

## **A Workshop on the Development of a Benchmark Hydroclimate Data Library for North America**

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There has been considerable progress recently in making historical, model and paleo data on climatic and hydrologic fields publicly accessible (e.g., [www.cdc.noaa.gov](http://www.cdc.noaa.gov), [water.usgs.gov/data.html](http://water.usgs.gov/data.html), [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov), [ingrid.ldeo.columbia.edu](http://ingrid.ldeo.columbia.edu), [www.eosdis.ornl.gov](http://www.eosdis.ornl.gov), and CDs available from a variety of sources). These sources have proven to be very valuable for educational and research purposes. Our empirical understanding of the nature of large scale climate variability and its hydrological footprint has increased significantly as a result. The increased research interest in this area underscores the need to improve the access, quality and extent of the hydroclimatic databases publicly available. Specifically, hydrologic data (e.g., streamflow, groundwater levels) libraries are at present rather deficient compared to climate libraries. It is difficult to easily acquire and analyze co-located streamflow and climate data. Data sets collected by different public entities are not available in a common format or site, or have spotty coverage, and are not up to date. No comprehensive project has been undertaken to assess the consistency of these data at different time scales and in space, and to investigate, assess and attempt to adjust for the role of human modification. Unlike climate fields, no online or other tools are available to do comprehensive statistical or empirical analyses of the space and time variations of hydrologic fluxes using online data. Blended model and observational records provide estimated gridded time series for atmospheric and oceanic variables back to 1948 or 1850 depending on the variable. No comparable data system is available for streamflow. Similarly, while there is now a rich multi-century or longer database of climate variables reconstructed from proxy indicators (e.g., tree rings, corals, and sediments), no comparable effort has been undertaken by hydrologists.