

# Watershed

Updated on 04 Mar 2024 · 4 Minutes to read · Contributors 

In this section, you will look at:

- [\*\*What is Watershed?\*\*](#)
- [\*\*Generating Watershed Analysis\*\*](#)

## What is Watershed?

Watershed is an area of land that sheds or drains water into a large waterbody. All waterbodies have a watershed. Watersheds drain rainwater and snowmelt into streams and rivers, which in turn flow into lakes and oceans.

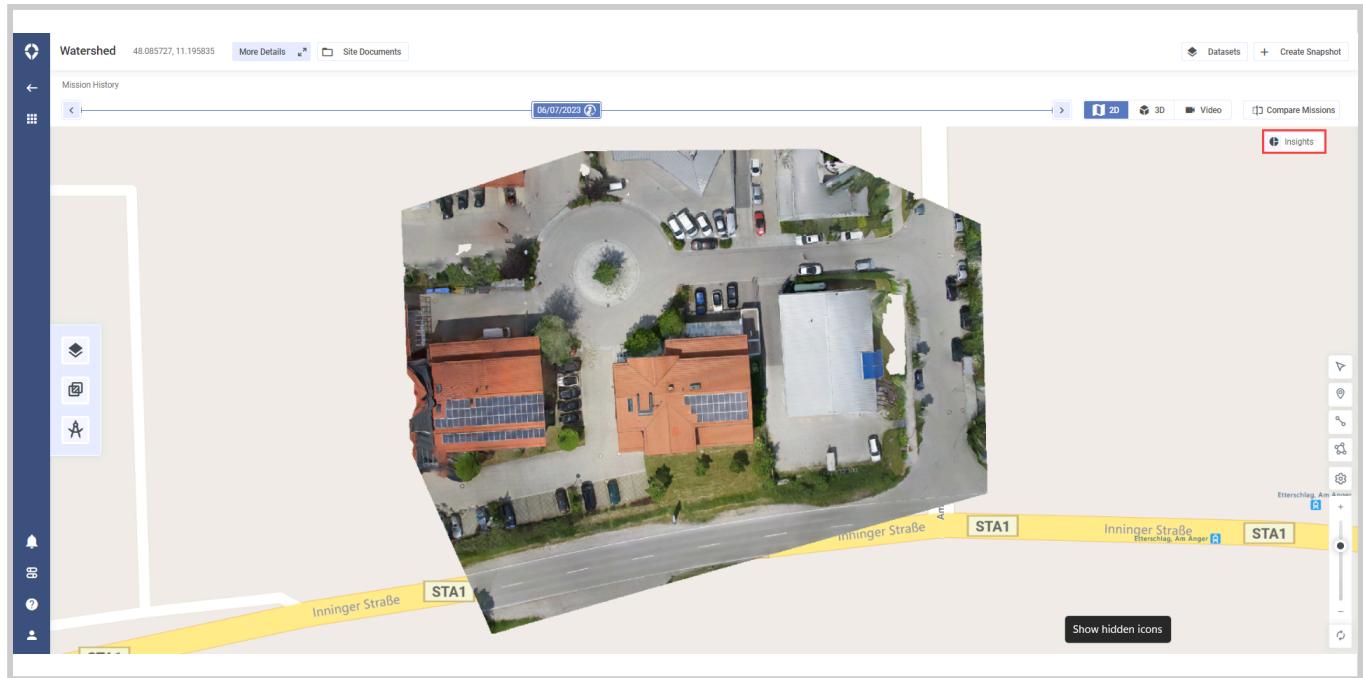
Watershed analysis process uses Digital Elevation Models (DEMs) to identify watersheds at different spatial scales and display streams, catchments, basins and so on. A large watershed covers an entire stream system. There may be smaller watersheds within the large watershed, one for each tributary in the stream system. Watersheds can be as small as a footprint or large enough to cover all the land that drains water into rivers, which in turn drain into bays, seas or oceans.

## Uses of Watershed Analysis

- **Water Quality Management:** Watershed analysis helps identify sources of water pollution and assess the impact of pollutants on water quality. This information is crucial for implementing measures to mitigate pollution.
- **Flood Prediction and Management:** By analyzing where the water comes from, how water moves through the terrain and where it is going, it's possible to predict flood risks and develop floodplain maps. This information is vital for floodplain management and disaster preparedness.
- **Water Resource Management:** Watershed analysis can help make informed decisions for allocating and managing water resources for drinking, agriculture, industry and other purposes. This can also prove useful during periods of drought.
- **Ecological Impact Assessment:** Watershed analysis helps in planning ecological conservation and restoration activities by identifying the impact of land use changes and human activities on aquatic and terrestrial ecosystems within a watershed.

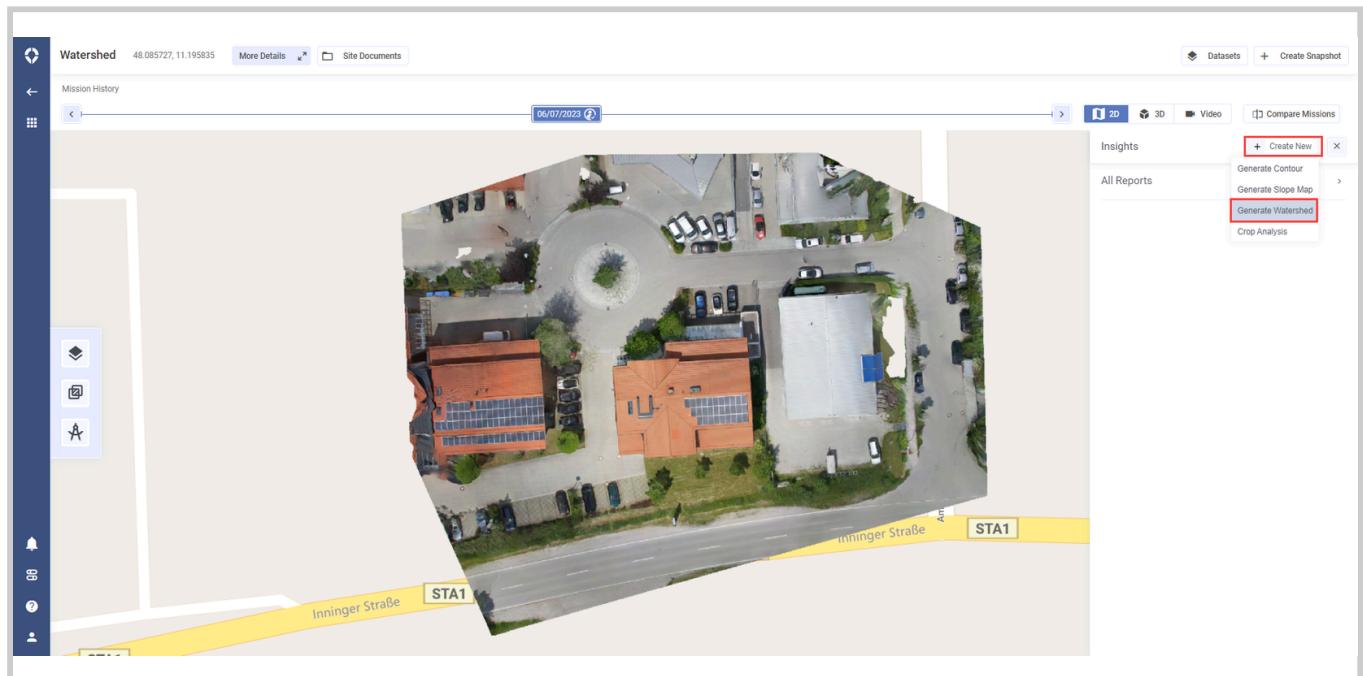
## Generating Watershed Analysis

1. Open the site and select the snapshot where you want to generate the watershed analysis.
2. On the map area, click **Insights**.



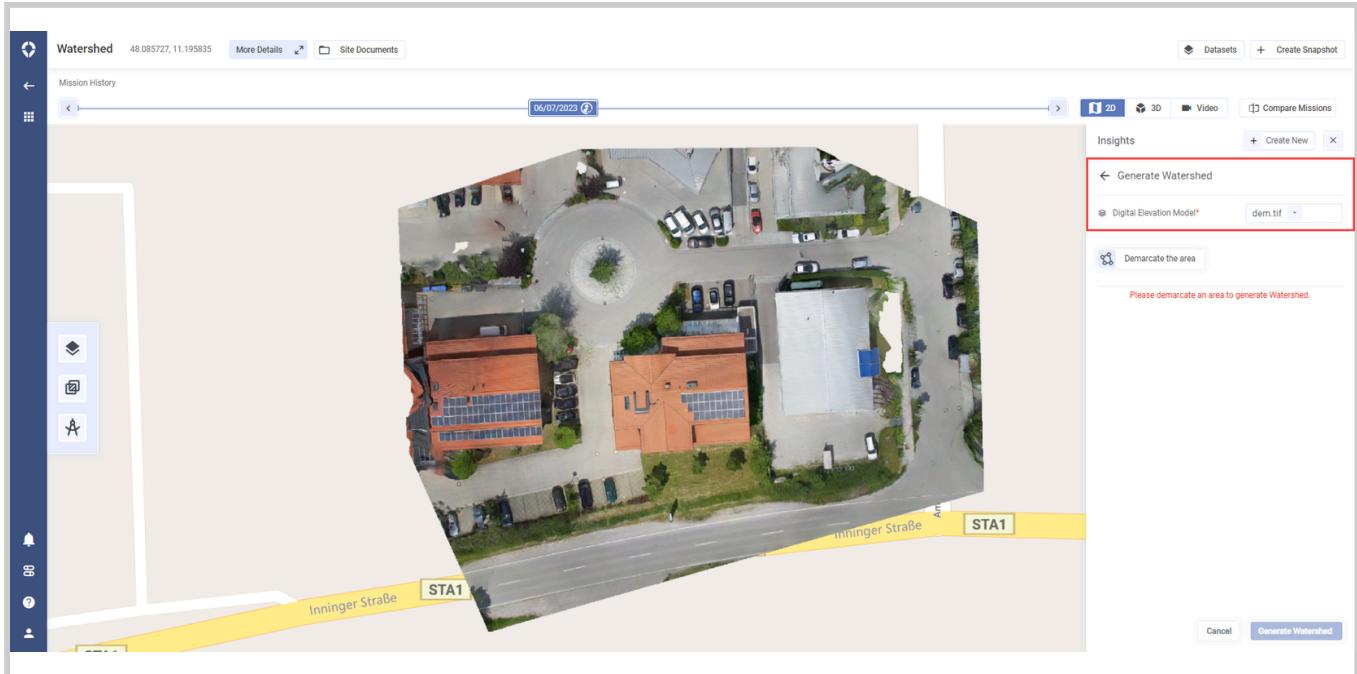
### Create Insights

3. In the **Insights** panel, click **Create New** and then click **Generate Watershed**.



### Generate Watershed

4. Select the **Digital Elevation Model** on which you want to create the watershed.



### Select DEM

5. To mark the exact dimensions for the watershed analysis, click **Demarcate the site boundary**. A blue dot appears next to your cursor.
6. On the map or satellite image, click the starting point of the area you want to demarcate.
7. Move your cursor to the new boundary point and click to define one edge of the polygon. This is displayed as a blue line on the map.
8. Repeat step 7, as needed, to draw all sides of the polygon.
9. When you reach the last point, double-click to mark the last point. A line is automatically drawn from the last point to the starting point to complete the polygon.

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Demarcate Boundary for Watershed

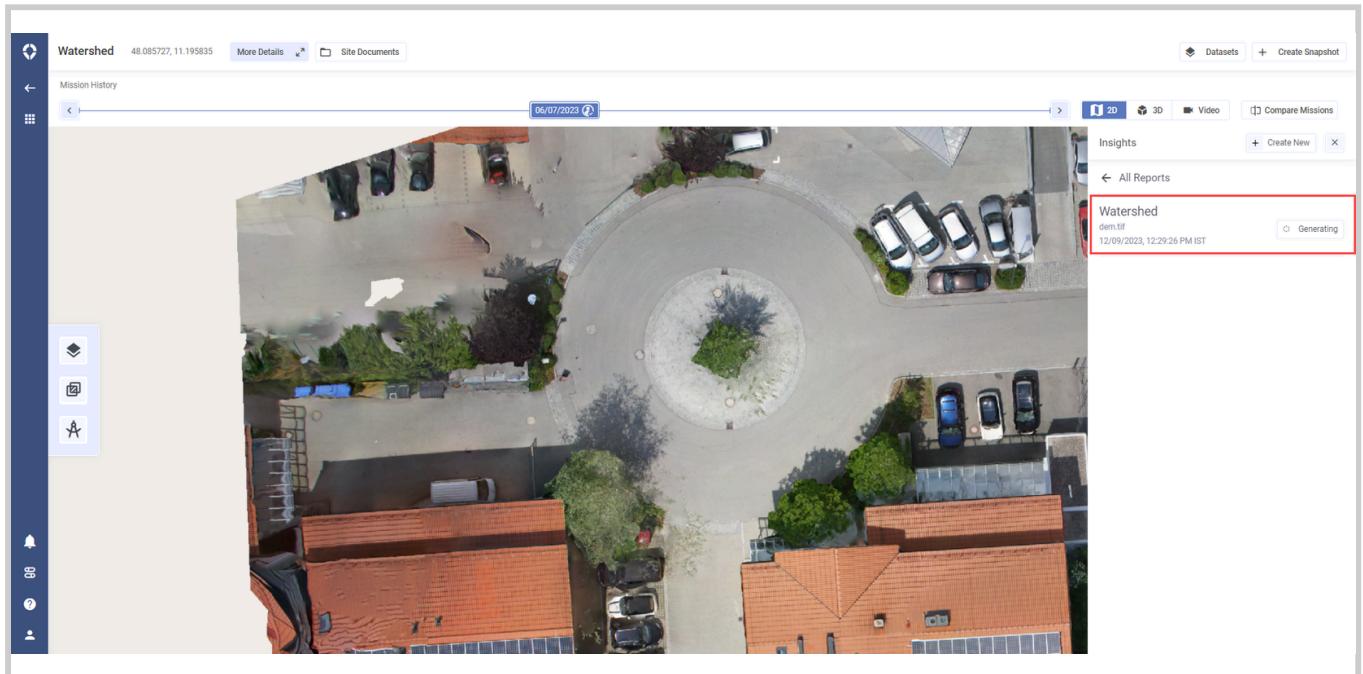
10. To reset the boundary, click **Reset the site boundary**.

Once you have demarcated the area, the **Selection Area** is displayed in square meters.

**The area selected for watershed analysis must be less than or equal to 5000 square meters.**

11. Click **Generate Watershed**.

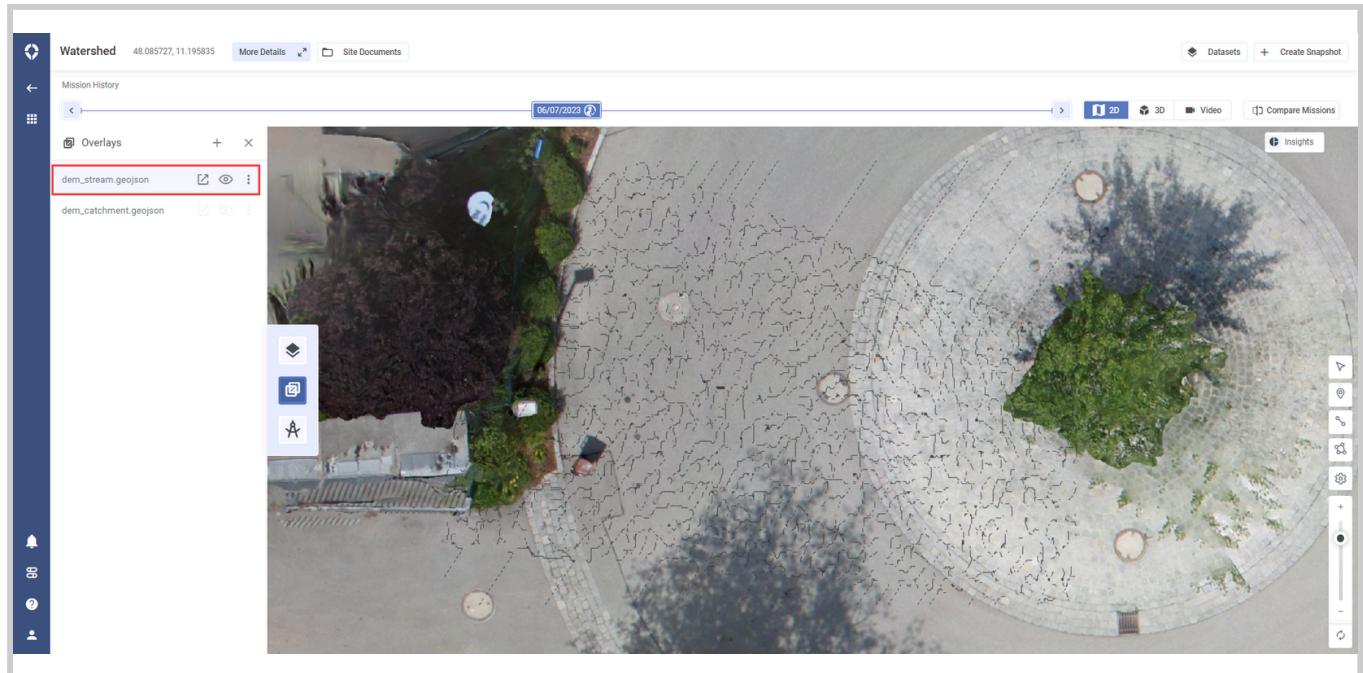
12. In the **Token Quotation** popup, click **ACCEPT**. The watershed analysis starts generating.



Watershed Generation in Progress

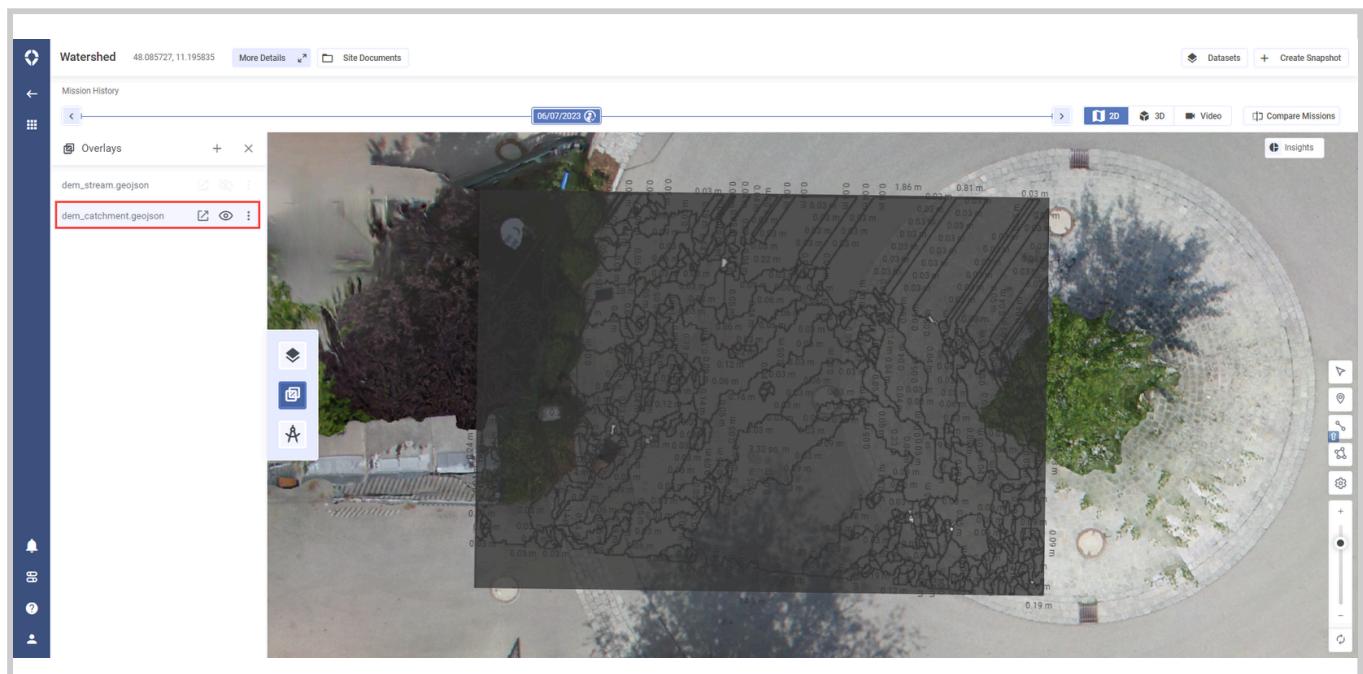
Once generated, the completion status is displayed in the **Insights** panel under **All Reports** and the following watershed analysis files are displayed in the **Overlays** panel:

- **Stream Network file:** This shows how the water flows with respect to gravity and elevation.



## Stream Network

- **Catchment file:** This shows the areas where the water is likely to be accumulated.



## Catchment

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