



CRWFS

CALIFORNIA ROUNDTABLE ON
WATER & FOOD SUPPLY

A wide-angle photograph of a sunset over a large body of water, likely a field of water. The sun is low on the horizon, creating a bright orange and yellow glow that reflects on the water's surface. The sky is a mix of orange, yellow, and blue. In the background, there are silhouettes of trees and utility poles. The water in the foreground is dark blue with gentle ripples.

Applying the Connectivity Approach: *Groundwater Management in California's Kings Basin*

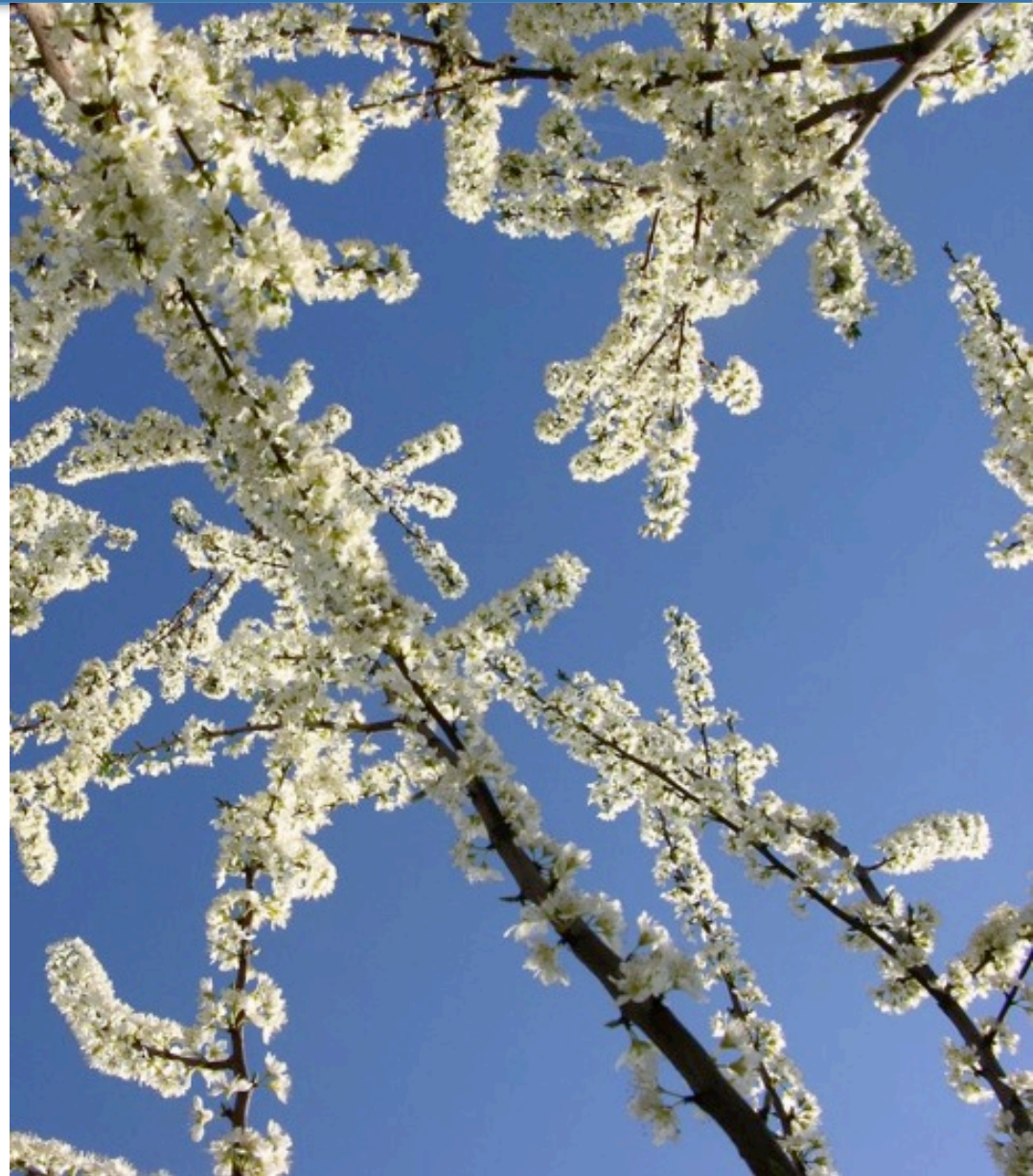
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Ag Innovations

4/16/15

Summary

- Mission and methodology of Ag Innovations and the CRWFS
- The “Connectivity Approach”
- Applying the connectivity approach: Groundwater management in California’s Kings Basin





Introduction

Ag Innovations

Non-profit organization founded in 1999 which focuses on **convening and facilitating diverse multi-stakeholder dialogues** at the regional and state level that work practically **to build a new California food system and enhance the natural environment** on which we all depend through both consensus-based policy change and innovation.

Flagship projects: Statewide Roundtables, Food System Alliances



California Roundtable on Water and Food Supply (CRWFS)

A multi-sector leadership body founded in 2010 by Ag Innovations to:

- Identify obstacles
- Develop solutions
- Take action

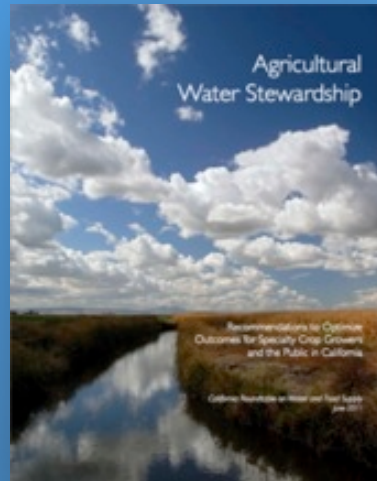
to enhance water security for agriculture, the public, and the environment.

Membership represents a broad and balanced cross-section of stakeholders including representatives from agriculture, water supply management, fish and wildlife, government, natural resources stewardship, environmental justice, rural economic development, and academia.

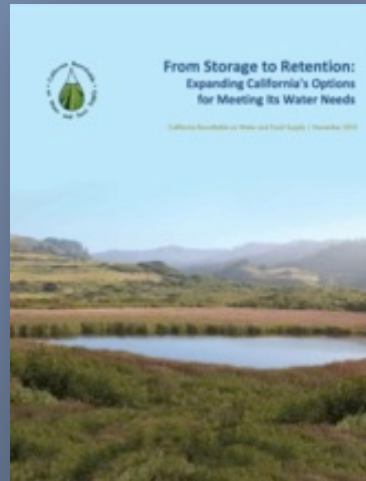


CRWFS Modules

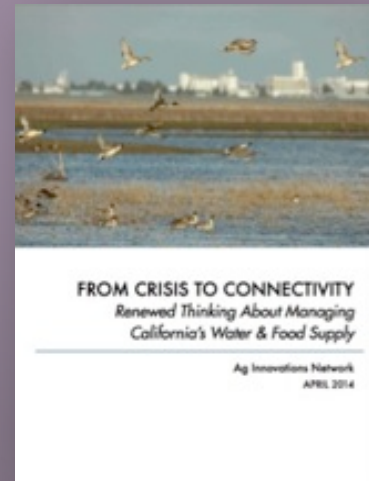
Using a systemic approach to understanding and addressing complex water and food supply issues, **CRWFS has completed 4 modules:**



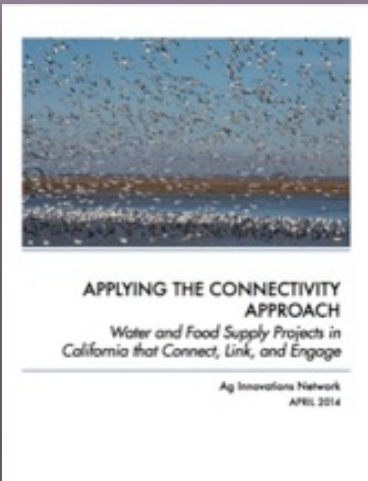
1 Ag water stewardship



2 Water retention in the landscape



3 Improving connectivity in our water management approach

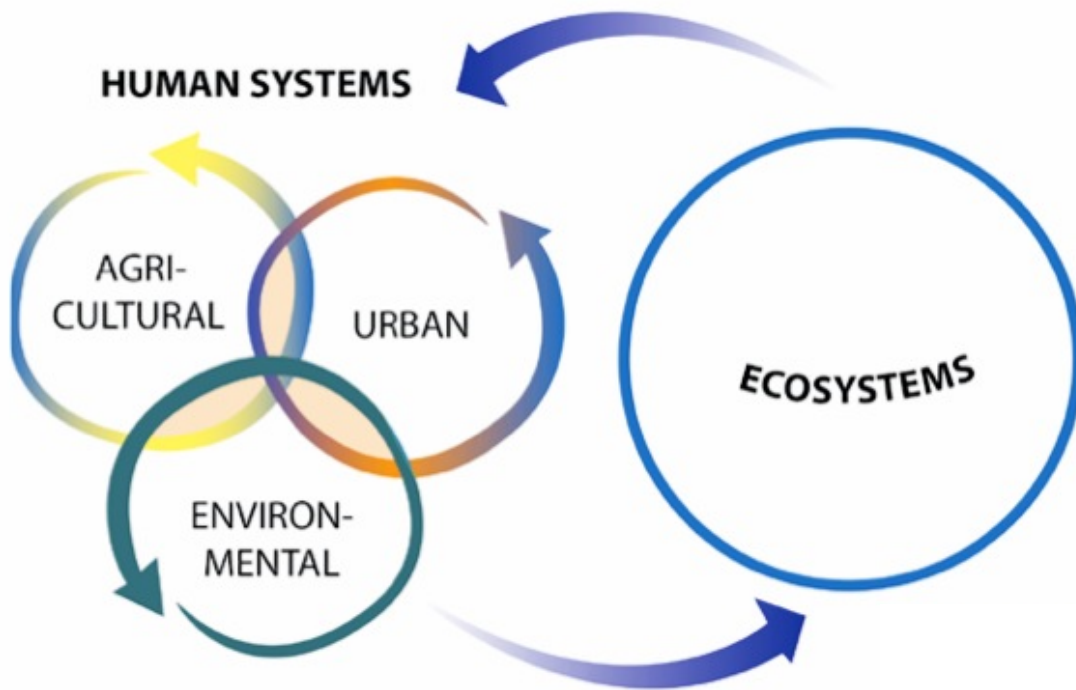


A 4th module on Groundwater will be discussed shortly.

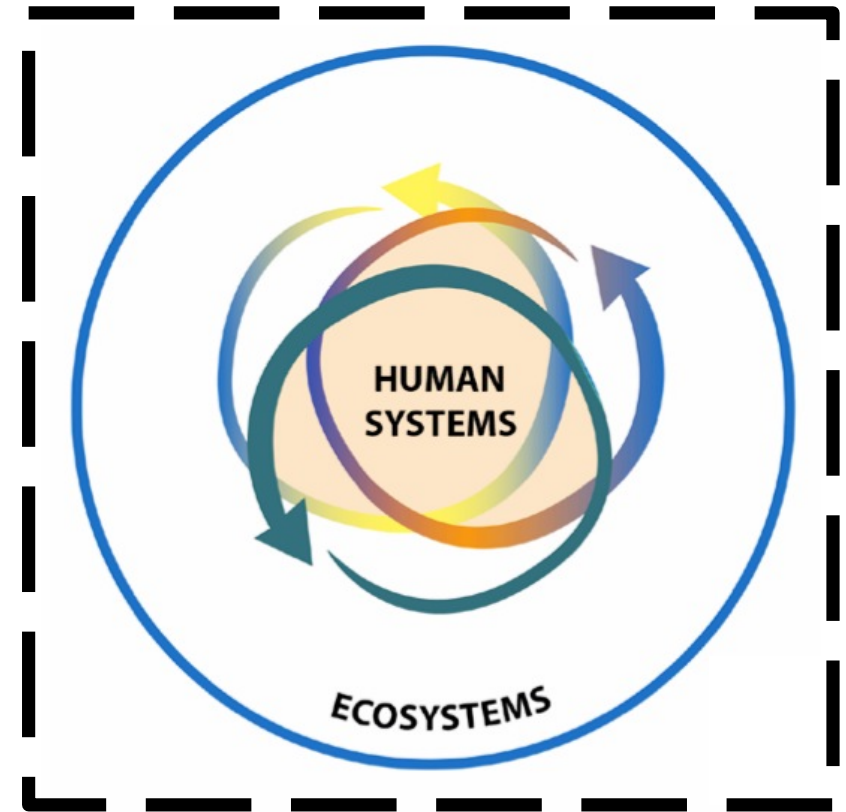


Connectivity Approach

Re-Visioning Connectivity



Common perception



New vision

Guiding principles



Connected thinking



**Socioeconomics &
institutional linkages**



**Public & stakeholder
engagement**

Connected thinking



1. Understand natural systems: Integrated thinking and science-based solutions
2. Recognize that water, farmland, and habitat are finite resources that depend on each other
3. Emphasize connected-benefit projects
4. Recognize that food is water
5. Focus on long-term goals versus short-term fixes
6. Avoid unintended negative consequences of past and emerging approaches



Source: Dave Feliz, CA Department of Fish & Wildlife

Socioeconomics & institutional linkages



1. Move beyond institutional goals and entrenchment
2. Address conflicting policies and regulations
3. Manage political and economic drivers
4. Shift from 'one-size-fits-all' solutions to collaborative, regionally appropriate, whole-systems strategies
5. Assess and manage unintended consequences
6. Design and implement approaches to manage the transition from existing to new practices

Public & stakeholder engagement



1. Participate versus consume
2. Public action from the ground up
3. Communicate with the public
4. Increase awareness and effectiveness of educational programs



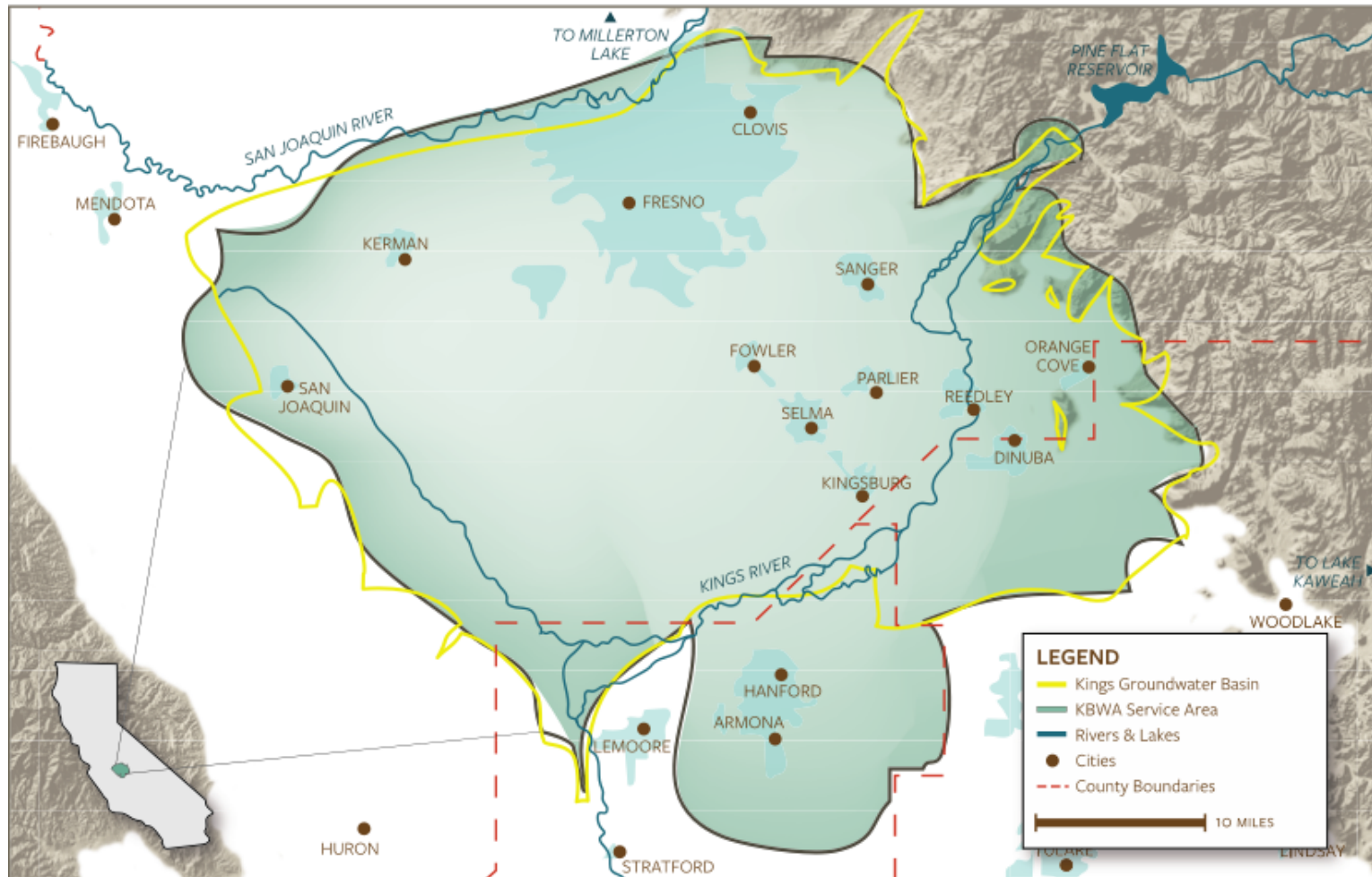
Source: Resource Conservation District of Santa Cruz County



Groundwater management in California's Kings Basin

The Kings Basin

The CRWFS studied the processes used in the Kings Basin to reveal strategies for advancing groundwater sustainability within the context of watershed-scale, integrated water management.



Key findings from Kings Basin case study

- An exceptional level of understanding of the water system because of an expansive monitoring and modeling program. Additionally, basin-wide data are integrated and managed by a single entity, the KRCD. The KRCD has also taken a leading role in facilitating the efforts of the KBWA (IRWMP).
- An array of connected benefit and groundwater-specific projects have been conducted to address groundwater overdraft. There is a collective recognition that groundwater overdraft is resulting in conflicts among water users, economic losses, and environmental harm, and could also undermine the public trust of this natural resource.



Key findings from Kings Basin case study

- The KBWA has become a forum where water agencies and land use planners interact to align goals and coordinate priorities. The IRWMP update process has integrated information from water management plans and the general plans of land use authorities.
- The KBWA and the KRCD have connected with resource managers in the upper watershed, and have worked together on interregional projects.
- The KBWA, Community Water Center, and Self-Help Enterprises have engaged and integrated a diverse group of stakeholders into the IRWM planning process. Together they have made great strides to identify the water-related needs of the region's Disadvantaged Communities, and explore a range of possible solutions.



Opportunities for California

Our case study of the Kings Basin region revealed opportunities for improved connectivity in groundwater management, planning, and implementation throughout California for the benefit of agriculture, the public, and the environment.

Four primary areas of opportunity were identified during our inquiry process:

- 1. Upper and lower watershed connectivity**
- 2. Surface and groundwater storage connectivity**
- 3. Alignment of governance structures and tools**
- 4. Improved public and stakeholder engagement**

Upper and lower watershed connectivity

1. Improve the scientific understanding of headwater processes and the influence of different mountain forest and meadow restoration and management strategies on the hydrologic cycle through research and monitoring to improve water supply and quality, and flood management.
2. The water budgets developed for medium and high priority groundwater basins should consider upper watershed conditions and processes.
3. Align and augment institutional cooperation across the watershed scale, either through the development and implementation of joint priorities and projects across regional water management groups (RWMGs), or the formation of unique multi-stakeholder coalitions.



Surface and groundwater storage connectivity

1. New water storage efforts should include integration of all hydrological components affecting water availability, movement, and retention to improve supply reliability for evolving needs.
2. State government should reexamine current policies and regulations to encourage and expand groundwater recharge, especially for medium and high priority groundwater basins.
3. State government should regard the recovery of depleted groundwater basins as a public benefit and allocate public funds to incentivize net groundwater recharge.



Source: Consolidated Irrigation District

Alignment of governance structures and tools

1. Perform a network analysis of the agencies and governance tools having authority, oversight, or influence on groundwater management; identify inconsistencies and conflicts between them; and assess their alignment with sustainable groundwater management goals.
2. Increase coordination between state and federal agencies in support of integrated regional water management and groundwater sustainability.
3. Explore opportunities to integrate water and land use planning and management by taking advantage of the requirement of the SGMA to share information between water supply or management agencies and land use approval agencies.
4. Explore opportunities for coordination and consultation between RWMGs and emergent GSAs.



Improved public and stakeholder engagement

1. Increase financial and technical assistance programs to support the development and endurance of functioning multi-stakeholder collaborations around integrated regional water management.
2. Enhance outreach to and engagement of segments of the public that have been inadequately engaged using a combination of traditional and new media outreach strategies.



Report available at:
aginnovations.org

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