

SEPT 2025

# The State of Bay-Delta Science 2025

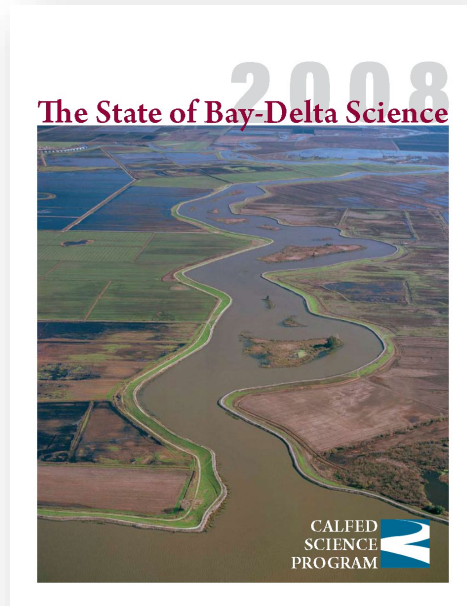
## “Extreme Events” edition



**Delta  
Science  
Program**

DELTA STEWARDSHIP COUNCIL

# The State of Bay-Delta Science



What have we learned?

What is still unknown?

Where do we go next?

# Sharing our scientific understanding



Synthesis



Communication



## Role in Delta science

**Builds** a shared body of knowledge

*"One Delta, One Science"*

**Informs** updates to the Science Action  
Agenda and Delta Science Plan

*Delta Science Strategy*

**Supports** future management actions  
and decision-making needs



# Assessing readership and engagement



## Previous two editions:

Hits: 58,441

Downloads: 18,105

Citations: 693

## Popular articles:

Moyle et al. 2016 – 130 citations

Kudela et al. 2023 – 26 citations

## Management documents:

Environmental Impact Report

Biological Opinion

Other planning documents

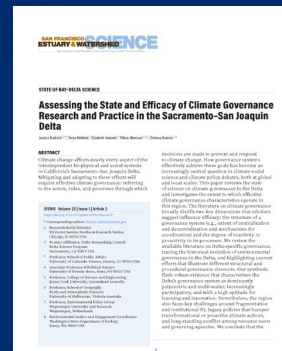




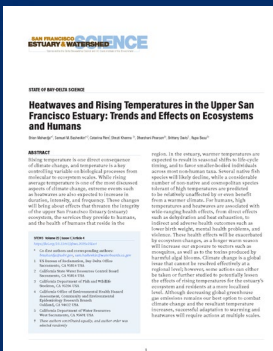
## Introduction



## Governance

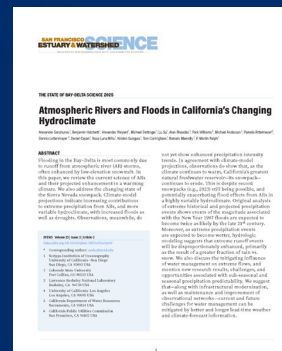


## Heatwaves



## Droughts

## Floods



## Wildfires



## Synthesis



# What have we learned?



**Extreme events** are the new normal for the 21<sup>st</sup> century.



**Precipitation** patterns are projected to become more extreme-- with dry years getting drier and wet years getting wetter



**Heatwaves** are increasing – not only in summer but also in spring and fall.



California's eight largest **wildfires** have occurred in the Delta watershed.





# What do we still need to know?



**Water management** faces major **uncertainties**. We lack accurate **seasonal forecasting tools**, and changes to total annual precipitation over time are uncertain.



We know relatively little about **reservoir water quality after major wildfires**, but 80% of California's water supply passes through them.



The extent to which the combined effects of these extreme events will **transform ecosystems** and **affect people living in the Delta** is unknown.





# Where do we go from here?



**Adaptive, data-driven, and equitable** governance can help prepare us for challenges ahead.



To **strengthen innovation and learning**, we can apply new and sophisticated tools, harness big data, and leverage the many effective practices that are already in place.



# Climate initiatives at the Council

State of Bay-Delta Science 2025	<b>Asks how well we understand</b> extreme events in a changing climate
Delta ISB Climate Symposium	<b>Asks how agencies are using</b> the latest climate science
California's 5 <sup>th</sup> Climate Assessment: Delta region	<b>Helps communities understand and prepare</b> for climate change by compiling best available science at a local scale
Delta Adapts	<b>Recommends strategies to integrate climate adaptation</b> in actions and investments



**Contributing to  
climate science &  
adaptation planning  
statewide**

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