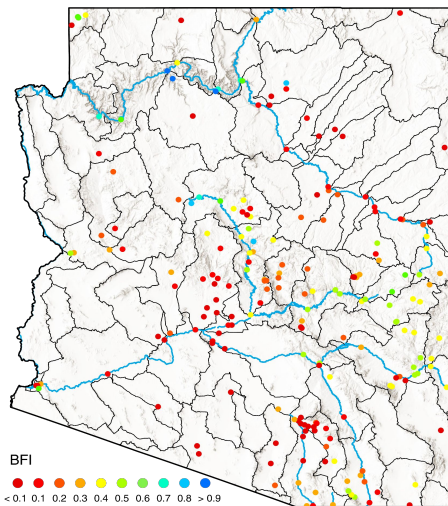


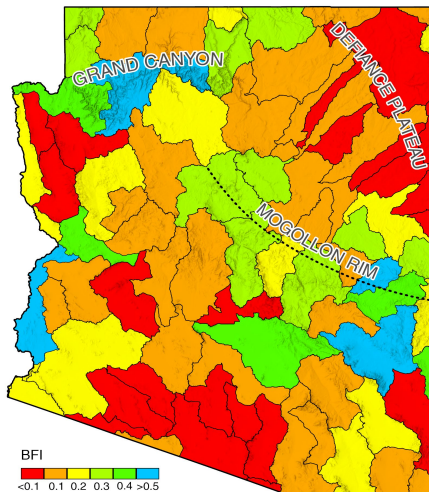
Regional Base-Flow Index in Arid Landscapes

Using Machine Learning and Instrumented Records

Groundwater sustains 32% of Arizona streamflow, but streamgages are sparse across drylands.



We applied XGBoost to predict regional BFI using climate, land-use, and physiographic data.



Widespread BFI declines seen in monsoon-dominant systems, warm-dry climates, and low-slope regions reflect climate stress.

