

# COUPLED FLOW-TRANSPORT SIMULATION - MODEL SETUP

## SIMULATION CONFIGURATION

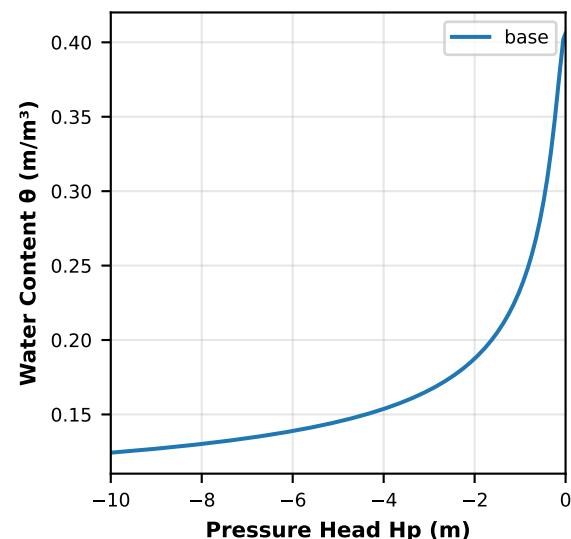
Simulation Name: Transport\_Chloride  
Start Date: 2024-05-01 00:00  
End Date: 2024-08-30 00:00  
Duration: 2904.0 hours (121.0 days)  
Time Step: 10800.0 seconds (3.00 hours)

Domain: 20.0 m × 5.0 m | Mesh: 80 × 40

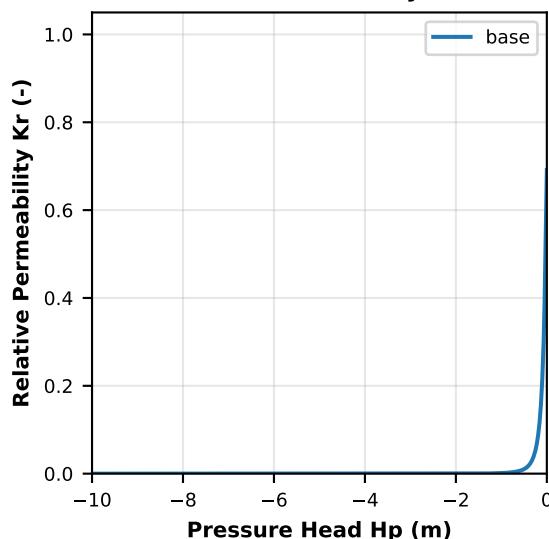
## CONTAMINANT PROPERTIES

Contaminant: Chloride ( $\text{Cl}^-$ )  
Application Rate: 0.1 kg/m<sup>2</sup>/hr  
Application Zone: Deicing zone (9-11m, surface)  
Application Duration: 726.0 hours  
Dispersivity ( $\alpha_L$ ): 0.05 m  
Bulk Density: 1600 kg/m<sup>3</sup>

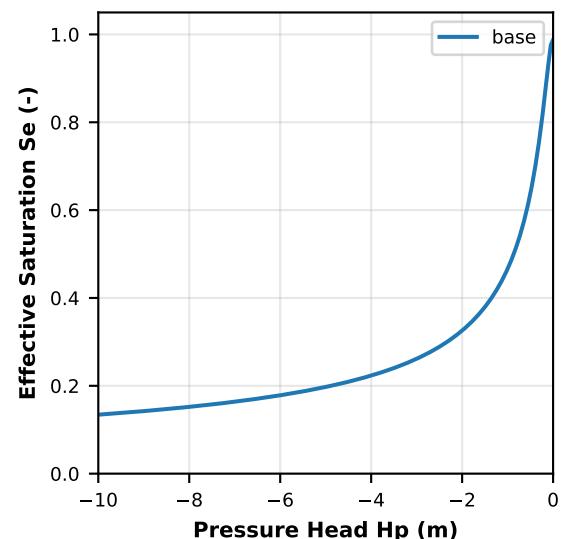
Water Content Curve



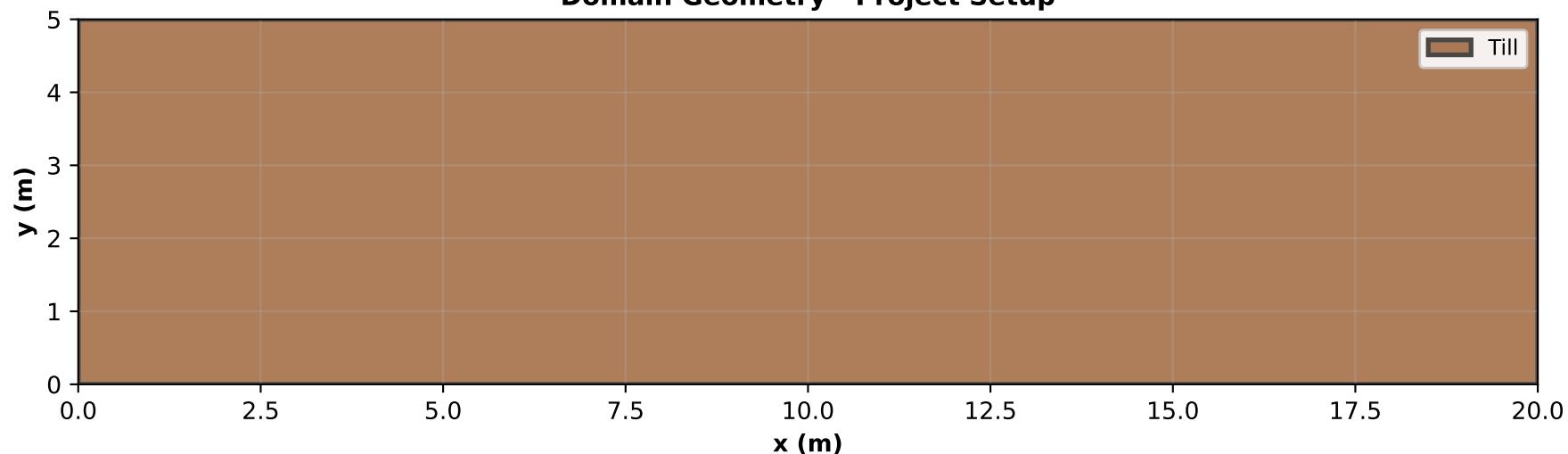
Relative Permeability Curve



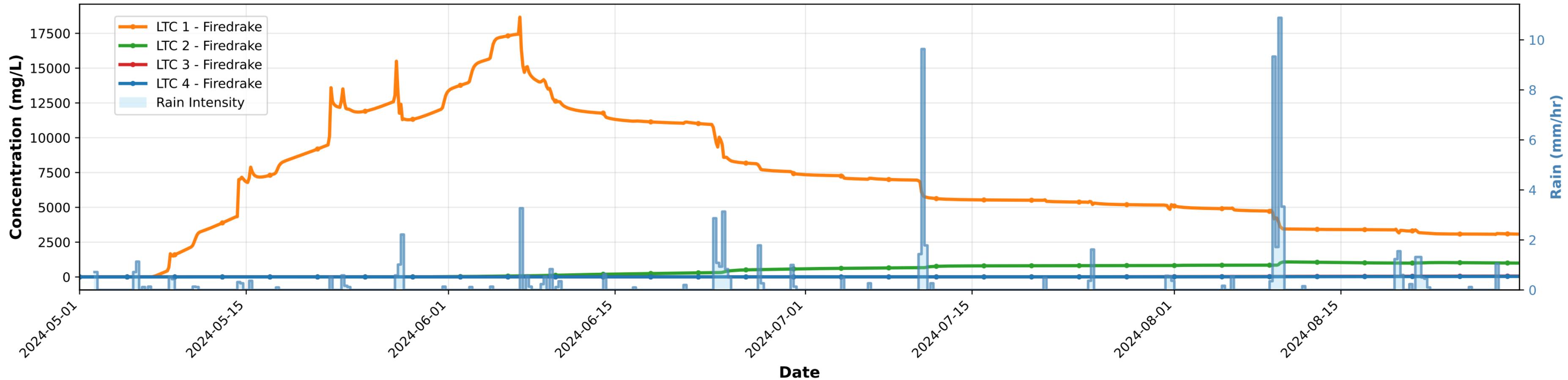
Effective Saturation Curve



Domain Geometry - Project Setup

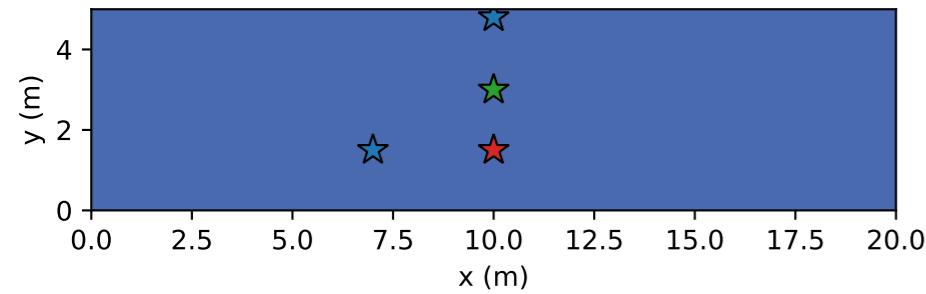


# CONTAMINANT CONCENTRATION - TIME SERIES

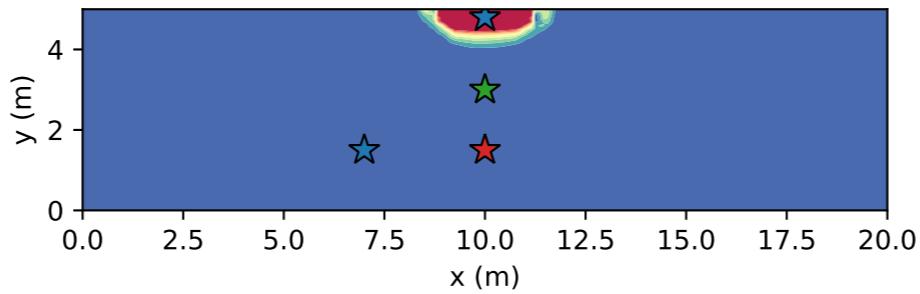


# CONTAMINANT CONCENTRATION - SPATIAL DISTRIBUTION

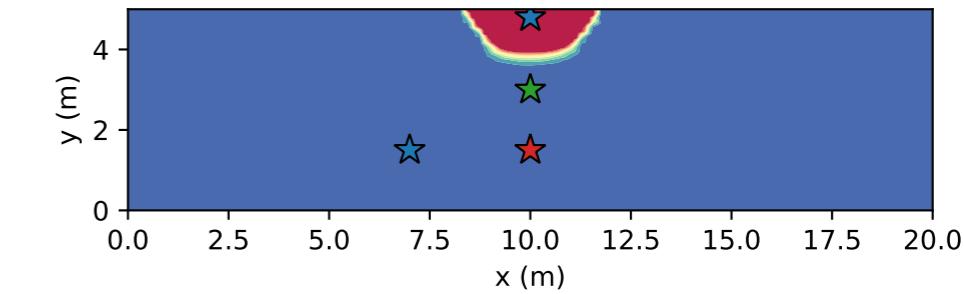
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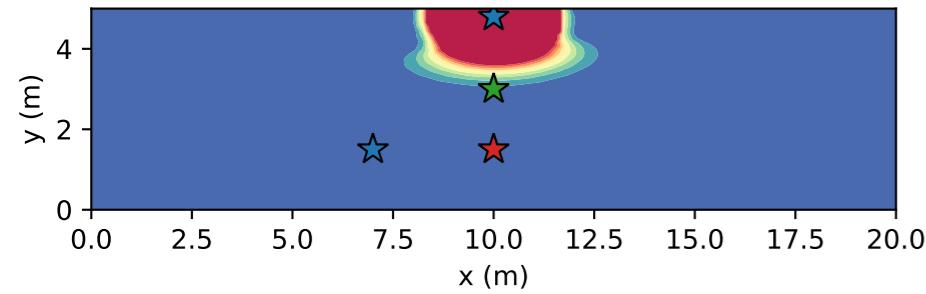
2024-05-13 03:00



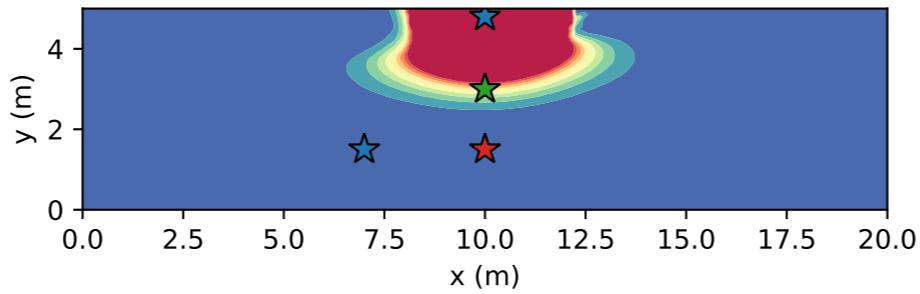
2024-05-25 06:00



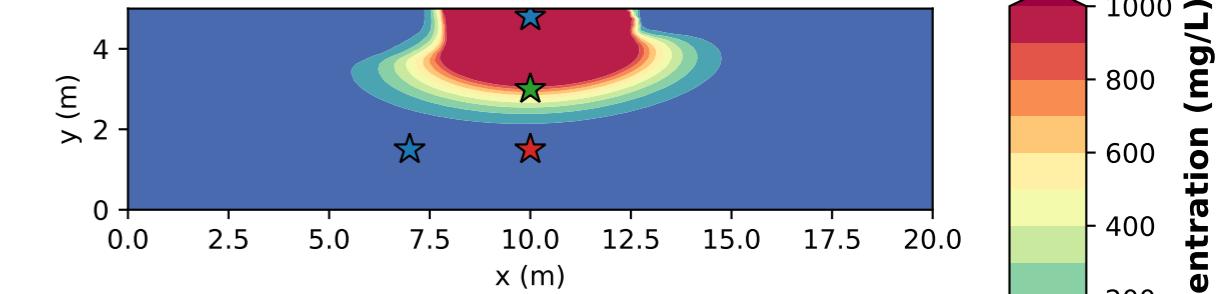
2024-06-06 06:00



2024-06-30 12:00



2024-07-24 18:00



Concentration (mg/L)

A vertical color bar on the right side of the bottom plot, ranging from 0 to 1000 mg/L. The colors transition through blue, green, yellow, orange, and red, with numerical labels at 0, 200, 400, 600, 800, and 1000.