

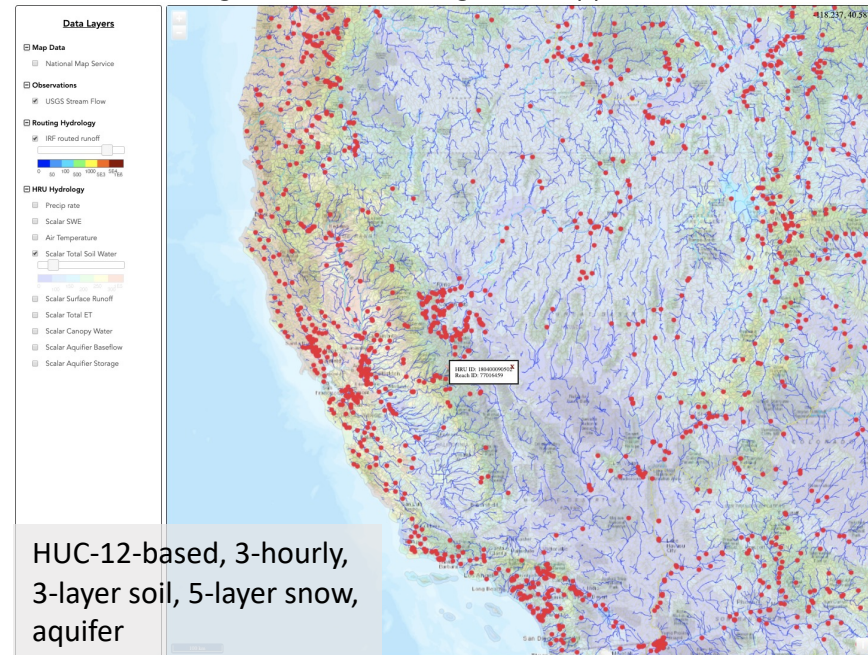
A new SUMMA and MizuRoute hydrologic modeling resource for US water applications

Andy Wood – NCAR Climate and Global Dynamics Laboratory & Research Applications Laboratory, Boulder CO

Objectives

- Using ensemble approaches to guide the development of risk-based strategies for operating reservoir systems
- Provide the first application of the SUMMA and mizuRoute framework for streamflow simulation and prediction
- Use ensemble meteorological forcings to enhance initial condition uncertainty
- Demonstrate of the value of hindcasts for understanding forecast skill and uncertainty

Creating a large-domain model modeling resource from which to tailor local to regional water management applications

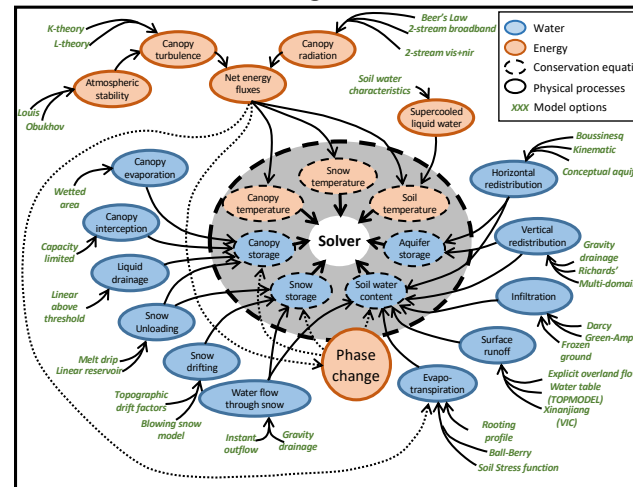


HUC-12-based, 3-hourly, 3-layer soil, 5-layer snow, aquifer

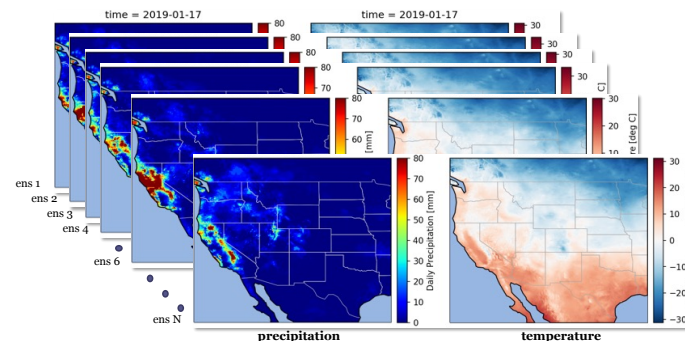
Acknowledgements

- **Sponsors:** US Army Corps of Engineers and Reclamation
- **Contributors:** J Sturtevant, N Mizukami, H Liu, D Llewellyn, J Lanini, D Broman, M Clark, A Newman, E Gutmann
- **Contact:** Andy Wood – andywood@ucar.edu

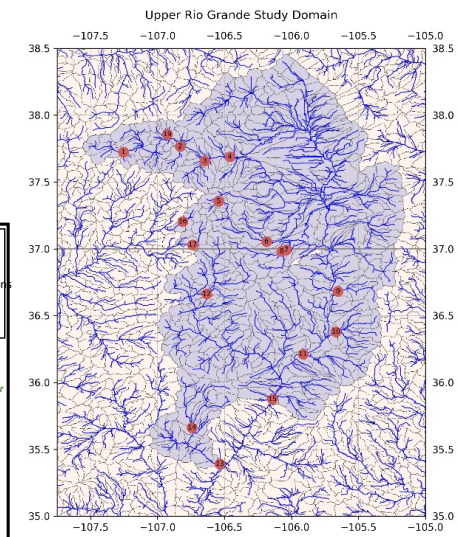
Structure for Unifying Multiple Modeling Alternatives



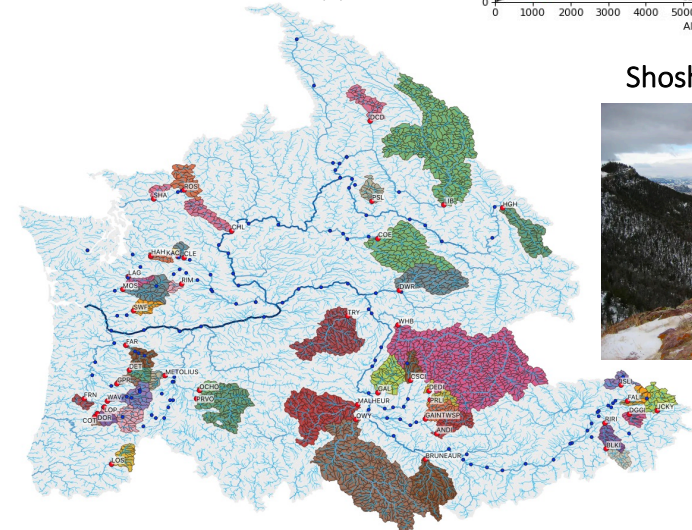
GMET Ensemble Observations for initialization



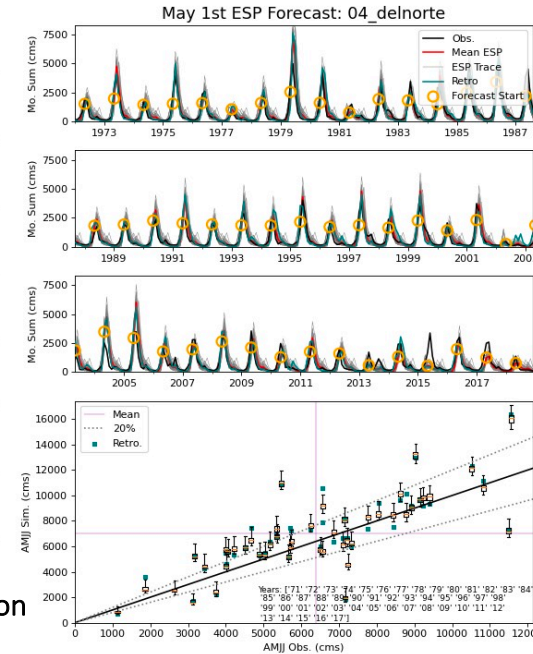
Rio Grande R application



Pacific NW / Columbia R application



Rio Grande R hindcasts



Shoshone R application

