

# **HYDROLOGY CHANGES AND PROJECTIONS IN THE CALIFORNIA BAY-DELTA SYSTEM**

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## **ABSTRACT**

The Delta of the Sacramento and San Joaquin rivers is an important habitat for many fish and wildlife species as it is critical to California's economy supplying drinking water for over 20 million people and irrigation water for 45% of the United States agricultural production. The natural hydrology - where runoff from spring melts interacts with tidal forces and river flows- has been modified with infrastructure over decades to meet the water supply demands but is now experiencing unprecedented pressures. Recent issues such as court-mandated cutbacks due to endangered species concerns, and sustained drought have combined with longer-term issues such as population growth and climate change to create a critical scenario. In an effort to provide a better understanding for adaptation management decision support, this paper analyzes the hydrology changes through time based on the unimpaired flows, observed flows and forecasted flows under different future climate change projections.

**PALAVRA-CHAVE:** adaptation management, climate change, delta, unimpaired flows, hydrology changes