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Simulating groundwater uptake and hydraulic redistribution by phreatophytes in a high-resolution, coupled subsurface-land surface model

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HIGHLIGHTS

- Belowground processes in Earth system models continue to present challenges.
- ParFlow.CLM modified to include more realistic root water uptake functions.
- New model capable of predicting groundwater uptake, hydraulic redistribution.
- Model compares favorably to eight years of data from AmeriFlux site in California.
- Improved prediction of latent heat fluxes in drylands with phreatophytes.

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