



## Carpe Diem

WESTERN WATER &  
CLIMATE CHANGE

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A PROJECT OF EXLOCO

# Carpe Diem Western Water & Climate Change Project **Report from the Field: 2007 - 2009**

**T**he Carpe Diem - Western Water & Climate Change Project was established in 2007 by a group of western water leaders acting on a shared belief that climate change requires everyone in the field to think in new ways. The Project quickly evolved into a network of experts and decision makers dedicated to addressing the unprecedented challenge that the impacts of climate change on water resources pose for the western United States. It is housed at Exloco, a nonprofit organization with expertise in spotlighting critical issues and facilitating strategic thinking.

This **Report from the Field: 2007 – 2009** is the result of an intense, wide-ranging, two-year conversation with western water stakeholders at every level throughout the region and many experts in a range of relevant fields. It defines the challenges ahead, outlines areas of agreement for common action among western water stakeholders, and maps out opportunities for further action.

## The Challenge

Climate change has already had an unprecedented and accelerating impact on water supplies in the western United States. This wide-scale shift requires an immediate, fundamental rethinking about water security for people, ecosystems, industry, and food production.

Mitigation has gotten all the attention, but we cannot mitigate out of this problem. We now have a choice between a future with a damaged world or a severely damaged world.

**Dr. Martin Parry**, Co-Chair  
WG II, Inter-governmental Panel  
on Climate Change

Warming weather causes more precipitation to fall as rain instead of snow, and extreme weather events such as catastrophic flooding and severe drought are becoming more common. These issues are exacerbated by population growth in desert regions, the increasing amount of water used in new energy production, and over-dependence on non-renewable groundwater. Even if carbon emissions were capped immediately, global warming and the resulting increasingly unpredictable weather would continue for many decades, if not longer.

The West's water infrastructure, management, laws, and policies have long been based on three assumptions: First, that there will be large, predictable winter snowpacks followed by spring run-off. Second, that additional affordable sources can always be found. Third, that supply-side solutions are inherently most practical regardless of cost. Climate change negates these assumptions.

On our land we see the changes climate change is bringing. The winds dry up the land and streams, and we are seeing more 'false storms'—water that falls up high and never reaches the ground.

**Gil Suazo**  
Water Resources Specialist  
and former Governor,  
Taos Pueblo

Many NGOs, sustainable community leaders, and water managers are developing smart, effective responses to climate change impacts on water. However, numerous outdated policy, regulatory, legal, and financing barriers fragment the work. In addition, while the West's water sources are linked across regions and states by watersheds and infrastructure, water management is fractured into a mosaic of often competing jurisdictions.

## A Snapshot of the Field

Over the past two years, the **Carpe Diem - Western Water & Climate Change Project** has been assessing the field. Key findings to date include:

- The timeline for developing and implementing effective, long-term sustainable responses is short. Climate change impacts are accelerating, and many changes will come abruptly, not gradually. **A focused, rapid response within the next decade is essential.**

- In the current expanded range of uncertainty there is little consensus about how to manage and deliver western water. The ingredients of a successful, new approach will not come just from technology, science, and policy, but also from a process that is broadly inclusive in terms of disciplines, tools, values, and perspectives. **A multi-disciplinary approach using climate change science, social science, and multi-sector perspectives must be incorporated into the decision-making framework.**

The West is on a journey  
from 18th-century fierce  
independence to 21st-century  
interdependence.

**Pat Mulroy**  
Southern Nevada Water  
Authority

- Historically, western water has been a system of winners and losers, or, as the famous saying goes: In the West, water runs uphill to money. As water becomes more expensive and supply less certain, stakeholders at every level will face difficult choices. **The trade-offs and consequences involved in any decision must be thoroughly understood by everyone involved, and a successful transition to a sustainable system will require a more inclusive framework for decision making.**

- While there is growing agreement on the problem set, there is little agreement on the solution set. An impression gleaned from many current water plans and proposals could be summed up as, “I’m going to solve my water problem by building new infrastructure to take your water.” **Finding common ground among willing stakeholders will be difficult, but it is the most pragmatic, politically viable path forward.**

- Rural areas and agricultural interests are faced with new challenges to their long-term viability. Political power rests more and more with the large populations in urban areas, and water policy shifts call for increasing urban-rural water transfers. The growing demand for more water for energy generation adds to the pressure. **New water policy must incorporate the water supplies needed for food security and the sustainability of rural communities.**

- As the impacts of climate change become more severe, there is a real possibility that water refugees will add their numbers to the economic refugees who already enter the country uninvited. **National security must be a component of the conversation about western water.**

In 2006, we asked,  
Is climate change real?  
In 2007, we said, ok, we now  
understand climate change  
is happening, but we need  
definitive prediction models to  
plan. In 2008, we know that,  
for now, science is going to  
give us just the benchmarks,  
and that in the next few years  
we need to make some  
tough decisions.  
Urban water manager

■ Water supply and quality are not adequately accounted for in planning for new housing, industrial development, or energy generation (including renewables). **As water resources become scarcer, a full accounting of the value of water is essential to any long-term energy security and to the development of new communities and industries.**

■ In the past few years, a growing number of water managers and water advocates have moved from skepticism about the relationship of climate change and western water issues to serious concern about the range of impacts climate change will have on supply and ecosystems. **The growing urgency for action among these stakeholders creates opportunities for new partnerships and alliances.**

■ Public understanding of the impacts climate change will have on local water supplies, the economy, food supplies, and recreation is very limited. This disconnect between public concern about local issues and climate change has been characterized as, “Climate change is something that happens to polar bears.” **Until this knowledge vacuum is addressed, persuasive arguments for change cannot be advanced, and science-based, sustainable solutions will not be adopted.**

If we can look past the  
zoological gauntlet of  
800-pound gorillas and sacred  
cows, is there a grand bargain  
for western water that  
the federal government can  
help facilitate? Can we in  
the West articulate what  
that grand bargain  
could look like?

**Doug Kenney**  
Western Water Policy Program  
University of Colorado

■ In the absence of the pressure that would result from a broader public understanding of the urgency of climate change water issues, there is little political support for addressing the impacts on western water. **Without a range of politically powerful stakeholders calling for change, a science-based national water policy, a new and necessary comprehensive approach to water management, or a more effective federal role, elected officials will continue to view western water issues as lose-lose propositions, a “third rail” not to be touched.**

■ The Obama Administration and Congress are looking to new approaches to fundamental social, economic and environmental challenges. **This is a time of grand political bargains, and grand bargains are needed to deal with increased competition for water in the West.**

## About the Carpe Diem Project

Climate change forces reality upon us. We are all connected, and no solo acts will do the job at hand.

**Ron Sims**

US Housing & Urban Development  
Former Executive,  
King County, Washington

The founders of the **Carpe Diem - Western Water & Climate Change Project** saw the scientific forecasts about the devastating impacts of climate change on western water as an opportunity as well as a challenge. All had worked for many decades on various aspects of western water policy, management, law, and climate change science. They formed the Project to bring competing interests together in the belief that the only successful way to meet the challenges ahead is for willing stakeholders to find common ground and to develop joint solutions.

Carpe Diem has demonstrated the exceptional and elusive ability to assemble a large and diverse group of stakeholders not just once, which lots of people can do, but repeatedly.

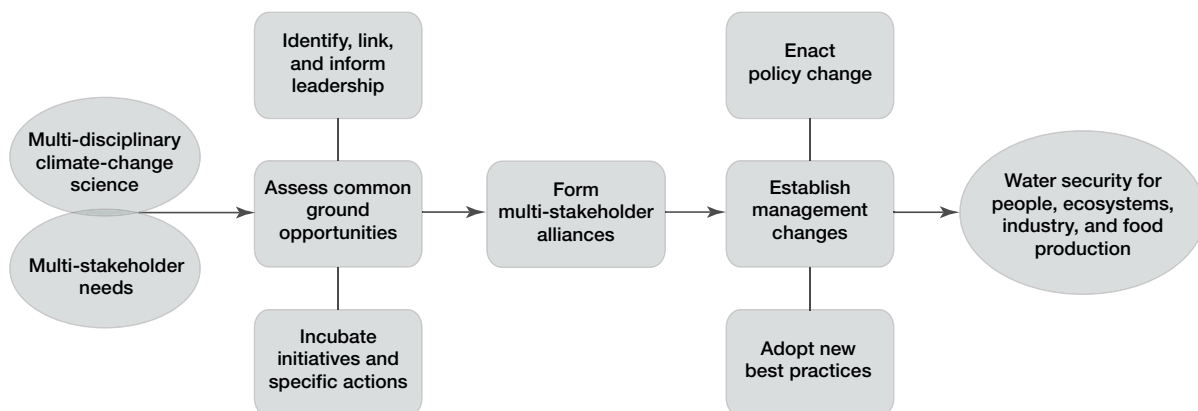
**Brad Udall**

Colorado University-NOAA  
Western Water Assessment

By linking leaders and integrating state-of-the-art climate-change science with the needs of a range of stakeholders, Carpe Diem incubates new initiatives and promotes sustainable management practices and policies that provide water security for people, ecosystems, industry, and food production.

While the Project works to identify and then incubate potential actions for policy and management changes, it is not prescriptive, relying instead on the collective wisdom of its leadership network to develop a vision, goals, and a plan for common action. An influential, critical mass of leaders from diverse stakeholder sectors has been engaged in the process, and the Carpe Diem Project has established standing among most stakeholders as a trusted broker of ideas and information.

## Getting to System Change



## Moving Forward

What we have is a completely insufficient political leadership and institutional response to the magnitude of the challenges ahead. Is it going to take a series of mega disasters to get action, or can we change before those happen?

**Steve Whitney**  
Bullitt Foundation

Through the Carpe Diem Project's work of the past 18 months, key western water stakeholders identified the following seven areas as priorities for possible development of common ground action:

1. New public land policies and management priorities that ensure protection and restoration of western headwater systems intended to provide more reliable timing of supply and water quality downstream.
2. Developing new responses to water, energy, and climate change issues.
3. New federal funding streams for sustainable water projects, including restoration programs that create jobs in both the public and private sectors.
4. New federal funding streams for water projects that address total water cycle planning.
5. A water source ranking policy that mandates the most cost-effective, environmentally sound water management for all new projects (termed a loading policy by the California Energy Commission.)
6. New management policies for storage.
7. The next generation of the 2007 Colorado River Accord.

A coalition of western water interests must be established to call for the funding, inter-agency coordination, and science needed.

**Amelia Jenkins**  
Senior Policy Advisor  
US House Natural Resource  
Committee

To support further development in these seven areas, the Carpe Diem Project will begin by establishing working leadership groups among stakeholders that will identify specific policy and practices options for action. This phase of the program will engage a range of interest groups to add a broader point of view to the network. Carpe Diem will also provide policy briefs to help frame the issues for stakeholders and policy makers. Through its ongoing communications research program, the Project will offer messaging recommendations on how to frame the proposed policy changes.

Carpe Diem will provide the convening and communications process that the groups will use to develop issues and make decisions. The working groups will also highlight existing programs that are successfully addressing the priority issues and explore ways to replicate these programs and take them to scale where possible. The process will pinpoint the scientific, economic, and ecosystems information and other tools needed to further develop policy and best practices objectives. Finally, the Project and the working groups will map out the next stages and identify the leadership needed to create the framework for any new alliances and campaigns.

## Three Opportunities

We know what the end game looks like — smarter use of less water. The question is not so much, Where do we need to go? The question is, How do we get there? Strong community and political leadership is needed to address both water availability and the challenge of statutory and institutional restructuring.

**Anne Watkins**

Office of the New Mexico  
State Engineer

In the near term, the Carpe Diem Project will focus on three priority issues:

1. New public land policies and management priorities that ensure protection and restoration of western headwater systems intended to provide more reliable timing of supply and water quality downstream.

**Outcome:** Science and economic analysis gaps are identified; Carpe Diem network leadership reaches agreement on crucial policy and management options; a framework to help western water stakeholders implement new policy and management priorities is agreed upon.

2. Developing new responses to water, energy, and climate change issues.

**Outcome:** Science and economic analysis gaps are identified; Carpe Diem leadership network reaches agreement on critical policy and management options; a framework to help western water stakeholders implement new policy and management priorities is agreed upon.

3. The next generation of the 2007 Colorado River Accord.

**Outcome:** A Carpe Diem Project options and opportunities report based on confidential interviews of key stakeholders provides the baseline for action by decision makers.

## Carpe Diem Project Network and Supporters

The Carpe Diem Project's wide-ranging network includes over 500 leaders in the western water field, and it engages both the existing range of political entities and water users, as well as constituencies and interests that have not historically been at the western water table.

### The Project is led by a 13-member Project Team:

Sarah Bates, Center for Natural Resources & Environmental Policy, University of Montana  
Holly Hartmann, Climate Assessment for the Southwest (CLIMAS), University of Arizona \*  
Kathy Jacobs, Institute for Environment and Society  
Lillian Kawasaki, Water Replenishment District of Southern California & Los Angeles Department of Water & Power (ret.) \*  
Doug Kenney, Western Water Policy Program, University of Colorado  
Steve Malloch, National Wildlife Federation  
Bill Mitchell, Flatcoat Consulting & Alki Fund \*  
John Shepard, Sonoran Institute \*  
Jennifer Sokolove, Compton Foundation  
Frances Spivy-Weber, California State Water Resources Control Board  
Anne Watkins, Office of the State Engineer (ret.), NM  
Steve Whitney, Bullitt Foundation  
Kimery Wiltshire, Exloco \*  
\* Executive Committee

### The Project's work is further advised by leaders in the field:

Tim Brick, Metropolitan Water District  
Gary Collins, Arapahoe Nation & Ruckelshaus Institute  
Sarah Cottrell, Office of New Mexico Governor Richardson  
Susan Daggett, Denver Water (ret.)  
Dominick DellaSalla, National Center for Conservation Science & Policy  
Alexandra Destler, Center for Public Health and Climate Change  
Mary Ann Dickinson, Alliance for Water Efficiency  
Josh Foster, Center for Clean Air Policy  
Terry Fulp, Bureau of Reclamation  
Gregg Garfin, Institute for Environment and Society, University of Arizona  
Dave Gutzler, University of New Mexico  
Denis Hayes, Bullitt Foundation  
Mike Hightower, Sandia National Lab  
Matt Holmes, New Mexico Rural Water Association  
Rick Holmes, Southern Nevada Water Authority  
Karen Knudsen, Clark Fork Coalition  
John Leshy, Hastings Law School, University of California  
Anne MacKinnon, Wyoming Water Development Commission  
Felicia Marcus, Natural Resources Defense Council

Rob Masonis, Trout Unlimited  
Jamie Pinkham, Columbia Basin Inter-tribal Fish Council  
Luther Propst, Sonoran Institute  
Joanna Prukop, New Mexico Energy, Minerals & Natural Resource Department  
Roger Pulwarty, National Integrated Drought Information System, NOAA  
Mark Sanchez, Albuquerque/Bernalillo Water Authority  
Karin Sheldon, Western Resources Advocates  
John Shurts, Northwest Power & Conservation Council  
Ron Sims, US Department of Housing & Development  
Anne Steinemann, Climate Impacts Group, University of Washington  
Brad Udall, CU-NOAA Western Water Assessment  
Johanna Wald, Natural Resources Defense Council  
*Note: Affiliations for identification purposes only. Participation does not imply direct endorsement of specific recommendations.*

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## About Exloco

Founded in 2000, **Exloco** develops pragmatic, innovative solutions to environmental sustainability challenges in the western United States. Partnering with social change organizations, public agencies, venture philanthropists, and corporations, Exloco works to advance new strategies for a healthy and vibrant West.

In all of its projects, Exloco identifies situations that need new approaches and researches and analyzes the context and environment. It brings together a network of the best thinkers and decision makers in relevant fields and provides an outcome-focused process to craft new strategies and solutions. Using the Exloco approach, the **Carpe Diem Project** has created a broadly multidisciplinary network of experts with decades of experience in western water issues to address the challenges posed by climate change.



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