Tuolumne river water for agriculture

As the state that produces the most agriculture, California requires significant water to maintain production. The main source of water in the San Joaquin Valley is precipitation in the Sierra Nevada mountains. This water travels through the different rivers, including the Tuolumne. Therefore, measuring river flow is important to maintain ecosystem health and deliver water. Finally, the Tuolumne River flows to Don Pedro reservoir where it is diverted to irrigate crops in the region.

There are many crops grown in the valley, but the two main crops are almonds and grapes. These crops generate $10.1 billion each year. These crops have a high water need – almonds are the highest, needing about 50 – 54 inches of water per year. Farmers know that water is important to grow crops. Therefore, they use different irrigation technologies like drip and sprinkler to maximize their crop yield and save water. As the valley is susceptible to dry periods, it is important that they use the minimum amount of water during these periods. It is crucial to have good water management in agriculture since it uses approximately 80% of California's water. Agriculture also helps to store water during wet years, when water can be recharged to groundwater and used for future growing seasons.

Created by Jorge Preciado, Graduate Student at New Mexico State University. This work is supported by Agriculture and Food Research Initiative Competitive Grant no. 2021-69012-35916 from the USDA National Institute of Food and Agriculture.

References:

https://www.cdfa.ca.gov/Statistics/
https://ucmanagedrought.ucdavis.edu/Agriculture/Crop_Irrigation_Strategies/Almonds/
https://water.ca.gov/Programs/Water-Use-And-Efficiency/Agricultural-Water-Use-Efficiency#:~:text=Yet%2C%20considering%20that%20agriculture%20accounts,use%20ef ficiency%20can%20be%20significant.