


# RAS Interface Intro

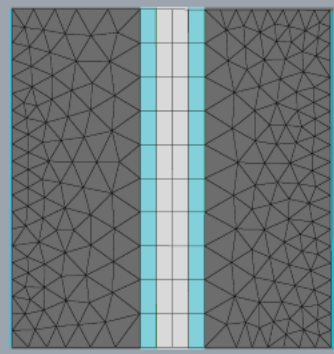
## *Part 1*



**RAS 2025**  
v0.1.0.2682-dev

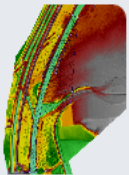
- New Project**  
Create a new RAS project.
- Open Project**  
Open an existing RAS project.
- Example Datasets**  
Browse all examples and synthetic datasets.
- GIS Mode**  
Use our GIS features without storing a model.
- Development Tools**

**Recent Projects**



**Tabletop**  
2/9/2026 2:01:36 PM  
C:\Users\q0hecjzm\OneDrive - US Army Corps of I

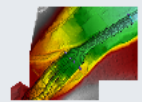
**Today**



**Escondida Example Project**  
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**Muncie 2025**  
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**lao (with structure)**  
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**Releases** Open Updater

- RAS 2025 Alpha** 0.1.0.2089-dev  
October 10, 2025
  - Many major crashes fixed
  - New charting, geoprocessing tools
  - USGS importer issues fixed
  - Much improved vector tooling
- RAS 2025 Alpha** 0.1.0.1822-dev  
July 2, 2025
  - New boundary condition workflow! DSS/RAS Results supported.
  - New precipitation importer, DSS rasters supported.
  - Mesh generation improvements and bug fixes.
  - Inundation boundary exporter
  - Terrain contour visualization
  - Fixed GPU/CPU solver bugs, improved warnings and timestep calculations.
  - Fixed numerous UI crashes.
- RAS 2025 Alpha** 0.1.0.1678-dev  
April 25, 2025
  - New data tables and spreadsheet tool

Settings Report a Bug



**+ New Project**  
Create a new RAS project.

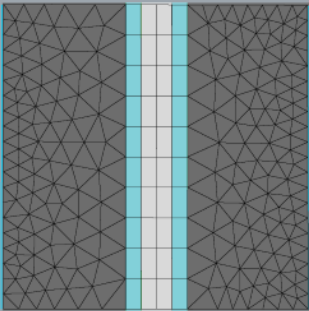
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Browse all examples and synthetic datasets.

**GIS Mode**  
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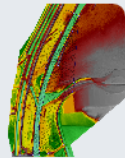
**Development Tools**

### Recent Projects

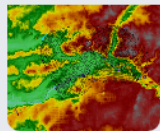


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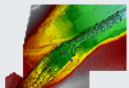
### Today



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**Settings**

**Report a Bug**

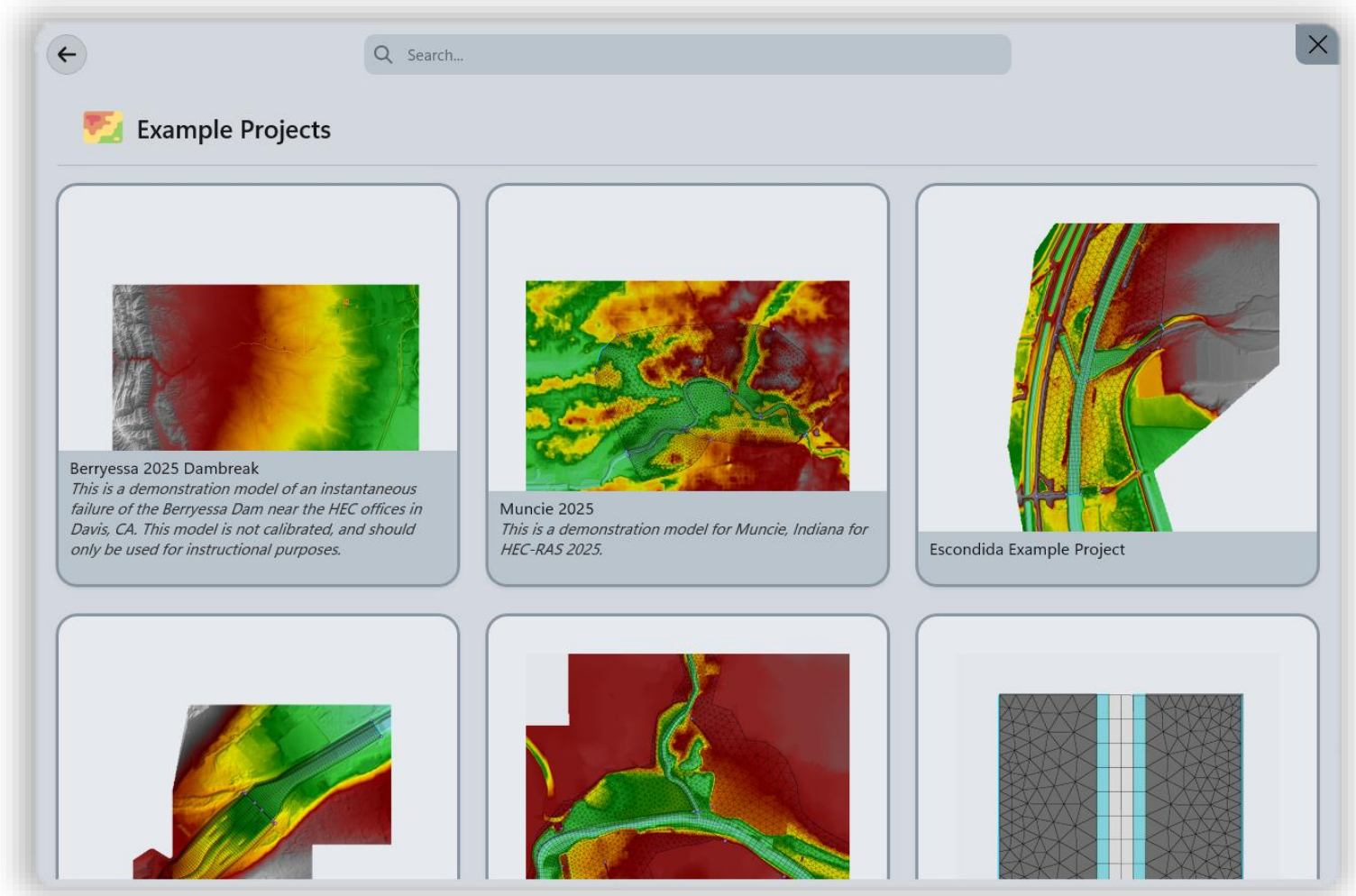
New/Open

Recent Projects

Update/Options

# Example Datasets

- Hosted at HEC
  - Download on-demand
- Continuously updated/improved
- Search by tag and description



# New Project

- Add Name
- Add Description
- Pick projection from file
  - .tif, .prj, .ras, .h5, and others
  - **Currently, projection can NOT be changed once set – double check it!**

New Project

Name  
American River  
C:\Users\q0heczjm\OneDrive - US Army Corps of Engineers\Documents\RAS Projects

Description

Projection  
Projected Local

Drop a file here  
or Click To Pick A File

Enter EPSG/Proj4/WKT Code

Search Projections By Name

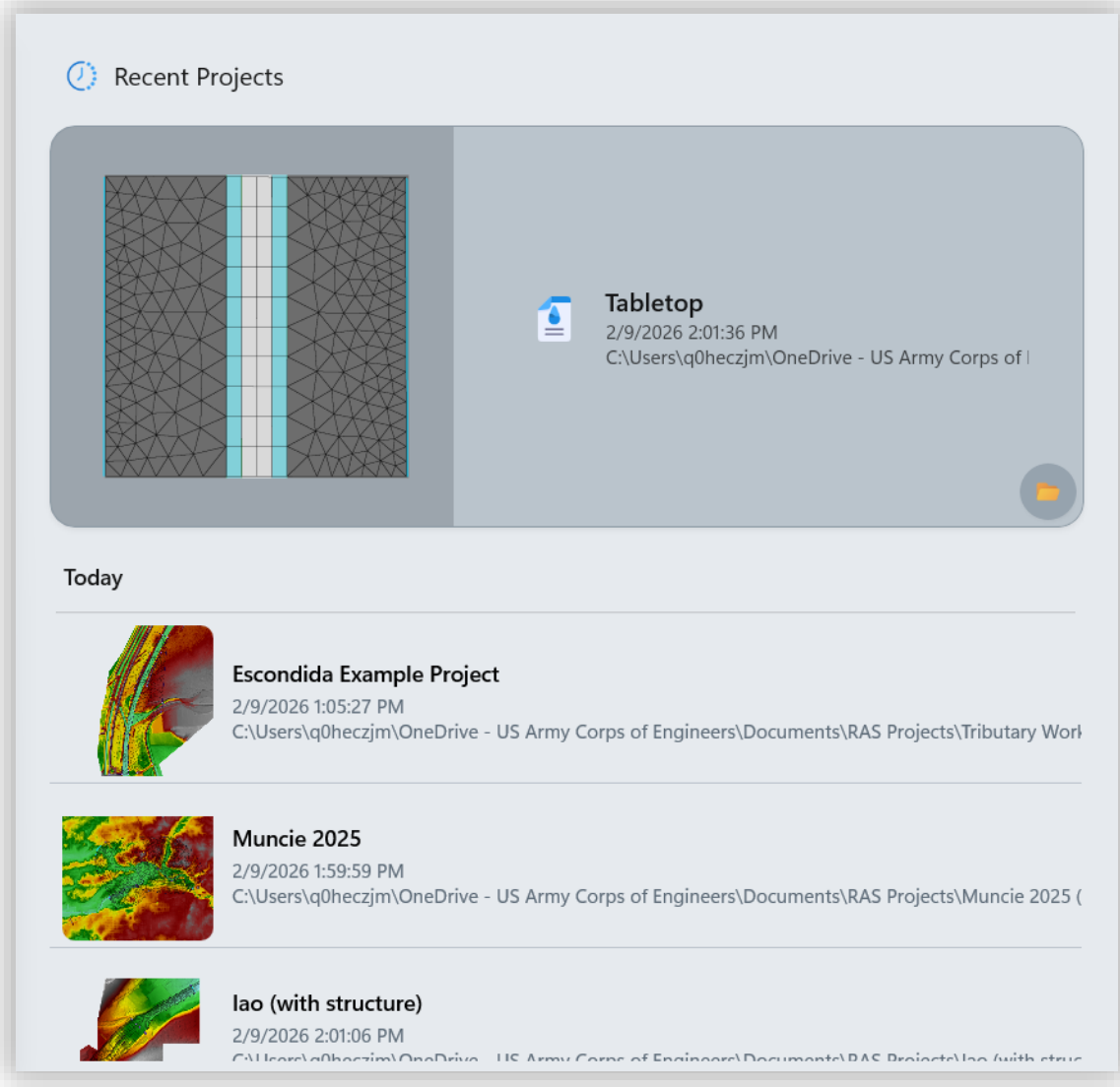
Projection Summary

Name  
Validity  
Units  
Vertical False  
Projected False  
EPSG Code  
UTM Zone

Cancel Create

# Recent Projects

- Most recent project on top
- Right-click to open project location



Recent Projects

**Tabletop**  
2/9/2026 2:01:36 PM  
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Today

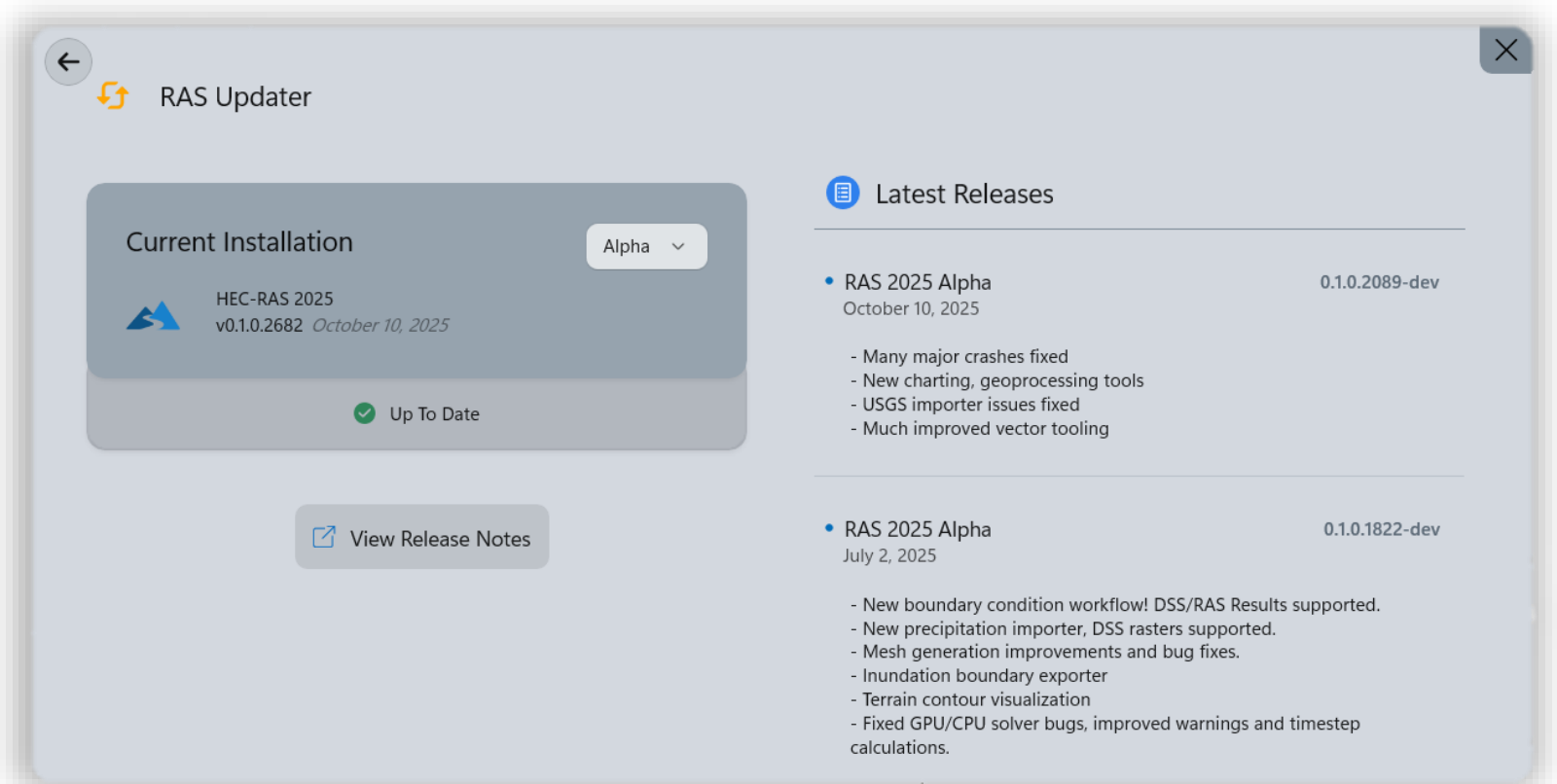
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# Updater

- In-App Updater
- Fully Portable
  - **no admin required**
- Future
  - Side-by-side installations of older or beta versions



# Bug Reporter

- Send crash logs
- Upload screenshots and geometry if appropriate

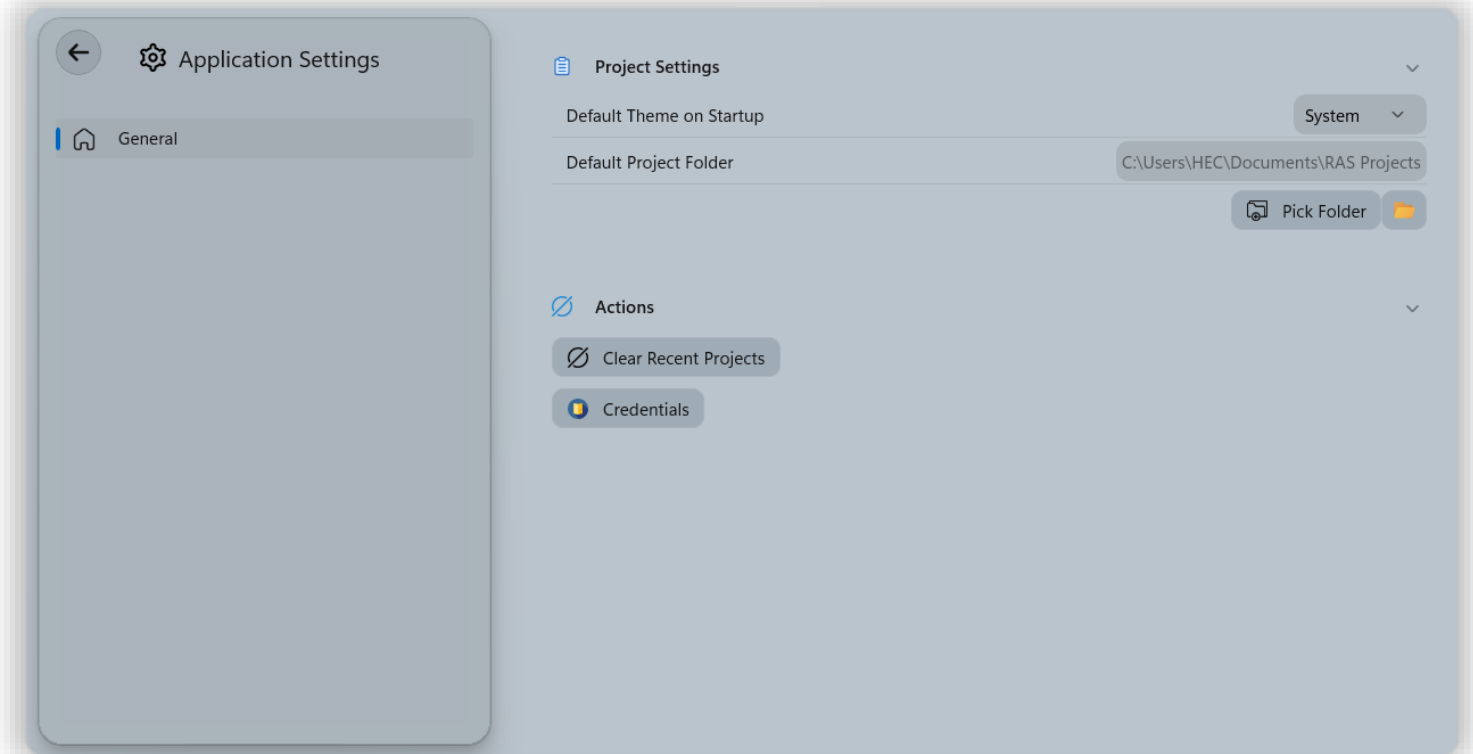
The screenshot displays the 'Bug Report' dialog box. At the top left is a gear icon and the title 'Bug Report'. Below this, the 'Title' field is set to 'Simulation crashed software' (27/100 characters). To the right of the title is a 'Known Issues' button with a document icon. The 'Description' field (449/3000 characters) contains a four-step guide: 1. Describe the bug. I was running a simulation and the software crashed. 2. Provide specific steps to reproduce the issue (if relevant). Uploading geometry and terrain via bug reporter -- just run Plan A. 3. Is this a recent regression? Did it work in a prior version? - No, it has never worked, but I haven't tried a previous version. 4. Do you know any workarounds for this bug? Running with a smaller timestep helped, but it was incredibly slow.

The 'Tags' section, labeled '(check all that apply)', consists of a grid of toggle switches for various categories: Boundary Conditions, Classification/N-Values, Geometry, Meteorologic Data, Performance, Projection, Terrain, Charting, Example Datasets, Mesh Generation, Network/Web, Plan, Solver, and User Interface. The 'Solver' toggle is currently turned on (blue), while all others are off (grey).

Below the tags is an 'Email (optional)' field with an information icon. At the bottom of the form, there is a 'Screenshots 0/4' section with 'Browse' and 'Clear' buttons. The bottom right corner features 'Cancel' and 'Submit' buttons, with 'Submit' being highlighted in green.

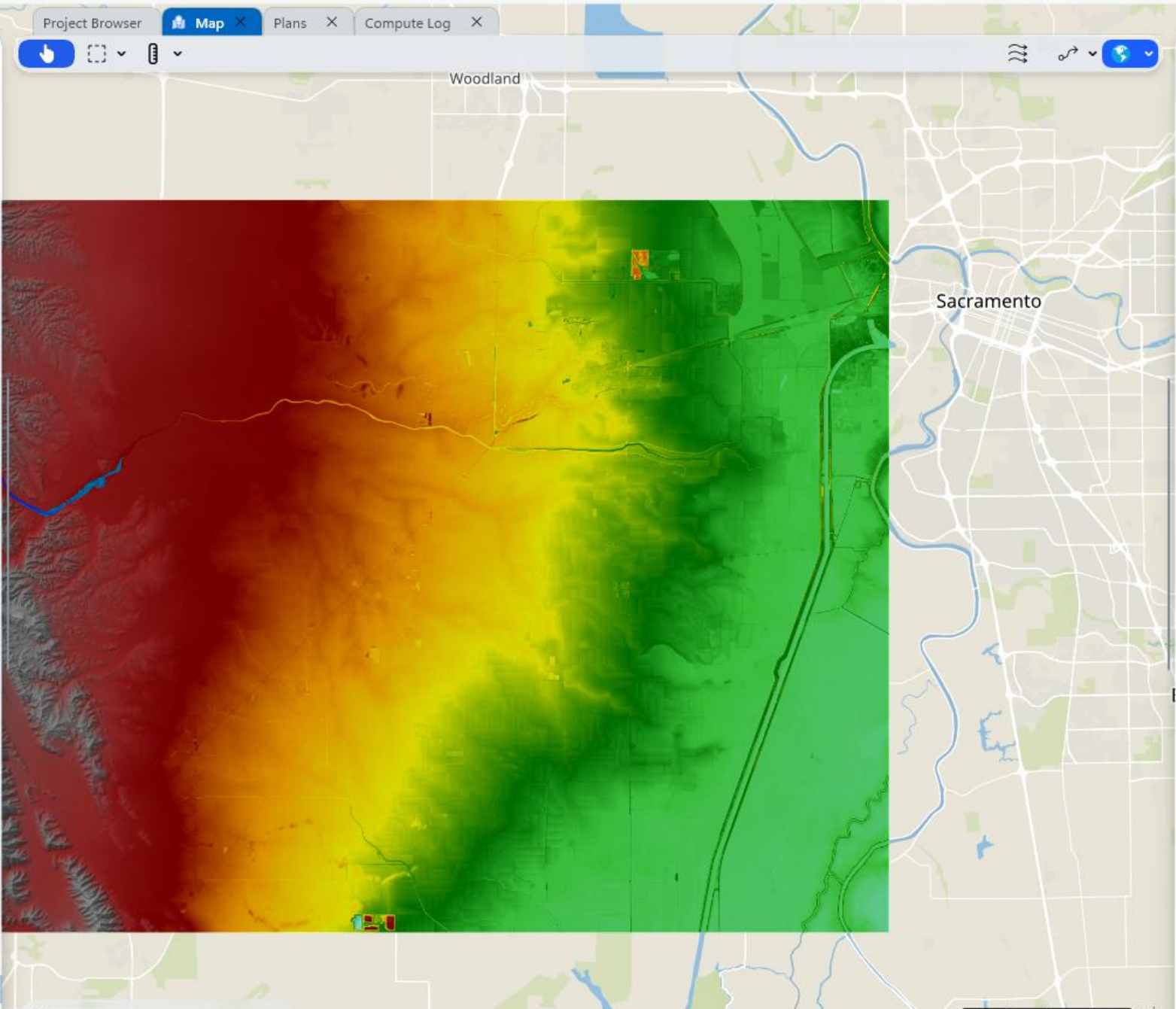
# Settings

- Change theme
- Default project folder
- Enter **class credentials**



Model Open Editor

- Dam Break
- Results
  - Dam Break (Latest)
    - Latest Dam Break (1)
      - 12/8/2025 8:49:16 PM
        - Dam Break
        - Base Geometry
        - US Inflow
- Features
  - Profile Lines
- Geometries
  - Base Geometry
    - Conceptual Mesh
    - Mesh
    - Culvert Barrels
- Boundary Conditions
  - US Inflow
- Surface Layers
  - Classifications
  - N Values
- Map Layers
- Terrains
  - New Terrain
  - Terrain



Components Overview

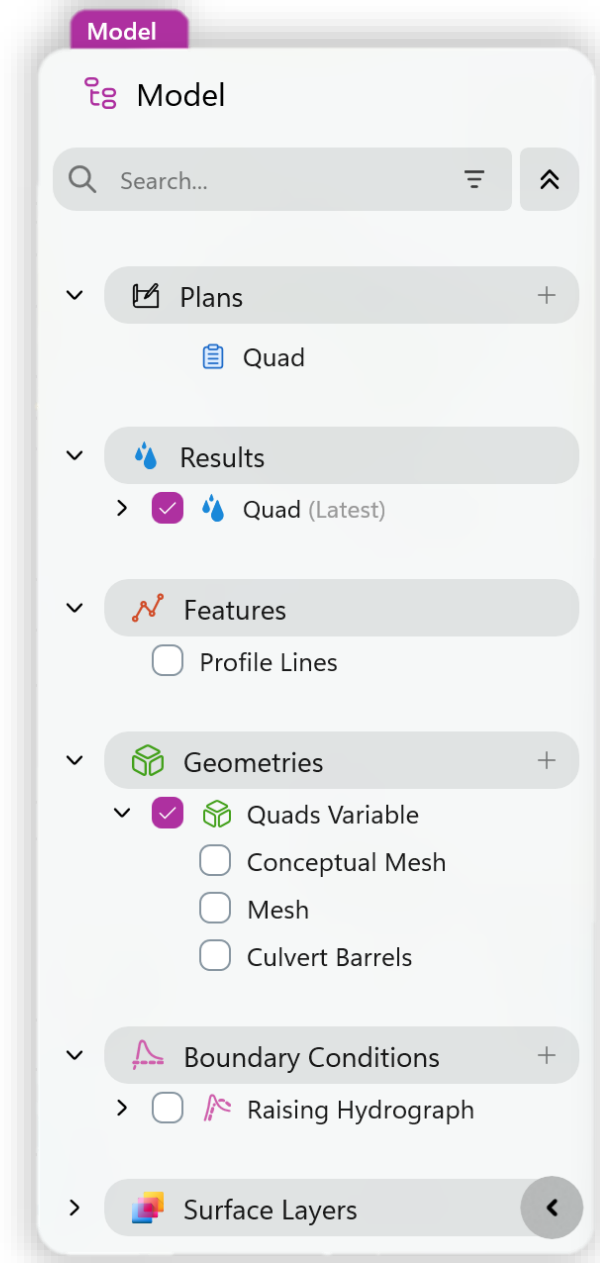
- Layers
  - Terrain.USGS\_13\_n39w123\_20240313
  - Terrain.USGS\_13\_n39w122\_20240313

Info

Name	New Terrain
Created	2025-12-08 20:31:56
Last Modified	2025-12-08 20:35:51
File Version	1.0-dev
Software Version	0.1.0.2462-dev
Description	

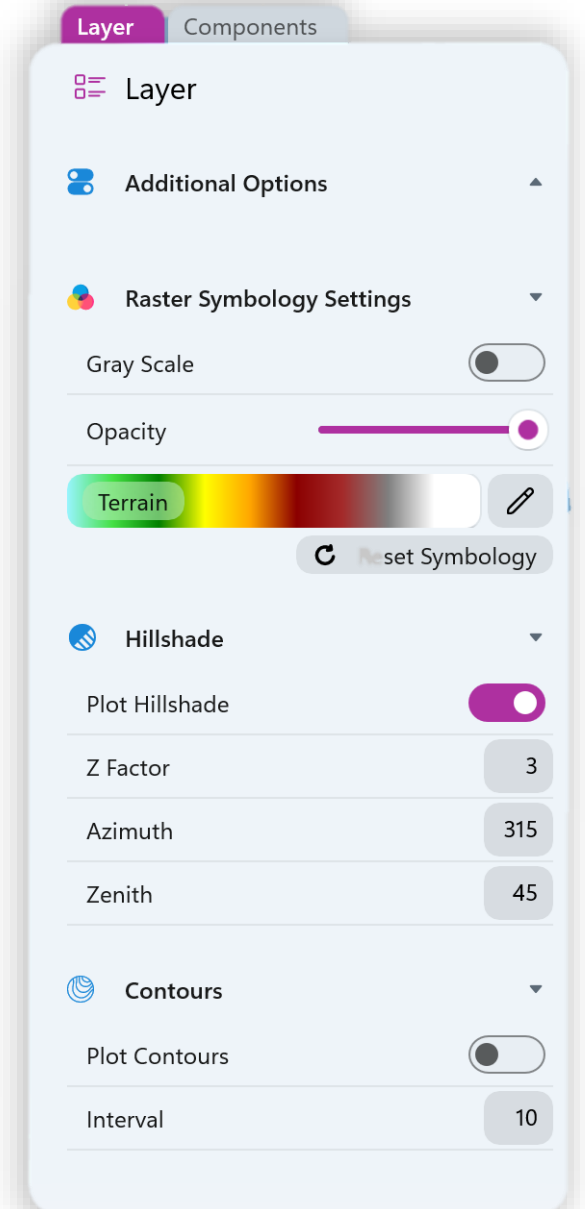
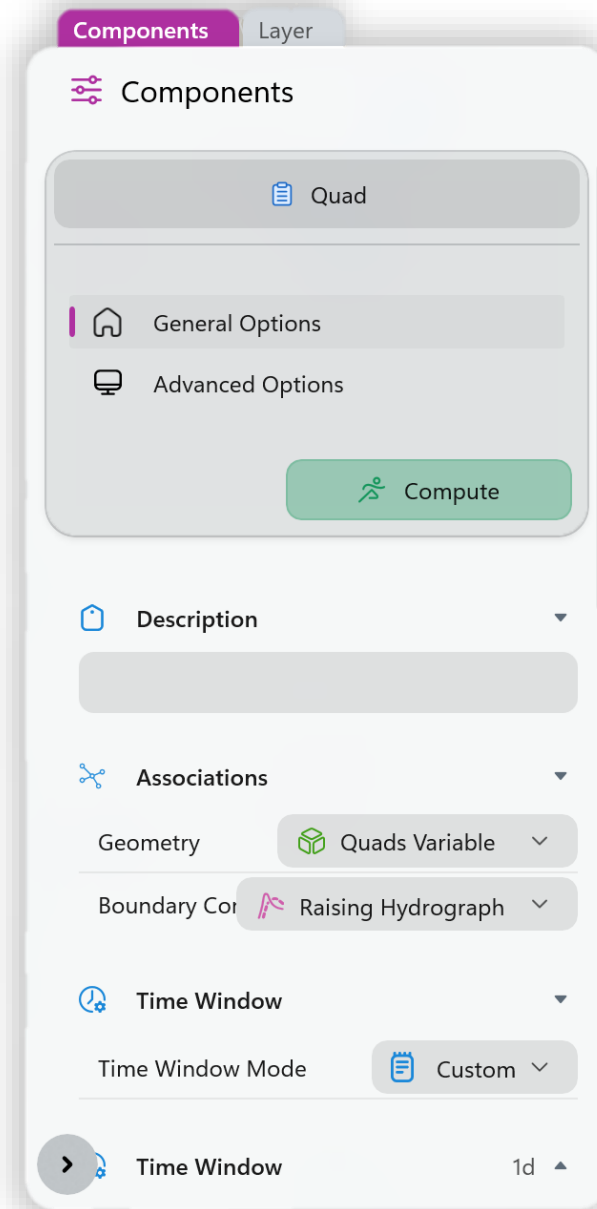
# Model Tab

- Your layers, organized by type
- Can filter/search list
- Reflects the active Map/View



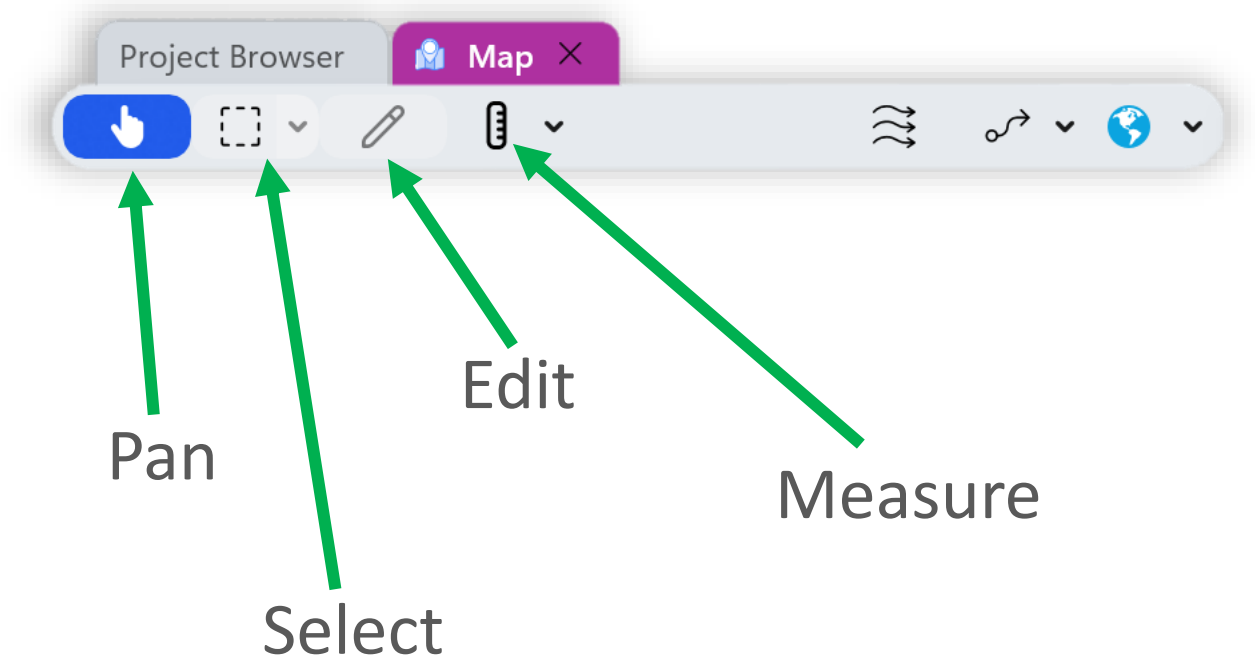
# Layers/Components

- Components affect results
- Layer is for visualization
- Reflects the active Map/View



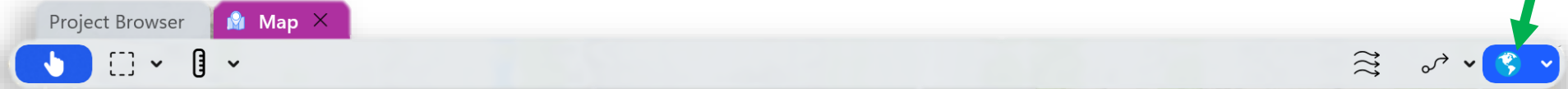
# Map Tooling

- Pan
- Select
- Edit
  - No ***Start Editing*** or ***End Editing***
  - Edits committed directly to model.
- Measure
  - Select Raster Layer



# Base Maps

Basemaps



Imagery Opacity

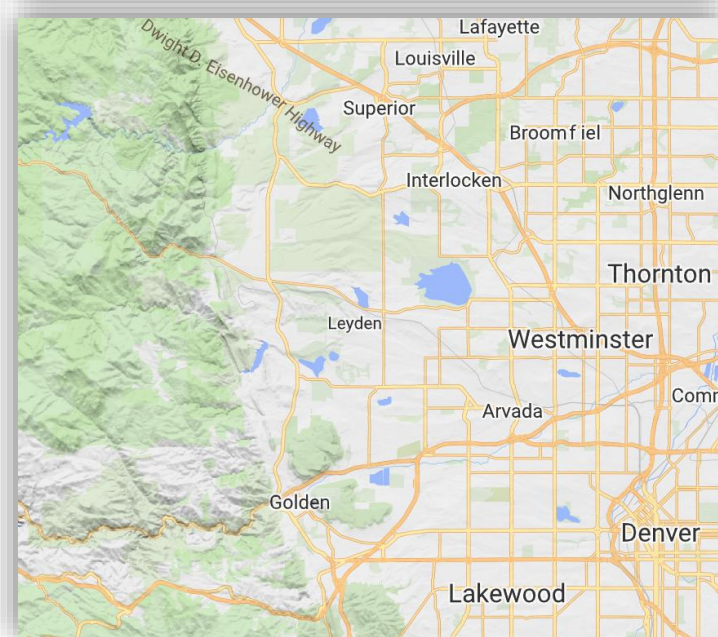
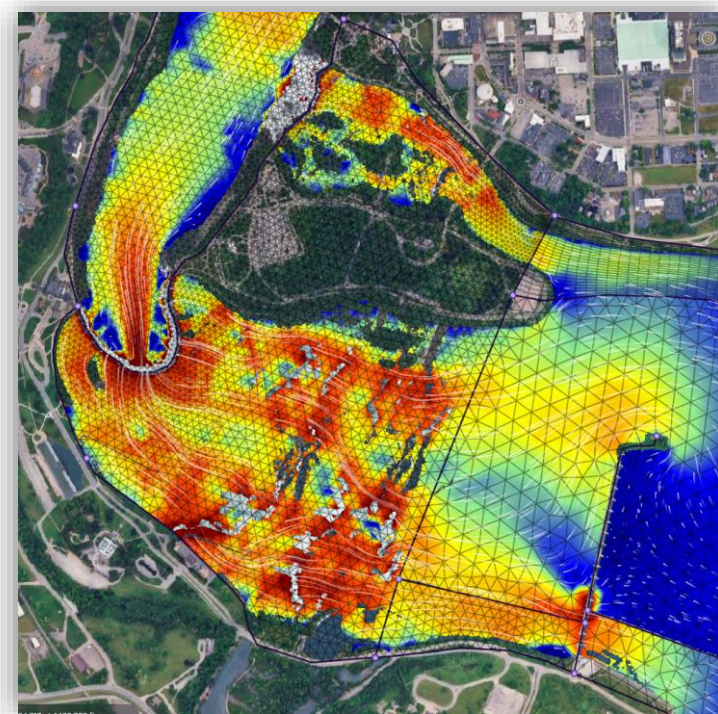
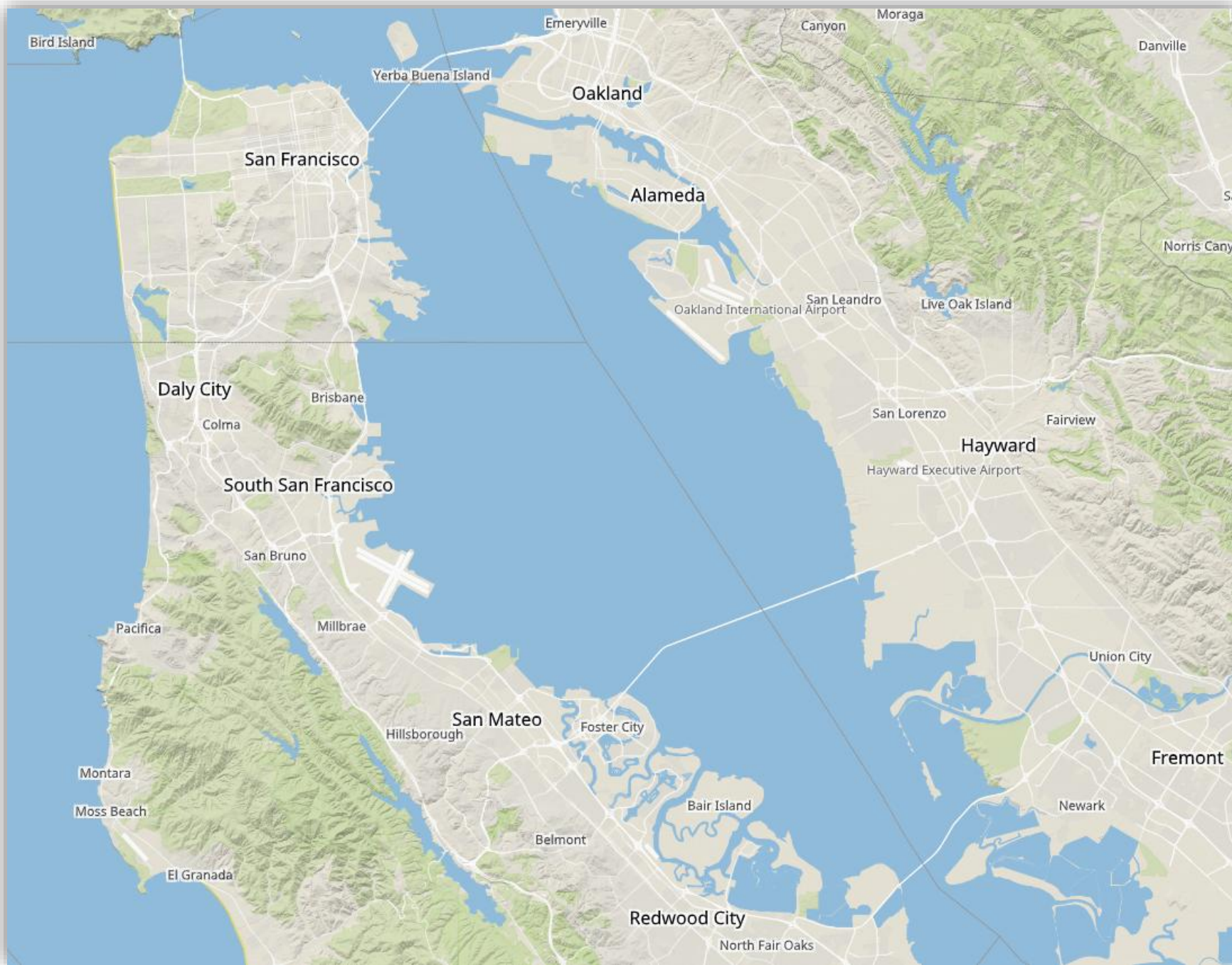
A screenshot of the 'Basemaps' panel. It contains several sections: 'Satellite Imagery' with a toggle switch and an 'Opacity' slider; 'USGS Hillshade' with a toggle switch; 'Open Street Map' with a toggle switch; 'Information Density' with a slider; and a list of map styles. The 'basic' style is selected and highlighted. Below the style list, it shows '47.447 MB' and icons for trash and folder. At the bottom, it says 'Map data © OpenStreetMap contributors.' A green arrow points from the text 'Imagery Opacity' to the opacity slider.

Street Map Styles



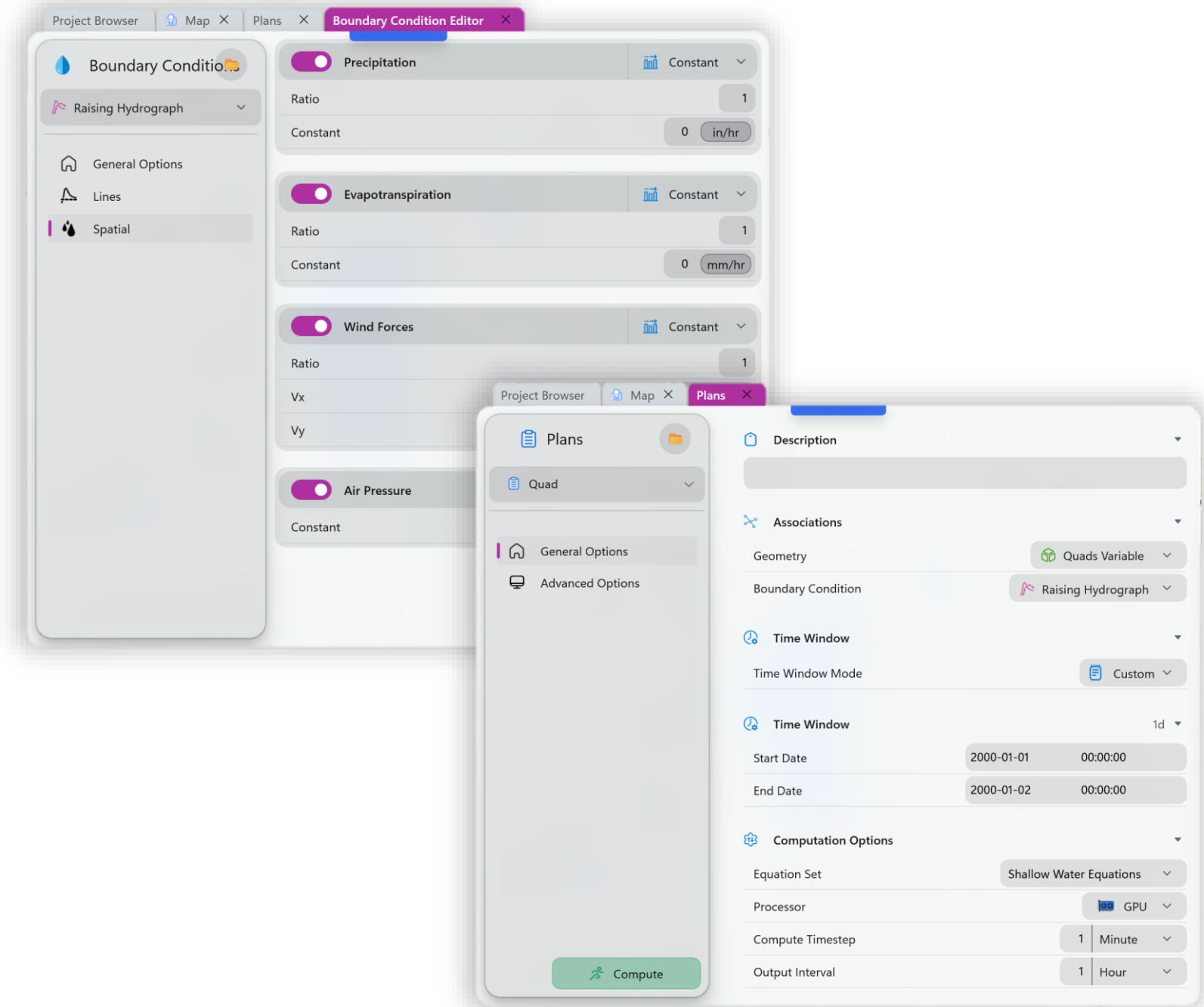
47.447 MB

Map data © OpenStreetMap contributors.



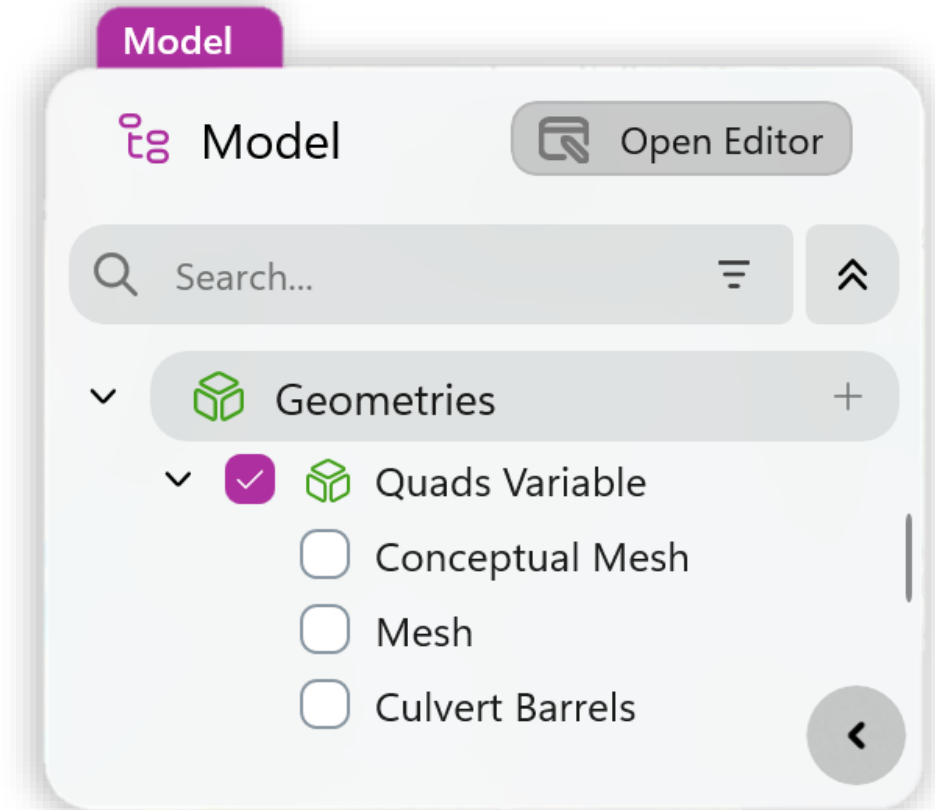
# Editors

- Double click to open
- Components pane is 80% of needs, editors are 100%
- Tabs on the left, content on the right
- View/change non-spatial properties



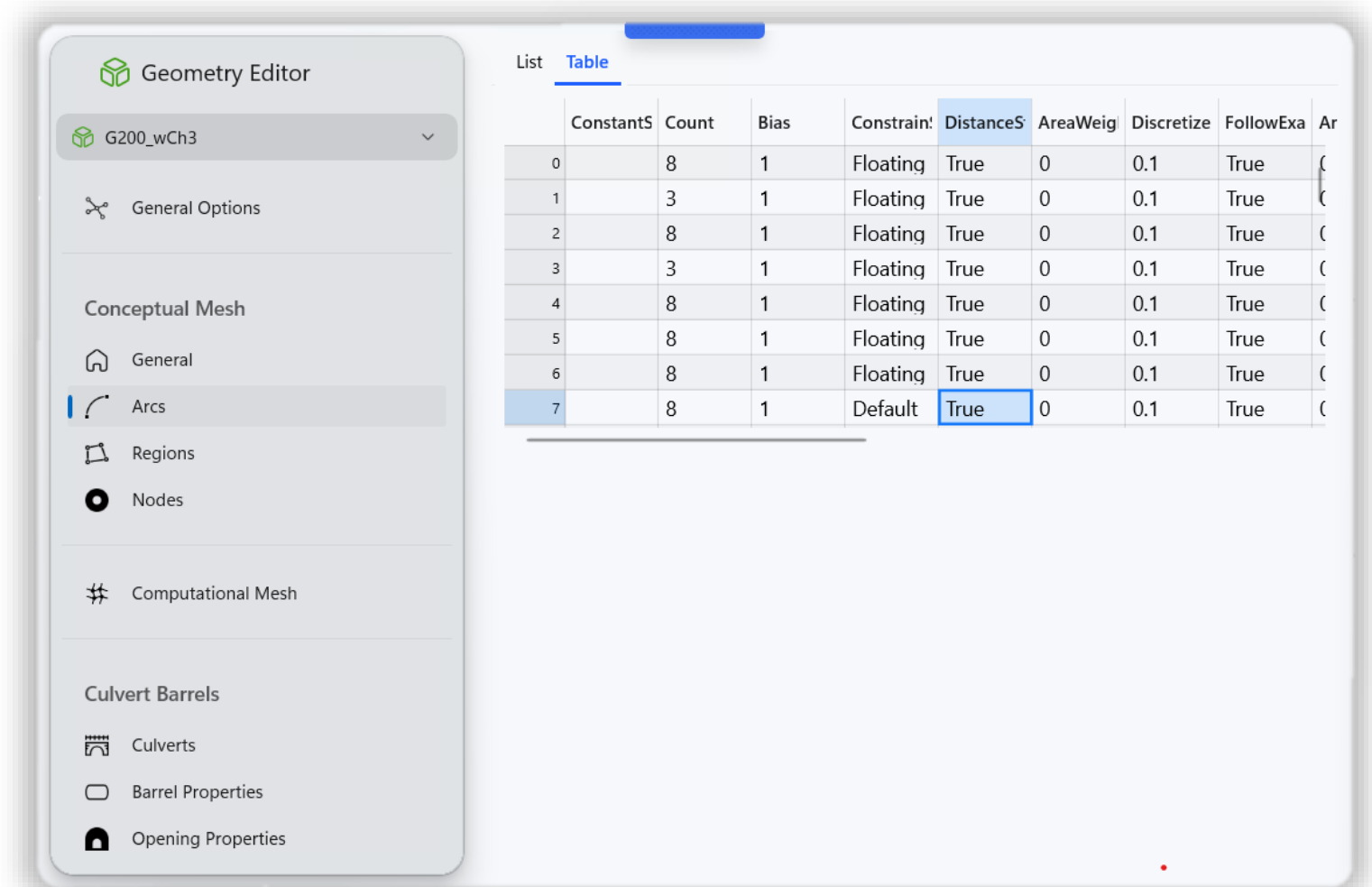
# Geometries

- Conceptual Mesh
  - Wireframe topological system with attached mesh generation parameters
- Mesh
  - Computational mesh produced from the Conceptual Mesh
- Culvert Barrels
  - Structure #1



# Geometries

- View tables and charts of geometry data



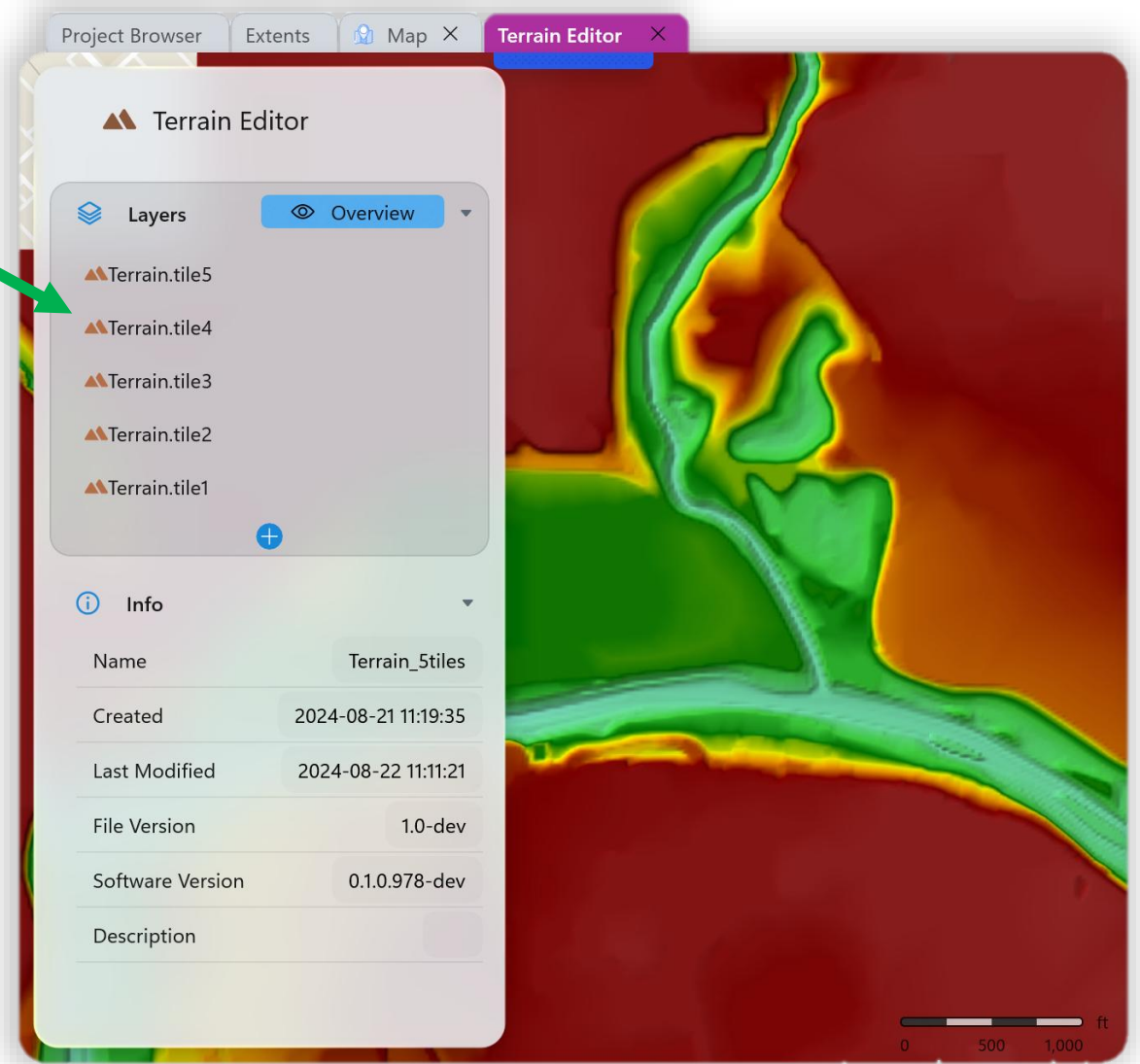
The screenshot displays the Geometry Editor interface. On the left is a sidebar with a menu for 'G200\_wCh3' containing sections for 'General Options', 'Conceptual Mesh' (with sub-items: General, Arcs, Regions, Nodes), 'Computational Mesh', and 'Culvert Barrels' (with sub-items: Culverts, Barrel Properties, Opening Properties). The 'Arcs' item is selected. The main area shows a 'Table' view of geometry data with the following columns: ConstantS, Count, Bias, Constrains, DistanceS, AreaWeig, Discretize, FollowExa, and Ar. The table contains 8 rows of data, with the 7th row highlighted in blue.

	ConstantS	Count	Bias	Constrains	DistanceS	AreaWeig	Discretize	FollowExa	Ar
0		8	1	Floating	True	0	0.1	True	(
1		3	1	Floating	True	0	0.1	True	(
2		8	1	Floating	True	0	0.1	True	(
3		3	1	Floating	True	0	0.1	True	(
4		8	1	Floating	True	0	0.1	True	(
5		8	1	Floating	True	0	0.1	True	(
6		8	1	Floating	True	0	0.1	True	(
7		8	1	Default	True	0	0.1	True	(

# Terrains

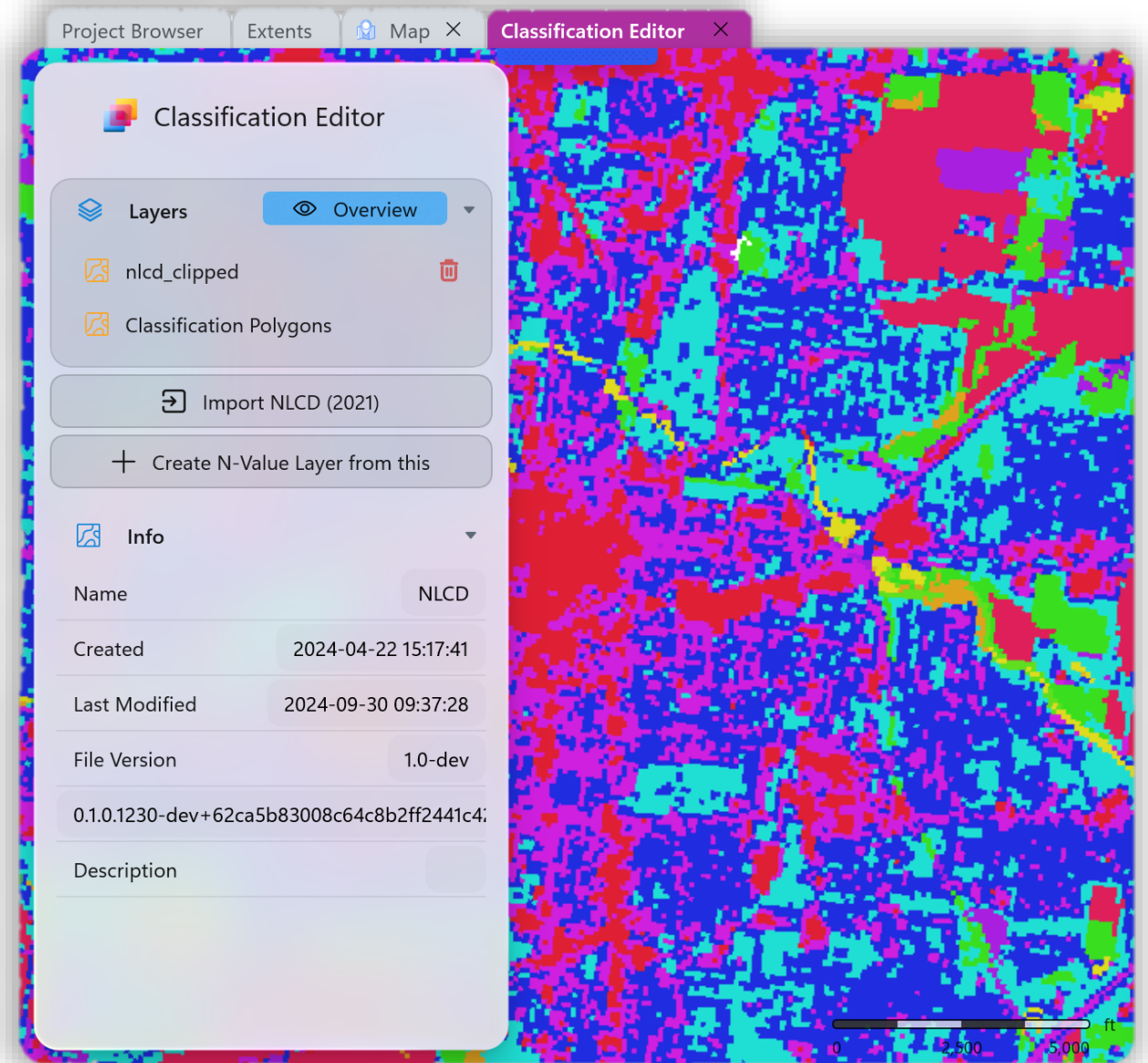
- Custom reading/writing code – 10-50x faster than v6
- Can re-order later

Drag To Reorder



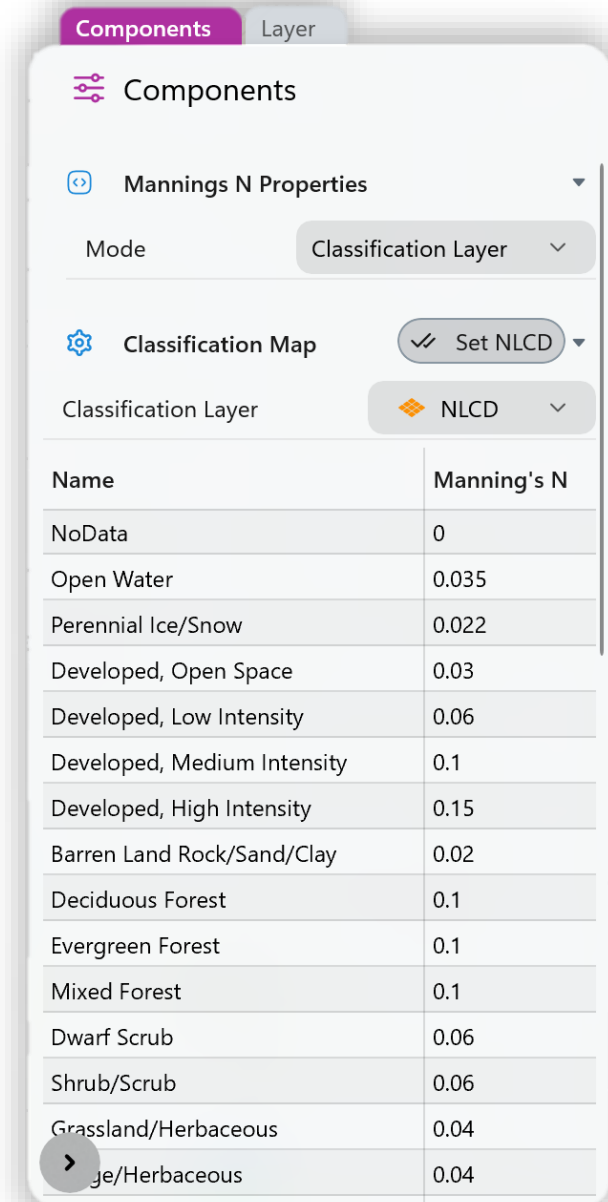
# Classifications

- Add local rasters
- Add classification polygons with **edit** tool
- Import **NLCD**



# Manning's N

- Multiple ways to define **n**
- Spatially variable
- Input a constant n value, or pick a classification layer



The screenshot shows a software interface with a 'Components' tab and a 'Layer' tab. The 'Mannings N Properties' section is expanded, showing 'Mode' set to 'Classification Layer'. Below this, the 'Classification Map' section is expanded, showing 'Set NLCD' as the selected map. The 'Classification Layer' is set to 'NLCD'. A table below lists various land use categories and their corresponding Manning's N values.

Name	Manning's N
NoData	0
Open Water	0.035
Perennial Ice/Snow	0.022
Developed, Open Space	0.03
Developed, Low Intensity	0.06
Developed, Medium Intensity	0.1
Developed, High Intensity	0.15
Barren Land Rock/Sand/Clay	0.02
Deciduous Forest	0.1
Evergreen Forest	0.1
Mixed Forest	0.1
Dwarf Scrub	0.06
Shrub/Scrub	0.06
Grassland/Herbaceous	0.04
Grassland/Herbaceous	0.04