

A [recently issued study](#) by a University of Texas-led group of research scientists confirm a disconcerting fact: groundwater resources in California's Central Valley are being depleted at an alarming rate. As reported in the [Sacramento Bee](#), the study warns that current groundwater extraction rates from the Central Valley aquifer—which is primarily mined to serve agricultural water users in the San Joaquin and Sacramento Valleys—are increasingly unsustainable.

California's groundwater resources are particularly taxed in times of drought. That's because California water regulators and water project operators routinely impose drought-related restrictions on *surface* water diversions under both contractual provisions and user priorities established under longstanding California water rights law. *Groundwater*, by contrast, remains unregulated under California law, and water users routinely increase their groundwater pumping in dry years to compensate for reductions in their surface water deliveries. (Notably, California is the only Western state that doesn't regulate private groundwater pumping. Nor are groundwater users even required to monitor and report the amount of water they pump from underground aquifers.) The problem is that recent and current pumping levels are depleting Central Valley aquifers at a faster rate than they can being replenished—even in wet water years.

The new University of Texas study helps quantify the extent of California's overdraft problem. During the drought years of 2006-09, for example, farmers used enough Central Valley groundwater to fill Lake Mead. And it looks like we're now in another drought period: 21 California counties have already been given a primary designation as disaster areas due to drought conditions, with more counties likely to be added should current hot weather and low precipitation patterns continue.

As if that weren't enough, climate scientists are suggesting that these drought conditions may well be the "new normal" of California climate conditions. At the same time, demand for Central Valley water supplies is actually increasing. Whereas agriculture has traditionally been the region's dominant water user, urban water demand is growing: since 1980, the Central Valley's population has doubled to 3.8 million people, and demographic experts predict that number to increase to 6 million by the year 2020. Of course, these steadily growing water demands work to the detriment of Central Valley ecosystems such as the Delta, valley rivers and the plant and animal species—such as migrating salmon populations—that depend on those ecosystems for survival.

The answer, according to both the University of Texas scientists and a multitude of

other experts, is for California to more actively and sustainably manage its groundwater resources. This means, for example, establishing effective groundwater monitoring systems, regulating groundwater the same way California allocates surface water resources, and proactively using currently-depleted groundwater aquifers as underground water banks that can be replenished in wet water years.

One can hope that California legislators and regulators will rely on this new scientific evidence to enact such welcome groundwater reforms. But I wouldn't bet the farm on it.