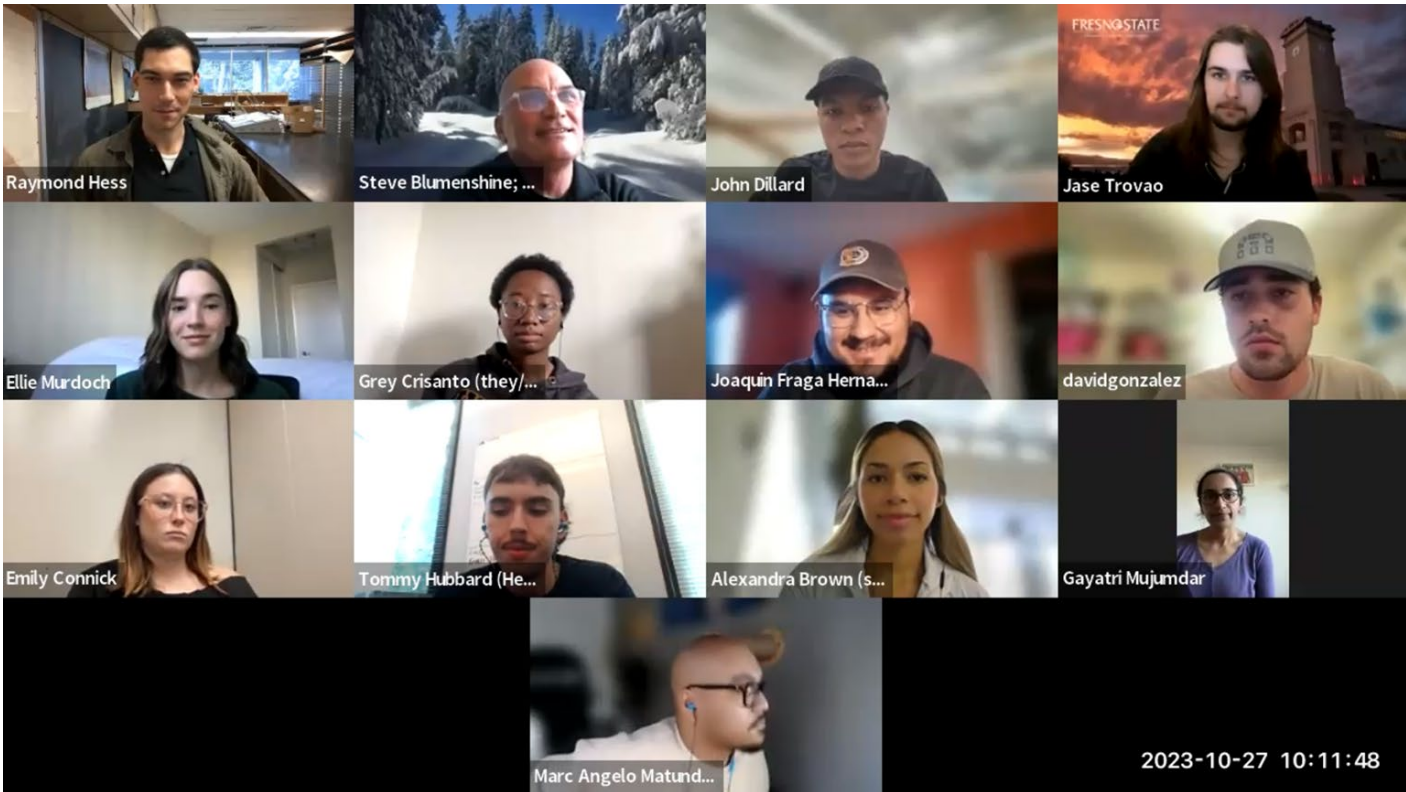




**CSU-WATER (Water Advocacy Towards Education and Research)**

**SOURCE (Student Outreach Unit for Research & Career Education)**

**Raymond Hess, MS student at San José State University  
Dr. Steve Blumenshine**



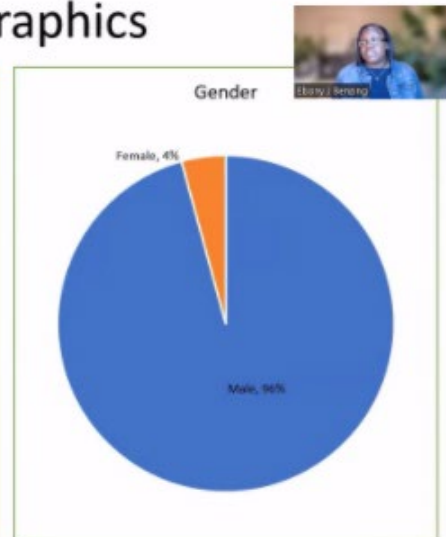
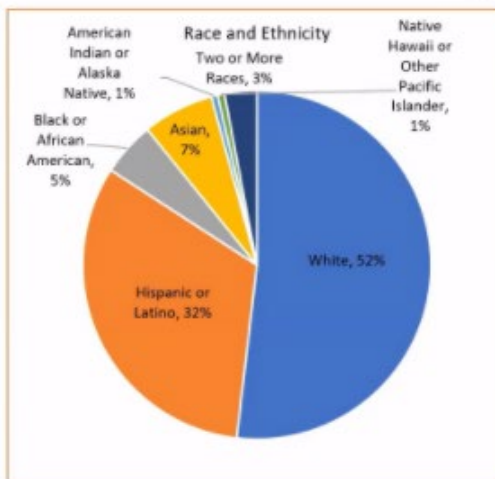
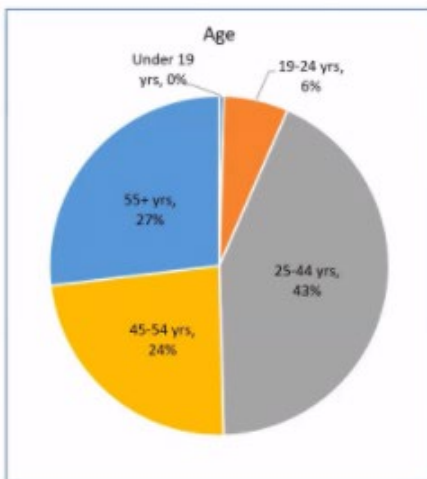


## 20% Job Vacancy Rate in CA Water Industry

- 67% of CA water agencies report difficulty recruiting water and wastewater operators.
- Few candidates apply for mission-critical roles.
- Less populated regions can't fill jobs.

Sources:  
<sup>1</sup>American Water Works Association (AWWA).  
<sup>2</sup>California Water and Environment Foundation; Centers of Excellence for Labor Market Research (COE).

### Water Careers Worker Demographics



**Slightly Higher than Average Retirement Risk in Greater Sac Water Careers**

- 27% workers aged 55 years or older
- Greater Sacramento average\*: 24.4%

**Lower than Average Racial Diversity in Greater Sac Water Careers**

- 48% racially diverse, or non-white, workers
- Regional average\*: 53.5%

**Average Gender Diversity in Greater Sac Water Careers**

- 4% female identifying workers
- State average\*\*: 4%
- **Opportunity to increase female worker participation**

Source: Lightcast 2023.3; QCEW employees, Non-QCEW Employees, and Self-Employed workers.

\* Across all 798 occupations employed in 7-county North (Greater Sacramento) subregion  
 \*\* Across the same 5 water occupations employed across California.



## SOURCE Mission

- Water in California is complex and requires insights from **future water professionals**.
- Establishing a **student-centered group** was necessary to foster **future leaders** of California water issues.
- Focused on developing research collaboration and connecting **highly motivated students** with **opportunities in industry** and **water agencies**.
- Successfully reached 80+ students with messaging for **scholarships, grants, and summer opportunities**.
- Established a **group identity** for **funding proposals** and **professional development**.





## SOURCE Launch

### Announcing SOURCE: A Student Group by CSU-WATER Student Outreach Unit for Research & Career Education

Water issues in California are complex and require insights from many entities including developing and future water professionals, like YOU.



Join an inaugural group of graduate and undergraduate students involved in research from across the CSU campuses established to create a networking community for discussing professional development, research, and issues, such as regional water quality and supply. In addition to group discussions, meetings will include guest speakers working at the forefront of these issues in academia, government, and industry.

#### Benefits of joining:

- Connecting students with opportunities in industry, communities, water agencies, and research institutions.
- Meet guest speakers from industry/research to cover career advice and guidance.
- Peer-to-peer mentoring meetings/exchanges.
- Leadership opportunities; 'Student Lead' from each participating campus.
- Find out about employment and research opportunities.
- Build an alumni network aimed at connecting current and future CSU students.
- CSU-WATER research grant or grant facilitation to aid with student research costs.
- Visit different CSU campuses to network and open opportunities.
- Attend the annual CSU-WATER conference and present your work.
- Participate in local excursions (local hike, dinner, trivia event).



#### What the members will do:

- Attend quarterly or monthly zoom meetings to discuss current water events in California
- Work with CSU-WATER and water agency partners on community education materials.
- Represent CSU-WATER on campus at career fairs (K-8, high school, community colleges, and university level) to advertise graduate school and employment opportunities within the CSU and with CSU-WATER industry partners respectively.



Join the CSU-WATER SOURCE by completing [this form](#).







## Guest Speakers

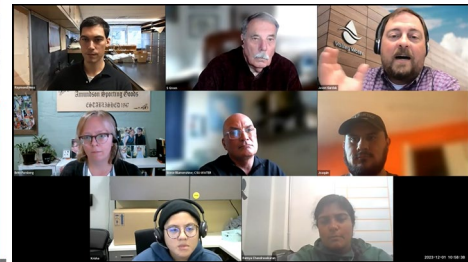
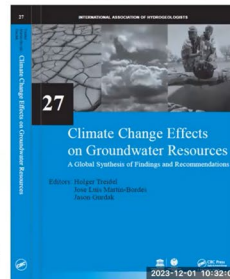
### About Me

I'm a Hydrogeologist

- Education:
  - BS, Geology
  - MS, Environmental Science & Engineering
  - PhD, Geochemistry
- Employment:
  - Environmental Consultant (3 yrs)
  - U.S. Geological Survey (USGS) Groundwater Hydrologist (10 yrs)
  - UNESCO program on groundwater & climate change (10 yrs)
  - Professor SFSU Dept of Earth & Climate Sciences (10 yrs)
  - Valley Water (4 yrs)
- Interests:
  - groundwater science and management
  - climate variability and change
  - nonpoint source contamination
  - low impact development
  - sustainable water resources



Hydro Group Fall 2017  
left to right - Mays Danfous, Diandra Alvarez, Cass Wolf, Jason Gurdak, Jessica Rodriguez, Lauren Finkelman, Lawrence Fujiwara, and Jeremiah Smith (missing). Suzanne Goldstein and Olivia Wilbur. Learn more about the group here.



## Speakers provided with a set of topics and questions focusing on:

- Current role, employer, and professional journey.
- What type of degree positions do you hire?
- Status of recruitment efforts & outcomes?
- Changing skill-sets over time and near term?
- Suggestions for students & universities regarding water career training



## Next Steps:

- Form an **alumni network** for **mentorship**, **outreach**, and **student opportunities**.
- **Student representatives** at **participating campuses** collaborating with **faculty representatives** for CSU-WATER.
- Organize existing CSU offerings of **water relevant coursework** for **inter-campus enrollment**.

## Questions?

Dr. Steve Blumenshine, Executive Director CSU-WATER  
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Raymond Hess, MS student at San José State University  
*raymond.hess@sjsu.edu*