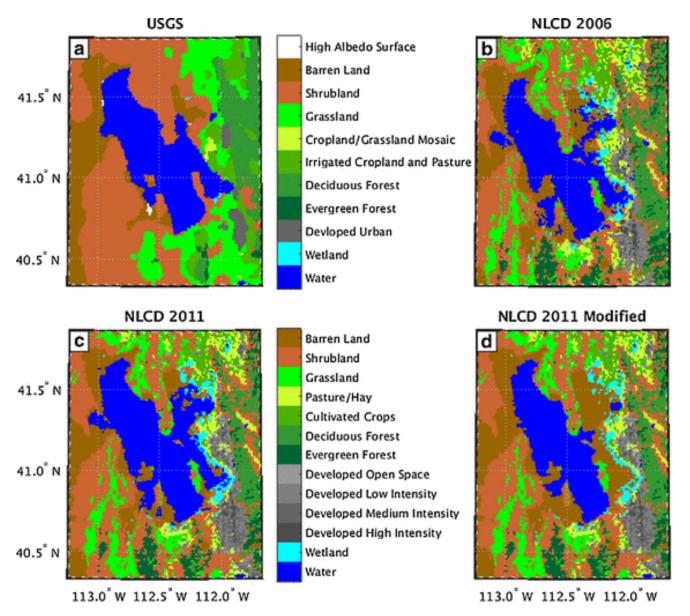
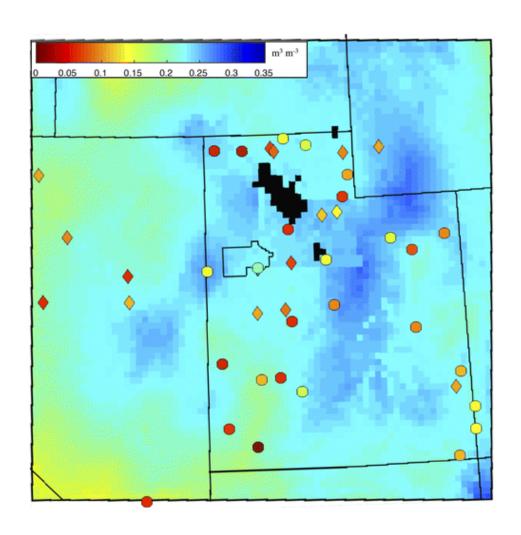
Erik Crosman and John Horel

- Experience running Weather Research and Forecast (WRF) Model over complex terrain in northern Utah, Emphasis in stable conditions
- Numerous modifications to land use and surface state to improve stable simulations
- High-resolution simulations ranging from mesoscale (I km) to large-eddy simulation (250 m resolution)



Foster, C., E.T. Crosman, and J.D. Horel, 2017: Simulations of a Cold-Air Pool in Utah's Salt Lake Valley: Sensitivity to Land Use and Snow Cover. In Press, to *Boundary-Layer Meteorology*

Soil Moisture Problems Massey et al. 2016



Improve Turbulent Mixing: Large-Eddy Simulation of CAP ✓ Depth 3000 Height z (m) 2500 ΔX 1335 m ✓ Duration 2000 √ Clouds 1500 CAP too shallow ✓ Physics **LES ΔX 250 m Important** To verify vertical profiles 3000 e observations Crosman Height z (m) 2500 and Horel (2017)2000 1500 29 27 28 30 31 January 2011