Coupling a three-dimensional subsurface flow and transport model with a land surface model to simulate stream-aquifer land interactions (PFLOTRAN_CLM v1.0)

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16 Figure S1. Plant function types at 10-m resolution as inputs for CLM4.5









22 Figure S3. Topography at (a) 2-m; (b) 10-m; (c) 20-m resolutions over the study domain





June of each year in study period from PFCLM_{2m} (left panels) and PFCLM_{E2m} (right panels)



30 Figure S5. Mole fraction of river-water tracer at elevation 107 m on 30 June of each year in the study

31 period from PFCLM_{2m} (upper panels) and PFCLM_{E2m} (lower panels)



Figure S6. Simulated daily domain-averaged surface energy fluxes from PFCLM_{2m} (red) and PFCLM_{E2m}
(blue)



39 Figure S7. Total water mass, tracer amount, and exchange rates of water and tracer at four boundaries

40 simulated by $PFCLM_{20m}$.