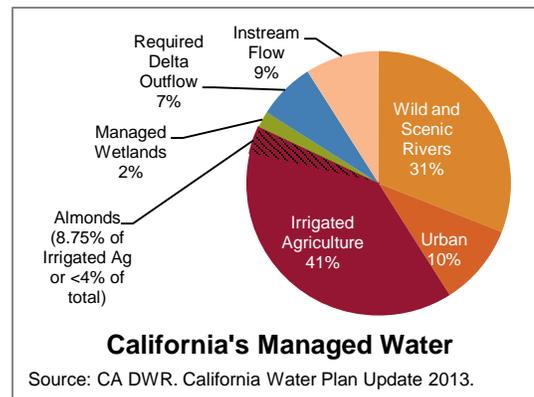


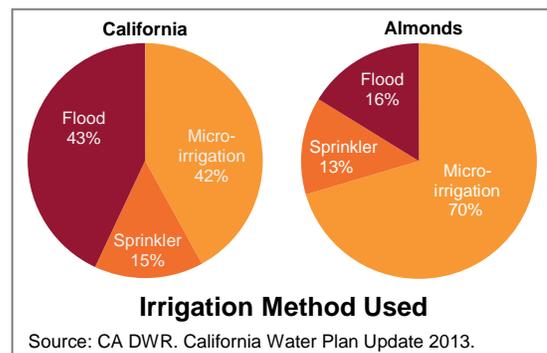
Almonds and Water 101

Know the Facts about California Almonds, Agriculture, and Water Use

- According to the [Public Policy Institute of California](#), agriculture uses 41 percent of California's total water supply – not 80 percent as often quoted.¹
- Despite all the focus on almonds recently, almonds make up approximately 13 percent of the state's total irrigated farmland and use less than nine percent of the state's agricultural (not total) water.² Growing almond trees – with nutritious almonds, by-product utilization and economic value – is a worthwhile use of 9 percent of California's agricultural water.



- In 2014 alone, the drought cost farmers \$1.5 billion and the loss of more than 17,000 jobs related to agriculture which goes to show that **farmers are sharing in the painful sacrifice**.³ Furthermore, the state government is providing farmers with a [20 percent water allocation](#) this year and the federal government is [providing zero allocation](#).^{4,5} According to the California Farm Water Coalition, 30 percent of the irrigated farmland in the state will receive no surface water this year and 41 percent will receive cuts of 80 percent or more. Additionally they project that job losses could reach 23,000 this year with economic costs to California's economy exceeding \$5.7 billion.⁶
- Almond growers have adopted efficiency measures above average for California farmers; [70 percent of almond growers use micro-irrigation systems](#) and more than 80 percent use demand-based irrigation scheduling.⁷ We expect those numbers to continue to grow over time. Over the past two decades, we've reduced the amount of water it takes to grow a pound of almonds by 33 percent, thanks in part to these advancements.⁸



¹ Public Policy Institute of California. [Water for Farms](#). Apr. 2015.

² USDA. [2012 Census of Agriculture](#). May 2014. California Department of Water Resources. [California Water Plan Update 2013](#): Volume 1. Oct. 2014. USDA-NASS. [2014 Almond Acreage Report](#). Apr. 2015.

³ University of California, Davis. [Economic Analysis of the 2014 Drought on California Agriculture](#). July 2014.

⁴ California Department of Water Resources. [Press Release](#). Mar. 2015.

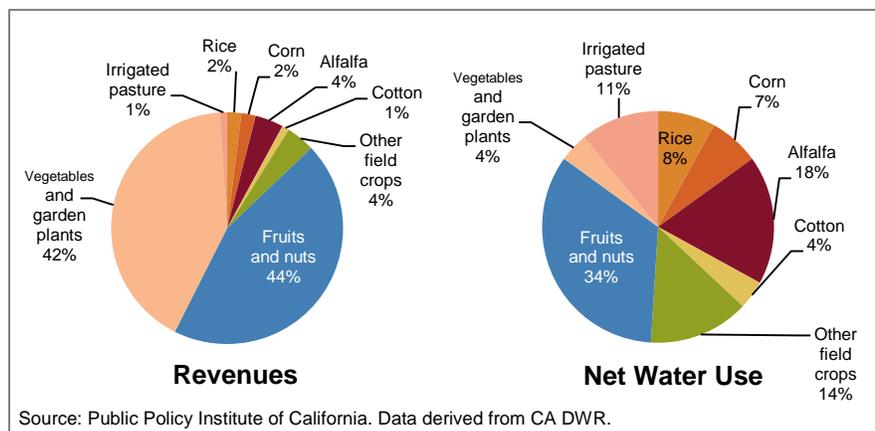
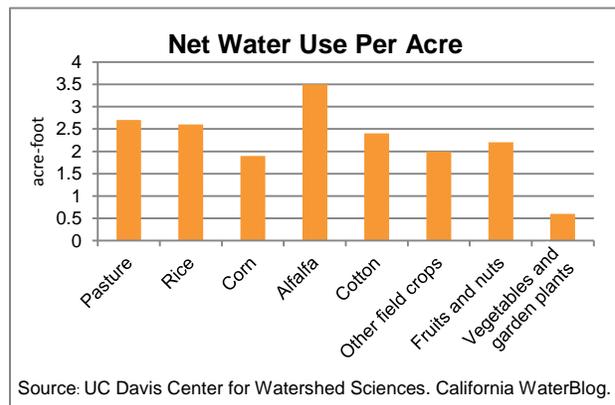
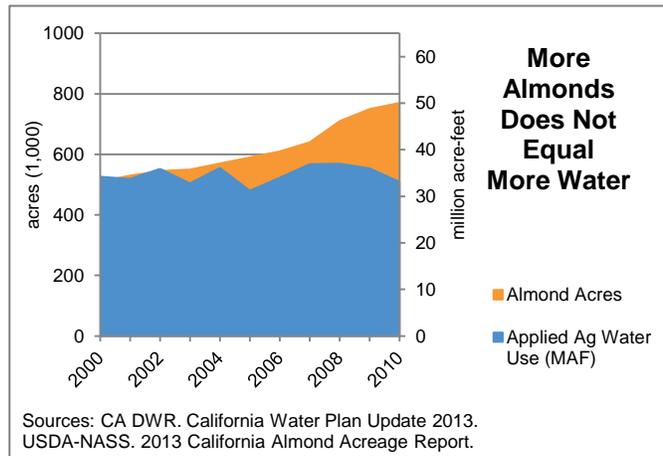
⁵ U.S. Bureau of Reclamation. [Press Release](#). Feb. 2015.

⁶ California Farm Water Coalition. [No Water For Farms](#). Apr. 2015.

⁷ California Almond Sustainability Program. Jan. 2014.

⁸ University of California. [UC Drought Management](#). Feb. 2010. Food and Agriculture Organization of the UN. FAO [Irrigation and Drainage Paper 66 – Crop yield in response to water](#). 2012. Almond Board of California. [Almond Almanac](#) 1990-94, 2000-14.

- Some have suggested that the shift towards higher value crops like nuts and wine grapes have led to an increase in agricultural water use. But according to the [Department of Water Resources](#), **the total amount of agricultural water has held steady since 2000 and actually declined over a longer period.** Meanwhile, the value per gallon has increased.⁹
- Agriculture is an economic imperative to the population of the largest region of the state – the Central Valley. A report from the University of California Agricultural Issues Center finds that **of the 104,000 jobs almonds alone contribute to California, 97,000 of them are in the Central Valley.** As the report's author notes, "These jobs are vital in a region that has long had high unemployment."¹⁰
- **The water used to grow almonds is in line with the per-acre needs of many other California crops,** and fruits and nuts provide 44 percent of the revenue while using only 34 percent of water.¹¹ Also, note that the water used to grow almond trees produces two crops. First, there's the kernel, which is the nut we eat. Second, there are the hulls, which are sold as livestock feed, reducing the amount of water needed to grow other feed crops. Even the shell of the almond is used for livestock bedding and alternative energy.



To learn more about almonds and water, please visit Almonds.com/Water.

⁹ California Department of Water Resources. [California Water Plan Update 2013](#); Volume 4. Feb. 2015.

¹⁰ University of California Agricultural Issues Center. [The Economic Impacts of the California Almond Industry](#). Dec. 2014.

¹¹ Public Policy Institute of California. [Water for Farms](#). Apr. 2015.