Deep-basin brines VI: Comparison with shallower groundwater

A major point of Part V of this series was that pH decreases with increasing concentration of deep-basin brines. That trend is opposite the usual relationship between TDS and pH in relatively shallow groundwater, where pH and TDS increase together. The plot below makes that point by showing data from groundwaters in the Coastal Plain of the southeastern United States and our data from deep-basin brines.

Data for deep-basin brines are from sedimentary basins in the US., Canada, and the North Sea; sources are shown in the legend for "Deep-basin brines I: Density, TDS, and chloride". Data for Georgia groundwaters are from the dataset used by Railsback et al. (1996) A survey of the major-element geochemistry of Georgia groundwater: *Southeastern Geology*, v. 36, p. 99-122.