

World Water Initiative

A UC DAVIS BIG IDEA





A Big Challenge, A Big Vision

Water connects every person on the planet. Rivers and groundwater are the lifeblood of our interlaced ecosystems, economies, and societies. Balancing human water needs with ecological water use has always been a challenge—and now, a growing population and changing climate are amplifying the complexity and urgency of this challenge to an unprecedented degree.

By 2050, an additional 2.3 billion people will live in areas with severe water stress, mostly in Africa and Asia. Already, 1.8 billion people worldwide lack access to safe drinking

water. Nearly three out of four jobs worldwide depend upon access to water and water-related services. From the Sacramento-San Joaquin Delta to the Flint, Michigan water crisis, domestic water challenges are equally daunting. The availability and distribution of clean water may be the most critical resource issue facing the world. Now more than ever, an effective framework to integrate sustainable water management expertise is needed. UC Davis is poised to bring that framework to bear on local, national and global water problems.

A Big Opportunity

UC Davis' Big Ideas are forward-thinking, interdisciplinary programs and projects that build upon the strengths of the university to positively impact the world for generations to come.

UC Davis seeks to partner with visionary philanthropists to bring cutting-edge water solutions to California, the nation and the world.

For more than a century, California stakeholders have addressed a wide range of water challenges while building one of the world's largest economies and striving to protect the state's diverse ecosystems. Through a history of droughts, floods, groundwater overdraft, population growth, threatened natural resources, and agricultural abundance, California has developed water-related scientific expertise and unique management and policy tools. And for decades, UC Davis has been home to the state's single greatest concentration of research expertise in water science, engineering, and policy—as well as one of the most prestigious and productive training grounds for graduates. No other institution is better positioned to take the California Model to the next level.

The World Water Initiative will bring UC Davis' unique depth and breadth of interdisciplinary water expertise to the global stage, connecting water experts from across the state with our internationally renowned faculty. Together, we will develop scalable, replicable, sustainable solutions to water-related grand challenges—from floods to droughts, safe drinking water to safe wastewater treatment, and agricultural production to ecosystem restoration.

The World Water Initiative will share groundbreaking research through a synergistic three-pronged strategy:

- **Education:** We will train the next generation of leaders through graduate programs grounded in rigorous fieldwork and research, emphasizing engagement with real-world challenges and solutions
- **Outreach:** A new program, Water Without Borders, will bring scientific expertise and guidance to communities with minimal resources that are facing emergent water crises
- **Science-Driven Policy:** A consortium of issue-focused centers will unite experts across the state to translate science for policymakers

We invite visionary philanthropic partners to join us in transforming how we steward the world's most precious resource with cutting-edge science, engineering, management and policy.





World Water Education

PREPARING THE NEXT GENERATION OF GLOBAL WATER INNOVATORS

Adapting water policy and management to a changing world requires bold and creative leadership. We have a vision to make UC Davis the leading provider of graduate education in water disciplines among U.S. universities and an international nucleus for water leadership.

Through highly competitive M.S. and Ph.D. degree programs and graduate certificates, we will recruit the best and brightest students and professionals from around the world. Lessons learned from managing myriad water issues in California will be paired with global case studies to develop new tools for addressing water challenges.

Instead of spending all of their time in front of whiteboards and computer screens, UC Davis students will be outdoors on the floodplains, dams and rivers of California.

Educating interdisciplinary water experts will meet the growing need for professionals both in California and the developing world, while elevating UC Davis' international reputation. Expedition-based field instruction and our exceptional breadth of research strengths will be embedded in all degree and certificate programs, providing students with an unparalleled focus on real-world, science-driven water solutions.

Launching World Water Education

A variety of gift opportunities are available to prepare the next generation of water innovators:

- Undergraduate and graduate project fellowships
- International fellowships
- Student travel funds
- California and World Water internships for undergraduates
- Domestic and international expedition courses



Water Without Borders

RAPID SCIENTIFIC RESPONSE FOR WATER EMERGENCIES

Water crises strike with alarming speed, typically overwhelming local scientific capabilities—and all too often, outside expertise is slow to arrive, if it comes at all. When these threats occur, they can jeopardize human life and health, fragile ecosystems and economic vitality. Short-term response to immediate dangers and long-term recovery depends on rigorous scientific understanding of the threat and the impacted systems.

Water Without Borders will establish a cadre of water scientists and engineers poised to respond, upon request, to emergent water crises around the world. These scientific strike teams will:

- Provide scientific expertise in response to water crises
- Guide planning for long-term recovery of impacted populations and ecosystems
- Collect perishable scientific data that are commonly missed or lost during such emergencies—providing a baseline understanding to help guide recovery efforts and inform better solutions to water crises worldwide

Crucially, Water Without Borders will serve as a tool for social justice. The United Nations has recognized access to clean drinking water and sanitation as a fundamental human right, but billions of people still live without these resources. Additionally, water is vital to food security, and water security is positively linked to a host of social issues, from education to housing to work. The two keys to water resilience and related social justice are investment and scientific expertise. Water security will continue to be investment-limited in many areas of the world, but existing development programs are hindered by the lack of available scientific and technical guidance, including for local grassroots projects. Water Without Borders will address this challenge by bringing impartial and independent scientific expertise to underserved communities in their moments of greatest need.

Launching Water Without Borders

A range of gift opportunities will enable us to make an immediate impact while strategically planning for the long term:

- A full-time staff director to support rapid and safe deployment of field teams
- Travel and logistical costs for two-week deployments of six teams per year
- Competitive awards program allowing graduate researchers to conduct follow-up studies

Translating Science for Policy

JOINT SCIENCE AND TECHNICAL CENTERS

The region from Sacramento to the Bay Area has the world's greatest concentration of water professionals across public agencies, NGOs, universities and consulting firms. These professionals serve the multibillion-dollar California water economy, and to date have been only informally connected to UC Davis, despite many being alumni. The state's water problems increasingly overlap jurisdictions, and require the integration of expertise and science that reside across and beyond state agencies.

A consortium of joint science and technical centers—bringing together diverse agency, academic, and non-governmental expertise and scientific needs—will foster a common scientific basis for policy and management. Together, these centers will serve as the educational and research hub of California's water-knowledge industry, engaging many universities, agencies, and interests in shared water problems to best serve the public good.

These centers would be funded primarily by the state through long-term contracts, with the University of California or a joint-powers authority serving as a primary administrative home. Working closely with Water Without Borders and World Water educational programs, these centers will serve as the policy and engagement arms of the World Water Initiative.

Promising Areas of Focus for Joint Science and Technical Centers:

- Groundwater
- Aquatic ecosystem flows and restoration
- Rural drinking water
- Delta modeling
- Water accounting and data
- Water demand modeling (agricultural and urban)
- Regional system modeling
- Delta science
- Adaptive management support





The Right Place, The Right Time

The World Water Initiative takes its inspiration from the Netherlands' highly successful public-private water management model and leverages it for even more powerful impact on a global scale. The Netherlands is home to a hydro-industrial complex that integrates education, applied research, and a water-science and engineering export industry that promotes the Dutch Model worldwide.

We see an opportunity to crystallize and elevate the California Model—a framework that offers unique insights into the full spectrum of water issues impacting arid and semi-arid regions, as well as best practices for addressing the water needs of both large agricultural operations and major urban centers in regions prone to drought and/or sea-level rise. Drawing on such rich, time-tested expertise, the California Model for water management will be broadly applicable in parts of the world experiencing extreme climate change effects, rapid urbanization and population growth, deforestation and more.

Key to this vision is connecting the broad constellation of our state's

water expertise. UC Davis' Center for Watershed Sciences has a long and successful track record of collaboration and effective engagement in the search for sustainable solutions. Our partnerships have led to significant advances in sustainable Sacramento-San Joaquin Delta management, fish and wildlife habitat restoration, flood and drought management, water markets, groundwater contamination and storage, and other areas.

The World Water Initiative is built on existing partnerships between the Center for Watershed Sciences and the College of Engineering, College of Agricultural and Environmental Sciences, College of Letters and Science, and School of Law. With these partnerships, complemented by UC Davis' internationally renowned programs in agriculture, environmental sciences, engineering and public health, we are well-positioned to coalesce the brainpower needed to take the California Model to the next level.

With philanthropic partners, the World Water Initiative will translate our renowned research into powerful solutions through education, outreach and science-driven policy.



An Invitation

Philanthropy has always been key to the university's success in moving great ideas forward. The World Water Initiative has the vision and the expertise that, with your partnership, will catalyze innovative solutions to the most critical water challenges.

Thank you for your consideration of this exciting Big Idea. We look forward to discussing how your philanthropic goals may be achieved through this transformative initiative.

For more information please contact:

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Big
IDEAS



Ways of Giving

We respect that, for each donor who wishes to provide significant philanthropic support, there are personal, financial and gift planning aspects to consider. We will work with you to realize your philanthropic vision and develop the gift plan that best meets your needs. At your request, we can also work with your tax and financial advisors. Following are various gift types and their associated benefits. You may wish to consider a mix of gift types to help you achieve both your philanthropic and financial objectives.

Cash Gifts

- Are the simplest and most popular giving method
- Can be tax deductible in the year they are given

Gifts of Securities

- Include stocks, mutual funds and bonds
- Can avoid capital gains taxes
- Can provide an income tax deduction for the full fair market value of long-term, appreciated securities

Gifts of Real Property

- Include land, farms, personal residences, and rental or commercial property
- Can avoid capital gains tax on appreciated assets
- Can provide an income tax deduction for the full fair market value of long-term, appreciated property
- Can eliminate property expenses and taxes
- Can provide continued use for life through a retained life estate gift

Bequests and Living Trusts

- Establish the UC Davis Foundation as a beneficiary of your estate
- Can provide an estate tax deduction equal to the value of the gift
- Offer flexibility by allowing you to provide for family first

Retirement Plan Gifts

- For current gifts, utilize the IRA Charitable Rollover provision (*for donors aged 70½ and older*)
- Name the UC Davis Foundation as a beneficiary
- Can eliminate income tax on the plan distributions
- Preserve the plan's full value for gift purposes

Life Income Gifts

- Include charitable remainder trusts and gift annuities
- Can provide potential tax savings on income, estate and capital gains
- Generate income for you and/or your loved ones for a fixed period of time or until your passing
- Distribute the remaining assets to the UC Davis Foundation