

The environment, agriculture and urban consumers drink up California's water

By Robert
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The water frozen in snow throughout the Sierra Nevada is 8% of average — less than a third the size of the smallest on record. Video by Mark Grossi. [Read his story](#) THEFRESNOBEE

With California entering its fourth year of drought, the question takes on new urgency: Where does all of the state's water go?

The answer can vary depending on how the data are compiled, but according to the California Department of Water Resources, the biggest users are the environment, agriculture and urban consumers.

As the state confronts a snowpack that's only 5% of average — the smallest one ever recorded in the Sierra — and below-average rainfall, Gov. Jerry Brown is asking for reductions aiming at cutting water use by 25%.

"Everyone is feeling it," said Doug Parker, director of the California Institute for Water Resources.

As with most things related to water, the system for how it is distributed, regulated and used can be complex. The responsibility of managing and protecting California's water falls to the Department of Water Resources. The agency allocates water to three different users: agriculture, urban and environmental. It uses water that falls as rain or melts as snow and is captured behind dams and reservoirs, and is also in groundwater storage. It also includes water that isn't captured, but is used for a specific environmental purposes.

Those environmental uses include wild and scenic rivers, the Sacramento-San Joaquin River Delta, wildlife refuges and wetlands.

Parker said some of the water dedicated to the environment also provides recreation or navigation.

"There are a lot of times when water has multiple uses," said Parker, who is also the strategic initiative leader for the University of California's Agriculture and Natural Resources' Water Initiative.

Taking all that into account, data from the state show that 50.2% is used by the environment, 40.9% for agriculture and 8.9% by urban residents and businesses.

State officials acknowledge that excluding the portion of water dedicated to the environment makes agriculture, by far, the major user, at about 80%.

That figure is sometimes used by proponents of strict water conservation. Farmers add the environment into the equation to show they are not the major user.

"People will put the environmental use in or leave it out, depending on what argument they are trying to prove," said Evelyn Tipton, senior engineer at DWR.

Parker said adding the environmental uses in is important in understanding total water use.

"If you say that ag uses 80% you are trying to make the point that there is a huge imbalance between what ag and urban use," Parker said. "But it is far more complicated than that."

As part of the state's emergency water conservation regulations, California's urban water users have been asked to reduce their usage by 25%. Wednesday, Gov. Brown promised more enforcement in cities and actions against water agencies in groundwater-depleted areas that have not shared data with the state.

Last year, the state prohibited washing down sidewalks and driveways, washing cars without a shut-off nozzle and allowing runoff from landscaping watering. New restrictions say restaurants can only serve water to customers on request and hotels and motels must give guests the option of choosing to have towels and linens laundered daily.

Although farmers have not been asked to conserve 25%, those in the San Joaquin Valley, the heart of the state's \$45 billion agriculture industry, will receive little to no surface water this year. To compensate, many are turning to groundwater pumping, which has also raised concerns about depleting the region's groundwater supplies.

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