Abstract

Streamflow statistics are increasingly non-stationary, thanks mainly to human-driven changes in the environment. The stationarity paradigm under which we worked in the 20th century needs re-examination, with implications for gaging and analysis. I'll summarize, as an example, our work showing how "global warming" could be seriously shifting the probabilities of extreme flood events. We'll also look at changes in winter flow statistics across the northern part of the USA; these changes appear to be driven by regional winter warming. Finally, I'll share some thoughts on how we might deal with the estimation of streamflow characteristics in a changing world.