



**PROVISIONAL\***

*Strategic Plan for the Future of  
Integrated Regional Water Management in California*

# Review of IRWM Planning and Implementation in California

June 2014



\* Please see the notice posted before the Foreword

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**Strategic Plan for the Future of  
Integrated Regional Water Management in California**

# **Review of IRWM Planning and Implementation in California**

**June 2014**

*Prepared by:*

**California Department of Water Resources**

*With assistance from:*

RMC Water and Environment

For information about the strategic plan development effort and subscription to project announcements, please visit: <http://www.water.ca.gov/irwm/stratplan/>.

Questions or comments related to this document can be sent to: [IRWM\\_StrategicPlan@water.ca.gov](mailto:IRWM_StrategicPlan@water.ca.gov).

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# NOTICE

Nothing in this technical memorandum report will be used to determine the eligibility of an IRWM grant application for funding.

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This technical memorandum report, as it is now written, documents IRWM efforts as of May 2014. Several regions, having recently updated their IRWM plans, have inquired about opportunities to have information about their most recent efforts reflected in this report.

In response, the strategic plan development team invites IRWM regions and others to submit corrections and/or updated information for incorporation into this report. DWR is committed to making this report as accurate and timely as it can be; however, as a practical matter, the revised report will be a “snapshot in time” when finalized. We respectfully request submittal of any updates or corrections to [IRWM\\_StrategicPlan@water.ca.gov](mailto:IRWM_StrategicPlan@water.ca.gov) by Friday, October 17, 2014.

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# Foreword

Integrated Regional Water Management (IRWM) has become a water management standard throughout most of California following passage of the 2002 IRWM Planning Act (SB 1672). The dedicated efforts of regional water management groups and the support of state bond funds have resulted in 48 IRWM regions identifying and implementing integrated regional water management solutions to improve public safety, foster environmental stewardship, and support economic stability throughout the state. Under the principles of IRWM, individuals and agencies have built strong working relationships, identified regional water management needs, and defined crucial steps to meet those needs together. IRWM is essential for California's future and is a key part of the California Water Action Plan.

As the Department of Water Resources works with its partners to produce a *Strategic Plan for the Future of IRWM in California* (Strategic Plan), we have surveyed the IRWM landscape to identify key characteristics and trends in IRWM planning and implementation. Survey results were presented to stakeholders at the second round of Strategic Plan development workshops in October and November 2013 and subsequently updated to reflect IRWM planning and implementation efforts as of May 2014. These updated results, along with additional information, are presented in this technical memorandum.

Please visit the Strategic Plan website at <http://www.water.ca.gov/irwm/stratplan/> to learn more about the Strategic Plan development effort. For more information about the California Water Action Plan, please visit [http://resources.ca.gov/docs/california\\_water\\_action\\_plan/Final\\_California\\_Water\\_Action\\_Plan.pdf](http://resources.ca.gov/docs/california_water_action_plan/Final_California_Water_Action_Plan.pdf).



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# Abbreviations and Acronyms

ACS	American Community Survey
CWC	California Water Code
CWP	California Water Plan
DAC	Disadvantaged Community
DWR	California Department of Water Resources
IRWM	Integrated Regional Water Management
IWM	Integrated Water Management
JPA	Joint Powers Authority
LOMU	Letter of Mutual Understanding
MHI	Median Household Income
MOU	Memorandum of Understanding
NGO	Non-governmental Organization
PRP	Plan Review Process
RAP	Regional Acceptance Process
RMS	Resource Management Strategy
RWMG	Regional Water Management Group

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# Executive Summary

The Department of Water Resources (DWR) is working with stakeholders to develop the *Strategic Plan for the Future of Integrated Regional Water Management in California* (hereafter referred to as the Strategic Plan). The status of Integrated Regional Water Management (IRWM) planning and IRWM plan implementation, based on actions taken as of May 2014, was reviewed to support Strategic Plan development efforts. This technical memorandum presents the results of the review.

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*The Strategic Plan will describe DWR's future role in Integrated Regional Water Management (IRWM) and guide its actions for improving support for IRWM. In addition, the Strategic Plan will identify options and recommendations for others to support the practice of IRWM.*

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Voter-approved bond funds have been instrumental in spreading the practice of IRWM throughout California. Since the passage of the Integrated Regional Water Management Planning Act (SB 1672) in 2002, 48 IRWM regions have been formed in California. Collectively, these regions cover about 87 percent of the state's geographic area and 99 percent of the population. State investments of \$770 million have leveraged about \$3.5 billion in local and regional IRWM cost-share resulting in more than 550 multi-benefit projects to improve water supply reliability, water quality, drought protection, regional self-reliance, public safety, and environmental stewardship.

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*Stakeholders have provided input on improving IRWM at two rounds of public workshops held in 2013.*

*Information about these workshops can be found at:*

*[www.water.ca.gov/irwm/stratplan/resources.cfm](http://www.water.ca.gov/irwm/stratplan/resources.cfm).*

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While IRWM has progressed as the means to identify and implement integrated regional water management solutions in California, opportunities remain to improve IRWM in some parts of the state. Based on the reviewed IRWM plans, these opportunities include improved stakeholder participation, better coordination of local land use plans and IRWM plans, and further incorporation of flood management into IRWM. Additional information from the review is briefly summarized in the following pages.

**Integrated Regional Water Management (IRWM)** is a collaborative effort to identify and implement water management solutions on a regional scale that increase regional self-reliance, reduce conflict, and manage water to concurrently achieve social, environmental, and economic objectives.

## **IRWM Plans**

As of May 2014, 42 of the 48 IRWM regions have adopted an IRWM plan. Those adopted plans identify regional water management issues; establish water management goals, objectives, and performance measures; define regional governance for IRWM; describe the stakeholder participation processes; and identify projects that provide, or work toward, regional water management solutions. Individual IRWM plans, and their related implementation projects, reflect the diversity of water resource conditions in California.

## **Regional Water Management Issues**

Predominant issues identified in IRWM plans are:

- **Water Supply Reliability:** Ensuring the availability of reliable long-term water supplies for municipal, agricultural, industrial, environmental, and domestic uses.
- **Groundwater Management:** Protecting groundwater basins from critical overdraft and pollution.
- **Water Quality:** Protecting and improving surface water and groundwater quality.
- **Flood Control and Stormwater Management:** Protecting life and property.
- **Environmental Stewardship:** Meeting habitat and ecosystem restoration needs.
- **Regulatory Constraints:** Complying with increasingly stringent and costly state and federal water quality requirements, and other regulatory requirements.
- **Aging Infrastructure:** Identifying repair and replacement needs.
- **Water Conservation:** Increasing public awareness and implementing water conservation measures.
- **Climate Change:** Mitigating and adapting to climate change.
- **Institutional Capacity:** Increasing institutional capacity for planning, implementing, and maintaining IRWM projects.

**Integrated Water Management (IWM)** is a comprehensive and collaborative approach for managing water to concurrently achieve social, environmental, and economic objectives.

Other regional issues include water rights constraints/conflicts, disadvantaged community needs, dependence on imported water, Tribal involvement, drinking water treatment, wastewater treatment, affordability of recycled water, and invasive species control.

### **Water Management Goals, Objectives, and Performance Measures**

The number of water management goals and objectives identified in adopted IRWM plans vary by region, ranging from 5 to 56 per plan. The majority of plans define fewer than 20 unique goals/objectives. Almost half of the goals and objectives in adopted IRWM plans are related to water supply, water quality, or ecosystem restoration.

Of the 42 adopted plans, 32 include performance measures as a means of tracking progress toward addressing regional water management issues. Performance measures vary considerably from plan to plan. Some performance measures are tied to specific plan goals and objectives, while others relate more to individual implementation projects. Of the plans that include performance measures, the most common goal and objective categories with performance measures include water supply, water quality, and ecosystem restoration.

### **Regional Governance**

Regional water management groups (RWMGs) are free to establish their own governance structures in California. Based on adopted IRWM plans, RWMGs employ the following three means of governance:

- Memorandum of Understanding or Letter of Mutual Understanding (62%)
- “Ad-hoc” or informal agreements (21%)
- Joint Powers Authority (17%)

### **Stakeholder Participation**

Participation in IRWM is voluntary; correspondingly, the manner and extent of participation by water management agencies and other organizations in IRWM varies from region to region. This variation is typically a function of the size of the IRWM region, its location, geographic make-up, water resource issues, economic conditions, and cultural considerations. For instance, many of the more rural IRWM regions experience high levels of participation by community

groups and non-governmental organizations (NGOs), whereas IRWM regions in urban areas tend to have more involvement by cities and local agencies and less involvement by community groups and NGOs.

Tribes are underrepresented in IRWM in most areas of the state. Based on the 42 adopted IRWM plans, relatively few RWMGs include active involvement by Tribes in IRWM processes.

The involvement of disadvantaged communities (DACs) in IRWM varies significantly among IRWM regions. Based on a review of the 42 adopted plans, the following observations were made:

- About one-third of IRWM regions have a significant level of DAC involvement.
- A little less than half of the regions appear to have a relatively low level of DAC involvement.
- DAC involvement in the remaining IRWM regions is unclear.

### **IRWM Plans and California Water Plan Resource Management Strategies**

The degree to which Resource Management Strategies identified by the California Water Plan Update 2009 are employed in individual IRWM plans varies widely by region. This variation is due, in large part, to the differing water management needs and circumstances of individual IRWM regions. The most commonly referenced resource management strategies involve water supply reliability (water use efficiency, recycled water, and conjunctive groundwater use), environmental restoration (pollution prevention, ecosystem restoration, and watershed management), land use planning, and flood risk management.

### **IRWM Plans and Other Water-Related Management Plans**

IRWM plans typically build upon or are otherwise informed by other planning efforts within IRWM regions. The most commonly referenced local and regional plans in IRWM plans are Urban Water Management Plans, City and County General Plans, Groundwater Management Plans, and Watershed Management Plans. Each of these plans serve a particular function, however, there appear to be opportunities for improving linkages with IRWM plans, such as in the case of City and County General Plans. There may also be opportunities to combine, or otherwise consolidate, plans to reduce costs and improve coordination.

DWR is assessing local and regional plans that relate to water management to evaluate the potential for improved linkages with IRWM plans, and to identify opportunities for combining

or consolidating plans. The findings of this assessment will be published in advance of the release of the draft Strategic Plan.

## **Path Forward**

To date, IRWM has profoundly changed the water management culture in California. While IRWM has made great strides, and reflects the diversity of regional needs and interests, there is room for more progress in the future to meet on-going and future water management challenges.

This investigation into adopted IRWM plans and the state of integrated regional water management today provides the starting point for the path toward the desired future for IRWM, as expressed by stakeholders throughout the development of the Strategic Plan for the Future of IRWM in California.

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# Section 1 Introduction and Background

Over the past 12 years, voter-approved bond funds have allowed DWR to work in partnership with regional water managers to advance IRWM in California. State bond funds have encouraged local agencies and organizations to form RWMGs and to develop, adopt, and implement IRWM plans.

Although much has been accomplished over the past 12 years, more work remains to be done. California stands at a critical juncture with complex water issues. Increasing uncertainty and vulnerability of managed water systems due to drought, population growth, changing ecosystems, economic conditions, societal priorities, aging infrastructure, and climate change present significant challenges now, and in the future.

The Strategic Plan will help define the desired future for IRWM and identify measures necessary to achieve that future. The Strategic Plan is needed to identify how California can:

- build on the current and past successes of IRWM;
- further enable, empower, and support RWMGs;
- better align government programs to support IRWM;
- develop a shared vision for funding priorities and financing mechanisms; and
- inform and influence future water management policies and investments for California.

The Strategic Plan will describe DWR's future role and guide its actions for improving its support for IRWM. In addition, the Strategic Plan will identify options and recommendations for others to support the practice of IRWM.

## Purpose

This technical memorandum (TM) was prepared in support of the development of the Strategic Plan. This TM's purpose is to:

- document progress in IRWM planning by RWMGs over the past 12 years;
- summarize the support provided by state IRWM grants; and
- document the number and types of IRWM projects funded.

## Evolution of the IRWM Program

IRWM is the application of integrated water management (IWM) principles on a regional scale. IWM is a comprehensive and collaborative approach for managing water to concurrently achieve social, environmental, and economic objectives. For DWR, these objectives are focused toward improving public safety, fostering environmental stewardship, and supporting economic stability. IWM delivers higher value for investments by considering all interests, providing multiple benefits, and working across jurisdictional boundaries at the appropriate geographic scale. Examples of multiple benefits include improved water quality, better flood management, restored and enhanced ecosystems, and more reliable water supplies.

IRWM relies on open, inclusive, and collaborative processes to promote sustainable water use. Some California water managers have practiced IRWM for decades to meet local and regional water management challenges.

IRWM was officially embraced by the State of California in 2002 with the passage of the Integrated Regional Water Management Planning Act (SB 1672). The purpose of this act is to:

*“facilitate the development of integrated regional water management plans, thereby maximizing the quality and quantity of water available to meet the state's water needs by providing a framework for local agencies to integrate programs and projects that protect and enhance regional water supplies.”*

The Act encourages:

*“local agencies to work cooperatively to manage their available local and imported water supplies to improve the quality, quantity and reliability of those supplies.”*

In 2002, California voters passed Proposition 50, the *Water Security, Clean Drinking Water, Coastal and Beach Protection Act* of 2002. Proposition 50 provided \$500 Million to support IRWM. Approximately \$384 Million of that was allocated for IRWM grants. The remaining amount was allocated for program implementation by DWR and the State Water Resources Control Board, and for other uses such as technical assistance and facilitation support for RWMGs. Among many benefits, Proposition 50 supported integrated regional water management strategies that protect communities from drought, protect and improve water quality, and improve local water security by reducing dependence on imported water.

In 2006, California voters passed Proposition 84, the *Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act*. Proposition 84 provided an additional \$1 Billion for IRWM.

California witnessed a surge in local and regional cooperation and integration in water resources management through Proposition 50 and Proposition 84. Grant funds and other support provided by both propositions helped spread the practice of IRWM across most of California.

## **Regional Water Management Groups**

The IRWM Planning Act of 2002 requires that an RWMG be formed to administer the development of an IRWM plan. California Water Code (CWC) §10539 defines an RWMG as:

*“a group in which three or more local agencies, at least two of which have statutory authority over water supply or water management, as well as those other persons who may be necessary for the development and implementation of a plan that meets the requirements [...], participate by means of a joint powers agreement, memorandum of understanding, or other written agreement, as appropriate, that is approved by the governing bodies of those local agencies.”*

RWMGs across the state are responsible for developing their own organizational structure, size, and means of governance.

## **IRWM Regions**

Currently, there are 48 IRWM regions in California which collectively cover about 87 percent of the state’s geographic area and 99 percent of the state’s population. These regions, shown in Figure 1, have been established by RWMGs. Each region has been accepted into the IRWM Grant Program by DWR through the Region Acceptance Process (RAP).

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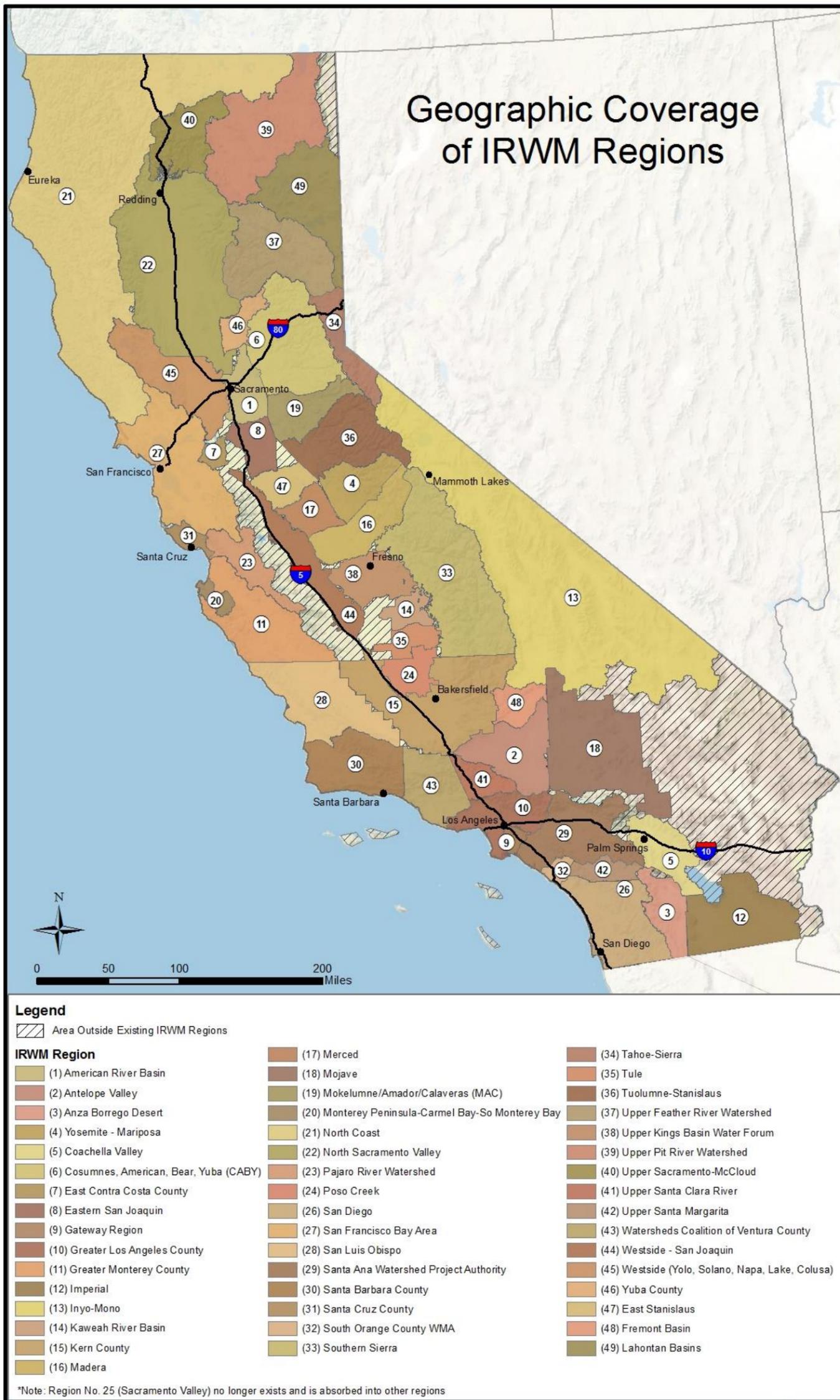


Figure 1 – Geographic Coverage of IRWM Regions

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## Section 2 IRWM Grant Funding

DWR administers IRWM planning and implementation grants under Proposition 50 and Proposition 84. These grants are generally described below.

### Planning Grants

Planning grants are intended to help support the development or update of IRWM plans.

State grant program-related requirements for IRWM plans have changed with time in accordance with legislative requirements. CWC §10540(c) currently requires that all IRWM plans, at a minimum, address the following:

1. Protection and improvement of water supply reliability, including identification of feasible agricultural and urban water use efficiency strategies.
2. Identification and consideration of the drinking water quality of communities within the area of the plan.
3. Protection and improvement of water quality within the area of the plan, consistent with the relevant (Regional Board) basin plan.
4. Identification of any significant threats to groundwater resources from overdrafting.
5. Protection, restoration, and improvement of stewardship of aquatic, riparian, and watershed resources within the IRWM region.
6. Protection of groundwater resources from contamination.
7. Identification and consideration of the water-related needs of disadvantaged communities in the area within the boundaries of the plan.

CWC §10541 directs DWR to develop guidelines for solicitation and evaluation of IRWM grants and requires that IRWM plans include all of the following elements:

1. Consideration of all of the resource management strategies identified in the California Water Plan, as updated by DWR Bulletin No. 160-2005 and future updates.
2. Consideration of objectives in the appropriate (Regional Board) basin plan, or plans and strategies to meet applicable water quality standards.
3. Description of the major water-related objectives and conflicts within an IRWM region.

4. Measurable regional objectives and criteria for developing regional project priorities.
5. An integrated, collaborative, multi-benefit approach to selection and design of projects and programs.
6. Identification and consideration of the water-related needs of disadvantaged communities in the area within the boundaries of the plan.
7. Performance measures and monitoring to demonstrate progress toward meeting regional objectives.
8. A plan for implementation and financing of identified projects and programs.
9. Consideration of greenhouse gas emissions of identified programs and projects.
10. Evaluation of the adaptability to climate change of water management systems in the region.
11. Documentation of data and technical analyses used in the development of the plan.
12. A process to disseminate data and information related to the development and implementation of the plan.
13. A process to coordinate water management projects and activities of participating local agencies and local stakeholders to avoid conflicts and take advantage of efficiencies.
14. Any other matters identified by DWR.

### **Implementation Grants**

Implementation grants fund IRWM projects identified through the IRWM planning process that are designed to assist meeting the water management objectives of an IRWM region. Implementation projects can cover a wide range of activities.

### **Summary of IRWM Grant Awards**

DWR's IRWM Grant Program has funded IRWM planning and implementation projects to identify and meet regional water management needs and objectives. A summary of IRWM grant funding awards under Proposition 50 and Proposition 84 is provided below. More detailed information will be presented in DWR's upcoming IRWM Grant Program 10-Year Report.

## Proposition 50

Approximately \$384 Million in grant funding was allocated to IRWM planning and implementation grants under Proposition 50. As shown in Table 1, state IRWM grant funds were highly leveraged by local and regional funds.

**Table 1 – Proposition 50 IRWM Grant Funding Summary (Dollar Amounts Rounded to the Nearest Thousand)**

Project Type	Number of Projects	State Grant Amount	Non-State Cost Match <sup>2</sup>	Total Project Cost <sup>2</sup>
Planning <sup>1</sup>	25	\$11,679,000	\$7,768,000	\$19,447,000
Implementation Round 1	170	\$306,992,000	\$1,700,397,000	\$2,007,389,000
Implementation Round 2	41	\$58,144,000	\$482,552,000	\$540,696,000
Supplemental (Implementation)	14	\$7,389,000	\$3,205,000	\$10,594,000
<b>Total</b>	250	\$384,204,000	\$2,193,922,000	\$2,578,126,000

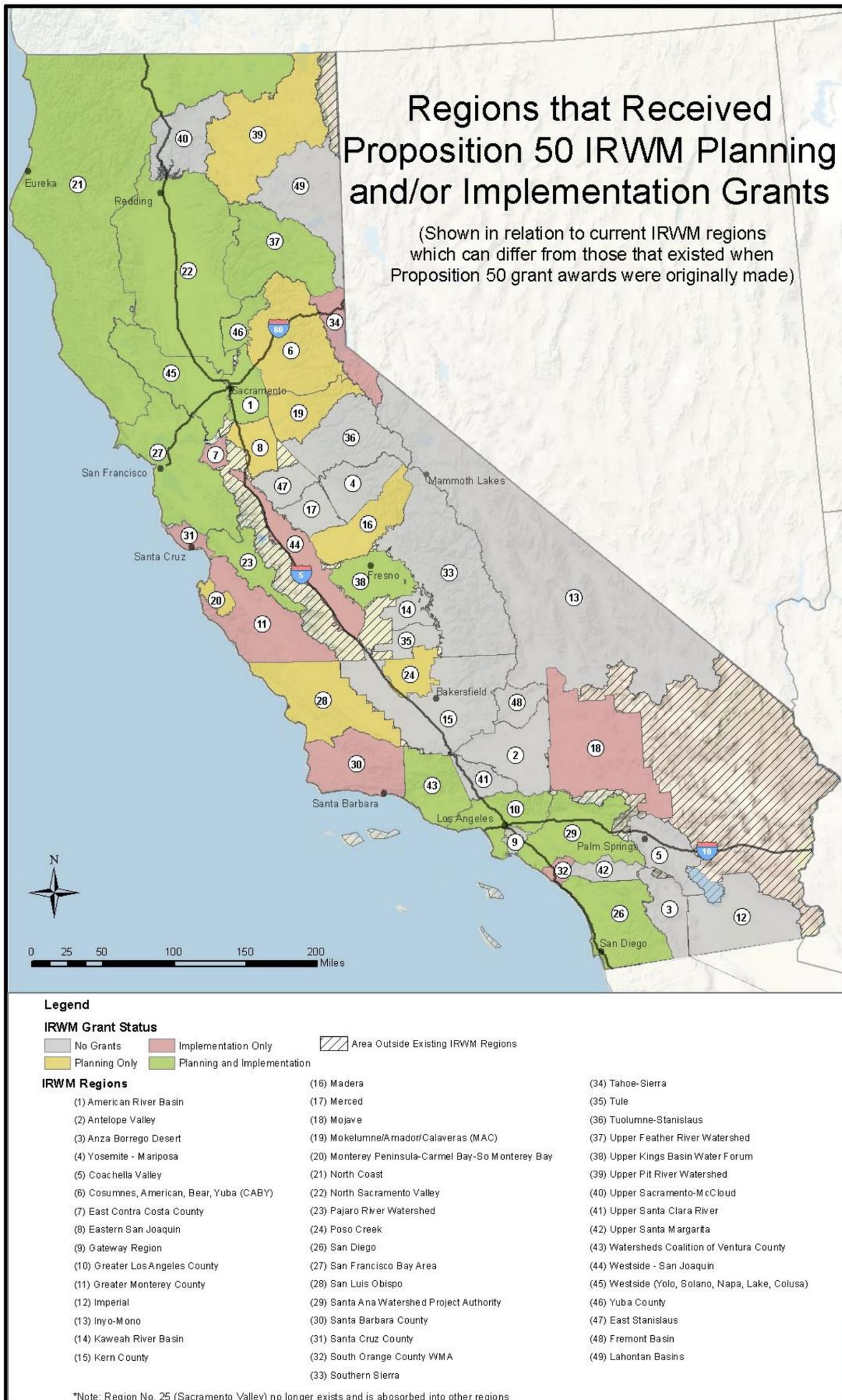
<sup>1</sup> The planning grant summary does not include Integrated Coastal Water Management (ICWM) grants that were distributed as part of this round of funding.

<sup>2</sup> These values are based on a review of current grant award amounts.

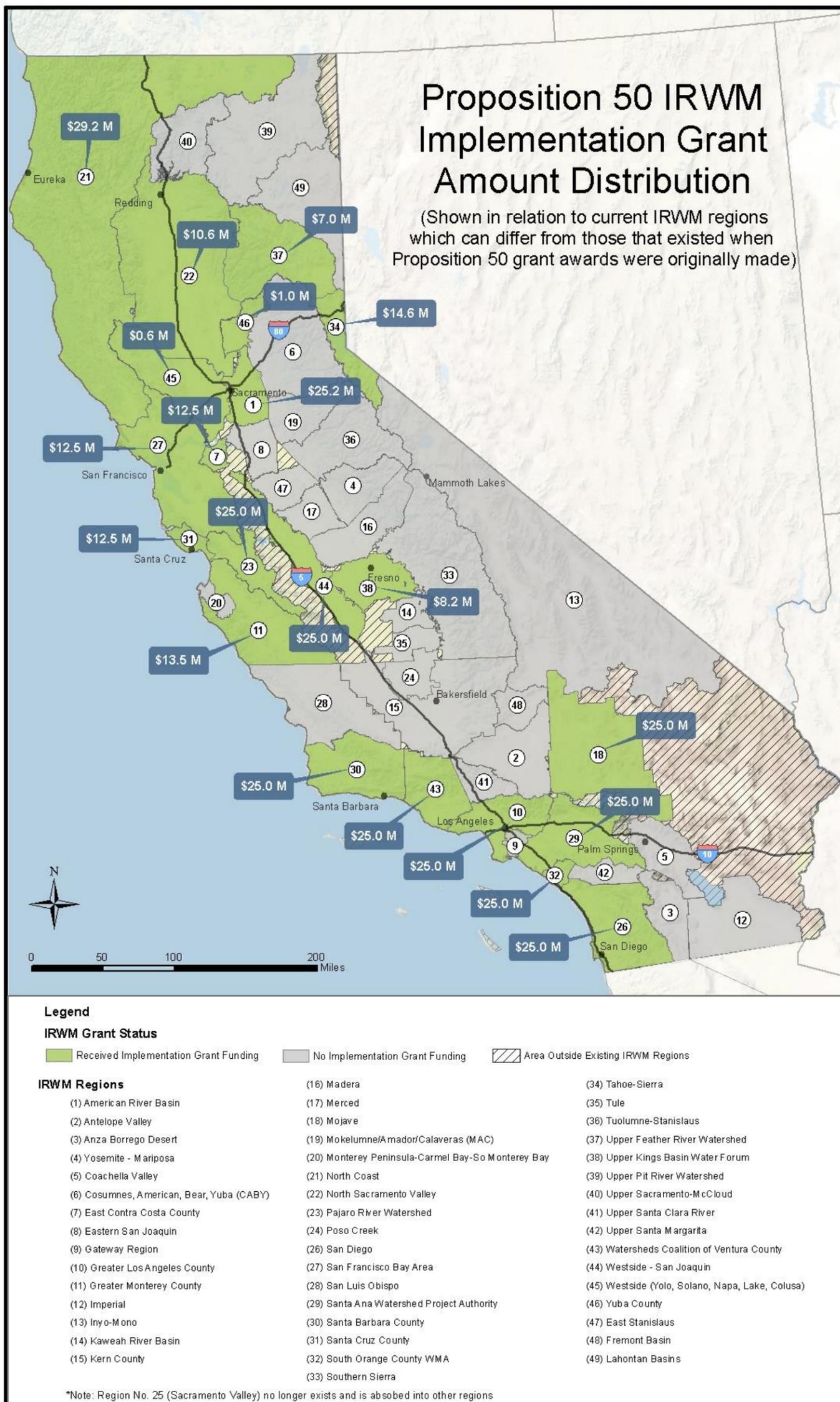
The geographic distribution of Proposition 50 planning and implementation grant awards is presented in Figure 2 in relation to IRWM regions. The distribution of total implementation grant award amounts under Proposition 50 is shown in Figure 3. Twenty-five Proposition 50 planning grant awards went to 21 regions and 24 Proposition 50 implementation grant awards went to 21 IRWM regions.

The distributions in Figures 2 and 3 have been adjusted to conform to the current configurations of IRWM regions, some of which were different when Proposition 50 awards were originally made. Because of this adjustment, Figures 2 and 3 should not be used to determine the exact distribution of grant funds to regions existing now or in the past.

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**Figure 2 - Geographic Distribution of Proposition 50 Planning and Implementation Grants**



**Figure 3 - Geographic Distribution of Proposition 50 Implementation Grant Amounts**

## Proposition 84

Total Proposition 84 grant awards for IRWM, as of February 2014, are listed in Table 2. A total of \$30 Million was awarded for IRWM planning grants through two rounds of funding and about \$358 Million was awarded for IRWM implementation grants through two funding rounds.

The geographic distribution of Proposition 84 planning and implementation grant awards is shown in Figure 4 in terms of current IRWM regions. The 45 Proposition 84 planning grant awards were awarded to 40 IRWM regions with some regions receiving planning grants from both rounds of funding.

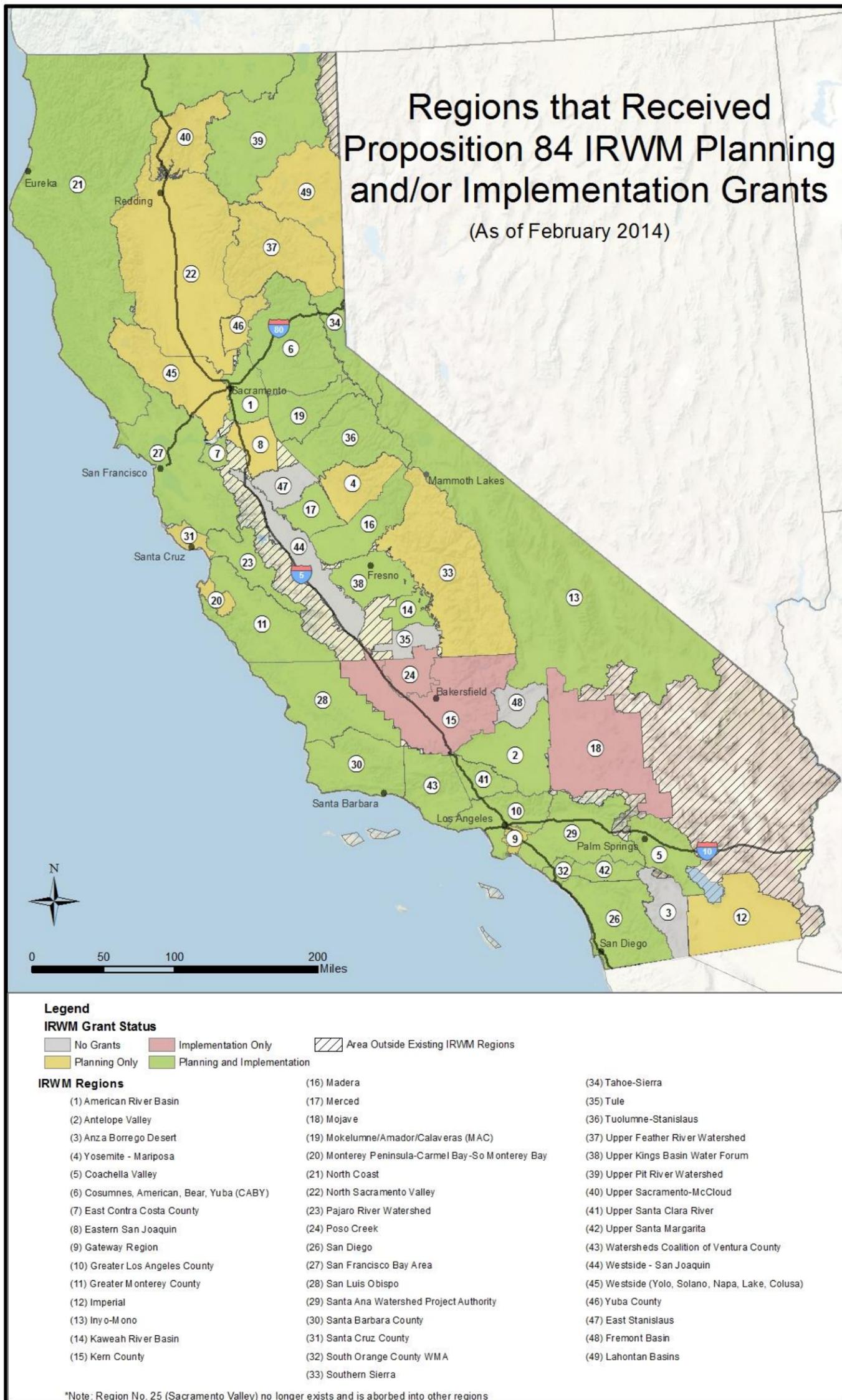
Round 1 implementation grants were awarded to 25 IRWM regions. Round 2 implementation grants were awarded to 21 regions. Some regions received implementation grants from both rounds of funding. The geographic distribution of Proposition 84 implementation grant award amounts is shown in Figure 5.

**Table 2 – Proposition 84 IRWM Grant Funding Summary (as of February 2014, Dollar Amounts Rounded to the Nearest Thousand)**

Project Type	Number of Projects	Grant Award Amount	Non-State Cost Match <sup>1</sup>	Total Project Cost <sup>1</sup>
Planning Round 1	30	\$21,047,000	\$11,413,000	\$32,460,000
Planning Round 2	15	\$8,953,000	\$5,833,000	\$14,786,000
Implementation Round 1	201	\$204,922,000	\$679,745,000	\$884,668,000
Implementation Round 2	138	\$152,851,000	\$633,420,000	\$786,271,000
<b>Total</b>	<b>384</b>	<b>\$387,773,000</b>	<b>1,330,411,000</b>	<b>\$1,718,185,000</b>

<sup>1</sup> These numbers are estimates based on available application information.

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**Figure 4 - Geographic Distribution of Proposition 84 Planning and Implementation Grants**



**Figure 5 - Geographic Distribution of Proposition 84 Implementation Grant Amounts**

## **General Information on Funded IRWM Implementation Projects**

The IRWM Grant Program has funded over 550 IRWM implementation projects since the inception of Proposition 50 in 2002. These projects accomplish many of the primary water management objectives specified in CWC §10537 and incorporate one or more California Water Plan (CWP) Update 2009 resource management strategies.

A cross-sectional analysis was performed for grant-funded IRWM implementation projects in relation to CWC water management objectives and CWP resource management strategies. This analysis was performed for Proposition 50 implementation projects (225), and Round 1 of Proposition 84 implementation projects (201). The results of this analysis are presented below. More detailed information will be presented in DWR's IRWM Grant Program 10-Year Report.

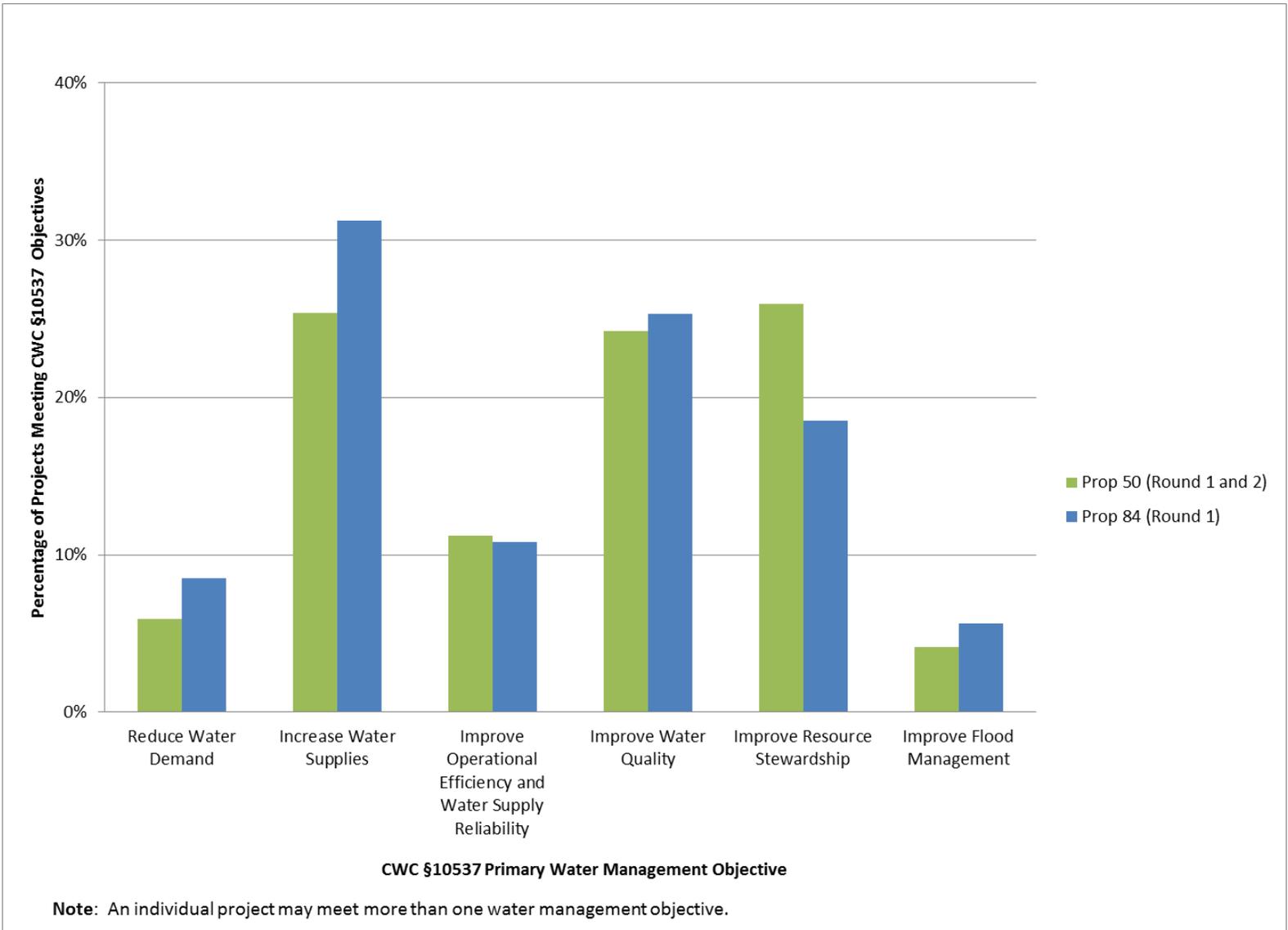
### **CWC §10537 Water Management Objectives**

Funded implementation projects were reviewed for the following water management objectives identified in CWC §10537:

- Reduce water demand
- Increase water supplies
- Improve operational efficiency and water supply reliability
- Improve water quality
- Improve resource stewardship
- Improve flood management

Figure 6 illustrates the percentage of grant-funded implementation projects meeting each of these water management objectives.

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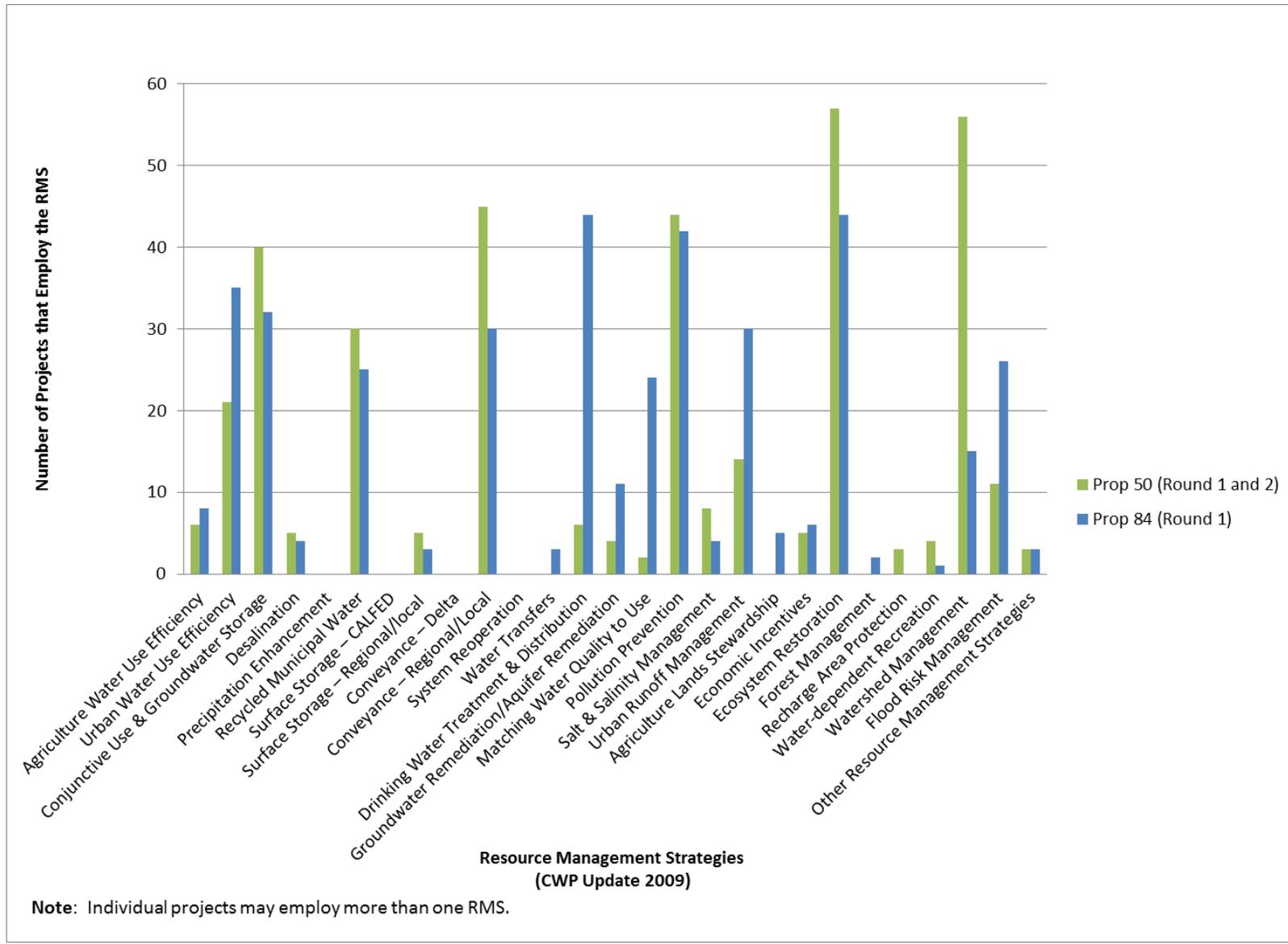
**Figure 6 – Percentage of Grant-Funded IRWM Implementation Projects Meeting CWC §10537 Water Management Objectives**

## **CWP Resource Management Strategies**

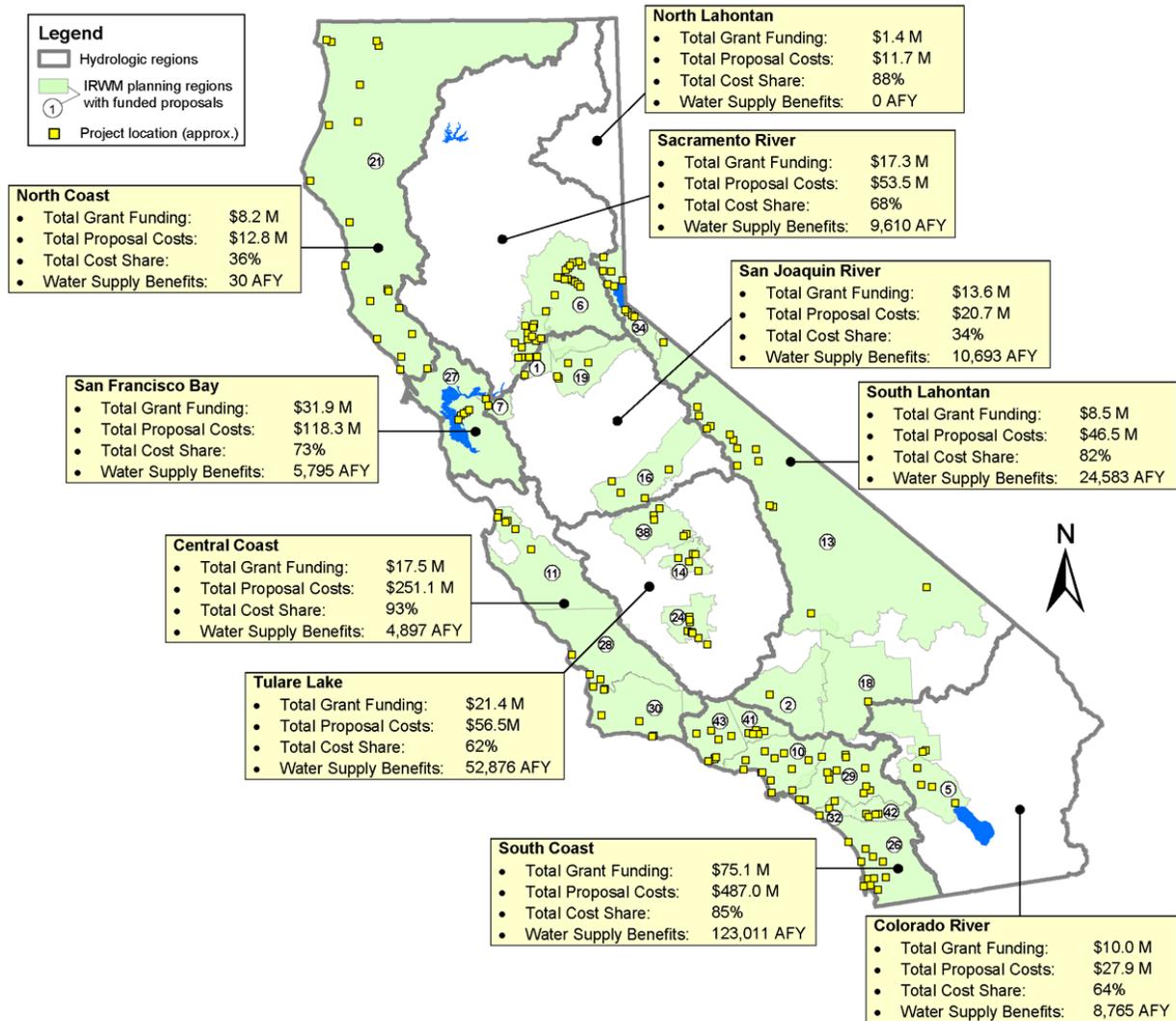
As discussed earlier, CWP Update 2009 identifies a diverse set of resource management strategies (RMSs) for addressing the water management needs of California. Figure 7 depicts the number of grant-funded IRWM implementation projects employing the various CWP Update 2009 RMSs. Many IRWM implementation projects that received Proposition 50 or Proposition 84 grants employed multiple RMSs.

## **Water Supply Project Benefits**

DWR reviewed Proposition 84 grant-funded projects to quantify water supply benefits identified for those projects. Figure 8 shows the aggregated water supply benefits and total cost share for each major hydrologic region of California.



**Figure 7 – Number of Grant-Funded IRWM Implementation Projects Employing CWP Update 2009 RMSs**



**Figure 8 – Identified Water Supply Benefits of Proposition 84 Round 1 Grant-Funded Implementation Projects by Hydrologic Region**

## Section 3 Existing IRWM Plans: A Cross-sectional Analysis

The passage of the IRWM Planning Act, state grants, and the dedicated efforts of RWMGs have changed water management in California over the past 12 years. Major changes include: (i) formation of 48 RWMGs and IRWM regions; (ii) development and adoption of IRWM plans; and (iii) implementation of numerous multi-benefit IRWM projects across the state.

As of May 31, 2014, 42 of the state’s 48 IRWM regions had adopted an IRWM plan. The remaining 6 regions are in the process of developing their IRWM plan for the first time. There are 13 regions who are currently updating their existing plan, as shown in Table 3. The status of IRWM plans is geographically shown in Figure 9.

**Table 3 - IRWM Regions and Plan Status (as of May 31, 2014)**

Region No *	Region Name	Year IRWM Plan First adopted	Most Recently Adopted Update	Current Activity
1	American River Basin	2006	2013	
2	Antelope Valley	2008	2013	
3	Anza Borrego Desert	2009	2009	
4	Yosemite-Mariposa			In Process
5	Coachella Valley	2010	2014	
6	Cosumnes American Bear Yuba (CABY)	2007	2014	
7	East Contra Costa County	2007	2013	
8	Eastern San Joaquin	2007	2007	Updating
9	Gateway Region	2013	2013	
10	Greater Los Angeles County	2006	2013	
11	Greater Monterey County	2006	2013	
12	Imperial	2012	2012	
13	Inyo-Mono	2011	2012	Updating
14	Kaweah River Basin			In Process
15	Kern County	2011	2011	
16	Madera	2008	2008	Updating
17	Merced	2013	2013	
18	Mojave	2005	2005	Updating

**Table 3 - IRWM Regions and Plan Status (as of May 31, 2014)**

Region No *	Region Name	Year IRWM Plan First adopted	Most Recently Adopted Update	Current Activity
19	Mokelumne/Amador/Calaveras (MAC)	2006	2013	
20	Monterey Peninsula, Carmel Bay, and South Monterey Bay	2007	2007	Updating
21	North Coast	2007	2007	Updating
22	Northern Sacramento Valley Group		2014	
23	Pajaro River Watershed	2007	2007	Updating
24	Poso Creek	2007	2007	
26	San Diego	2007	2013	
27	San Francisco Bay Area	2006	2013	
28	San Luis Obispo	2007	2007	Updating
29	Santa Ana Watershed Project Authority (SAWPA)	2005	2014	
30	Santa Barbara Countywide	2007	2013	
31	Santa Cruz County	2005	2005	Updating
32	South Orange County Watershed Management Area	2006	2013	
33	Southern Sierra			In Process
34	Tahoe-Sierra	2007	2007	Updating
35	Tule			In Process
36	Tuolumne - Stanislaus	2013	2013	
37	Upper Feather River Watershed	2005	2005	Updating
38	Upper Kings Basin Water Forum (UKBWF)	2007	2013	
39	Upper Pit River Watershed	2013	2013	
40	Upper Sacramento-McCloud	2013	2013	
41	Upper Santa Clara River	2008	2014	
42	Upper Santa Margarita	2007	2014	
43	Watersheds Coalition of Ventura County	2006	2006	Updating
44	Westside San Joaquin	2006	2006	
45	Westside (Yolo, Solano, Napa, Lake, Colusa)	2013	2013	
46	Yuba County	2008	2008	Updating
47	East Stanislaus	2013	2013	
48	Fremont Basin			In Process
49	Lahontan Basins			In Process

*\*Region No. 25 (Sacramento Valley) no longer exists and is absorbed into other regions.*

A cross-sectional analysis of the 42 IRWM plans in California, existing as of May 31, 2014, was conducted to evaluate:

- Regional diversity of water management issues;
- Patterns of goals and objectives identified by the various regional groups;
- Performance measures used for monitoring the implementation of an IRWM plan;
- Types and numbers of regional governance frameworks;
- Types of stakeholders participating in IRWM planning processes;
- Involvement of disadvantaged communities and Tribes in IRWM;
- IRWM plans and their relationships with the CWP Resource Management Strategies and Statewide Priorities; and
- IRWM plans and their relationships with other local plans.

This analysis is presented in the following sections.

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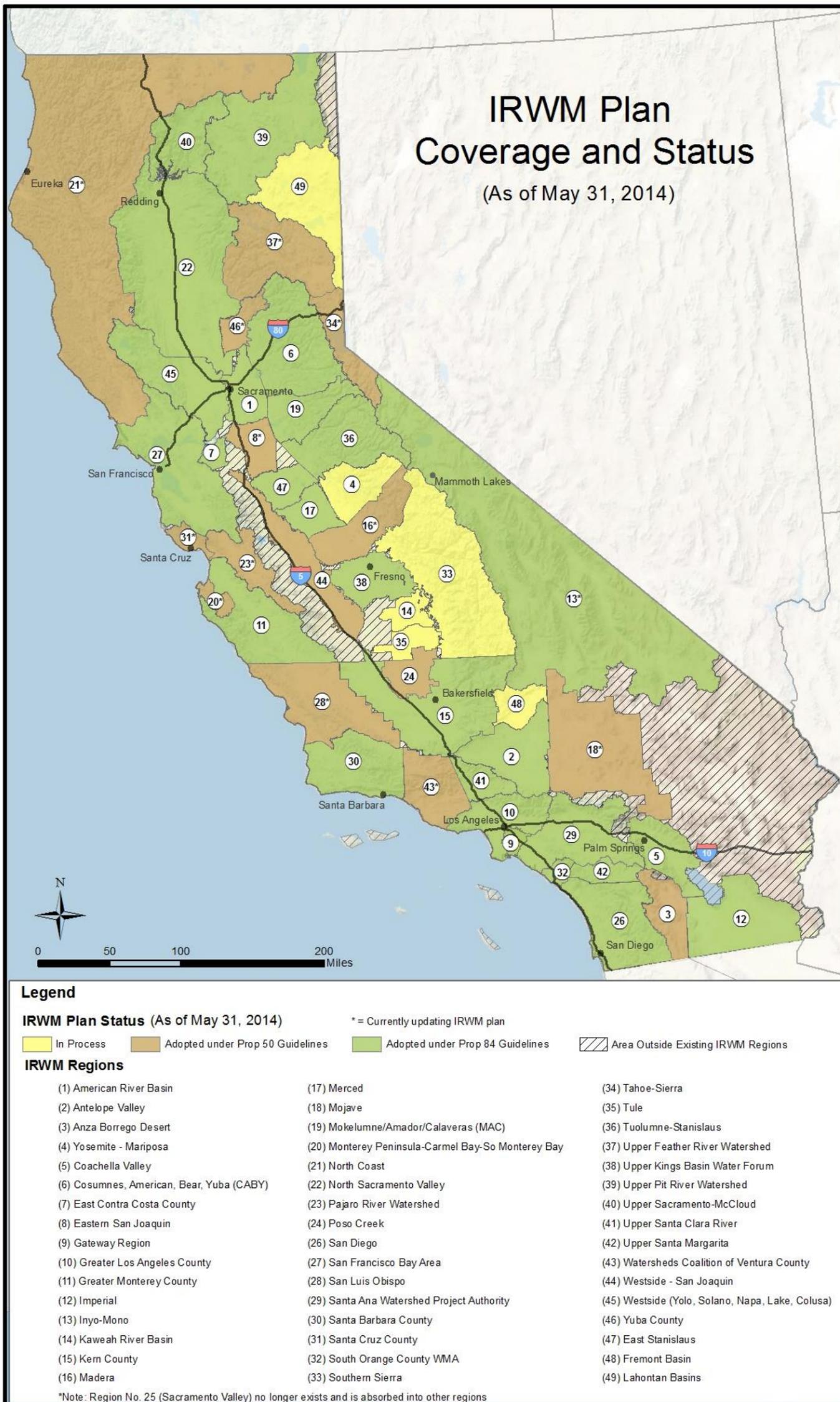


Figure 9 - IRWM Plan Coverage and Status (as of May 31, 2014)

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## **IRWM Plan Standards**

Standards for IRWM plans have evolved with time in response to the requirements of Proposition 50, Proposition 84, and related legislation. Current standards for IRWM plans are contained in DWR's IRWM Grant Program Guidelines (2012 Guidelines) available at <http://www.water.ca.gov/irwm/grants/guidelines.cfm>.

DWR has initiated an IRWM plan review process (PRP) to assess whether each region's IRWM plan is consistent with current standards. The PRP is described in detail in Appendix H of the 2012 Guidelines.

It is expected that almost all IRWM plans in California will be compliant with current standards in near future. IRWM plans that meet standards will still vary significantly in their individual content and level of detail depending on regional needs.

## **Regional Diversity of Water Management Issues**

Water management issues often vary between IRWM regions, as documented in individual IRWM plans. Some of the more prevalent issues addressed in IRWM plans are:

1. **Water Supply Reliability:** Ensuring the availability of long-term reliable water supplies for municipal, agricultural, industrial, environmental, and domestic uses.
2. **Groundwater Management:** Protecting groundwater basins from critical overdraft and pollution (including related land subsidence and storage loss issues).
3. **Water Quality:** Protecting and improving surface water and groundwater quality.
4. **Flood Control and Stormwater Management:** Protecting property and public safety by addressing inadequate facilities, lack of master planning, and requirements for on-site stormwater retention limits and water quality requirements.
5. **Environmental Stewardship:** Meeting habitat and ecosystem restoration needs.
6. **Regulatory Constraints:** Complying with increasingly stringent and costly state and federal water quality requirements and other regulatory requirements. The lack of alignment of regulations and regulatory policies further increase project costs.
7. **Aging Infrastructure:** Identifying needs for repairing and replacing aging infrastructure to meet current demand.

8. Water Conservation: Increasing public awareness and implementing water conservation programs and measures.
9. Climate Change: Mitigating and adapting to climate change impacts.
10. Institutional Capacity: Increasing institutional capacity for planning, implementing, and maintaining IRWM projects. Some IRWM regions lack the financial resources to hire outside contractors to assist.

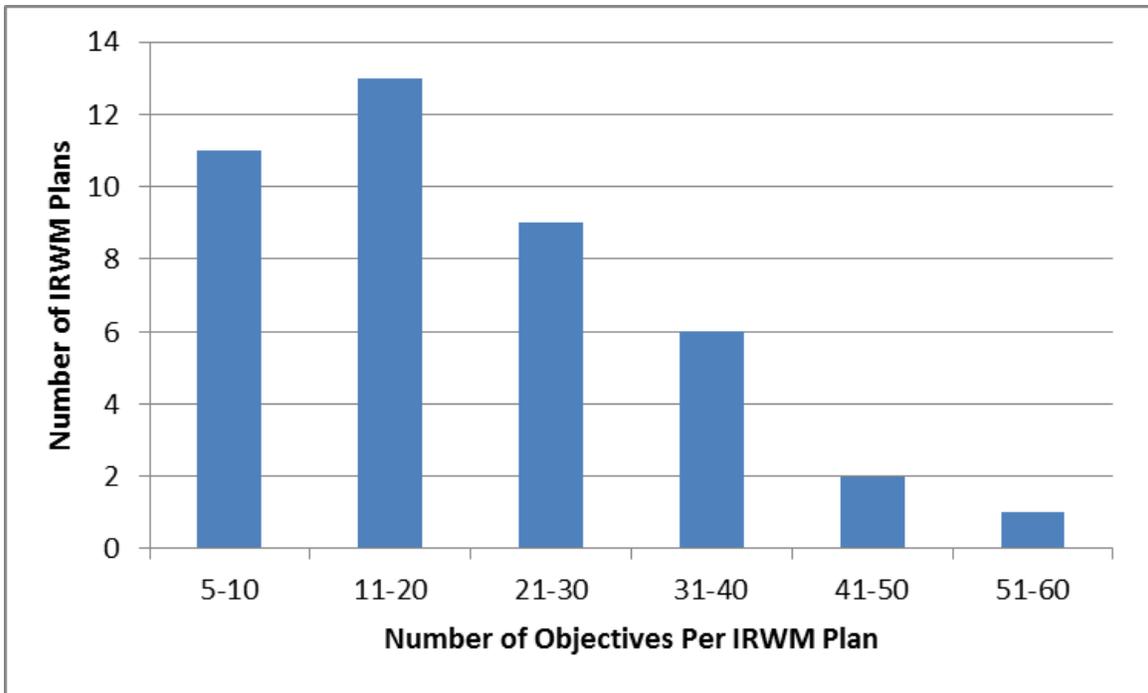
Other regional issues that are mentioned include dependence on imported water, water rights constraints/conflicts, Tribal involvement, drinking water treatment, disadvantaged community needs, wastewater treatment and related infrastructure, affordability of recycled water, and control of invasive species.

An overview of the major regional issues of IRWM regions organized by DWR's Region Office service areas (Northern, North Central, South Central, and Southern) is included as Appendix A.

## **Goals and Objectives in Existing IRWM Plans**

As of May 31, 2014, the number of goals and objectives identified in individual IRWM plans vary by region, ranging from 5 to 56. Figure 10 is a histogram of the number of IRWM plans having various numerical ranges of goals/objectives. The majority (24) of plans have less than 20 unique goals/objectives per plan. Only three plans had more than 40 goals/objectives.

A total of 840 goals/objectives were found in the 42 IRWM plans reviewed. These are listed by IRWM region in Appendix B.



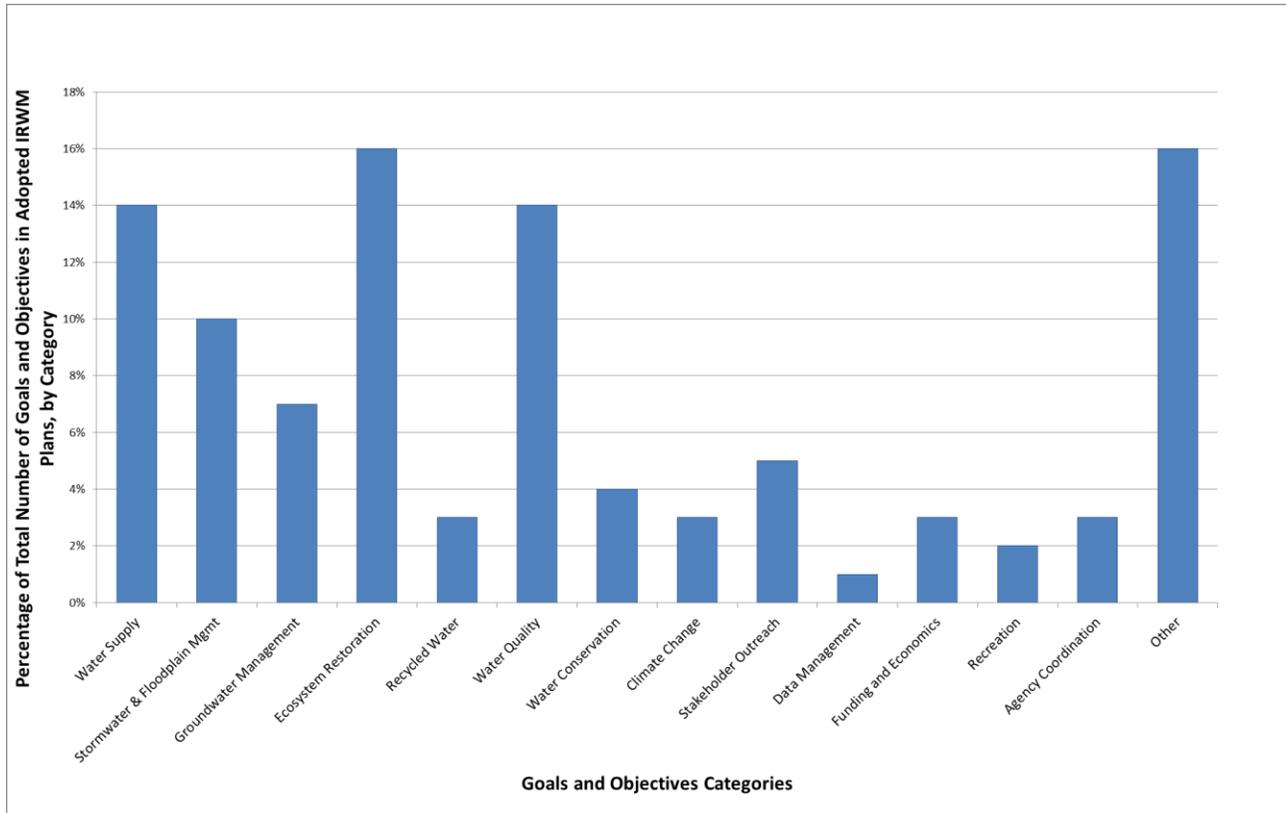
**Figure 10 - Histogram of Goals and Objectives in IRWM Plans (as of May 31, 2014)**

The goals and objectives identified in the 42 adopted plans as of May 31, 2014 were grouped into the following general categories for the purposes of analysis:

- Water Supply
- Stormwater and Floodplain Management
- Groundwater Management
- Ecosystem Restoration
- Recycled Water
- Water Quality
- Water Conservation
- Climate Change
- Stakeholder Outreach
- Data Management
- Funding and Economics
- Recreation

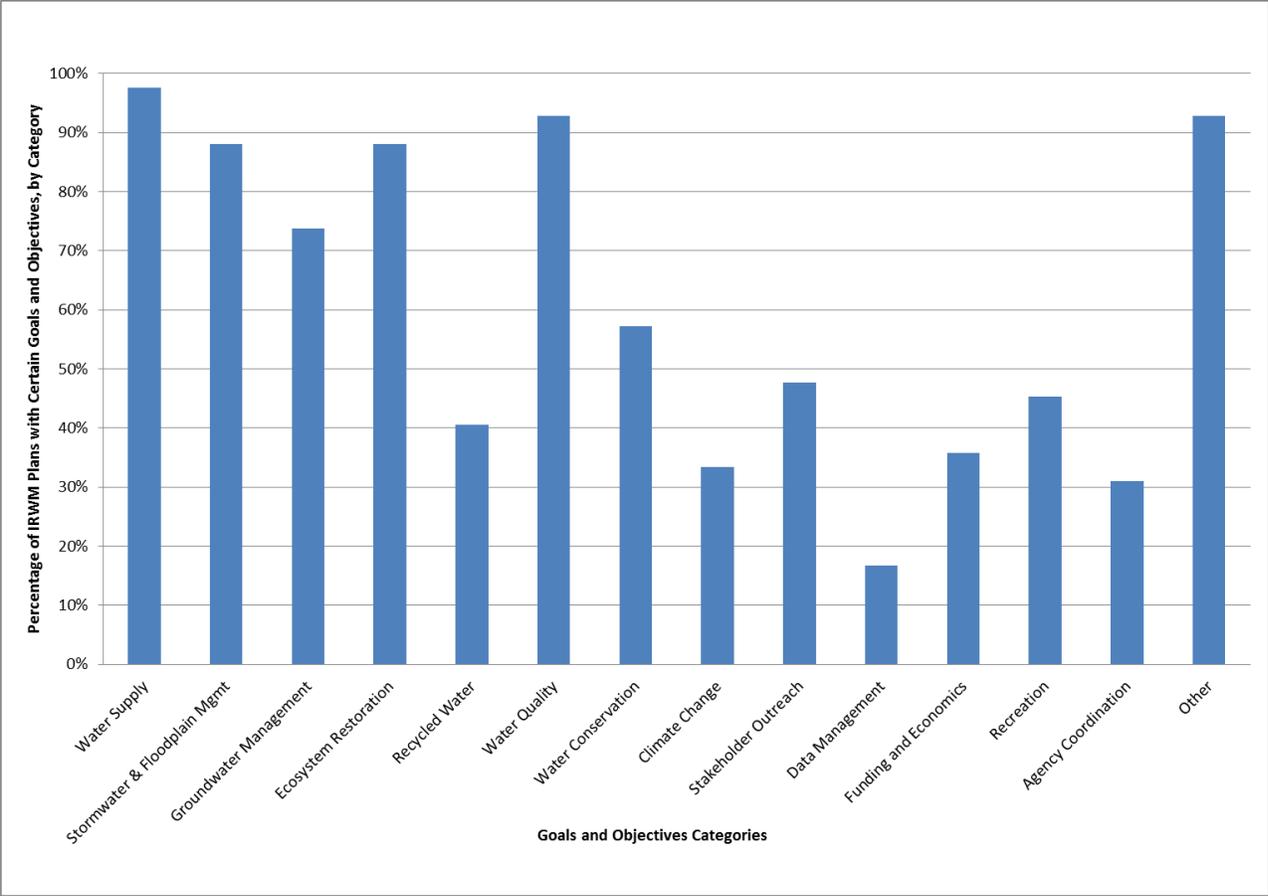
- Agency Coordination
- Other (includes objectives related to governance, management, disadvantaged communities, Tribal engagement, and other various objectives)

The distribution of these goals and objectives according to the above categories is shown in Figure 11. Almost half (44 percent) of the total 840 goals/objectives identified in IRWM plans are related to water supply, water quality, or ecosystem restoration.



**Figure 11 - Distribution of Goals and Objectives by General Categories (as of May 31, 2014)**

The distribution of the goals/objectives by IRWM plans is shown in Figure 12. Almost all (98 percent) currently-adopted IRWM plans have at least one water supply related goal or objective; 93 percent of the plans have at least one water quality related goal or objective; and 88 percent of the plans have at least one ecosystem restoration related goal or objective.



**Figure 12 - Percentage of IRWM Plans with Various Goals and Objectives by General Categories (as of May 31, 2014)**

## Performance Measures in IRWM Plans

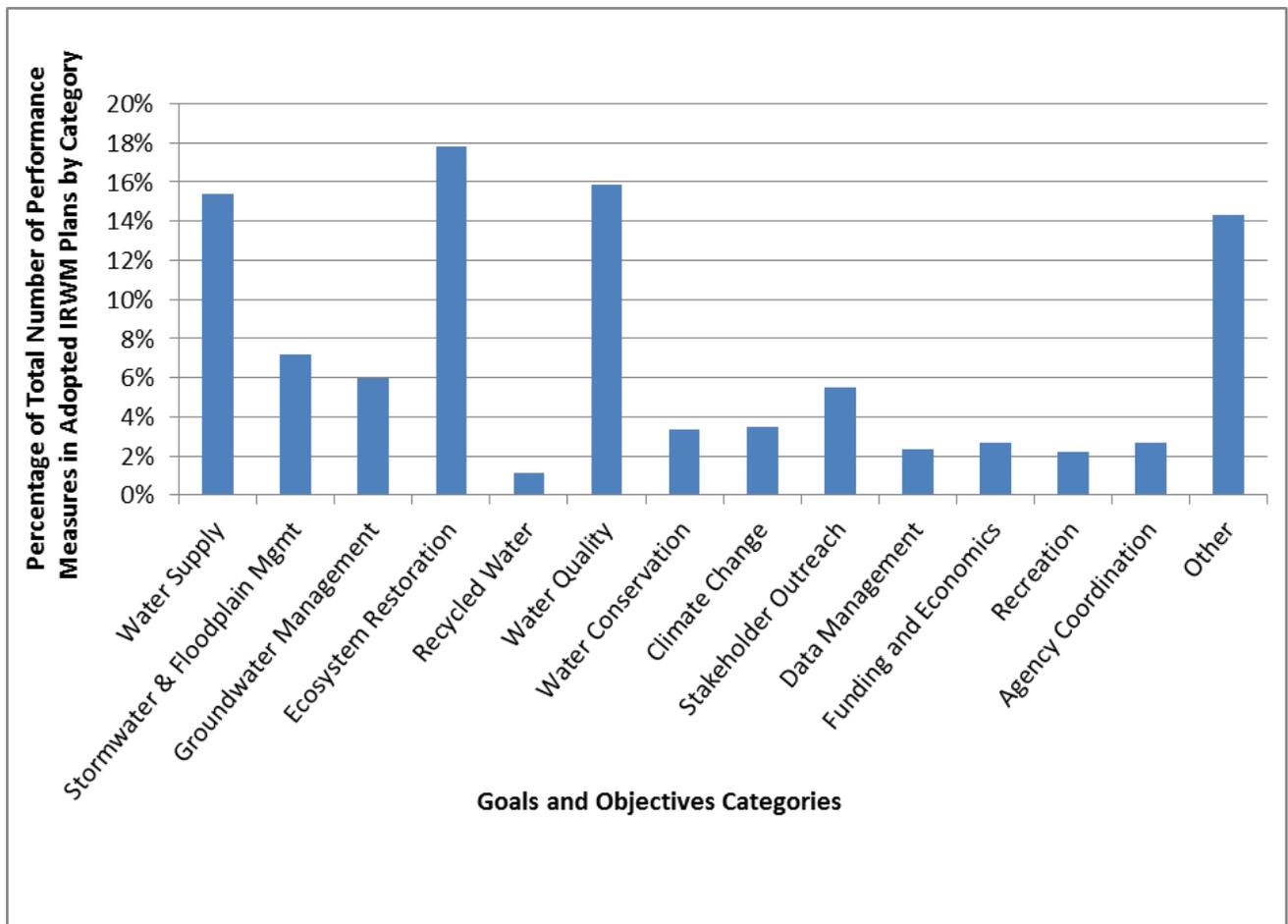
The 42 adopted IRWM plans were reviewed for inclusion of performance measures in the plan. Performance measures include performance targets (endpoint) and performance metrics (measuring scale). A set of sample performance measures is presented in Table 4.

**Table 4 - Samples of Performance Measures in IRWM Plans by Goal and Objective Categories**

Goal Category	Sample Performance Target*	Sample Performance Metric*
Water Supply	Reduce mismatch of expected supply and demand by 73,600 acre-feet per year (AFY)	Number of aquifers evaluated for potential potable supply
Stormwater and Floodplain Management	Coordinate a regional flood management plan by 2010	Change in calculated level of flood protection
Groundwater Management	Balance groundwater extractions with groundwater recharge	Acre-feet per year (AFY) of water injected as recharge
Ecosystem Restoration	Conserve or protect native water-related habitats	Acreage or lineal measurement of riparian corridor restored
Recycled Water	Individual stakeholders track and measure increased use of recycled water	Acre-feet per year (AFY) use increase of recycled water
Water Quality	Compliance with all drinking water, water quality protection, and wastewater discharge standards within the Region throughout the planning period	Number of mines known to cause water quality issues for which remedial actions are implemented
Water Conservation	20 percent reduction of water demand by Year 2020	Number of acres under sustainable agricultural practices
Climate Change	Implement an assessment of climate change on future water supplies	Number of local water supply plans that consider climate change and incorporate best available climate science into the planning process
Stakeholder Outreach	Increased community awareness and participation	Number of people who receive the educational materials/messages within the Region each year
Data Management	Development of web-based, GIS-compatible data management system	Number of user hits on project website
Recreation	Improve recreational opportunities for urban populations	Number of acres of water-based recreational open space created
Other	Increased land use planning in water management	Acreage of land managed, protected, or enhanced to protect beneficial uses of water

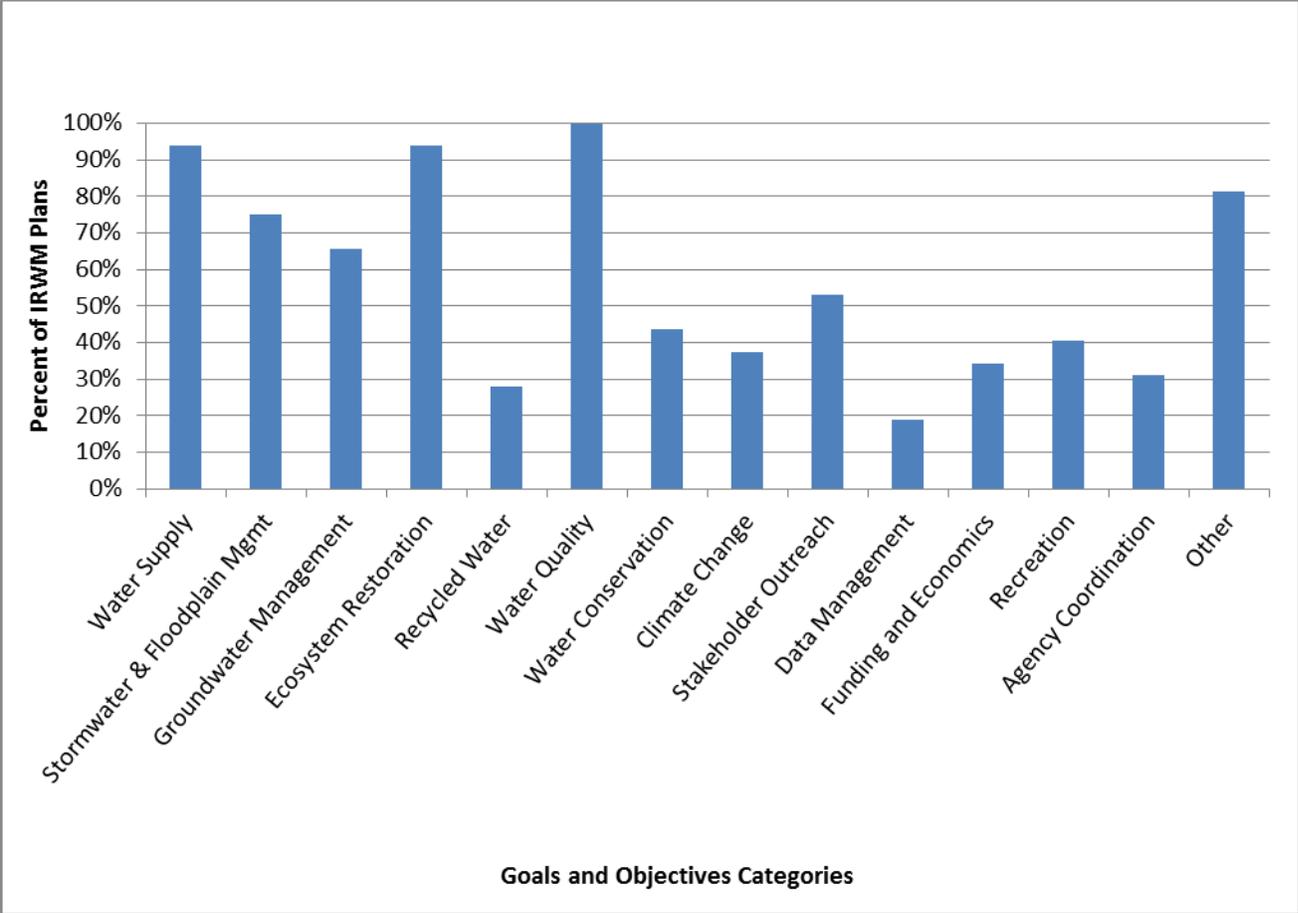
*\*These performance measures are provided here as a sample of what measures are contained in the published IRWM plans without any editorial revision.*

Of the 42 IRWM plans adopted as of May 31, 2014, thirty-two included performance measures. The performance measures vary considerably from plan to plan with some being tied to specific plan goals and objectives, while others relate more to individual implementation projects. A total of 1148 performance measures were found in the 32 IRWM plans and were then related to the general goal and objective categories discussed earlier. The distribution of performance measures according to these categories is shown in Figure 13.



**Figure 13 - Distribution of Performance Measures in Adopted IRWM Plans (as of May 31, 2014) by General Goal and Objective Categories**

Figure 14 depicts the percentage of IRWM plans with performance measures that relate to various goal and objective categories. Analysis of the 32 IRWM plans that included performance measures found that 100 percent of IRWM plans have water quality related performance measures, 94 percent have water supply related performance measures, and 94 percent have performance measures that relate to ecosystem restoration.



**Figure 14 - Percentage of Adopted IRWM Plans (as of May 31, 2014) with Performance Measures Related to General Goal and Objective Categories**

## RWVG Governance Structure

Section 10539 of the California Water Code states, in part, that the basis of participation in an RWVG be by:

*“...means of a joint powers agreement, memorandum of understanding (MOU), or other written agreement, as appropriate...”*

Current IRWM program guidelines require that IRWM plans document the IRWM governance basis for the region. DWR does not dictate any specific governance basis for RWVGs.

A review of adopted IRWM plans shows that RWVGs have employed the following three means or basis of IRWM governance:

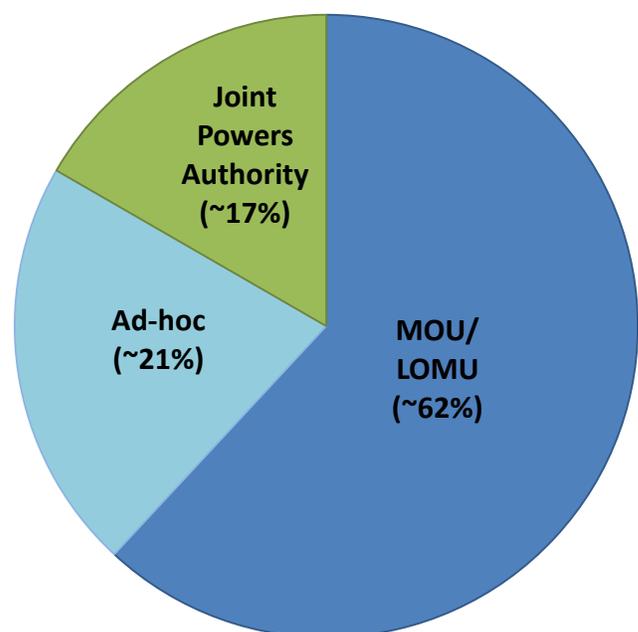
- Joint Powers Authority (JPA)
- Memorandum of Understanding (MOU), or Letter of Mutual Understanding (LOMU)
- “Ad-hoc”

The distribution of governance basis by RWVGs across the state is shown in Figure 15. Each governance basis is briefly described below.

### Joint Powers Authority

Section 6500 of the California Government Code allows for the formation of JPAs as separate public entities created by two or more public agencies for a particular mission or purpose. JPAs are based on a formal contract among individual public agencies to jointly exercise their powers.

JPAs generally are organized according to the wishes of their members. Most have a governing board made up of elected or appointed members from each participating entity. The governing board typically sets the policy direction for the JPA and coordinates how the JPA’s policies are acted on.



**Figure 15 – Breakdown of Governance Basis for IRWM Regions (As of May 31, 2014)**

## **Memorandum of Understanding/Letter of Mutual Understanding**

A Memorandum of Understanding or Letter of Mutual Understanding is an agreement between individual local agencies to pursue a common purpose or goal. MOU/LOMU based governance is mostly voluntary on the part of the signatories and relies on the goodwill and cooperation of the signatories.

### **Ad-hoc**

There are several IRWM regions which do not have a JPA or MOU/LOMU as the basis for governance. These groups have established various types of committees to govern the activities of their RWMG. Committee decisions are typically made by consensus.

## **Participation of Stakeholders**

IRWM participation is voluntary; correspondingly, the manner and extent of participation by water management agencies and other organizations in IRWM varies from region to region. The number and type of agencies and other organizations involved in IRWM in a specific region is also a function of the size of the region and its geographic location. IRWM regions in rural areas of the state generally have fewer participants than regions in urban areas, especially where an “urban region” is fairly large. Table 5 presents a summary of types of stakeholders actively engaged in the development and implementation of IRWM plans, based on a review of the 42 adopted IRWM plans.

**Table 5 – General Summary of Stakeholders Participating in the Development and Implementation of IRWM Plans<sup>1</sup> (Last Updated September 15, 2014)**

Region No.	Region Name	Cities	Counties	Community Groups/NGOs <sup>2</sup>	DACs <sup>3</sup>	Tribes <sup>3</sup>	Flood Management Agencies <sup>4</sup>	Irrigation Districts	Privately Owned Water Companies	Reclamation Districts	Sanitation Districts	Water Agencies	Water Districts	Community Service Districts	Resource Conservation Districts	Other <sup>5</sup>
1	American River Basin	9	1	18	●	2	2	2	5	1	1	2	13	1	4	28
2	Antelope Valley	4	2	4	●	●		1	9		2	2	2	2	1	14
3	Anza Borrego Desert		1	2	●		1						1	1		7
4	Yosemite-Mariposa		1	6	7	1		1	2			1		2	1	23
5	Coachella Valley	9	1	11	7	6	1		1		1	1	2	1		16
6	Cosumnes American Bear Yuba (CABY)	6	5	25	4	6		2				2	2	3	4	12
7	East Contra Costa County	3			●		1	2	20	13	2		1	2		4
8	Eastern San Joaquin	4	2	4	2		1	2	1			2	4			19
9	Gateway Region	28	1	7	●	1	1	1	16		1		7			28
10	Greater Los Angeles County	12	2	7	●		1				2		7		1	25
11	Greater Monterey County	6	2	55	●	●			7		1	3	5	2	1	39
12	Imperial	11	1	7	●			1			1		1			10
13	Inyo-Mono	1	2	7	●	5			1				2	3	1	16
14	Kaweah River Basin	<i>Plan Development In Process</i>														
15	Kern County	9	1	15	●	1		1	7			2	21	5	3	30
16	Madera	2	1	3		1		1	1				4		2	2
17	Merced	3	1	3				1	1		1		2	1	1	19
18	Mojave	7	1	18	●	●	2		24		1	3	17	6	1	45
19	Mokelumne/Amador/Calaveras (MAC)	5	3	5	4	●		1			2	2	1	1		6
20	Monterey Peninsula, Carmel Bay, and South Monterey Bay	6		9	4		1		1		1		1	1	1	18
21	North Coast	17	8	18	5	2			1		2	2	4	13	5	12
22	Northern Sacramento Valley Group		6	9	●	2		1	4	1		1	3		6	2
23	Pajaro River Watershed	5	4	15	1		1					1	5	1	1	15
24	Poso Creek	4			●			2				1	8		1	8
26	San Diego	18	2	43	2	18	1	2	1		2		13	2	2	36

<sup>1</sup> This list of stakeholders was obtained through a review of adopted IRWM plans and draft IRWM plan update materials available as of September 15, 2014. Stakeholder engagement was determined from either the IRWM plan signatory list or a general stakeholder list, depending on what was provided in the plan. This summary represents a “snapshot” in time and may not be completely representative of stakeholder participation in individual IRWM regions.

<sup>2</sup> NGOs = Non-governmental Organizations

<sup>3</sup> DACs = Disadvantaged Communities. Please see Appendix C for descriptions of DAC and Tribal involvement in the development and implementation of IRWM plans.

<sup>4</sup> Entities which are not explicitly named as flood management agencies, but have flood management functions, are not shown in this column.

<sup>5</sup> Includes land use agencies, specialized local agencies, Joint Powers Authorities, public utility districts, and any other organizations not included in the other categories.

● Reported active outreach efforts to encourage participation in IRWM plan development and implementation.

**Table 5 – General Summary of Stakeholders Participating in the Development and Implementation of IRWM Plans<sup>1</sup> (Last Updated September 15, 2014) (Continued)**

Region No.	Region Name	Cities	Counties	Community Groups/NGOs <sup>2</sup>	DACs <sup>3</sup>	Tribes <sup>3</sup>	Flood Management Agencies <sup>4</sup>	Irrigation Districts	Privately Owned Water Companies	Reclamation Districts	Sanitation Districts	Water Agencies	Water Districts	Community Service Districts	Resource Conservation Districts	Other <sup>5</sup>
27	San Francisco Bay Area	108	15	126	●	●	6		4		12	5	8		9	199
28	San Luis Obispo	7	3	4	4		1		6		1			8	1	13
29	Santa Ana Watershed Project Authority (SAWPA)	63	3	29	5	5	3		15		3	1	35	4	3	72
30	Santa Barbara County	8	1	1	3	●	1		2		6	1	5	5	1	2
31	Santa Cruz County	2	1	9	1		1				2		4		1	16
32	South Orange County Watershed Management Area	11	1	9	2	1	1						8			8
33	Southern Sierra	<i>Plan Development In Process</i>														
34	Tahoe-Sierra	2	4	4	●	1			2			1			1	17
35	Tule	<i>Plan Development In Process</i>														
36	Tuolumne – Stanislaus	2	2	9	●	2		1			1		3	3	1	8
37	Upper Feather River Watershed	1	2	2	●		1							2		7
38	Upper Kings Basin Water Forum	10	3	9	●		1	7	2				4	6	1	11
39	Upper Pit River Watershed	1	3	8	4	1		1					1	1	3	16
40	Upper Sacramento-McCloud	2	1	10	2	4								1	2	10
41	Upper Santa Clara River	1	2	4		1	1		1		1	1	1		1	19
42	Upper Santa Margarita	3	1	12	●	3	1		1				5		2	29
43	Watersheds Coalition of Ventura County	10		14	●	1	1	1	2		4		8	1	1	38
44	Westside San Joaquin	2		3				9	3	1		1	22			25
45	Westside (Yolo, Solano, Napa, Lake, Colusa)	6	5	5	●	6	2		1	1		1	1		7	14
46	Yuba County	4	1	1	●			3	1	4		1	7		2	4
47	East Stanislaus	9		3	2	●		2								4
48	Fremont Basin	<i>Plan Development In Process</i>														
49	Lahontan Basins	1	2	8	●	●	2	2			3		1	5	2	4
<b>TOTALS</b>		<b>422</b>	<b>98</b>	<b>561</b>	<b>59</b>	<b>70</b>	<b>35</b>	<b>47</b>	<b>142</b>	<b>21</b>	<b>53</b>	<b>37</b>	<b>239</b>	<b>83</b>	<b>74</b>	<b>950</b>

<sup>1</sup> This list of stakeholders was obtained through a review of adopted IRWM plans and draft IRWM plan update materials available as of September 15, 2014. Stakeholder engagement was determined from either the IRWM plan signatory list or a general stakeholder list, depending on what was provided in the plan. This summary represents a “snapshot” in time and may not be completely representative of stakeholder participation in individual IRWM regions.

<sup>2</sup> NGOs = Non-governmental Organizations

<sup>3</sup> DACs = Disadvantaged Communities. Please see Appendix C for descriptions of DAC and Tribal involvement in the development and implementation of IRWM plans.

<sup>4</sup> Entities which are not explicitly named as flood management agencies, but have flood management functions, are not shown in this column.

<sup>5</sup> Includes land use agencies, specialized local agencies, Joint Powers Authorities, public utility districts, and any other organizations not included in the other categories.

● Reported active outreach efforts to encourage participation in IRWM plan development and implementation.

## Involvement of Disadvantaged Communities in IRWM Planning

IRWM guidelines require that RWMGs consider DACs in their IRWM planning processes. DACs are defined as communities with an annual median household income (MHI) that is less than 80 percent of the statewide annual MHI according to Public Resources Code §75005 (g).

The level of inclusion and involvement of DACs in IRWM varies by region and is partly a function of the number of DACs existing in a particular region. Based on 2010 census figures, the locations of DACs in California are shown in Figure 16.

The American Community Survey (ACS) of the U. S. Census is the primary source of estimates of MHI for use in determining if a community is a DAC. RWMGs may use ACS data at the census place, census tract, or census block group geography levels to identify DACs in their IRWM region, based on what geographic consideration is the most representative for that community. In cases where the ACS survey data do not support a community being classified as a DAC, DWR will consider use of other data showing a community to be a DAC.

A review of adopted IRWM plans as of May 31, 2014 was conducted to develop a general understanding of the extent of DAC involvement in IRWM statewide. This evaluation generally determined that:

- About one-third of IRWM regions have a significant level of DAC involvement. Significant involvement is typically evidenced by the identification of an IRWM region's DACs in an IRWM plan, and documentation of their active involvement.
- A little less than half of the regions appear to have a relatively low level of DAC involvement. This level of involvement was indicated by the identification of some or all of an IRWM region's DACs in an IRWM plan, but with limited documentation of their involvement.
- DAC involvement in the remaining IRWM regions is unclear.

A summary of DAC involvement in IRWM planning for each region is included in Appendix C.

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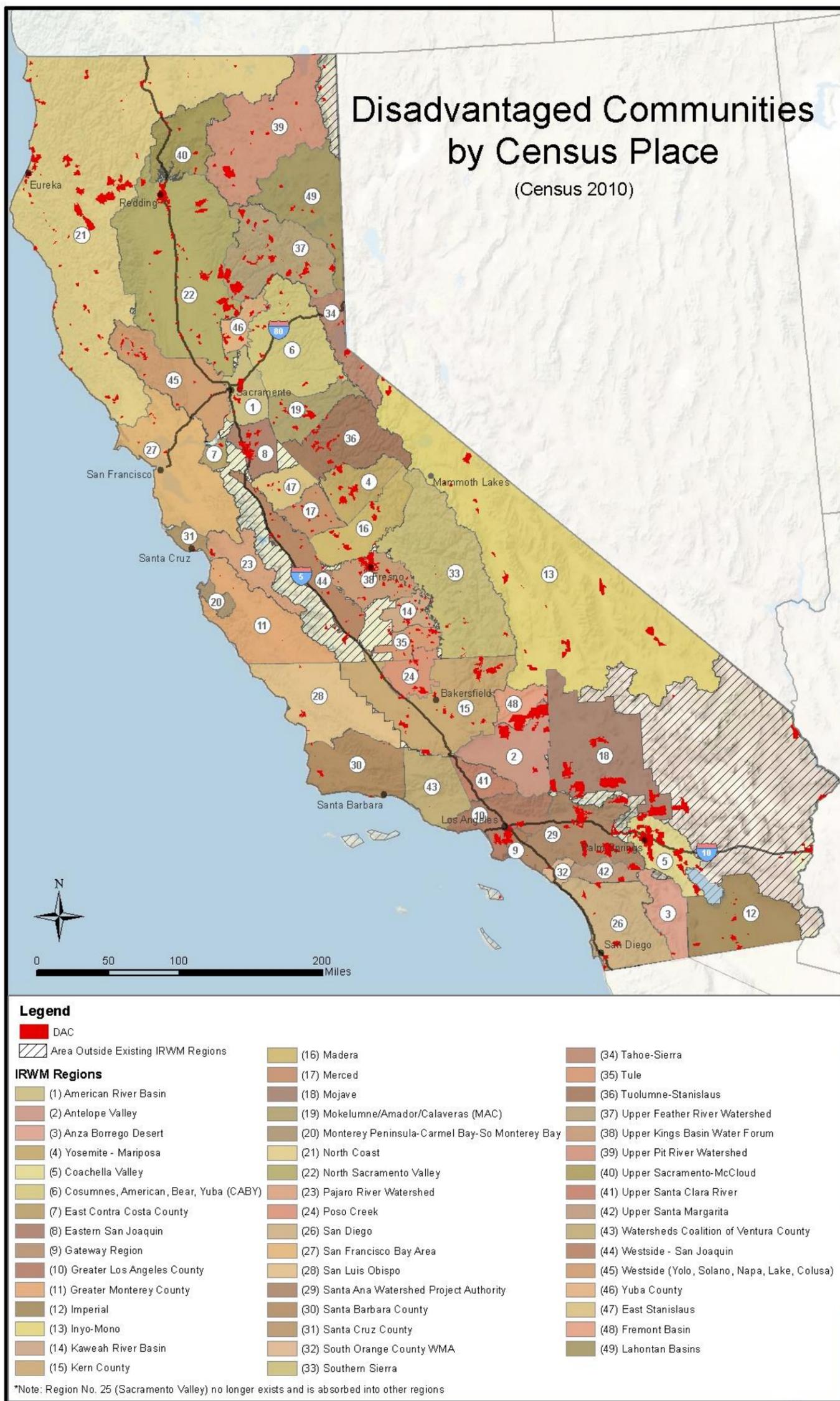


Figure 16 – Locations of Disadvantaged Communities in California by Census Place

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## Involvement of Tribes in IRWM Planning

IRWM guidelines require that IRWM regions endeavor to involve Native American Tribal communities (Tribes) in the IRWM planning process. California has 108 federally recognized Tribes and over 55 non-federally recognized Tribes.

The level of involvement of Tribes in IRWM varies by region and is partly due to the number of Tribes that exist within a region. A map of Tribal lands in California can be found at:

[http://www.waterplan.water.ca.gov/tribal2/docs/maps/CaliforniaIndianTribalHomelands24x30\\_20110719.pdf](http://www.waterplan.water.ca.gov/tribal2/docs/maps/CaliforniaIndianTribalHomelands24x30_20110719.pdf).

Since almost all IRWM regions contain lands of formally recognized and/or non-recognized Tribes, productive partnerships with Tribes are important for the proper development and implementation of IRWM plans. A summary of Tribal involvement in IRWM for each region is included in Appendix C. Based on the information summarized in Appendix C, it appears that there are relatively few RWMGs in California where Tribes are actively involved or represented in the IRWM process.

## IRWM Plans and Resource Management Strategies

CWP Update 2009 identified 27 RMSs for water resources in California. RMSs cover a broad range of water management actions that can be taken to help meet region-specific goals and objectives, depending on the circumstances and needs of individual IRWM regions.

IRWM guidelines require that IRWM plans:

*“...must document the range of RMS considered to meet the IRWM objectives and identify which RMS were incorporated into the IRWM Plan... RMS to be considered must include, but are not limited to, the RMS found in Volume 2 of the CWP Update 2009.”*

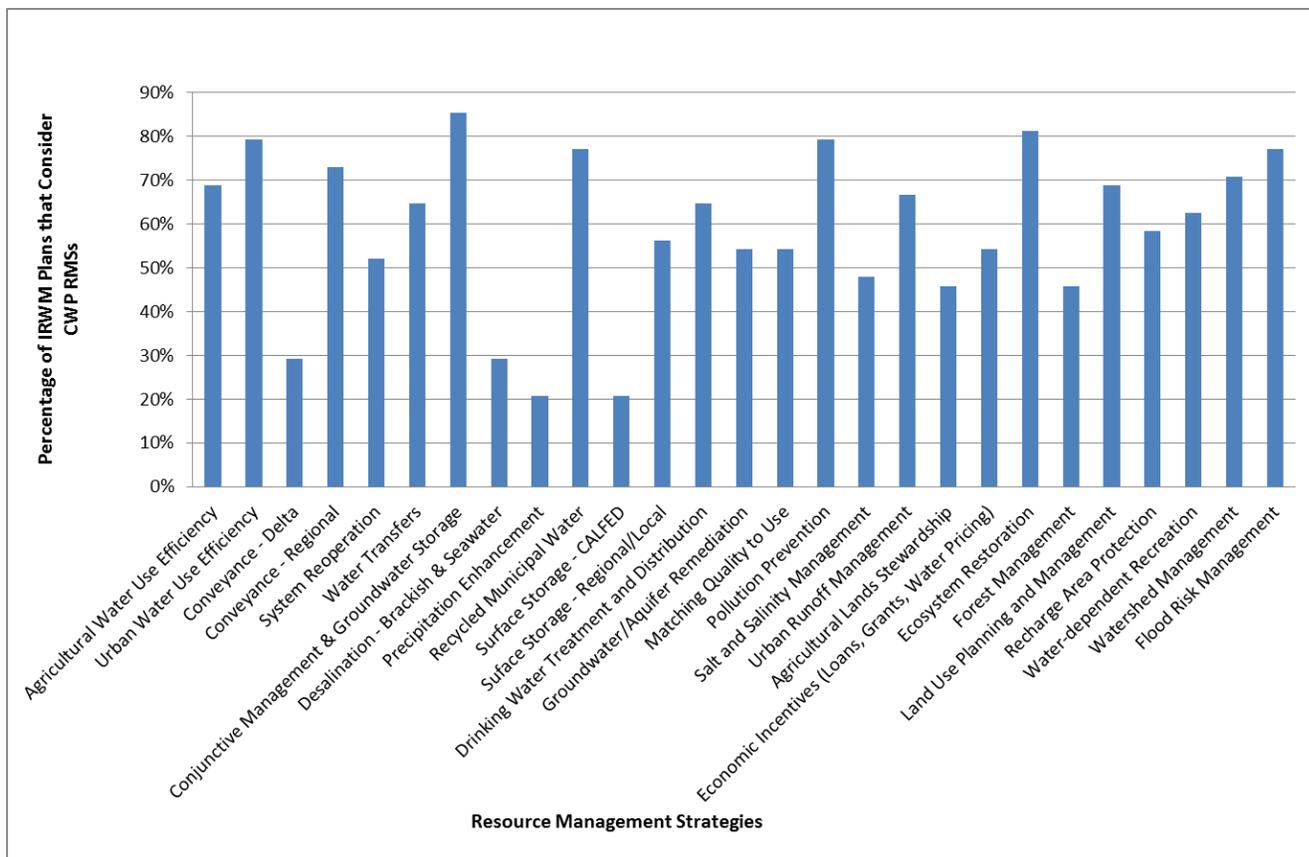
A cross-sectional analysis was conducted to determine what RMSs are considered in the 42 reviewed IRWM plans. The results of that analysis are presented in Table 6. The percentages of IRWM plans that include the various RMSs are illustrated in Figure 17.

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Table 6 – Consideration of California Water Plan Update 2009 Resource Management Strategies in IRWM Plans (as of May 31, 2014)

Region Name	Agricultural Water Use Efficiency	Urban Water Use Efficiency	Conveyance - Delta	Conveyance - Regional	System Reoperation	Water Transfers	Conjunctive Management & Groundwater Storage	Desalination - Brackish & Seawater	Precipitation Enhancement	Recycled Municipal Water	Surface Storage - CALFED	Surface Storage - Regional/Local	Drinking Water Treatment and Distribution	Groundwater/Aquifer Remediation	Matching Quality to Use	Pollution Prevention	Salt and Salinity Management	Urban Runoff Management	Agricultural Lands Stewardship	Economic Incentives (Loans, Grants, Water Pricing)	Ecosystem Restoration	Forest Management	Land Use Planning and Management	Recharge Area Protection	Water-dependent Recreation	Watershed Management	Flood Risk Management	
American River Basin	X	X		X	X	X	X			X			X	X	X	X	X	X	X	X	X		X	X	X	X	X	
Antelope Valley	X	X		X	X	X	X			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Anza Borrego Desert	X	X		X		X	X								X					X								
Coachella Valley	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cosumnes American Bear Yuba (CABY)	X	X	X	X	X	X	X			X		X	X			X		X	X	X	X	X	X	X	X	X	X	X
East Contra Costa County	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X
Eastern San Joaquin	X	X	X	X	X	X	X			X		X	X	X	X	X				X	X		X	X	X	X	X	X
Gateway Region		X		X	X	X	X	X		X		X	X							X	X		X	X	X	X	X	X
Greater Los Angeles County	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Greater Monterey County	X	X		X			X			X		X	X			X	X	X		X	X	X	X	X	X	X	X	X
Imperial		X		X			X	X		X				X						X								X
Inyo-Mono	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
Kern County	X	X			X	X	X			X			X		X	X		X			X		X				X	X
Madera	X	X					X			X		X		X									X				X	X
Merced	X	X		X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mojave		X	X				X								X					X			X	X				
Mokelumne/Amador/Calaveras (MAC)	X	X		X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Monterey Peninsula, Carmel Bay, and South Monterey Bay	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
North Coast	X	X								X			X			X					X		X				X	
Northern Sacramento Valley Group	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
Pajaro River Watershed	X	X	X				X			X						X		X			X		X					X
Poso Creek			X	X		X	X							X							X							X
San Diego	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
San Francisco Bay Area	X	X		X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
San Luis Obispo	X	X		X		X	X	X		X			X	X		X		X			X	X						X
Santa Ana Watershed Project Authority (SAWPA)	X	X		X	X	X	X	X		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Santa Barbara Countywide	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Santa Cruz County				X			X			X			X			X		X			X					X	X	X
South Orange County Watershed Management Area		X		X	X	X	X	X		X		X	X	X	X	X	X	X		X	X		X	X	X	X	X	X
Tahoe-Sierra		X		X			X						X			X					X	X	X				X	
Tuolumne - Stanislaus	X	X		X	X	X	X			X		X	X		X	X		X	X	X	X	X	X	X	X	X	X	X
Upper Feather River Watershed							X									X						X	X	X				X
Upper Kings Basin Water Forum (UKBWF)	X	X		X		X	X			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Upper Pit River Watershed	X	X		X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Upper Sacramento-McCloud	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Upper Santa Clara River	X	X		X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Upper Santa Margarita	X	X	X	X			X			X					X	X	X	X			X		X			X	X	X
Watersheds Coalition of Ventura County	X	X		X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Westside San Joaquin	X	X	X	X		X	X			X					X			X			X					X		X
Westside (Yolo, Solano, Napa, Lake, Colusa)	X	X	X	X	X	X	X			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Yuba County							X			X		X			X		X			X						X	X	X
East Stanislaus	X	X		X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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**Figure 17 – Percentage of IRWM Plans Considering Various CWP Update 2009 Resource Management Strategies (as of May 31, 2014)**

## Statewide Priorities and IRWM Plans

Priorities for the state’s IRWM grant program have been specified by the Legislature and have changed with time. DWR included these priorities in the Proposition 50 guidelines. DWR later modified the guidelines for Proposition 84 IRWM grants in response to subsequent legislation.

As of May 31, 2014, many IRWM plans existing at that time had been developed before Proposition 84 guidelines were issued in 2010. Since then, some have been updated. A review of the 42 adopted IRWM plans was performed to determine what priorities are addressed in the plans. The results of this review are presented in Table 7.

As can be noted from Table 7, the degree that statewide priorities are addressed by individual regions varies. This variation is due, in large part, to the differing water management needs and circumstances of individual IRWM regions.

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## IRWM Plans and Other Water-Related Management Plans

IRWM plans are a relatively recent development in California. Water management agencies, special districts, cities, and counties have been developing other water-related plans for decades in accordance with their mandates and responsibilities. These are listed in Table 8 below.

**Table 8 – Local and Regional Water-Related Management Plans**

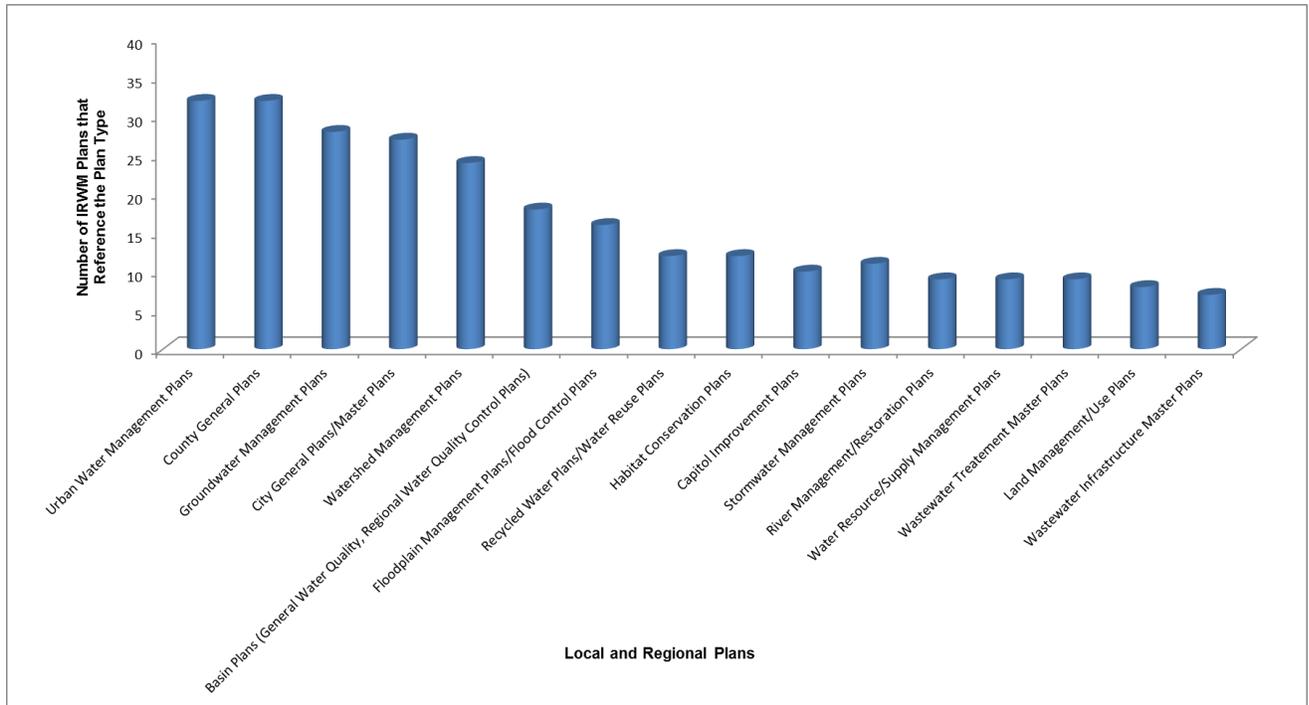
Plan Types
Agricultural Water Monitoring Plan
Regional Water Quality Control Board Basin Plan
Capital Improvement Plan (CIP)
City General Plans/Master Plan
County General Plan
Floodplain Management Plan/Flood Control Plan
Groundwater Management Plan
Habitat Conservation Plan
Multi-Species Conservation Plan
Municipal Water Master Plan
Recycled Water Plan/Water Reuse Plan
Regional Drinking Water Quality Plan
River Management/Restoration Plan
Salt and Nutrient Management Plan
Sewer System Master Plan
Stormwater Management Plan
Urban Water Management Plan
Wastewater Treatment Master Plan
Water Conservation/Efficiency Plan
Water Resource/Supply Management Plan
Water Reuse Plan
Water System/Supply Master Plan
Watershed Management Plan

IRWM grant program guidelines require that IRWM plans reference local water planning documents on which they are based. IRWM plans must include:

- A list of local water plans used in the IRWM plan,

- A discussion of how the IRWM plan relates to planning documents and programs established by local agencies, and
- A description of the dynamics between the IRWM plan and local planning documents.

Figure 18 illustrates the type and number of local and regional plans most commonly referenced in the 42 reviewed IRWM plans.



**Figure 18 - Frequency of the 14 Most Commonly Referenced Local and Regional Plans in IRWM Plans (as of May 31, 2014)**

A significant amount of overlap exists between various water management plans and IRWM plans in many areas of the state. As a result, there are consolidation and integration opportunities among different planning efforts and documents.

## Section 4 Appendices

- Appendix A – Overview of Major Regional Issues Identified in IRWM Plans (as of May 31, 2014)
- Appendix B – Regional Goals and Objectives Identified in IRWM Plans (as of May 31, 2014)
- Appendix C – Description of DAC and Tribal Involvement in IRWM Planning (as of May 31, 2014)

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Appendix A – Overview of Major Regional Issues Identified in IRWM Plans (as of May 31, 2014)

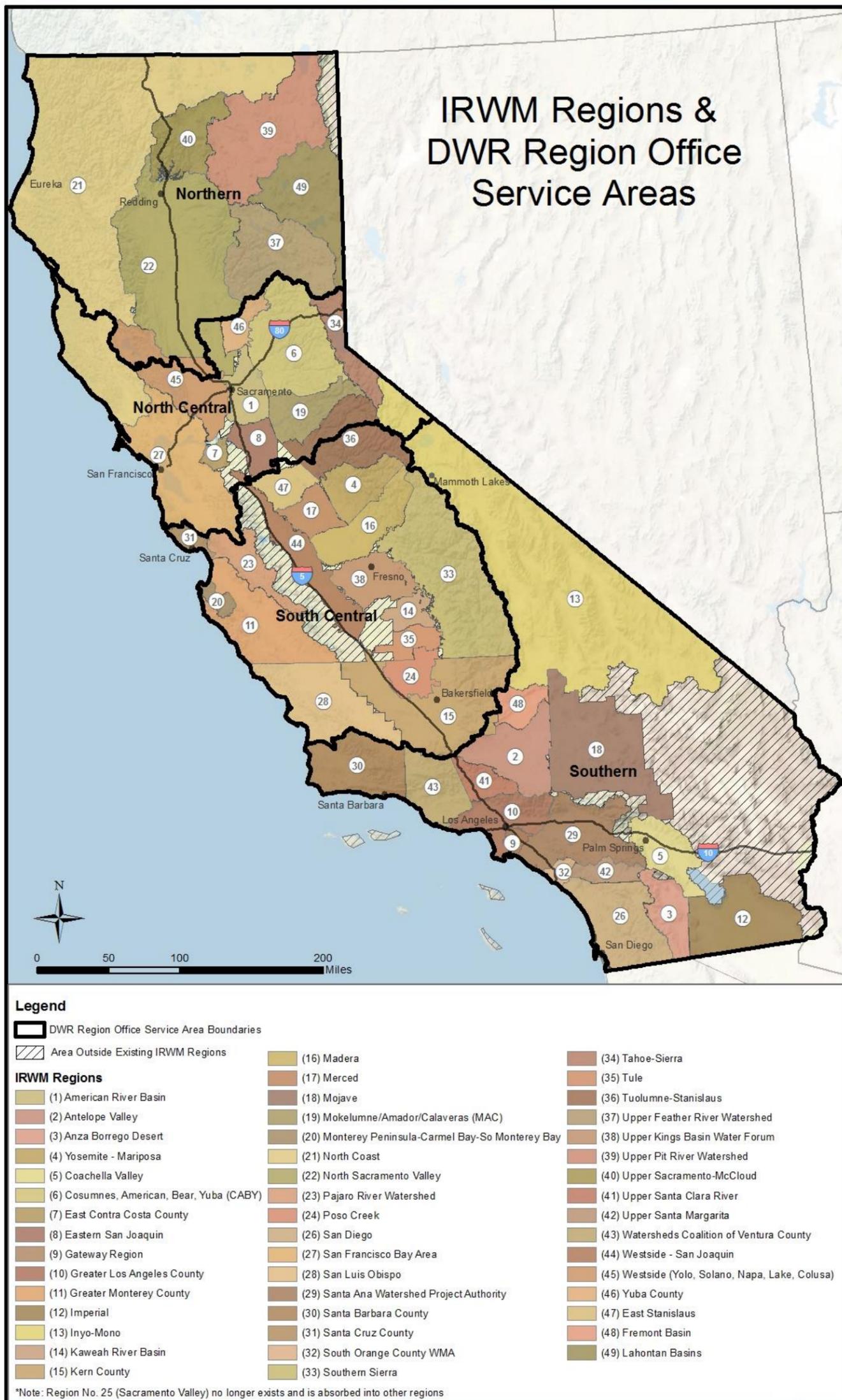


Figure A-1 – IRWM Regions and DWR Region Office Service Areas

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**Table A-1 – Overview of Major Regional Issues in DWR’s Northern Region Office Service Area (as of May 31, 2014)**

IRWM Region Name	Major Regional Issues (in no particular order)					
	1	2	3	4	5	6
North Coast	Riparian and wetland ecosystem function	Point and non-point source discharges	Groundwater and surface water interactions	Water quality and quantity		
North Sacramento Valley Group	Water supply reliability	Flood protection and planning	Water quality protection and enhancement	Watershed protection and enhancement	Sustainability of IRWM	Water-related public education
Upper Feather River Watershed	Water quantity (increase in rapid runoff, flooding in high water years, and dry tributaries in the summer due to decreased vegetative cover)	Water quality (impaired biotic habitat, reservoir storage, flood control capability, and power generation storage due to increased sediment yields)				
Upper Pit River Watershed	Water quality	Water quantity	Habitat and the environment, including Invasive species	Economics and communities	Forest and range health	Water education
Upper Sacramento-McCloud	Basin characterization	Cooperation and trust	Ecological health (including forest and land use)	Water management for disadvantaged communities and tribes	Water quality	Infrastructure (including water, wastewater, and flood management)
Lahontan Basins	<i>Plan Development In Process</i>					

**Table A-2 - Overview of Major Regional Issues in DWR's North Central Region Office Service Area (as of May 31, 2014)**

IRWM Region Name	Major Regional Issues (in no particular order)					
	1	2	3	4	5	6
American River Basin	Maintaining sustainable water resources for all uses under all hydrologic conditions	Maintaining reliable groundwater resources with the presence of several extensive contaminant plumes (groundwater)	Preserving and improving habitat in a highly urbanized environment	Protecting a large urban population in a flood-prone environment	Engaging the public at large as part of the solution to ensure sustainable water resources	
Cosumnes American Bear Yuba (CABY)	Water supply (aging infrastructure and supply reliability)	Water quality (legacy mining toxins and mine land runoff)	Environment and Habitat (fish passage and invasive species)	Climate change	Human-Landscape interaction	
East Contra Costa County	Water quality	Supply reliability	Protection, restoration, and enhancement of the Delta ecosystem and other environmental resources	Ecosystem funding	Stormwater and flood management	Outreach and equitable distribution of resources
Eastern San Joaquin	Water quality (surface and groundwater)	Groundwater overdraft	Water supply reliability	Subsidence and irrecoverable basin storage capacity	Flood protection	Competing urban, agricultural, and environmental water demands
Mokelumne/Amador/Calaveras (MAC)	Land use and water use conflicts	Environmental protection	Water quality conflicts	Supply management	Forest and fire management	Economic impacts
San Francisco Bay Area	Environmental stewardship and watershed management	Dependence on the Sacramento-San Joaquin Delta	Water supply and reliability	Flood protection	Climate change	
Tahoe-Sierra	Water quality	Aging infrastructure				
Westside (Yolo, Solano, Napa, Lake, Colusa)	Improve education and awareness	Improve habitat and ecosystem health	Provide safe and reliable water supplies	Sustain and Modernize Infrastructure	Foster reasonable use	Manage risks
Yuba County	Groundwater quality (valley floor)	Water supply reliability (foothills)	Water quality of surface water sources (foothills)	Adequate infrastructure to store and deliver water (foothills)	Flood protection along the Yuba and Feather Rivers	

**Table A-3 - Overview of Major Regional Issues in DWR's South Central Region Office Service Area (as of May 31, 2014)**

IRWM Region Name	Major Regional Issues (in no particular order)					
	1	2	3	4	5	6
Yosemite-Mariposa	<i>Plan Development In Process</i>					
Greater Monterey County	Water quality: drinking water quality impairment, seawater intrusion, runoff, etc.	Water supply: due to water quality, infrastructure, overdraft, etc.	Watershed management and flood management	Environmental	Climate change	Disadvantaged communities
Kaweah River Basin	<i>Plan Development In Process</i>					
Kern County	Water Supply: (1) the CVP and the SWP do not reliably deliver the expected amount of water supplies, which has caused severe economic impact in the agricultural communities, and to its DACs in particular; (2) Groundwater is overdrafted in many parts of the Region; (3) Urban growth and water demand	Infrastructure: aging and/or duplicative infrastructure	Water quality: The greatest long-term problem facing the entire Tulare Lake Basin is the increase of salinity in groundwater. The major source of salt is imported water supplies. Local impairments include TDS, sodium chloride, sulfate, nitrate, organic compounds, and arsenic.	Environmental stewardship: urban growth encroachment on key recharge areas	Flood management: lack of coordination throughout the region, poor water quality of runoff, nuisance water and dry weather runoff, and difficulty providing flood control without interfering with groundwater recharge	
Madera	Groundwater overdraft	Stormwater flooding	Water supply: not enough water for the new development proposals received by the county			
Merced	Groundwater basin health	Disadvantaged communities: nearly the entire region is classified as a DAC	Inadequate flood control	Impacts to sensitive ecosystems	Water quality: impacts to surface water and groundwater, including potential impacts from inadequate wastewater collection and treatment	Disconnect between land use management and water management
Monterey Peninsula, Carmel Bay, and South Monterey Bay	Meet current replacement supply and future demand targets for water supply and support the Seaside Groundwater Basin Watermaster to implement the physical solution in the basin	Reduce the potential for flooding in the Carmel Valley and at the Carmel River Lagoon	Mitigate effects of storm water runoff throughout the planning region	Address storm water discharges into Areas of Special Biological Significance	Promote the steelhead run	

**Table A-3 - Overview of Major Regional Issues in DWR's South Central Region Office Service Area (as of May 31, 2014)**

IRWM Region Name	Major Regional Issues (in no particular order)					
	1	2	3	4	5	6
Pajaro River Watershed	Meeting 100% of municipal & industrial (M&I) and agriculture demands (both current and future conditions) in wet to dry years including the first year of a drought	Meeting 85% M&I and 75% agriculture demands (both current and future conditions) in second and subsequent years of a drought	Providing a variety of water supply sources to meet demand	Optimizing and sustaining use of existing import surface water entitlements from the San Felipe Division	Optimizing the use of groundwater and aquifer storage	
Poso Creek	Water supply	Water reliability	Water cost and water quality			
San Luis Obispo	Water supply	Water quality protection and improvement	Ecosystem preservation and restoration	Groundwater monitoring and management	Flood management	
Santa Cruz County	Each of the three major groundwater basins in the region is in overdraft, one is experiencing, and another is in danger of, seawater intrusion.	Surface water supplies in the North Coast and San Lorenzo Sub-basins are insufficient during droughts and late in the water year, often to a huge extent.	Rural road drainage, erosion and sedimentation	Discharge of pathogens, nitrates and other contaminants into storm drains	As demands grow over the next 20-30 years, water shortages for the City of Santa Cruz system are projected to become the norm, even under so-called 'average' hydrologic conditions.	Stream base flows have declined as a result of surface diversion and diminished groundwater levels.
Southern Sierra	<i>Plan Development In Process</i>					
Tule	<i>Plan Development In Process</i>					
Tuolumne-Stanislaus	Efficient use and distribution of water	Reliable and affordable water supply	Water quality	Resource stewardship and ecosystem needs	Stormwater	Climate change
Upper Kings Basin Water Forum	Groundwater overdraft	Water supply reliability	Degradation of water quality	Sustaining the agricultural economy		
Westside San Joaquin	Expanding water supply and improving reliability	Managing groundwater	Improving water quality	Enhancing habitat		
East Stanislaus	Water supply reliability	Water quality, including drinking water	Groundwater management	Water-related needs for disadvantaged communities	Protection and enhancement of aquatic, riparian, and watershed resources	Flood protection

**Table A-4 - Overview of Major Regional Issues in DWR's Southern Region Office Service Area (as of May 31, 2014)**

IRWM Region Name	Major Regional Issues (in no particular order)					
	1	2	3	4	5	6
Antelope Valley	Water supply variability and uncertainty	Water quality	Flood management	Environmental resources	Land use	Climate change
Anza Borrego Desert	Groundwater overdraft	source water reliability	Institutional difficulty	Regulatory constraints	Costs/affordability	
Coachella Valley	Water supply: increasing demand and a largely imported supply	Water quality: salinity, heavy metals, nutrients, and new chromium-6 requirements	Flood management	Natural resources: habitat conservation, Salton Sea considerations	Groundwater quality, overdraft, and land subsidence effects	Social Issue Groups: Disadvantaged communities and tribal communities
Gateway Region	Water quality	Aging infrastructure	Urbanization	Floods		
Greater Los Angeles County	Reliance on imported water	Water quality, specifically as it relates to urban runoff, stormwater, and wastewater	Protection, restoration, and enhancement of natural processes and habitat	Availability of watershed friendly recreational space	Flood risk management	Climate change adaptation and mitigation
Imperial	Regional water supply (primarily related to availability of imported water from the Colorado River): need storage, aging infrastructure, cap on imported water, need a reliable water supply to support economic development.	Wastewater treatment plant and related infrastructure: aging infrastructure, discharge water quality, recycling not affordable and other funding issues.	Drinking water treatment: aging infrastructure, meeting 7-day water storage standards, catastrophic supply interruptions and safe drinking water compliance in rural areas.	Flood control and stormwater management: inadequate facilities, lack of master planning, requirements for on-site stormwater retention limits, and MCI development potential.	Other: environmental justice, DACs' limited technical, management, and fiscal resources constrain the ability to participate in the IRWM process and state or federal grant programs, reluctance to increase rates and fees, changing and evolving regulatory requirements, expectations on how much water can be realistically conserved, disconnect between land use planning and water supply.	
Inyo-Mono	Water quality: naturally occurring arsenic and uranium are present in drinking water supplies in concentrations often above MCLs	Water infrastructure: inadequate water infrastructure results in substantial water loss and inadequate fire-fighting capabilities.	Institutional/human capacity: Many communities lack the expertise necessary to plan, implement and maintain projects, and lack the financial resources to hire outside contractors.			
Mojave	Current demand exceeds supply; future demand will also exceed supply unless corrective actions are taken.	Naturally occurring water quality problems affect drinking water supplies.	Many of the groundwater basins are in overdraft.	All but two of the subareas have riparian ecosystem maintenance issues.	Wastewater infrastructure issues affect the two subareas with the largest water demands.	Many subareas within the region are impacted by activities in other subareas.

**Table A-4 - Overview of Major Regional Issues in DWR's Southern Region Office Service Area (as of May 31, 2014)**

IRWM Region Name	Major Regional Issues (in no particular order)					
	1	2	3	4	5	6
San Diego	Regulatory constraints or disconnects	Jurisdictional issues and water rights	Barriers to participation in IRWM process for various stakeholders	Water quality to beneficial use	Environmental challenges	Affordability and funding
Santa Ana Watershed Project Authority	Climate change	Colorado River drought conditions	San Joaquin Delta vulnerability	Population growth and development		
Santa Barbara Countywide	Water supply reliability	Water quality	Habitat protection	Emergency preparedness		
South Orange County Watershed Management Area	Water supply and reliability	Seasonal storage	Water quality	Water recycling and conservation	Watershed management and environmental protection	Climate change
Upper Santa Clara River	Water demand	Water supply	Water quality	Resource stewardship	Flood management	Climate change adaptation and mitigation
Upper Santa Margarita	Water supply and reliance on imported water	Water quality	Protecting the natural environment and habitats	Public health and safety from flooding	Climate change	Water resources funding
Watersheds Coalition of Ventura County	Water supply reliability	Water quality	Groundwater management	Flood management	Protect and restore habitat and ecosystems	Climate change
Fremont Basin	<i>Plan Development In Process</i>					

## **Appendix B – Regional Goals and Objectives Identified in IRWM Plans (as of May 31, 2014)**

The goals and objectives identified in the 42 IRWM plans reviewed as of May 31, 2014 are presented in this section. Due to the variation in how goals and objectives are classified in individual IRWM plans, some goals and objectives, as presented in individual IRWM plans, have been reclassified in the following tables for discussion purposes. These goals and objectives are provided in the tables below without any editorial revision.

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Regional Goals and Objectives

American River Basin Region: 1			
Goal #	Goal	Objective #	Objective
1	Provide reliable and sustainable water resources, sufficient to meet the existing and future needs of the Region.	1	Meet current and future water resources needs.
		2	Increased water use efficiency.
		3	Improve ability to reliably meet water demands during dry or emergency conditions.
		4	Increase the use of recycled water for appropriate uses.
2	Protect and enhance the quality of surface water and groundwater.	5	Remediate contaminated groundwater and reuse it to the extent feasible.
		6	Improve protection of beneficial uses of surface water and groundwater.
		7	Recharge and reuse stormwater and urban runoff to the extent practicable.
3	Protect and enhance the environmental resources of the watersheds within the Region.	8	Maintain and improve the ecosystem function of area streams and watersheds.
		9	Maintain and improve habitat of area watersheds.
		10	Conserve natural riparian buffers in undeveloped portions of local watersheds and restore buffers in developed areas when possible.
4	Protect the people, property, and environmental resources of the Region from damaging flooding.	11	Increase the capacity of the flood management system to meet applicable standards for designated areas and land uses.
		12	Maintain and improve levees and other flood related infrastructure to reduce flood risk.
		13	Maintain and restore/reconnect floodplains to provide flood storage and other benefits.
		14	Improve management of residual flood risks.
5	Promote community stewardship of our Region's water resources.	15	Increase awareness of the need for, benefits of, and practices for maintaining sustainable water resources.
		16	Improve integration of water resources planning with land-use planning.
		17	Increase sharing of information, studies, and reports to further advance integrated regional water management.

Regional Goals and Objectives

Antelope Valley Region: 2			
Goal #	Goal	Objective #	Objective
1	Water supply management	1	Provide reliable water supply to meet the Antelope Valley Region's expected demand between now and 2035; and adapt to climate change.
		2	Establish a contingency plan to meet water supply needs of the Antelope Valley Region during a plausible disruption of SWP deliveries.
		3	Stabilize groundwater levels.
2	Water quality management	4	Provide drinking water that meets regulatory requirements and customer expectations.
		5	Protect and maintain aquifers.
		6	Protect natural streams and recharge areas from contamination.
		7	Maximize beneficial use of recycled water.
3	Flood management	8	Reduce negative impacts of stormwater, urban runoff, and nuisance water.
4	Environmental resource management	9	Optimize the balance between protecting existing beneficial uses of stormwater and capturing stormwater for new uses.
5	Land use planning/management	10	Preserve open space and natural habitats that protect and enhance water resources and species in the Antelope Valley Region.
		11	Maintain agricultural land use within the Antelope Valley Region.
		12	Meet growing demand for recreational space.
		13	Improve integrated land use planning to support water management.
		14	Mitigate against climate change

Regional Goals and Objectives

Anza Borrego Desert Region: 3			
Goal #	Goal	Objective #	Objective
1	Develop programs that assist in stabilizing the over-draft of the aquifer at the current level and work to assure a permanent long-term supply of high quality water to the valley.	1	Adopt programs and approaches to groundwater management that will incrementally reduce the annual decline in water levels of monitored wells.
2	Seek programs to provide a long-term supply of water for the valley that will not adversely impact the water resources of adjacent land in the state park.	2	Evaluate all programs adopted for groundwater management to assess their impact on the long-term water resources of the adjacent land in the state park.
3	Continue to expand the District's knowledge of the water resources of the aquifer and its water resources.	3	Implement programs to improve the measurement of all water uses in the valley.
		4	Develop additional programs to measure the water resources of the aquifer.
4	Develop and implement conservation programs for all classifications of water users in the valley-urban, recreational and agricultural.	5	Establish standards for reduction of water use for all categories of land use and develop programs to meet those standards.
5	Work with state and county agencies to try to minimize any adverse impact that new land uses will have on groundwater resources and groundwater quality.	6	Maintain water quality throughout the valley at the current standard.
		7	Assure that the appropriate agencies, particularly the BWD, evaluate any new land use in terms of its projected impact upon the valley's groundwater resources.
6	Develop the ability within the agency to obtain funding for acquisition of agricultural land.	8	Work with public and private entities to acquire agricultural land from willing sellers.
7	Evaluate the feasibility of acquiring land in adjacent basins and exploring for water to be transported to the Borrego Valley.	9	Determine the maximum amount of water that can be obtained from adjacent basins and evaluate programs to acquire land and construct the necessary facilities to make maximum use of these resources.

## Regional Goals and Objectives

Coachella Valley Region: 5			
Goal #	Goal	Objective #	Objective
1	Optimize water supply reliability.	1	Provide reliable water supply for residential and commercial, agricultural community, and tourism needs.
		2	Manage groundwater levels to reduce overdraft, manage perched water, and minimize subsidence.
		3	Secure reliable imported water supply, including restoring/improving reliability of State Water Project supply and securing other imported water supplies.
		4	Maximize local supply opportunities, including water conservation, water recycling and source substitution, and capture and infiltration of runoff.
2	Protect or improve water quality.	5	Protect groundwater quality and improve, where feasible.
		6	Preserve and improve surface water quality by maintaining integrity of agricultural drainage systems, protecting the quality of natural runoff used for potable supply, and reducing pollution in stormwater runoff.
3	Provide stewardship of our water-related natural resources.	7	Preserve local environment and restore, where feasible.
		8	Manage flood risks, including current acute needs and needs for future development.
4	Coordinate and integrate water resource management.	9	Optimize conjunctive use of available water resources.
		10	Maximize stakeholder involvement and stewardship in water resource management.
5	Ensure cultural, social, and economic sustainability of water in the Valley.	11	Address water-related needs of local Native American culture.
		12	Address water and sanitation needs of disadvantaged communities, including those in remote areas.
		13	Maintain affordability of water.

Regional Goals and Objectives

Cosumnes, American, Bear, Yuba (CABY) Region:6			
Goal #	Goal	Objective #	Objective
1	Ensure adequate and reliable supply that can be adapted to climate change and can meet the needs of the region	1	Implement urban water conservation plans
		2	Upgrade aging infrastructure
		3	Complete major strategic interties between regional water agencies
		4	Assess the need and economic and environmental feasibility of new storage facilities
		5	Adopt local drought and regional drought and emergency management preparedness plans
		6	Development of additional recycled water infrastructure
		7	Convene CABY meetings discussing water transfers in and out of the region
		8	Prepare summary of requirements for approving development relying exclusively on groundwater
		9	Catalogue major subdivision permit denials due to possibility of unavoidable impacts due to reliance on groundwater
2	Ensure sufficient water quality to support healthy ecosystems and dependent organisms	10	Remediate abandoned mining sites
		11	Remove legacy mining contaminants from region
		12	Increase the number of water bodies that can achieve water quality objectives
		13	Restore the natural sediment transport regime
		14	Assess the level of preparedness and prevention measures in place for wastewater spills
		15	Identify watersheds critical to major in-region urban areas' water supply
		16	Maintain watershed resilience
		17	Evaluate feasibility of a watershed and water quality 'credit trading program'
3	Preserve and restore watershed health	18	Improve habitat for aquatic biota
		19	Increase access to suitable spawning habitat for anadromous fish
		20	Improve aquatic and riparian habitat
		21	Quantify and/or secure habitat on rivers or tributaries with barrier-free ocean access
		22	Enhance wet meadow-complex function
		23	Increase fuel load management
4	Anticipate climate change needs and be prepared to respond adaptively to human and ecosystem needs	24	Implement an Aquatic Invasive Species (AIS) Program
		25	Implement coordinated non-native invasive plant education, prevention, and control actions
		26	Implement climate change adaptive management strategies
5	Maintain and enhance functioning landscapes that provide sustainable services for humans	27	Increase alternative energy and energy efficiency
		28	Provide conservation stewardship for core and connected habitat
		29	Increase involvement of Tribal entities in CABY activities
		30	Implement flood risk reduction projects
		31	Provide for permanent protection of open space
		32	Support DAC project development activities
		33	Increase recreational opportunities
		34	Increase alternative energy generation
		35	Advocate for regulations that support continued agricultural operations viability
		36	Permanently protect agricultural lands
		37	Create a Sustainability Revolving Fund
		38	Continue to expand CABY's presence in the region
		39	Enhance legislators' understanding of the Sierra Region
		40	Monitor regulatory processes with the potential to affect water resources in the region
		41	Identify persistent conflicting regulations that hinder implementation of the CABY IRWMP
		42	Integrate education into all CABY projects and programs
		43	Maintain the Data Management System
44	Coordination of planning activities across the region		

Regional Goals and Objectives

East Contra Costa County Region: 7			
Goal #	Goal	Objective #	Objective
1	Water Quality and Related Regulations	1	Protect/improve source water quality
		2	Maintain/improve regional treated drinking water quality
		3	Maintain/improve regional recycled water quality
		4	Increase understanding of groundwater quality and potential threats to groundwater quality
		5	Meet current and future water quality requirements for discharges to the Delta
		6	Limit quantity and improve quality of stormwater discharges to the Delta
2	Stormwater and Flood Management	7	Manage local stormwater
		8	Improve regional flood risk management
3	Water Supply Reliability	9	Pursue water supplies that are less subject to Delta influences and drought, such as recycled water and desalination
		10	Increase water conservation and water use efficiency
		11	Increase water transfers
		12	Pursue regional exchanges for emergencies, ideally using existing infrastructure
4	Protection, Restoration and Enhancement of the Delta Ecosystem and Other Environmental Resources	13	Enhance understanding of how groundwater fits into the water portfolio and investigate groundwater as a regional source (e.g., conjunctive use)
		14	Protect, restore and enhance habitat in the Delta and connected waterways
		15	Protect, restore and enhance the watersheds that feed and contribute to the Delta Ecosystem
		16	Minimize impacts to the Delta ecosystem and other environmental resources
		17	Reduce greenhouse gas emission
		18	Protect Delta ecosystem against habitat disruption due to emergencies, such as levee failure
		19	Increase shoreline access for subsistence fishing and recreation
5	Funding for Water-Related Planning and Implementation	20	Increase regional cost efficiencies in treatment and delivery of water, wastewater, and recycled water
		21	Develop projects with regional benefits that are implementable and competitive for grant funding
		22	Use financial resources strategically to maximize return on investment on grant applications for project development/implementation
		23	Develop a funding pool to self-fund regional efforts such as grant applications, outreach, Web site development, and other planning activities
		24	Increase public awareness of project importance to pass ballot measures or obtain matching funds through other means that require public support
		25	Ensure projects with existing matching funds are prioritized to maximize regional funding opportunities
6	Outreach	26	Identify and engage DACs
		27	Collaborate with and involve DACs in the IRWM process
		28	Promote equitable distribution of proposed projects across the region
		29	Increase awareness of water resource management issues and projects with the general public

Regional Goals and Objectives

Eastern San Joaquin Region: 8			
Goal #	Goal	Objective #	Objective
		1	Ensure the long-term sustainability of water resources in the San Joaquin Region
		2	Equitably distributing benefits and costs
		3	Minimizing adverse impacts to agriculture, communities, and the environment
		4	Maximizing efficiency and beneficial use of supplies
		5	Protecting and enhancing water rights and supplies

Regional Goals and Objectives

Gateway Region Region: 9			
Goal #	Goal	Objective #	Objective
1	Identify and address the water dependent natural resources needs of the Gateway Region Watersheds.		
2	Protect and enhance water quality.	1	Attain required TMDL levels in accordance with their individual schedules.
		2	Effectively reduce major sources of pollutants and environmental stressors in the region.
3	Optimize and ensure water supply reliability.	3	Continue and enhance water use efficiency measures to meet 20x2020 per capita water use targets.
		4	Expand regional water recycling facilities and recycled water distribution to help provide reliable water sources.
		5	Systematically upgrade aging water infrastructure in the region.
4	Coordinate and integrate water resource management.		
5	Provide stewardship of the region's water dependent natural resources through enhancement of amenities and infrastructure.	6	Create habitat, open space, and water-based recreational opportunities in the region.
6	Manage flood and storm water to reduce flood risk and water quality impacts.	7	Install or optimize water monitoring to effectively manage storm water in the region. Obtain, manage, and assess water resources data and information.

Regional Goals and Objectives

Greater Los Angeles County Region: 10			
Goal #	Goal	Objective #	Objective
1	Improve Water Supply	1	Optimize local water resources to reduce the Region's reliance on imported water.
2	Improve Surface Water Quality	2	Comply with water quality regulations (including TMDLs) by improving the quality of urban runoff, stormwater and wastewater.
3	Enhance Habitat	3	Protect, restore, and enhance natural processes and habitats.
4	Enhance Open Space and Recreation	4	Increase watershed friendly recreational space for all communities.
5	Reduce Flood Risk	5	Reduce flood risk in flood prone areas by either increasing protection or decreasing needs using integrated flood management approaches.
6	Address Climate Change	6	Adapt to and mitigate against climate change vulnerabilities.

Regional Goals and Objectives

Greater Monterey County Region: 11			
Goal #	Goal	Objective #	Objective
1	Water supply	1	Increase groundwater recharge and protect groundwater recharge areas.
		2	Optimize the use of groundwater storage with infrastructure enhancements and improved operational techniques.
		3	Increase and optimize water storage and conveyance capacity through construction, repair, replacement, and augmentation of infrastructure.
		4	Diversify water supply sources, including but not limited to the use of recycled water.
		5	Maximize water conservation programs.
		6	Capture and manage stormwater runoff.
		7	Optimize conjunctive use where appropriate.
		8	Support research and monitoring to better understand identified water supply needs.
		9	Support the creation of water supply certainties for local production of agricultural products.
		10	Promote public education about water supply issues and needs.
		11	Promote planning efforts to provide emergency drinking water to communities in the region in the event of a disaster.
2	Water quality	12	Promote practices necessary to meet, or where practicable, exceed all applicable water quality regulatory standards (for drinking water, surface and groundwater quality).
		13	Promote projects to prevent seawater intrusion
		14	Incorporate or promote principles of low impact development where feasible, appropriate, and cost effective.
		15	Protect surface waters and groundwater basins from contamination and the threat of contamination.
		16	Support research and pilot projects for the co-management of food safety and water quality protection.
		17	Improve septic systems, sewer system infrastructure, wastewater treatment systems, and manure management programs to prevent water quality contamination.
		18	Support research and other efforts on salinity management.
		19	Support monitoring to better understand major sources of erosion, and implement a comprehensive erosion control program.
		20	Promote programs and projects to reduce the quantity and improve the quality of urban and agricultural runoff and/or mitigate their effects in surface waters, groundwater, and the marine environment.
		21	Promote regional monitoring and analysis to better understand water quality conditions.
		22	Support research and utilization of emerging technologies (enzymes, etc) to develop effective water pollution prevention and mitigation measures, and source tracking.
		23	Promote public education about water quality issues and needs.
3	Flood protection & floodplain management	24	Promote projects and practices to protect infrastructure and operational techniques/strategies.
		25	Implement flood management projects that provide multiple benefits such as public safety, habitat protection, recreation, agriculture, and economic development.
		26	Develop and implement projects to protect, restore, and enhance the natural ecological and hydrological functions of rivers, creeks, streams, and their floodplains.
		27	Support research and monitoring efforts to understand the effects of flooding on transport and persistence of pathogens in food crop production areas.
		28	Support management of flood waters so that they do not contaminate fresh produce in the field.
		29	Promote public education about local flood management issues and needs.
4	Environment	30	Support science-based projects to protect, improve, enhance, and/or restore the region's ecological resources, while providing opportunities for public access and recreation where appropriate.
		31	Protect and enhance state and federally listed species and their habitats.
		32	Minimize adverse environmental impacts of water resource management projects.
		33	Support applied research and monitoring to better understand environmental conditions, environmental water needs, and the impacts of water-related projects on environmental resources.
		34	Implement fish-friendly stream and river corridor restoration projects.
		35	Reduce adverse impacts of sedimentation into streams, particularly from roads and non-point sources.
		36	Promote efforts to prevent, control, reduce, and/or eradicate high priority invasive species.
		37	Promote native drought-tolerant plantings in municipal and residential landscaping.
		38	Consider opportunities to purchase fee title or conservation easements on lands from willing sellers that provide integrated water resource management benefits. Ensure adequate funding and infrastructure to manage properties and/or monitor easements.
		39	Support research and monitoring efforts to understand the effects of wildfire events on water resources.

Regional Goals and Objectives

Greater Monterey County (Continued)			
Region: 11			
Goal #	Goal	Objective #	Objective
5	Regional communication and cooperation	40	Facilitate dialogue and reduce inconsistencies in water management strategies/regulations between local, regional, state, and federal entities.
		41	Promote dialogue between federal and state regulators and small water system managers to facilitate water quality regulation compliance.
		42	Foster collaboration between regional entities to minimize and resolve potential conflicts and to obtain support for responsible water supply solutions and improved water quality.
		43	Build relationships with federal, state, and local regulatory agencies and other water agencies to facilitate the permitting, planning, and implementation of water-related projects.
		44	Increase stakeholder input and public education about the need, complexity, and cost of strategies, programs, plans, and projects to improve water supply, water quality, flood management, coastal conservation, and environmental protection.
6	Disadvantaged communities	45	Seek funding opportunities to ensure all communities have a water system with adequate, safe, high-quality drinking water.
		46	Seek funding opportunities to ensure all communities have adequate wastewater treatment.
		47	Ensure that DACs are adequately protected from flooding and the impacts of poor surface and groundwater quality.
		48	Provide support for the participation of DACs in the development, implementation, monitoring, and long-term maintenance of water resource management projects.
		49	Promote public education in DACs about water resource protection, pollution prevention, conservation, water quality, and watershed health.
7	Climate change	50	Plan for potential impacts of future climate change.
		51	Support increased monitoring and research to obtain greater understanding of long-term impacts of climate change in the Greater Monterey County region.
		52	Support efforts to research alternative energy and to diversify energy sources appropriate for the region.
		53	Seek long-term solutions to reduce greenhouse gas (GHG) producing energy use.
		54	Seek long-term solutions to maintain and protect existing pristine natural resources from the impacts of climate change.
		55	Support research and/or implementation of land-based efforts such as carbon-sequestration on working lands and wildlands in the Greater Monterey County region.
		56	Promote public education about impacts of climate change, particularly as it relates to water resource management in the Greater Monterey County region.

Regional Goals and Objectives

Imperial Region: 12			
Goal #	Goal	Objective #	Objective
1	Water Supply: diversify the regional water supply portfolio to ensure a long-term, verifiable, reliable, and sustainable supply to meet current and future agricultural, municipal, commercial, industrial, and environmental demands.	1	Meet 100 percent of future demands without adverse impact to existing users that are not mitigated.
		2	Implement projects or programs that will provide a firm, verifiable, and sustainable supply of 50 to 100 thousand acre-feet per year (KAFY) for municipal, commercial, or industrial demands by 2025.
		3	Ensure equitable and appropriate cost sharing among water users who would receive benefits from any proposed water management project.
		4	Protect surface water rights.
		5	Optimize and sustain use of Colorado River entitlements through development of groundwater banking and storage projects.
		6	Implement water conservation measures that demonstrate reasonable beneficial use of the available supplies and are consistent with established industry standards,19 and state and federal requirements.
		7	Integrate resources management strategies that diversify the regional water supply portfolio through projects such as desalination of brackish groundwater or drain water, reclaimed wastewater, and stormwater reuse; or through coordinated land use and water management policies.
		8	Promote economic development that is consistent with existing agreements on use and management of the Colorado River water supply and is consistent with County and City general plans and other local ordinances and regulations.
		9	Protect correlative groundwater rights and currently designated sole source aquifers from further overdraft, and optimize the use of other groundwater where feasible.
2	Water Quality: protect water quality for beneficial uses consistent with regional community interests and the Colorado River Regional Water Quality Control Board (RWQCB) Basin Plan through cooperation with stakeholders and local and state agencies.	10	Maintain or improve the quality of incoming Colorado River water.
		11	Support communities in meeting wastewater disposal and permit requirements.
		12	Support communities in meeting drinking water standards.
		13	Comply with Total Maximum Daily Loads (TMDLs) established by the Colorado River RWQCB (Region 7) for the Imperial Region, and implement established Best Management Practices or other measures to minimize water quality impacts from stormwater.
		14	Preserve and, where and when technology allows, improve the quality of groundwater resources in the Imperial Region.
3	Environmental Protection and Enhancement: protect and enhance aquatic ecosystems and wildlife habitat consistent with municipal, commercial, industrial, and agricultural land uses.	15	Recognize and mitigate impacts to IID drains, small natural floodways, and the New and Alamo rivers that occur from reduced flows as a result of development or reclaimed water use.
		16	Investigate and develop a regional mitigation banking program to provide cost-effective environmental mitigation for proposed projects that reduce IID drain flow or have other adverse impacts.
		17	Identify opportunities for open spaces, trails, parks, and other recreational projects in the Imperial Region that can be incorporated with water supply, water quality, or flood protection projects that are consistent with public use and property rights.
4	Flood Protection and Stormwater Management: protect life and property from flooding and develop regional and local flood protection and stormwater management strategies.	18	Assess regional flood control and local stormwater management needs through a collaborative effort to develop policies and cost-effective physical solutions.
		19	Document and define technical and policy approaches for flood and stormwater management that can be integrated with other water management actions to meet multiple objectives and provide multiple benefits.
		20	Evaluate and define local and regional projects that prevent or minimize flooding and damage to public and private facilities and property.
5	Develop Regional Policies: develop regional policies, in accordance with and respecting the individual agencies' jurisdiction and authorities, by engaging the water and land use agencies and other interested parties in a cooperative, regional approach.	21	Streamline the permitting process and integrate land use and water supply planning requirements where appropriate.
		22	Define cost-effective projects and equitable cost-sharing agreements with those entities that would receive benefits from proposed water management projects of all types.
		23	Develop consistent policies across all water and land use agencies: Imperial County, Cities, IID, and federal land.
		24	Projects relying on and overlying the Ocotillo-Coyote Wells Groundwater Basin that was designated a sole source aquifer by the U.S. Environmental Protection Agency in 1996 shall be based on safe yield considerations and resource constraints to protect correlative rights of overlying users.
		25	Recognize and mitigate impacts of proposed projects on disadvantaged communities to ensure environmental justice.

Regional Goals and Objectives

Inyo-Mono Region: 13			
Goal #	Goals	Objective #	Objective
		1	Protect, conserve, optimize, and/or augment water supply
		2	Protect, restore, and/or enhance water quality
		3	Provide stewardship of our natural resources
		4	Maintain and/or enhance water, wastewater, and power generation infrastructure efficiency and reliability
		5	Address climate variability and/or reduce greenhouse gas emissions
		6	Increase participation of small and disadvantaged communities in the IRWM process
		7	Promote sustainable stormwater and floodplain management that enhances flood protection
		8	Promote sound groundwater monitoring, management and mitigation in cooperation with all affected parties

Regional Goals and Objectives

Kern County Region: 15			
Goals #	Goal	Objective #	Objective
1	Increase water supply	1	Through cooperation and collaboration with other regions, restore water supplies to levels that will mitigate for water lost from the region and eliminate overdraft.
		2	Pursue and implement cost effective water use efficiency programs.
		3	Increase water storage capacity in the region by increasing recharge acreage and expanding groundwater banking programs before all prime recharge land has been developed.
		4	Integrate management of water banking facilities to maximize conjunctive use over the planning horizon.
		5	Increase/augment water supplies to meet region demands (e.g., M&I, agricultural, environmental) by 2050.
2	Improve operational efficiency	6	Increase transfers and exchanges flexibility over the planning horizon.
		7	Create tools to re-regulate water supplies within the region, including storage, storm flows, and operational flows over the planning horizon.
		8	Increase distribution efficiencies and reduce energy usage over the planning horizon.
		9	Increase the use of alternate energy sources (e.g., solar).
		10	Replace aging infrastructure to reduce system water losses, improve operational efficiencies, and reduce service interruptions.
		11	Increase the use of recycled water for direct reuse within the Kern Region.
		12	Optimize local management of water resources to improve water supply reliability over the planning horizon.
		13	Increase the pool of qualified candidates to operate water and wastewater systems.
3	Improve water quality	14	Monitor and/or manage headwaters/areas of origin, natural streams, and recharge areas to prevent or mitigate contamination.
		15	Identify and preserve prime recharge areas in the Kern fan area and other areas.
		16	Improve water quality for DACs and the watershed over the planning horizon.
		17	Continue to provide drinking water that meets or exceeds water quality standards; and support efforts to attain appropriate standards throughout the planning horizon.
		18	Maximize the use of lesser quality water for appropriate uses (landscaping, certain ag crops, "aesthetic" projects) throughout the planning horizon.
4	Promote land use planning and resource stewardship	19	Coordinate and enhance aquatic pest control efforts from this point forward.
		20	Promote stewardship of the Kern River by applying appropriate measures in various reaches of the river from this point forward.
		21	Encourage the removal of non-native invasive plant species that affect water quality, reliability, and operations.
		22	Identify and promote the regeneration and restoration of native riparian habitat.
		23	Coordinate agricultural and urban water suppliers to more effectively address land use planning issues from this point forward.
		24	Improve the linkage between land use planning and water supply in the region throughout the planning horizon.
		25	Increase educational opportunities to improve public awareness of water supply, conservation, and water quality issues throughout the planning horizon.
5	Improve regional flood management	26	Improve and coordinate integrated land use planning to support stewardship of environmental resources, such as the Kern River and Kern Fan, and integrate with habitat conservation plans and other ongoing planning efforts from this point forward.
		27	Preserve and improve ecosystem/watershed health throughout the planning horizon.
		28	Improve regional flood management by addressing preparedness, response, and post flood actions throughout the planning horizon.
		29	Reduce the effects of poor quality runoff throughout the planning horizon.
		30	Identify and promote innovative flood management projects to protect vulnerable areas.
		31	Plan new developments to minimize flood impacts from this point forward.

Regional Goals and Objectives

Madera Region:16			
Goal #	Goal	Objective #	Objective
		1	Substantially reduce or eliminate the current groundwater overdraft through improved management of existing water supplies and development of additional water supplies.
		2	Develop processes to better manage groundwater pumping.
		3	Incorporate flood protection into the water management strategy.
		4	Maintain and/or improve groundwater quality.
		5	Develop a groundwater monitoring program.
		6	Create realistic, practical, implementable, and enforceable policies governing groundwater management to sustain the supply.
		7	Assess the feasibility of surface water supply development.
		8	Assess the potential for conservation, wastewater reuse/recycling, and watershed management.
		9	Create realistic land development policies and practices.
		10	Develop and implement a groundwater monitoring program.

Regional Goals and Objectives

Merced Region: 17			
Goal #	Goal	Objective #	Objective
		1	Manage flood flows for public safety, water supply, recharge, and natural resource management.
		2	Meet demands for all uses, including agriculture, urban, and environmental resource needs.
		3	Correct groundwater overdraft conditions.
		4	Improve coordination of land use and water resources planning.
		5	Maximize water use efficiency.
		6	Protect and improve water quality for all beneficial uses, consistent with the Basin Plan.
		7	Protect, restore, and improve natural resources.
		8	Address water-related needs of disadvantaged communities (DACs).
		9	Protect and enhance water-associated recreation opportunities.
		10	Establish and maintain effective communication among water resource stakeholders in the Region.
		11	Effectively address climate change adaptation and/or mitigation in water resource management.
		12	Enhance public understanding of water management issues and needs.

Regional Goals and Objectives

Mojave Region: 18			
Goal #	Goal	Objective #	Objective
1	Balance future water demands.	1	Stabilize the groundwater basin storage balance over long-term hydrologic cycles.
		2	Protect and restore riparian habitat areas as identified in Exhibit H of the Mojave Basin Area Judgment and the Department of Fish & Game management plan required by Exhibit H.
		3	Limit the potential for well dewatering, land subsidence, and migration of poor quality water.
		4	Maintain a sustainable water supply through extended drought periods.
		5	Select projects with the highest likelihood of being implemented.
2	Maximize the overall beneficial use of water throughout MWA.	6	Supply water in the quantity and quality suitable to the various beneficial uses.
		7	Addressing at a minimum Table 7-1 issues throughout the MWA service area recognizing the interconnection and interaction between different areas.
		8	Distributing benefits that can be provided by MWA in an equitable and fair manner.
		9	Ensuring that costs incurred to meet beneficial uses provide the greatest potential return to beneficiaries of the project(s).
		10	Avoiding redirected impacts.
		11	Identifying sustainable funding sources including consideration of affordability.

Regional Goals and Objectives

Mokelumne/Amador/Calaveras (MAC) Region: 19			
Goal #	Goal	Objective #	Objective
1	Water supply	1	Meeting 100% of urban and agricultural demand in wet and dry years, including the first year of water shortages.
		2	Meeting 85% of urban and 75% of agricultural demands in second and subsequent years of water shortages.
		3	Optimizing and sustaining the use of existing surface water entitlements from the Mokelumne and Calaveras Rivers.
		4	Protecting existing water rights and county of origin protections.
		5	Providing a variety of water supply sources to meet current demands.
		6	Maximizing use of recycled water from wastewater treatment plants with an overall target reuse goal of 50% of plant effluent by 2020.
		7	Optimizing the use of groundwater storage and conjunctive use options.
		8	Implementing water conservation plans for both urban and agricultural uses.
		9	Providing a variety of water supplies to support planned growth, anticipated increases in industrial and agricultural demand, and shifts in water supply availability resulting from climate changes.
		10	Providing a reliable supply of water to meet alternative water uses such as fire suppression and municipal irrigation.
2	Flood protection	11	Developing outlines of regional projects and plans necessary to protect existing infrastructure from flooding and erosion from the 100-year event.
		12	Working with stakeholders to preserve existing flood attenuation by implementing land management strategies throughout the watershed.
		13	Developing approaches for adaptive management to minimize maintenance requirements and protect the quality and availability of water while preserving ecologic and stream functions, and enhancing when appropriate.
		14	Providing community benefits beyond flood protection, such as public access, open space, recreation, agricultural preservation, and economic development.
3	Water quality	15	Meeting or exceeding all applicable water quality regulatory standards.
		16	Meeting or exceeding urban water quality targets established by stakeholders.
		17	Delivering agricultural water to meet water quality guidelines established by stakeholders.
		18	Meeting or exceeding recycled water quality targets established by stakeholders.
		19	Aid in meeting Total Maximum Daily Loads established, or to be established, for the Mokelumne and Calaveras River watersheds.
		20	Protecting surface waters from contamination and threat of contamination (including through SSOs and SSMPs).
		21	Protecting groundwater basins from contamination and threat of contamination.
		22	Managing existing land uses while preserving or enhancing environmental habitats.
		23	Developing environmental water to meet water quality guidelines established by stakeholders.
		24	Minimizing impacts from storm water through implementation of Best Management Practices or other detention projects.
		25	Managing existing land uses for recycled water discharges and allowable water-based discharges.
4	Environmental protection and enhancement	26	Identifying opportunities to assess, protect, enhance, and/or restore natural resources when developing water management strategies.
		27	Minimizing adverse effects on biological and cultural resources, including riparian habitats, habitats supporting sensitive plant or animal species, and archaeological sites when implementing strategies and projects.
		28	Identifying opportunities for open spaces, trails and parks along creeks and other recreational projects in the watershed to be incorporated with water supply, water quality, or flood protection projects.
		29	Projecting elements should maintain and, to the extent practicable, enhance the local environment and contribute to the long-term sustainability of agricultural, commercial, industrial, and urban land uses and activity within the basin.
		30	Identifying opportunities to protect, enhance, or restore habitat to support the Mokelumne (including Dry Creek, Sutter Creek and Jackson Creek) and Calaveras River watersheds in conjunction with water supply, water quality, or flood protection projects.
5	Regional communication and cooperation	31	Developing format for consensus decision-making by regional entities.
		32	Create prioritization strategy and protocols for integrated water management decision-making.
		33	Fostering collaboration between regional entities to minimize and resolve potential conflicts.
		34	Building relationships with State and Federal regulatory agencies and other water forums and agencies to facilitate permitting of water-related projects.
		35	Opening and fostering lines of communications between regional and inter-regional entities to reduce inconsistencies in water management strategies and to maximize benefits from water related projects.
		36	Opening avenues of communication with the general public and offer opportunities to provide feedback on the IRWM and water-related projects.
		37	Identifying opportunities for public education about water supply, water quality, flood management, and environmental protection.
		38	Maintaining water and wastewater rates to remain within the socioeconomic means of the community.

Regional Goals and Objectives

Monterey Peninsula, Carmel Bay, and South Monterey Bay Region: 20			
Goal #	Goal	Objective #	Objective
1	Water supply	1	Meet water supply replacement targets set by MPWMD that satisfy existing water demand and meet the following current requirements: State Water Resources Control Board Order No. WR 95-10 (and subsequent orders); Seaside Groundwater Basin Final Decision (Case No. M66343). This is currently estimated to be approximately 12,500 acre-feet.  Once existing demand is met (e.g., through implementation of water supply projects), meet water supply targets set by MPWMD to meet estimated long term future demand (based on General Plan Build-Out estimates). This is currently estimated to be approximately 4,550 acre-feet. The total need for water supply projects is estimated to be about 95% of existing demand.
		2	Maintain the quantity and quality of water in the Seaside Groundwater Basin as specified in the Final Decision setting forth the adjudicated rights in the Groundwater Basin.
		3	Minimize the impacts to sensitive species and habitats from diversions (surface and groundwater) by optimizing the use of groundwater storage and conjunctive use options.
		4	Maximize use of recycled water.
		5	Optimize conjunctive use of surface and groundwater.
		6	Evaluate, advance, and create water conservation efforts throughout the Region.
		7	Minimize fiscal impacts to ratepayers and taxpayers.
2	Water quality	8	Meet or exceed applicable water quality standards established by regulatory processes or by stakeholders (whichever is higher).
		9	Improve water quality for environmental resources (e.g. steelhead). Protect surface waters and groundwater basins from contamination and threat of contamination.
		10	Meet or exceed recycled water quality targets established by stakeholders.
		11	Minimize impacts from stormwater (or urban) runoff through implementation of Best Management Practices or other alternatives.
		12	Improve stream and near-shore water quality.
3	Flood protection and erosion prevention	13	Define the maximum extent practicable for reducing discharges to Areas of Special Biological Significance (ASBS). Reduce or eliminate to the maximum extent practicable the storm and nonstorm water flows to the ASBS.
		14	Develop regional projects and plans that are necessary to protect existing infrastructure and sensitive habitats from flood damage.
		15	Develop approaches for adaptive management that minimize maintenance and repair requirements.
		16	Protect quality and availability of water while preserving or restoring ecologic and stream functions, and enhance aquatic and riparian resources when appropriate.
4	Environmental protection and enhancement	17	Provide community benefits beyond flood protection, such as public access, open space, recreation, agricultural preservation, and economic development.
		18	Identify opportunities to assess, protect, enhance, and/or restore natural resources when developing water management strategies and projects.
		19	Protect and enhance sensitive species and their habitats in the regional watersheds.
		20	Minimize adverse effects on biological and cultural resources, including riparian habitats, habitats supporting sensitive plant or animal species, and archaeological sites when implementing strategies and projects.
		21	Identify opportunities for open spaces, trails and parks along streams and other recreational areas in the watershed that can be incorporated into water supply, water quality, or flood protection projects.
5	Regional communication	22	Identify and integrate elements from appropriate Federal and State species protection and recovery plans and from other similar plans (e.g., SWRCB Critical Coastal Areas Program) that are applicable to the region.
		23	Meet or exceed State and Federal regulatory orders, provided that mandates are funded.
		24	Identify strategies for protecting both infrastructure and environmental resources.
		25	Foster collaboration between regional entities to minimize and resolve potential conflicts and to obtain support for environmentally responsible water supply solutions.
		26	Build relationships with State and Federal regulatory agencies and other water forums and agencies to facilitate the permitting, planning and implementation of water-related projects.
27	Identify opportunities for public education about the need, complexity, and cost of strategies, programs, plans, and projects to improve water supply, water quality, flood management, coastal conservation, and environmental protection.		

Regional Goals and Objectives

North Coast Region: 21			
Goal #	Goal	Objective #	Objectives
		1	Conserve and enhance native salmonid populations by protecting and restoring required habitats, water quality and watershed processes.
		2	Protect and enhance drinking water quality to ensure public health.
		3	Ensure adequate water supply while minimizing environmental impacts.
		4	Support implementation of Total Maximum Daily Loads (TMDLs), the North Coast Regional Water Quality Control Board's (NCRWQCB) Watershed Management Initiative, and the Non-Point Source Program Plan.
		5	Address environmental justice issues as they relate to disadvantaged communities, drinking water quality and public health.
		6	Provide an ongoing, inclusive framework for efficient intra-regional cooperation, planning and project implementation.

Regional Goals and Objectives

North Sacramento Valley Region 22			
Goal #	Goals	Objective #	Objectives
1	Water Supply Reliability	1	Document baseline conditions and trends for surface water and groundwater resources.
		2	Quantify current and future water demands.
		3	Maximize efficient utilization and reliability of surface and groundwater supplies in coordination with local groundwater management plans (GMP's).
		4	Coordinate and protect regional groundwater resources, consistent with locally developed GMP's that monitor groundwater levels, groundwater quality, and inelastic land subsidence.
		5	Develop regional water transfer guidelines to facilitate efficient management of water supplies that recognize the NSV Region as having the first priority for use.
		6	Protect existing and established surface water rights.
		7	Honor and preserve area-of-origin statutory protections.
		8	Protect existing and established regional Central Valley Project (CVP) and State Water Project (SWP) water contract supplies.
		9	Increase surface water storage and hydropower generation within the region.
		10	Develop and implement a regional drought preparedness strategy to minimize socio-economic impacts.
		11	Develop and improve water resources infrastructure to increase water supply reliability within our region.
		12	Develop, update, and implement GMPs through local jurisdictions.
2	Flood Protection and Planning	13	Develop and coordinate flood risk reduction plans and projects consistent with current law and regulation to provide protection for agricultural, urban and rural communities.
		14	Evaluate new flood control projects that have potential economic impacts on agricultural land.
		15	Develop and coordinate flood preparedness programs and alert systems for floodprone areas consistent with existing flood and hazard mitigation plans.
		16	Implement mutually beneficial flood risk reduction and floodplain ecosystem enhancement programs and projects on a voluntary basis.
3	Water Quality Protection and Enhancement	17	Develop and improve infrastructure to meet State and Federal standards for drinking water quality.
		18	Develop and improve infrastructure for wastewater collection, treatment, discharge, and reuse.
		19	Meet State and Federal standards for water quality in surface water bodies and groundwater basins.
		20	Minimize adverse water quality impacts from point sources to surface and groundwater.
		21	Minimize adverse water quality impacts from non-point sources to surface and groundwater.
4	Watershed Protection and Management	22	Aggressively manage invasive species within the watershed.
		23	Integrate mutually beneficial agricultural production and habitat conservation programs and projects that don't redirect impact to neighbors.
		24	Improve and protect riparian and fish habitat, and fish passage.
		25	Implement healthy forest/foothill management activities that improve watersheds.
		26	Protect wetlands that are critical to hydrologic function.
		27	Integrate recreational opportunities within water resource programs and projects.
		28	Evaluate habitat conservation and ecosystem improvement programs and projects that have potential economic impacts on agricultural lands.
5	Integrated Regional Water Management (IRWM) Sustainability	29	Preserve the autonomy of local governments, special districts, and Tribes.
		30	Enhance communication and coordination among federal, state, Tribal, and local governments, and other stakeholders.
		31	Maintain a governance structure to update the Integrated Regional Water Management Plan (IRWMP) and support IRWMP project implementation.
		32	Coordinate with neighboring IRWM regions to identify opportunities to enhance water management.
		33	Pursue funding opportunities to implement programs and projects consistent with the IRWMP.
		34	Coordinate IRWM activities with land-use planning.
6	Public Education and Information Dissemination	35	Conduct public education and outreach to promote IRWMP goals.
		36	Develop and disseminate information to protect regional water supplies.
		37	Disseminate information on flood risks, Federal Emergency Management Agency's (FEMA's) flood insurance rate maps (FIRM), and new FEMA policies.
		38	Develop and disseminate water quality information throughout the region.
		39	Develop and disseminate scientific information on aquatic, riparian, and watershed resources.

Regional Goals and Objectives

Pajaro River Watershed Region: 23			
Goal #	Goal	Objective #	Objective
1	Water supply	1	Meet 100% of Municipal & Industrial and agriculture demands (both current and future conditions) in wet to dry years including the first year of a drought.
		2	Meet 85% Municipal & Industrial and 75% agriculture demands (both current and future conditions) in second and subsequent years of a drought.
		3	Provide a variety of water supply sources to meet demand.
		4	Optimize and sustain use of existing import surface water entitlements from the San Felipe Division.
		5	Optimize the use of groundwater and aquifer storage. The mission of the Pajaro River Watershed Collaborative is to preserve the economic and environmental wealth and well-being for the Pajaro River watershed through watershed stewardship and comprehensive management of water resources in a practical, cost effective and responsible manner. Pajaro River Watershed Integrated Regional Water Management Plan ES-10 Executive Summary
		6	Target recycled water use to make up 5% of total water use by 2010 and 10% of total water use by 2020.
		7	Implement water conservation programs for both Municipal & Industrial and agricultural uses consistent with the CVPIA.
		8	Protect existing appropriated surface water rights.
2	Water quality	9	Meet or exceed all applicable groundwater, surface water, wastewater, and recycled water quality regulatory standards.
		10	Protect or improve the quality of water supply sources.
		11	Meet or exceed water quality targets established by stakeholders.
		12	Aid in meeting TMDLs established for the Pajaro River Watershed
		13	Minimize impacts from stormwater through implementation of established Best Management Practices or other stormwater management projects.
3	Flood protection	14	Implement flood protection projects throughout the watershed that provide multiple benefits.
		15	Reach consensus on the Pajaro River Flood Protection Project necessary to protect existing infrastructure and land uses from flooding and erosion from the 100-year event.
		16	Work with stakeholders to preserve existing flood attenuation by implementing land management strategies throughout the watershed.
		17	Develop approaches for adaptive management to minimize maintenance requirements and protect quality and availability of water while preserving ecologic and stream functions, and enhancing when appropriate.
4	Environmental protection and enhancement	18	Provide community benefits beyond flood protection such as public access, open space, recreation, agriculture preservation and economic development.
		19	Identify opportunities to enhance the local environment and protect, enhance, and/or restore natural resources, consistent with urban and agricultural land uses, when developing water management strategies.
		20	Minimize adverse effects on biological and cultural resources, including riparian habitats, habitats supporting sensitive plant or animal species and archaeological/historic sites when implementing strategies and projects.
		21	Identify opportunities to protect, enhance, or restore habitat to support Monterey Bay marine life in conjunction with water supply, water quality or flood protection projects.
		22	Identify opportunities for open spaces, trails, parks along creeks and other recreational projects in the watershed that can be incorporated with water supply, water quality or flood protection projects, consistent with public use and property rights.

Regional Goals and Objectives

Poso Creek Region: 24			
Goal #	Goal	Objective #	Objective
1	Water supply reliability		
2	Groundwater levels		
3	Groundwater quality		
4	Water supply costs		
5	Monitoring		
6	Environmental resources		
7	Flood control		

Regional Goals and Objectives

San Diego Region 26			
Goal #	Goal	Objective #	Objective
1	Improve the reliability and sustainability of regional water supplies.	1	Develop and maintain a diverse mix of water resources, encouraging their efficient use and development of local water supplies.
		2	Construct, operate, and maintain a reliable water management infrastructure system.
2	Protect and enhance water quality.	3	Effectively reduce sources of pollutants and environmental stressors to protect and enhance human health, safety, and the environment.
3	Protect and enhance our watersheds and natural resources.	4	Enhance natural hydrologic processes to reduce the effects of hydromodification and encourage integrated flood management.
		5	Protect, restore, and maintain habitat and open space.
		6	Effectively address climate change through greenhouse gas reduction, adaptation, or mitigation in water resources management.
4	Promote and support sustainable integrated water resource management.	7	Encourage the development of integrated solutions to address water management issues and conflicts.
		8	Maximize stakeholder/community involvement and stewardship of water resources, emphasizing education and outreach.
		9	Effectively obtain, manage, and assess water resource data and information.
		10	Further the scientific and technical foundation of water management.
		11	Optimize water-based recreational opportunities.

Regional Goals and Objectives

San Francisco Bay Area Region: 27			
Goal #	Goal	Objective #	Objective
1	Promote environmental, economic and social sustainability	1	Work with local land, water, wastewater and stormwater agencies, project proponents and other stakeholders to develop policies, ordinances and programs that promote IRWM goals, and to determine areas of integration among projects.
		2	Encourage implementation of integrated, multi-benefit projects.
		3	Plan for and adapt to more frequent extreme climate events.
		4	Reduce energy use and/or use renewable resources where appropriate.
		5	Plan for and adapt to sea level rise.
		6	Secure adequate support, funding and partnerships to effectively implement plan.
		7	Avoid disproportionate impacts to disadvantaged communities.
		8	Promote community education, involvement and stewardship.
		9	Support data management for climate change vulnerabilities.
		10	Enhance monitoring network and information sharing to support proper management of watersheds.
		11	Minimize health impacts associated with polluted water.
		12	Protect cultural resources.
		2	Improve water supply reliability and quality
14	Provide adequate water supplies to meet demands.		
15	Provide clean, safe, reliable drinking water.		
16	Minimize vulnerability of infrastructure to catastrophes and security breaches.		
17	Implement water use efficiency to meet or exceed state and federal requirements.		
18	Increase recycled water use.		
19	Expand water storage and conjunctive management of surface and groundwater.		
20	Provide for groundwater recharge while protecting groundwater resources from overdraft.		
21	Protection of groundwater resources from contamination.		
3	Protect and improve watershed health and function and Bay water quality	22	Protect, restore, and rehabilitate watershed and bay processes.
		23	Maintain health of watershed vegetation, land cover, natural stream buffers and floodplains, to improve filtration of point and nonpoint source pollutants.
		24	Minimize point-source and nonpoint-source pollution.
		25	Control excessive erosion and manage sedimentation.
		26	Improve floodplain connectivity.
		27	Improve infiltration capacity.
		28	Control pollutants of concern.
4	Improve regional flood management	29	Manage floodplains to reduce flood damages to homes, businesses, schools, and transportation.
		30	Achieve effective floodplain management that incorporates land use planning and minimizes risks to health, safety and property by encouraging wise use and management of flood-prone areas.
		31	Identify and promote integrated flood management projects to protect vulnerable areas.
5	Create, protect, enhance, and maintain environmental resources and habitats	32	Protect, restore, and rehabilitate habitat for species protection.
		33	Enhance wildlife populations and biodiversity (species richness).
		34	Protect and recover fisheries (natural habitat and harvesting).
		35	Reduce geographic extent and spread of pests and invasive species.

Regional Goals and Objectives

San Luis Obispo Region: 28			
Goal #	Goal	Objective #	Objective
1	Water quality	1	Protect and improve source water quality.
		2	Meet all federal and state drinking water standards.
		3	Support the development and implementation of TMDLs.
		4	Implement NPDES Phase II Storm Water Management Programs.
		5	Implement the California NPS Plan and the RWQCB Conditional Agricultural Waiver Program for irrigated agriculture.
		6	Comply with new waste discharge requirements.
2	Water supply	7	Implement inter-agency projects including emergency inter-ties between systems, jointly developed facilities, water exchanges, and other methods of enhancing reliability through cooperative efforts over the development of new supplies.
		8	Maximize water conservation for both M&I and agricultural uses.
		9	Expand desalination water opportunities by 2010.
		10	Expand reclaimed water use to make up 5% of total water use by 2010 and 10% of total water use by 2020.
3	Ecosystem preservation and restoration	11	Purchase or conserve through easements, preserve, enhance, and restore land in ecologically sensitive ecosystems.
		12	Manage public land access to encourage public involvement and stewardship.
		13	Manage stream flows to fish bearing streams, support a region-wide fish passage barrier prevention, circumvention and removal program, and implement fish friendly stream and river corridor restoration projects.
		14	Reduce the effects of invasive plant species, manage public properties to re-establish rare and special status native plant populations, and promote native drought tolerant plantings in municipal and residential landscaping.
		15	Implement the San Luis Obispo County Native Tree Management Guidelines and promote the voluntary guidelines in the San Luis Obispo County Native Tree Resolution for tree protection and restoration programs, urban forest management, and wild lands fire management.
		16	Reuse reclaimed mine lands for beneficial purposes.
		17	Conserve natural resources.
4	Groundwater monitoring and management	18	Develop monitoring and reporting programs for groundwater basins in the region.
		19	Evaluate and consider Groundwater Banking Programs.
		20	Protect and improve groundwater quality from point and non-point source pollution, including nitrate contamination; MTBE and other industrial, agricultural, and commercial sources of contamination; naturally occurring mineralization, boron, radionuclide, geothermal contamination; and seawater intrusion and salts.
		21	Conduct public education and outreach about ground water protection.
		22	Identify areas of known or expected conflicts and target stakeholders on specific actions that they should take to help protect groundwater basin quality and supply.
		23	Recharge ground water with high quality water.
5	Flood management	24	Distinguish the root cause of flooding problems stemming from new development, existing development, and mandatory regulation.
		25	Integrate ecosystem enhancement, drainage control, and natural recharge into development projects.
		26	Develop financial programs for drainage and flood control projects.
		27	Evaluate and minimize the risk of dam and levee failures.
		28	Develop and implement public education, outreach, and advocacy.

Regional Goals and Objectives

Santa Ana Watershed Project Authority Region: 29			
Goal #	Goal	Objective #	Objective
1	Maintain reliable and resilient water supplies and reduce dependency on imported water	1	Decrease water demand
		2	Increase water-use efficiency
		3	Increase use of rainfall and snowpack as a resource
		4	Increase use of recycled water
		5	Sustainably develop local water resources
		6	Maintain sufficient storage to overcome multi-year (3 year) drought over a ten year hydrologic cycle
		7	Reduce green-house-gas emissions and energy consumption from water resource management
2	Manage at the watershed scale for preservation and enhancement of the natural hydrology to benefit human and natural communities	8	Preserve and restore hydrologic function of forested and other lands
		9	Preserve and restore hydrogeomorphic function of streams and water bodies
		10	Safely co-manage flood protection and water conservation
		11	Include ecosystem function in new development planning and construction
3	Preserve and enhance the ecosystem services provided by open space and habitat within the watershed	12	Increase the capacity of open space to provide recreational opportunities without degrading its quality or increasing its consumption of water and energy
		13	Protect existing and restore native habitats
		14	Protect and maintain healthy forests
		15	Manage aquatic and riparian invasive species
		16	Protect estuarine and marine near-shore habitats
		17	Reduce ornamental irrigated landscapes
		18	Improve management support for landscaping that utilizes native and drought tolerant vegetation
		19	Protect and Restore wildlife corridors
		20	Protect endangered and threatened species and species of special concern through improved habitat
		4	Protect beneficial uses to ensure high quality water for human and natural communities
22	Protect and improve source water quality		
23	Achieve and maintain salt balance in the watershed		
5	Accomplish effective, equitable and collaborative integrated watershed management	24	Improve regional integration and coordination
		25	Ensure high quality water for all users
		26	Balance quality of life and social, environmental, and economic impacts when implementing projects
		27	Maintain quality of life
		28	Provide economically effective solutions
		29	Engage with disadvantaged communities to eliminate environmental injustices
		30	Engage with Native American tribes to ensure equity
		31	Reduce conflict between water resources and protection of endangered species

Regional Goals and Objectives

Santa Barbara County Region: 30			
Goal #	Goal	Objective #	Objective
		1	Protect, conserve, and augment water supplies
		2	Protect, manage, and increase groundwater supplies
		3	Practice balanced natural resource stewardship
		4	Protect and improve water quality
		5	Improve Flood Management
		6	Improve Emergency Preparedness
		7	Maintain and Enhance Water and Wastewater Infrastructure Efficiency and Reliability
		8	Address Climate Change through Adaptation and Mitigation
		9	Ensure Equitable Distribution of Benefits

Regional Goals and Objectives

Santa Cruz County Region: 31			
Goal #	Goal	Objective #	Objective
		1	Water supply reliability: Minimize the impact of droughts, production facility failures, or groundwater overdrafts on regional water supplies. Reduce the likelihood of domestic water shortages and any future need to import water from outside the County.
		2	Raw water quality: Maximize the quality of surface and ground water in the county by addressing sources or conduits of contamination.
		3	Delivered water quality: Maximize the quality of delivered drinking water as well as reclaimed water for irrigation.
		4	Habitat restoration and maintenance: a. Aquatic: Restore and maintain habitats to support local aquatic species. b. Terrestrial: Restore and maintain habitats to support terrestrial species of local flora and fauna. c. Ocean: Restore and maintain habitats to support Monterey Bay marine life.
		5	Recreation: Maximize the recreational value of county water resources.
		6	Public health: Minimize adverse water-related public health impacts in the county.
		7	Flood management: Minimize the adverse impacts of future flood events.
		8	Regional economy: Add maximum value to the regional economy.
		9	Regional collaboration: Continue and expand collaboration among public and private agencies to address county water-related challenges.
		10	Readiness to Proceed: Be prepared to proceed with approved projects in a timely manner.
		11	Availability of Funding: Ensure that sufficient local and regional funding is available to move forward with projects.

Regional Goals and Objectives

South Orange County Region: 32			
Goal #	Goal	Objective #	Objective
1	Integrate flood management	1	Enhance Flood protection for public safety and property.
		2	Implement economically and technically feasible multiple uses for flood control facilities.
2	Improve water quality	3	Comply with Clean Water Act and Porter-Cologne.
		4	Protect beneficial uses of receiving waters.
3	Increase water supply and reliability	5	Improve planning and awareness of water supply reliability issues related to imported water into South Orange County.
		6	Develop and manage groundwater supplies in South Orange County 10,800 AF by 2020.
		7	Increase efficient use of recycled water from municipal wastewater sources by 20,000 AFY by 2020.
		8	Increase capture and utilization of surface runoff for irrigation purposes.
		9	Produce 15 MGD of ocean water desalination as a new drought proof supply by 2020.
		10	Improve System Reliability to protect against out of the region earthquakes and floods as well as earthquakes in Orange County that would cause interruptions of supplies.
4	Promote water use efficiency	11	Manage and improve the supplies available to South Orange County for the collective benefit of the area.
		12	Compliance with "20 x 2020" and with MWD's IRP Goals by 2020.
		13	Reduce region wide landscape irrigation consumption to an ETAF of <0.7 by 2020.
		14	Maximize Efficiency of Utility Based Operations.
		15	Promote use of low impact design for new and existing developments.
5	Protect natural resources	16	Enhance the functioning of regional aquatic ecosystems.
		17	Reduce impacts from surface runoff.
		18	Eradicate invasive species throughout the watershed.
		19	Minimize impact to air, energy, land, materials and habitat resources.

Regional Goals and Objectives

Tahoe-Sierra Region: 34			
Goal #	Goal	Objective #	Objective
1	Water quality	1	Develop TMDL standards.
		2	Reduce nutrient and sediment loads to receiving water bodies.
		3	Meet nutrient and sediment standards for tributary streams and stormwater runoff.
		4	Ensure that drinking water continues to meet the standards of the Safe Drinking Water Act.
		5	Restore degraded streams and wetlands to re-establish natural water filtering processes.
		6	Increase public awareness of regional water quality issues and their role in improving the quality of local water bodies.
2	Water supply	7	Provide adequate water supply for a 20-year management window.
		8	Build reliable infrastructure to supply water.
		9	Implement and promote water conservation measures and practices.
		10	Install water meters to track water use and encourage water conservation.
3	Groundwater management	11	Create reliable groundwater supply.
		12	Protect groundwater quality.
		13	Manage groundwater for multiple uses.
4	Ecosystem restoration	14	Enhance and restore degraded stream environment zones (SEZs) to support healthy and viable native fish populations.
		15	Restore wetlands and natural biogeochemical cycles.
		16	Educate public about ecosystem services provided by healthy wetlands and SEZs.
		17	Manage forest health and wildfire risks.
		18	Minimize disturbance caused by urban development.
5	Integrated watershed management	19	Ensure sound planning that is based on watershed science.
		20	Encourage collaboration among multiple jurisdictions within a watershed.
		21	Form partnerships to share resources, take advantage of cost sharing opportunities, and exchange information.

Regional Goals and Objectives

Tuolumne-Stanislaus Region 36			
Goal #	Goals	Objective #	Objectives
		1	Improve water supply infrastructure within DAC and urban areas that have declining water quantity/quality or other water system reliability issues (e.g., fire flow, contamination, etc.).
		2	Reduce contamination in groundwater, natural streams, raw water conveyance systems, and reservoirs from the negative impacts of stormwater, urban runoff, nonpoint source pollutants, and nuisance water.
		3	Improve infrastructure to meet wastewater discharge/disposal requirements and deliver drinking water that meets drinking water standards and customer expectations.
		4	Improve watershed health in support of increased water yield and ecosystem function.
		5	Improve the condition and ecosystem function of meadows.
		6	Assist in the protection and recovery of sensitive special status, threatened, culturally sensitive, and endangered native aquatic and other water dependent species in the Region.
		7	Identify, preserve, and promote the regeneration and restoration of wetlands, vernal pools, and native plant riparian habitat; reduce invasive species.
		8	Reduce the risk of localized flooding in urban areas.
		9	Increase renewable energy production for water management.
		10	Improve energy efficiency of water and wastewater system infrastructure.
		11	Improve efficiency and reliability of man-made water conveyance systems.
		12	Increase current and future water use efficiency (WUE) by both municipal (residential and commercial) and agricultural end users.
		13	Develop sufficient reliable and affordable water supplies to meet regional demands of existing and projected water supply needs under a multi-year drought now and into the future.
		14	Improve integrated land use and natural resource planning to support watershed management actions that restore, sustain and enhance watershed functions.

Regional Goals and Objectives

Upper Feather River Watershed - (Goals and Objectives not connected)			
Region: 37			
Goal #	Goal	Objective #	Objective
1	Improve local water retention and reduce flood potential.	1	Continuous flow in perennial streams
2	Improve dry-season base flows.	2	Sediment transport reduction
3	Improve water quality (Temperature and Sediment).	3	Streambank protection
4	Improve water quality to meet CVRWQCB basin plan / agriculture waiver.	4	Stream temperature improvement
5	Improve upland vegetation management.	5	Agriculture NPS waiver program
6	Improve groundwater retention and storage in major aquifers.	6	Wetland wastewater treatment
7	Accommodate a salmon fishery in segments of the upper feather river watershed.	7	Road rehabilitation or closure
		8	Groundwater recharge and extraction balance
		9	Grazing management
		10	In-stream and riparian/wetland habitat
		11	Public awareness and stakeholder input
		12	Monitoring and adaptive management

Regional Goals and Objectives

Upper Kings Basin Water Forum - (Goals and Objectives not connected)			
Region: 38			
Goal #	Goal	Objective #	Objective
1	Halt, and ultimately reverse, the current overdraft and provide for sustainable management of surface and groundwater.	1	Increase amount of groundwater in storage with intent to eliminate the groundwater overdraft in 20 years.
2	Increase the water supply reliability, enhance operational flexibility, and reduce system constraints.	2	Identify opportunities and projects.
3	Improve and protect water quality.	3	Identify DAC priority needs and promote/support solutions to DAC water issues.
4	Provide additional flood protection.	4	Comply with SBx7-7.
5	Protect and enhance aquatic ecosystems and wildlife habitat.	5	Increase dry year supply.
		6	Increase regional conveyance capacity.
		7	Increase average annual supply and reduce demand.
		8	Compile baseline water quality data for ground & surface water.
		9	Encourage Best Management Practices, policies & education that protect water quality.
		10	Identify sources of water quality problems & promote/support solutions to improve water quality.
		11	Increase surface storage.
		12	Sustain the Kings River Fisheries Management Program.
		13	Pursue opportunities to incorporate habitat benefits into projects.
		14	Increase public awareness of IRWM Efforts.
		15	Involve local water districts and land use agencies in generating and confirming the current and future water needs to ensure compatibility and consistency with land use and water supply plans.

Regional Goals and Objectives

Upper Pit River Watershed Region 39			
Goal #	Goal	Objective #	Objective
1	Maintain or Improve Water Quality	1	Implement two new projects that measurably improve water quality from tailwater management.
		2	Assist landowners in implementing five additional projects to improve livestock management in riparian areas (e.g., off-site watering facilities, relocation of feedlots and corrals, riparian and stream-zone fencing).
		3	Implement five miles of bank stabilization projects to reduce erosion and siltation.
		4	Conduct a feasibility analysis of alternative methods of irrigation water delivery (e.g., piping or canals) that benefits both agricultural users and riparian/aquatic health.
		5	Research and improve the Main Street urban runoff problem in Alturas.
		6	Establish a Pit River Tribe Resource Conservation District to help address water-quality issues.
2	Maintain and Improve the Quantity and Availability of Water for Irrigation Demands	7	Work with local Resource Conservation Districts (RCDs) to secure funding for completing additional sprinkler irrigation system efficiency evaluations.
		8	Support voluntary drought management plans in sub-basins; complete at least one by 2015.
		9	Implement at least one project to demonstrate improved flashboard dam operations.
		10	Develop groundwater basin management objective plans for at least one more groundwater sub-basin of the watershed.
		11	Conduct feasibility analysis of additional water storage by 2017.
		12	Implement piping and/or lining to replace at least five miles of open ditch systems to reduce water losses by at least 50 percent.
3	Sustain/Improve Aquatic and Terrestrial Communities and Habitat and Ecological Function	13	Conduct meadow, spring, fen, and vernal pool restoration projects affecting at least 1,000 acres. Stabilize and/or restore 25 miles of streams within the watershed to natural ecological function to increase shade canopy, improve summer base flows, decrease peak flows, improve bank and channel stability, and improve habitat conditions.
		14	Restore and reconnect streams with historic floodplains, affecting at least 1,000 acres of floodplain.
		15	Increase the number of stream miles that support native fisheries in some tributaries to the Pit River.
		16	Enhance fish populations by implementing projects that reduce entrainment (unintentional trapping) of fish in irrigation diversions and blockage of migration at diversion dams.
		17	Reduce the potential for large, uncontrolled fires, and thus subsequent erosion and runoff and property loss by conducting forest health and small fuels reduction projects on at least 20,000 acres. Implement the Burney-Hat Creek Basins Collaborative Forest Landscape Restoration Program (CFLRP) forest restoration project. (Each element has its own project metrics.)
		18	Implement the Sage-Steppe Ecosystem Restoration Strategy. (Each element has its own project metrics.)
4	Control and Prevent the Spread of Invasive Species	19	Promote and expand collaborative strategic weed management plans and then implement treatments on at least 500 acres of noxious weeds annually. Include a noxious weed treatment element in all restoration projects implemented under this Plan.
		20	Increase aquatic health and resiliency of the Fall River by implementing Eurasian watermilfoil pilot projects. Measures include establishing four monitored locations for the pilot project, 30,000 weevils cultured and stocked, and five randomly selected sites sampled with fully assessed results.
		21	Develop two action plans and/or implement projects to prevent introduction and/or expansion or reduction of non-native animal species (e.g., muskrat, non-native bass, quagga mussels, and/or address genetic mixing

Regional Goals and Objectives

Upper Pit River Watershed (Continued) Region 39			
Goal #	Goal	Objective #	Objective
5	Improve Efficiency and Reliability of Community Water Supply and Other Water-Related Infrastructure	22	Conduct at least two water-supply infrastructure projects that could include: leak detection and repair; distributions system pipeline replacement; creation of supply redundancy; water tank storage repair/replacement; and meter calibration, repair, and replacement that help improve the integrity of local water supply.
		23	To reduce per capita water use, create incentives for efficient appliances and fixtures, help plant drought-resistant landscaping, and publicize available audits, rebates, and incentives as a pilot program in at least one jurisdiction.
		24	Implement at least one wastewater treatment improvement project to increase the quality of discharged waters.
		25	Increase conservation education via water bills and other outreach throughout the watershed by designing a series of outreach materials that can be used by all water purveyors.
		26	To gain an understanding of long-term system reliability and to aid in capital improvement and planning decisions, undertake at least one water-supply assessment for a community service provider.
		27	Work with county agencies and Caltrans to reduce artificial constrictions of flood flows, prioritize projects, and promote proper design.
		28	Implement three projects to address flood attenuation and secondary effects: 1) in the Parker Creek drainage (Modoc County), 2) in the Bieber area, and 3) in the Alturas area.
6	Strengthen Community Watershed Stewardship and Encourage Better Coordination of Data Collection, Sharing, and Reporting	29	Implement the City of Alturas' project to construct wetlands (green infrastructure) for wastewater disposal and treatment, and make progress toward (could include completed design, securing funding for, and/or implementing) measures to address wastewater-treatment issues identified in Fall River Mills and Burney.
		30	Pit River Watershed Alliance (PRWA) to create a Pit River Steward of the Year award by 2013.
		31	Continue to hold annual watershed stewardship, cooperative public/private demonstration days/field tours by RCDs, but showcase all projects planned and completed under this Plan annually.
		32	Assist in place-based learning during at least one event annually for K-12 students to learn about the watershed system and needs by PRWA and the RWMG coordinating/sharing IRWMP project outcomes and volunteer opportunities with the Pit River Tribe, the River Center's Pit River Adoption Project, and Spring Rivers Foundation.
		33	Finalize and publicize a watershed improvement directory that documents local restoration and enhancement projects and shares successes that improve adaptive management within the watershed.
		34	Identify river and stream segments in need of restoration to include: prioritized reaches, restoration opportunities, funding sources, partnership opportunities, and a design/implementation plan.
		35	Support counties or appropriate groundwater basins to collect existing groundwater data for all sub-basins and conduct a groundwater inventory to determine data gaps, including the relationship between ground and surface water.
7	Support Community Sustainability by Strengthening Natural Resource-Based Economies	36	Add watershed data to the Sacramento River Watershed Information Module (SWIM) database as a part of this planning effort.
		37	Encourage California SB 18 (2005) conservation easements for willing landowners to permanently protect Tribal lands, as well as cultural and environmental resources on Tribal lands. Explore implementation of Tribal conflict resolution suggestions, including: <ul style="list-style-type: none"> <li>• Cooperatively developing a set of best management practices for various resource management issues throughout the watershed;</li> <li>• Multi-party monitoring protocols that implement best practices for forest health and management;</li> <li>• Mutually agreed upon pre and post tests for water-quality monitoring and evaluation methods for long-term outcomes;</li> <li>• Partnerships and projects in the spirit of collaboration with the Tribal Government; and</li> <li>• Conduct a "How-To Workshop" regarding intergovernmental affairs coordination with Tribe for all local water-management entities.</li> </ul>
		38	Support two restoration/enhancement projects that benefit the local economy.
		39	Explore at least two solar, wind, geothermal, and/or biomass projects.
		40	Encourage projects conducted under this Plan to hire a local workforce.
41	Seek Stewardship Contracts from the U.S. Forest Service to conduct at least one ecological restoration project.		
8	Improve Agency Programs and Policies by Increasing Accuracy, Accountability, and Effectiveness	42	Apply for a salinity delisting of the South Fork Pit River, a pH delisting in the North Fork, and complete delisting of the Pit River downstream of Fall River as soon as feasible.
		43	Evaluate the credibility of 303(d) listings for the Pit River and tributaries and, if appropriate, request that the State and Regional Board modify the Basin Plan beneficial-use designations.
		44	Work with RWQCB to re-design the ILRP to better suit the conditions of upper (as opposed to Sacramento Valley floor) watersheds.
		45	Improve the permitting and public notification required for weather modification by working with RWQCB and local air quality districts. Recommend that appropriate agencies request full disclosure statements that include: the chemical composition of agents used in weather modification, monitoring protocols for water and soils sampling to determine adverse effects associated with weather modification activities, and a determination of weather modification effects on nearby and/or adjacent regions.
		46	Work with state and local agencies to post water-quality advisories in both English and Spanish at impaired water bodies with public access.

Regional Goals and Objectives

Upper Pit River Watershed (Continued) Region 39			
Goal #	Goal	Objective #	Objective
9	Provide Adaptive Management Strategies for Conserving Energy and Reducing Greenhouse Gas Emissions	47	Improve energy conservation and economic stability through irrigation/water-pumping efficiencies that reduce the amount of electricity used over the same number of acres.
		48	Support three alternative energy projects on agricultural lands in partnership with existing federal agricultural programs, such as Environmental Quality Incentives Program (EQIP).
		49	Include solar-supported pumping at a minimum of two remote well sites in conjunction with water-supply infrastructure projects.

Regional Goals and Objectives

Upper Sacramento-McCloud Region 40			
Goal #	Goals	Objective #	Objectives
		1	Increase knowledge of basin characteristics and raise public awareness and understanding of fractured rock aquifers, watershed dynamics, existing water rights, water resource allocation, and existing management authorities to inform and develop support for IRWM planning and projects.
		2	Encourage, improve and maintain an environment that fosters cooperation, facilitates collaboration, and builds relationships of trust and respect among water resource stakeholders and community members with respect to water management efforts within the region.
		3	Maintain and enhance the ecological health of the basin to: 1. Support the local economy 2. Ensure public health and safety 3. Respect and support indigenous cultures 4. Improve recreational infrastructure and opportunities for both tourism and the local economy 5. Prepare for potential reintroduction of native species to the region
		4	Support and improve ongoing forest management efforts with regard to local water quality and supply including fire management within existing regulatory frameworks.
		5	Ensure support for and foster success of water management efforts for disadvantaged and Native American communities while respecting the cultural values of existing communities.
		6	Support local participation in development and implementation of water quality standards that reflect local conditions and implementation of projects that maintain and enhance the basin's existing water quality.
		7	Ensure adequate water supply and quality while maintaining regulatory compliance, minimizing conflict, and recognizing and respecting existing water rights and users.
		8	Facilitate development of sustainable water/wastewater infrastructure to ensure public health, protect ecological integrity, and support economic stability.
		9	Address flooding concerns through infrastructure improvements and support ongoing local flood management efforts.

Regional Goals and Objectives

Upper Santa Clara River Region: 41			
Goal #	Goal	Objective #	Objective
		1	Reduce Potable Water Demand: Implement technological, legislative and behavioral changes that will reduce user demands for water.
		2	Increase Water Supply: Understand future regional demands and obtain necessary water supply sources.
		3	Improve Water Quality: Supply drinking water with appropriate quality; improve groundwater quality; and attain water quality standards.
		4	Promote Resource Stewardship: Preserve and improve ecosystem health; improve flood management; and preserve and enhance water-dependent recreation.
		5	Flooding/Hydromodification: Reduce flood damage and/or the negative effects on waterways and watershed health caused by hydromodification and flooding outside the natural erosion and deposition process endemic to the Santa Clara River.
		6	Take actions within the watershed to adapt to climate change
		7	Promote project and actions that reduce greenhouse gas (GHG) emissions

Regional Goals and Objectives

Upper Santa Margarita Region: 42			
Goal #	Goal	Objective #	Objective
1	Increase diversification of the water supply portfolio	1	Reduce regional potable water consumption
		2	Increase local supply development
2	Maximize groundwater potential	3	Improve quality and ability to access and increase groundwater supply
		4	Increase knowledge of groundwater supply potential
3	Protect and improve local surface water quality	5	Reduce controllable pollutant sources to 303(d) listed receiving waters
4	Promote integrated flood management	6	Enhance regional flood control by implementing multiple benefit projects
		7	Reduce municipal and private property damage risk
5	Protect, restore and enhance aquatic/riparian habitat	8	Protect and create aquatic/riparian habitat
		9	Enhance riparian corridors on existing land use
6	Promote economic, social, land use and environmental sustainability	10	Support water resources projects that positively impact DACs
		11	Improve recreation opportunities and open space through multiple benefit projects
		12	Adapt to and mitigate against climate change by promoting adaptation strategies and reducing water related greenhouse gas emissions

Regional Goals and Objectives

Watersheds Coalition of Ventura County Region: 43			
Goal #	Goal	Objective #	Objective
1	Reduce dependence on imported water and protect, conserve and augment water supplies	1	Implement projects and programs that increase and enhance the beneficial uses of local water supplies, including stormwater. Improve water supply reliability.
		2	Enhance understanding about local watersheds by gathering and synthesizing more data and information regarding water supply (capacity, safe yield, flows) and water demand.
		3	Ensure secure water supplies by helping local water agencies address the impacts of future droughts and other water shortages.
		4	Document efforts being made by local water districts, environmental interest groups and other agencies to improve the management of local water supplies and to identify ways to build on these efforts for greater future success.
		5	Protect groundwater supplies through groundwater recharge projects and protection of recharge areas.
		6	Develop watershed management plans to enhance understanding of watershed characteristics and appropriate actions.
		7	Assure critical water supply needs of disadvantaged communities are met.
2	Protect and improve water quality	8	Implement projects and programs that improve and protect water quality.
		9	Meet State and Federal water quality standards.
		10	Manage and remove salts in the watersheds and help establish and comply with TMDL requirements.
		11	Assure critical water quality needs of disadvantaged communities are met.
3	Protect people, property and the environment from adverse flooding impacts	12	Explore use of incentives for avoiding construction of physical structures in the floodplain.
		13	Explore use of incentives for use of non-structural floodplain protection methods.
		14	Implement projects and programs which will result in reduced damage due to flooding.
4	Protect and restore habitat and ecosystems	15	Develop and implement land use measures that will help mitigate the impacts of new development in floodplains.
		16	Implement projects and programs to protect, improve and restore habitats.
		17	Integrate and coordinate ecosystem restoration efforts.
		18	Research and implement projects to remove invasive species.
5	Provide water-related recreational, public access, stewardship, engagement and educational opportunities	19	Develop a master permit for removal of invasive plant species.
		20	Develop programs which enhance the public's knowledge and awareness of water issues and engage them in the integrated regional water management process and stewardship of the watershed.
6	Prepare for and adapt to climate change	21	Improve public access and recreation opportunities when implementing new projects and programs.
		22	Assess vulnerabilities to the effects of climate change.
		23	Implement projects and programs which help the region adapt to climate change.

Regional Goals and Objectives

Westside - San Joaquin Region: 44			
Goal #	Goal	Objective #	Objective
1	Ecosystem restoration	1	Provide reasonable opportunity to advance ecosystem restoration through balanced project implementation.
2	Environmental and habitat protection and improvement	2	Develop Regional solutions that protect environmental and habitat concerns and provide potential for improvement.
3	Water supply reliability	3	Improve south-of-Delta water supply reliability by an average of 25%.
4	Flood management	4	Minimize risk of loss of life, infrastructure, and resources caused by significant storm events by utilizing uncontrolled flow beneficially.
5	Groundwater management	5	Maximize utility of Regional aquifers while reducing potential for overdraft.
6	Recreation	6	Consider recreational potential in project development.
7	Storm water management	7	Capture storm water for higher beneficial use whenever practicable.
8	Water conservation	8	Always promote and enhance water conservation.
9	Water quality improvement	9	Develop Regional solutions that provide opportunity for water quality improvement.
10	Water recycling	10	Always promote and enhance water recycling.
11	Wetlands enhancement	11	When possible, align projects to complement existing wetlands.

## Regional Goals and Objectives

Westside (Yolo, Solano, Napa, Lake, Colusa) Region: 45			
Goal #	Goal	Objective #	Objective
1	Acknowledge and respect the cultural values and resources of the Region.	1	Provide/promote use of educational curricula for K-12 students .
2	Improve education and awareness throughout the Region about water, watershed functions, and ecosystems and the need for sustainable resource management to protect community health and well-being.	2	Provide educational information to encourage stewardship by public.
3	Improve the collective understanding of watershed characteristics and functions (natural and human-induced) within the Region as needed to respond effectively to evolving water resources management challenges and opportunities (e.g., climate change).	3	Restore native vegetation/form/function in riparian/aquatic corridors.
4	Improve the form and function of degraded natural channels.	4	Quantify extent of suitable life-cycle habitat for threatened/endangered/imperiled (T/E/I) native fish.
5	Improve water-related public health across the Region and emphasize improvements for populations most in need.	5	Prioritize/plan/schedule improvements to life-cycle habitat for threatened/endangered/ imperiled native fish.
6	Preserve and enhance water-related recreational opportunities.	6	Increase availability of suitable life-cycle habitat for threatened/endangered/imperiled native fish.
7	Preserve, improve, and manage water quality to meet designated beneficial uses for all water bodies within the Region.	7	Prevent colonization by quagga/zebra mussels and eliminate/prevent spread of New Zealand mud snail.
8	Promote reasonable use of water and watershed resources.	8	Establish invasive plant management plan.
9	Protect and enhance habitat and biological diversity of native and migratory species.	9	Implement invasive plant management plan.
10	Provide reliable water supplies of suitable quality for multiple beneficial uses (e.g., urban, agriculture, environmental, and recreation) within the Region.	10	Create asset management plan for key water management infrastructure.
11	Reduce the risks of disruptive natural and human-caused disturbances affecting the Region's water resources, including flooding, fire, and significant institutional interruptions that reduce resources management services.	11	Meet 20% by 2020 conservation targets.
12	Support improved regional water management through governance throughout the Region that uses science and collaboration to make fair and equitable decisions and investments.	12	Increase adoption of agricultural best management practices (BMPs).

Regional Goals and Objectives

Westside (Yolo, Solano, Napa, Lake, Colusa) (Continued)			
Region: 45			
Goal #	Goal	Objective #	Objective
13	Support sustainable economic activities consistent with local and state government planning efforts within the Region.	13	Maintain and increase water-related recreational opportunities.
		14	Provide adequate flood protection.
		15	Manage watershed activities to reduce large erosion events.
		16	Monitor state/federal Delta programs.
		17	Monitor conditions/improve understanding to support sustainable groundwater basins.
		18	Maintain and enhance watershed and natural resource monitoring network and information sharing.
		19	Address pollutant sources to meet runoff standards and total maximum daily load (TMDL) targets.
		20	Minimize accidental wastewater spillage/discharges.
		21	Reduce public health risks by reducing contaminants in drinking water sources.
		22	Meet all drinking water and wastewater discharge standards.
		23	Provide 100% reliability of municipal and industrial (M&I) water supplies.
		24	Provide agricultural water supplies to support a robust agricultural industry.

Regional Goals and Objectives

Yuba County Region: 46			
Goal #	Goal	Objective #	Objective
1	Flood management	1	Protect Yuba County to the highest level achievable in an expeditious and cost effective manner that meets urban area mid-term flood protection goals (200-year) and contributes to the long-term goal (500-year protection).
		2	Account for uncertainty in predicting the magnitude of hydrological events.
		3	Operate and manage existing and proposed facilities to avoid coincident peak flows that exceed the channel capacities on the Yuba and Feather Rivers and to continue implementing the F-CO Program.
		4	Provide for significantly improved performance of levee systems under a full range of design loading conditions, and avoid increasing downstream flow and stage during peak-flow conditions.
		5	Incorporate environmental enhancements and adopt management measures that minimize environmental impacts and fully comply with environmental laws.
		6	Maximize benefits and reduce facility cost through use of local, state, and federal revenues, and equitably distribute costs with upstream and downstream interests when appropriate and practical.
		7	Streamline environmental permitting and compliance efforts.
		8	Secure FEMA certification of local levees.
2	Water supply reliability	9	Provide reliable and good-quality water for urban areas of the County as defined by the Urban Water Management Planning Act to meet current and future water demands in various year types (normal years, single dry year, and multiple dry years).
		10	Provide a reliable and good-quality water supply to ensure the long-term sustainable agricultural economy of Yuba County through 2030.
		11	Improve the self-reliance of the rural and isolated communities within the Plan Area to help them meet their local water infrastructure and water management goals through 2030 except in critical dry years. Many of these areas are disadvantaged and low income.
		12	Improve water supply reliability for the region and State by continuing to make surface water available to the EWA with increased operational flexibility for protection of the fisheries resources, and providing dry-year water supplies to state and federal water contractors.
3	Groundwater management	13	Achieve groundwater storage levels that result in a net benefit to basin groundwater users. YCWA intends to manage groundwater through conjunctive use activities to avoid unreasonable impacts that may occur from changes in groundwater elevations due to external water transfers.
		14	Maintain or improve groundwater quality in the basin for the benefit of groundwater users.
		15	Protect against potential inelastic land surface subsidence.
		16	Protect against adverse impacts to surface water flows.
4	Water quality protection and improvement	17	Identify and implement projects and programs that monitor and protect surface water quality.
		18	Identify and implement projects and programs that monitor and protect groundwater quality.
		19	Coordinate water quality monitoring and reporting efforts with existing programs.
5	Ecosystem restoration	20	Implement the Proposed Lower Yuba River Accord and provide local and statewide fishery benefits.
		21	Integrate ecosystems management objectives and environmental features into the Y-FSFCP and related flood management strategies.
6	Recreation and public access	22	Identify opportunities to provide safe, legal access to the Yuba River and other water bodies in the Plan Area while ensuring that the integrity of levee protection systems is maintained.
		23	Identify opportunities to highlight the natural features and unique historical character of the rivers and surrounding areas.
		24	Increasing use of recycled urban wastewater to reduce discharges into the Feather River or the groundwater basin.

Regional Goals and Objectives

East Stanislaus Region 47			
Goal #	Goals	Objective #	Objectives
1	Protect existing water supplies and water rights, and improve regional water supply reliability.	1	Provide a variety of water supply sources, including recycled water, to meet all current and future demands (urban, agricultural and the environment) under various hydrologic conditions.
		2	Promote the use of groundwater storage and conjunctive use options to reduce groundwater overdraft.
		3	Protect existing water rights.
		4	Implement water conservation plans for both urban and agricultural uses.
		5	Support monitoring and research to improve understanding of water supplies and needs.
		6	Address conveyance infrastructure needs.
2	Ensure flood protection strategies are developed and implemented through a collaborative process, utilizing both local and watershed-wide approaches designed to maximize opportunities for comprehensive water resource management.	7	Develop outlines of regional projects and plans necessary to protect infrastructure from flooding and erosion from the 100-year event.
		8	Work with stakeholders to preserve existing flood attenuation by implementing land management strategies throughout the watershed.
		9	Develop approaches for adaptive management that minimize maintenance requirements and protect water quality and availability while preserving and enhancing ecologic and stream functions, as appropriate.
		10	Provide community benefits beyond flood protection, such as public access, open space, recreation, agricultural preservation, and economic development.
		11	Protect, restore, and enhance the natural ecological and hydrologic functions of rivers, creeks, streams and their floodplains.
3	Protect and improve water quality for beneficial uses consistent with regional interests and the RWQCB Basin Plan in cooperation with local, state and federal agencies and regional stakeholders.	12	Meet or exceed all applicable water quality regulatory standards.
		13	Deliver agricultural water to meet water quality guidelines established by stakeholders.
		14	Aid in meeting Total Maximum Daily Loads established, or to be established, for the Tuolumne River watershed.
		15	Protect surface waters and groundwater basins from contamination and threat of contamination.
		16	Manage existing land uses while preserving or enhancing environmental habitats.
		17	Minimize impacts from storm water through implementation of Best Management Practices, Low Impact Development or other similar projects.
		18	Promote programs and projects to reduce the quantity and improve the quality of urban and agricultural runoff.
		19	Promote and support regional monitoring to further understanding of water quality issues.
4	Protect the environmental resources of the Stanislaus, Tuolumne, Merced and San Joaquin River watersheds by identifying, promoting and implementing opportunities to assess, restore and enhance natural resources of these watersheds.	20	Identify and incorporate (where possible and reasonable) opportunities to assess, protect, enhance, and/or restore natural resources when developing water management strategies.
		21	Minimize adverse effects on biological and cultural resources, including riparian habitats, habitats supporting sensitive plant or animal species, and archaeological sites when implementing strategies and projects.
		22	Identify opportunities for open spaces, trails and parks along creeks and other recreational projects in the watershed to be incorporated with water supply, water quality, or flood protection projects.
		23	Contribute to the long-term sustainability of agricultural, commercial, industrial, and urban land uses and activities within the basin.
		24	Identify opportunities to protect, enhance, or restore habitat to support all watersheds in the Region in conjunction with water supply, water quality, or flood protection projects.
		25	Support projects to understand, protect, improve and restore the region's ecological resources.
5	Implement and promote this IRWM Plan through regional communication, cooperation, and education.	26	Develop a forum for consensus decision-making and IRWM Plan implementation by regional entities.
		27	Build relationships with State and Federal regulatory agencies and other water forums and agencies to facilitate permitting of water-related projects and ensure continued consistency with state water plans.
		28	Facilitate dialogues between regional and inter-regional entities to reduce inconsistencies and conflicts in water management and to maximize benefits from water-related projects.
		29	Maintain avenues of communication with the general public and offering opportunities to provide feedback on the IRWM and water-related projects through the regional websites and other public forums.
		30	Identify opportunities for public education about water supply, water quality, flood management, and environmental protection.
6	Promote development and implementation of projects, programs and policies that are socially impartial and economically sound.	31	Support the participation of disadvantaged communities in the development, implementation, monitoring and long-term maintenance of water resource projects.
		32	Develop cost-effective multi-benefit projects.
		33	Consider disproportionate community impacts to ensure environmental justice.
		34	Maximize economies of scale and governmental efficiencies.
		35	Protect cultural resources.
		36	Reduce energy use and/or use renewable resources where appropriate.

## Appendix C – Description of DAC and Tribal Involvement in IRWM Planning (as of May 31, 2014)

The following summarizes DAC and Tribal involvement in IRWM planning by region. This information was obtained through review of adopted IRWM plans and draft IRWM plan updates available as of May 31, 2014. These summaries represent a snapshot in time and may not be fully representative of current DAC or Tribal involvement in specific IRWM regions.

Region ID*	Region Name	DAC Involvement	Tribal Involvement
1	American River Basin (ARB)	DACs in the ARB region are generally not isolated communities with particular water supply or water quality concerns and are generally served effectively by water purveyor efforts to provide high-quality water supplies. Some DACs or individuals that would be considered disadvantaged reside in very small pockets of the region, served by a small water system and/or private wells. The region prepared and maintains a DAC contact and mailing list to encourage participation through direct solicitation, such as mailings, email, or phone calls. Also, ARB stakeholders and project proponents are encouraged to identify projects with the potential to address DAC needs.	The ARB region has two federally recognized Tribes. These include the United Auburn Indian Community of the Auburn Rancheria (UAIC) and the Wilton Rancheria. Regional Water Authority (RWA) contacted these Tribes via invitation letter in June 2011 and extended the invitation to participate in the IRWM plan development. Additionally, RWA contacted a consultant to discuss UAIC water resource-related issues in May 2011. No issues were identified at that time. RWA intends to continue direct outreach to these Tribes to identify if opportunities to collaborate exist during implementation of the ARB IRWM plan.
2	Antelope Valley	Identified DACs in the region include the unincorporated communities of Boron, Lake Los Angeles, Littlerock, Mojave, and Roosevelt, as well as portions of the City of Lancaster and City of Palmdale. A DAC outreach committee was formed as part of the IRWM plan update. The purpose of the DAC outreach committee was to assist with data collection, outreach efforts, education of target audiences in DAC regions, and project solicitation in DAC areas. Additional efforts were made by the region to outreach to rural and isolated communities, regardless of DAC status.	There are no formal Native American reservations or Rancherias identified within the Antelope Valley IRWM region. However, invitations were extended to those Native Americans who did express interest in the Antelope Valley IRWM planning efforts.
3	Anza Borrego Desert	The plan identified the entire Borrego IRWM region as a DAC based on the annual household income being less than 50% of the statewide annual median household income.	The Borrego IRWM plan does not identify any Tribes within the region and does not provide a section in the plan addressing tribal involvement.

Region ID*	Region Name	DAC Involvement	Tribal Involvement
4	Yosemite-Mariposa	<i>Plan Development In Process</i>	
5	Coachella Valley	<p>Six cities in Coachella Valley qualify as DACs using the 2006-2008 American Community Survey data: Cathedral City, Coachella, Desert Hot Springs, Indio, Palm Desert, and Palm Springs. An additional eight unincorporated communities were identified as DACs using data from the 2010 Nielsen Update Demographics: Desert Edge, North Shore, Mecca, Sky Valley, Thermal, Thousand Palms, and Vista Santa Rosa. As part of the IRWM planning process, the region included representatives from two different Issues Groups to consider and scope the final issues, goals, and objectives of the IRWM plan. One of the Issues Groups included representatives for disadvantaged communities (DACs).</p>	<p>The region includes five Indian Reservations (Torres-Martinez Desert Cahuilla, Cabazon Band of Mission, Augustine Band of Cahuilla, Agua Caliente Band of Cahuilla, and Twenty-Nine Palms Band of Mission Indians), and two Tribal Lands (Santa Rosa and Morongo). The region created an Issue Group focused on Native American Tribes' special needs including cultural water uses. Tribal leaders and the U.S. Bureau of Indian Affairs staff attended several meetings throughout the IRWM plan development process.</p>
6	Cosumnes American Bear Yuba (CABY)	<p>DACs in the CABY region include River Pines, Plymouth, Kirkwood, Grizzly Flats, Soda Springs, Graniteville, Washington, North San Juan, Grass Valley, Rough and Ready, Penn Valley, Newcastle, North Auburn, Downieville, Alleghany, Pike, Dobbins, and Camptonville. Four of the 18 DACs in the region are part of the region's IRWM Planning Committee, while the rest were encouraged to participate in meetings and project development activities. Outreach to DACs has included face-to-face meetings with DAC staff, boards of directors, and volunteer representatives on a regular basis. The IRWM plan includes 12 projects that originate from and/or benefit DACs in the region. CABY has also created a DAC Work Group that now includes representatives from most of the DACs in the region. CABY staff continues ongoing outreach to expand participation.</p>	<p>Initial Tribal outreach efforts in the region included direct outreach to Federally Recognized Tribes (FRTs). Those efforts did not result in sustained communication or collaboration with FRTs. The Tribal entities contacted during the outreach process include the Buena Vista Rancheria, Wilton Rancheria, Miwok Tribe of the El Dorado Rancheria, Lone Band of Miwok Indians, Jackson Band of the Mi-Wuk, Nashville-El Dorado Miwok, Strawberry Valley Rancheria, Colfax-Todds Valley Consolidated Tribe, Tsi-Akim Maidu, Shingle Springs Band of Miwok, Washoe Tribe of Nevada and California, Nevada City Rancheria: Nisenan Tribe, and the Tyme Maidu/Berry Creek Rancheria. A second round of outreach focused on project development and involved both FRT and Non-federally Recognized (NFRT) members. This effort produced several Tribally designed projects. However, participation in project development did not translate into participation in the Planning Committee meetings. A third round of outreach was designed and coordinated by the California Environmental Indian Alliance. This third effort included</p>

Region ID*	Region Name	DAC Involvement	Tribal Involvement
			<p>outreach to not only Tribal members resident to the CABY region, but also to Tribal members with ancestral links to the region. This round of outreach did not meet the desired outcomes and did not result in ongoing working relationships between the CABY Planning Committee and Tribal members. A fourth round of collaboration will be undertaken with the objective of identifying meaningful opportunities for engaging CABY Tribal members in the planning process.</p>
7	East Contra Costa County	<p>The East Contra Costa County (ECCC) region faces special challenges as there are many DACs in the region. Census tract groups that qualify as DACs cover an area of 41,079 acres, or approximately 19 percent of the geographic area of the region and approximately 23 percent of the total population. DACs include the Beacon West community on Bethel Island, as well as portions of Bay Point, and the cities of Antioch and Pittsburg. The primary water supply and water quality issues facing DACs relate to a strong reliance on Sacramento-San Joaquin Delta supplies, a need to maintain compliance with applicable drinking water standards, and the threat of damage from flooding. The ECCC region has maintained a transparent and open process in which DAC representatives are always welcome, and the project Web site allows 24-hour access to information.</p>	<p>There are no tribal communities currently identified in the region. However, there is a rich history of Native American occupation in the region, including the Kellogg Creek National Historic District located in the Los Vaqueros watershed.</p>
8	Eastern San Joaquin	<p>According to Census data from 2000, approximately 45 percent of households in the region can be classified as DACs, including portions of Thornton, Walnut Grove, the City of Lodi, the City of Stockton, Lathrop, and Manteca. Although the region's IRWM plan does not describe specific targeted outreach to DACs, the region regularly provides information to stakeholders and the general public through many avenues, including paper mailings, email, website announcements, newsletters, and press releases.</p>	<p>No Tribes are identified within the region and no further Tribal information is available in the region's IRWM plan.</p>

Region ID*	Region Name	DAC Involvement	Tribal Involvement
9	Gateway Region (GWMA)	<p>Approximately 47 percent of the households within the larger Gateway region are considered disadvantaged. The region outlines a specific task to make sure that the water-related needs of DACs in the region are considered and that mitigations are in place if projects hinder or adversely impact DACs.</p>	<p>GWMA contacted the Native American Heritage Commission (NAHC) and received a list of representatives for the Gabrieleno-Tongva Tribe. These contacts were notified of all meetings and activities and invited to participate as a stakeholder during and after the IRWM plan development. While there are Tribal interests and residents in the region, there are no Tribal reservations or facilities within the Gateway region.</p>
10	Greater Los Angeles County (GLAC)	<p>DACs are located throughout the region. A DAC Subcommittee provides direction and oversight to the region for DAC outreach activities including the DAC Outreach Evaluation Program. The DAC Subcommittee also facilitated and supported several efforts to help identify DAC representatives that could speak about DAC issues relative to water management. Additionally, the region created a DAC Coordinator position to function as a liaison between the region and DACs. The DAC Coordinator participates in reviewing DAC projects for consideration for implementation funding. The GLAC region applied for and received specialized funding from DWR to develop and implement a draft DAC outreach process as a pilot program that could then be used to revise the process based on lessons learned.</p>	<p>The GLAC region contacted the NAHC to determine if the region was home to any Tribes or Tribal interests. The response from the NAHC indicated that the region is not home to any current Tribes or Tribal lands. A letter explaining the IRWM plan update process was sent to parties on a listing provided by NAHC of individuals with Tribal interests in the region.</p>
11	Greater Monterey County	<p>Four DACs have been identified in the region from US Census data and an additional 20 DACs were identified from a tract-level search using 2006-2010 American Community Survey (ACS) data. More than half of the region's proposed IRWM projects address DAC objectives, either directly or indirectly, and all projects are reviewed for potential impacts to DACs and potential environmental justice concerns as part of the project review process. Thus far, no potential impacts to DACs or environmental justice concerns have been found in any of the projects submitted to the region. Numerous benefits to DACs are expected to result</p>	<p>The Monterey County population is comprised of about 1.3 percent Native American residents and the region encompasses a number of historic, cultural, and Native American sacred sites. The region has consulted with the California NAHC and is working to include representatives of the Ohlone/Costanoan, Esselen, and Salinan Nation Tribe in the IRWM planning process and project review process.</p>

Region ID*	Region Name	DAC Involvement	Tribal Involvement
		from implementation of the IRWM plan.	
12	Imperial	Currently 18 out of the 19 county subdivisions in the region contain DACs, 10 of which are classified as severely disadvantaged (less than 60% of the statewide median household income). A needs analysis for DACs was conducted early in the IRWM planning process to identify DACs for inclusion. The region compiled a DAC Needs Analysis Report based on interviews with DACs. The report describes the current state of each of the systems (stormwater, wastewater, and potable water systems), system notes, system issues/concerns, and list of priority projects that have a specific focus on DACs.	No Tribes are identified within the region and no further Tribal information is available in the region's IRWM plan.
13	Inyo-Mono	All of Inyo County is classified as a DAC. The Inyo-Mono RWMG has prioritized outreach to and engagement of DACs and Tribes since its inception in 2008. The DACs in the Inyo-Mono planning region include unincorporated communities in the counties of Inyo, Mono, San Bernardino, and Kern, as well as federally-recognized and non-federally-recognized Native American Tribes. Throughout the pre-planning and planning phases, effort has been made to reach out to DACs; share information about IRWM program activities, objectives, and funding opportunities; and, more importantly, listen to their water-related needs and concerns. Program office staff has targeted outreach to DACs both with individual meetings/presentations and through the larger outreach campaign initiated in 2010.	There are several federally and non-federally recognized Tribes in the region that contribute significantly to the economy and culture of the region. These groups have also been involved in regional water issues for centuries. As such, it was recognized early in the IRWM planning process that Tribal involvement in the RWMG is imperative. Targeted outreach efforts yielded good results; all Tribes in the region except two are signatories to the Inyo-Mono MOU.
14	Kaweah River Basin	<i>Plan Development In Process</i>	
15	Kern County	The RWMG contracted with a professional facilitation consultant for outreach to DACs, underserved communities, traditionally isolated communities or rural communities, severely disadvantaged communities (SDACs), and Native American Tribes. The IRWM plan identifies 27 DACs, two-	Local Tribes include the Tubatulabals, the Paiutes, the Chumash, and the Yokuts. The Tubatulabals are participants in the IRWM plan. In May 2009, DWR, the Tubatulabals of Kern Valley, and the North Fork Mono Tribe hosted a Tribal Water Regional Planning day. Due to non-federally recognized status for many of

Region ID*	Region Name	DAC Involvement	Tribal Involvement
		third of which are SDACs (defined as having household incomes of less than 60% of the state mean household income). Many of the DACs that have been contacted have had continuous representation at the stakeholder meetings. Additionally, representatives from the Kern region are participating actively in the Tulare Lake Basin DAC Water Study to help develop regional solutions to DAC water and wastewater challenges. These findings will be incorporated into the IRWM plan.	the local Tribes, federal and state funding is very limited.
16	Madera	No DACs are identified within the region.	The IRWM plan references an agreement between Madera County and the Chukchansi Tribe of the Picayune Rancheria to conduct an evaluation of groundwater, but there is no indication that they or any other Tribes are involved in the IRWM planning efforts.
17	Merced	The majority of the Merced Region currently qualifies as a DAC. Communities in the Merced Region which meet the State's definition of a DAC are Planada, Winton, Le Grand, El Nido, Livingston, Merced, Atwater and Snelling. Additionally, the communities of Franklin/Beachwood and Stevinson are considered by the Merced Region to be DACs based on location knowledge of economic conditions. Environmental justice is addressed by ensuring that all stakeholders have access to the MIRWMP planning decision-making process and that minority and/or low-income populations do not bear disproportionate adverse human health or environmental impacts from Plan and project implementation. The commitment of the RWMG to providing benefits to DACs now and in the future is evidenced by the MIRWMP objective of addressing water-related needs of DACs and the inclusion of two DAC scoring criteria in the project prioritization process.	There are no California Native American tribal communities within the Merced Region. As such, implementation of the MIRWMP will not directly benefit or impact California Native American tribal communities. Plan and project implementation does, however, have the potential to benefit or impact lands that were historically occupied by California Native American tribal communities. California Native American Tribes that had traditional lands in the Merced Region include the Dumna Wo-Wah Tribal Government, the North Valley Yokuts Tribe and the Chowchilla Tribe of Yokuts.
18	Mojave	The inclusion and participation of DACs is considered essential to the Mojave IRWM plan process, as more than half of the region qualifies as a DAC. The	There are no Tribal reservations or lands identified in the region; however, artifacts relating to the San Manuel Band of Mission Indians have previously been

Region ID*	Region Name	DAC Involvement	Tribal Involvement
		<p>DACs identified in the region include Adelanto, Barstow, Daggett, El Mirage, Hinkley, Johnson Valley, Joshua Tree, Kramer Junction, Landers, Lenwood, Lucerne Valley, Newberry Springs, Oro Grande, Pinon Hills, Pioneertown, Yermo, Yucca Valley, and portions of Apple Valley, Hesperia, Phelan, and Victorville. Numerous efforts have been conducted to identify needs of, seek input from, and communicate with DACs in the region. The region held three DAC-specific public meetings at different locations as part of the IRWM plan update process. The region also outreached to DACs through informational invitations mailed and emailed to individuals and water agencies servicing known DACs.</p>	<p>encountered in the project work within the region. The region intends to include this Tribe in its stakeholder outreach as part of the ongoing IRWM plan update process.</p>
19	Mokelumne/ Amador/ Calaveras (MAC)	<p>The cities or communities of Jackson, Plymouth, Sutter Creek, Drytown, Sutter Creek, Martell, Buena Vista, Camanche North Shore, Lake Camanche Village, West Point, Rail Road Flat, San Andreas, and Dorrington are DACs. Kirkwood, Avery, Angels, and Murphys are DACs that are partially located in the MAC region. The region has created a Community Outreach Plan to supplement its IRWM planning efforts. One major aspect of the Outreach Plan includes ensuring that the interests of DACs are represented and accounted for in the IRWM plan by soliciting involvement of DAC representatives in the Regional Participant Community (RPC). RPC members are encouraged to advocate for DACs that do not have designated RPC representatives but lie within the RPC member's jurisdiction. RPC representatives are also encouraged to inform DACs of the IRWM program through flyers and newspaper notices.</p>	<p>Focused outreach to Native American Tribes within the MAC region was completed as part of the plan update. The three federally recognized Tribes within the MAC region include the Lone Band of Miwok Indians, the Jackson Rancheria Band of Miwok Indians, and the California Valley Miwok Tribe (also known as the Sheep Ranch Tribe). The region has created a Community Outreach Plan to supplement its IRWM planning efforts. One major aspect of the Outreach Plan includes ensuring that the interests of Tribes are represented and accounted for in the IRWM plan by soliciting involvement of Tribal representatives in the RPC. RPC members are also encouraged to advocate for Tribes that do not have designated RPC representatives but lie within the RPC member's jurisdiction. RPC representatives are also encouraged to inform Tribes of the IRWM program through flyers and newspaper notices. Although none of the federally-recognized Tribes is actively engaged in the planning process, the RPC have sought to minimize impacts to these communities and provide for equitable benefits associated with project implementation.</p>

Region ID*	Region Name	DAC Involvement	Tribal Involvement
20	Monterey Peninsula, Carmel Bay, and South Monterey Bay	There are four census tracts in the region that qualify as DACs. These four tracts are found in parts of the cities of Monterey, Sand City, and Seaside (two tracts are in Seaside). Each of these tracts are represented on the region's Technical Advisory Committee (TAC) and Stakeholder Group.	No Tribes are identified within the region and no further Tribal information is available in the region's IRWM plan.
21	North Coast	Of the ten counties in the region, only Marin and Sonoma do not qualify as disadvantaged. Mechanisms for outreach and involvement of DACs in the region include the region's website, more than 10 public workshops held throughout the region, one-on-one technical assistance to project proponents, and direct phone, email, and in person communication with agencies and individuals. The region has a goal specifically targeted at DACs and environmental justice, and further supports DAC benefits through their proposed projects list. Potential benefits to DACs from IRWM project implementation include improvements to salmonid fisheries, water quality, water supply, and compliance with state and federal regulations.	The North Coast region has a significantly higher percentage of Native American residents than that of the state's 1 percent; about 4 percent of residents identify themselves as Tribal members. The two largest Native American reservations in California are located in the North Coast region, and include the Hoopa Reservation in Humboldt County and the Round Valley Reservation in Mendocino County. In total, there are 37 federally recognized Native American Tribes in the region. Outreach efforts have included summit meetings between elected representatives of cities and Tribes, in addition to information disbursement via the website, workshops, conferences, and printed materials. Active involvement in the IRWM planning process includes Tribal representatives from the Yurok Tribe and Hoopa Valley Tribal Protection Agency serving as IRWM plan reviewers.
22	Northern Sacramento Valley Group	Large portions of the region are "disadvantaged" and are located in the foothill and intermountain areas, in addition to the valley floor. DAC outreach is primarily conducted by County staff, building upon existing relationships. The Region's members are cognizant of potential management issues and differences due to various factors and are committed to ensuring a balance across the planning leadership, in the advisory and public input processes, and engagement of DACs.	Local Tribes and Tribal lands include the Berry Creek Rancheria, Redding Rancheria, Colusa Indian Community Council, Tsi-Akim Maidu, Cortina Rancheria, Maidu Nation, Enterprise Rancheria of Maidu, Honey Lake Maidu, Greenville Rancheria, Wadatjuta Band of the Northern Paiute of the Honey Lake Valley, Grindstone Indian Rancheria, Wintu Tribe of Northern California, Mechoopda Tribal Council, Shasta Indian Nation, Mooretown Rancheria, Shasta Nation, Nor-Rel-Muk Nation, Susanville Indian Rancheria, Paskenta Tribal Council, and Winnemem Wintu Tribe. Tribes were notified of the IRWM plan process and invited to participate in the stakeholder input meetings. The RWMG also attempted to involve Tribes in more

Region ID*	Region Name	DAC Involvement	Tribal Involvement
			<p>direct participation in the IRWM planning process, including an initial meeting with Tribal representatives in three different places throughout the region. A representative from the Colusa Indian Community Council is a member of the IRWM plan TAC and has been attending the Board Meetings. A representative from the Cortina Rancheria also frequently attends meetings.</p>
23	Pajaro River Watershed	<p>Based on data from the 2000 census, the City of Watsonville qualifies as a DAC. Other communities that are economically depressed, but do not qualify as DACs, include Freedom, Pajaro, Paicines, and San Juan Bautista. Numerous stakeholder groups throughout the Pajaro River Watershed were identified and contacted, including DACs and lower income areas. Several public announcements were published in regional newspapers to reach the stakeholders. The City of Watsonville is actively participating as a stakeholder and implementation partner in the IRWM planning process. They are also providing a member to the Stakeholder Steering Committee to facilitate coordination and collaboration among various stakeholder groups in the region.</p>	<p>The area around Soap Lake was previously inhabited by the Ohlone group of Indians. No further Tribal information is available in the region's IRWM plan.</p>
24	Poso Creek	<p>Much of the Poso Creek region qualifies as a DAC. Specific DACs in the region include Delano, Earlimart, Lost Hills, McFarland, Richgrove, Shafter and Wasco. None of these communities serve as members of the region's Resource Management Group (RMG), but the region has developed a specific project as part of the IRWM plan to help the economically-disadvantaged communities to qualify for grant funding by being participants in this regional planning process and to assist them by identifying and informing them of funding opportunities.</p>	<p>Approximately 1.5 percent of the population of Kern County is of Native American decent. No further Tribal information is available in the region's IRWM plan.</p>

Region ID*	Region Name	DAC Involvement	Tribal Involvement
26	San Diego	<p>Based on the 2010 Census data, eight of San Diego County's 18 incorporated cities are considered DACs or contain DACs; these cities are El Cajon, Imperial Beach, Oceanside, Carlsbad, Escondido, San Marcos, National City, and San Diego. Additionally, based on the same data, 24 of the 58 City of San Diego community planning areas (CPAs) and 18 of the 23 County CPAs are considered DACs or contain areas that qualify as DACs. In order to guide and assist outreach efforts in the County, the RWMG drafted the San Diego IRWM Public Outreach and Disadvantaged &amp; Environmental Justice Community Involvement Plan. The RWMG has worked directly with many organizations that are involved with addressing water-related issues of DACs and environmental justice (EJ) communities within the region, including: San Diego Coastkeeper, Environmental Health Coalition, Rural Community Assistance Corporation (RCAC), Jacobs Center for Neighborhood Innovation, Groundwork San Diego-Chollas Creek, WildCoast, and others. Targeted outreach has focused on identifying DAC issues, needs, and concerns, as well as ensuring DAC and EJ representation on the Regional Advisory Committee.</p>	<p>San Diego County features the largest number of Tribes and Reservations of any county in the United States. There are 18 federally-recognized Native American Tribal Reservations and 17 Tribal Governments, because the Barona and Viejas Bands share joint-trust and administrative responsibility for the Capitan Grande Reservation. These Reservation lands, which are governed by Tribal Nations, total approximately 127,000 acres or 198 square miles. Two additional Tribal Governments do not have federally recognized lands: 1) the San Luis Rey Band of Luiseño Indians (though the Band remains active in the San Diego region) and 2) the Mount Laguna Band of Luiseño Indians. As part of the 2013 IRWM plan development process, the RWMG contacted the 17 federally-recognized Tribal Governments in San Diego County through their respective EPA director, water director, or other environmental liaison. Increased participation of tribal groups is a goal moving forward in the San Diego IRWM Program. The La Jolla Band of Luiseno Indians served on the Regional Advisory Committee (RAC) until the composition of the RAC membership was reorganized under the RAC charter. The RAC charter ensures the RAC will always reserve a seat for a tribal representative, though that seat is currently vacant.</p>
27	San Francisco Bay Area	<p>While the mean household income (MHI) of each of the nine San Francisco Bay Area counties is well above the 80 percent threshold for DAC status in the State, there are DACs located in each county, with the majority of these communities located in Alameda and Contra Costa counties. Including DACs and water resource projects that serve DAC communities is a priority for the region. Outreach efforts include inviting DAC representatives to participate in all aspects of the IRWM planning process, making the IRWM planning process easy to understand through non-technical outreach materials, identifying and</p>	<p>The 2010 census estimates the number of American Indian and Native Alaskans in the region to be approximately 50,000 people. Tribal members are dispersed into the region's population and do not live in Tribal-specific communities. The region has a process for identifying Native American Tribes and Tribal members within the region's jurisdiction, including conducting interviews with knowledgeable contacts from NGOs and water agencies and reviewing publicly-available resources from Tribes and information provided by DWR's Tribal Liaison for the region. The Lytton Band of Pomo Indians currently owns land within</p>

Region ID*	Region Name	DAC Involvement	Tribal Involvement
		mapping the location of DACs, clarifying DAC project eligibility criteria, and conducting outreach and hands-on guidance to support identification and development of projects servicing DACs.	the region's geographic boundary and may have distinct water resource interests, needs, or challenges.
28	San Luis Obispo (SLO)	The communities of San Miguel, San Simeon, and Oceano, along with the City of San Luis Obispo all qualify as DACs. All four are signatory to the region's Memorandum of Understanding and are represented in the RWMG. All public outreach and communication efforts include and support the involvement of the SLO region's DACs.	Historically, the Chumash and Salinian Tribes were influential in the region. No further Tribal information is available in the Region's IRWM plan or draft plan update materials.
29	Santa Ana Watershed Project Authority (SAWPA)	Approximately 69 percent of the cities/communities within the region are considered disadvantaged or contain DACs. Nearly 1.5 million of the 5.4 million residents are considered disadvantaged, approximately 26 percent of the total region's population. Issues concerning DACs include funding, water quality, water supplies, water infrastructure, flooding and drought, and communication. In order to perform the widest possible assessment of the concerns from the residents of the minority and/or low income communities in the region, the watershed was divided into regions for investigation and meetings were held with local public agencies and residents to gain an understanding of their water quality and supply concerns. The IRWM Plan also provides information on best practices for DAC engagement and participation in the region.	The Soboba Band of Luiseno Indians, the San Manuel Band of Serrano Mission Indians, the Morongo Band of Mission Indians, and the Santa Rosa Band of Cahuilla Indians reside within the region. Just outside the communities of the Agua Caliente Band of Cahuilla Indians, the Cahuilla Band of Mission Indians, the Ramona Band of Cahuilla Mission Indians, and the Pechanga Band of Luiseno Indians. As part of the outreach process for the IRWM Plan, the four Santa Ana Watershed Tribes were contacted, although not all provided input to this document. Outreach was extended to neighboring Tribes, as well. The Soboba Band of Luiseño Indians joined forces with Eastern Municipal Water District, Lake Hemet Municipal Water District, and the federal Bureau of Indian Affairs for a Wastewater Treatment Plan project for the Round 2 Proposition 84 grant cycle. The project was awarded funding. The IRWM Plan also provides information on best practices for tribal engagement and participation in the region.

Region ID*	Region Name	DAC Involvement	Tribal Involvement
30	Santa Barbara Countywide	<p>The region contains several DACs including the cities of Guadalupe, Casmalia, Cuyama, and areas of Santa Maria and Lompoc. Targeted outreach to DACs was conducted to assist them in developing their own capacities and engage them in an on-going water dialogue regarding their water experiences, challenges, concerns and ideas for solutions to the obstacles facing the region. Another goal of DAC outreach is to have DAC stakeholders assist the region in the formative process for priority setting and identification of issues and regional objectives. The methods of outreach included emails, phone calls, publically posted meeting notices, frequent updates to the website, and presentations about the IRWM at various venues.</p>	<p>Targeted outreach was undertaken with the Santa Ynez Band of Chumash Indians. This was accomplished by phone calls and personal meetings. The region’s representatives made several calls to the Santa Ynez Band of Chumash Indians to set up focused meetings to discuss the update to the IRWM plan and potential projects.</p>
31	Santa Cruz County	<p>The City of Watsonville is the only area that qualifies as a DAC in the region. However, many other communities have a high percentage of households earning 'low', 'very low', or 'extremely low' incomes. Outreach to these communities has been performed by including IRWM outreach in the planning and outreach processes of other water planning efforts, a summit of nonprofit leaders, discussions between project proponents and local agencies and officials, and public notices of meetings. The region is currently trying to secure grant funding to conduct additional targeted outreach to DACs.</p>	<p>No Tribes are identified within the region and no further Tribal information is available in the region's IRWM plan.</p>

Region ID*	Region Name	DAC Involvement	Tribal Involvement
32	South Orange County Watershed Management Area	DAC involvement is an important part of the South Orange County IRWM planning process. The DACs of South Orange County are in the City of Laguna Woods. In order to develop a DAC Outreach Program that could be used countywide, Orange County Watersheds staff partnered with Latino Health Access, a local nonprofit organization established in 1993 to help meet the multiple health needs of the Latino community.	The state and federally recognized Juaneno Band of Mission Indians are participants in the IRWM planning process. The IRWM Group conducts ongoing outreach to Tribal representatives throughout the region. The IRWM Group solicits to local Tribes as part of the public outreach process. The public workshops aim to engage Tribal representatives in identifying the major issues and priorities of their lands, and how the priority projects may impact them.
33	Southern Sierra	<i>Plan Development In Process</i>	
34	Tahoe-Sierra	Approximately 58 percent of the region's population resides in the DACs of Kings Beach and the City of South Lake Tahoe. All projects planned and implemented in these areas include outreach to underserved populations in order to attempt to engage them in the stakeholder process. Involvement of DACs in the IRWM process is encouraged through engagement of appropriate local non-profits that can disseminate educational materials and provide resources and opportunities to become involved in planning efforts.	No Tribes are identified within the region and no further Tribal information is available in the region's IRWM plan.
35	Tule	<i>Plan Development In Process</i>	
36	Tuolumne - Stanislaus	A significant portion of the region qualifies as a DAC because the median household income is less than \$48,706 per the DWR criteria. The Planning Grant Committee convened a DAC outreach subcommittee to identify and develop a list of DACs throughout the region to improve DAC engagement in the IRWM planning process. All of the subcommittee participants are connected to a DAC: they are either a municipality that serves a DAC or provides community advocacy and benefits directly to DAC constituents. Subcommittee follow up teleconference calls were conducted to identify and discuss ways in which the region could reach out to DACs. These meetings were also used to assist DACs in developing projects for inclusion in the plan.	The Region is home to two Federally recognized Tribes, including the Chicken Ranch Band of Me-Wuk Indians and the Tuolumne Band of Me-Wuk Indians, and the non-Federally recognized Tuolumne Algerine Band of Yokut. In order to engage and identify issues that would benefit each Tribe, an initial letter was sent to each Tribal chairperson to introduce the IRWM process and request further communication. An initial tribal meeting was held with the Tuolumne Band of Me-Wuk Indians at which representatives of the Chicken Ranch Rancheria were present. This meeting was used to discuss Tribal issues and concerns, Tribal water-related needs, and identify opportunities to improve conditions for the Tribes. Since the initial meeting, the Tuolumne Band of Me-Wuk

Region ID*	Region Name	DAC Involvement	Tribal Involvement
			Indians has been an active attendee at the Planning Grant Committee meetings and submitted 2 projects for inclusion in the plan.
37	Upper Feather River Watershed	The entire Upper Feather River Watershed is considered a DAC due to high unemployment and low incomes, and is in need of environmental, economic, and social justice. The region seeks to restore ecological balance in the Upper Feather River Watershed and resolve existing environmental justice issues. The IRWM plan is built upon the seven mandatory plans, which included public and/or stakeholder involvement as an integral part of the planning process. However, potential obstacles to IRWM implementation exist, especially from private landowners, municipalities, and private corporations who may not feel direct and immediate benefits from implementation actions. Solutions to such obstacles are continuing to be pursued throughout the IRWM process.	American Indians and Alaska Natives constitute 3 percent of the region's population, with approximately 1,500 Maidu people in the region. A few families live on the Greenville Rancheria, but most are scattered around the traditional lands in the watershed, and around Oroville and Redding. IRWM plan outreach efforts to these communities is unclear.
38	Upper Kings Basin Water Forum (UKBWF)	Due to the lower income levels found in the San Joaquin Valley and the region, most communities meet the definition of a DAC. However, there is a significant difference in capacity between a large DAC such as the city of Fresno and a small severely disadvantaged community such as East Oroshi or Hardwick. The Kings Basin includes approximately 90 unique DACs. An emphasis has been placed on understanding the needs of the smaller DACs and SDACs. DAC representatives were identified and invited to attend the RWMG meetings. The opportunity to join the RWMG was also extended to DACs. The region also formed a DAC Work Group to prepare grant applications for DAC projects, perform studies to help DACs with water resources problems, and perform outreach to DACs.	There are no Native American Tribes located within the region, therefore no involvement or collaboration was directly conducted.

Region ID*	Region Name	DAC Involvement	Tribal Involvement
39	Upper Pit River Watershed	<p>Of the 17 communities in the region, four are categorized as DACs and nine as severely disadvantaged communities. Outreach was focused on the City of Alturas, Burney, and the community service districts which serve DACs across the region. All of the contacted DAC service districts or public works departments chose to actively participate through the Project Review Committee (PRC). Primary outcomes of the PRC for DACs included: development of templates to ensure consistency of project development activities, a system for collaborating on options for integration of projects over time, a strategy for sharing resources to advance conceptual projects, and opportunities to realize an economy of scale. In addition, two fundraising workshops were conducted – one within the PRC venue and another a two-day training given by an outside trainer. These trainings were specifically targeted at the DAC members of the PRC though other project sponsors also took advantage of the opportunity to attend. It is important to note that, as a result of the PRC, many of the affected DACs began to participate in other Plan development activities, including Plan document review.</p>	<p>The region includes the Pit River Tribe, which is a federally recognized Tribe composed of 11 autonomous bands located in northeastern California. Team members attended Tribal Council meetings where issues and concerns were identified and processes for ensuring project development were discussed. The Project Team also met with five Tribal staff numerous times in person and over the phone, and conducted two field visits – one with Tribal staff and one with the Council and staff to identify priority projects. In turn, Tribal representatives participated in numerous Project Review Committee meetings, attended RWMG meetings, provided substantial input into plan preparation (both through lengthy written comments as well as personal communications and attendance at key meetings), and worked with the assistance of team members to develop project materials to ensure that several Tribal projects would be eligible for inclusion in the plan.</p>
40	Upper Sacramento-McCloud	<p>Nearly all of the region can be considered disadvantaged or severely disadvantaged and includes the cities of Mt. Shasta, Dunsmuir, and unincorporated areas McCloud, Castella, Montgomery Creek, and Big Bend. Outreach to these entities began with the RAP process. Continual contact with these entities by the River Exchange and through collaborative outreach with other groups ensured that these communities were well integrated into the process early on, and consistently incorporated and included throughout. This outreach included individual phone calls, informative e-mails, process updates through other organizations, and one-</p>	<p>There are four tribes represented in the region: the Modoc Nation, the Shasta Tribe (represented by the Shasta Nation and the Shasta Indian Nation), the Pit River Tribes, and the Winnemem Wintu. These tribes began to be identified in the RAP process (though the Shasta Nation band of the Shasta Tribe was invited at the beginning of the planning process, in early 2012). Participation in the planning process has run from the limited participation of the Shasta Indian Nation, which attended a few planning meetings and did not submit any projects, to the Winnemem Wintu, a nation that has been quite active due to their partnership status on several projects and which submitted many comments on nearly all</p>

Region ID*	Region Name	DAC Involvement	Tribal Involvement
		to-one discussions in the project development phase to ensure that these communities had every opportunity to identify and describe their projects, thereby preparing them for future implementation opportunities.	chapter drafts. The Pit River Tribe representatives have attended most of the larger planning meetings but did not submit any projects. The Pit River Tribe has commented that their participation has been limited in part because of their inclusion in several IRWM regions, thus putting additional pressure on their staff resources.
41	Upper Santa Clara River	None of the communities within the geographic areas including the County of Los Angeles, the City of Santa Clarita, the Santa Clarita Valley, and the outlying areas of the watershed are DACs. While no DACs that met the strict state definition were identified, both the City of Santa Clarita and the County of Los Angeles have identified areas where particular outreach efforts are merited, due either to substandard infrastructure, substandard housing, or similar concerns.	Open channels of communication and good working relationships are already established between agencies/companies of the Santa Clarita Valley and the Tataviam Band of Mission Indians due to several development projects involving their lands. Invitations for the IRWMP meetings were extended; a representative from the group attended early stakeholder meetings and communication is maintained with the Tribe via email.
42	Upper Santa Margarita	The USMW Region has several communities and areas that have been identified as DACs according to DWR's guidance. These areas include the communities of Anza and Aguanga and portions of the cities of Murrieta and Temecula. DAC representatives are included on the IRWM Distribution List and receive all stakeholder communication. To further engage participation from representatives in these areas, the RWMG assigned Regional representatives to personally contact potential DAC representatives at both the city and community level. In particular, an effort to outreach to any special community based organizations of "pocket" groups that might best represent DAC interests was conducted. A fact sheet was also prepared that targeted DACs to inform them of how the IRWM program can help the DACs with their water resources needs, and encourage them to participate in the IRWM Program.	There are three tribal lands within the USMW Region including lands for the Pechanga Band of Luiseno Indians, the Cahuilla Band of Indians, and the Ramona Band of Cahuilla Indians. Tribal representatives are included on the IRWM Distribution List and receive all stakeholder communication. Previous IRWM plan development outreach resulted in a December 2008 agreement that will provide the Pechanga tribe with rights to water from the Upper Santa Margarita Watershed. As part of the 2014 Plan Update, the Region contacted tribal representatives to individually invite and encourage them to take part in the IRWM Plan Update. A fact sheet was also prepared that targeted tribal communities to inform them of how the IRWM program can help the tribal community with its water resources needs, and encourage them to participate in the IRWM Program.

Region ID*	Region Name	DAC Involvement	Tribal Involvement
43	Watersheds Coalition of Ventura County (WCVC)	There are several areas within the WCVC region that are considered DACs. Many of these DACs are part of larger areas served by a city, Ventura County, or other public or private water provider agencies and do not have unmet critical water supply or quality needs. Several unincorporated communities that qualify as DACs, including Piru and El Rio, have received targeted DAC funding in the IRWM grant program for wastewater treatment and septic to sewer conversion projects.	There are several Native American tribes represented in Ventura County including the Chumash, Barbareno and Ventureno Indians. Local tribal interests are loosely organized and consist primarily of individuals. These individuals are included in the outreach e-mails and periodically attend meetings. WCVC staff have met with these individuals to determine their primary interests and cultural values and preferences.
44	Westside San Joaquin	Three of the five counties and twelve of the 23 census tracts in the west San Joaquin Valley region are considered DACs. Improving water supply reliability and otherwise enhancing the conditions for production agriculture in this region has been identified as a way to expand the source of employment opportunities for these disadvantaged populations. No further information is available in the region's IRWM plan.	There are an estimated three-hundred descendants of the Coastanona (Ohlone) Tribes in the Santa Clara and San Benito counties near Mission San Jose, Mission San Juan Bautista, and Watsonville. No further information is available in the region's IRWM plan.
45	Westside (Yolo, Solano, Napa, Lake, Colusa)	A number of areas throughout the region are considered DACs, primarily located around the Clear Lake area. Other DAC areas are located in central and northern Yolo County as well as in the Middletown area of Lake County. The IRWM plan also outlines specific actions taken to reach out to DACs in the region.	The Tribal communities involved in the region's IRWM planning include Big Valley Band of Pomo, Yocha Dehe Wintun Nation, Scotts Valley Band of Pomo, Cortina Band of Wintun, Robinson Rancheria of Pomo, and the Suscol Intertribal Council. Specific outreach efforts to involve Tribes in the IRWM process are outlined in the IRWM plan.
46	Yuba County	DACs exist throughout the county. The DACs are widely disbursed on the valley floor among the agricultural lands. In the foothill and mountain areas, the DACs are small communities dotted along the transportation corridors. Because of the rugged terrain and low population density, these few populated areas define the economic conditions of the area. Stakeholder outreach efforts included public meetings, informational letters targeting stakeholder groups, briefs to public officials, and comment periods for draft review of the plan. Specific DAC groups are not specified as part of	No Tribes are identified within the region and no further Tribal information is available in the region's IRWM plan.

Region ID*	Region Name	DAC Involvement	Tribal Involvement
		the outreach effort.	
47	East Stanislaus	The region is home to many DACs, including the communities of Keyes, Bret Harte, Bystrom, Empire, Grayson, Shakelford, West Modesto, Riverdale Park, Cowan, Parklawn, Rouse, and portions of Modesto, Turlock, Denair, Hughson, Oakdale, Waterford, and Ceres. Involvement and participation of representatives of these communities during the planning process was solicited and encouraged to help understand the issues confronted by DACs and to better address the needs of minority and/or low-income communities.	There are no Tribal communities within the region. Formal letter communications were conducted to two Tribes with possible ties to areas within the region, but no response has been received to date. Continued efforts of various means will be used to locate and contact Native American interests within the region through ongoing and future efforts.
48	Fremont Basin	<i>Plan Development In Process</i>	
49	Lahontan Basins	<i>Plan Development In Process</i>	

\*Region No. 25 (Sacramento Valley) no longer exists and is absorbed into other regions.