

Accounting for Consumptive Use of Lower Colorado River Water

The Colorado River Compact of 1922 requires the participation of the U.S. Geological Survey and Bureau of Reclamation to monitor flow and estimate consumptive use of water from the Colorado River. The U.S. Supreme Court Decree of 1964, *Arizona v. California* is specific about the responsibility of the Secretary of the Interior to account for the consumptive use and distribution of water from the lower Colorado River in Arizona, California, and Nevada. The Lower Colorado River Accounting System (LCRAS) and the accounting surface are tools that enable the Secretary to comply with the Compact and Decree. The LCRAS was designed to estimate the annual consumptive use of river water by vegetation from the lower Colorado River and allow equitable distribution of that use among water users between Hoover Dam and Mexico. Domestic, municipal, and industrial consumptive use of water pumped from wells is a component of the LCRAS water budget; therefore, accounting for consumptive use from all these wells provides a more equitable estimate and distribution of consumptive use by vegetation to agricultural users. The identification of wells outside the flood plain that yield water that will be replaced by water from the river is based on the concept of a river aquifer and an accounting surface within the river aquifer. The accounting surface provides a uniform criterion of identification based on hydrologic principles for all users pumping water from wells. Accounting for the consumptive use of Colorado River water requires the identification of all points of withdrawal of water; however, this accounting is incomplete because the location of all wells is unknown. Cooperative work continues with the Bureau of Reclamation to inventory all wells completed in the river aquifer so they can be included in the water-accounting process.

<http://water.usgs.gov/wid/html/az.html>