

# AGU Conference

**American Geophysical Union  
December 9 -13, 2024 Washington DC**



**Delta  
Stewardship  
Council**

A CALIFORNIA STATE AGENCY

# Themes and Highlights from AGU

## Ted Grantham, UC Berkeley



## US Global Change Research Program, NASA, NOAA, NIST, EPA, stakeholders



Session GC32C: Collaboratories for Equitable and Resilient Futures

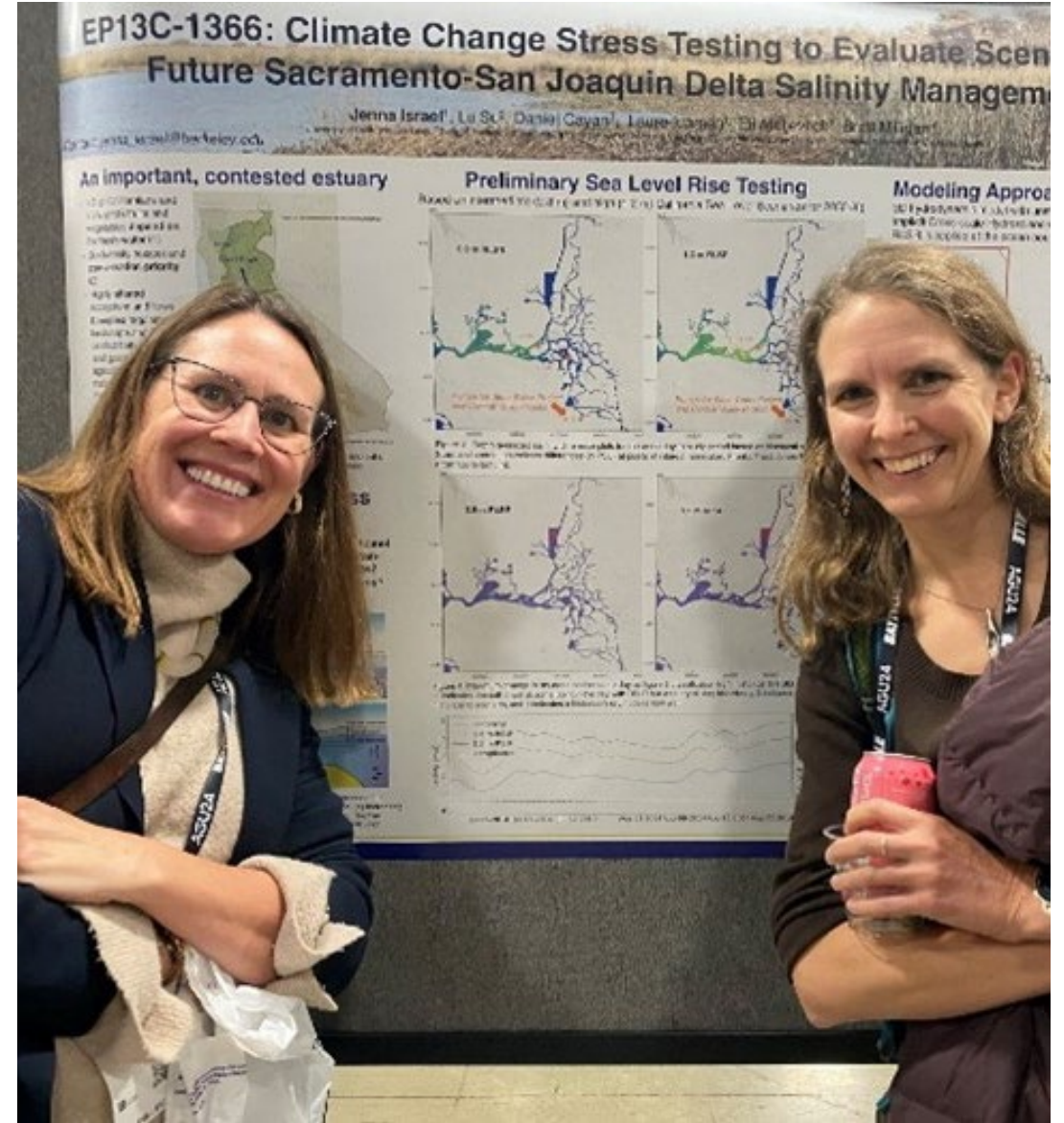
Session B21B,B22C,B23D: Coastal Wetland Carbon

Union Town Hall: U.S. Greenhouse Gas Center  
<https://earth.gov/ghgcenter>

# Familiar Faces



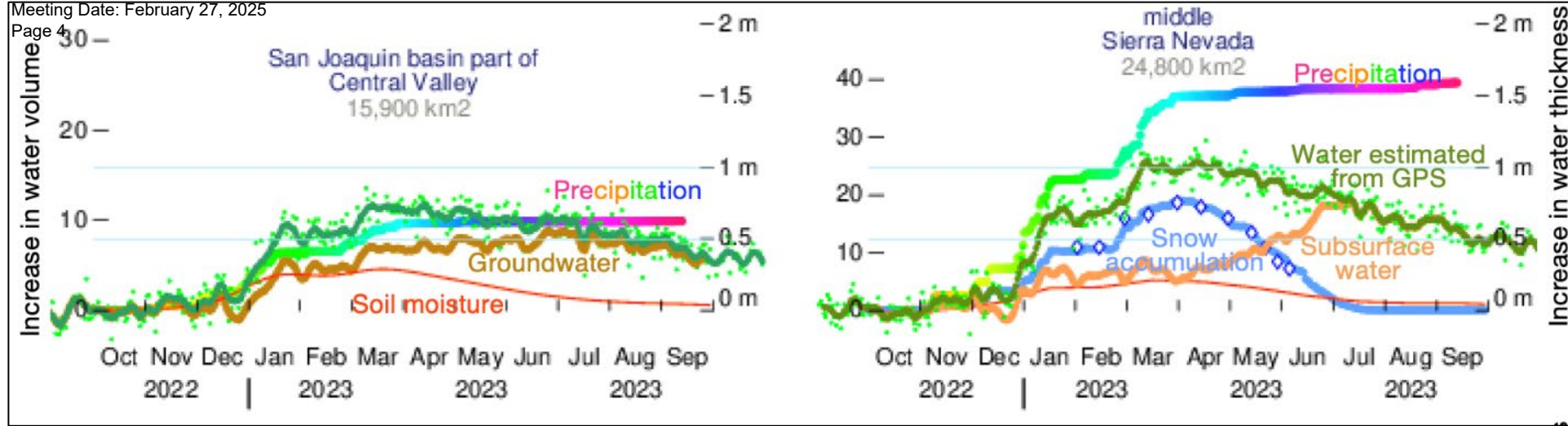
USGS CAWSC: Michelle Stern, Diana Zamora-Reyes



UC Berkeley: Laurel Larsen, Jenna Israel's poster

# Atmospheric Rivers: The Big Soak 2023

- A) Monitoring**  
D. Argus, NASA JPL
- B) Predicting**  
D. Cayan, Scripps I.
- C) Managing**  
C. Talbot, USACE



## Hydroclimatic Challenges of 21<sup>st</sup> Century Drought in the Sacramento/San Joaquin Delta

**Unusually high variability**

**HOW DRY might future Delta Droughts be?**

**Extreme example: 1992/93, 2002/03, 2007/08, 2012/13**

**Findings**

**Conclusions**

**Projected future Delta precipitation**

**Composite P and Q -- Unwet Years**

**References**

## The Use of Collaborative Steering Committees to Maximize Benefits from the Application of Forecast Informed Reservoir Operations Within the US Army Corps of Engineers

**Cary A. Talbot, Ph.D., P.E.**

**National Lead, Forecast Informed Reservoir Operations Program - US Army Corps of Engineers**

**What is FIRO?**

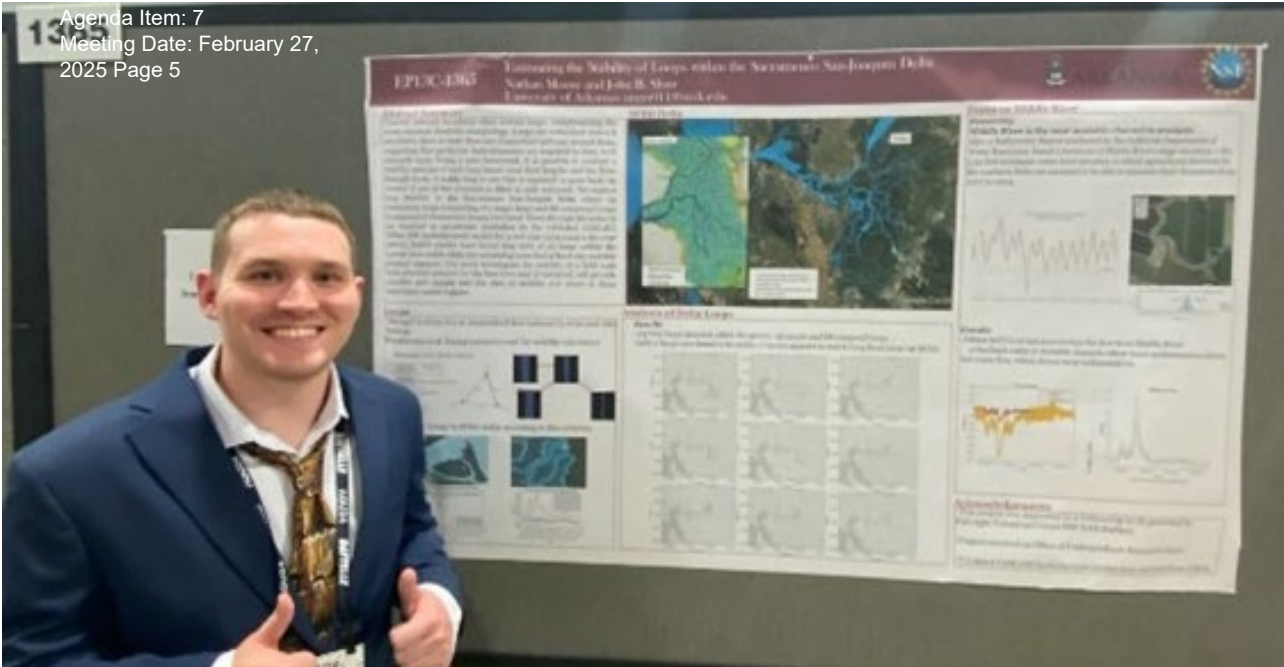
**FIRO Viability Assessment Steering Committees**

**Research And Operations Partnership (RAOP)**

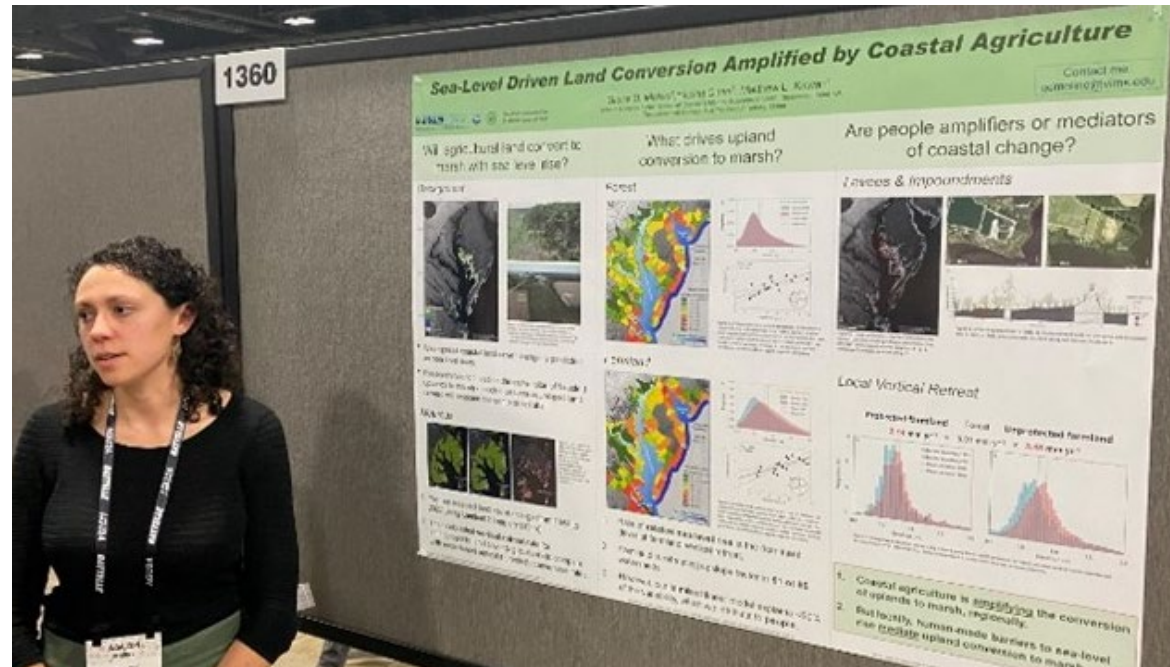
**Steering Committees and RAOPs in Practice**

**More Info and Presentations About FIRO at AGU24**

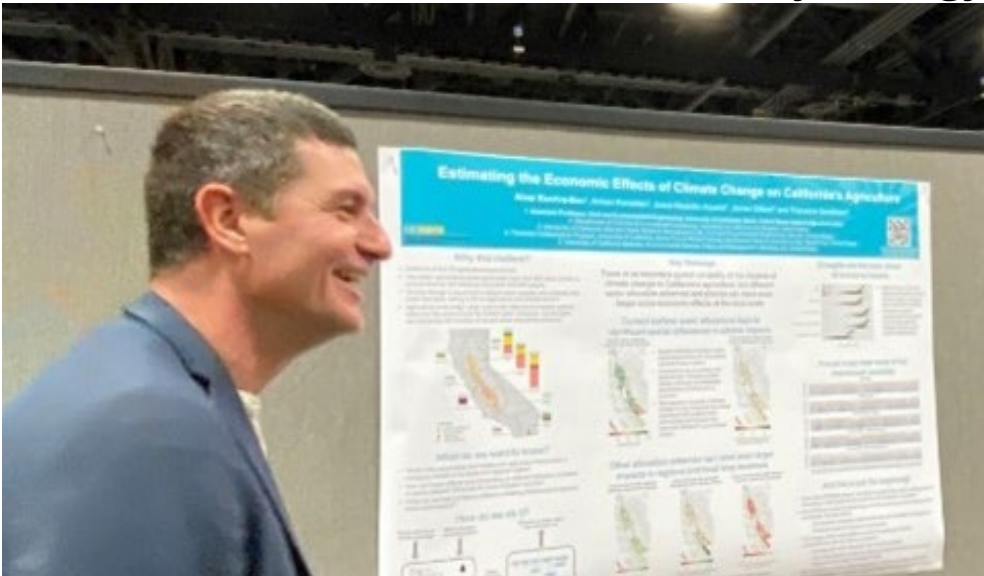
**References**



U. Arkansas: Trent Fortier, Delta Hydrology Loops



VIMS: Grace Molino, Chesapeake Coastal Agriculture



UCLA: Alvar Escriva-Bou, San Joaquin Valley

**The Delta:  
Not Invisible  
Not Alone**



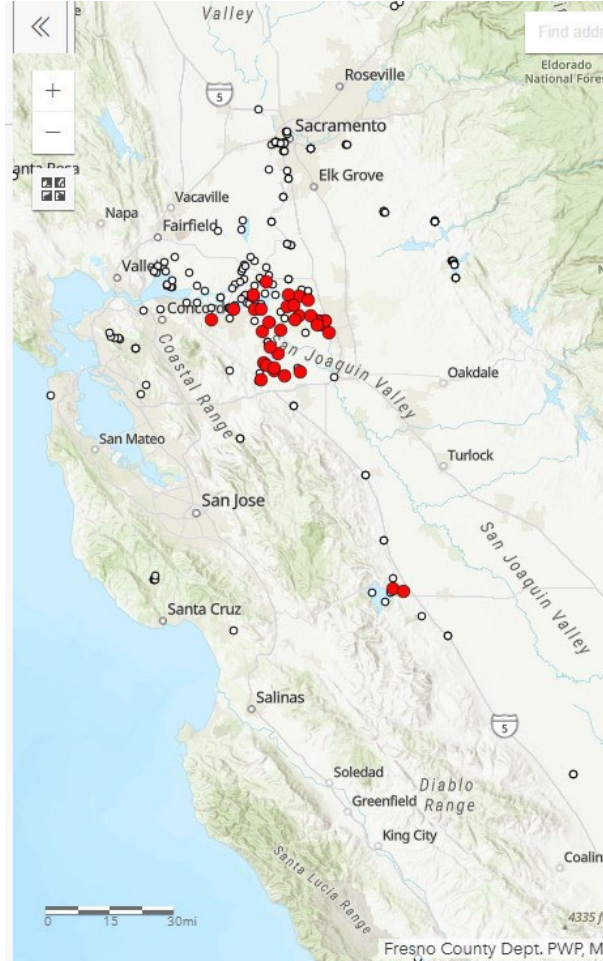
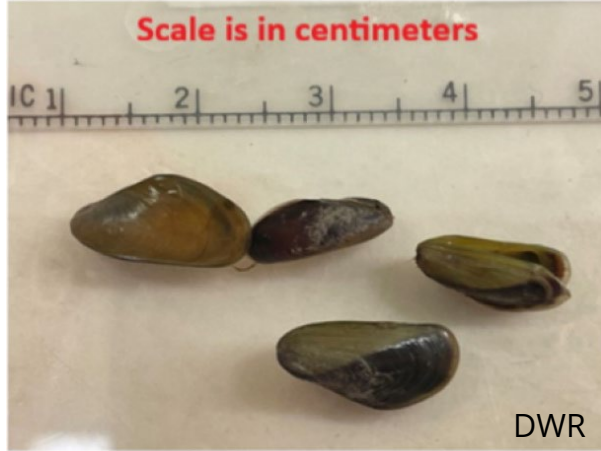
# Golden Mussels



**Delta  
Science  
Program**

DELTA STEWARDSHIP COUNCIL

# Golden Mussels



- **New invader to Delta**
- **Potential impacts:**
  - Impacts to food web via filter feeding
  - Clogging water infrastructure
  - Encrusting watercraft and docks
- **CDFW has convened Interagency Golden Mussel Task Force:**
  - Developing Rapid Response Plan
  - Emergency regulations passed in December
  - No effective control, focused on containment
  - Education and outreach

CDFW Map:  
**Red** = Golden Mussel detected  
**White** = surveyed, no Golden Mussel detected

Golden mussels in pipe at hydroelectric plant in Brazil (Science.org 2021)



# DON'T MOVE A MUSSEL

Clean, Drain, and Dry  
to Protect California Waters



[www.wildlife.ca.gov/Invasives](http://www.wildlife.ca.gov/Invasives) | 866-440-9530



GOLDEN MUSSEL



QUAGGA MUSSEL



ZEBRA MUSSEL

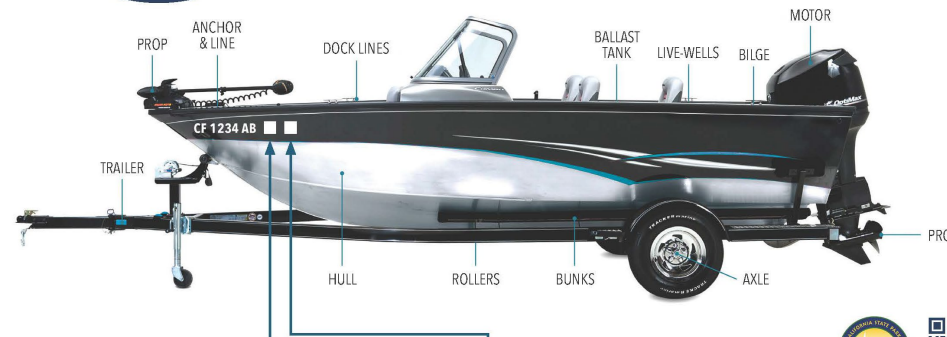
CLEAN | DRAIN | DRY

Prevent  
the spread  
of invasive  
mussels

**CLEAN** your gear, boat, and trailer before leaving the area. Remove plants, animals, and mud. Dispose of unwanted bait and debris in the trash.

**DRAIN** bilge, ballast, wells, and buckets before you leave the parking area, and never drain back into the waterway.

**DRY** equipment before launching into another body of water. Waiting periods can vary – check with your local waterbody.



Display your **DMV Registration** and **Mussel Fee Stickers** on the hull



## Golden mussel outreach to boaters

For more information:

[wildlife.ca.gov/Conservation/Invasives/Species/Golden-Mussel](http://wildlife.ca.gov/Conservation/Invasives/Species/Golden-Mussel)

# Thank you

Connect with us



Scan the QR code to  
subscribe to our email  
announcements



[Deltacouncil.ca.gov](http://Deltacouncil.ca.gov)



[@DeltaCouncil](https://twitter.com/DeltaCouncil)



[@delastewardshipcouncil](https://www.instagram.com/delastewardshipcouncil)



[Delta Stewardship Council](https://www.linkedin.com/company/delta-stewardship-council)



[@delastewardshipcouncil](https://www.facebook.com/delastewardshipcouncil)