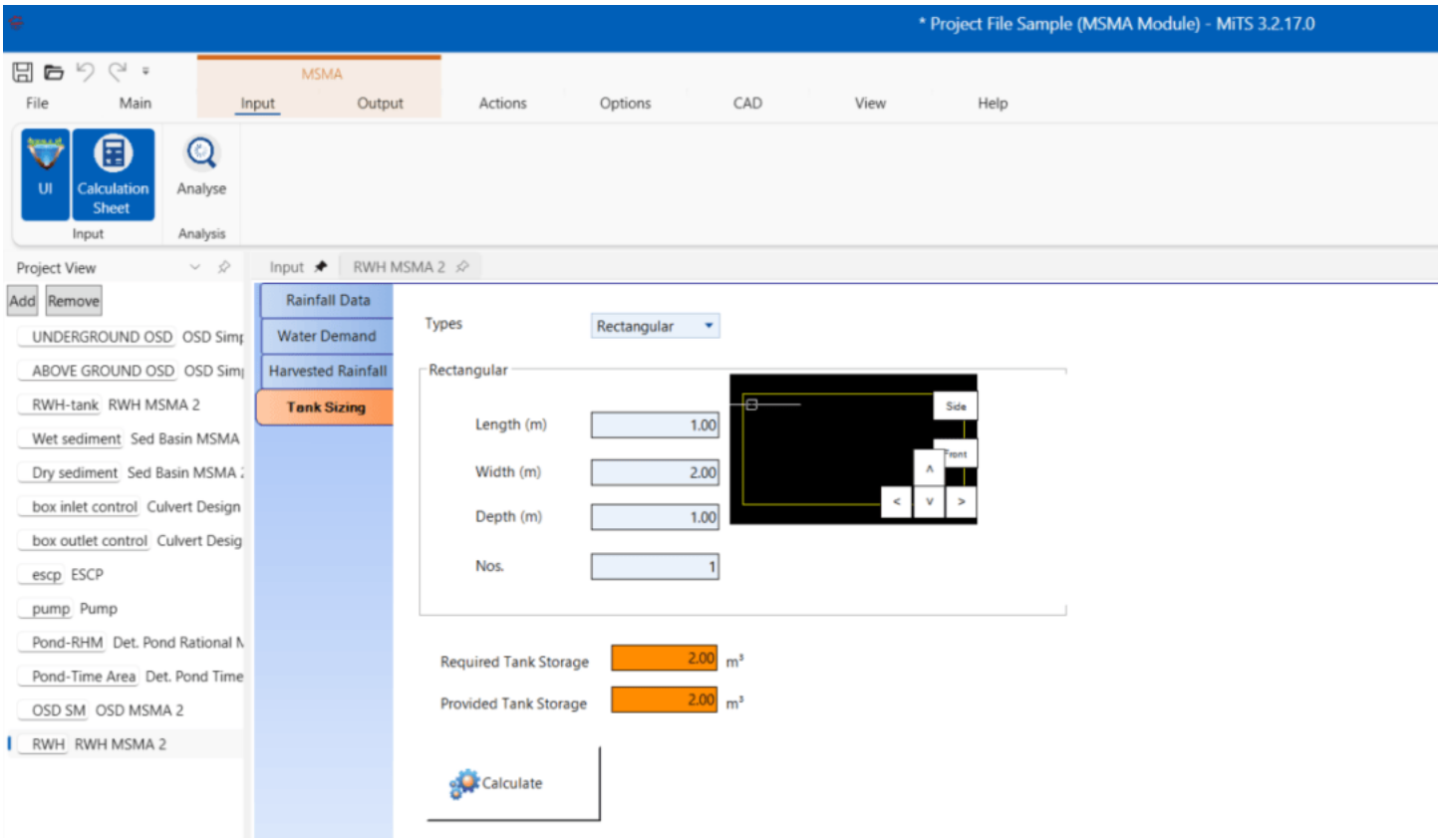
Determine the amount of harvested rainfall by inputting data in the Harvested **Rainfall** tab.



1. Input the plane area of rooftop catchment, and press “Enter” on the keyboard.
2. Design results will be calculated automatically

Tank Sizing

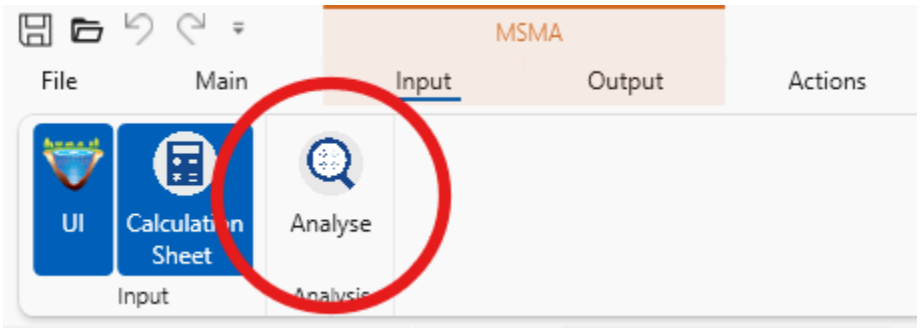
Design tank volume by inputting data in **Tank Sizing** tab.



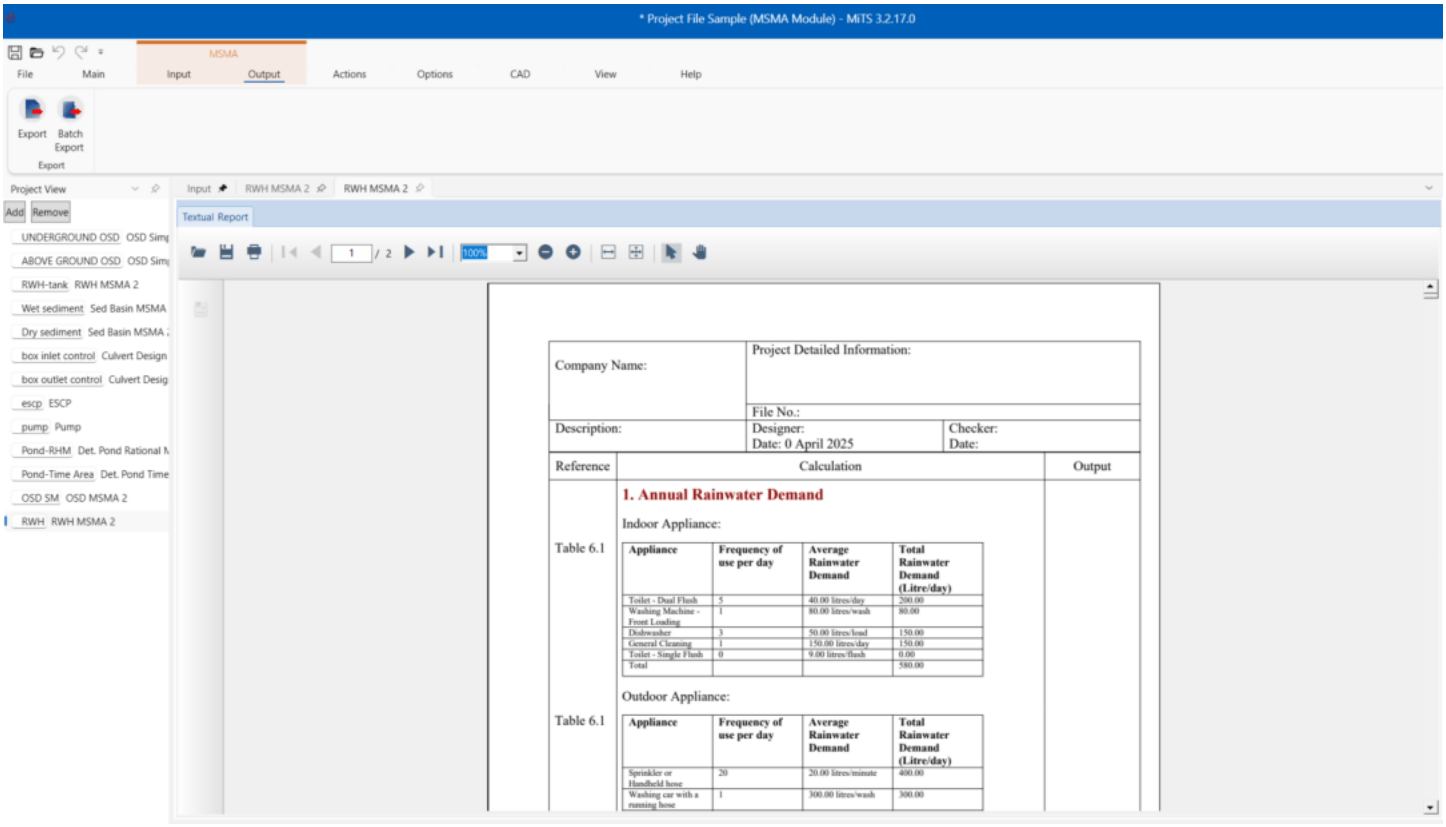
1. Select the type of the tank (rectangular or circular).
2. Input the dimension of the tank.
3. Click the " **Calculate**" button to obtain Tank Storage volume.

Result

Click the " **Analyse"** button to generate the result.

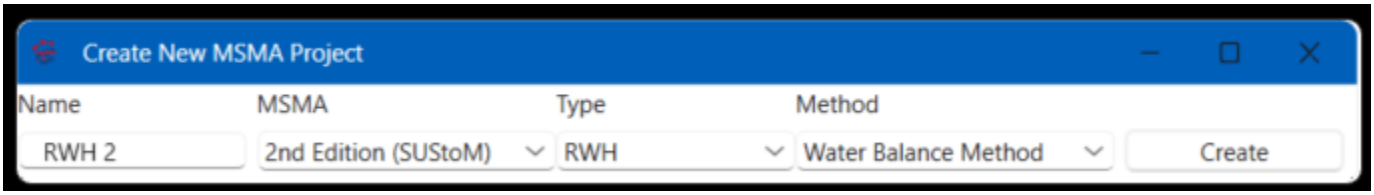


Textual Report of rainwater harvesting design is generated.



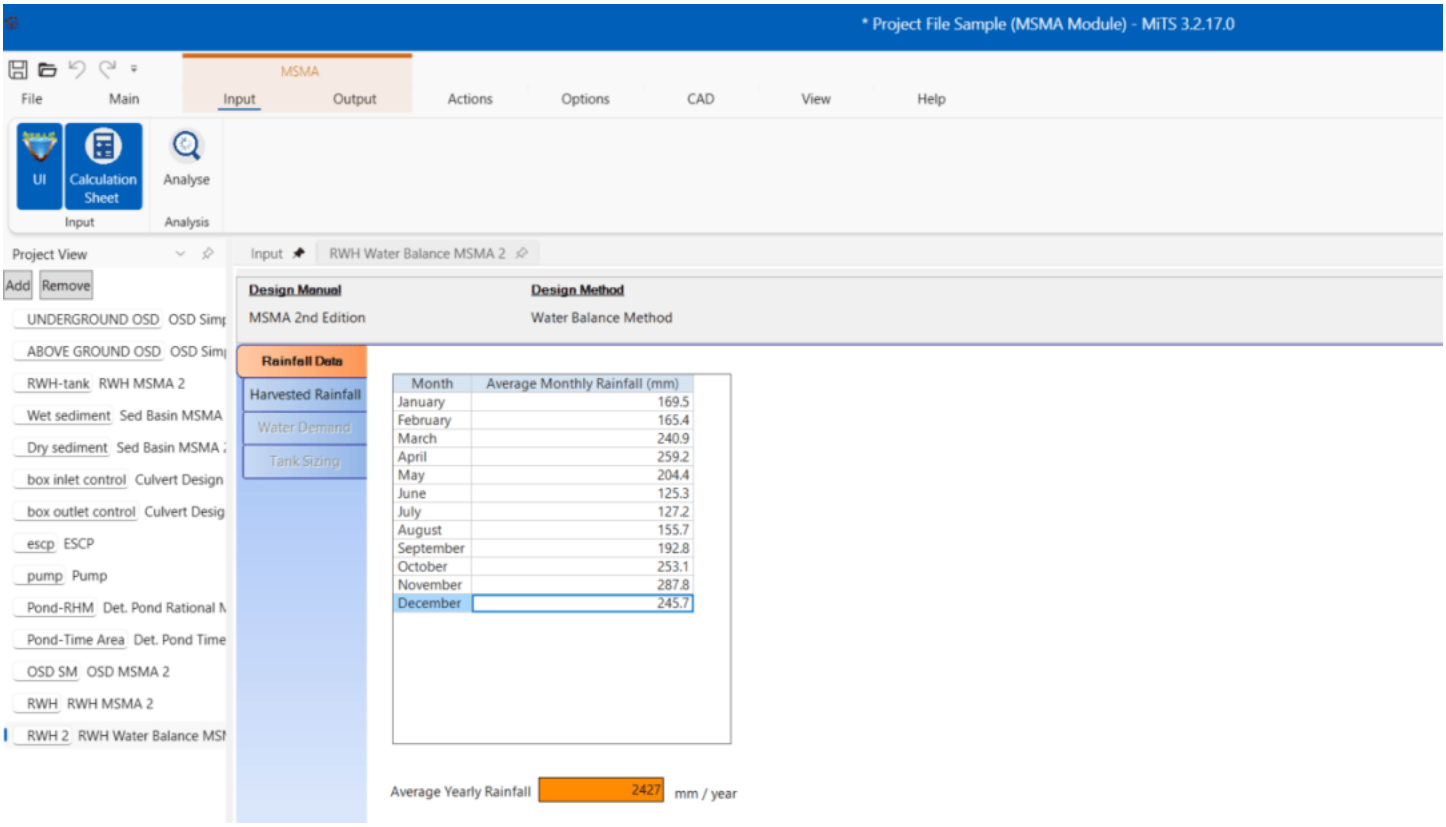
RWH (Water Balance Method)

Click Add in Project View to create a new MSMA project. Choose RWH, select MSMA 2nd Edition, create the name of the project, select the method to be used and click Create. Method used in section 4.2 is Water Balance Method.



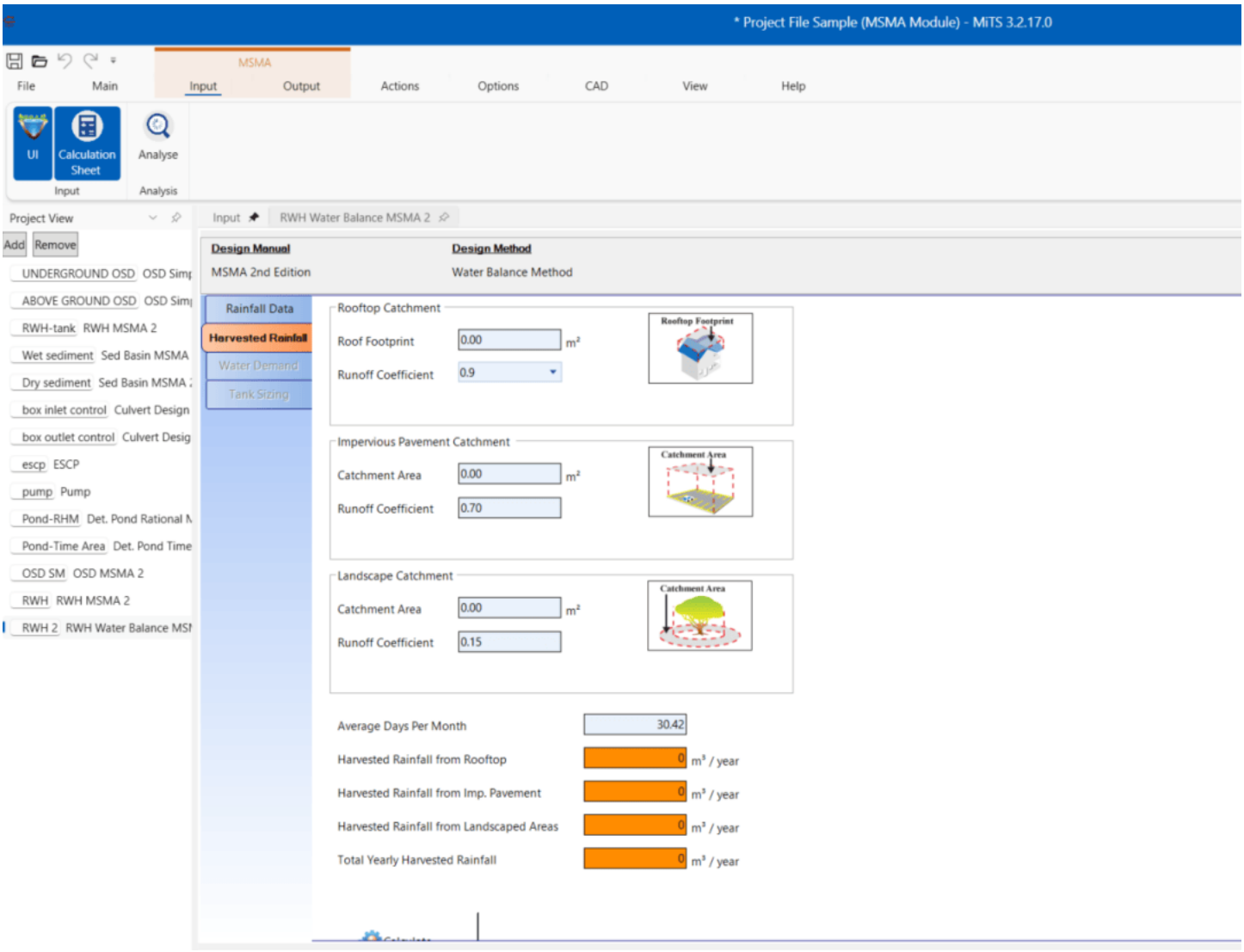
Rainfall Data

Determine the average yearly rainfall by inputting the average monthly rainfall from January to December.



Harvested Rainfall

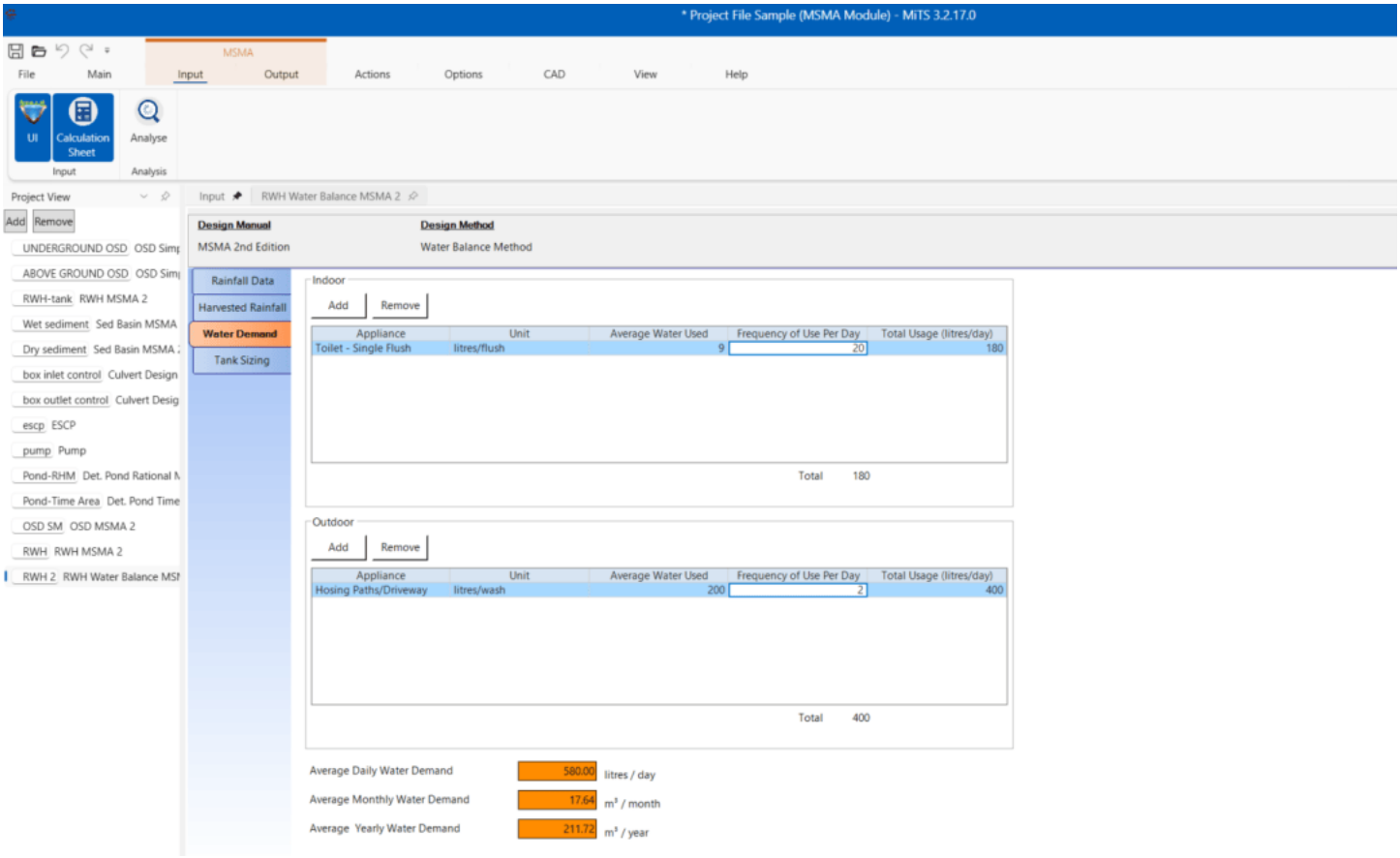
Determine the amount of harvested rainfall by inputting data in the Harvested **Rainfall** tab.



1. Input the plane area of rooftop catchment, impervious pavement catchment, and/or landscape catchment.
2. Input the runoff coefficient of rooftop catchment, impervious pavement catchment, and/or landscape catchment.
3. Click on the “ **Calculate**” button to obtain the harvested rainfall from different types of catchment areas and total yearly harvested rainfall.

Water Demand

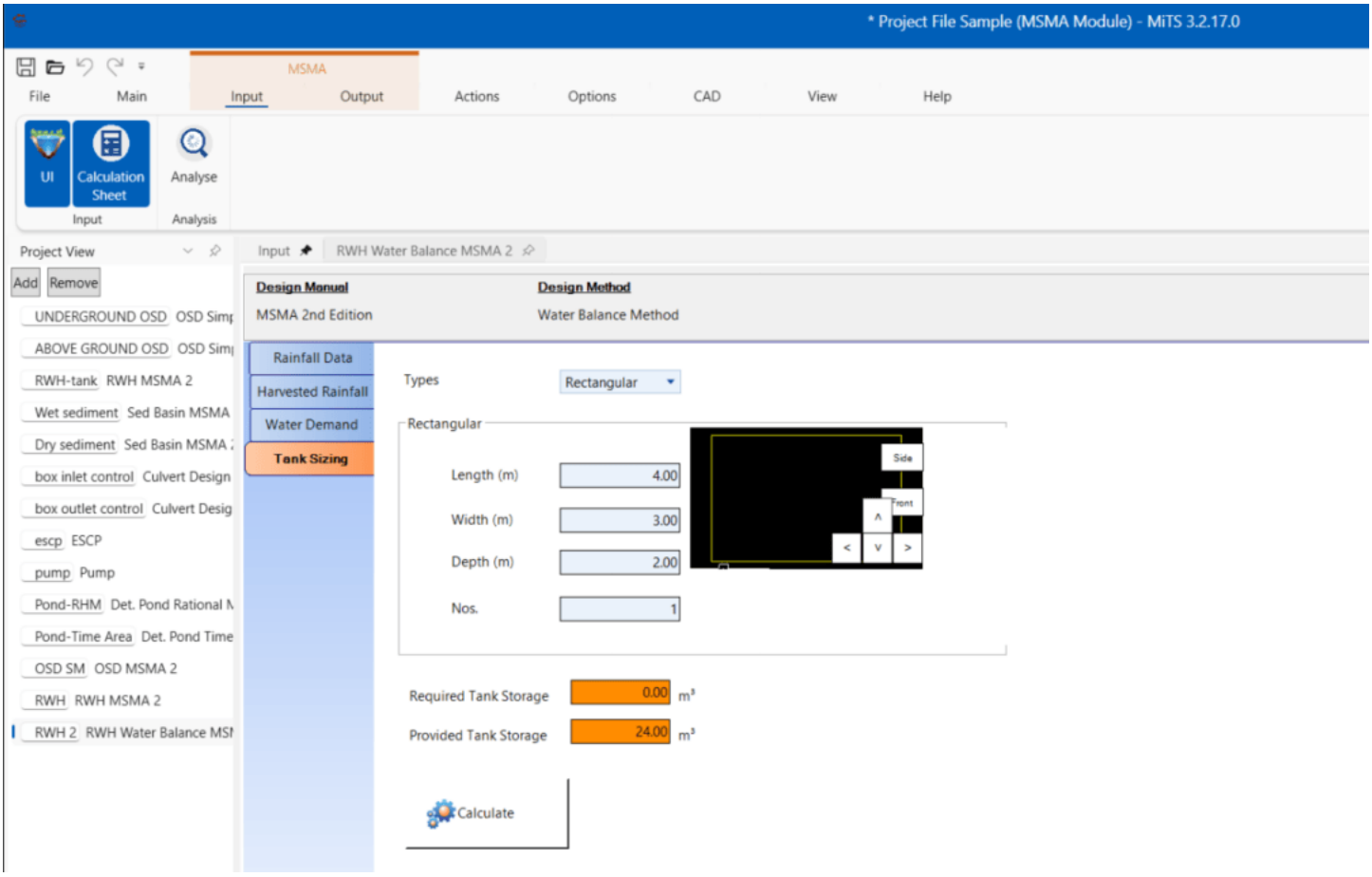
Determine the amount of water demand by inputting data in the Water **Demand** tab.



1. Choose the Appliance (outdoor/indoor).
2. Select the Unit.
3. Input the Frequency of Use.
4. Click on “ **Calculate**” to obtain average water demand and required tank storage.

Tank Sizing

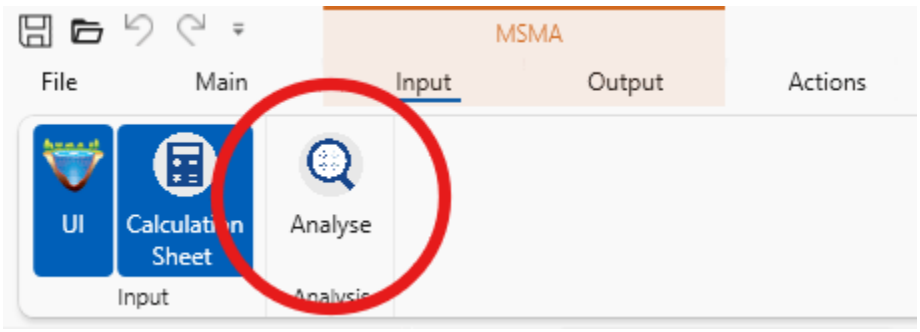
Design tank volume by inputting data in **Tank Sizing** tab.



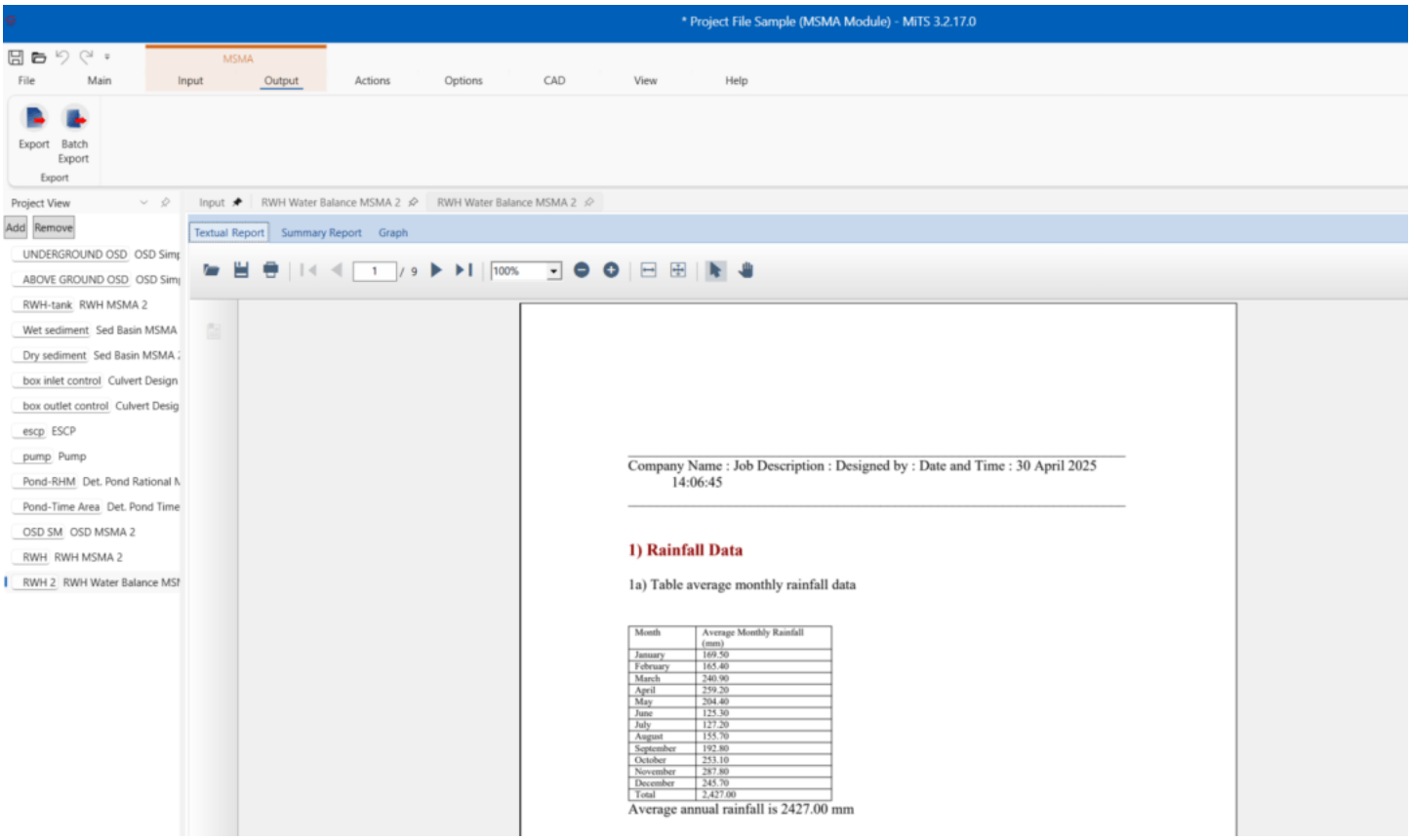
1. Select the type of the tank.
2. Input the dimension details of the tank type.
3. Click the " **Calculate**" button to obtain Tank Storage.

Result

Click the " **Analyse"** button to generate the result.



Click **Textual Report**, **Summary Report,** or **Graph** tabs to show the outcomes respectively.



Related



Ngu Soon Hui

I'm the Benevolent Dictator for Life for MiTS Software cum Editor of this website. Read more here.

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