



# Critical Year Determination

## Overview

The Critical Year metric determines the available contractual water supply under Sacramento River Settlement, San Joaquin River Exchange, San Joaquin Settlement, and refuge water supply contracts. The Critical Year Determination is made based on the forecasted full natural inflow into Shasta Reservoir for a given Water Year (October 1 to September 30). In a non-Critical Year, the annual volume of water available is 100%. During a Critical Year, the annual volume of water available is reduced, generally around 25%.

## Background

Located nine miles northwest of Redding, California on the Sacramento River, Shasta Reservoir provides water supply, hydroelectric power, and flood management. The reservoir is fed by the Sacramento, Pit, and McCloud rivers and the watershed receives an average of 62 inches of annual precipitation. With a capacity of 4.5 million acre-feet, Shasta Reservoir is the largest reservoir in California and serves as the cornerstone of the Central Valley Project. Water from Shasta Reservoir is released downstream into a regulating reservoir—Keswick Reservoir—and then released downstream into the Sacramento River.



**Shasta Reservoir is the largest reservoir in California.**

## To Whom Does a Critical Year Apply?

Reclamation has settlement contracts with pre-Central Valley Project water right holders on the Sacramento River, and exchange and settlement contracts with pre-Central Valley Project water right holders on the San Joaquin River. Reclamation also has water contracts with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife for water supply to north- and south-of-Delta refuges, and Grassland Water District for lands within the Grassland Resource Conservation District.

These contractors typically receive 100% of their contract total unless the water year is classified as a Critical Year for Shasta, in which supplies are typically reduced by 25% of the contract total. However, in 2024, Reclamation and the Sacramento River Settlement Contracts executed the [2024 Drought Protection](#)

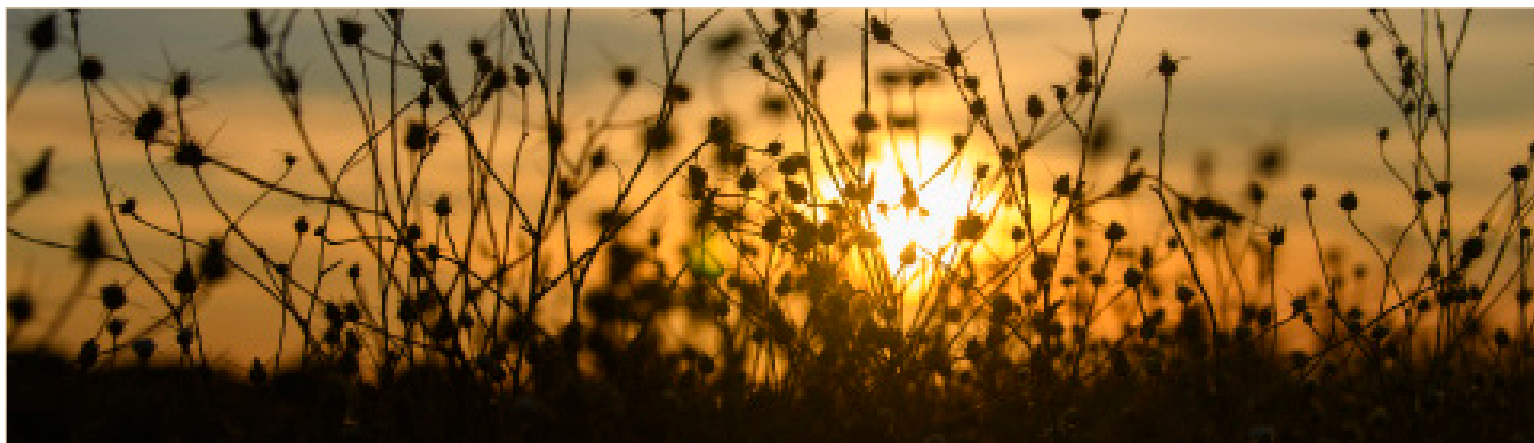
[Program](#) to bolster reliability of water supplies for irrigation and fish and wildlife during drought conditions. Under the Program, Sacramento River Settlement Contractors receive 100% allocation in wet and normal water years, but in certain critically dry years their diversions are reduced to 50% of total contract amounts as outlined in the Program Plan.

Generally, the contracts provide for Reclamation to make the Critical Year determination in mid-February. This determination is normally based on the forecasted full natural inflow to Shasta Lake provided by the Department of Water Resources' Water Supply Index and Bulletin 120 forecasts, which are updated monthly, and the National Weather Service's California Nevada River Forecast Center. Reclamation uses this information to update the forecast as needed, until a final determination is made around May.

*"Critical Year" in the Sacramento River Settlement Contracts, "Critical Calendar Year" in the San Joaquin River Exchange Contracts, and "Critically Dry Year" in the Refuge Water Supply Contracts.*



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## Determining a Critical Year

A Critical Year is determined when the forecasted full natural inflow to Shasta Reservoir for the current water year is equal to or less than 3.2 million acre-feet. It also occurs when the total accumulated Shasta inflow deficiencies are below 4 million acre-feet in the immediately prior Water Year or series of successive prior Water Years, combined with when the forecasted deficiency for the current Water Year exceeds 800,000 acre-feet.

For example, in Water Year 1, Shasta inflow is 4.5 million acre-feet, it would be a non-Critical Year. In Water Year 2, Shasta

inflow is 3 million acre-feet, it would be a Critical Year because inflow is less than 3.2 million acre-feet. In Water Year 3, Shasta Inflow is 3.4 million acre-feet. Although the inflow is greater than 3.2 million acre-feet, the deficiency criteria would apply because the immediate prior year had a deficiency of 1 million acre-feet (greater than 800,000 acre-feet). Water Year 3 forecasted inflow would therefore need to be greater than 4 million acre-feet for a non-Critical Year determination.

