



The California State University
WATER RESOURCES AND POLICY INITIATIVES

Annual Report
Fiscal Year
2009/2010

www.calstate.edu/water



AGRICULTURAL



ENVIRONMENTAL



URBAN



Introduction and Program Overview

Under the leadership of Chancellor Charles B. Reed, the California State University (CSU) has identified the Water Resources and Policy Initiatives (WRPI) as an opportunity to leverage CSU's system wide academic excellence into an important resource for addressing the complex issues about water confronting California today and in its future.

Many other states and countries look to California and the CSU system for leadership in developing and executing solutions for sustainable water resource management. CSU's academic centers are recognized worldwide for contributing to next-generation policies, science and technology, and complex environmental, social and economic solutions.

As the largest and most diverse university system in the country, the CSU system is uniquely qualified to provide practical leadership in helping to solve immediate and long-term water management issues facing California:

- *The CSU has hundreds of scientists and technicians on 23 campuses that feature almost 450,000 students and 47,000 faculty and staff.*
- *A system wide multidisciplinary academic program can serve as a platform for applying CSU and its resources to important sustainable water practices and policy initiatives.*
- *These resources can provide education, training and expertise to individuals already in or wanting to pursue diverse careers in the water industry.*

The goals listed below support the key elements found in the WRPI mission. The goals reflect the CSU comparative advantage in addressing current and emerging statewide water issues. The WRPI will become a leading resource for:

- **Partnerships with the water industry and government agencies**
WRPI will engage a broad group of water industry stakeholders and government agencies to leverage university resources to pursue the development of "good science" from which to base decision making and emerging water policy.
- **Education, training and professional capacity building**
The WRPI will help raise awareness of careers in water and develop academic pathways for the next generation of professionals and the general public through outreach and training programs, professional capacity building, university curriculum development, and formal post secondary and graduate education.
- **Technology and economic development**
The WRPI will provide a strong scientific base and business development support to help commercialize new ideas in water industries, services and professions in California. The outcome will be a creative climate of innovation, furthering economic growth in water technology.

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Director's Message

WRPI - A Year in Review

During FY09/10 the Water Resources and Policy Initiatives (WRPI) made significant strides in raising awareness about the quality and breadth of CSU faculty expertise across a wide range of water issues. In the fall of 2009, the California Legislature specifically named WRPI as a key element in both SB-2 (water bond) and SB-261 (water conservation). The Water Bond language was ultimately approved by the legislature and signed by the Governor. The final fate of the legislation rests with California voters in November 2010. If approved, the water bond will provide significant funding for the WRPI to address critical issues in agricultural water research and education. Unfortunately the water conservation bill (SB-261) did not survive and was replaced with AB-49 in the final conference hearing. Therefore the role of WRPI in statewide urban water data management was not enacted into law.

The WRPI held its second annual conference on the campus of CSU Sacramento in March 2010. Faculty and staff from 20 of the 23 CSU campuses attended. The focus of the conference was in part to establish better relations between CSU researchers and decision makers at state and/or federal water agencies. One of the most important outcomes from the meeting was drafting master contract language by the California Department of Water Resources which will enable the agency to work directly with any faculty or staff member within the CSU system.

Obtaining multi-campus funding for research is a priority for the WRPI. Faculty met as a group at the annual conference to discuss proposal development. One of the products from the breakout session was a planning grant submission to the NSF to establish a "Climate Change and Water" center. A second proposal was submitted to the EPA to provide coordination of water quality measurements on the San Joaquin River. Several other proposals are under development or consideration. Additionally a Federal funding request was submitted to Congressional representatives Grace Napolitano and Jim Costa. The request is for \$1.2 million and would support major water research in selected areas as determined by the WRPI. In total, nearly \$52 million has been requested by the WRPI in FY09/10 to support water research and education activities.

A "white paper" has been developed to address the critical needs of disadvantaged communities for clean drinking water and wastewater treatment facilities. A scoping meeting was held with over 30 participants representing elected officials, regulators, agencies, CSU faculty and environmental justice groups to discuss the need and potential role of the CSU. Plans are currently ongoing to establish a framework for the WRPI to facilitate solutions for the water needs of disadvantaged communities statewide.

The WRPI also hosted the first ever CSU affinity group meeting in Fresno. Leadership from these groups represented CSUPERB, COAST, CEMHS, CASSRC/SSIRC, the Chancellor's Office and the WRPI. This event proved that communication and coordination among affinity groups is important and future plans call for at least one leadership summit annually.

Education and outreach are also important activities within the WRPI. To better promote the role of CSU researchers in the water industry, selected faculty have begun to write articles pertaining to their interests and expertise. During the calendar year 2010, CSU faculty will provide four articles for publication in "Water Efficiency" magazine where each edition reaches over 26,000 professionals in the water industry.

Finally, the WRPI has actively supported CSU San Bernardino's proposal to transfer the Water Resource Center Archives (WRCA) currently housed on the UC Berkeley campus to southern California. The proposal is to collaboratively house and manage the WRCA collection at the John M. Pfau Library at CSUSB and the Raymond L. Orbach Science Library at UC Riverside.

All in all, significant progress has been made since the WRPI's humble beginnings in July of 2008. While there is still much to be done, we can now look back and see how far we have traveled. The WRPI is looking forward to building on our successes and living up to the full potential of water research within the California State University system.

Best Regards,

A handwritten signature in blue ink that reads "David F. Zoldoske". The signature is written in a cursive, flowing style.

*David F. Zoldoske, Executive Director
Water Resources and Policy Initiatives*

Vision and Mission

Vision

The Water Resources and Policy Initiatives will help achieve a long-term, sustainable water supply for California through education, research and policy development while balancing the needs of urban, agricultural and environmental concerns.

Mission

The Water Resources and Policy Initiatives (WRPI) is designed to target the capabilities and resources within the 23 California State University campuses to provide academic preparation, applied research and policy development that addresses all aspects of water use. WRPI serves to focus synergistically with the many centers and programs of excellence within the CSU on water issues. The scope of WRPI activities include:

- Provide critical faculty- and staff-based expertise to support California's need for appropriate and sustainable water resources in the 21st century;*
- Promote the need for education, training and professional capacity development with the water industry, governmental agencies, and the wider community;*
- Support the development of new and advanced water technologies and services that will help drive economic development and job creation.*

CSU Water Faculty and Staff

Over 250 CSU faculty and staff members are involved in water-related projects throughout the CSU system. A list of faculty and staff is available at <http://www.calstate.edu/water/staff.shtml>



Institutes, Centers and Programs

The CSU system houses a number of institutes, centers and programs that focus on water-related issues, technology and solutions including:

Fresno

Center for Irrigation Technology

(559) 278-2066

David Zoldoske

<http://cati.csufresno.edu/cit>

International Center for Water Technology

(559) 278-2066

David Zoldoske

<http://www.icwt.net>

California Water Institute

(559) 298-6072

David Zoldoske

<http://www.californiawater.org>

Humboldt

Klamath Watershed Institute

(707) 826-3202

Steven J. Steinberg

(707) 826-3258

Andrew Stubblefield, Co-Director

<http://www.humboldt.edu/~kwi/>

Monterey Bay

The Watershed Institute

(831) 582-3689

Laura Lee Lienk, Doug Smith

<http://watershed.csUMB.edu/wi/index.htm>

Pomona

Center for Turf, Irrigation and Landscape Technology

(909) 869-2085

Ramesh Kumar

<http://www.csupomona.edu/~lis/ctilt>

Sacramento

Center for Collaborative Policy
(916) 445-2079
Susan Sherry
<http://www.csus.edu/ccp>

Office of Water Programs
(916) 278-6142
Ramzi Mahmood
<http://www.owp.csus.edu>

San Bernardino

Water Resources Institute
(909) 537-7681
Susan Longville
<http://wri.csusb.edu>

San Diego

Coastal and Marine Institute
(619) 594-0995
Todd Anderson
<http://www.sci.sdsu.edu/CMI>

San Luis Obispo

Irrigation Training and Research Center
(805) 756-2434
Stuart Styles
<http://www.itrc.org>

Coastal Resources Institute
(805) 756-1774
James Vilkitis
<http://www.calpoly.edu/~cri>

Legislative Affairs

WRPI was involved in a number of legislative issues in 2010 including:

Senate Bill-2 (water bond)

WRPI is specifically included in the bond language:

79769. The sum of fifty million dollars (\$50,000,000) shall be allocated to California State University for the purposes of funding for agricultural water supply, water use, efficiency, water quality, and related research and education efforts at the California State University Water Resources and Policy Initiatives.

Voting on this bond will take place during the November 2010 election.

Senate Bill-261 (water conservation)

WRPI was also specifically included in this bill's language:

Chapter 5. Urban Water Efficiency

Article 1. Findings and Definitions

(e) "Institute" means the California State University Water Resources and Policy Initiatives.

10675. (a) The institute shall calculate the total of all estimates of water conserved, as submitted in urban water management plans for the year 2010, for retail urban water suppliers that are implementing a plan to achieve high-efficiency water use or a water conservation percentage equal to, or greater than, 20 percent of baseline by the year 2020. The calculation shall include the estimates of water conserved that is contained in all revised water conservation plans submitted by December 31, 2012. The institute shall report the statewide total to the Legislature on or before March 1, 2013.

The WRPI Executive Director and a representative from the CSU Office of Advocacy and State Relations testified before the Parks and Wildlife committee on behalf of SB-261 in September 2009. In the final conference hearing on this bill, it was replaced by AB-49 and unfortunately, WRPI's role was not included in that version.

Annual Conference

On March 3, 2010 the Second Annual WRPI Conference was held in Sacramento, California with CSU faculty and staff in attendance. The conference objective was to connect CSU faculty and staff with water agency staff and programs. Complete conference materials are available online at: <http://www.calstate.edu/water/conference/>

The conference agenda was as follows:

- *WRPI Update and Overview*
- *Greetings from Congressman Jim Costa*
- *Presentations by:*
 - *Mark Cowin, Director, California Department of Water Resources*
 - *Charles Hoppin, Chair, State Water Resources Control Board*
 - *CSU/Agency Partnership: A Case Study - Ramzi Mahmood*
- *Breakout Sessions:*
 - *NSF Proposal*
 - *Water Quality*
 - *Water Policy*
 - *Fish and Wildlife/Environment*

Conference and Organizing Committee Members

Brad Finney – Humboldt
Ramesh Kumar – Pomona
Stuart Styles – San Luis Obispo
Susan Longville – San Bernardino
Brian Currier – Sacramento
Christian Carleton – Sacramento
Dave Ceppos – Sacramento
Ed Dammel – Sacramento
Jamie Kneitel – Sacramento
John Johnston – Sacramento
Karen Cardozo – Sacramento
Kevin Murphy – Sacramento
Michelle Stevens – Sacramento
Nadine Cross – Sacramento
Philip Garcia – Sacramento
Ramzi Mahmood – Sacramento
Ronald Coleman – Sacramento
Saad Merayyan - Sacramento



Proposal Committee

CSU campuses undertook a number of collaborative proposals and projects this year. Over \$52 million has been requested and the projects include:

- **Category 1 Proposal for NSF Solicitation 10-524, Water Sustainability and Climate (WSC) - Repercussions of climate change within the California State Water Project system**

The WRPI has submitted a proposal to delineate the scientific and socioeconomic consequences of hydrological variability within the portion of California served and/or affected by the State Water Project (SWP).

- **EPA Proposal - Development of an Integrated San Joaquin Basin Surface Water Monitoring Program Framework**

This basin-wide program has the following objectives: create an integrated basin-wide surface water monitoring program framework, establish effective coordination linkages between existing technical monitoring entities; establish an in-basin satellite Data Coordination Center and web portal at the California Water Institute at California State University Fresno, in collaboration with the Moss Landing Marine Laboratories (MLML); liaison with in-basin cities, counties, local agencies, state and federal agencies and the public that have interests in water quality monitoring, and build a framework for in-basin financial support of a comprehensive, long-term water quality monitoring program.

- **Federal Funding Request for CSU WRPI**

\$1.2 million has been requested to yield 8 to 12 funded projects. The projects will bring critical CSU expertise to target water issues within California and help bring a better understanding of current issues and make for a more informed decision making process. Faculty will lead the investigations and it is anticipated that a significant number of students will also be involved, which in turn will help train and inspire our next generation of water expertise.

- **Rural Assistance Center White Paper Disadvantaged Communities**

WRPI members from Fresno and San Bernardino were present at a scoping meeting held on June 2, 2010 to discuss development of a Rural Assistance Center for Disadvantaged communities which would include work from WRPI. A white paper has been developed on the project which proposes to help small rural communities develop the tools necessary to protect the public health, safety and surrounding environment through safe drinking water and wastewater treatment systems.

Proposal Committee Members

*Dirk Baron – Bakersfield
Anita Chaudhry – Chico
Gary Li – East Bay
Florence Cassel – Fresno
David Zoldoske – Fresno
Steven Steinberg – Humboldt
Lars Pierce – Monterey Bay
Saad Merayyan – Sacramento
Susan Longville – San Bernardino
Junesook Lee – San Jose
Shikha Rahman – San Luis Obispo
Michael Cohen – Sonoma*

Other WRPI Activities

- **CSU Affinity Group Meeting**

Fresno State hosted the Inaugural CSU Affinity Group Meeting on March 23, 2010. Representatives at the meeting included: David Zoldoske (WRPI), Keith Clement (CEMHS), Beth Ambos (CO), Ed Nelson (SSIRC/CASSRC), Susan Baxter (CSUPERB), Krista Kamer (COAST), Bill Eryasian (CSU five-campus group for international development – Chico, Fresno, Pomona, SLO, Humboldt) and David Zoldoske for Joe Bezerra (CATI). The group will work to improve communications and coordination among affinity groups and their next steps are to: conduct an annual meeting; promote grant writing workshops; engage CSU provost community (as distinct from University Presidents' community); develop general guidelines on how CSU affinity groups operate; and improve linkages between centers and institutes.

- **Water Resource Center Archives**

This historic and vast archives currently housed at UC Berkeley are in need of a new home due to loss of funding. WRPI is supporting a proposal developed by CSU San Bernardino to collaboratively house and manage the archives at the John M. Pfau Library at CSUSB and the Raymond L. Orbach Science Library at UC Riverside.

Magazine/Articles Committee Public Outreach

Below are articles prepared in 2010 by WRPI participants. The pieces have or will be published in "Water Efficiency" magazine with a circulation of over 26,000 water industry professionals. Complete copies are available online at <http://www.waterefficiency.net/>

- **GIS & Modeling Tools to Enhance Agricultural Water Use Efficiency**
Lars Pierce - Monterey Bay
- **Emerging Technology for Reservoir Capacity Studies**
Doug Smith - Monterey Bay
- **External Impacts of Water Transfers: The State of Knowledge**
Anita Chaudhry - Chico
- **Title TBD**
Michael Lee - East Bay

Magazine/Articles Committee

Anita Chaudhry – Chico
Michael Lee – East Bay
Dave Goorahoo – Fresno
Charles Krauter – Fresno
Ed Norum – Fresno
Doug Smith – Monterey Bay
Lars Pierce – Monterey Bay
Maureen Kerner – Sacramento
Susan Longville – San Bernardino
Michael Cohen – Sonoma

Outlook and Planning for FY 2010/2011

- *Plan and conduct third WRPI conference.*
- *Continue to encourage grant development and submittal. This includes Federal legislative requests.*
- *Develop WRPI Strategic Plan (3-5 years).*
- *Continue to meet and work with other CSU affinity groups.*
- *Develop WRPI advisory board representing southern and northern geographic areas.*
- *Review and proceed as appropriate with faculty articles in “Water Efficiency” magazine.*
- *Conduct campus visits to promote mission and vision of WRPI.*
- *Continue work to finalize Master Contract language with the California Department of Water Resources.*
- *Provide a public forum to debate merits of Water Bond at selected campuses.*
- *Continue to develop WRPI website.*
- *Write and publish annual report.*

