Carbonate CZ-RCN Potential Modeling Data Tools
Prepared by Lindsey Aman Cromwell, Research Assistant, West Virginia University

MODFLOW: USGS finite-difference groundwater flow program:
MODFLOW Link

Flopy: Create, run, and post-process MODFLOW models:
Flopy Github Link

ParFlow: Parallel, integrated hydrology model that simulates spatially distributed surface and subsurface flow, as well as land surface processes including ET and snow:
ParFlow Link

Landlab: Python based environment to build numerical landscape models to compute flow across a gridded terrain:
Landlab Link

CMT3D: Used for nitrate transport through the aquifer matric and karst conduits:
CMT3D Hydroshare Application and Citation

Conduit Flow Process (CFP): USGS Model to simulate turbulent or laminar groundwater flow conditions:
CFP USGS Link Hydroshare Example

Storm Water Management Model (SWMM): EPA model used to simulate sediment transport processes in karst conduits:
EPA Link SWMM Github Hydroshare Example

VarKarst: Model that pinputs precipitation and PET and returns karstic recharge and AET with a combination of hillslopes and depressions, randomly distributed soil and epikarst depths, and fast-slow flow:
VarKarst Github Hydroshare Example