



IRWM 2.0: Working Together for Resilience and Sustainability

The 48 Integrated Regional Water Management (IRWM) planning regions, serving 99 percent of the state's population, have an established track record achieving successful regional planning, grant acquisition, engagement with disadvantaged and other under-represented communities, and the development of multi-benefit water resource portfolios.

Regional approaches integrate all facets of water management including water supply, water quality, wastewater, recycled water, flood water, stormwater, and habitat restoration. IRWM regions cross jurisdictional and political boundaries.

What is IRWM 2.0? The IRWM Roundtable of Regions advocates for a new vision for IRWM, referred to as "IRWM 2.0," that retains and strengthens the successful elements of the program and uses it as the key process through which federal, state, and local water planning resources are directed.

Using key elements from the Association of California Water Agencies' (ACWA) *IRWM Policy Principles*, and the California Department of Water Resources' (DWR) *IRWM Stakeholder Perspectives*, **the Roundtable recommends 9 strategies for local and state policy makers to adopt to take regional planning to the next level.**

"The success of IRWM is due to the steadfast dedication and commitment of people who 15 years ago, never heard of IRWM."

Strengths of the IRWM Program Approach

Integrated planning that concurrently achieves social, environmental, and economic objectives: IRWM planning differs from traditional water resource management approaches by focusing at a local level with a regional perspective.

Collaborative planning: IRWM stakeholders include state, local and federal agencies; water providers; wastewater agencies; flood control agencies; resource conservation districts; environmental and other community organizations; disadvantaged and other under-represented communities; Tribes; groundwater management agencies; business and labor leaders; and interested individuals.

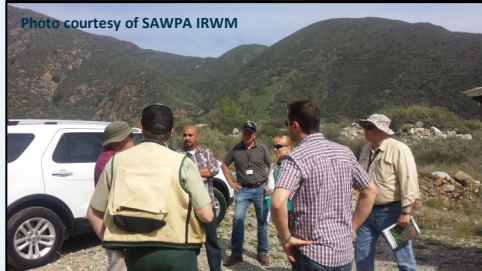
Identifies and achieves water management solutions at a regional scale: IRWM Regional Water Management Groups (RWMGs) have established regional governance structures responsible for long-term planning, identification and selection of projects. Each Region has created an IRWM Plan that sets out a vision for regional water management into the future.

Project implementation to meet IRWM Plan goals and regional needs: In addition to the projects funded and implemented at the local and regional level, the state's IRWM Grant Program has funded more than 840 regional projects providing multiple benefits in such areas as improved water quality, increased resiliency to climate change,

and better flood, stormwater and headwaters management.

High rate of return for state investment: IRWM projects represent an investment of 3.2 times that of the state through local grant funding match and coordinated project planning (approximately \$4.2 billion local funds versus \$1.3 billion state funding).

Ensures the involvement of under-represented voices: IRWM involves underserved and disadvantaged communities, Tribes, environmental and non-governmental organizations, and other interested stakeholders into local water resources decision-making, planning and management.



Strategies to Achieve IRWM 2.0

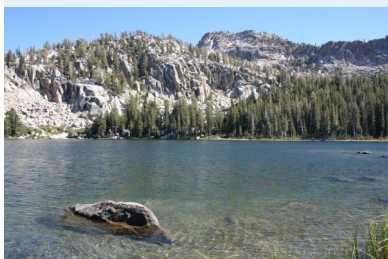


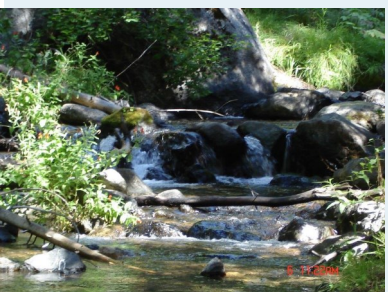
Photo courtesy of Southern Sierra IRWM



Photo courtesy of Ventura IRWM



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- 1. Use IRWM as the framework to implement Water Resilience Portfolio Recommendations and other requirements:** Governor Gavin Newsom's Water Resilience Portfolio embodies priorities such as concentrating on multi-benefit approaches and encouraging regional collaboration among water users within a watershed. IRWM regions can provide a forum to collaboratively engage all water-related stakeholder processes including the Sustainable Groundwater Management Act (SGMA). The IRWM Program should be the major venue for local agencies to develop and pursue priority regional projects that are generated through California's Water Resilience Portfolio Initiative. State water resource-related grants that intersect with the goal statements in the final Water Resilience Portfolio should be solicited through the IRWM regions as is done currently with IRWM Implementation and Disadvantaged Community-related grants. This will ensure that local agencies are engaged in the process, projects with multiple and regional benefits are selected, and water-related grant applications from the various State agencies are consistent.
- 2. Form a Stakeholder Advisory Group** with representatives from the Roundtable of Regions and other entities to enhance coordination with DWR and other related state agencies regarding long-range water management. The Stakeholder Advisory Group could address the lack of alignment of government policies, regulations, and programs—a barrier to successful implementation of IRWM in some regions. Agency policies and programs often lack integration with other aspects of water management, especially at the regional level. Improving the alignment of state, local, and federal agencies in support of IRWM would allow more timely implementation of multi-beneficial water-related projects. The Group could also advise on ways to improve regional assistance services and grant administration processes.
- 3. Provide baseline funding for IRWM stakeholder participation:** Participation in Regional Water Management Groups can be challenging, particularly in large rural regions with a high percentage of disadvantaged communities. Many rural IRWM programs lack funding for dedicated staffing and coordination; they also can lack the capacity to submit grant applications and may not have the on-hand funding to manage the long reimbursement times in State grants. DWR should provide noncompetitive base-level funding or administrative support, subject to State accountability requirements, for individual IRWM regions to help support key operations. By providing stable funding the State will help support stakeholder engagement, coordination and collaboration, IRWM plan updates, and participation of underrepresented groups, such as disadvantaged communities, Tribes, and local agencies with budget constraints.
- 4. Expand engagement with disadvantaged and other under-represented communities:** Establish a Task Force that includes representatives of disadvantaged and under-represented communities, RWMG representatives, and DWR staff to facilitate and monitor the implementation of necessary initiatives and actions to ensure the involvement of members of disadvantaged communities in IRWM. Collaborate with RWMGs, State Water Board, and community members to identify tools and processes for improving coordination and collaboration. Continue to identify the capacity-building and technical assistance needs of disadvantaged communities, and provide the resources necessary to meet those needs. Develop a training program for community representatives to enhance understanding of roles,

“The value of IRWM is measured by the millions of dollars that California taxpayers have committed to a vision articulated in consecutive bond measures—on faith—towards implementing hundreds of projects that serve to build resilience and sustainability in an incredibly complex water delivery system.”

responsibilities, policies, and procedures related to the program services offered by DWR’s IRWM program and other State agency services.

5. **Commit to expanded Tribal participation:** Provide funding to Tribes to support participation in IRWM planning and implementation. Establish a Tribal task force that includes Tribal, RWMG, and State representatives to facilitate and monitor the implementation of necessary initiatives and actions to increase the involvement of Tribes in IRWM. Collaborate with DWR, Tribes, and RWMGs to identify tribal needs and identify approaches for enabling tribal involvement in IRWM processes.
6. **Adhere to legislative intent and state code sections related to IRWM projects and funding:** The state should work with its IRWM Stakeholder Advisory Group (to be established) to ensure maximum deference to regional project priorities and decision-making processes consistent with legislative intent. State agencies administering water management-related grant and loan programs should take necessary steps to implement the provisions of California Water Code sections 10544 and 10608.50 to give preference to projects included in an adopted IRWM plan, to the extent allowed by funding program statutes. Preferences for IRWM projects could be in the form of reduced matching fund requirements and/or additional points in competitive application scoring. Improving the timeliness and efficacy of grant agreement development and contract execution is also necessary to ensure participating in IRWM is not a burden for stakeholders in smaller regions.
7. **Increase Public Education and Awareness:** IRWM is the primary platform for developing shared goals, identifying shared interest and potential conflicts in water management at the regional scale, and then using these understandings to prioritize, design and implement water related projects that benefit regional resilience. Limited funding restricts the number of projects that can be implemented. In some cases, IRWM stakeholders have forgone

funding to support others in their regions with greater needs. However, the average beneficiary of IRWM projects is unaware of the benefits derived from IRWM. A public awareness campaign to educate California residents on the value of regional coordination, integration, and multi-benefit projects from IRWM is needed. In addition, include support for educational programs and projects in IRWM project portfolios; coordination to establish, state dedication to, and legislative outreach to move forward with, prioritization of increasing the public’s awareness of the “one water” approach to managing water - i.e. the importance of water as a resource.

8. **Allocate Funding More Strategically:** The formulas used to distribute funding from the Proposition 84 and Proposition 1 grant programs were based largely on population. Funding areas with small populations receive substantially fewer grant dollars. This imbalance is most notable in the Sierra which supplies 60% of the state’s water yet received less than 5% of Prop 1 funding. Funding should balance investment between supporting regional goals and issues of statewide impact, including headwaters.
9. **Streamline Permitting:** IRWM projects seek to achieve regulatory compliance but often conflicting permitting requirements extend the timeframe for projects. State and federal entities should streamline permit processes or allow flexibility on the development of regulatory requirements for projects supported by IRWM. Such regulatory alignment supports efficient, integrated water resource management. A possible pilot project is the development of a “one-stop shop” environmental permitting for projects included in an adopted IRWM plan. The shop would reduce transaction costs and improve regional outcomes. A state task force should be established to identify where regulatory goals and authorities are working at cross purposes, to better identify how policy change can align state goals such that disparate regulatory authorities are seeking similar outcomes.

“IRWM is unique because of the determination and willingness of interests that have not been in the same room together for decades to sit down at the same table one more time. It brings together sincere individuals seeking to bridge diverse perspectives, motives, and objectives to build relationships , support communities, and connect across differences—and in some cases, setting aside their own interests to support smaller or less affluent groups with greater needs.”

SUPPORTING DOCUMENTS

ACWA *Integrated Regional Water Management Policy Principles* <https://www.acwa.com/resources/integrated-regional-water-management-policy-principles/>

CA Department of Water Resources *Stakeholder Perspectives: Recommendations for Sustaining and Strengthening Integrated Regional Water Management* https://water.ca.gov/LegacyFiles/irwm/docs/IRWM_Recommendations.pdf

CA Department of Water Resources *Water Plan Update 2018: Managing Water Resources for Sustainability* <https://www.acwa.com/resources/integrated-regional-water-management-policy-principles/>

Water Education Foundation *Layperson's Guide to Integrated Regional Water Management* <https://www.watereducation.org/publication/laypersons-guide-integrated-regional-water-management-0>

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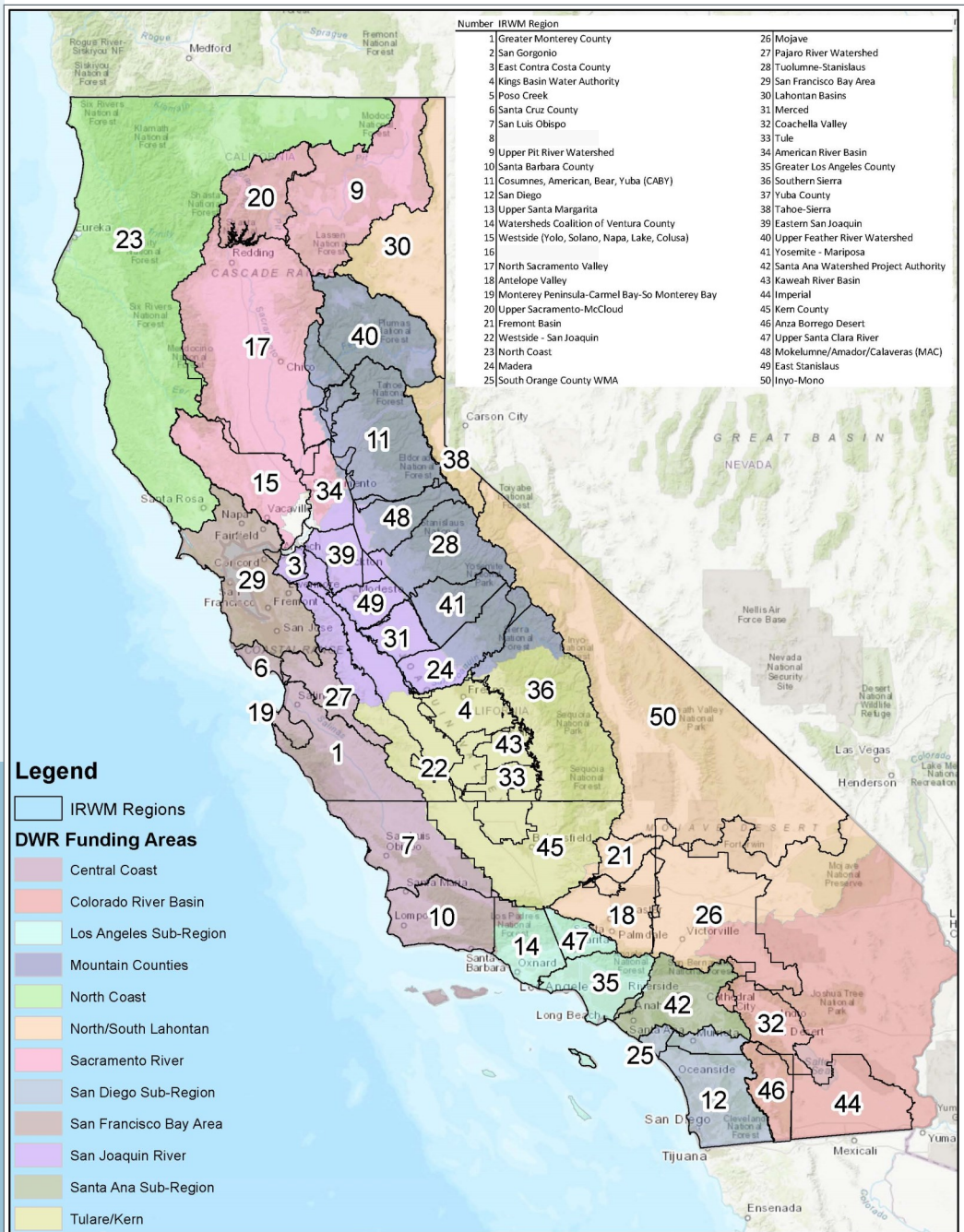
Find more information at:
www.RoundtableofRegions.org

What IRWM Regions are saying:

"The IRWM program incentivized the formation of the North Coast Resource Partnership (NCRP) -- an effective, stakeholder-driven collaboration among local government, Tribes, and watershed groups in the North Coast region. The NCRP has provided opportunities for the partnership to work collaboratively on water, forestry, and climate change management challenges to reduce conflicts, integrate federal, state, regional and local priorities and utilize a multi-benefit approach to identify and seek funding for the highest priority project needs in the region."

"Our IRWM has enhanced collaborative efforts in the region, fostering greater interaction and planning among water districts, municipalities, public works, resource agencies, and NGOs. A few examples include IRWM planning related to conjunctive use, aquifer recharge, and inter-agency water transfers (among others). These efforts have resulted in projects and management actions to implement these strategies and yielded multi-agency collaborations and leveraged funding to continue this work."

Map of IRWM Regions and Funding Areas



FEATURE

IWRM: Can You Relate?

Mike Antos



The author (right) and colleagues at the site of a Coastal Cleanup Day in the Arroyo Seco, a tributary to the Los Angeles River. Source: Ryanna Fossum

AS SOMEONE WHO NOW HAS 20 YEARS (!) EXPERIENCE with “integrated water resources management,” I am constantly fascinated to hear, often within the course of one coffee break at a conference, that IWRM is both passé and central to everything we are currently doing. About four years ago someone at an AWRA meeting told me, “Our projects would never get through a city council if they weren’t integrated and providing multiple benefits.” And I often share an apocryphal summary of a community conversation:

Consultant: “For you, how important is it that the

different water management agencies plan and work together?”

Community member: “You mean they don’t?”

At the 2019 AWRA specialty conference in Omaha, my co-chair and I encouraged everyone to think about “setting the conditions for the success of IWRM.” We edited an *IMPACT* magazine using that same theme. My professional experience and academic research had led me to observe that practitioners had mostly sorted out how and why to work in integrated ways when managing water. However, in most cases the policy structures that empower (or restrict) how water managers work had become the primary challenge. If the concern is that IWRM takes 20% more time and 20% more money, it is because everyone is stretching slightly outside their authority, requiring special permits and clearances, and having to triple-check that they are spending money in approved ways. Seeing “20% slower and more expensive” as a sign that the system is either a luxury or a dead end had become a self-fulfilling loop, as policy makers who should empower IWRM

were instead viewing it with skepticism. Empowering further integration to achieve economies of scope is necessarily a mission of policy and governance.

I remain confident that we were on to something and, more importantly, that real-world progress is being made. Today, public agencies are more likely to have a sustainability office and a resilience mandate, for example, and both those concepts recognize integrated challenges and opportunities. Climate risk is driving more integrated thinking, with water, health, and prosperity



Flooding on the South Fork American River in California, near Henningsen Lotus Park, on New Year's Day 2023. Heavy snow and rain across the Sierra Nevada resulted in deadly flooding and mudslides. Flood-MAR promises to curb the negative impacts of such flooding, saving the water to be used in times of drought. Source: Lisa, Adobe Stock

seen as interconnected and within the responsibility set of water managers. When economic tides ebb and flow, the need to make smart investments pushes toward greater integration—solving two or more problems with the same dollar.

Investing in Social Infrastructure

For me the truth about IWRM has always been hiding in plain sight: relationships are the actual topic that should be made central to our discussions. Maybe it should be integrated water relationship management. Whether it be relationships between agencies, or between agencies and the communities that created them, or relationships between the people and their representatives, relationships of trust and mutual understanding are what is needed to be effective at integrated management of anything. Relationships are the social infrastructure that results when the “extra” 20% investment of time and money is made.

Those relationships, once created and nurtured, are a persistent benefit across projects and over time.

A remarkable example to share is the [Disadvantaged Community and Tribal Involvement \(DACTI\) Program](#) in California. This program is a \$51 million investment in relationships and engagement statewide, produced by an act of the voters in 2014. As a component of the State’s Integrated Regional Water Management Program (IRWM), the DACTI Program was explicitly designed to build capacity and empower the voices of marginalized, tribal, and overburdened communities to be prominent if not in the lead of planning for more resilient and integrated water management.

California’s IRWM had long held a mandate that 10% of the funding provided by the State in a 1:1 cost-share for local projects had to be supportive of disadvantaged communities. However, in the five years after the 2002 creation of IRWM, advocates and community members

“Economies of scope” was coined in the 1970s to describe “a situation where it is less costly to combine two or more product lines in one firm than to produce them separately.”

The application of this framing to public infrastructure has been explored in peer-reviewed literature on and off since and I believe remains fertile intellectual territory for resilience, integration, and remediation scholars and practitioners.

alike shared how projects that were being located within communities were not what the community itself would have chosen. The DACTI Program was aimed directly at this reality, putting another 10% of the available funding aside for efforts that would “ensure the involvement of” members of overburdened and tribal communities.

This policy success—an investment in strategic listening and building relationships with the time and resources necessary to do it properly—is the “setting conditions for success” that has been central to my thinking for more than a decade. This program demonstrates that engagement must not be a self-referential requirement (we are engaging because the funder says we must engage) and instead is a fundamental part of achieving equity, resilience, and sustainability. In the DACTI Program, supporting and listening to the voices of all those who will be impacted by water management decisions is the integration.

Another example to share from California is the ongoing adaptation effort driven by climate change switching the winter precipitation in the Sierra Nevada from snow to rain. Much of California’s water supply infrastructure was built to use the slow snowmelt to sustain supplies through the summer. With climate change, more frequent and more deeply dry years will be punctuated with years that bring much more winter rain to the mountains, meaning California faces drought and flood. A collective and collaborative effort has gained steam over the past five years to adopt Flood-MAR (managed aquifer recharge using flood waters) within the Central Valley. Solving one climate-related challenge with another climate-related challenge is quite elegant.

Moving from not doing Flood-MAR to doing lots of Flood-MAR is a deeply integrated challenge. To name

but a few specific challenges, it requires changes in policy, regulation, and law, and it requires adoption of new financial models and new thinking about private property. It also ties to groundwater dependent ecosystems and in-stream flows, and it accentuates concerns about groundwater quality. Into these puzzles came the [Flood-MAR Network](#)—a group of people who are each tackling their own piece of the puzzle, sharing with one another, looking for synergies, sorting out turn-taking, resolving conflicts before they can start, and helping teach and learn what works and what does not. Here again, the integration is the people and the relationships they have established. Any one Flood-MAR project may be relatively single-purpose—but the transformation to the widespread use of Flood-MAR is an integrated effort benefitting from people recognizing their interdependence and shared purpose.

Learning the Lessons of IWRM 1.0

This magazine is considering what comes next for IWRM—do we need to rebrand or create a 2.0 version? I would say the first step to answering that question is to reflect on some of the key things that changed because of IWRM 1.0. First, we saw fewer lawsuits as

water managers began partnering with one another to alleviate shared burdens instead of ignoring externalities until they got out of control. Second, water management became home to not just technical people with engineering and hydrology degrees; this period saw the

planners, policymakers, engagement specialists, community organizers, ombudsmen, and community groups all join in. If you look across the AWRA IWRM award winners since 2012, you find that the celebrated integrated efforts always stem from groups of people with different roles in the community coming together.

For me the truth about IWRM has always been hiding in plain sight: relationships are the actual topic that should be made central to our discussions.

"Disadvantaged Community" has several policy definitions in California and is often abbreviated "DAC" and pronounced "dack." I bristle at this shortening, and welcome opportunities to help people see how using "dack" further dehumanizes and de-peoples the communities whose burden is almost always no fault of their own. It also suggests a uniformity that falsely smooths over the often very complex set of opportunities and challenges that are held uniquely by every community. Regardless of economic capacity, all people and all communities have pride, hope, things they would sustain, and things they would change. Investing in capacity, engagement, and listening to all voices is both humane and a key resilience strategy, and doing so in a way that respects all people is necessary.

These projects all achieved economies of scope—spending a little more time and a little more money to achieve a lot more outcomes.

Seen this way, I argue that what we actually learned during IWRM 1.0 is that our challenges are integrated, which means our solutions must be integrated. The only way to do this is through many diverse and diversely skilled people building lasting relationships of respect and common purpose. I'm not sure about you, but I absolutely treasure that my work lets me strive together with people who are different from me and who hold different skills and perspectives. Integrated water resources management is rewarding for its processes and its outcomes in equal measure.

I encourage the IWRM community to recognize all that it has achieved, and to consider if the "brand" was ever the most important part for us. Learning how to connect with others, how to think together at the scale of complex systems, and how to overcome the allure of planned externalities—these skills never were constrained to only the IWRM projects. IWRM is a practice, a skill, a discipline. We are IWRM practitioners, and every project needs at least a couple of us. We don't need IWRM projects—all projects need to practice IWRM. ■

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