

**Devils Lake, ND Adaptation response and climate attribution: The Devils in the details**Doug Kluck<sup>†</sup>;<sup>†</sup> NOAA's National Climatic Data Center, USALeading author: [doug.kluck@noaa.gov](mailto:doug.kluck@noaa.gov)

For the past 30 years the closed basin of Devils Lake, North Dakota has been experiencing increasing lake levels that have caused over a billion dollars in response from local, state and federal governments. Levees, roads, railways and towns have either been raised to stay ahead of the encroaching lake or left to founder in the water. Many additional hardships have been faced by those living around and near the lake. Precipitation has correspondingly been above normal for the most part over this time period but other variables have played an important role as attribution studies have shown (Hoerling et al, 2010). Evaporation or the lack thereof may be the most important determinate for lake levels now. Soil moisture also plays a large role as soil profiles have become complete saturated over the basin. Timing and type of precipitation and runoff also play key roles. Naturally it is relevant to question the role of climate change and its impact on the basin. Certainly the preponderance of climate models have portrayed wetter scenarios in northern latitudes annually. While the changing climate cannot be discounted fully the direct impact may be minimal based on preliminary findings from Hoerling et al (2010). Studies showing a cyclic nature to precipitation throughout the Great Plains shows that natural variability may be the strongest strong contributor. This poster will address the question of climate variability and change on the Lake. It will also highlight the impacts and adaptation response to them.