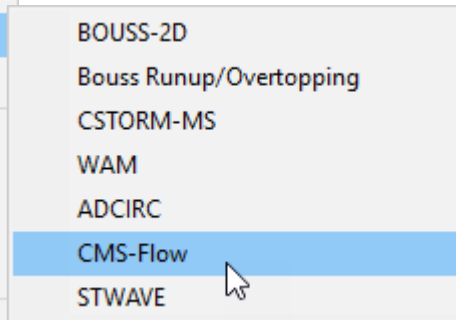
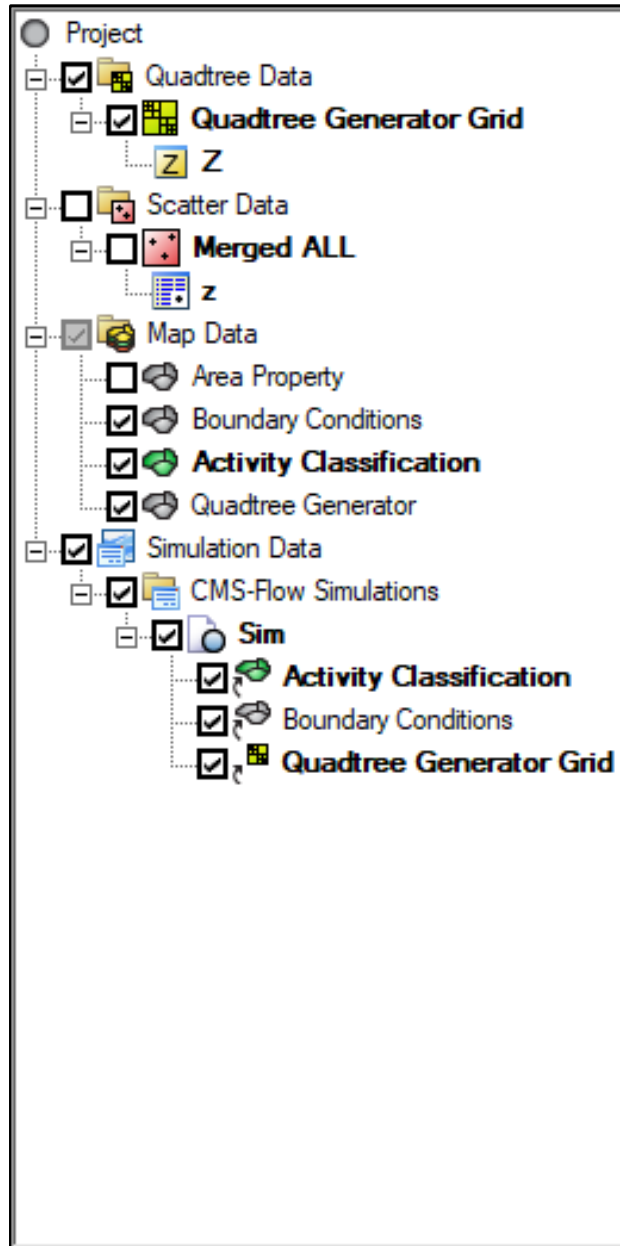
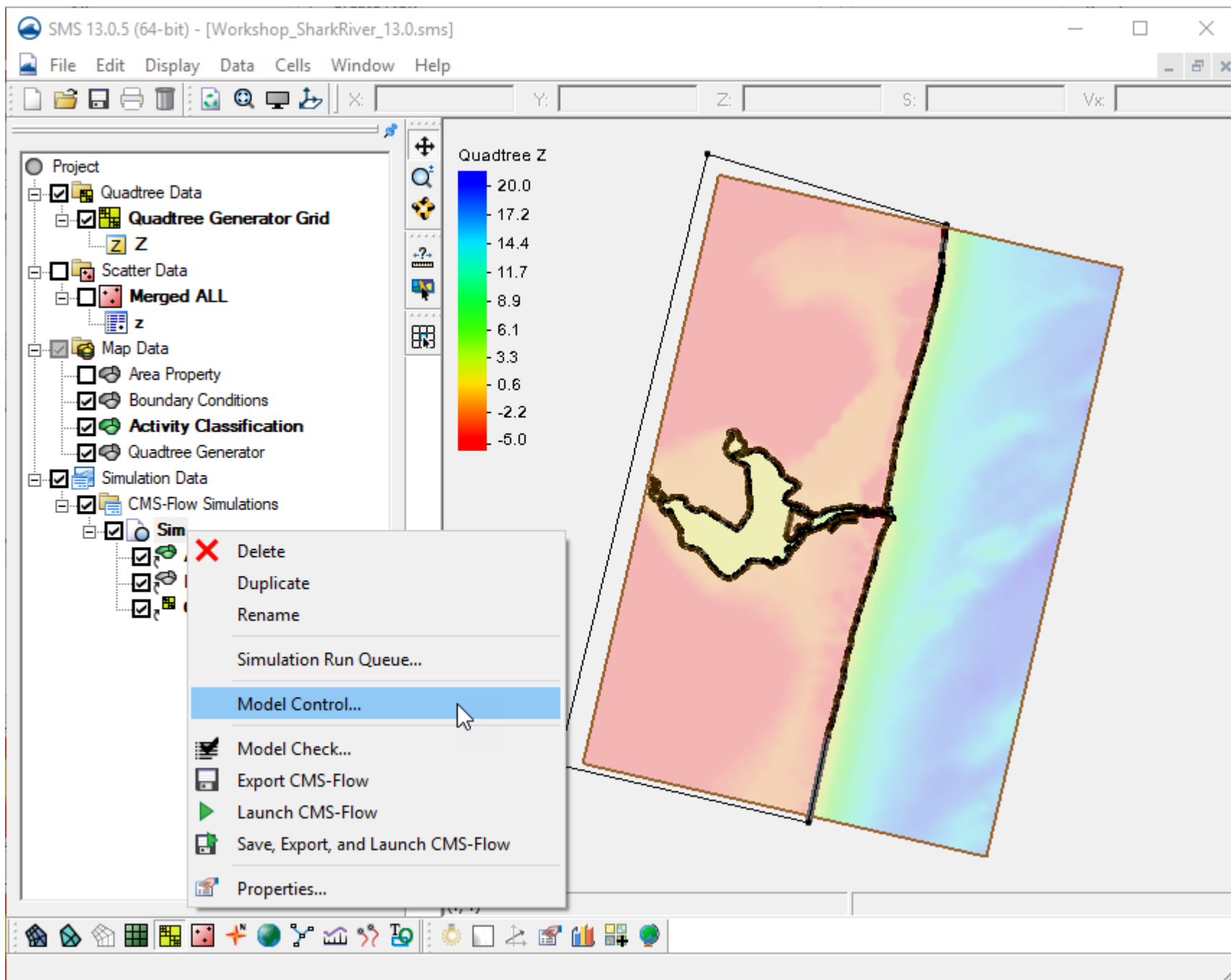


Getting ready to launch CMS-Flow

- Create Simulation
- Define CMS-Flow Model Control
 - Bottom Roughness Dataset
 - Sediment D50 Dataset
 - Other Model Control Parameters
- Export CMS-Flow Files



- Load project from previous work (Day3/Webinar folder)
- Right click in open space in data tree
 - *New Simulation | CMS-Flow*
 - Rename from “Sim” if desired
- Drag needed coverages to the simulation area
 - Boundary Conditions
 - Activity Classification
- Drag quadtree grid (not coverage) to the simulation area



Model Control is done from Right click menu of Simulation.

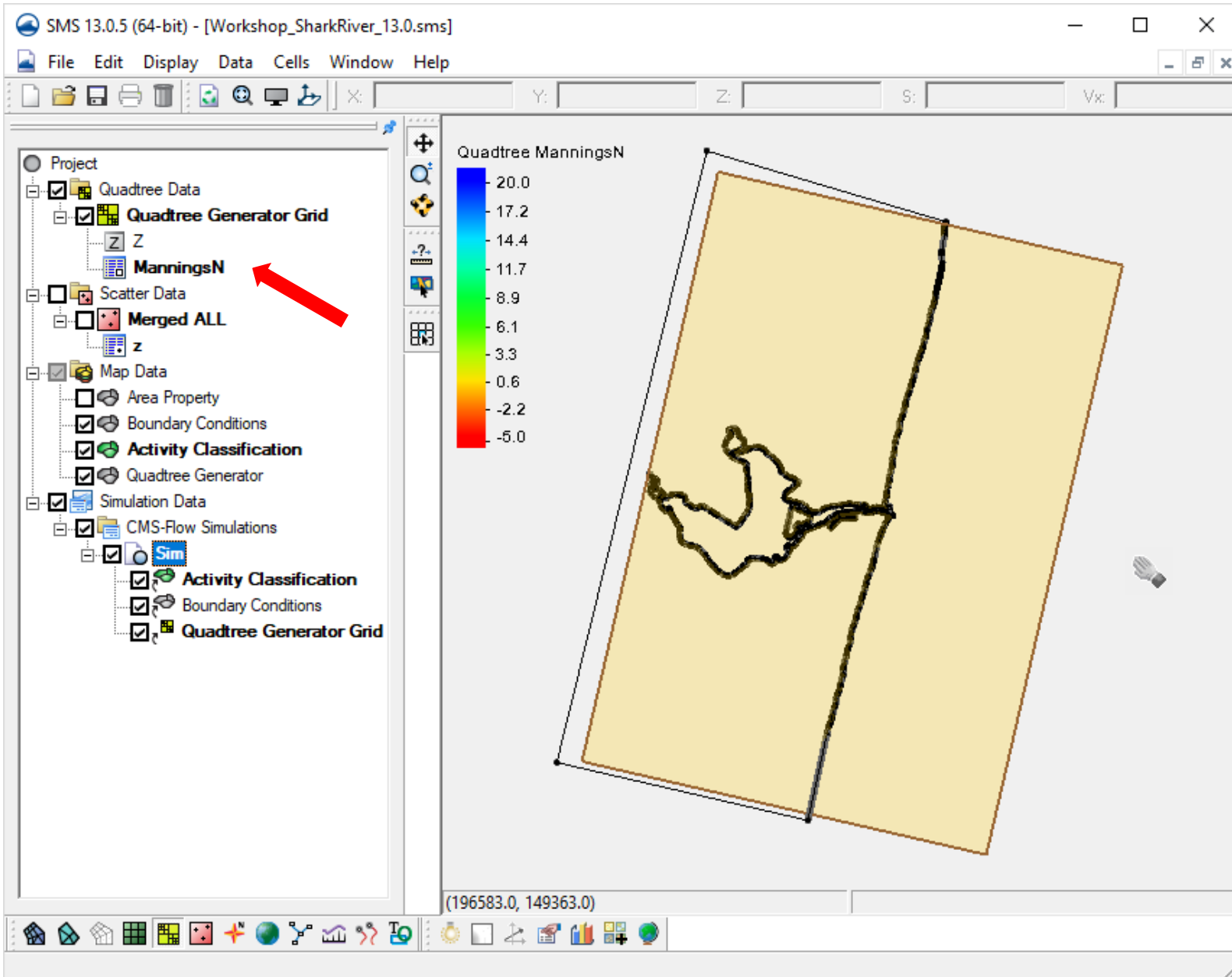
Tab	Item	Value
General	Start Date/Time	1/1/2001 12:00:00 am
	Simulation Duration	744 'hours'
	Ramp Duration	24 'hours'
	Solution Scheme	'Implicit'
	Number of Threads	<maximum of 4>
Flow	Hydrodynamic Time Step	600 'seconds'
	Wetting and Drying Depth	0.05
	Bottom Roughness Dataset	<see info below>
Sediment	Calculate Sediment Transport	[checked]
Output	List 1	[0] [0.5] [744]
	List 2	[0] [3] [744]
	List 3	[0] [1] [744]
	Water Surface Elevation	'List 1'
	Current Velocity	'List 1'
	Morphology	[checked] 'List 2'
	Transport	[checked] 'List 3'
	Simulation Label	"SRI_testRun1"

Set information for each tab as indicated in the table.

If no information is given in the table, used the selected default value.

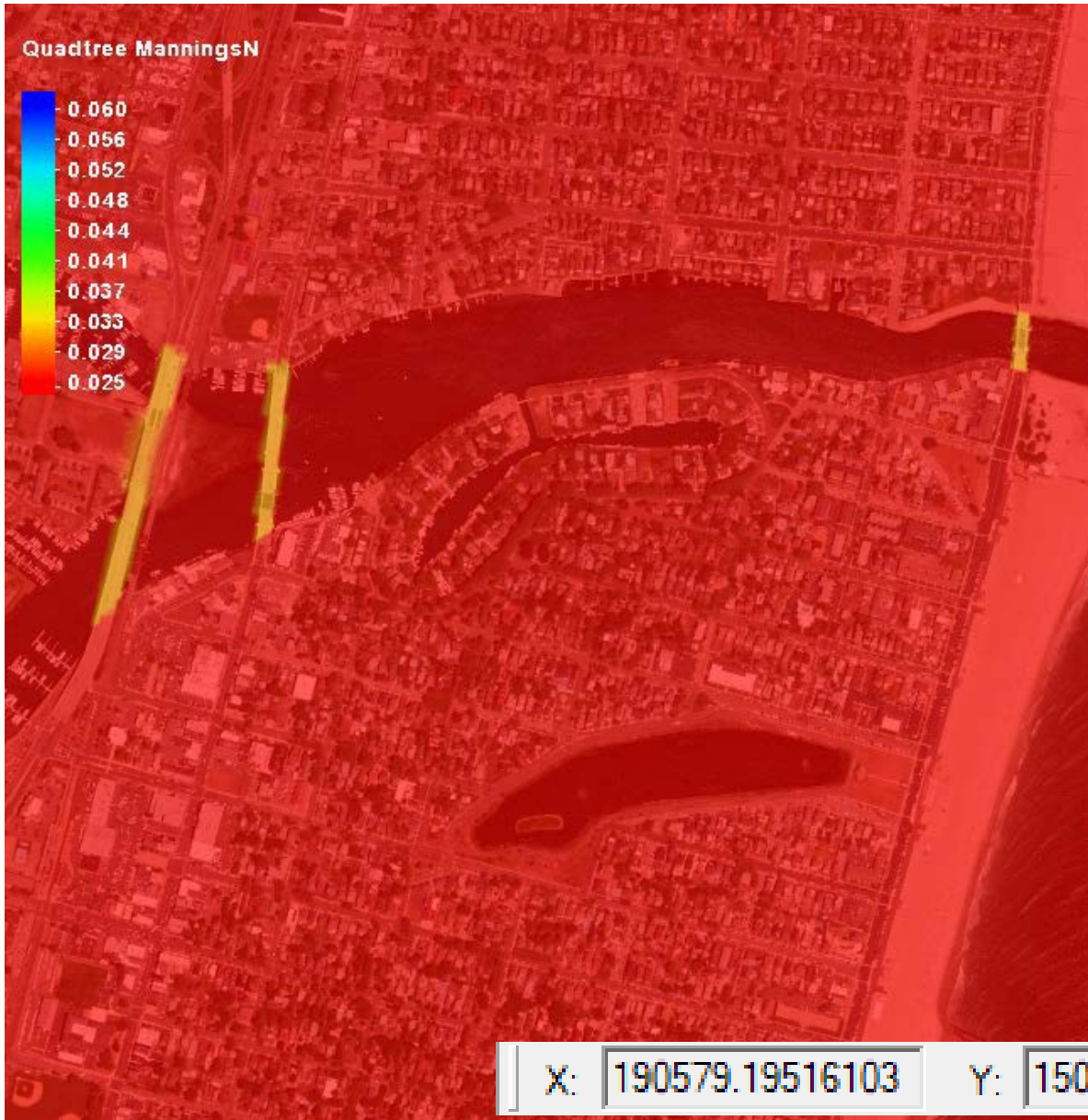
(see demo)

Bottom Roughness (Flow Tab of Model Control)



- Choose “Mannings N” for the type of dataset
- Click “Select” and then “Create” buttons
- In Data Calculator, enter 0.025 as a constant in the “Calculator” blank
- Give a name “ManningsN”
- You **MUST** click “Compute” to create the dataset.
- Click OK to get back to the main SMS screen.

Bottom Roughness (Modify specific areas)



Individual or selected cells can be modified as needed.

- Click the Select cells tool
- Select the cells to modify
- Enter new value in the “S” box above the graphics screen.



Sediment D50 Dataset (Sediment Transport Tab)

Size Classes

Sediment size class diameters:

	Diameter	Fall Velocity Method	Fall
1	0.26 mm	Soulsby (1997)	0

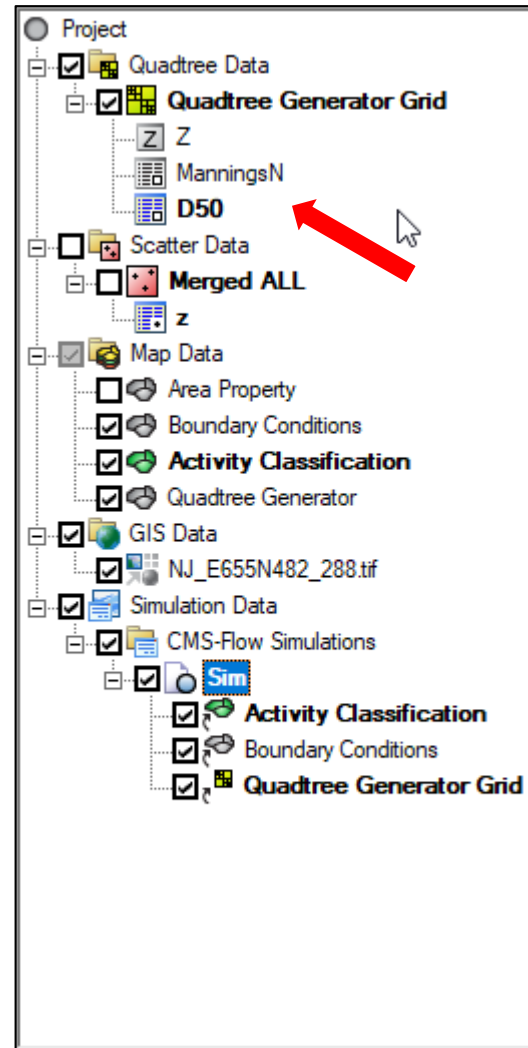
☐ Copy/Paste Mode Import... Export... Insert Above Insert Below

Bed Composition

Bed layer block (layer thickness in m, and percentile diameters in mm):

	D30	D35	D50	D65	D84
1	(none selected)	(none selected)	(none selected)	(none selected)	(none selected)

☐ Copy/Paste Mode Import... Export... Insert Above Insert Below



- In Size Classes, click Insert Row, to have one entry in the table.
- Change value of grain size to 0.26.
- In Bed Composition, click Insert Row.
- Scroll to the right and create a D50 dataset similar to how we did ManningsN.
- Enter 0.26 as value and name "D50"
- You **MUST** click "Compute" to create the dataset.
- Click OK to get back to the main SMS screen.

D50 Dataset (Modify specific areas)

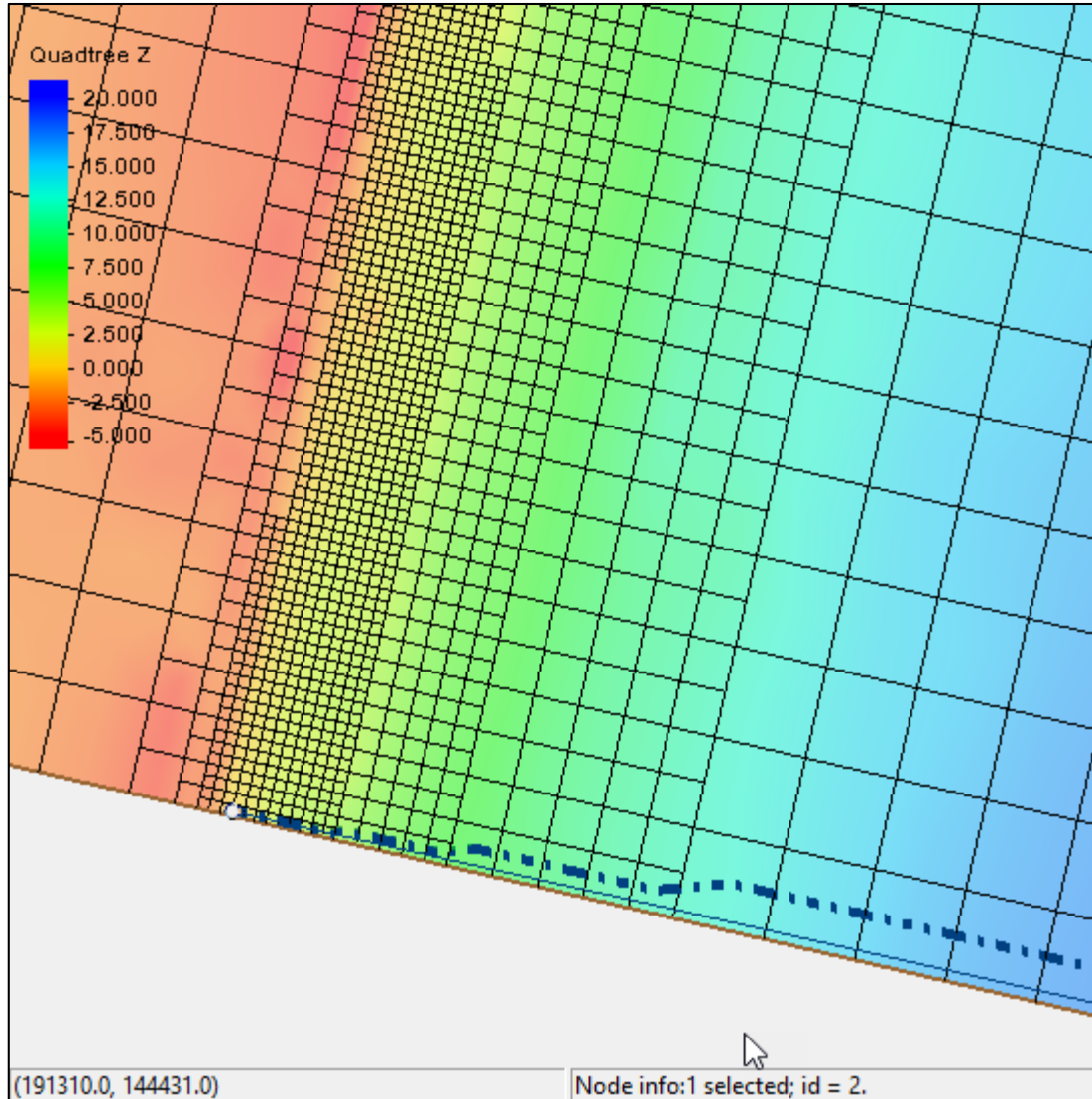


Individual or selected cells can be modified as needed.

- Click the Select cells tool
 - Select the cells to modify
 - Enter new value in the “S” box above the graphics screen.
-
- Add the large section, enter 0.4.
 - Add the middle section, enter 0.5.
 - Add the small section, enter 0.6



Check boundary condition cellstrings

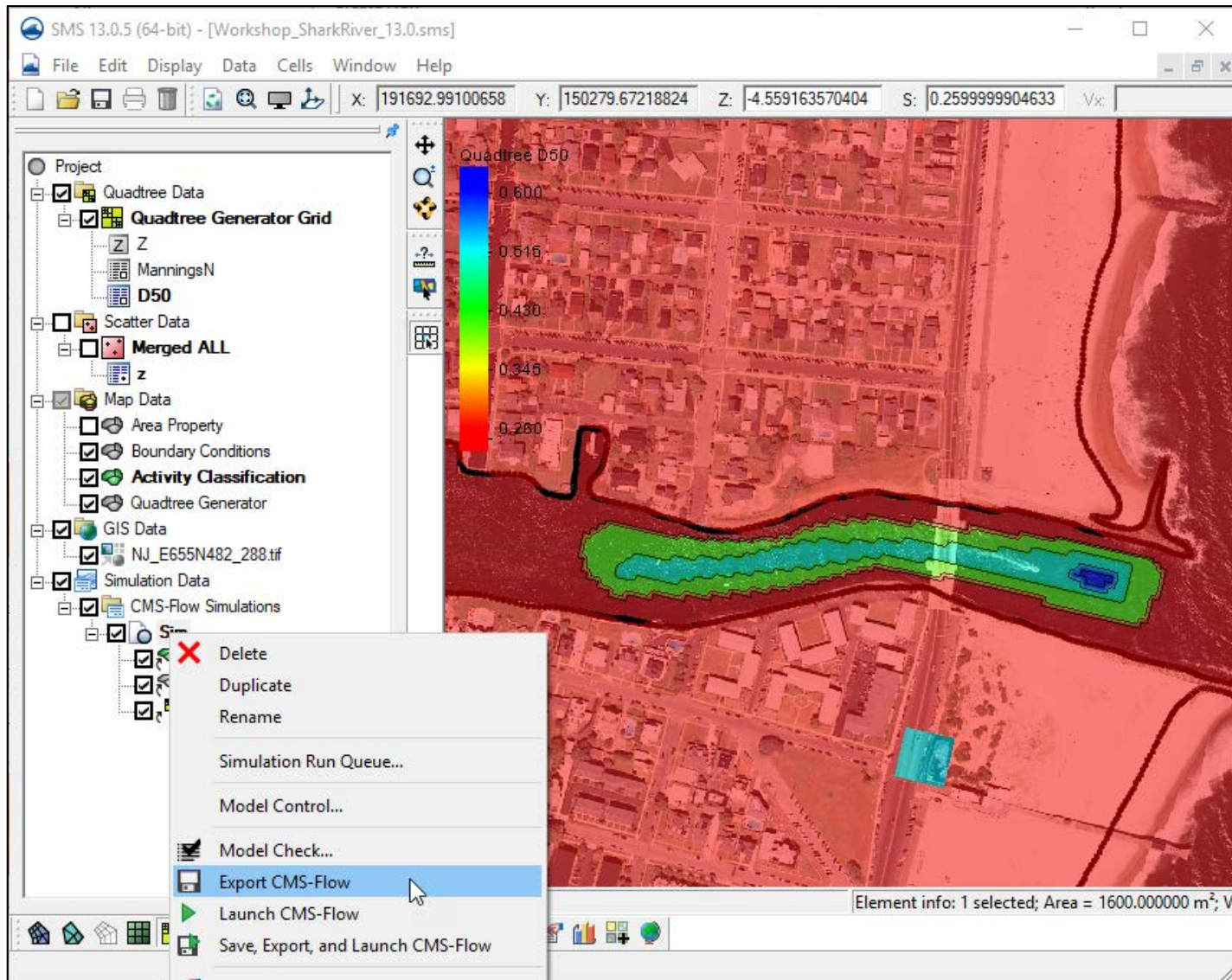


See where the boundary condition cellstrings are located.

- Under simulation, select the Boundary Conditions coverage.
- Zoom to the forcing location
- Click “Shift-Q” or turn on Snap Preview under Display Options | Map

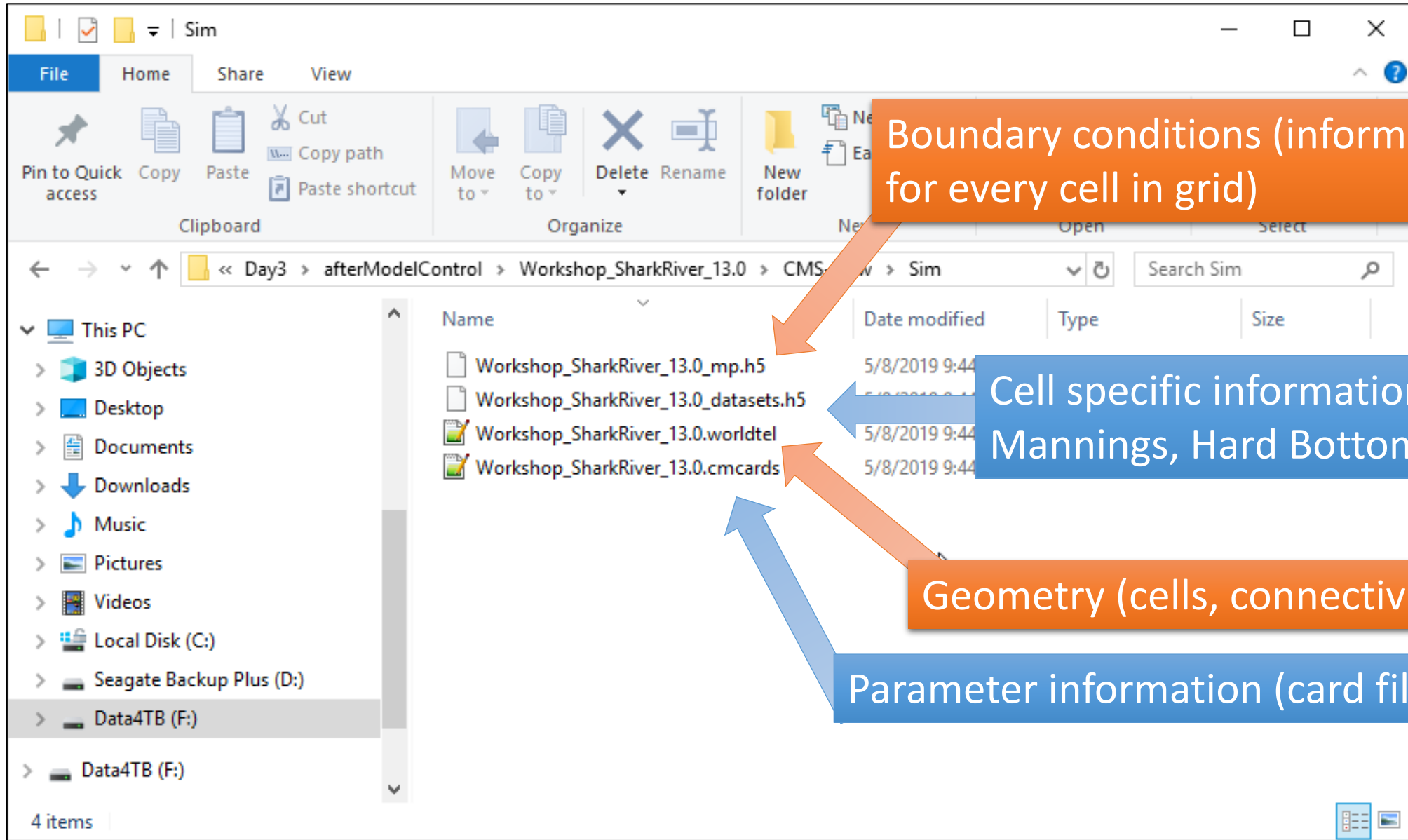
Ensure the cellstring follows the external edge cells and does not contain any internal cells.

Export CMS-Flow Files



- Right Click on the Simulation name and choose “Export CMS-Flow”
- This gathers the information from the Boundary Conditions and Activity Classification coverages as well as model control and grid information, then writes the necessary information into files contained within a subfolder in the directory.

Files written to the following directory structure - <project name>\CMS-Flow\<simulation name>



Boundary conditions (information not for every cell in grid)

Cell specific information (D50, Mannings, Hard Bottom, Depth, etc)

Geometry (cells, connectivity, etc)

Parameter information (card file)

Launch CMS-Flow

