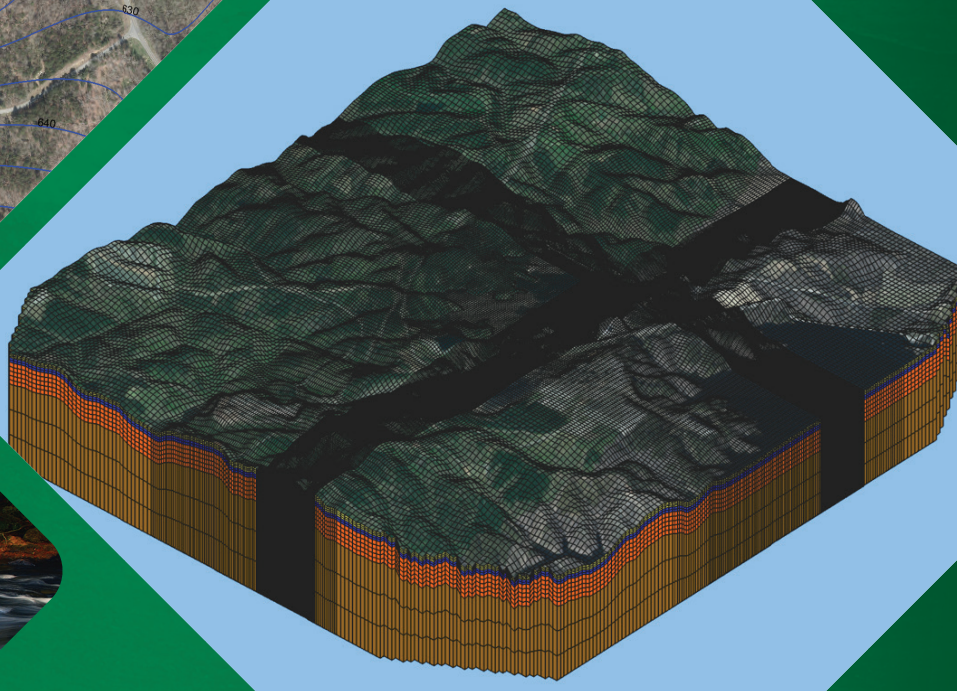
synTerra

GROUNDWATER FLOW AND TRANSPORT MODELING



Solutions to groundwater-related environmental challenges often require more than monitoring of wells. Data from monitoring can be used to create flow and transport models that enhance understanding of complex, interconnected systems. Flow and transport simulations enable teams to identify critical data gaps, forecast future conditions, and support remedial alternatives.

Bring systems and solutions to life with flow and transport modeling.

Groundwater flow and transport modeling can deliver details about past, present, and future conditions that basic monitoring data cannot provide. SynTerra developed groundwater modeling as a specialty service to support clients in diverse sectors. For more than two decades, SynTerra modeling experts have helped stakeholders gain key information about the evolution of systems, and in turn, identify promising remedial alternatives.

The SynTerra modeling team uses the latest software and has strong connections with leading practitioners in the field. With its expertise, SynTerra is ideally suited to deliver timely, cost-effective modeling solutions.

SYNTERRA CAPABILITIES FOR GROUNDWATER FLOW AND TRANSPORT MODELING

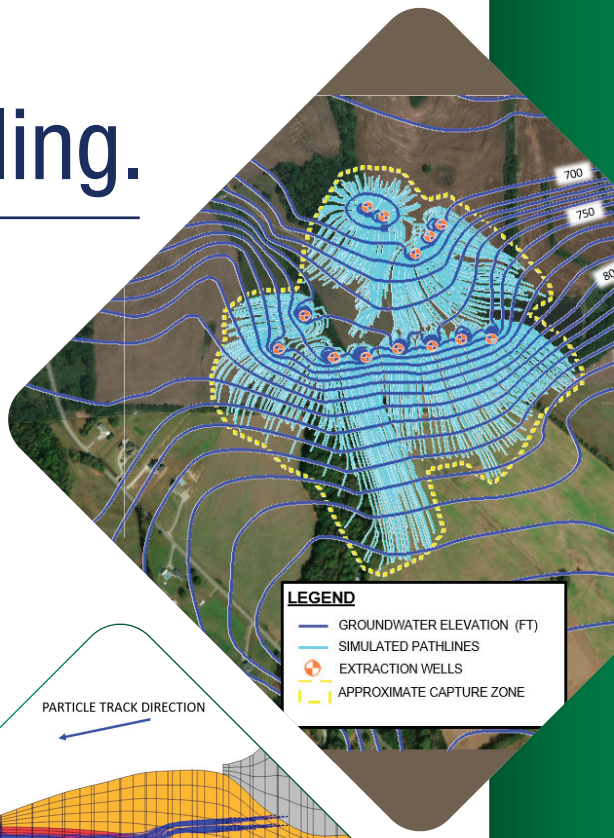
Site understanding
- Identify data gaps and provide guidance for additional data collection.
- Refine the conceptual site model by revealing internal inconsistencies.
- Identify source areas and predicted plume migration.

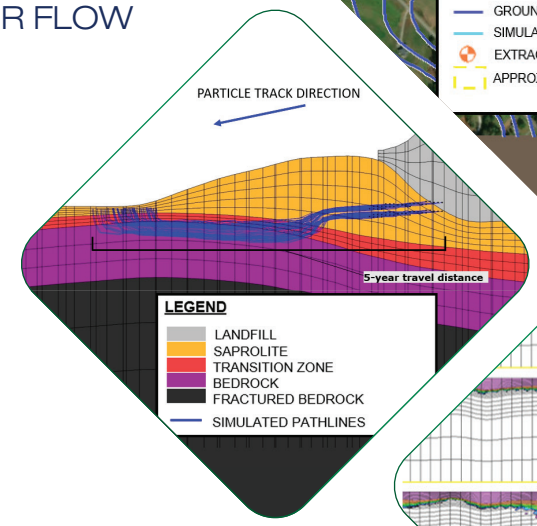
Remediation
- Develop remediation goals protective of receptors.
- Evaluate remediation strategies based on costs and effectiveness.
- Optimize remedial monitoring systems based on costs and duration.

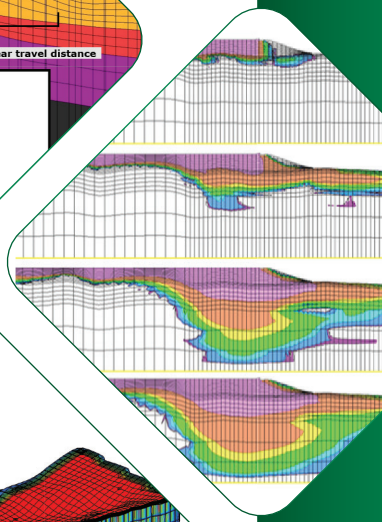
Site closure/exit strategy
- Identify plume stability.
- Determine when monitored natural attenuation (MNA) is appropriate.
- Establish alternative cleanup goals.

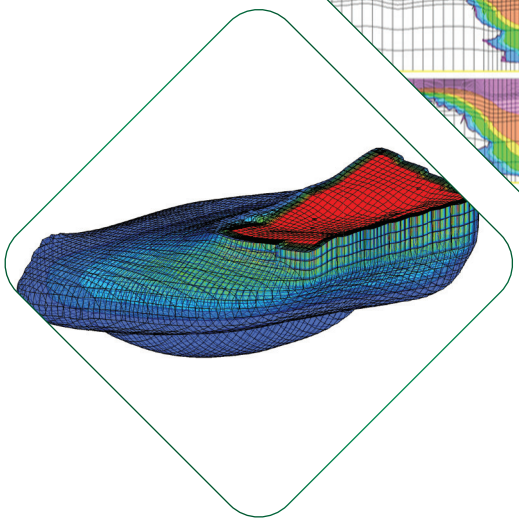
Geotechnical and landfill design
- Predict post-construction water levels.
- Estimate dewatering flow rates and final groundwater elevations.
- Evaluate the effects of capping systems and liners.

Resource development
- Assess the amount of groundwater resources available.
- Assess the effectiveness of groundwater extraction methods.
- Evaluate the sustainability of groundwater resources.
- Predict the combined effects of anthropogenic and natural stresses on groundwater reserves.
- Evaluate aquifer vulnerabilities.









FOR MORE INFORMATION ABOUT SYNTERRA GROUNDWATER FLOW AND TRANSPORT MODELING SERVICES:

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