



Water UCI Industry University Research Center



Industry • Government • University

COLLABORATION



Education

- Middle School Challenge
- Water UCI Fellows Program (2017-2018)
- International Student Exchange
- Research Experiences for Teachers



Outreach

- Colloquia Series
 - Manageable or wicked problems? Covid 19, Viral contaminants, and protection of our water supply- October 22, 12 PM
- Workshops
 - California's Drought: Causes, Consequences and Policy (co-sponsored by American Geophysical Union, National Oceanic and Atmospheric Administration, & NASA)
 - The Water-Energy Nexus: Capturing the Benefits of Integrated Resource Management for Water & Electricity Utilities and their Partners (co-sponsored by UCOP & U.S. Department of Energy)
 - California Energy Commission "CEC 309" Climate/Water Initiative project
- Community Water Saving Workshop – Jointly Sponsored by IRWD



February 23, 2016

California Water 2016 and Beyond

**Presentation by Felicia Marcus,
Chair fo the California State Water
Resources Control Board**

4:00-5:30 p.m Lecture – Calit2 Auditorium
5:30-7:00 p.m. Catered Reception – Calit2

Ms. Marcus will discuss California water system history and features, identify challenges faced during this drought and in the face of climate change, and suggest what the state, local agencies, and communities need to do to create a more sustainable water future for California.



RSVP at water.uci.edu/events-2

Research

- Industry University Research Center
- Policy Support
- Previous Research Areas:
 - Sustainable groundwater management
 - Valuing CA's water: a social science perspective
 - Capturing the Benefits of Integrated Resource Management for Water & Electricity Utilities and their Partners

UCI WEX Center
Research at the Water-Energy Nexus



UNIVERSITY of CALIFORNIA • IRVINE
The Global Integrated Drought Monitoring and Prediction System (GIDMaPS)



Industry University Research Center Water UCI

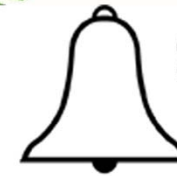
- Four member agencies
- Agency-guided research
- Identify issues of concern for water providers in Orange County and Southern California
- Conduct collaborative research projects to address these issues

UCI Industry Advisory Board

- Orange County Water District
- Irvine Ranch Water District
- Santa Margarita Water District
- Moulton Niguel Water District



Irvine Ranch
WATER DISTRICT



Santa Margarita
Water District



moulton niguel
water district



2020 Project: Sewershed-scale analysis of perfluorinated compounds in wastewater from domestic, commercial, and industrial sewerage system users

- Partners: Orange County Water District, Irvine Ranch Water District, Santa Margarita Water District, Moulton Niguel Water District, [Orange County Sanitation District](#), [Eastern Municipal Water District](#), [Western Municipal Water District](#), [Inland Empire Utilities Agency](#), [San Bernardino Valley Municipal Water District](#)
- Project period: One year beginning in September 2020



Project Aims

- (1) develop a methodology to identify the sources of PFAS in the sewershed of a WWTP in Orange County; one that can be replicated elsewhere for PFAS or other contaminants
- (2) work with a WWTP selected by the Industry Advisory Board (IAB) to implement the methodology, with the goal of identifying the primary sources of PFAS to the Plant's sewerage system
- Additional studies will be conducted to identify specific products leading to large PFAS release.

National Science Foundation Center: WaSHER (Center for Water Sustainability, Health, Equity and Resilience)

WaSHER

Sustainability	Improved energy efficiency and storage; Assessing energy needs against climate impacts
	Effects of technology decisions on integrated water-energy infrastructure
	Advanced analytics for sustainable water management in extreme events and natural disasters
	Reducing water footprints of watersheds in water-scarce regions
Health	Impacts of wildfires and fire suppression on water quality and water provision equity
	Technical feasibility, efficacy, water quality improvement and environmental impacts of innovative water supply options (e.g., rainwater harvesting, effluent reuse, water use efficiency methods, and desalination)
	Environmental problems of decreased environmental flows
Equity	Public acceptability, regulatory compliance and community implementation of innovations regionally and internationally
	Water rights and watershed partnerships
	Environmental justice issues posed by increasing population and decreasing water availability
Resilience	Evaluating drought and water demand, climate effects and climate forecasting for water resiliency of urban water infrastructure and water quality
	Remote sensing applications that can be used in water budgeting
	Spatial deployment of supply innovations (i.e., distributed systems vs. centrally managed)
	Incentives to enhance water security and efficiency

Thank you

Water UCI

Questions?