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

Review of IRWM Planning and Implementation in California

February 2015

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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.

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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.

This document includes updated information based on feedback received during an open comment period that ended in October 2014. It has also been updated to include adopted IRWM plans revised/submitted by December 31, 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 October 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.

Paula J. Landis, P.E.
Chief, Division of Integrated Regional Water Management

Contents

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 December 2014, was reviewed to support Strategic Plan development efforts. This technical memorandum presents the results of the review.

*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.*

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 $993 million have leveraged about $4.0 billion in local and regional IRWM cost-share resulting in about 700 projects to improve water supply reliability, water quality, drought protection, regional self-reliance, public safety, and environmental stewardship.

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.

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 December 2014, 45 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 watershed management, and 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, invasive species control, and threatened and endangered species declines.

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 45 adopted plans, 39 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 (70%)
- "Ad-hoc" or informal agreements (13%)
- 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.

In general, Tribes are underrepresented in IRWM in many areas of the state. Based on the 45 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 45 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, Master Water Plans, Watershed Management Plans, and various supporting planning studies. 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 and to improve alignment of water resource management programs.

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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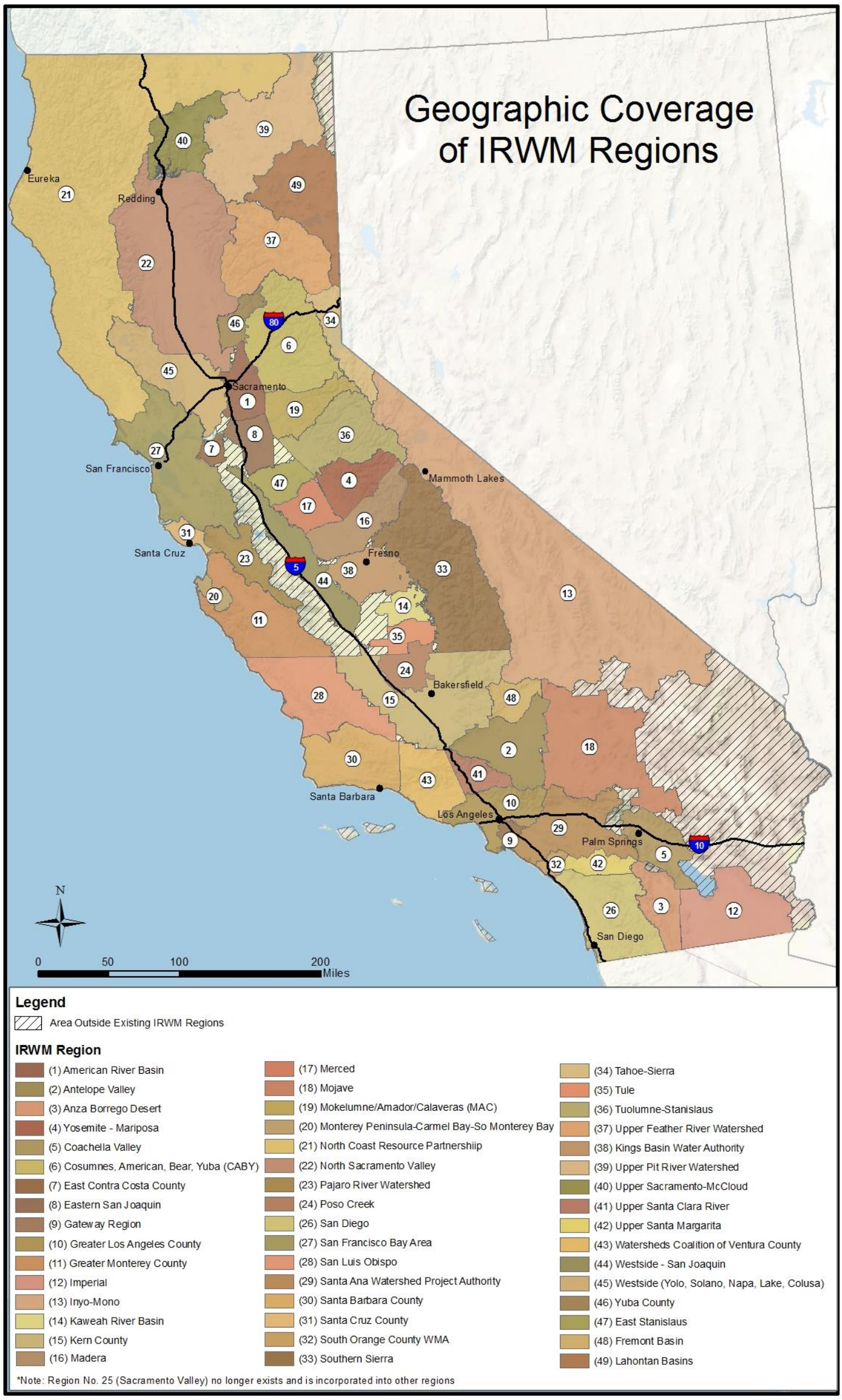

Figure 1 – Geographic Coverage of IRWM Regions

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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[2]	Total Project Cost[2]
Planning[1]	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
Total	250	$384,204,000	$2,193,922,000	$2,578,126,000

[1] *The planning grant summary does not include Integrated Coastal Water Management (ICWM) grants that were distributed as part of this round of funding.*
[2] *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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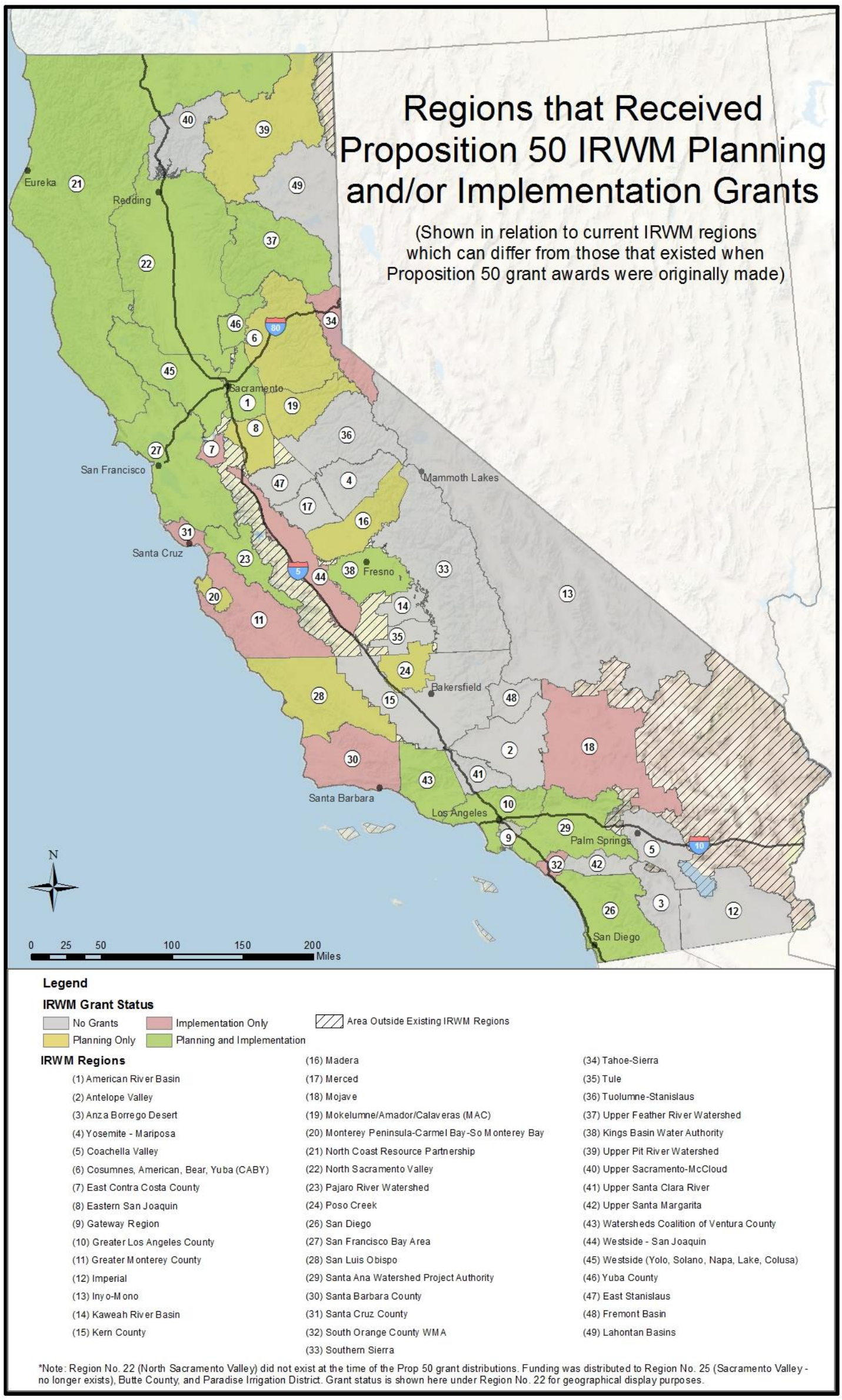

Figure 2 - Geographic Distribution of Proposition 50 Planning and Implementation Grants

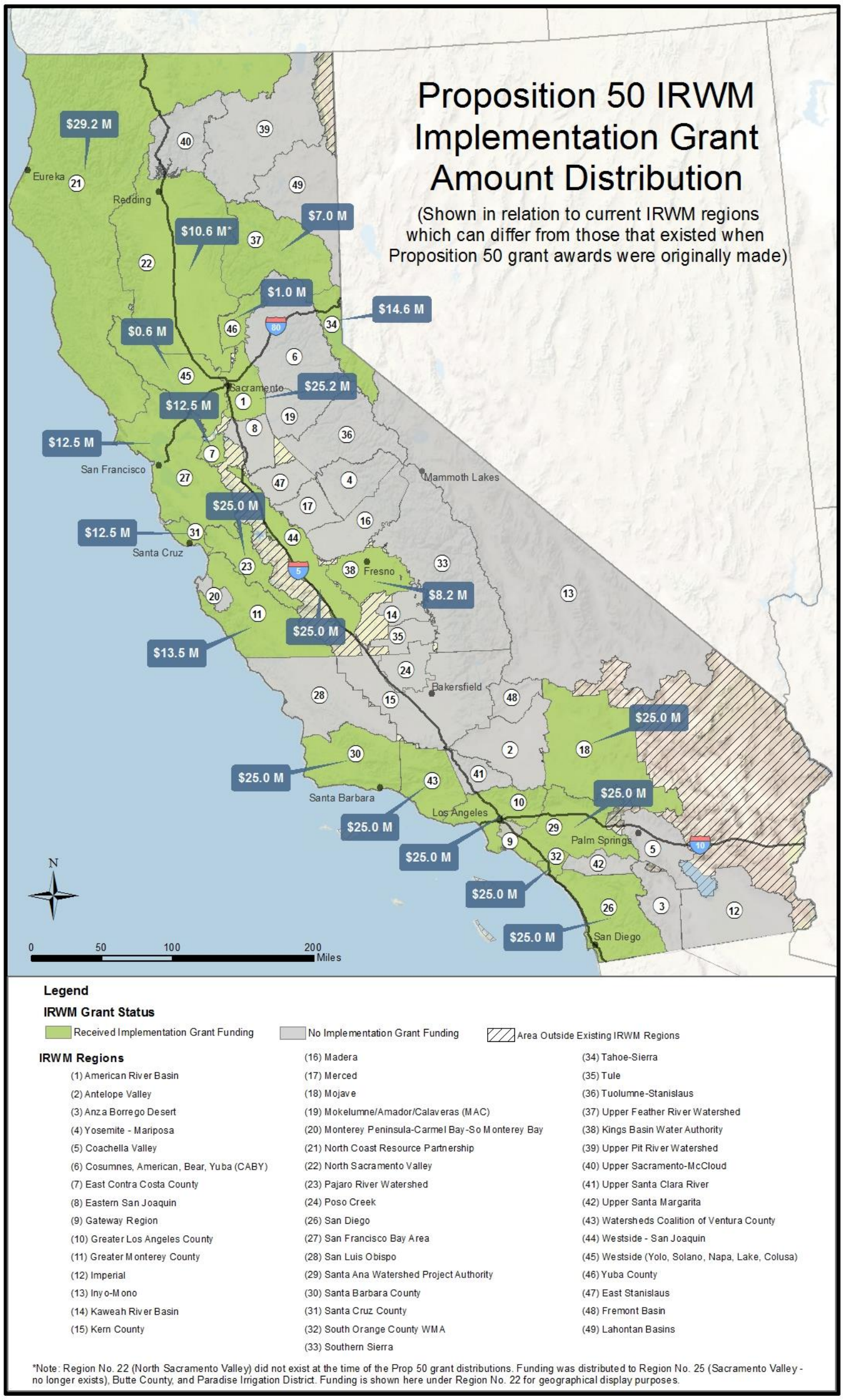

Figure 3 - Geographic Distribution of Proposition 50 Implementation Grant Amounts

Proposition 84

Total Proposition 84 grant awards for IRWM, as of December 2014, are listed in Table 2. A total of $30 Million was awarded for IRWM planning grants through two rounds of funding and about $580 Million was awarded for IRWM implementation grants through three 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. Round 3 implementation grants were awarded to 27 regions. Some regions received implementation grants from all three 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 December 2014, Dollar Amounts Rounded to the Nearest Thousand)

Project Type	Number of Projects	Grant Award Amount	Non-State Cost Match[1]	Total Project Cost[1]
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
Implementation Round 3	136	$221,113,000	$561,016,000	$782,129,000
Total	520	$608,886,000	$1,891,427,000	$2,500,314,000

[1] *These numbers are estimates based on available application information.*

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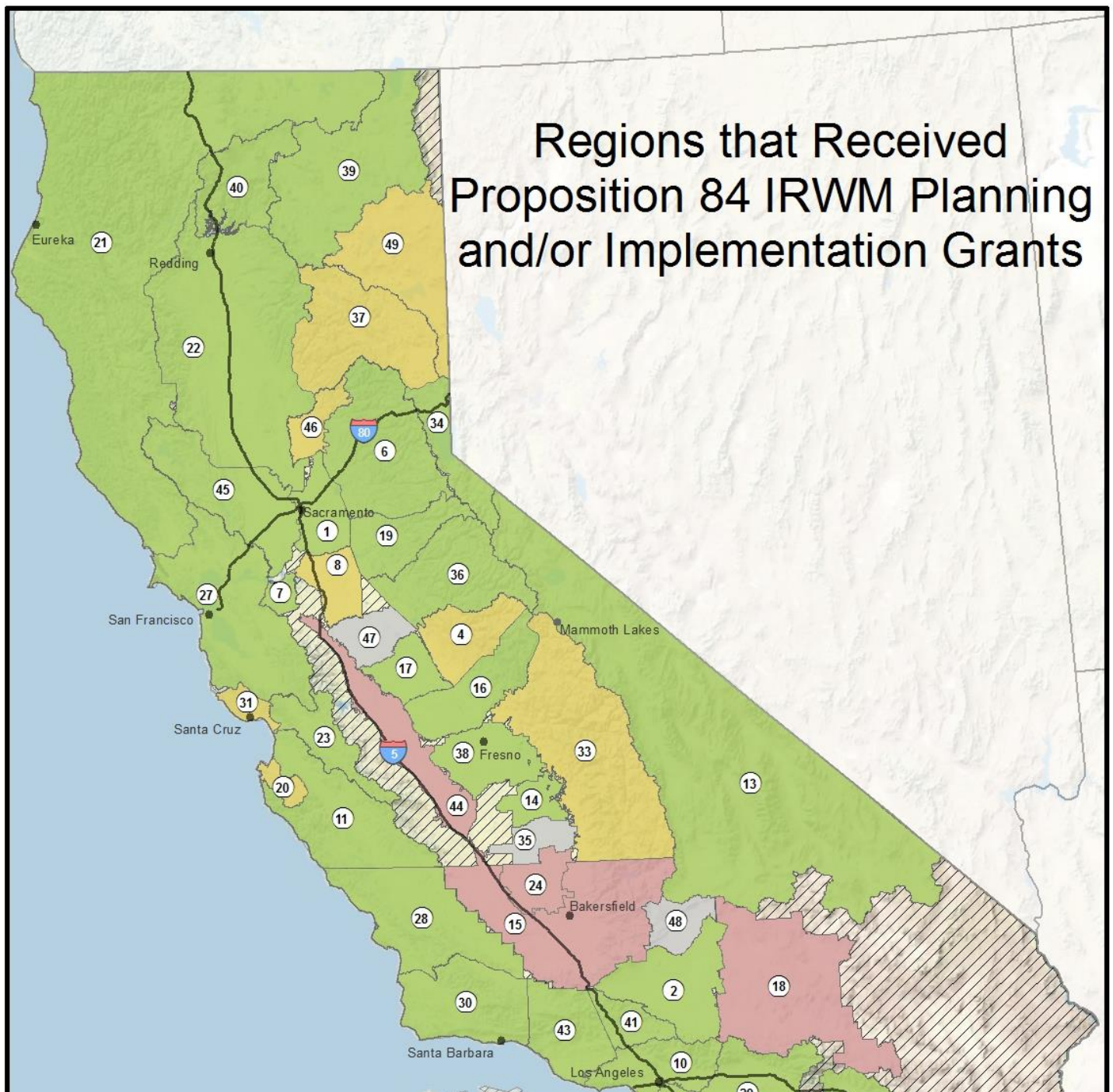

Legend

IRWM Grant Status

No Grants | Implementation Only | Area Outside Existing IRWM Regions
Planning Only | Planning and Implementation

IRWM Regions

(1) American River Basin
(2) Antelope Valley
(3) Anza Borrego Desert
(4) Yosemite - Mariposa
(5) Coachella Valley
(6) Cosumnes, American, Bear, Yuba (CABY)
(7) East Contra Costa County
(8) Eastern San Joaquin
(9) Gateway Region
(10) Greater Los Angeles County
(11) Greater Monterey County
(12) Imperial
(13) Inyo-Mono
(14) Kaweah River Basin
(15) Kern County
(16) Madera
(17) Merced
(18) Mojave
(19) Mokelumne/Amador/Calaveras (MAC)
(20) Monterey Peninsula-Carmel Bay-So Monterey Bay
(21) North Coast Resource Partnership
(22) North Sacramento Valley
(23) Pajaro River Watershed
(24) Poso Creek
(26) San Diego
(27) San Francisco Bay Area
(28) San Luis Obispo
(29) Santa Ana Watershed Project Authority
(30) Santa Barbara County
(31) Santa Cruz County
(32) South Orange County WMA
(33) Southern Sierra
(34) Tahoe-Sierra
(35) Tule
(36) Tuolumne-Stanislaus
(37) Upper Feather River Watershed
(38) Kings Basin Water Authority
(39) Upper Pit River Watershed
(40) Upper Sacramento-McCloud
(41) Upper Santa Clara River
(42) Upper Santa Margarita
(43) Watersheds Coalition of Ventura County
(44) Westside - San Joaquin
(45) Westside (Yolo, Solano, Napa, Lake, Colusa)
(46) Yuba County
(47) East Stanislaus
(48) Fremont Basin
(49) Lahontan Basins

*Note: Region No. 25 (Sacramento Valley) no longer exists and is incorporated into other regions

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

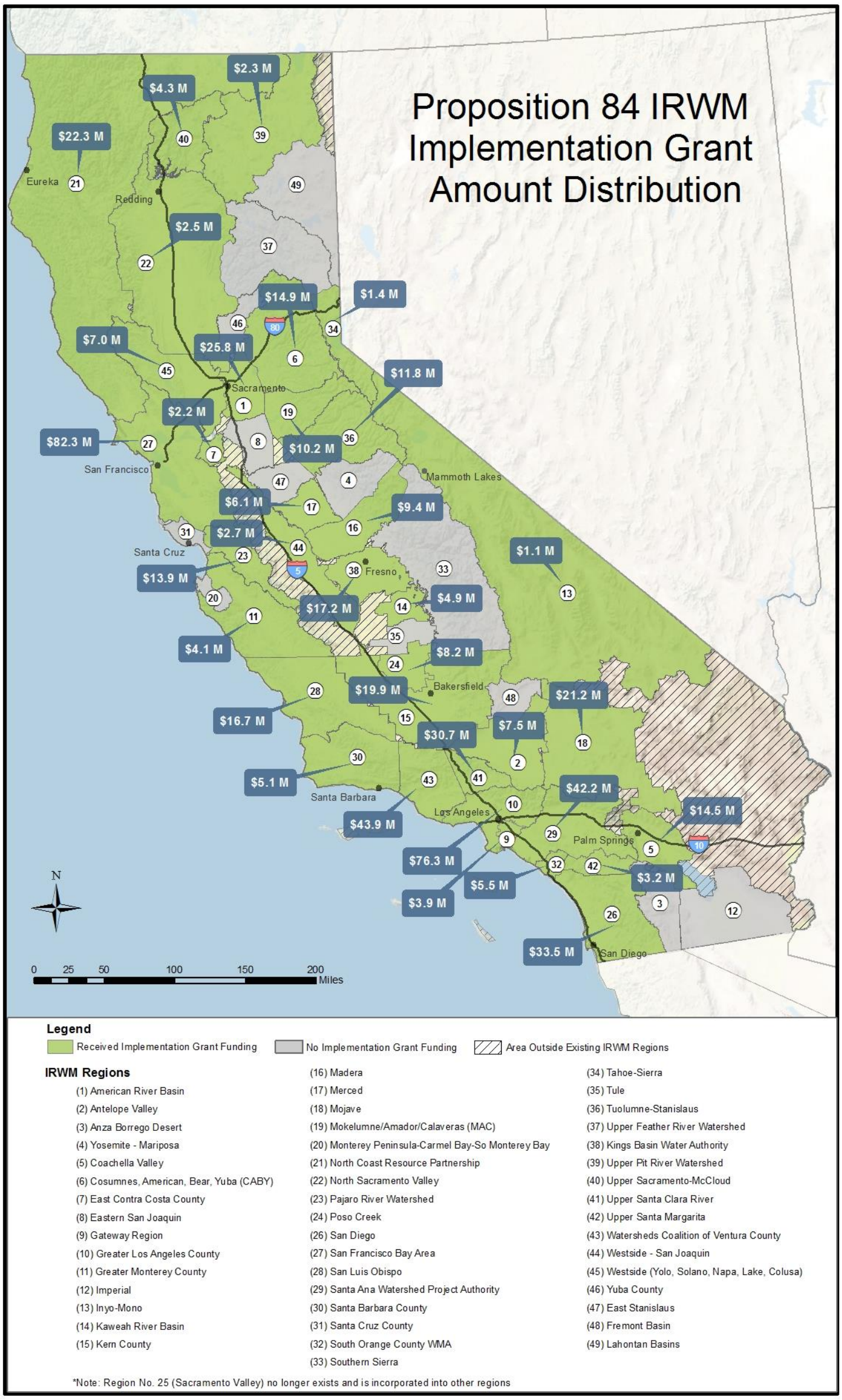

Figure 5 - Geographic Distribution of Proposition 84 Implementation Grant Amounts

General Information on Funded IRWM Implementation Projects

The IRWM Grant Program has funded about 700 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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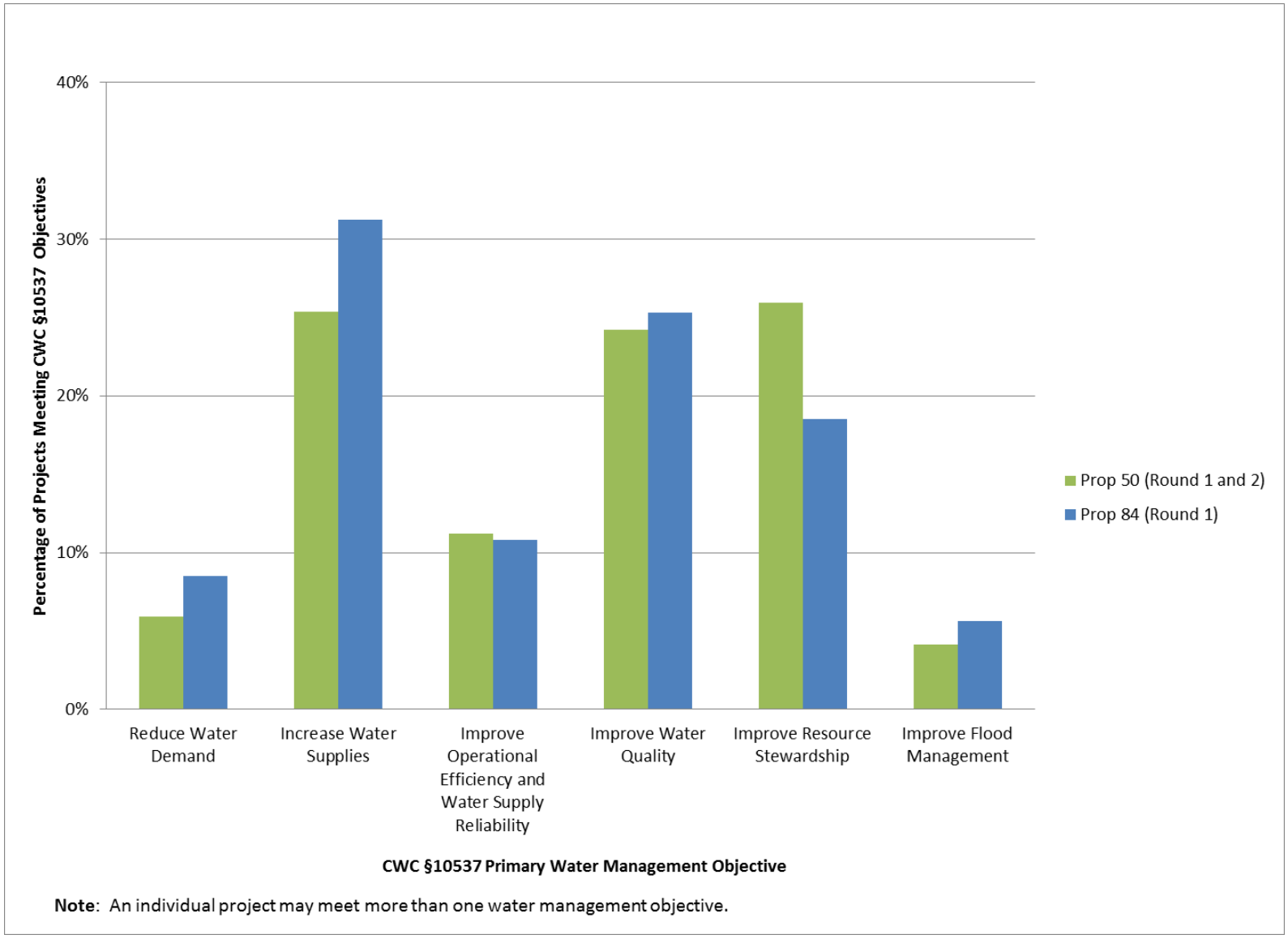

Figure 6 – Percentage of Grant-Funded IRWM Implementation Projects Meeting CWC §10537 Water Management Objectives

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 Round 1 and Round 2 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.

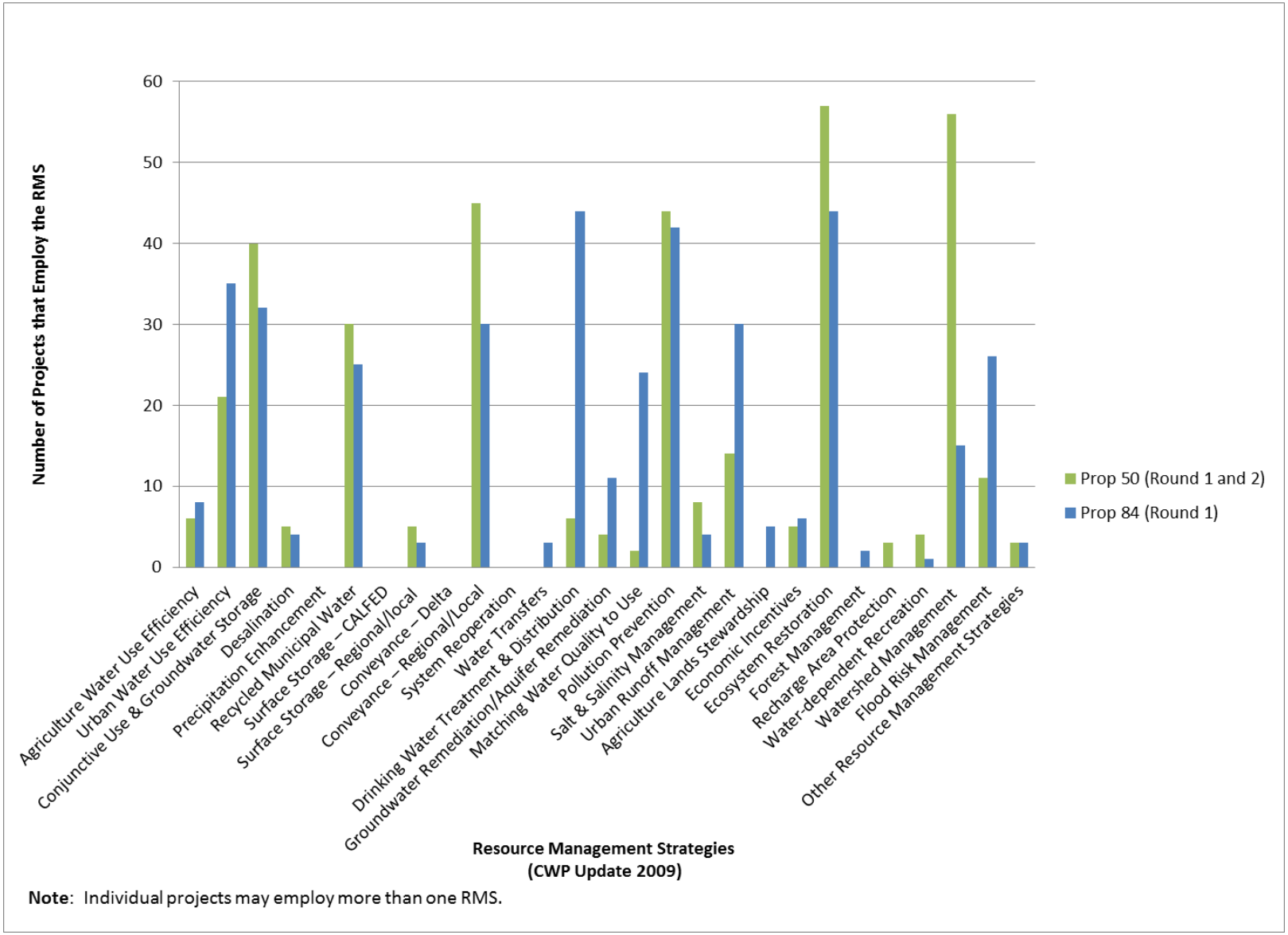

Figure 7 – Number of Grant-Funded IRWM Implementation Projects Employing CWP Update 2009 RMSs

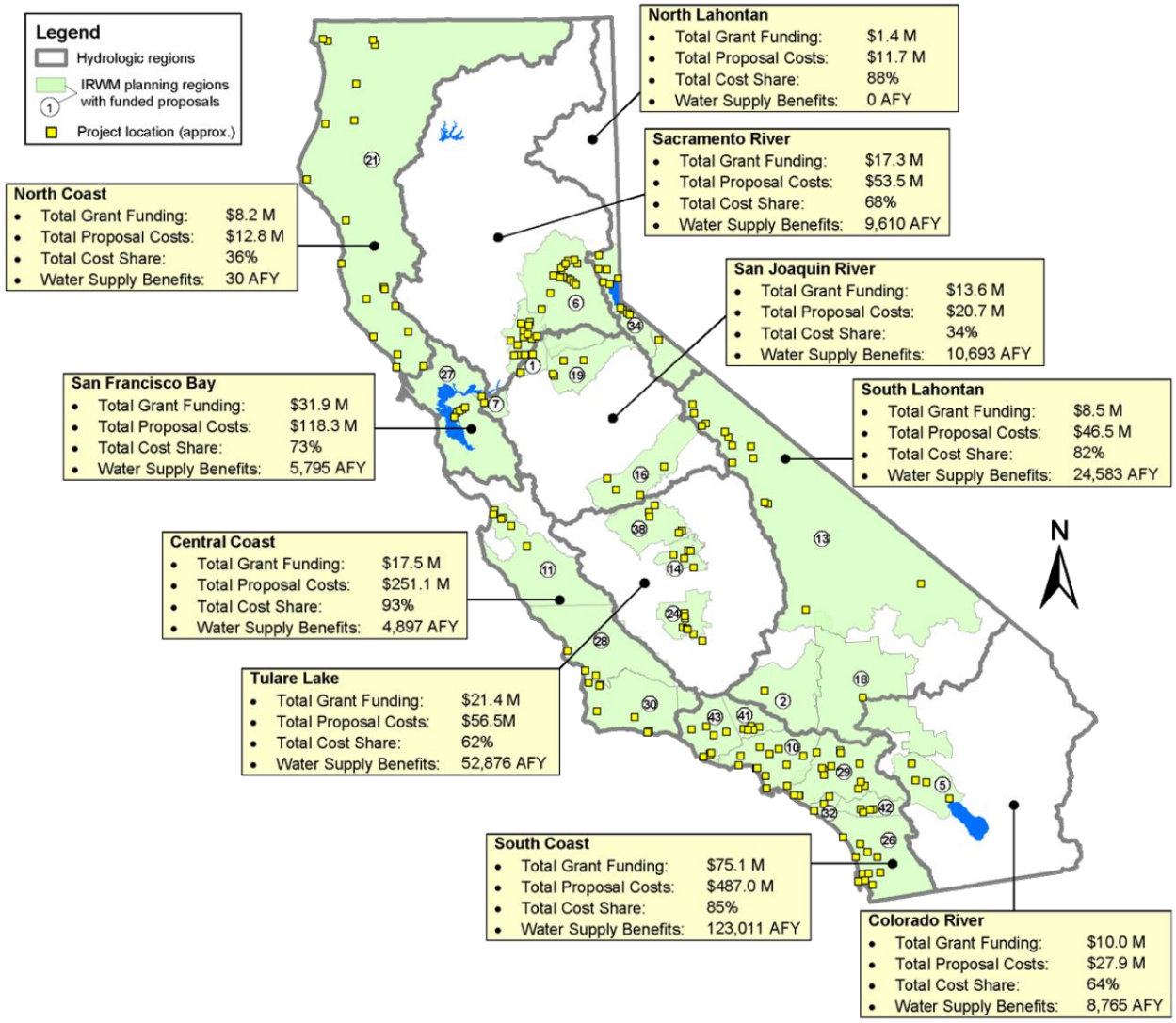

Figure 8 – Identified Water Supply Benefits of Proposition 84 Round 1 Grant-Funded Implementation Projects by Hydrologic Region

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 December 31, 2014, 45 of the state's 48 IRWM regions had adopted an IRWM plan pursuant to the 2002 IRWM Planning Act. The remaining 3 regions are in the process of developing their IRWM plan for the first time. There are 2 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 December 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	2014	2014	
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	2014	
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	2014	
14	Kaweah River Basin	2014	2014	
15	Kern County	2011	2011	
16	Madera	2008	2014	
17	Merced	2013	2013	

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

Region No *	Region Name	Year IRWM Plan First adopted	Most Recently Adopted Update	Current Activity
18	Mojave	2005	2014	
19	Mokelumne/Amador/Calaveras (MAC)	2006	2013	
20	Monterey Peninsula, Carmel Bay, and South Monterey Bay	2007	2014	
21	North Coast Resource Partnership	2007	2014	
22	Northern Sacramento Valley Group		2014	
23	Pajaro River Watershed	2007	2014	
24	Poso Creek	2007	2014	
26	San Diego	2007	2013	
27	San Francisco Bay Area	2006	2013	
28	San Luis Obispo	2005	2014	
29	Santa Ana Watershed Project Authority (SAWPA)	2005	2014	
30	Santa Barbara Countywide	2007	2013	
31	Santa Cruz County	2005	2014	
32	South Orange County Watershed Management Area	2005	2013	
33	Southern Sierra	2014	2014	
34	Tahoe-Sierra	2007	2014	
35	Tule			In Process
36	Tuolumne - Stanislaus	2013	2013	
37	Upper Feather River Watershed	2005	2005	Updating
38	Kings Basin Water Authority	2007	2012	
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	2014	
44	Westside San Joaquin	2006	2014	
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 incorporated into other regions.*

A cross-sectional analysis of the 45 IRWM plans in California, existing as of December 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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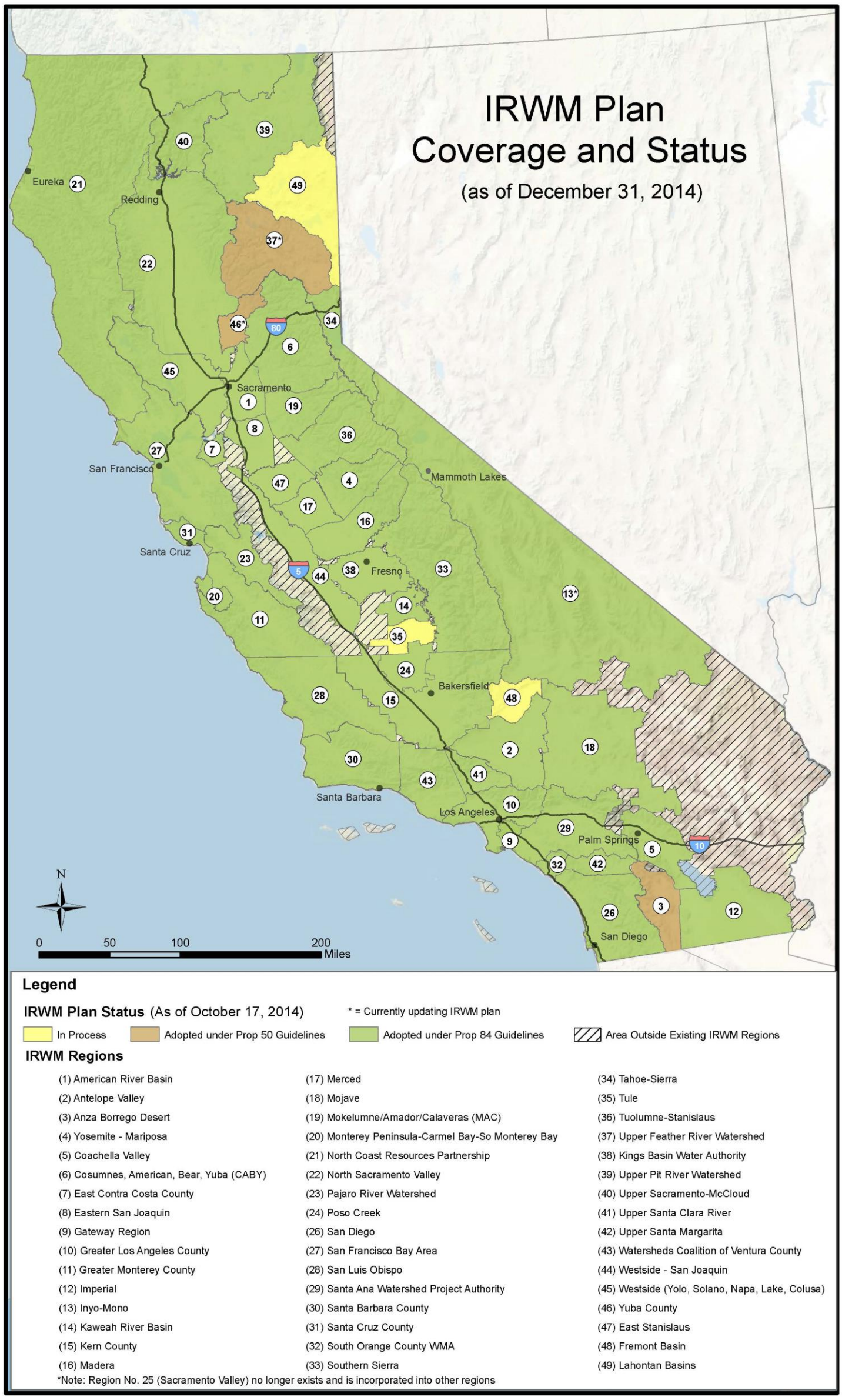

Figure 9 - IRWM Plan Coverage and Status (as of December 31, 2014)

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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:

- Water Supply Reliability: Ensuring the availability of long-term reliable water supplies for municipal, agricultural, industrial, environmental, and domestic uses.
- Groundwater Management: Protecting groundwater basins from critical overdraft and pollution (including related land subsidence and storage loss issues).
- Water Quality: Protecting and improving surface water and groundwater quality.
- 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.
- Environmental Stewardship: Meeting watershed management, and habitat and ecosystem restoration needs.
- 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.

- Aging Infrastructure: Identifying needs for repairing and replacing aging infrastructure to meet current demand.
- Water Conservation: Increasing public awareness and implementing water conservation programs and measures.
- Climate Change: Mitigating and adapting to climate change impacts.
- 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, control of invasive species, and threatened and endangered species declines.

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 December 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 946 goals/objectives were found in the 45 IRWM plans reviewed. These are listed by IRWM region in Appendix B.

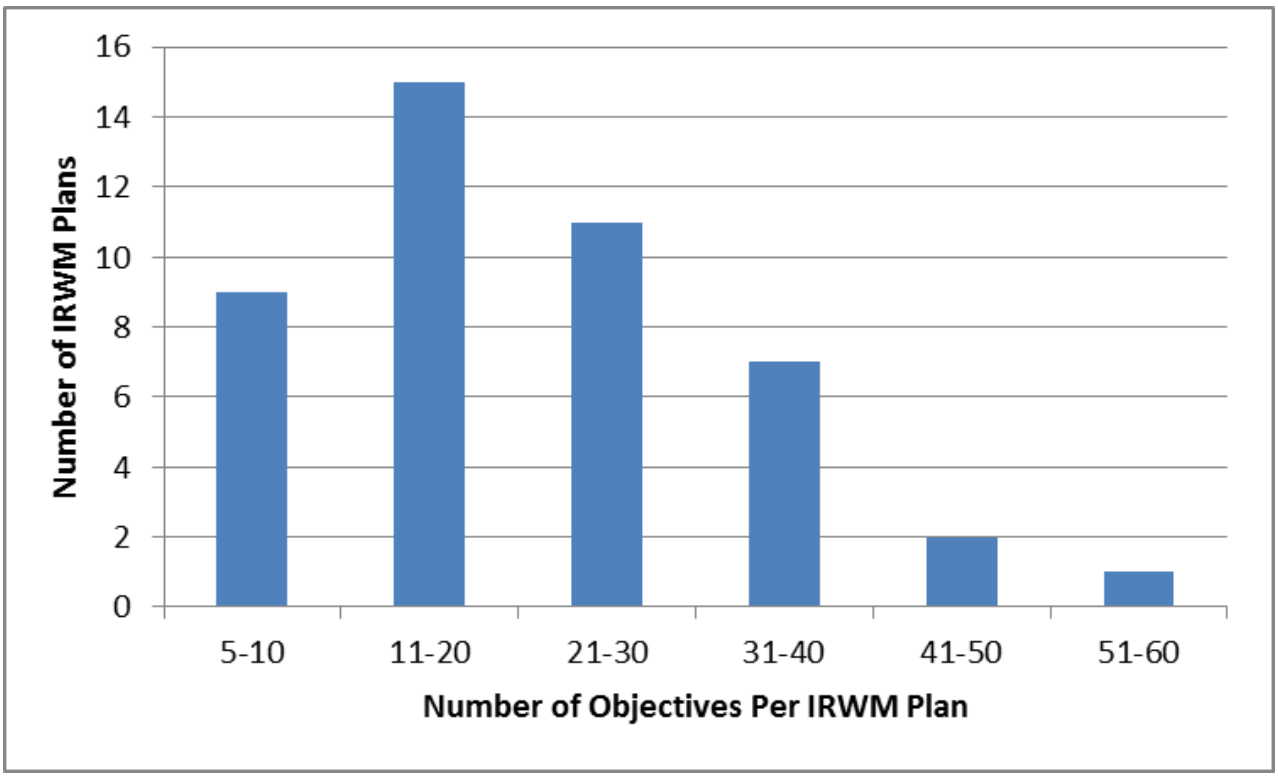

Figure 10 - Histogram of Goals and Objectives in IRWM Plans (as of December 31, 2014)

The goals and objectives identified in the 45 adopted plans as of December 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 (43 percent) of the total 946 goals/objectives identified in IRWM plans are related to water supply, water quality, or ecosystem restoration.

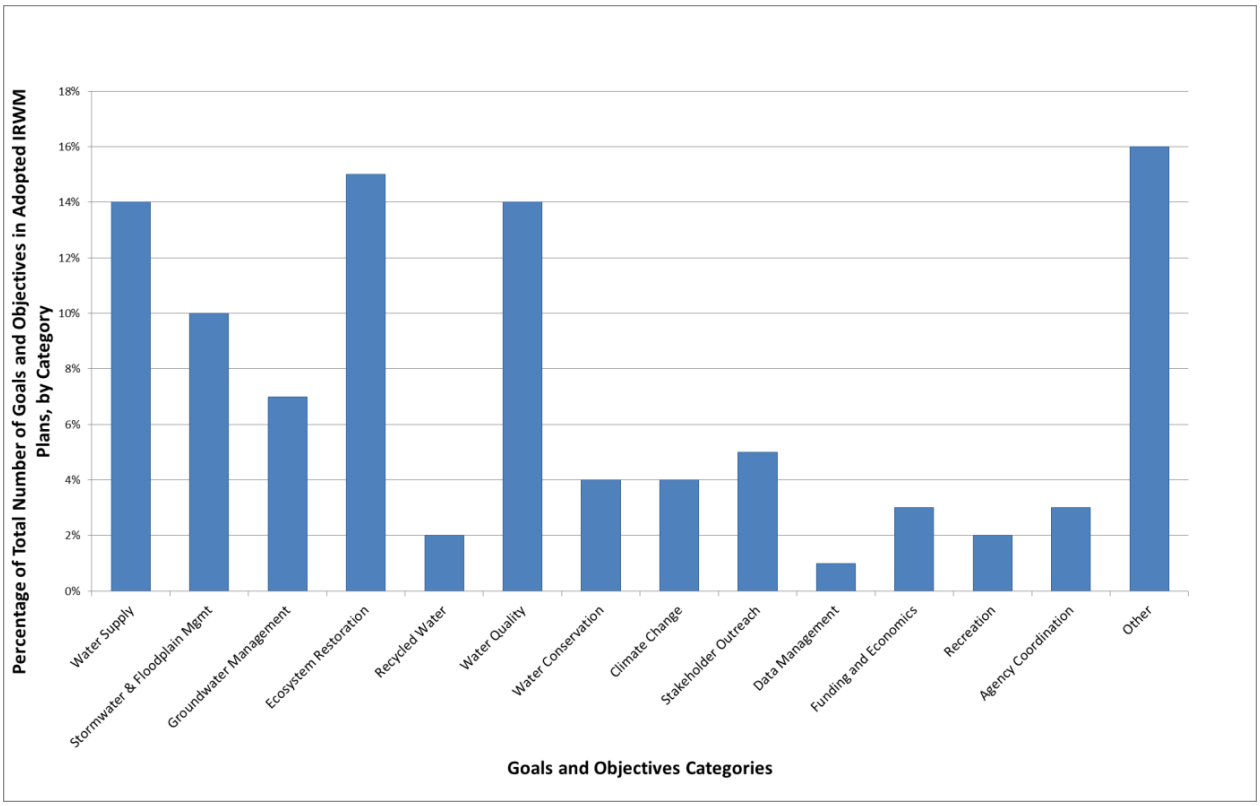

Figure 11 - Distribution of Goals and Objectives by General Categories (as of December 31, 2014)

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; 98 percent of the plans have at least one water quality related goal or objective; and 93 percent of the plans have at least one ecosystem restoration related goal or objective.

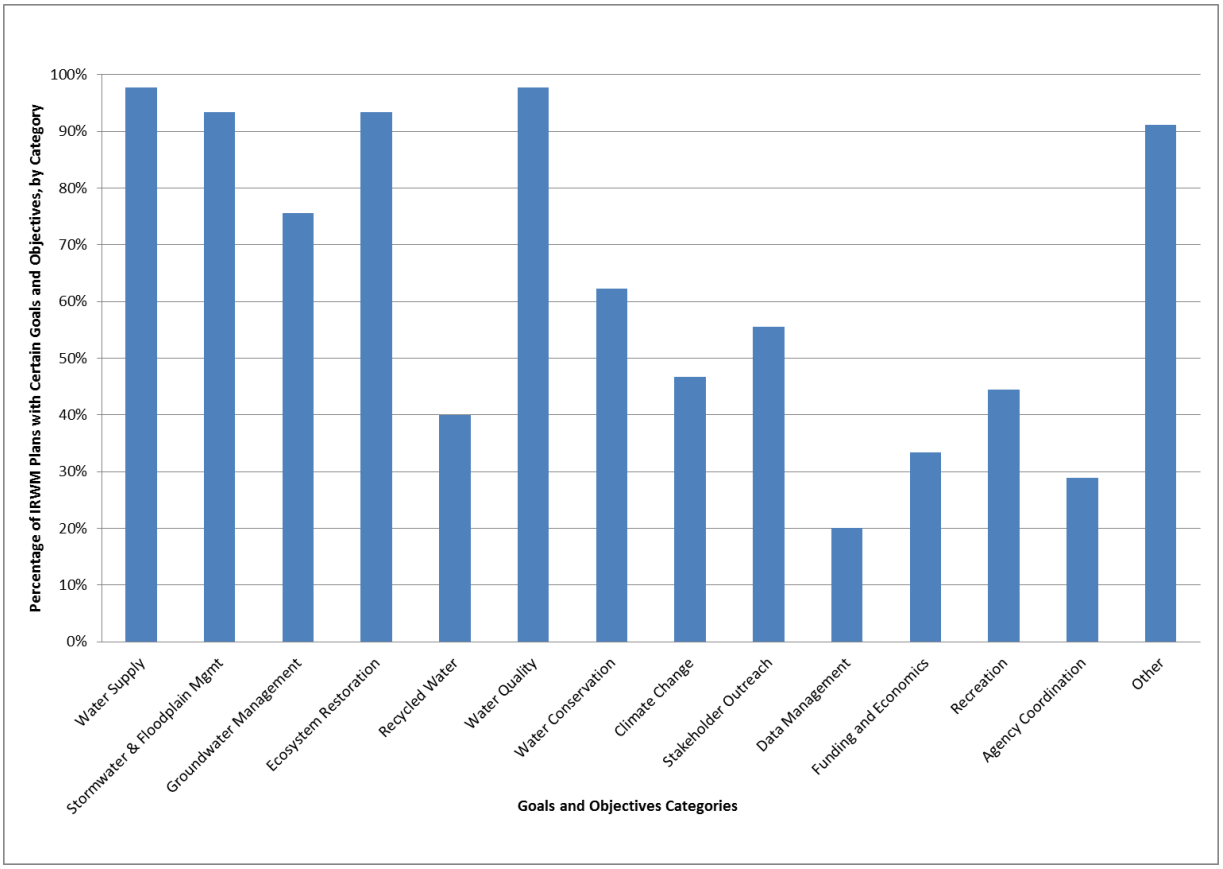

Figure 12 - Percentage of IRWM Plans with Various Goals and Objectives by General Categories (as of December 31, 2014)

Performance Measures in IRWM Plans

The 45 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 45 IRWM plans adopted as of December 31, 2014, thirty-nine 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 1709 performance measures were found in the 39 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.

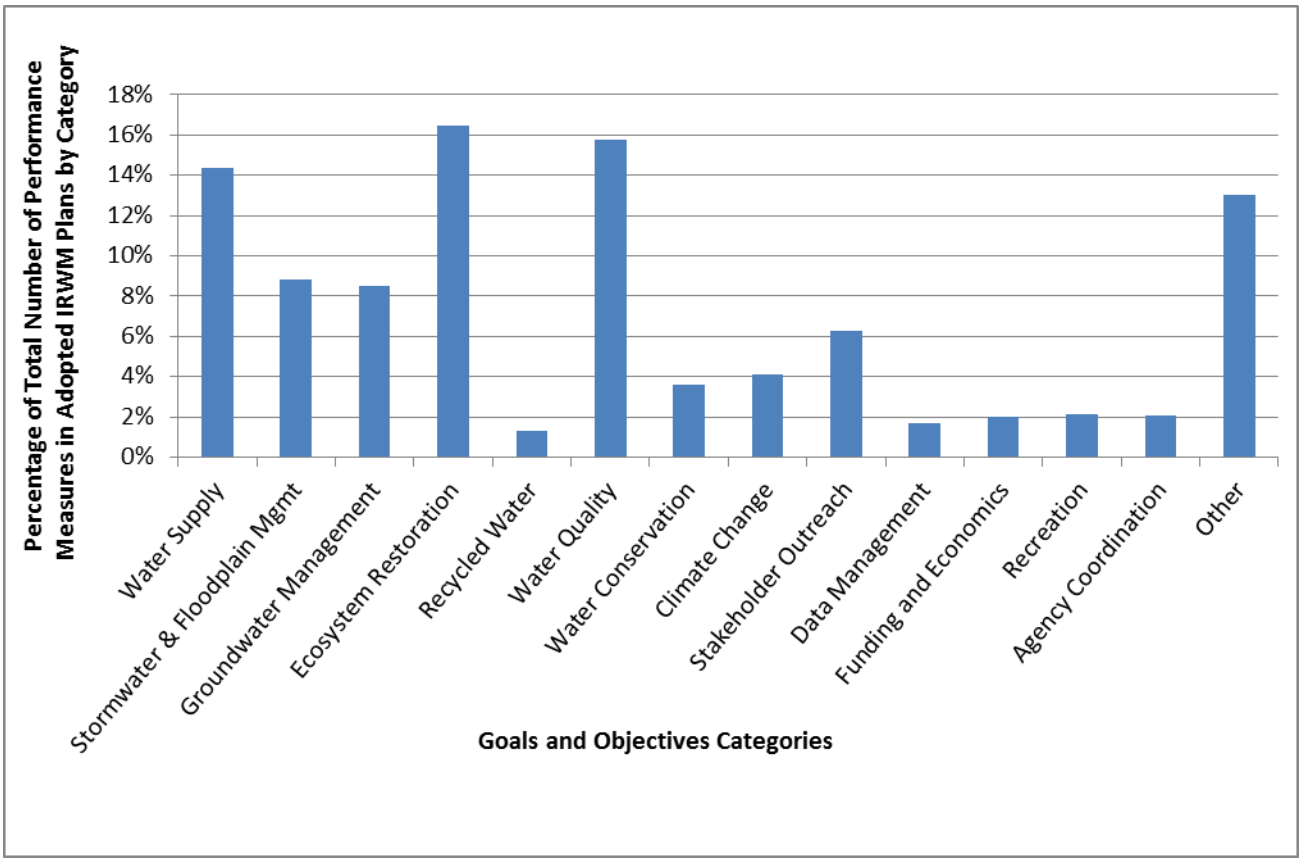

Figure 13 - Distribution of Performance Measures in Adopted IRWM Plans (as of December 31, 2014) by General Goal and Objective Categories

Figure 14 depicts the percentage of IRWM plans with performance measures that relate to various goal and objective categories. Analysis of the 39 IRWM plans that included performance measures found that 97 percent of IRWM plans have water quality related performance measures, 95 percent have water supply related performance measures, and 97 percent have performance measures that relate to ecosystem restoration.

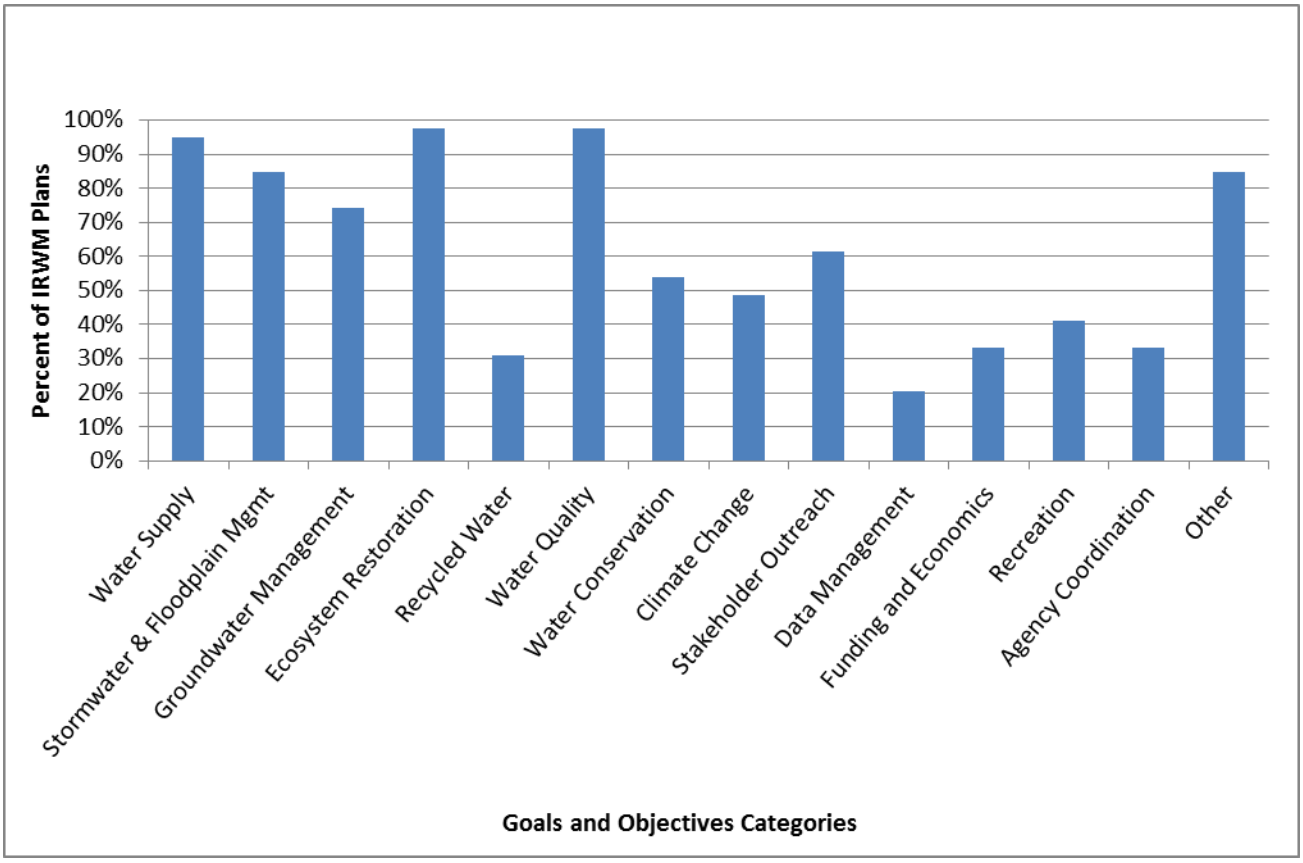

Figure 14 - Percentage of Adopted IRWM Plans (as of December 31, 2014) with Performance Measures Related to General Goal and Objective Categories

RWMG Governance Structure

Section 10539 of the California Water Code states, in part, that the basis of participation in an RWMG 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 RWMGs.

A review of adopted IRWM plans shows that RWMGs 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 RWMGs across the state is shown in Figure 15. Each governance basis is briefly described below.

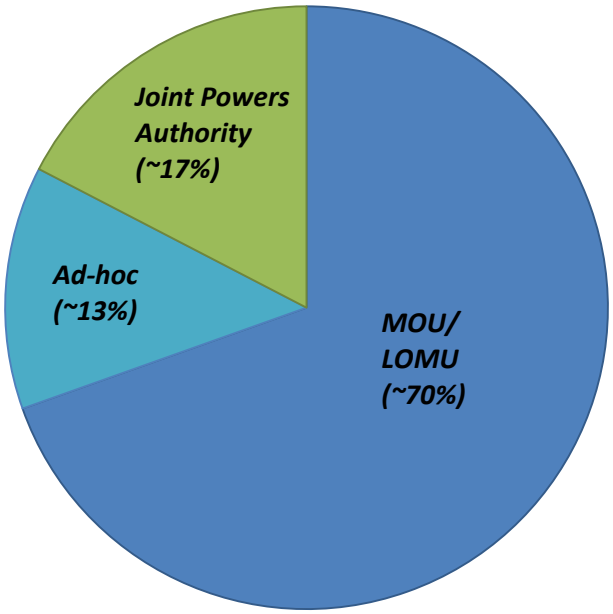

Figure 15 – Breakdown of Governance Basis for IRWM Regions (as of December 31, 2014)

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.

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 45 adopted IRWM plans.

Table 5 – General Summary of Stakeholders Participating in the Development and Implementation of IRWM Plans[1] (Last Updated December 31, 2014)

Region No.	Region Name	Cities	Counties	Community Groups/NGOs[2]	DACs[3]	Tribes[3]	Flood Management Agencies[4]	Irrigation Districts	Privately Owned Water Companies	Reclamation Districts	Sanitation Districts	Water Agencies/ Districts	Community Service Districts	Resource Conservation Districts	Other[5]
1	American River Basin	9	1	18	●	2	2	2	5	1	1	15	1	4	28
2	Antelope Valley	4	2	4	●	●		1	9		2	4	2	1	14
3	Anza Borrego Desert		1	2	●	5	1					2	2	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	3	1		16
6	Cosumnes American Bear Yuba (CABY)	6	5	25	4	6		2				4	3	4	12
7	East Contra Costa County	3			●		1	2	20	13	2	1	2		4
8	Eastern San Joaquin	3	1	2	2		3	2	1			5			19
9	Gateway Region	28	1	7	●	1	1	1	16		1	7			28
10	Greater Los Angeles County	12	2	17	●		1				2	22		3	25
11	Greater Monterey County	6	2	55	10	1			7		1	8	2	1	39
12	Imperial	11	1	7	●			1			1	1			10
13	Inyo-Mono		2	7	●	5						2	3	2	13
14	Kaweah River Basin	5	1	4	●	1		3	1			2			13
15	Kern County	9	1	15	●	1		1	7			23	5	3	30
16	Madera	2	1	3	●	1		1	1			4		2	5
17	Merced	3	1	3				1	1		1	2	1	1	19
18	Mojave	7	1	30	18	2	4		2	1	9	37	5	1	35
19	Mokelumne/Amador/ Calaveras (MAC)	5	3	5	4	●		1			2	3	1		6
20	Monterey Peninsula, Carmel Bay, and South Monterey Bay	7	4	44	3				1		2	4	1	1	73
21	North Coast Resource Partnership	17	8	29	5	9			1		2	7	17	7	2
22	Northern Sacramento Valley Group	6	6	9	●	3	8	1	4	1		4		6	2
23	Pajaro River Watershed	5	4	19	1	1	2					9	1	4	8
24	Poso Creek	3	1	1	●			2	1			4		1	25
26	San Diego	18	2	43	2	18	1	2	1		2	13	2	2	36

[1] This list of stakeholders was obtained through a review of adopted IRWM plans and draft IRWM plan update materials available as of December 31, 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.

[2] NGOs = Non-governmental Organizations

[3] Please see Appendices C and D for descriptions of DAC and Tribal involvement in the development and implementation of IRWM plans.

[4] Entities which are not explicitly named as flood management agencies, but have flood management functions, are not shown in this column.

[5] 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[1] (Last Updated December 31, 2014) *(Continued)*

Region No.	Region Name	Cities	Counties	Community Groups/NGOs[2]	DACs[3]	Tribes[3]	Flood Management Agencies[4]	Irrigation Districts	Privately Owned Water Companies	Reclamation Districts	Sanitation Districts	Water Agencies/ Districts	Community Service Districts	Resource Conservation Districts	Other[5]
27	San Francisco Bay Area	100	9	126	●	●	6		4		12	11		9	199
28	San Luis Obispo	7	1	2	4	●	1		2				8	2	11
29	Santa Ana Watershed Project Authority (SAWPA)	63	3	29	5	5	3		15		3	36	4	3	72
30	Santa Barbara County	8	1	1	3	●	1		2		6	6	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	6	2	1	1					8			8
33	Southern Sierra		3	15	1	7	1	1						2	33
34	Tahoe-Sierra	2	4	4	2	1			2			1		1	17
35	Tule	*Plan Development In Process*													
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	Kings Basin Water Authority	10	3	9	●		2	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	2		1	19
42	Upper Santa Margarita	3	1	12	●	3	1		1			5		2	29
43	Watersheds Coalition of Ventura County	11	1	14	●	1	1	1	3		4	23	0	1	6
44	Westside San Joaquin	6	5	2	1			3	1			4			7
45	Westside (Yolo, Solano, Napa, Lake, Colusa)	6	5	5	●	6	2		1	1		2		7	14
46	Yuba County	4	1	1	●			3	1	4		8		2	4
47	East Stanislaus	9		3	2	●		2							4
48	Fremont Basin	*Plan Development In Process*													
49	Lahontan Basins	1	2	8	●	●	2	2			3	1	5	2	4
TOTALS		**429**	**104**	**645**	**90**	**95**	**49**	**45**	**117**	**21**	**61**	**308**	**86**	**85**	**992**

[1] This list of stakeholders was obtained through a review of adopted IRWM plans and draft IRWM plan update materials available as of December 31, 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.

[2] NGOs = Non-governmental Organizations

[3] Please see Appendices C and D for descriptions of DAC and Tribal involvement in the development and implementation of IRWM plans.

[4] Entities which are not explicitly named as flood management agencies, but have flood management functions, are not shown in this column.

[5] 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.

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 December 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.

Involvement of Tribes in IRWM Planning

IRWM guidelines require that IRWM regions endeavor to involve California Native American Tribes and tribal communities (Tribes) in the IRWM planning process. California has 111 federally recognized Tribes and a significant number of non-federally recognized Tribes.

The level of involvement of Tribes in IRWM varies by region and is partly due to the number of active Tribes 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.

Since over half of IRWM regions contain lands of California Native American Tribes and tribal communities, productive partnerships are important for the proper development and implementation of IRWM plans. However, it is also important to note that there are some regions with limited to no tribal lands requiring water resources management. A summary of Tribal involvement in IRWM for each region is included in Appendix D. Based on the information summarized in Appendix D, it appears that broader participation and collaboration can be achieved 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 45 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 16.

Table 6 – Consideration of California Water Plan Update 2009 Resource Management Strategies in IRWM Plans (as of December 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	Suface 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
Anza Borrego Desert	X	X		X		X	X									X				X			X				
Yosemite-Mariposa	X	X		X	X	X	X			X		X	X	X	X	X		X	X	X	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
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
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
Eastern San Joaquin	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
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
Greater Monterey County					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	X	X	X	X	X	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
Mojave	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
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
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
North Coast Resource Partnership	X	X			X		X		X	X		X	X	X	X	X	X	X	X	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
Pajaro 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	X
Poso Creek	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 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
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	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
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
Santa Cruz 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
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
Tahoe-Sierra	X	X		X	X	X	X		X	X		X	X	X	X	X	X	X	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
Upper Feather River Watershed							X									X						X	X	X			X
Kings Basin Water Authority	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
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
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
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
Westside San Joaquin	X	X	X	X	X	X	X	X	X	X		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
Yuba County							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

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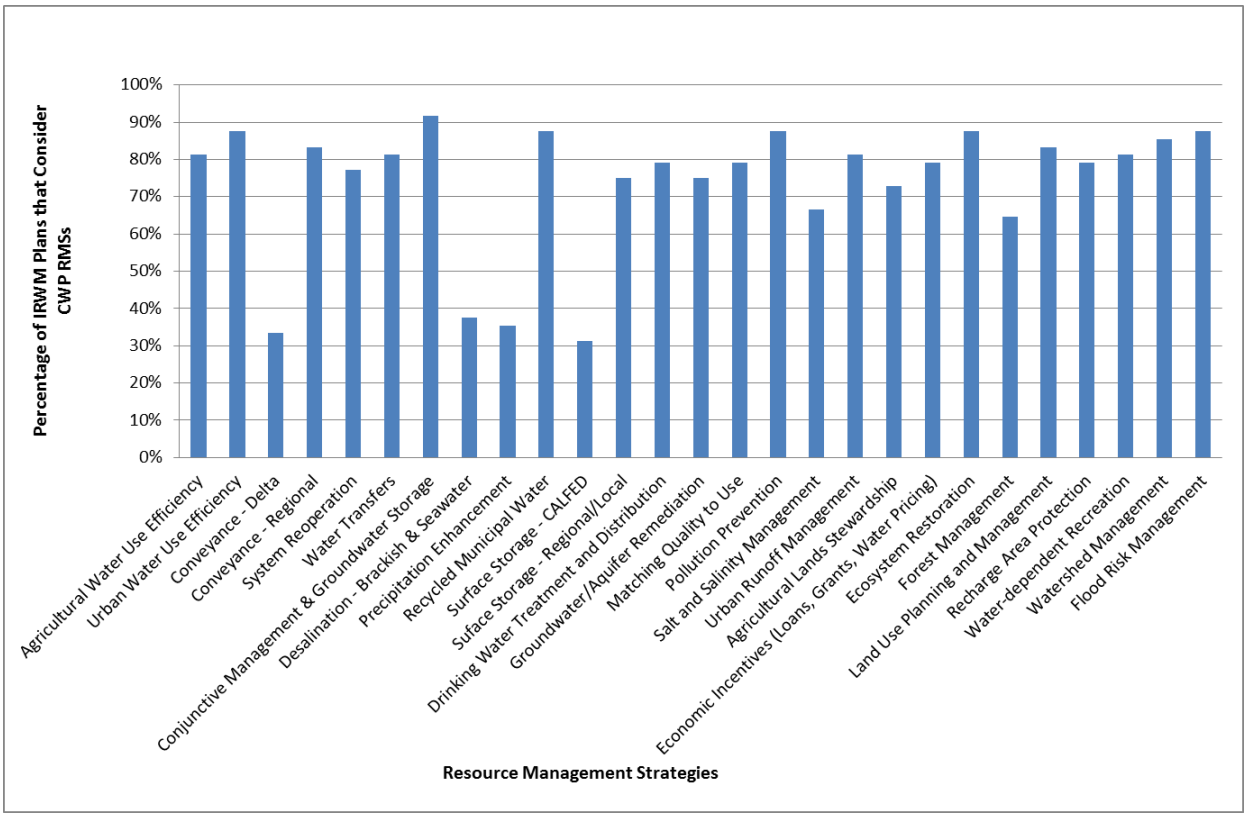

Figure 16 – Percentage of IRWM Plans Considering Various CWP Update 2009 Resource Management Strategies (as of December 31, 2014)

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 December 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 45 adopted IRWM plans was performed to determine what priorities are addressed in the plans. The results of this review pertaining to the most recent adopted IRWM plans 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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Table 7 – Statewide Priorities for IRWM Addressed by Adopted IRWM Plans (as of December 31, 2014)

	Region Reference Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
	Region Name	American River Basin	Antelope Valley *	Anza Borrego Desert*	Yosemite-Mariposa*	Coachella Valley	Cosumnes American Bear Yuba (CABY)*	East Contra Costa County	Eastern San Joaquin*	Gateway Region*	Greater Los Angeles County	Greater Monterey County	Imperial	Inyo-Mono	Kaweah River Basin*	Kern County	Madera	Merced	Mojave	Mokelumne/Amador/Calaveras (MAC)	Monterey Peninsula, Carmel Bay, and South Monterey Bay	North Coast Resource Partnership	North Sacramento Valley*	Pajaro River Watershed	Poso Creek	San Diego	San Francisco Bay Area	San Luis Obispo	Santa Ana Watershed Project Authority (SAWPA)	Santa Barbara Countywide*	Santa Cruz County	South Orange County Watershed Management Area	Southern Sierra*	Tahoe-Sierra*	Tule	Tuolumne-Stanislaus*	Upper Feather River Watershed	Kings Basin Water Authority	Upper Pit River Watershed*	Upper Sacramento-McCloud	Upper Santa Clara River*	Upper Santa Margarita	Watersheds Coalition of Ventura County	Westside San Joaquin	Westside (Yolo, Solano, Napa, Lake, Colusa)*	Yuba County	East Stanislaus
Prop 84 Statewide Priorities	Drought preparedness	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
	Use and reuse water more efficiently	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
	Climate change response action	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
	Expand environmental stewardship	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
	Practice integrated flood management	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
	Protect surface water and groundwater quality	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
	Improve tribal water and natural resources	x				x					x			x		x	x	x	x	x	x	x		x	x	x	x	x	x		x	x					x		x		x	x				x
	Ensure equitable distribution of benefits	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
Prop 50 Statewide Priorities	Reduce conflict between water rights users or resolve water rights disputes, including inter-regional water rights issues																																					x									x	
	Implementation of TMDLs that are established or under developed																																														x	
	Implementation of region Water Quality Control Board (RWQCB) Watershed Management Initiative, Chapters, plans, and policies																																					x										
	Implementation of the SWRCB's non-point source pollution plan																																					x									x	
	Assist in meeting Delta Water Quality Objectives																																													x	
	Implementation of recommendations of the floodplain management task force, desalination task force, recycling task force, or state species recovery plan																																					x									x	
	Address environmental justice concerns																																					x										
	Assist in achieving one or more goals for the CALFED Bay-Delta Program																																					x									x	

* Not shown in most recent plan explicitly. Many regions use statewide priorities in project selection criteria only.

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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 17 illustrates the type and number of local and regional plans most commonly referenced in the 45 reviewed IRWM plans.

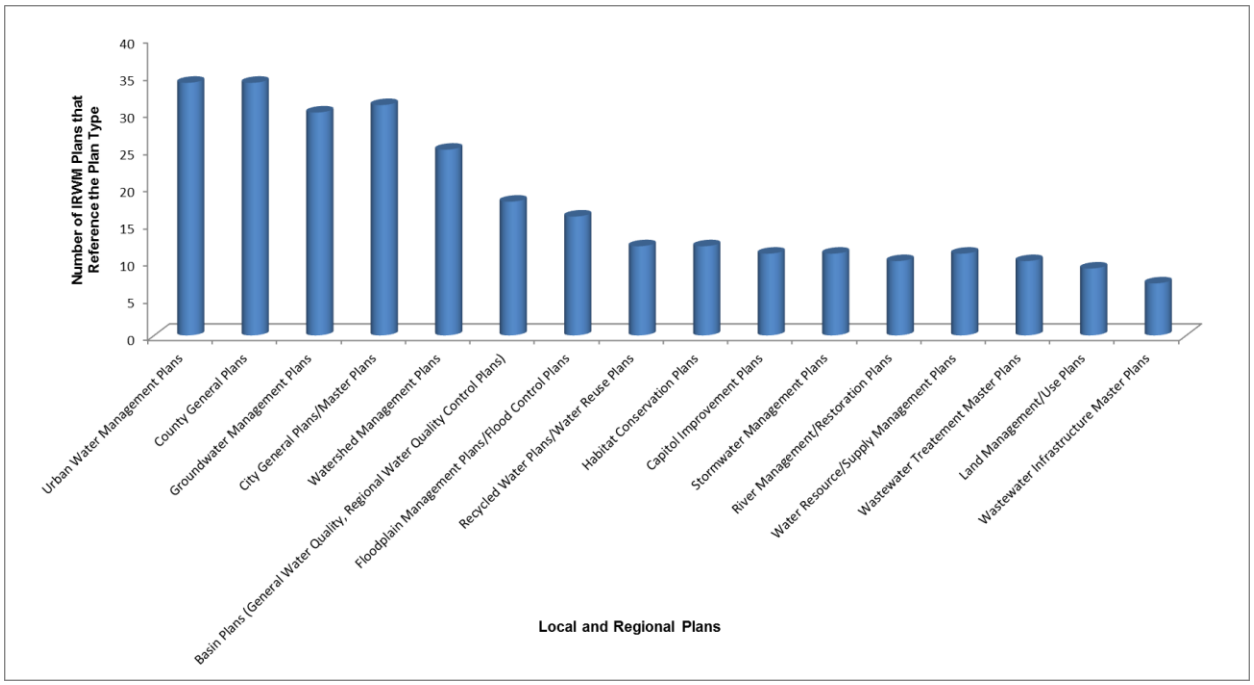

Figure 17 - Frequency of the 14 Most Commonly Referenced Local and Regional Plans in IRWM Plans (as of December 31, 2014)

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 December 31, 2014)
- Appendix B – Regional Goals and Objectives Identified in IRWM Plans (as of December 31, 2014)
- Appendix C – Description of DAC Involvement in IRWM Planning (as of December 31, 2014)
- Appendix D – Description of Tribal Involvement in IRWM Planning (as of December 31, 2014)

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

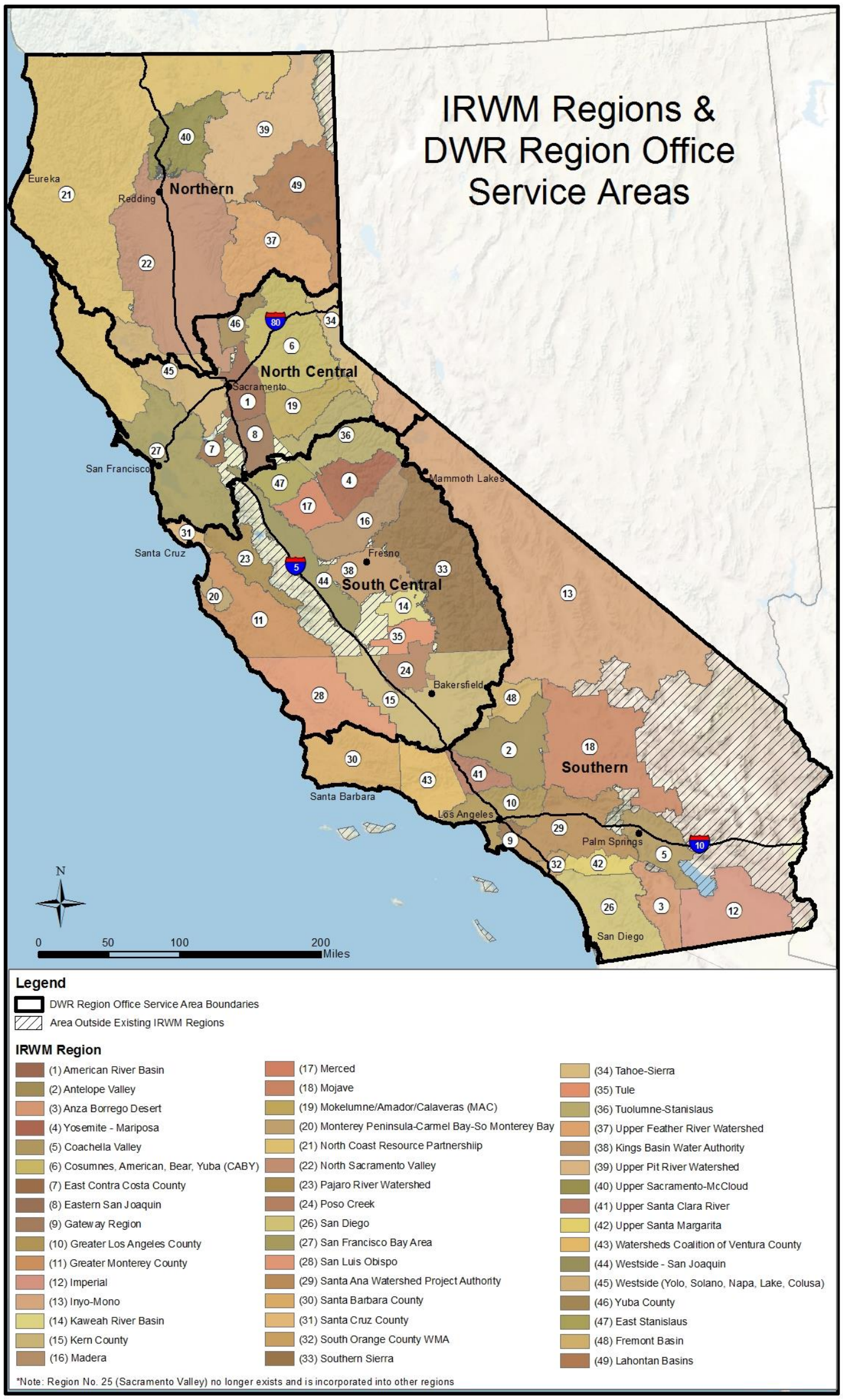

Figure A-1 – IRWM Regions and DWR Region Office Service Areas

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

IRWM Region Name	Major Regional Issues (in no particular order)					
	1	2	3	4	5	6
North Coast Resource Partnership	Salmonid Population Decline	Impaired quality of water bodies	Reduced water availability	Wastewater and drinking water supply infrastructure	Flood protection and flood management	Non-native invasive species
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	*Plan Development In Process*					

Table A-2 - Overview of Major Regional Issues in DWR's North Central Region Office Service Area (as of December 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 including recycled water expansion	Flood protection	Climate change	Regulatory compliance and funding challenges
Tahoe-Sierra	Climate change	Water quality	Forest management	Infrastructure needs		
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 December 31, 2014)

IRWM Region Name	Major Regional Issues (in no particular order)					
	1	2	3	4	5	6
Yosemite-Mariposa	Water quality: compliance with water quality regulations; Management and restoration of impaired surface water bodies; Protection of groundwater quality; Improvement of forest and watershed management actions; Prevention of wildfire and mitigation of water quality impacts	Water demands: balancing local water demand growth with resource availability	Water supply: limited local surface supplies and significant downstream exports; Groundwater use is not managed and supply reliability is not well understood; Climate change effects on supply are unknown	Infrastructure: infrastructure is not being replaced in a timely manner; Inadequate water resources for fire protection; Compliance with wastewater treatment standards for wastewater systems	Environmental: protection and restoration of anadromous fisheries; threatened, endangered and sensitive aquatic and terrestrial species; Restoration of functional wildlife habitat; Management of invasive aquatic and terrestrial species	Climate change vulnerabilities
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	Conditions of the groundwater reservoir	Cost to extract water as groundwater levels decline and changes in water quality occur	Regional governance and leadership	Number of population concentrations and rural residences (51% of population) are considered to be disadvantaged		
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	Disadvantaged community concerns		
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

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

IRWM Region Name	Major Regional Issues (in no particular order)					
	1	2	3	4	5	6
Monterey Peninsula, Carmel Bay, and South Monterey Bay	Meet current replacement supply and future demand targets for water supply	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	
Pajaro River Watershed	Flooding	Groundwater overdraft	Groundwater water quality	Surface water quality	Imported water reliability	Fisheries
Poso Creek	Water supply	Groundwater and surface water reliability	Water cost and water quality	Disadvantaged community concerns	Economic challenges	Floodplain and flooding issues
San Luis Obispo	Promote open communications and regional cooperation in the protection and management of water resources, including education and outreach related to water resources conditions, conservation/water use efficiency, water rights, water allocations, and other regional water resource management efforts.	Maintain or improve water supply quantity and quality for potable water, fire protection, ecosystem health, and agricultural production needs; as well as to cooperatively address limitations, vulnerabilities, conjunctive-use, and water-use efficiency.	Foster an integrated, watershed approach to flood management and improved storm water quality through collaborative community supported processes in order to ensure community health, safety, and to enhance quality of life.	Maintain or improve the health of the Region's watersheds, ecosystems, and natural resources through collaborative and cooperative actions; with a focus on assessment, protection, and restoration/enhancement of ecosystem and resource needs and vulnerabilities.	Achieve sustainable use of the Region's water supply within groundwater basins through collaborative and cooperative actions.	
Santa Cruz County	Water supply	Surface water and groundwater quality	Watershed resources	Flood and stormwater management	Climate change	
Southern Sierra	Competing demands and conflicts over water rights	Blocked fish passage from man-made and natural obstacles	Forest management and water yield	Need to provide clean, sustainable and affordable water supply	Inadequate knowledge of flooding risks, hazard areas and landslide dam flood risk	Insufficient information on hard-rock aquifers and groundwater supplies
Tule	*Plan Development In Process*					
Tuolumne-Stanislaus	Efficient use and distribution of water	Reliable and affordable water supply	Water quality	Resource stewardship and ecosystem needs	Stormwater	Climate change
Kings Basin Water Authority	Groundwater overdraft	Water supply reliability	Degradation of water quality	Sustaining the agricultural economy		
Westside San Joaquin	Water supply reliability	Surface and groundwater quality	Groundwater overdraft	Land and flood management	Protection and enhancement of aquatic, riparian, and watershed	Water-related needs for disadvantaged communities

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

IRWM Region Name	Major Regional Issues (in no particular order)					
	1	2	3	4	5	6
					resources	
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 December 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	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	Balance average annual future water demands with available future supplies to ensure sustainability throughout the Region between now and the 2035 planning horizon and beyond.	Maintain stability in previously overdrafted groundwater basins and reduce overdraft in groundwater basins experiencing ongoing water table declines.	Provide support and assistance to disadvantaged communities and help facilitate projects and programs that benefit those communities.			

Table A-4 - Overview of Major Regional Issues in DWR's Southern Region Office Service Area (as of December 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	Energy crises	Fiscal crises
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	
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 management optimization	Habitat restoration	Water quality	Flood control	Water supply enhancement/reliability	
Fremont Basin	*Plan Development In Process*					

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

The goals and objectives identified in the 45 IRWM plans reviewed as of December 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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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.

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

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.

Yosemite-Mariposa Region: 4			
Goal #	**Goal**	**Objective #**	**Objective**
1	Provide/Improve Reliable Water Supply within the Region	1	Provide reliable water supplies to meet all domestic water needs in the Region by 2035
		2	Improve understanding of groundwater usage, quality, and reliability throughout key groundwater use areas the Region by 2020
		3	Promote Water Use Efficiency (WUE) practices throughout the Region and educate 80% of households and businesses by 2020
		4	Identify by 2019 and manage and conserve forest, wetlands, and range lands for enhancement of water supply by 2035
2	Ensure Reliable Community Water and Wastewater Infrastructure	5	Assess and identify the current condition of private and community water systems and their plans, if any, or future improvements by 2018
		6	Assess and identify the current condition of community wastewater systems and their plans, if any, for future improvements by 2020
		7	Rehabilitate or replace aging and inadequate water and waste water distribution/collection, treatment, and disposal infrastructure by 2035
3	Maintain or Improve Water Quality in the Region	8	Identify and prioritize impacted watersheds by 2020
		9	Conserve and restore 10,000 acres of watersheds through improved forest and rangeland management practices and appropriate land use by 2020. Conserve and restore 20,000 acres by 2035
		10	Implement water quality improvement activities where pollutants are identified by 2035
		11	Promote sustainable ecosystem and vegetation management on agricultural and production land, primarily near riparian corridors in the first five years of the IRWM Program
4	Protect and Improve Wildlife Habitat	12	Improve watershed health by preventing the establishment of or reducing/eliminating aquatic and terrestrial invasive species in at least 2 locations per year starting in 2017
		13	Protect special status and sensitive species and preserve and restore 10,000 acres by 2025 and 20,000 acres by 2035
		14	Conserve and ensure the presence of unfragmented wildlife corridor habitats
5	Assess and Enhance Recreational Opportunities in the Region	15	Evaluate existing and potential recreational opportunities by 2019
		16	Enhance public access for recreation to waterways by 2035
6	Develop Collaborative and Sustainable Partnerships Both Within and in Adjacent Regions	17	Identify, review and evaluate the effectiveness of ordinances and county planning related to water management in the Region by 2020
		18	Develop opportunities/data management system so that current scientific data can be made available to make informed, collaborative choices regarding water resources and land use planning throughout the Planning Period
7	Reduce Risk of Catastrophic Fire	19	Facilitate and coordinate fuel management policies and strategies in at least two locations per year of high hazard lands in the Region
8	Educate Stakeholders and County Residents about Water Issues through the IRWM Process to Inspire Public Action	20	Use education and outreach annually that maintains or increases watershed stewardship resulting in water quality and ecological improvements
9	Prepare for Impacts of Climate Change	21	Educate the public regarding the findings of the Climate Change Vulnerability Checklist for the Region by 2015 and periodically update the checklist with updated information
		22	Mitigate impacts of climate change by implementing cost-effective renewable energy production in at least one location by 2035 and promoting energy/water use efficiency in the Region
		23	Mitigate flood risk associated with climate change by cooperating with Local Hazard Mitigation Planning flood risk updates and educating the public regarding flood prevention and mitigation measures

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.

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'
		18	Improve habitat for aquatic biota
3	Preserve and restore watershed health	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
		24	Implement an Aquatic Invasive Species (AIS) Program
		25	Implement coordinated non-native invasive plant education, prevention, and control actions
4	Anticipate climate change needs and be prepared to respond adaptively to human and ecosystem needs	26	Implement climate change adaptive management strategies
		27	Increase alternative energy and energy efficiency

Cosumnes, American, Bear, Yuba (CABY) ó/2yűlyźŠŘú Region:6			
Goal #	**Goal**	**Objective #**	**Objective**
5	Maintain and enhance functioning landscapes that provide sustainable services for humans	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

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
		13	Enhance understanding of how groundwater fits into the water portfolio and investigate groundwater as a regional source (e.g., conjunctive use)
4	Protection, Restoration and Enhancement of the Delta Ecosystem and Other Environmental Resources	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

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

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 enancement 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.

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.

Greater Monterey County Region: 11			
Goal #	**Goal**	**Objective #**	**Objective**
1	Water supply	1	Increase groundwater recharge and protect goroundwater 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 no 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, approprate, 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.

Regional Goals and Objectives

Greater Monterey County ó/2yúy ǳŜŘú Region: 11			
Goal #	**Goal**	**Objective #**	**Objective**
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.
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.

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.

Inyo-Mono (Goals not linked to Objectives) Region: 13			
Goal #	**Goals**	**Objective #**	**Objective**
1	Functioning watersheds that support regional flora and fauna	1	Protect, Conserve, Optimize, and Augment Water Supply While Maintaining Ecosystem Health
2	Sustainable livelihoods supported by reliable access to potable water	2	Protect, Preserve, Restore, and Enhance Domestic and Ecosystem Water Quality
		3	Provide Stewardship of Water Dependent Natural Resources
		4	Maintain and Enhance Water, Wastewater, Emergency Response, and Power Generation Infrastructure Efficiency and Reliability
		5	Address Climate Variability and Reduce Greenhouse Gas Emissions
		6	Encourage Participation of Small and Disadvantaged Communities, Including Tribes, in IRWM Process to Identify and Work towards Meeting Their Needs
		7	Promote Sustainable Stormwater and Floodplain Management that Enhances Flood Protection
		8	Support Groundwater Monitoring, Management, and Mitigation in Cooperation with all Affected Parties

Kaweah River Basin Region: 14			
Goal #	**Goal**	**Objective #**	**Objective**
		1	Work Toward Achievement of Sustainable Balanced Surface and Groundwater Supplies
		2	Protect and Improve Water Resources through Land Use Practices
		3	Protection of Life, Structures, Equipment and Property from Flooding
		4	Provide Multiple Benefits of Management of Water Resources and Related Diversion and Conveyance Infrastructure
		5	Reduction of Contamination of Surface and Groundwater Resources
		6	Meet Applicable Regional Water Quality Control Board Basin Plan Objectives
		7	Management of Recreational Activities to Minimize Impacts on Water Resources
		8	Conserve, Enhance and Regenerate Riparian Habitats
		9	Reduce Impacts and Optimize Benefits from Assisting Other Drought-Related Areas with Basin-to-Basin Transfers of Water
		10	Evaluation of the Need for Supplemental Water Management Strategies Related to the Effects of Climate Change
		11	Optimize Efficient Use, Conservation and Recycling of Water Resources
		12	Identify and Promote Strategies for Hydroelectric Generation Facilities
		13	Evaluate and Modify Water Diversion and Conveyance Infrastructure
		14	Promote City, Community and Regional Storm Water Management Plans
		15	Increase Knowledge Regarding Groundwater Related Conditions and Establish Groundwater Management Practices
		16	Conserve and Restore Native Species and Related Habitats
		17	Sustain Agricultural and Urban Viability through Effective Water Management

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.
		19	Coordinate and enhance aquatic pest control efforts from this point forward.
4	Promote land use planning and resource stewardship	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.
		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.
5	Improve regional flood management	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.

Madera Region: 16			
Goal #	**Goal**	**Objective #**	**Objective**
1	Achieve groundwater sustainability by 2024 (Valley Goal)	1	Increase regional capacity for direct recharge by 50,000 AF/Year
		2	Integrate flood/storm water conveyance infrastructure and regional irrigation system
		3	Expand CASGEM groundwater monitoring network to semi-annually measure regional groundwater on a per-aquifer basis
		4	Improve water reliability
		5	Expand water conservation efforts
2	Create independent local organization to manage groundwater resources (Valley Goal)	6	Determine most desirable form of organization and achieve buy-in from RWMG member agencies.
		7	Identify sources for ongoing operational funding for the independent local organization.
		8	Seek special legislation as required to create the chosen special district
3	Expand Stakeholder Education (Valley Goal)	9	Community education on water issues
4	Assure groundwater quality meets drinking and irrigation water quality standards (Valley Goal)	10	Identify problem areas
		11	Identify strategies to address chemical Constituents of Concern
		12	Propose projects to address waters which do not meet State Public Health Goals or irrigation standards
5	Improve Flood Control and Protection (Valley Goal)	13	Improve flood conveyance capacity
		14	Improve water storage capacity
6	Create practical, enforceable policies resulting in sustainable groundwater management (Foothill/Mountain Goal)	15	Determine strategies to enhance sustainability in foothill and mountain water supplies
		16	Develop policies to improve hard rock well sustainability and quantity
		17	Develop sources of surface water supply
		18	Implement water conservation policies to achieve the State's "20 x 2020" goal
		19	Fully utilize recycled wastewater from County-maintained districts and urban areas
		20	Develop and implement a comprehensive groundwater monitoring program by 2020
7	Improve water quality (Foothill/Mountain Goal)	21	Promote community awareness of potential water quality issues
		22	Protect source water areas
8	Improve Watershed Management (Foothill/Mountain Goal)	23	Manage forest density to increase surface runoff
		24	Manage vegetation to reduce fire risk and attempt to keep fires within their natural range of variability.
		25	Reduce erosion and sedimentation.
		26	Promote natural water storage through meadow, stream, wetlands and floodplain restoration.
9	Expand Stakeholder Education (Foothill/Mountain Goal)	27	Community education on water issues

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.

Mojave Region: 18			
Goal #	**Goal**	**Objective #**	**Objective**
		1	Balance average annual future water demands with available future supplies to ensure sustainability throughout the Region between now and the 2035 planning horizon and beyond.
		2	Continue improving regional water use efficiency by implementing a portfolio of conservation actions that are regionally cost-effective.
		3	Maintain stability in previously overdrafted groundwater basins and reduce overdraft in groundwater basins experiencing ongoing water table declines.
		4	Address the State policy goal of reducing reliance on the Delta by meeting water demands with alternative sources of supply during times when SWP supplies are reduced or unavailable due to droughts, outages, environmental and regulatory restrictions, or other reasons.
		5	Optimize the use of the Region's waterrelated assets to maximize available supplies to meet projected demands while mitigating against risks. Water-related assets to be optimized include financial resources, groundwater storage programs, available imported water supplies, transfer and exchange opportunities, available physical infrastructure, and management policies.
		6	Prevent land subsidence throughout the Region.
		7	Provide support and assistance to disadvantaged communities and help facilitate projects and programs that benefit those communities.
		8	Improve environmental stewardship related to waterways and water management in the Region.
		9	Improve floodplain management throughout the Plan area.
		10	Preserve water quality as it relates to local beneficial uses of water supplied by each source, including groundwater, stormwater, surface water, imported water, and recycled water.
		11	Obtain financial assistance from outside sources to help implement this Plan across a range of project sizes during the planning horizon.
		12	Improve public awareness of water supply, conservation, water quality, and environmental stewardship challenges and opportunities throughout the planning horizon.
		13	Identify and establish reliable funding sources to maintain, modernize and improve water infrastructure to ensure a high quality, resilient and reliable water supply.
		14	Increase the use of recycled water in the Region while maintaining compliance with the Mojave Basin Area Judgment as applicable.

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.

Mokelumne/Amador/Calaveras (MAC) ó/2yűíyűzŠŘú Region: 19			
Goal #	**Goal**	**Objective #**	**Objective**
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 projection.
		38	Maintaining water and wastewater rates to remain within the socioeconomic means of the community.

Monterey Peninsula, Carmel Bay, and South Monterey Bay Region: 20			
Goal #	**Goal**	**Objective #**	**Objective**
1	Water Supply	1	Meet existing water supply replacement needs of the Carmel River system and Seaside Groundwater Basin.
		2	Maximize use of recycled water and other reuse, including gray water systems, and stormwater capture and use.
		3	Seek long-term sustainable supplies for adopted future demand estimates.
		4	Optimize conjunctive use of surface and groundwater.
		5	Evaluate, advance, or create water conservation throughout the Region in compliance with the State's 20x2020 Water Conservation Plan.
2	Water Quality	6	Improve ocean water quality, including Areas of Special Biological Significance (ASBS), by minimizing pollutants in stormwater discharges.
		7	Improve inland surface water quality for environmental resources (e.g. steelhead) and potable water supplies.
		8	Protect and improve water quality in groundwater basins.
		9	Meet or exceed water quality standards established by regulatory agencies and stakeholders.
3	Flood Protection/Erosion Prevention	10	Develop regional projects and plans necessary to protect existing infrastructure and sensitive habitats from flood damage, erosion, and sea level rise, in particular, along the South Monterey Bay shoreline and Carmel Valley.
		11	Develop approaches for adaptive management that minimize maintenance and repair requirements (sustainable flood management systems).
		12	Protect quality and availability of water while preserving or restoring ecologic and stream function.
		13	Provide community benefits beyond flood protection, such as public access, open space, recreation, agricultural preservation, and economic development.
4	Environmental Protection and Enhancement	14	Protect and enhance sensitive species and their habitats in the regional watersheds; promote the steelhead run.
		15	Identify opportunities to assess, protect, enhance, and/or restore natural resources, including consideration of climate change, when developing water management strategies and projects.
		16	Minimize adverse effects on biological and cultural resources when implementing strategies and projects.
		17	Identify opportunities for open spaces, trails and parks along streams and other recreational areas in the watershed that can be incorporated into projects.
		18	Identify and integrate elements from appropriate Federal and State species protection and recovery plans.
5	Climate Change	19	Evaluate adaptation measures and mitigative solutions to climate change effects.
		20	Support increased education, monitoring and research to increase understanding of long-term impacts of climate change in the region.
		21	Support efforts to increase education, research and use of energy conservation measures and alternatives to fossil fuel and non-renewable resources to reduce greenhouse gas emissions associated with water and wastewater facility operations and IRWM projects.
6	Regional Communication	22	Identify cooperative, integrated strategies for protecting both infrastructure and environmental resources, including from climate change impacts.
		23	Foster collaboration among regional entities as an alternative to litigation.
		24	Identify and pursue additional opportunities for public education, outreach, and communication on water resource management and climate change, including to disadvantaged communities and stakeholders with interests in water management issues.
		25	Build relationships with State and Federal regulatory agencies and other water forums and agencies.

North Coast Resource Partnership Region: 21			
Goal #	**Goal**	**Objective #**	**Objective**
1	Intraregional Cooperation & Adaptive Management	1	Respect local autonomy and local knowledge in Plan and project development and implementation.
		2	Provide an ongoing framework for inclusive, efficient intraregional cooperation and effective, accountable NCIRWMP project implementation.
2	Economic Vitality	3	Ensure that economically disadvantaged communities are supported and that project implementation enhances the economic vitality of disadvantaged communities.
		4	Conserve and improve the economic benefits of North Coast Region working landscapes and natural areas.
3	Ecosystem Conservation & Enhancement	5	Conserve, enhance, and restore watersheds and aquatic ecosystems, including functions, habitats, and elements that support biological diversity.
		6	Enhance salmonid populations by conserving, enhancing, and restoring required habitats and watershed processes.
4	Beneficial Uses of Water	7	Ensure water supply reliability and quality for municipal, domestic, agricultural, cultural, and recreational uses while minimizing impacts to sensitive resources.
		8	Improve drinking water quality and water related infrastructure to protect public health, with a focus on economically disadvantaged communities.
		9	Protect groundwater resources from over-drafting and contamination.
5	Climate Adaptation & Energy Independence	10	Assess climate change effects, impacts, vulnerabilities, and strategies for local and regional sectors.
		11	Promote local energy independence, water/ energy use efficiency, GHG emission reduction, and jobs creation.
6	Public Safety	12	Improve flood protection and reduce flood risk in support of public safety.

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.

North Sacramento Valley ó/2yúŧydzŜŘú Region 22			
Goal #	**Goals**	**Objective #**	**Objectives**
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.

Pajaro River Watershed Region: 23			
Goal #	**Goal**	**Objective #**	**Objective**
1	**Water Supply Goal** - Protect and improve regional water supply reliability, protect groundwater resources from overdraft, reduce dependence on imported water, and protect watershed communities from drought while considering climate change impacts on water supply resources and demands.	1	Meet 100% of M&I and agriculture demands (both current and future conditions) in wet to dry years including the first year of a drought
		2	Meet 85% M&I and 75% agriculture demands (both current and future conditions) in second and subsequent years of a drought
		3	Identify and address water supply needs of disadvantaged communities in the Pajaro River Watershed
		4	Implement water conservation programs to reduce M&I and agricultural water uses consistent with SBx7-7 and CVPIA
		5	Maximize the use of recycled water during the irrigation season and expand other uses of recycled water
		6	Optimize the use of groundwater and aquifer storage
		7	Maximize conjunction use opportunities including interagency conjunctive use
		8	Optimize and sustain the use of existing import surface water entitlements from the San Felipe Unit
		9	Maximize the beneficial use of existing local water supplies while protecting existing surface water rights
2	**Water Quality Goal** – Protect and improve water quality for beneficial uses consistent with regional community interests and the RWQCB basin plan objectives through planning and implementation in cooperation with local and state agencies and regional stakeholders.	10	Meet or exceed all applicable groundwater, surface water, wastewater, and recycled water quality regulatory standards
		11	Identify and address the drinking water quality of disadvantaged communities in the Pajaro River Watershed
		12	Protect groundwater resources from contamination including salts and nutrients
		13	Address impacts from surface water runoff through implementation of Best Management Practices or other surface water management strategies
		14	Meet or exceed delivered water quality targets established by recycled water users
3	**Flood Management Goal** – Ensure flood management strategies are developed and implemented through a collaborative and watershed-wide approach and are designed to maximize opportunities for comprehensive management of water resources.	15	Implement flood management strategies throughout the watershed that provide multiple benefits
		16	Reach consensus on the Pajaro River Risk Reduction Project necessary to protect existing urban areas and infrastructure from flooding and erosion from the 100-year event and to maximize opportunities to protect agricultural land uses
		17	Work with stakeholders to preserve existing flood attenuation by implementing land management and conservation strategies throughout the watershed
		18	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
		19	Provide community benefits beyond flood protection such as public access, open space, recreation, agriculture preservation and economic development
4	**Environmental Protection and Enhancement Goal** – Preserve the environmental wealth and well-being of the Pajaro River watershed by identifying opportunities to restore and enhance natural resources of streams, watersheds, wetlands, and the Monterey Bay when developing and implementing water management strategies.	20	Address opportunities to enhance the local environment and protect and/or restore natural resources, in cooperation with landowners, when developing water management strategies
		21	Improve biological and cultural resources, including riparian habitats, habitats supporting sensitive plant or animal species and archaeological/historic sites when implementing strategies and projects
		22	Address opportunities to protect, enhance, or restore habitat to support Monterey Bay National Marine Sanctuary marine life in conjunction with water management strategies
		23	Address opportunities for open spaces, trails, parks along creeks and other recreational projects in the watershed that can be incorporated with water management strategies, consistent with public use and property rights

Poso Creek (Goals and Objectives have multiple linkages) Region: 24			
Goal #	**Goal**	**Objective #**	**Objective**
1	Maintain and Enhance Water Supply Reliability	1	Enhance reliability of surface water supplies delivered to region.
2	Improve Operational Efficiency and Flexibility	2	Indentify any significant threats to groundwater resources from overdrafting.
3	Reduce Water Demand	3	Improve regional water conveyance, direct recharge, and in-lieu service areas
4	Protect Quality of Water Supply	4	Increase absorptive capacity within the region.
5	Maintaing Economic Viability of Water Use in Region	5	Promote regional conjunctive water-use.
6	Practice Regional Resource Stewardship and Environmental Awareness	6	Support groundwater monitoring activities.
7	Improve Flood Management	7	Maintain and enhance quality of water supply.
		8	Enhance region-wide flood control measures.
		9	Promote environmental conservation and support wildlife habitat enhancement.
		10	Identify drinking water quality issues of communitites, water-related needs of DACs, and consider improvements.
		11	Implement regional opportunities, projects, and programs.
		12	Implement region-wide water management actions.
		13	Maintain compliance with State and Federal planning requirements
		14	Maintain coordination between Poso Creek RWMG Participants and Interested Parties.

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.

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.
		13	Increase water resources related recreational opportunities.
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 native 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.

San Luis Obispo Region: 28			
Goal #	**Goal**	**Objective #**	**Objective**
1	**Water Supply Goal** - The intent of the Water Supply Goal is to maintain or improve water supply quantity and quality for potable water, fire protection, ecosystem health, and agricultural production needs; as well as to cooperatively address imitations, vulnerabilities, conjunctive-use, and water-use efficiency.	1	Maximize Accessibility of Water
		2	Adequate Water Supply
		3	Sustainable Potable Water for Rural
		4	Sustainable Water for Agriculture
		5	Water System Water Quality Improvements
		6	Implement Water Management Plans
		7	Conservation/ Water Use Efficiency
		8	Plan for Vulnerabilities of Water Supplies
		9	Diverse supply (Recycled, Desalinized)
		10	Support Watershed Enhancement
2	**Ecosystem and Watershed Goal** - Maintain or improve the health of the Region's watersheds, ecosystems, and natural resources through collaborative and cooperative actions; with a focus on assessment, protection, and restoration/enhancement of ecosystem and resource needs and vulnerabilities.	11	Understand Watershed Needs
		12	Conserve Balance of Ecosystem
		13	Reduce Contaminants
		14	Public Involvement and Stewardship
		15	Protect Endangered Species
		16	Reduce Impacts of Invasive Species
		17	Climate Change on Ecosystems
3	**Groundwater Monitoring and Management Goal** - Achieve sustainable use of the Region's water supply within groundwater basins through collaborative and cooperative actions.	18	Understand Groundwater Issues and Conditions
		19	Support Local Groundwater Management
		20	Further Local Basin Management Objectives
		21	CASGEM Program
		22	Groundwater Recharge/Banking
		23	Protect and Improve Groundwater Quality
4	**Flood Management Goal** - Foster an integrated, watershed approach to flood management and improved storm water quality through collaborative community supported processes in order to ensure community health, safety, and to enhance quality of life.	24	Understand Flood Management Needs
		25	Promote Low Impact Developement
		26	Enhance Natural Recharge
		27	Improve Infrastructure and Operations
		28	Implement Multiple Benefit Projects
		29	Restore Streams, Rivers and Floodplains
		30	Support Disadvantaged Communities Flood Protection

San Luis Obispo ó/2ÿúÿdzŜŘú Region: 28			
Goal #	**Goal**	**Objective #**	**Objective**
5	**Water Resources Management and Communications Goals** - Promote open communications and regional cooperation in the protection and management of water resources, including education and outreach related to water resources conditions, conservation/water use efficiency, water rights, water allocations, and other regional water resource management efforts.	31	Public Outreach on IRWM Implementation
		32	Fund for IRWM Implementation
		33	Support Local Control
		34	Consider Property Owner Rights
		35	Agency Alignment on Water Resources Efforts
		36	Collavoration Between Agriculture , Rural and Urban
		37	Disadvantaged Communities Support and Education
		38	Promote Public Education Programs

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	21	Attain water quality standards in fresh and marine environments to meet designated beneficial uses
		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

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

Santa Cruz County Region: 31			
Goal #	**Goal**	**Objective #**	**Objective**
1	Provide a safe, reliable, and affordable water supply to meet current and expected regional demand without causing undesirable environmental impacts.	1	Water Supply - Ensure a reliable and sustainable local water supply through strategies that diversify the supply portfolio, develop production from alternative/supplemental sources, protect and enhance surface and ground water, protect against seawater intrusion, and maximize efficient delivery and use.
		2	Water Supply - Reduce water demand as technically and economically feasible, particularly in relation to the cost of additional sources.
2	Maintain and improve regional surface and groundwater quality to protect beneficial uses.	3	Water Quality - Reduce the sources of harmful pollutants (e.g., sediment, bacteria, nitrate, persistent organics and other toxic constituents) and their impacts on aquatic resources.
3	Improve the condition of riparian and aquatic ecosystems to support the native species, watershed functions, and regional water needs.	4	Watershed Resources - Increase the habitat quality and quantity of critical aquatic ecosystems (i.e., streams, tidal wetlands and freshwater wetlands).
4	Reduce flood hazards and manage stormwater runoff through economical policies and projects that enhance natural hydrologic function and protect communities.	5	Flood/Stormwater Management - Implement integrated flood and stormwater management strategies that reduce hazards and impacts from floods and, where feasible, provides multiple benefits (e.g., improved stormwater quality, ecosystem benefits, low impact development/redevelopment, and groundwater recharge).

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.
		11	Manage and improve the supplies available to South Orange County for the collective benefit of the area.
4	Promote water use efficiency	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.

Southern Sierra Region: 33			
Goal #	**Goal**	**Objective #**	**Objective**
1	Improve Water Supply Management	1	Promote natural water storage through meadow, stream and forest restoration
		2	Increase understanding of the water balance and groundwater resources
		3	Increase capacity of water storage facilities
		4	Efficiently use, conserve and recycle water resources
		5	Mitigate and adapt to climate change impacts on water supplies
		6	Promote sustainable water supplies for human development
2	Protect and Improve Water Quality	7	Protect natural streams, lakes and other water bodies from contamination
		8	Promote best management practices to protect water quality or reduce water contamination
		9	Reduce erosion and sedimentation
		10	Promote storm water management planning and implementation
		11	Assess water quality problems of small water systems
		12	Study impacts of septic systems on water quality
3	Perform Integrated Flood Management	13	Identify and implement projects to accommodate flood related impacts from climate change
		14	Integrate flood management with other land management activities
		15	Protect and restore connectivity of floodplains with other water bodies
		16	Increase capacity of water storage facilities
4	Improve Watershed and Environmental Resource Management	17	Promote best management practices to protect water quality or reduce water contamination
		18	Manage vegetation to reduce fire risk and attempt to keep fires within their natural range of variability
		19	Reduce erosion and sedimentation
		20	Promote natural water storage through meadow, stream and forest restoration
		21	Protect and restore connectivity of floodplains with other water bodies
5	Expand Stakeholder Education	22	Promote community education about water issues
		23	Increase outreach and involvement to Native American Tribes
		24	Increase outreach and involvement to disadvantaged communities
		25	Develop and maintain a comprehensive website for Regional Water Management Group
6	Protect and Enhance Unique and Important Environmental Resources	26	Protect unique areas of high value for water storage and groundwater recharge
		27	Protect unique areas of high value for water quality protection and remediation
		28	Protect unique areas of high value for other important water resources related issues
		29	Enhance water resources management in areas already in protected status for their unique and high value natural resources

Tahoe-Sierra Region: 34			
Goal #	**Goal**	**Objective #**	**Objective**
1	Protect and improve water quality	1	Meet approved TMDL standards in accordance with the attainment date, and participate in the development of future TMDLs
		2	Reduce pollutant loads by implementing measures such as storm water LID retrofits, erosion control/restoration to meet Water Quality Objectives (WQOs) for receiving water bodies established in the Water Quality Control Plan for the Lahontan Region within the planning horizon
		3	Implement water quality monitoring programs through planning horizon, and coordinate annually throughout the Region
		4	Ensure that drinking water supplied by public water systems continues to meet Federal and State standards
		5	Restore degraded streams, wetlands, riparian and upland areas to reestablish natural water filtering processes
		6	Operate and maintain, build, or replace infrastructure for reliable collection, treatment and disposal of wastewater
2	Protect the community water supply and treatment/delivery system	7	Provide water supply to meet projected demands for a 20-year planning horizon
		8	Operate and maintain, build, or replace infrastructure to reliably supply water
		9	Implement and promote water conservation measures and practices to meet state goals
3	Manage groundwater for sustainable yield	10	Maintain and monitor groundwater supply to assure future reliability
		11	Promote groundwater protection activities for high quality groundwater, and advocate for improvements to impacted groundwater quality through public education
		12	Manage groundwater for multiple uses (e.g., municipal/industrial/agricultural supply and environmental use)
4	Contribute to ecosystem restoration	13	Enhance and restore water bodies, wetlands, riparian areas and associated uplands to support healthy watersheds, viable native fish, wildlife and plant habitats
		14	Develop and implement programs to prevent the spread of existing invasive species and colonization of potential future invasive species
		15	Implement, in coordination with public and private landowners, activities to manage forest health and wildfire risks
		16	Minimize ecosystem impacts caused by existing and new development
5	Implement integrated watershed management throughout the Region	17	Conduct local and regional water-related planning activities within the planning horizon as supported by current and future watershed science
		18	Ensure collaboration among multiple jurisdictions within the Region for information exchange
		19	Increase public education and awareness of watershed functions, protection and restoration needs to encourage stewardship by the public
		20	Promote activities that reduce flood risk
		21	Address climate change (e.g., water quality, water supply, groundwater recharge, flood management) in local and regional planning efforts and support efforts to continue improving the science
		22	Monitor water storage, release and exchange activities in order to improve coordination with regional planning

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.

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

Kings Basin Water Authority - (Goals and Objectives have multiple linkages) 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.

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
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.
		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.

Upper Pit River Watershed ό/ƶyʎyʣŜŘύ Region 39			
Goal #	**Goal**	**Objective #**	**Objective**
6	Strengthen Community Watershed Stewardship and Encourage Better Coordination of Data Collection, Sharing, and Reporting	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.
		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: • Cooperatively developing a set of best management practices for various resource management issues throughout the watershed; • Multi-party monitoring protocols that implement best practices for forest health and management; • Mutually agreed upon pre and post tests for water-quality monitoring and evaluation methods for long-term outcomes; • Partnerships and projects in the spirit of collaboration with the Tribal Government; and • Conduct a "How-To Workshop" regarding intergovernmental affairs coordination with Tribe for all local water-management entities.
7	Support Community Sustainability by Strengthening Natural Resource-Based Economies	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.
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.

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.

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

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

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.
		15	Develop and implement land use measures that will help mitigate the impacts of new development in floodplains.
4	Protect and restore habitat and ecosystems	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.
		19	Develop a master permit for removal of invasive plant species.
5	Provide water-related recreational, public access, stewardship, engagement and educational opportunities	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.
		21	Improve public access and recreation opportunities when implementing new projects and programs.
6	Prepare for and adapt to climate change	22	Assess vulnerabilities to the effects of climate change.
		23	Implement projects and programs which help the region adapt to climate change.

Westside - San Joaquin Region: 44			
Goal #	**Goal**	**Objective #**	**Objective**
1	Minimize Regional conflicts by addressing the most problematic sources of tension affecting the Region's agricultural, municipal, and environmental water use, namely water supply reliability, drainage, and water quality.	1	Provide reasonable opportunity to advance ecosystem restoration through balanced project implementation.
		2	Develop Regional solutions that protect environmental and habitat concerns and provide potential for improvement.
		3	Improve south-of-Delta water supply reliability by an average of 25%.
		4	Minimize risk of loss of life, infrastructure, and resources caused by significant storm events by utilizing uncontrolled flow beneficially.
		5	Maximize utility of Regional aquifers while reducing potential for overdraft.
		6	Consider recreational potential in project development.
		7	Capture storm water for higher beneficial use whenever practicable.
		8	Always promote and enhance water conservation.
		9	Develop Regional solutions that provide opportunity for water quality improvement.
		10	Always promote and enhance water recycling.
		11	When possible, align projects to complement existing wetlands.

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).

Westside (Yolo, Solano, Napa, Lake, Colusa) ó/2yúlyźŠŘú 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.

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.

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.

East Stanislaus ó/Ɀyΐůẏ ǆŜŘú Region 47			
Goal #	**Goals**	**Objective #**	**Objectives**
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.

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Appendix C – Description of DAC Involvement in IRWM Planning (as of December 31, 2014)

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

Region ID*	Region Name	DAC 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.
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.
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.
4	Yosemite-Mariposa	As described in greater detail in the IRWM plan, the majority of the Region, outside of Yosemite National Park, is economically disadvantaged (i.e., has a median household income (MHI) less than 80% of the statewide MHI) which has posed challenges for planning and opportunities to provide assistance through the IRWM process. A special effort during the IRWM Plan process was made to include DACs by making presentations at meetings of community groups. A significant portion of the Region qualifies as a DAC but is sometimes hard to contact due to the sparse population. Although no organizations specifically addressing Environmental Justice (EJ) concerns have been identified in the Region, opportunities to address EJ issues were coordinated with DAC outreach as appropriate.

Region ID*	Region Name	DAC Involvement
5	Coachella Valley	The region partnered with DWR to develop a DAC Outreach Demonstration Program (DAC Outreach Program). The DAC Outreach Program was implemented from 2012 to 2013 and included extensive outreach to improve understanding of which areas in the Region qualify as DACs with the purpose of developing and implementing methods to improve DAC participation in the region's IRWM process. A large portion of the work completed for the program involved additional mapping efforts to define the location of DACs, including follow-up surveys and research. The resulting mapped DAC areas were divided into 14 focus areas as follows: White Water, Desert Hot Springs, Garnet, Desert Edge, Cathedral City, Sky Valley, Thousand Palms, Coachella, Thermal, Mecca, Oasis, North Shore, Desert Homes, and Salton City. DAC Outreach Program activities included creating stakeholder profiles, forming a DAC issues group, holding several DAC-specific workshops, coordinating with community leaders, and performing outreach through a wide variety of communication mechanisms. DAC involvement is thoroughly documented in a dedicated chapter of the IRWM Plan, as well as in a second volume of the Plan.
6	Cosumnes American Bear Yuba (CABY)	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.
7	East Contra Costa County	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.
8	Eastern San Joaquin	An outreach plan was developed to guide DAC engagement and is structured so that it can be continued for the life of the IRWM plan. Goals and objectives were established for the engagement of DAC representatives, and strategies developed to identify governmental and non-governmental organizations to help identify needs and possible remedial projects or actions. Several DAC projects were identified and carried forward into the evaluation phase of the IRWM plan. The IRWM plan identifies 59 percent of San Joaquin County as Disadvantaged Communities. DACs can be found in portions of Thornton, Walnut Grove, City of Lodi, City of Stockton, Lathrop, Escalon, Ripon, Tracy, and Manteca.
9	Gateway Region (GWMA)	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.

Region ID*	Region Name	DAC Involvement
10	Greater Los Angeles County (GLAC)	DACs are located throughout the Greater LA 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. The region created a DAC Coordinator position to function as a liaison between the members of the Regional Water Management Group and local agencies. Additionally, a DAC Outreach Coordinator position was created to engage DAC representative groups. The DAC Coordinator and the DAC Outreach Coordinator participate in identifying and evaluating DAC projects for consideration for implementation funding. The GLAC region applied for and received specialized funding from DWR to develop and implement a DAC outreach pilot program which is being used to revise the outreach processes Statewide based on lessons learned.
11	Greater Monterey County	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 from implementation of the IRWM plan. DACs involved in the IRWM are: San Jerardo Cooperative, San Lucas, Castroville, Springfield, Las Lomas, Alpine Court, San Vicente Rd, Boronda, Chualar, and Camphora Highlands.
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.
13	Inyo-Mono	All of Inyo County is classified as a DAC. The Inyo-Mono RWMG has prioritized outreach to and engagement of DACs 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.
14	Kaweah River Basin	The region plans to create a new outreach program specifically designed to address water quality issues related to disadvantaged communities and aggregation of single-family residences in a disadvantaged hamlet setting. Mapping is currently being completed of each of the concentrations of households within the IRWM plan boundary in excess of six (6) single-family units. From this basis, work will begin with respect to the drinking water quality of each of those areas, followed by the development of a program for assistance to the identified areas.

Region ID*	Region Name	DAC Involvement
15	Kern County	The RWMG contracted with a professional facilitation consultant for outreach to DACs, underserved communities, traditionally isolated communities or rural communities, and severely disadvantaged communities (SDACs). The IRWM plan identifies 27 DACs, two-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.
16	Madera	Due to the lower income levels generally found in the San Joaquin Valley and the Madera Region, most communities in the region meet the definition of a Disadvantaged Community. The Madera RWMG undertook proactive steps to ensure inclusion of the Disadvantaged Communities' needs and interests in the planning process of the IRWM plan and in the regional project definitions. After the Disadvantaged Community representatives were identified, the Madera RWMG extended invitations to attend the RWMG meetings, and meeting minutes and educational materials were made available to the member representatives. The opportunity to join the RWMG was also extended to interested Disadvantaged Communities. Because many Disadvantaged Communities did not have the ability to contribute monetary dues to the RWMG, a process was developed and adopted by the RWMG to encourage participation through a "DAC Group" that was not asked to pay the standard RWMG annual dues.
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.
18	Mojave	The inclusion and participation of economically disadvantaged communities (DACs) was considered essential to the Mojave IRWM Plan process, as approximately 80 percent of the Mojave Region qualifies as disadvantaged. DACs within the IRWM planning region included both rural and urban areas. Among the DACs identified in the Region are the following: Adelanto, Barstow, Daggett, El Mirage, Hinkley, Johnson Valley, Joshua Tree, Kramer Junction, Landers, Lenwood, Lucerne Valley, Newberry Springs, Oro Grande, Pinon Hills, Pioneertown, Twentynine Palms, Yermo, Yucca Valley, and portions of Apple Valley, Hesperia, Phelan, and Victorville. The Region also outreached to DACs through informational invitations mailed and emailed to individuals and water agencies servicing known DACs.

Region ID*	Region Name	DAC Involvement
19	Mokelumne/ Amador/ Calaveras (MAC)	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.
20	Monterey Peninsula, Carmel Bay, and South Monterey Bay	There are four tracts within the region that can be considered disadvantaged. These tracts represent approximately 15 percent of the population in the region. The population of these areas is represented in the Stakeholder Group and additional outreach to these groups was conducted prior to each stakeholder meeting for the development of the updated plan. During discussions at stakeholders meetings, no additional critical water-resource related issues were identified that related directly to disadvantage communities or environmental justice concerns.
21	North Coast Resource Partnership	Approximately 88 percent of the geographic area of the large North Coast region and 36 percent of the population is economically disadvantaged. Mechanisms for outreach and involvement of DACs in the region include the website, public workshops across the region, one-to-one technical assistance to project proponents, and direct meetings at individuals' request. A major avenue for involvement of DACs recently is the "Water Supply and Wastewater Service Providers Outreach and Support Program" of the NCRP, which aims to increase drinking water quality, supply, and safety through local collaborations to improve infrastructure, operations, and maintenance.
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.
23	Pajaro River Watershed	Based on data from the 2010 census, the City of Watsonville and the census places of Pajaro, Amesti, and Freedom qualify as DACs. Numerous stakeholders groups throughout the Pajaro River Watershed were identified and contacted, including DACs and lower income areas. The City of Watsonville is actively participating as a stakeholder and implementation partner. They are also a member of the Stakeholder Steering Committee. The Pajaro/Sunny Mesa Community Service District is an active implementation partner.
24	Poso Creek	All of the incorporated and unincorporated cities and communities in the Region qualify as "economically disadvantaged communities" based on the statewide median household income. The RWMG has taken proactive steps for identifying and including DACs in development of the Plan. Following the identification of economically-disadvantaged areas, representatives were extended an invitation to participate in the IRWM Group. Several communities that met the criteria for DACs joined the Poso Creek IRWM Group and have participated since its formation. DAC participation in the IRWM Group was formalized through the formation of a DAC Work Group, which also includes an elected DAC Representative who is a voting member of the RWMG.

Region ID*	Region Name	DAC Involvement
26	San Diego	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 & 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.
27	San Francisco Bay Area	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 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.
28	San Luis Obispo (SLO)	The region has four designated DACs as follows: San Miguel, Oceano, San Simeon, and San Luis Obispo. All four DACs are signatories to the MOU and are represented in the RWMG. All public outreach and communication efforts include and support the involvement of the SLO IRWM Region's DACs. Targeted outreach was conducted with DACs as well as rural water users, ranchers, and other water users within agriculture and agricultural-related industries.
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.

Region ID*	Region Name	DAC Involvement
30	Santa Barbara Countywide	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.
31	Santa Cruz County	The City of Watsonville qualifies as a disadvantaged community, including two census tracts within the city qualifying as "severely disadvantages". In addition, two census tracts within the City of Santa Cruz qualify as disadvantaged, with one of them qualifying at "severely disadvantaged". The community of Davenport was identified as a DAC through and independent income survey. Ongoing efforts have been made to identify DACs in the region and to engage them in the planning process. Both Watsonville and Davenport have benefitted from IRWM funding for specific planning and implementation projects. In 2013, Santa Cruz was awarded an IRWM Planning Grant for Disadvantaged Community Outreach. This work is currently in progress and will be included as a future addendum to the 2014 Plan.
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.
33	Southern Sierra	The RWMG has made it a priority to consider ecological, social, economic and cultural components in water resources management. In early meetings, brainstorming sessions were held between stakeholders that identified primary issues and effects on Disadvantaged Communities (DACs). Thirteen (13) of the 17 communities in the Southern Sierra region are considered economically disadvantaged. In the Southern Sierra Region there are very small islands of relative wealth surrounded by a sea of DACs. Additionally, unlike valley farm communities and urban low income areas, there is rarely a central or even identifiable point of contact to reach DAC populations. This makes communication, coordination and meaningful interaction very labor intensive. The initial outreach efforts by the Sierra Nevada Alliance and Sequoia Riverlands Trust included identifying stakeholders in the Region's DACs. There have been a few representatives of DACs who have attended the RWMG meetings. The RWMG will continue to reach out and engage DACs in planning and implementation to ensure the DAC needs continue to be represented.
34	Tahoe-Sierra	In the Tahoe-Sierra Region approximately 36% of the population resides in DACs, including parts of City of South Lake Tahoe, Kings Beach, the Washoe Tribe's Woodford Community, and part of rural Nevada County. DAC outreach consisted of door-to-door multi-lingual household surveys in the areas of Kings Beach and South Lake Tahoe which are identified DACs.
35	Tule	*Plan Development In Process*

Region ID*	Region Name	DAC Involvement
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.
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.
38	Kings Basin Water Authority	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 Orosi 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.
39	Upper Pit River Watershed	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.

Region ID*	Region Name	DAC Involvement
40	Upper Sacramento-McCloud	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-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.
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.
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.
43	Watersheds Coalition of Ventura County (WCVC)	In the 2006 WCVC IRWM Plan, very few areas meeting the DAC criterion were identified in the region. Due to changing economic conditions, many Ventura County residents, as in other regions of California, have experienced either unemployment or a drop in income. Based on the most recent American Community Survey 5-Year Estimate (2007-11), there are more census tracts in the County of Ventura that have a concentration of residents with income levels below the threshold of 80 percent of the median household income ($49,305) than there were a few years ago. These areas now qualify as DACs. For the purposes of the IRWM Plan, DACs have been identified in two ways. The first is through the American Community Survey, a part of the U.S. Census designed to provide more current demographic data and estimates throughout the decade. The second method used in the WCVC IRWM region to identify DACs, also based on income data, has been through income surveys. During development of the IRWM plan, a variety of entities serving DACs were contacted to engage them in Plan development.

Region ID*	Region Name	DAC Involvement
44	Westside San Joaquin	The entire Westside-San Joaquin Region is considered disadvantaged, except for the very northern tip of the Region. Improving water supply reliability and quality, and otherwise enhancing the conditions for production agriculture in this region have been identified as ways to expand the source of employment opportunities for these disadvantaged populations. To promote DAC identification and involvement, the Westside-San Joaquin Region conducted an extensive survey of private and public community representatives to educate and encourage understanding of the IRWM process, to help understand the issues confronted by DACs, and to better address the needs of minority and/or low-income communities. The Region mailed formal letters to potential stakeholders requesting participation in a survey to identify water quality, water treatment flood control and water supply needs for disadvantaged communities in the Region. Follow-up contacts were made first by email, and then by telephone. This effort resulted in an initial list of 22 projects that would benefit DACs and low-income communities.
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.
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 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.
48	Fremont Basin	*Plan Development In Process*
49	Lahontan Basins	*Plan Development In Process*

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

Appendix D – Description of Tribal Involvement in IRWM Planning (as of December 31, 2014)

The following summarizes 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 December 31, 2014. These summaries represent a snapshot in time and may not be fully representative of current Tribal involvement in specific IRWM regions.

Region ID*	Region Name	Tribal Involvement
1	American River Basin (ARB)	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	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 Anza Borrego Desert RWMG reached out to all of the Tribes, only two Tribes responded.
4	Yosemite-Mariposa	While there is one Tribal community, the Southern Sierra Miwok Nation, currently centered in the Region, there are several others such as the North Fork Mono Tribe and the Picayune Rancheria of the Chukchansi Indians, whose peoples have cultural ties to the Region but are now centered elsewhere. Together, these Tribes have a long and rich cultural history that is rooted in the Region. Consistent with the 2009 Update to the California Water Plan, the Y-M RWMG has used the term “California Native American Tribe” to signify all indigenous communities of California including those that are not federally recognized. The purpose of Tribal outreach as part of the IRWM plan was to engage and identify issues and ultimately projects specific to water resources that would benefit each Tribe. Early in the project, the California Native American Heritage Commission was contacted to provide information and participate in the planning process. Contact was made with fourteen individuals, most of whom were with the American Indian Council of Mariposa County and North Fork Rancheria. Representatives of these groups participated in meetings to gather information and identify projects beneficial to the Tribes. Three Tribal projects are included in the IRWM Plan.

Region ID*	Region Name	Tribal Involvement
5	Coachella Valley	Native American Tribes in or near Coachella Valley include the Torres-Martinez Desert Cahuilla Indians, Cabazon Band of Mission Indians, Augustine Band of Cahuilla Indians, Agua Caliente Band of Cahuilla Indians, Twenty-Nine Palms Band of Mission Indians, and Santa Rosa Band of Cahuilla Indians. The Santa Rosa Reservation is located at the boundary of the IRWM region, but decided not to participate in the Coachella IRWM Program because they do not obtain their water resources from the Coachella Valley Region. The Coachella Valley's tribal governments were engaged through an outreach program to better understand their critical water resources issues and needs. Several meetings were held with representatives with the tribes and an Issues Group was established to identify water related issues and needs related to the Coachella Valley's Tribes. Tribal members have since indicated that convening a separate Issues Group is no longer necessary, but targeted communications continue.
6	Cosumnes American Bear Yuba (CABY)	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, Ione 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 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.
7	East Contra Costa County	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.
8	Eastern San Joaquin	The IRWM plan states that no Tribal entities exist within the region and therefore there is no section in the plan addressing Tribal involvement.
9	Gateway Region (GWMA)	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.
10	Greater Los Angeles County (GLAC)	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.

Region ID*	Region Name	Tribal Involvement
11	Greater Monterey County	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. The region has had significant participation from the Ohlone/Costanoan-Esselen Nation at Regional Water Management Group Meetings.
12	Imperial	No Tribes are identified within the region and no further Tribal information is available in the region's IRWM plan.
13	Inyo-Mono	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	The KDWCD has a longstanding relationship with Tribal community representatives in the area. Consultations take place on any project which is in the development process or, more importantly, at the threshold of construction process, to ensure coordination with Tribal group representatives and to ensure protection of antiquities, sacred sites and burial sites. Nevertheless, the KDWCD is currently preparing a Memorandum of Understanding with Tribal group representatives which will call for immediate cessation of project activities if any antiquities or evidence of burial are discovered in the construction process. It is a goal of the KDWCD Board of Directors, staff and consultants to maintain this relationship.
15	Kern County	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 the local Tribes, federal and state funding is very limited.
16	Madera	Within the Madera IRWM Plan boundary there are two Federally recognized Native American Tribes: the Picayune Band of the Chukchansi Indian Tribe and the North Fork Rancheria of Mono Indians. The North Fork Rancheria of Mono Indians is a signatory member of the RWMG.
17	Merced	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 Mojave IRWM Plan outreach included the San Manuel Band of Mission Indians and the Twenty-Nine Palms Band of Mission Indians in its Stakeholder Outreach Program, due to the existence of related Tribal artifacts and Tribal lands located near the Region's boundaries or within the Region.

Region ID*	Region Name	Tribal Involvement
19	Mokelumne/ Amador/ Calaveras (MAC)	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 Ione 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.
20	Monterey Peninsula, Carmel Bay, and South Monterey Bay	No Tribes are identified within the region and no further Tribal information is available in the region's IRWM plan.
21	North Coast Resource Partnership	The North Coast region has a significantly higher percentage of Native American residents than that of the state's 2 percent; about 4 percent of residents identify themselves as Tribal members. Representatives of North Coast Tribes are active participants in the NCRP governance and technical bodies via designation per the PRP-approved "Tribal Representation Process" that was endorsed by 20 Tribes. A Tribal Outreach Coordinator from the North Coast Region has been retained to ensure the NCRP continues to incorporate Tribal priorities and needs into the NCIRWMP and implementation projects. "NCRP outreach to 34 Tribal governments in the Region has been formalized via a listserv of Tribal representatives in North Coast Tribal government and Tribal environmental agencies. The goal is a continually improved NCIRWM Plan that utilizes indigenous knowledge and expertise, represents the needs of North Coast Tribes, and is sensitive to Tribal concerns. It is the intent of the NCIRWMP to document the fact that each of the North Coast Tribes exerts their jurisdictional authority according to their own traditional policies, laws, mandates and capacity. Priorities of North Coast Tribes were developed for the 2014 NCRIWMP: •Expand meaningful participation of Tribes in the North Coast IRWM planning process •Implement mechanisms to build the capacity of participating Tribes and provide technical assistance for project submissions •Identify water related implementation projects •Share relevant information between Tribes and governmental/non-governmental agencies •Respect of Tribal Governmental structures, and the sovereign and political independence of Tribal Nations and its members •Document specific water related issues and priorities in North Coast Tribal areas

Region ID*	Region Name	Tribal Involvement
22	Northern Sacramento Valley Group	Local Tribes and Tribal lands include the Berry Creek Rancheria, Redding Rancheria, Colusa Indian Community Council, Cortina Rancheria, Maidu Nation, Enterprise Rancheria of Maidu, Greenville Rancheria, Grindstone Indian Rancheria, Wintu Tribe of Northern California, Mechoopda Tribal Council, Shasta Indian Nation, Mooretown Rancheria, Shasta Nation, Nor-Rel-Muk Nation, 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 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 actively participates in meetings.
23	Pajaro River Watershed	The area around Soap Lake was previously inhabited by the Ohlone group of Indians. A representative of the Amah Mutsun Tribal Band is a member of the Stakeholder Steering Committee.
24	Poso Creek	There are no Native American Tribal communities located in the region.
26	San Diego	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.
27	San Francisco Bay Area	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 to identify 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 the region's geographic boundary and may have distinct water resource interests, needs, or challenges.
28	San Luis Obispo (SLO)	The two prominent Native American Tribes of San Luis Obispo are the Salinan and Northern Chumash Indian tribes. There are no tribal lands with specific water resources management needs; however, members of these tribes are encouraged to engage in the IRWM Program through notifications using the Native American Heritage Commission contact list.

Region ID*	Region Name	Tribal Involvement
29	Santa Ana Watershed Project Authority (SAWPA)	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 are 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.
30	Santa Barbara Countywide	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.
31	Santa Cruz County	There are no dedicated Tribal lands in the Santa Cruz IRWM region, but there are a number of historic, cultural, and Native American sacred sites throughout the region that are of great importance to the descendants of these Tribes. The primary organized Tribal group in the region is the Amah Mutson Tribal band of Ohlone/Costanoan Indians. Members of the Santa Cruz RWMG have met several times with representatives of the Amah Mutsun, and their representatives are included on the stakeholder notification list for the Santa Cruz IRWM region.
32	South Orange County Watershed Management Area	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	There are numerous unrecognized Tribes and three federally recognized Native American Tribal Reservations or Rancherias in the Region: Big Sandy, Cold Springs and Tule River. The Southern Sierra RWMG has several Tribal representatives as members and interested stakeholders. These representatives add significant value to the discussion and decision making of the RWMG including input on recreation, land use, historic use, and how current water policy may affect aspects of current life. IRWM plan members have attended Sierra Tribal Forum meetings at the National Forest Service office in Clovis to inform Tribal representatives of the on-going IRWM plan activities. Outreach and communication will continue through focused efforts to encourage membership and participation in the RWMG governance and project development.

Region ID*	Region Name	Tribal Involvement
34	Tahoe-Sierra	The Tribal communities involved in planning included the Washoe Tribe of Nevada and California. The purpose of Tribal outreach as part of the IRWM plan was to engage and identify issues and ultimately projects specific to water supply, resources, and quality that would benefit the Tribe. To begin this process, through the Tribal Environmental Protection Department and the Environmental Specialist, the Washoe Tribe Interim Chairman was invited to attend the initial stakeholder meeting to introduce the IRWM process and request further communication. An initial Tribal meeting was held with the Woodfords Washoe Community Council and community members. Since the initial meeting, the Washoe Tribe has been an active attendee at the stakeholder and subcommittee meetings and submitted two (2) projects for inclusion in the plan.
35	Tule	*Plan Development In Process*
36	Tuolumne - Stanislaus	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 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	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	Kings Basin Water Authority	There are no Native American Tribes located within the region, therefore no involvement or collaboration was directly conducted.
39	Upper Pit River Watershed	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.

Region ID*	Region Name	Tribal Involvement
40	Upper Sacramento-McCloud	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 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	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 IRWM plan 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	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.
43	Watersheds Coalition of Ventura County (WCVC)	There are several Native American Tribes represented in Ventura County including the Chumash, Barbareno and Ventureno Indians. There has been ongoing outreach to Tribal interests throughout the IRWM planning process beginning in 2005. The Native American Heritage Commission was contacted to confirm the appropriate contacts for further outreach. 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. In particular, they strongly value preservation of the ecosystems and species (i.e., California Steelhead trout populations) which sustained indigenous Tribes for centuries.
44	Westside San Joaquin	According to the US Department of the Interior Indian Affairs, as of March 2014 there are no listed federally recognized tribes within the region. No additional information is available in the Plan.
45	Westside (Yolo, Solano, Napa, Lake, Colusa)	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.

Region ID*	Region Name	Tribal Involvement
46	Yuba County	No Tribes are identified within the region and no further Tribal information is available in the region's IRWM plan.
47	East Stanislaus	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	*Plan Development In Process*
49	Lahontan Basins	*Plan Development In Process*

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