



Water Conservation

Water Leaders Class 2009

Water Education Foundation • Board of Directors Meeting
November 30, 2009 • San Diego, California

What do you get...?

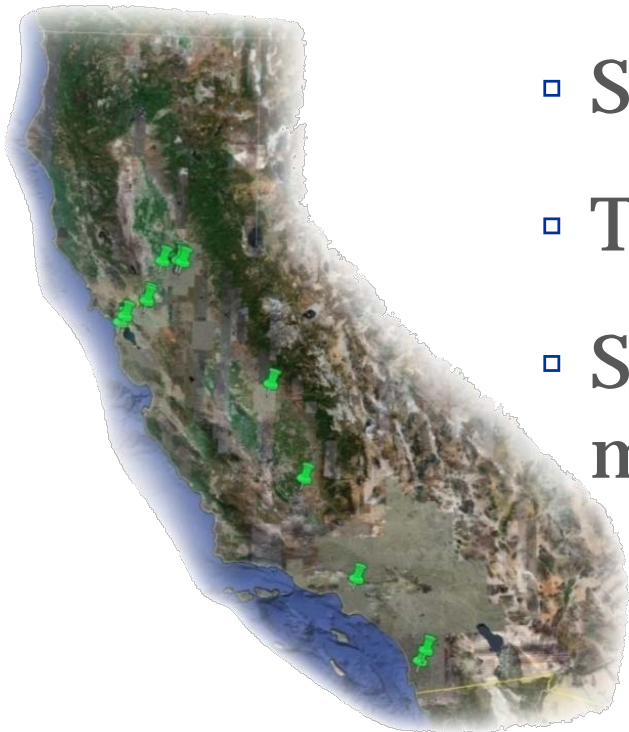
- Class ingredients:
 - Consultants
 - Two attorneys
 - Journalist
 - Political staffers
 - Urban interests
 - Agricultural interests
 - Environmentalist views



2009 Water Leaders Class

What do you get...?

- **Instructions:**
 - Place all ingredients in a room
 - Shake to combine
 - Transport throughout California
 - Sprinkle with 20 perfectly ripened mentors just before serving



What do you get...?

- Result:
 - Largest Water Leaders class to-date
 - Beginning of career-long relationships
 - Many diverse opinions



Water Leaders on Tour

Water Leaders Class Project



Map of CVP

- **Topic: Water Conservation**
 - All sectors (e.g., urban, agriculture, commercial, etc.)
- **Tours, educational events**
- **Mentors**

Mentors

- Located throughout California
- Represent many stakeholder groups
 - Water agency managers
 - Agricultural interests
 - Environmental advocates



Bay-Delta Model in Sausalito

Mentors

Mentor	Water Leader
Timothy Brick <i>Chairman, Board of Directors Metropolitan Water District of Southern California</i>	Kari Fisher <i>Associate Counsel California Farm Bureau Federation</i>
Dennis Falaschi <i>General Manager Panoche and Pacheco Water District</i>	Teresa Chan <i>Attorney Ellison, Schneider & Harris</i>
Teresa Geimer <i>Drought Water Bank Coordinator California Department of Water Resources</i>	Kimberly Brown <i>Manager Westside Mutual Water Company</i>
Donald Glaser <i>Mid-Pacific Regional Director Bureau of Reclamation-Mid Pacific</i>	Kimberly Houdling-Kaufmann <i>Field Representative Congressman Radanovich</i>
Dana Haasz <i>Water Conservation Administrator San Francisco Public Utilities Commission</i>	Kristen Mignone Crane <i>Water Conservation Manager City of Poway</i>

Mentors

Mentor	Water Leader
Ellen Hanak <i>Research Fellow</i> <i>Public Policy Institute of California</i>	Tara Lohan <i>Senior Editor</i> <i>AlterNet</i>
Paul Jones <i>General Manager</i> <i>Irvine Ranch Water District</i>	Brian Heywood <i>Water Resources Engineer</i> <i>CDM</i>
Randele Kanouse <i>Special Assistant to General Manager</i> <i>East Bay Municipal Utility District</i>	Meghan Moda <i>Conservation Program Administrator</i> <i>Resources Legacy Fund</i>
Jay Lund <i>Professor</i> <i>University of California Davis</i>	Lisa McPhee <i>Assistant Resource Specialist</i> <i>Metropolitan Water District of Southern California</i>
Wendy Martin <i>Drought Coordinator</i> <i>California Department of Water Resources</i>	Derek Larsen <i>Project Manager</i> <i>MBK Engineers</i>

Mentors

Mentor	Water Leader
James Nickel <i>Real Estate Manager</i> <i>Nickel Family, LLC</i>	Matt Notley <i>Public Affairs Assistant Director</i> <i>California Department of Water Resources</i>
Jennifer Persike <i>Director of Strategic Coordination and Public Affairs</i> <i>Association of California Water Agencies</i>	Allison Dvorak <i>Water Resource Specialist</i> <i>State Water Contractors</i>
Frances Spivy-Weber <i>Board Member</i> <i>State Water Resources Control Board</i>	Summer Bundy <i>Water Resources Engineer</i> <i>CH2M Hill</i>
Ted Trimble <i>General Manager</i> <i>Western Canal Water District</i>	Andrea Schmid <i>Environmental Planner</i> <i>New Fields</i>
Peter Vorster <i>Staff Hydrologist</i> <i>The Bay Institute</i>	Vincent Marchand <i>Senior Consultant</i> <i>Senator Gloria Negrete McLeod</i>

Mentors

Mentor	Water Leader
Michael Wade <i>California Farm Water Coalition</i>	Aracely Campa <i>Legislative Consultant California State Assembly Member Caballero</i>
Mark Weston <i>General Manager Helix Water District</i>	Lisa Skutecki <i>Senior Engineer Brown & Caldwell</i>
Leo Winternitz <i>Director of Delta Projects The Nature Conservancy</i>	Lisa Mash <i>Senior Project Scientist ENTRIX, Inc.</i>
John Woodling <i>Executive Director Regional Water Authority</i>	Jeffrey Payne <i>Water Resources Engineer MWH Americas, Inc.</i>
Greg Zlotnick <i>Special Counsel for Strategic Planning / Delta Policy Santa Clara Valley Water District</i>	Michelle Yeh <i>Hydrogeologist Shaw Environmental and Infrastructure Group</i>

Mentor Interviews

- Focused on four main topics
 - Policy and regulation
 - Economics
 - Public outreach
 - Technology



Why is Conservation Important?

- Third year of drought in California
- Environmental regulations
- Increasing population
- Climate change



Mentor Responses



- Agreement that water conservation is needed
- Different opinions on how conservation should be achieved

Policy and Regulation

- Not a regulatory-driven process
- Local level
(if necessary)
- Conservation
market/bank



California State Capitol

Economics

- Economics should be a tool to promote conservation
- Is water a commodity or a basic human need?
- Tiered pricing structures



Public Outreach

- Funding for a long-term outreach plan
- Maintain message in wet years
- Inconsistent messages across California
- Focus on behavior change



New Message for California

Technology



New sprinkler technology

- Integral to conservation
- Cost is a barrier
- More effective implementation of existing technologies

Urban Residential Technology

- Urban – Indoor
 - Low-flow fixtures
 - Building code changes
- Urban – Outdoor
 - Weather-based irrigation
 - Drought-tolerant landscape
 - “Smart” water meters



High-efficiency washers save a lot of water

Commercial / Industrial Technology

- Great opportunity for savings in some areas
- Creative solutions for water reuse



Pre-rinse spray valves

Urban Reclaimed Water

- Important long-term tool to preserve potable water supply
- Implementation challenges
 - Economics
 - Regulations



"Purple pipe" for landscape irrigation

Agricultural Technology



Central Valley citrus farmers demonstrate water-efficient growing practices

- On-Farm
 - Drip irrigation
 - Climate-driven systems
 - Drought-tolerant hybrids
- Conveyance efficiency

20 x 2020

- Achievable, but challenging
- How will baselines be established?
- Regional variation
- Flexibility
- Funding



Lake Shasta

Challenges – Social / Economic



Water-wise plants

- Societal view of water
- Monetary value of water
- Challenging to achieve behavior change

Challenges – Political

- Varied positions on “highest and best use” of water
- Demand hardening
- Different opinions on role of conservation



California Aqueduct

Challenges – Other

- **Infrastructure**
 - Without meters in some areas, how is success measured?
- **Institutional and legal**
 - Framework of water regulation
 - Groundwater vs. surface water



Los Vaqueros Reservoir

Successes – Social / Economic

- Progressive rate structures
 - “Water budgets” for customers
 - Tiered rate structure
- Examples of agencies:
 - Irvine Ranch Water District
 - East Bay Municipal Utility District
 - Helix Water District



Successes - Political

- Camino Tassajara Integrated Project
 - Net-zero water demand
 - On-site conservation measures
 - Offsets additional water requirements through off-site mitigation



Alamo Creek WaterSmart Model Home

Successes – Agriculture

- Panoche & Pacheco Water Districts
 - New, water saving methods and equipment
 - 65% to 80% increased water-use efficiency
 - Grasslands Bypass Project
 - Use low-quality brackish water from the San Joaquin River



*Jose Tall Wheat Grass grown
by Panoche Water District*

Successes - Commercial

- Bean sprout grower water reuse
 - Pilot project by San Francisco PUC
 - Treatment and reuse of drainage water
 - Significant water and wastewater savings



Indoor Sprout-Growing Facility

Water Leaders' Take-Aways

- California's water system is broken
- Conservation should be part of the solution
- Conservation alone will not resolve the problem



Jones Tract Island

Water Leaders' Thoughts

- Least Effective to Achieve Conservation
 - Requirements through legislation
 - Pricing water like other commodities (e.g., electricity)
 - 20 x 2020



California Poppies

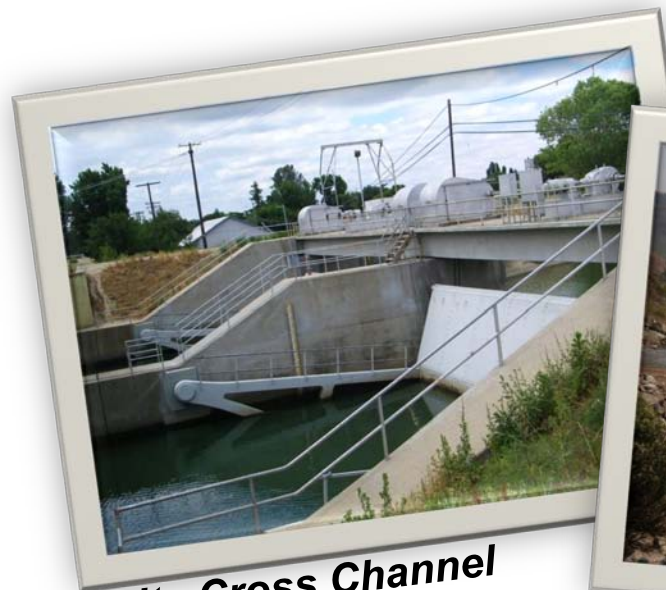
Water Leaders' Thoughts

- Urban water use should be focus
 - Residential
 - Landscape Irrigation
- Public education is critical
- Economics measures
- No “one size fits all” approach



And the Answer Is?

Lake Shasta



Delta Cross Channel



Russian River



Thank You

