



New Hydrologic Daily Values Web Services

**A joint announcement from the USGS (U.S. Geological Survey) and CUAHSI
(Consortium of Universities for the Advancement of Hydrologic Sciences Incorporated)**

The USGS and CUAHSI are pleased to announce a new web service for the delivery of hydrologic data, available for beta testing as of December 3, 2007. This service is a part of the development of a web services architecture for water resources data. This architecture enables scientists and engineers to easily acquire information from a wide range of data providers in a form that is highly efficient for both the provider and the user and which assures that the metadata (information about the data such as place, time, qualifications and definitions) are transmitted with the data. The direct machine to machine communication provided by web services supports applications that consume and analyze data without requiring user intervention or downloading the data using a web browser.

The particular service that is being announced today is the XML-based delivery of all USGS historical daily values data contained in the USGS National Water Information System (NWIS). This service provides access to the 295 million individual daily values of hydrologic data contained in NWIS including about 200 million individual daily streamflow values some of which are from streamgage records of over 100 years in duration. These data also include about 14 million daily water levels in wells, about 13 million daily temperature values, and about 6 million daily specific-conductance (salinity) values. We believe that this service will assist research scientists and engineers gain easy access to data that can help them conduct their research, test their hypotheses, and evaluate designs related to a wide range of important water issues and water-management needs.

These data can be accessed through the "GetValues" function of the CUAHSI Hydrologic Information System (HIS) at <http://river.sdsc.edu/wateroneflow/NWIS/DailyValues.asmx> in conjunction with accessing a wide range of non-USGS water data through the CUAHSI web services. These services support a standard set of queries on all data sources and return data in a standard data language, WaterML, which CUAHSI has developed and the USGS has adopted for providing direct query access to the NWIS daily values archive.

Detailed instructions for accessing the service and obtaining these data directly from the USGS can be found at http://waterdata.usgs.gov/nwis/?DailyValues_Service_Instructions. The USGS service is considered to be in beta test mode in order to evaluate system performance and usability and, as such, the system may be unavailable for short periods of time as reconfigurations are made to address user feedback and overall performance. However, the data provided have been verified as correct and identical to those that are available through the web browser data-delivery mechanisms provided by the USGS NWISWeb interface <http://waterdata.usgs.gov/>.

The USGS and CUAHSI look forward to expanding web service delivery of more USGS data types in the future. The CUAHSI HIS is supported by the National Science Foundation which enabled CUAHSI to take the leadership in defining WaterML and a community architecture for the delivery of water data.