

2013 San Diego Integrated Regional Water Management Plan

1 Introduction

The San Diego Integrated Regional Water Management (IRWM) Region extends east from the Pacific Ocean, through one of the most populous areas in the nation, to the ridgeline of a forested mountain range.

San Diego is an immensely complex border region consisting of 11 watersheds that jointly provide water sufficient to meet only about 15% of the region's current water demands. The region's diverse habitats range from coastal to mountainous, and support more threatened and endangered species than any comparable land area in the nation (County of San Diego, 2009). Most of the 3.1 million people within the region inhabit the urbanized coastal areas, and the population of these areas is expected to increase by 30% percent by 2035, to over 4.0 million, according to the San Diego Association of Governments (SANDAG) forecast (SANDAG, 2010). The 2013 IRWM Plan presents an overarching assessment of the San Diego region's water supply, water quality and ecosystem challenges and provides recommendations for sustainable answers.



The San Diego IRWM Region includes eleven parallel watersheds.

Seeking and implementing integrated water management solutions is not new to the San Diego region. With average precipitation levels of only 10 inches per year at the coast, collaboration has been instrumental to overcoming the challenges of water scarcity. For example, the federal government assisted local agencies with water management issues in 1908 with the formation of the Cleveland National Forest in order to protect source water supplies. With the formation of the San Diego County Water Authority (Water Authority) in 1944, the diverse communities of the San Diego region formally banded together to build the aqueducts needed to import freshwater supplies. Similarly, the region has worked together over the past 13 years through the Water Authority in the construction of a series of reservoirs, pipelines, treatment plants and pump stations that, when complete, will allow the Water Authority to deliver locally stored water to the region's residents in the event of a water supply outage. In 1998, the Metropolitan Wastewater Joint Powers Authority (Metro JPA) was formed to ensure stakeholder collaboration with regard to San Diego's ocean discharge at Point Loma. In 2000, Project Clean Water was launched to coordinate on water quality issues of regional significance.

A look into the future of integrated water management in San Diego suggests that new levels of collaboration are forthcoming. For example:

- The San Diego region is a leader in the development of potable reuse as a water supply. How will water and wastewater agencies collaborate to ensure effective partnering?

- New stormwater runoff regulations align well with water conservation best management practices for large landscapes. How might stormwater and water agencies work together to efficiently partner on conservation programs?
- Many surface waters face water quality impairment from non-point source pollution, bacteria, sediment, nutrients, salinity, metals, and toxic organic compounds. How can water agencies, stormwater agencies, land-use authorities, regulators and others join forces to effect real water quality improvements?
- The Region encompasses urban and rural disadvantaged communities (DACs) with water management issues in need of being addressed. How can DACs most effectively participate in water management projects benefitting their communities?
- The Region includes 18 federally recognized tribes, each with water management challenges. How can tribal water management issues be effectively integrated into San Diego's regional water management planning?

These are but a few of the questions that the San Diego region must begin to answer. Inherent in these opportunities are the cost drivers associated with water supply diversification, wastewater treatment, regulatory compliance, and maintenance of existing infrastructure. Integration is not an end-game, but rather an iterative process.

Responsibilities for managing water resources span a multitude of agencies and entities. Natural water demarcations such as river systems do not correspond to political jurisdictions and each of the Region's watersheds span multiple cities and agencies. This creates jurisdictional complexity for water management. Although water purveyors are integrated in their plans, those that are member agencies of the Water Authority are just one stakeholder group in water. IRWM offers a forum to bring together the diversity of stakeholders into a collaborative approach to water management with reduced overall costs and improved effectiveness and efficiency. The IRWM model, while still evolving, offers the San Diego Region an enhanced approach for sustainable water management.

1.1 IRWM Planning

IRWM planning is a relatively new California initiative, aimed at developing long-term water supply reliability, improving water quality, and protecting natural resources. In 2002, the Integrated Regional Water Management (IRWM) Planning Act (SB 1672) was chaptered into State law, establishing the basis of California's IRWM Program. The Statewide IRWM Program is supported by Proposition 50 (2002) and Proposition 84 (2006), both of which provided bond funding to the California Department of Water Resources (DWR) to fund competitive grants for projects that improve water resources integration and management.

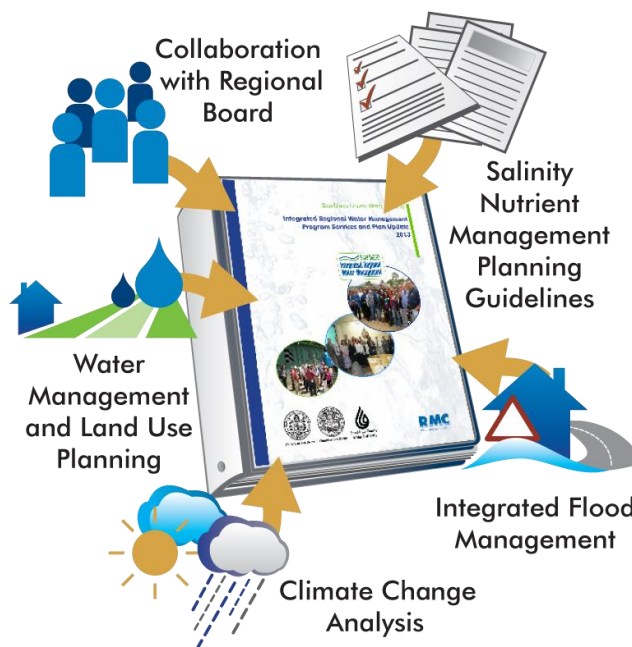
The San Diego IRWM Program began in 2005, and since then has achieved substantial success. San Diego published its first IRWM Plan in 2007 and has received over \$34 million to date through voter-approved bond funding. IRWM Plans are regional plans designed to improve collaboration in water resources management and comprehensively address all aspects of water management and planning throughout an IRWM Region. IRWM Plans cross jurisdictional, watershed, and political boundaries; involve multiple agencies, stakeholders, individuals, and groups; and attempt to address the issues and differing perspectives of all the entities involved through mutually beneficial solutions.

This 2013 IRWM Plan – prepared by the San Diego Regional Water Management Group (RWMG) which consists of the San Diego County Water Authority (Water Authority), the City of San Diego (City), and the County of San Diego (County) – is a comprehensive update of the 2007 IRWM Plan.

Unique and innovative features of this 2013 IRWM Plan include the five planning studies developed to address identified water planning needs in the San Diego IRWM Region. The five planning studies were developed by a technical team in conjunction with IRWM stakeholders (see further detail in *Chapter 7, Regional Coordination*) and focused on:

- improving collaboration between IRWM stakeholders and the Regional Water Quality Control Board (Regional Board),
- developing salinity and nutrient management guidelines and individual basin plans,
- recommending integrated flood management tools that may be utilized by water managers,
- incorporating climate change factors into IRWM planning, and
- examining how land use planning and water resources management can be better integrated.

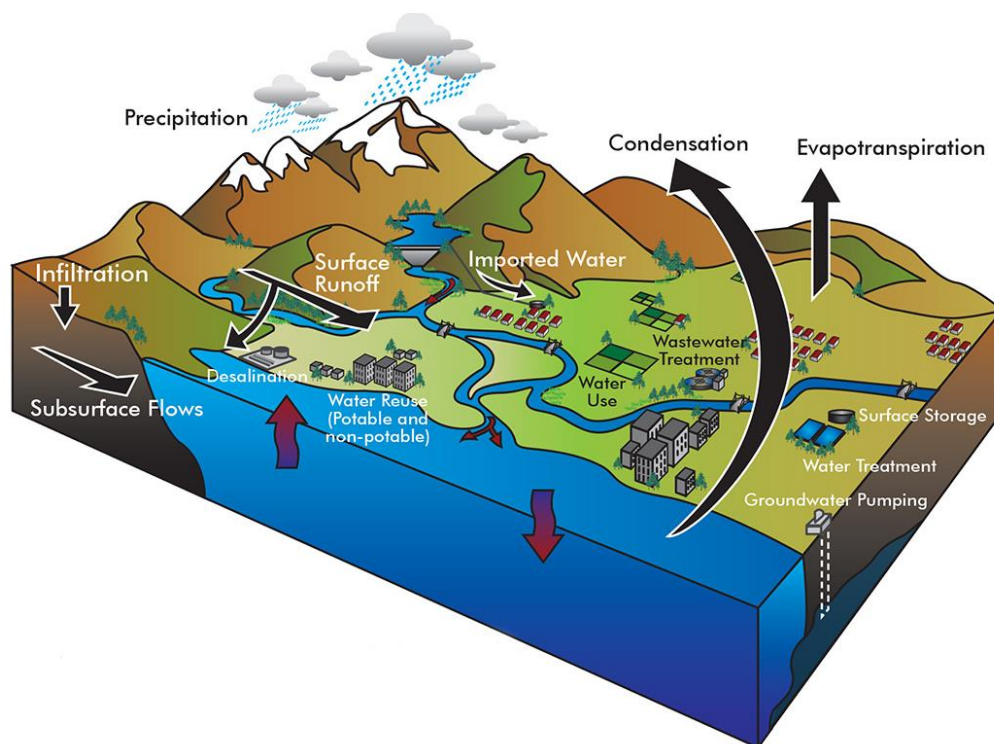
Although not required by the IRWM Planning Act, local stakeholders emphasized the need to explore how to improve working relationships between IRWM stakeholders and the Regional Board. The Regulatory Workgroup Report in Appendix 7-A attempts to facilitate better water management in the Region by documenting common ground between the regulators and the regulated community. By working together toward common goals, such as focusing together on science-based 303(d) listings, will allow broader support for compliance activities. As discussed in *Chapter 11, Implementation*, all of the recommendations of the Regulatory Report have implementation commitments from regional stakeholders.



This 2013 IRWM Plan involved five separate planning studies and associated stakeholder workgroups.

1.1.1 The “I” in IRWM

The “I” in IRWM stands for integration, which is defined as combining or acting in harmony with the whole. The IRWM Program incentivizes agencies and organizations to integrate their water management activities within the “modern” hydrologic cycle – from managing different water sources to protecting water quality to restoring water-related habitat. This “modern” hydrologic cycle incorporates several human influences such as imported water, wastewater treatment and discharge, groundwater pumping, water reuse, and desalination. These human influences change the natural flow of water within the hydrologic cycle and must be managed to ensure that negative impacts don’t result. IRWM planning seeks to integrate decision-making by the different water managers so that their management activities work together in a mutually supportive manner.



The “modern” hydrologic cycle includes precipitation, infiltration, surface and subsurface flows, as well as water importation, treatment, storage and reuse.

1.2 Plan Overview

The 2013 IRWM Plan incorporates stakeholder input, updated planning documents, planning studies completed since the 2007 IRWM Plan, and lessons learned through the IRWM Program to identify and address the water management needs of the Region. This update reflects the achievements of the IRWM Program by shifting the focus of the IRWM Plan where necessary, and utilizes the increased knowledge of the Region acquired through IRWM studies, projects, and other efforts to improve water resources management. The 2013 IRWM Plan reflects the priorities and needs identified by stakeholders through the stakeholder involvement process, and moves the Region’s water resources management planning forward to address additional concerns such as climate change and integrated flood management. The IRWM Program in the San Diego Region is now well-established and its processes and procedures are formalized in this 2013 IRWM Plan to reflect the evolution of the IRWM Program.

1.2.1 Purpose of Plan

The 2013 IRWM Plan presents an integrated approach for addressing water management issues within the Region. Through a process that identifies and involves water management stakeholders throughout the Region, the 2013 IRWM Plan:

- presents the San Diego IRWM Program’s vision and goals
- establishes water management objectives and measurable targets
- identifies water management challenges and issues
- identifies and evaluates applicable water management strategies

- assesses the ability of the water management strategies to meet the regional objectives
- identifies opportunities for integrating the regional water system, starting by integrating regional water supply, water quality, and watershed management strategies
- establishes a system for prioritizing the strategies
- presents a plan for implementing the water management strategies
- identifies the framework for overall integrated regional water management planning in the Region, including future updating of water management strategies and plan priorities

Figure 1-1: Plan Organization

1.2.2 Plan Organization

This IRWM Plan is organized into four major sections providing in-depth background information about the San Diego region and the identified strategies for moving integrated water management forward. Figure 1-1 illustrates the 2013 IRWM Plan structure.

1.2.3 Benefits of Regional Approach

The IRWM planning process provides a mechanism for stakeholders to work together to identify and address the challenges that potentially exist among multiple planning efforts. The IRWM planning process also provides a means to develop and update water management objectives to address the Region's water resources management challenges, overcome potential water management constraints, and identify water management projects and programs for grant funding that help attain the Plan objectives. The 2013 IRWM Plan is a result of this process, and reflects changes to the Region's water resources management challenges and needs, as indicated by stakeholders.

1.2.4 Existing Planning Environment

Groundwater, inland surface waters, and coastal waters within the Region support a wide variety of water supply needs, recreational uses, and important ecosystems and habitats. Like many urbanized areas in California and throughout the nation, the Region faces challenges in ensuring the long-term sustainability of its water supply, water quality, and watershed resources.

The Water Authority and almost all of its 24 member agencies prepare *Urban Water Management Plans* (UWMPs) every five years to articulate and balance water supplies and demands throughout their respective service areas. These UWMPs provide a summary of water use, wastewater volumes and recycled water opportunities for each of the urban water suppliers. Water and wastewater agencies also prepare a variety of other water-related planning documents as needed to manage



their assets, including reservoir management plans, groundwater management plans, wastewater master plans, and recycled water master plans.

The Regional Water Quality Control Board, San Diego Region (Regional Board) is responsible for regulating activities that affect the quality of Region's groundwater and surface water resources. The Regional Board adopted the current version of the *Water Quality Control Plan for the San Diego Basin* (Basin Plan) in 1994, and has amended this plan periodically; most recent amendments to the Basin Plan took place in 2011. The Regional Board also implements the *Water Quality Control Plan for Ocean Waters* and the *Water Quality Control Plan for Enclosed Bays and Estuaries Plan*, which establish water quality standards for marine waters and enclosed bays and estuaries, respectively (State Water Resources Control Board; 2009, 2009).

DWR is responsible for preparing multiple statewide planning documents, one of which is the *California Water Plan*, which was most recently updated in 2009. The *California Water Plan Update 2009* identifies water management challenges within the state and provides a framework for meeting the challenges. The specific Resource Management Strategies (RMS) included within the *California Water Plan Update 2009* are the basis for the RMS described in the 2013 IRWM Plan (refer to *Chapter 8, Resource Management Strategies*).

In the San Diego IRWM Region, a number of different entities are responsible for distinct areas of water management. The Region includes 21 stormwater management entities, all of which participate in the Municipal Separate Storm Sewer System (MS4) permit program to reduce and manage non-point source pollution within their respective jurisdictions. The Region's flood control agencies develop flood control plans for areas of high flood risk. Governmental agencies and non-governmental organizations (NGOs) within the Region also develop local watershed management plans to help conserve and protect watershed resources and habitats. Finally, some jurisdictions also participate in development of habitat protection and Multiple Species Conservation Program (MSCP) plans to ensure protection of sensitive natural resources.

The 2013 IRWM Plan is an umbrella document that encompasses the above local plans, but addresses water management issues on a Regional level. This Plan incorporates water resources management findings and recommendations from many of the Region's major water-related planning efforts. Implementing this Plan, however, will require additional effort to address short-term priorities and to incorporate water resources management planning from all of the Region's pertinent watershed, recreation, habitat protection, flood control, land use, and conservation plans.

1.2.5 Future of IRWM

In addition to establishing short-term priorities and facilitating the pursuit of outside funding, the 2007 IRWM Plan represented the first step in a long-term planning process. As this long-term process unfolds, stakeholder groups have been expanded, governance structures refined, coordination with watershed groups enhanced, new emerging issues identified, and new priorities established. The 2013 IRWM Plan reflects these changes, refines the IRWM process, and builds on the success of the original 2007 IRWM Plan.

The San Diego IRWM Plan is a living document; the 2013 Plan marks the second generation of IRWM planning in the Region, and it is envisioned that the IRWM Plan will continue to evolve over time in response to the changing needs of the Region. Through this stakeholder-driven, cooperative process of integrated regional water management, the San Diego Region has established itself as a leader in active water management planning.

1.2.6 Region Boundaries

Figure 1-2 (following page) presents San Diego IRWM Region. This Region is entirely within the jurisdiction of the Regional Board, and includes all portions of the County that are tributary to coastal waters. The San Diego IRWM Region was approved by DWR through the 2009 Region Acceptance Process (DWR 2009).

1.3 Regional Water Management Group

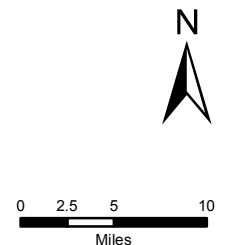
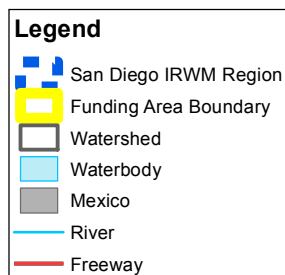
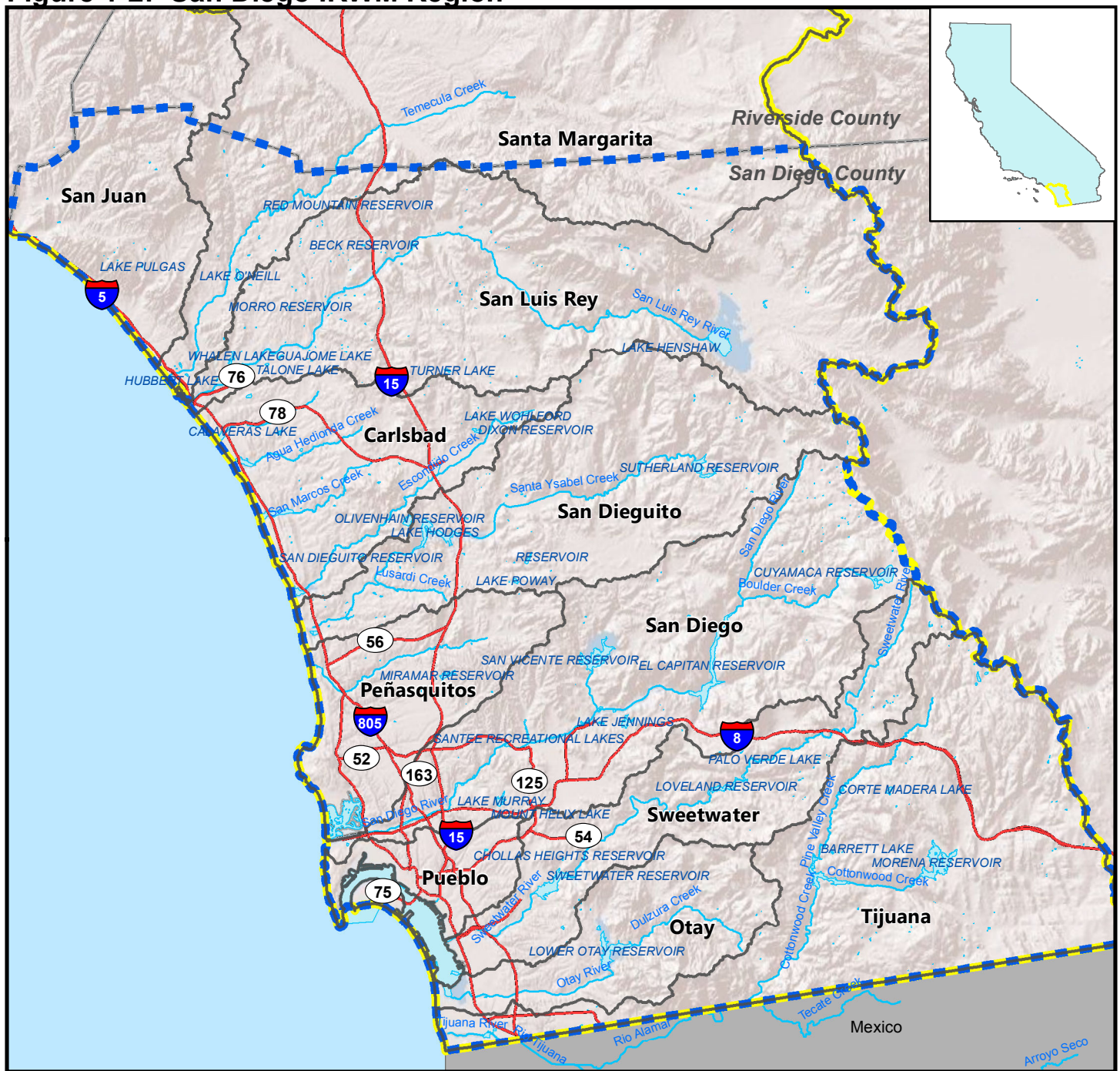
The San Diego Regional Water Management Group was formed in 2005 in accordance with provisions of the California Water Code (§79570 et seq.) to manage development and implementation of the IRWM Plan, and to manage the San Diego IRWM Program. The RWMG consists of:

- the San Diego County Water Authority (Water Authority)
- the City of San Diego (City)
- the County of San Diego (County)

In accordance with terms set forth in a Memorandum of Understanding (refer to Appendix 6-A), the three RWMG agencies are equal partners in the development of the 2013 IRWM Plan. The three agencies also equally share in the costs to develop the plan and conduct other IRWM planning activities, such as stakeholder outreach. The RWMG recognizes that cooperation and input from stakeholders throughout the Region is critical to a successful IRWM Program. As a result, the RWMG has assumed a lead role in engaging stakeholders and soliciting stakeholder input for 2013 IRWM Plan development and implementation.

Figure 1-3 shows the jurisdictional boundaries of the three RWMG agencies. The combined jurisdiction of the three agencies encompasses the entire Region; the water supply service areas of the Water Authority and the City cover all urbanized portions of the Region. Table 1-1 summarizes water management responsibilities of the three RWMG agencies. Collectively, the three RWMG agencies have key involvement in water supply, wastewater treatment, watershed management, land use, and recreational aspects of water management within the Region.

Figure 1-2: San Diego IRWM Region



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Figure 1-3: RWMG Agencies



Legend

- San Diego County Water Authority
- County of San Diego
- City of San Diego
- San Diego IRWM Region
- Watershed
- Funding Area Boundary
- Ocean
- Freeway
- Mexico



0 2.5 5 10
Miles

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**Table 1-1: Summary of Water Management Responsibilities for
Regional Water Management Group**

Water Management Category	San Diego County Water Authority	City of San Diego	County of San Diego
Imported Water Delivery	•		
Water Supply Infrastructure	•	•	•
Water Supply Planning	•	•	○
Storing Raw Imported Water	•	•	
Capturing and Storing Local Runoff	○	•	○
Groundwater Supply	○	•	•
Wastewater Treatment		•	•
Recycled Water Supply	○	•	
Water and Recycled Water Regulation	○	○	•
Public Health Regulation			•
Municipal Stormwater NPDES Management		•	•
Flood Management and Control		•	•
Watershed Protection	○	•	•
Land Use Control and Management		•	•
Natural Community Conservation Planning	•	•	•
Parks and Recreation		•	•

- Direct water management involvement
- Provides planning support

The RWMG led the development of this 2013 IRWM Plan by providing staffing and consultant services towards the years-long effort. Each of the agencies serve multiple water management roles within the Region and are involved in a number of region-wide water management coordination efforts. As documented in *Chapter 3, Region Description*, depending on regional hydrologic conditions, approximately 80% of the Region's water supply is provided through the Water Authority. The City of San Diego is the Region's largest retail water agency, and is involved in water management within six of the Region's eleven watersheds. The County is involved in watershed planning efforts in all but one of the Region's watersheds (San Juan). The City and County together provide wastewater service to a sizable portion of population within the Region. Additionally, the City and County are the largest copermittees in the regional urban runoff management program (stormwater program). The City and County are also responsible for land use planning and regulation within the majority of the Region.

1.3.1 San Diego County Water Authority

The Water Authority is the regional water wholesale agency within the County. The Water Authority's mission is to provide a safe and reliable supply of water to its 24 member agencies. The Water Authority's member agencies serve a combined population of 3.1 million (97% of the County's population) and support an annual regional economy of over \$188 billion.

The Water Authority's boundaries comprise the western third of San Diego County with a total area of 1,468 square miles. The urbanized parts of the Region are entirely within the Water Authority's service area. Water Authority member agencies include six cities, five water districts, eight municipal water districts, three irrigation districts, a public utility district, and the U.S. Marine Corps Base Camp Pendleton. The City of San Diego is the Water Authority's largest member agency in terms of land area, population, and water purchases. It is also the largest member agency in terms of representation, with 10 members on the 35-member Water Authority Board of Directors. The County appoints a non-voting representative to the Water Authority Board.



The Water Authority is a member agency of the Metropolitan Water District of Southern California (Metropolitan) and is the largest Metropolitan customer in terms of water purchases. The Water Authority also purchases conserved agricultural supplies through a water transfer agreement with the Imperial Irrigation District. Additionally, the Water Authority has been assigned rights to water conserved by lining the All-American Canal and Coachella Canal in Imperial County. In addition, the Water Authority will purchase water from the Carlsbad Desalination plant when construction is completed. The Water Authority conveys water supplies to its member agencies via five parallel pipelines that comprise the First Aqueduct and Second Aqueduct. The Water Authority delivers both treated and untreated supplies to its member agencies through 88 service connections.

In coordination with its member agencies, the Water Authority has implemented an Emergency Storage Program that enhances the Region's reservoir capacity and improves conveyance facilities. While the Emergency Storage Program is designed to make the regional water supply more reliable during an emergency that disrupts normal imported water deliveries, the new facilities will improve the Region's water system flexibility and reliability at all times.

As part of water supply diversity plans set forth in the Water Authority's *2010 Urban Water Management Plan*, the Water Authority is active in coordinating with its 24 member agencies to plan and pursue water conservation, recycled water use, development of local groundwater supplies, surface water storage and supplies, water transfers, seawater and groundwater desalination, and water quality protection projects.

1.3.2 City of San Diego

The City of San Diego exercises a range of water supply, wastewater, recycled water, storm water, recreation, and watershed management responsibilities, and administers a number of programs that provide opportunities to pursue integrated approaches with other agencies and jurisdictions.

The City of San Diego Public Utilities Department operates an extensive water system that currently provides drinking water to 1.3 million customers located within the cities of San Diego, Del Mar, Coronado, and portions of National City, Chula Vista, and Imperial Beach. In addition to providing

drinking water to approximately half of the population of San Diego County, the City of San Diego Public Utilities Department also delivers untreated water to three adjacent agencies. On an annual basis, the City treats and delivers approximately 200,000 acre-feet of water to residential, commercial, industrial, and agricultural customers within a 340-square-mile service area. The City's water system includes nine water storage reservoirs, three water treatment facilities, 31 treated water storage facilities, and 3,213 miles of transmission and distribution pipelines (City of San Diego, 2010).

The City of San Diego Public Utilities Department also operates an extensive wastewater collection and treatment system that includes approximately 2,900 miles of sewer line servicing a 330-square mile area. The City Public Utilities Department is the operating agency for the San Diego Metropolitan Wastewater System (Metro System). The Metro System provides wastewater services to 2.2 million residents of the City of San Diego and 15 other cities and districts (called Participating Agencies) within a 450-square mile service area, and treats approximately 180 million-gallons per day of wastewater (City of San Diego, 2011). Approximately three-quarters of the County's population discharge their wastewater to the Metro System.

The City has been a pioneer in the field of water recycling. Two reclamation facilities with a combined treatment capacity of 45 million gallons per day of non-potable recycled water are in operation. Additionally, the City is actively exploring the feasibility of potable reuse as an alternative water supply. A one million gallon per day water purification demonstration project has been in operation since the summer of 2011. Tests for 342 constituents and parameters over a one-year period showed the purified water met all regulatory limits and had concentrations similar to distilled water. For more information about the City's water purification demonstration project, see www.purewatersd.org.



The City of San Diego maintains storm drain structures, pipelines, and channels within the city. The City is one of the 21 copermittees regulated by Regional Board under the 2013 Municipal Separate Storm Sewer System (MS4) Permit (Order No. R9-2013-0001 [NPDES No. CAS0109266]). The Storm Water Division in the Transportation & Storm Water Department leads the City's efforts to protect and improve the water quality of rivers, creeks, bays and estuaries, and the ocean. The Division's efforts are conducted to ensure compliance with the MS4 Permit and other surface water quality regulations issued by the State of California. The Division's priorities are to identify sources of pollution and abate them through the implementation of innovative and efficient public education, watershed management, storm water development regulations, enforcement, and citywide training programs, and to provide the most efficient storm drain system operation and maintenance services to San Diego's residents. This includes the popular "Think Blue" (www.sandiego.gov/thinkblue) educational program implemented in coordination with other organizations.

The City of San Diego Planning Department regulates land use and flood control within the metropolitan boundaries and is responsible for coordinating with other regional agencies in implementing the MSCP Plan.

1.3.3 County of San Diego

The County maintains a number of water and watershed-related program responsibilities within unincorporated portions of the Region. These responsibilities include: water supply (outside Water Authority service area), wastewater treatment, land use and planning, public health, parks and recreation, flood management and control, stormwater and water quality management, ecosystem and habitat protection, and watershed planning.

The Department of Planning and Development Services is responsible for developing the County's General Plan. The Department of Planning and Development Services also manages the MSCP South County Subarea Plan, the North County MSCP Plan, and the East County MSCP Plan. Additionally, the department manages the County's Agricultural Conservation Easement Program, maintains the groundwater and landscape ordinances, and manages environmental mitigation banks.

The County Department of Public Works provides limited wastewater and drinking water services to unincorporated communities outside the imported water distribution service area. The Department of Public Works also provides the following services for the unincorporated portion of the County:

- stormwater conveyance service and maintenance
- residential recycling and composting programs
- erosion control and flood management services
- stormwater and watershed planning and protection programs and services

The County Department of Environmental Health has regulatory authority for the beach recreational water use, site assessment and mitigation, on-site wastewater (septic) systems, recycled water use, small water systems and monitoring wells. The Department of Planning and Development Services has discretionary project approval authorities.

The County uses an inter-departmental approach for addressing county-wide issues such as habitat protection, watershed protection, and water quality improvement. The County implements its own stormwater program in unincorporated areas providing public education, employee training, water quality monitoring, source identification, code enforcement, watershed management, TMDL implementation and the development and implementation of Best Management Practices. Historically the County has acted as Principal Permittee for the MS4 Permit that regulates MS4 discharges from the County of San Diego and 20 other Copermittees, which includes the 18 municipalities of the County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority. The County will continue in this role during the two-year transition period under the recently adopted 2013 MS4 Permit. Following this transition period the MS4 permit moves to a distributive watershed model in which the County will be the lead permittee for the San Luis Rey and San Diego River Watersheds and a participant in the other watersheds.



project clean water

Starting in 2000, the County developed and supported Project Clean Water, a broad-based forum for developing stakeholder-driven solutions to pressing water quality problems throughout the Region. Through Project Clean Water's website (www.projectcleanwater.org) and stakeholder groups, the County assumed the primary responsibility for coordinating stakeholder input into the development of the 2007 IRWM Plan and the associated list of regional implementation projects.

The Project Clean Water stakeholder process continues today in the form of the IRWM Program while the website continues as a water quality resource of the Region.

1.4 IRWM Program History and Accomplishments

The San Diego IRWM Program was initiated in 2005, and since then has achieved multiple successes. The Program continues to evolve with respect to increasing stakeholder diversity and input, changing conditions, and adapting to meet regional needs. The following is a brief timeline and outline major accomplishments that the Program has achieved during its 8-year tenure.

- **2005:** The City of San Diego, County of San Diego, and San Diego County Water Authority, who collectively comprise the RWMG, completed a **Memorandum of Understanding (MOU)** that formalized their commitment to fund, guide, and manage development and implementation of the IRWM Program.
- **2006:** Establishment of the **Regional Advisory Committee (RAC)**, a collection of professionals who represent diverse groups and points of view with a stake in water management in the region. The RAC has met regularly since its inception and is responsible for providing input and feedback to the RWMG with regards to regional planning and funding activities.
- **2007:** Wrote and adopted the **2007 San Diego IRWM Plan**. The 2007 IRWM Plan laid the groundwork for enhanced collaborative, multi-benefit water resource projects by facilitating cooperation between public agencies and non-profit organizations.
- **2008:** DWR awarded the San Diego IRWM Region **\$25 million** to support 19 high-priority local projects under Proposition 50.
- **2009:** The Region completed DWR's **Region Acceptance Process** and received formal approval of the Region's boundary.
- **2009:** The San Diego RWMG and management groups from the neighboring IRWM Regions (Upper Santa Margarita and South Orange County) formed the Tri-County Funding Area Coordinating Committee (FACC) as a collaborative inter-regional body. With this, the San Diego Funding Area became the **first and only** funding area in the State to formalize grant funding agreements to allocate IRWM funding (Proposition 84 funding) between IRWM regions.
- **2010:** DWR awarded the San Diego IRWM region a **\$1 million grant award** for planning activities associated with conducting stakeholder outreach, completing planning studies, and preparing the 2013 IRWM Plan.
- **2011:** DWR awarded the San Diego IRWM region **\$8 million** to implement 11 high-priority local projects under Proposition 84-Round 1.
- **2012:** Kicked off planning efforts to update the 2007 IRWM Plan. Initial outreach efforts included an **IRWM Summit** to raise awareness among the public and stakeholders about development of the 2013 IRWM Plan.

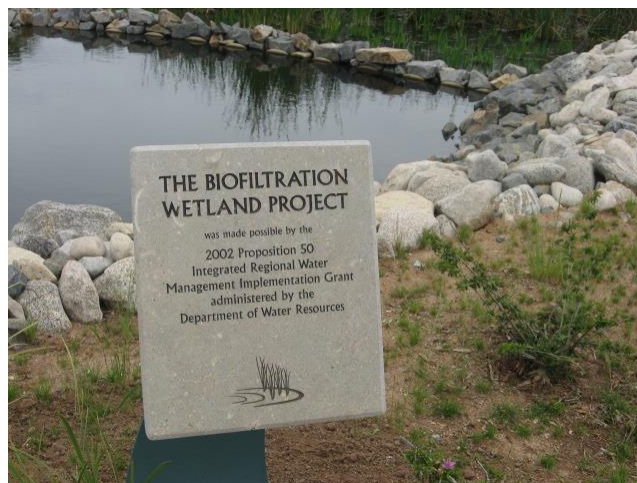
"The San Diego IRWM Program has taken the initial steps of bringing together organizations and individuals from diverse backgrounds, interests, and perspectives to work toward achieving a shared vision needed to guide the protection, management, and use of the region's water resources for the mutual benefit of people, wildlife, and habitats."

-Kirk Ammerman, RAC Member Representing
City of Chula Vista and Water Quality Caucus,
2006-2013

- **2013:** Submitted a **\$10.3 million** implementation grant application to implement 7 high-priority local projects with potential grant funding support from Proposition 84-Round 2.
- **2013:** Completed and adopted the **2013 IRWM Plan**.

1.5 Addressing the Region's Water Management Challenges

Numerous water management plans have been developed by individual or multiple agencies or groups within the Region to address water supply, water quality, stormwater and flood, ecosystem and habitat protection and enhancement, watershed protection, conservation, recreation, and land use controls (see *Chapter 7, Regional Coordination* for a description of these plans). Each local plan addresses portions of the Region, but many of the plans overlap in geography, scope, or agency jurisdiction, which can contribute to regional water management conflicts and challenges.



Biofiltration Wetland Project at the San Diego Zoo Safari Park, funded through Proposition 50

Photo Credit: Crystal Mohr, RMC Water and Environment

Table 1-2 summarizes several key challenges or constraints that the Region faces in addressing water management issues. Table 1-2 also identifies how the IRWM Plan can assist in solving those challenges. The list of key challenges or constraints was developed by the RWMG and affirmed by the RAC and stakeholders at a public workshop held on June 5, 2013. Given the importance of the challenges presented in Table 1-2, the Region will strive to implement projects to address these issues. Information about the Region's project prioritization and selection process can be found in *Chapter 9, Project Evaluation and Prioritization*.

As shown in Table 1-2, the IRWM Plan provides a process to address and resolve conflicts through a collaborative regional effort. Additionally, the IRWM Plan may prove useful in identifying, coordinating, and addressing environmental and regulatory issues on a regional basis.

In addition to resolving existing water management conflicts and prioritizing and focusing regional water management efforts, the IRWM Plan may help make water management projects and programs in the Region eligible for future state and federal funding. An approved IRWM Plan is necessary for eligibility to apply for State of California Proposition 84 funding that is administered by DWR. Further, it is likely that other forms of future state and federal funding will be tied into the IRWM Plan process.

Table 1-2: Current Challenges to Water Management within the Region and How the IRWM Plan Can Help Resolve the Challenges

Challenges and Conflicts in Water Management	How the IRWM Program Can Address Challenges
<p>1. Regulatory Process/Administration:</p> <p>Regulatory constraints or disconnects – namely as they relate to the administration of regulations – can cause water management conflicts. This is particularly true for implementation of unfunded mandates, instances where there are conflicting priorities between entities, permitting or implementation of new/cutting-edge technology (such as water reuse), and inconsistent regulatory requirements. Specifically, current regulations may be infeasible to implement from a cost and technology perspective, and implementation requirements may not yield desired benefits, or may create unintended consequences.</p>	<p>The IRWM Program provides a unified regional approach for identifying and assessing regulatory compliance issues. Implementation of the recommended action items will represent first steps in improving coordination between regulators and water managers. Because IRWM funding can be leveraged to increase scientific knowledge and fill data gaps, the Program can potentially provide the data and information necessary to address regulatory compliance issues.</p>
<p>2. Water Quality Objectives and Beneficial Uses:</p> <p>There is widespread concern that beneficial uses are not properly defined. This may result in unnecessarily strict or unrepresentative water quality standards for surface waters. Such restrictions impact the Region's ability to effectively and affordably manage water, including imported and reuse supplies. There is concern that because beneficial uses are not prioritized, management is not realistic as every use is considered equally.</p>	<p>The IRWM Program provides a forum for collaboration between water managers, the regulatory agencies which establish water quality standards, and other stakeholders, including potentially redefining beneficial uses. The IRWM Program provides a forum through which regulated entities, non-governmental organizations, and others can collaborate on potential win-win solutions to current issues associated with water quality objectives and beneficial uses.</p>
<p>3. Integrated Planning:</p> <p>There are numerous entities involved in water management in the Region, including water agencies, non-governmental organizations, and other entities. Due to the number of entities in the Region, there are also conflicts with beneficial uses as different entities may not agree on which beneficial uses are most important from a water management point of view. Conflicts between jurisdictional and interested parties as well as beneficial uses are unavoidable, and demonstrate a need to integrate planning efforts in order to increase the ability to move forward in addressing water management issues. Although communication between water managers and land use jurisdictions has improved, ongoing disconnects may result in water quality, flooding, natural resources, and other water-related issues.</p>	<p>The IRWM Program provides a forum to bring different entities together to potentially resolve or avoid conflicts resulting from overlapping jurisdiction. It is also possible that the IRWM Program can help eliminate duplicative efforts by increasing cross-pollination of water management efforts in the Region. The IRWM Program can also bring together water managers from different disciplines, and therefore can help resolve management disputes regarding various beneficial uses. One example of this is how the IRWM Program helps to bring together water managers from different water sectors such as water supply and wastewater managers for efforts associated with potable reuse. In addition, the IRWM Program provides a regional forum for water managers to engage the land use community. Implementation of the recommended action items will represent first steps in improving coordination between land use planners and water managers.</p>
<p>4. Stakeholder Involvement:</p> <p>Stakeholder involvement in the IRWM Program is a concern, particularly given the complex nature of the program and the number of entities involved. There is particular concern that due to the number of entities, all entities may not be involved in a meaningful way. There have been identified barriers for participation of various entities, particularly those that may not participate due to funding or regulatory restrictions (e.g. non-governmental organizations, tribal entities, and DACs).</p>	<p>The IRWM Program's outreach efforts have attempted to resolve participation barriers to the maximum extent feasible. Specific efforts have been made to create solutions that will resolve participation barriers, such as partnering non-governmental organizations with tribal governments and DACs for grant-funded projects to resolve grant contracting and implementation issues. In addition, the IRWM Program has commented to DWR on behalf of stakeholders in an attempt to resolve regulatory and programmatic complexities that may bar or discourage certain entities from participating in the Program.</p>
<p>5. Public Awareness and Education:</p> <p>Regional awareness of water management issues is a concern, particularly given that the public and elected officials may be less inclined to support water management financing (e.g., bond or fee programs) if they are unaware of the need for these efforts. Public awareness and expectations of the IRWM Program need to be managed, especially as the State faces uncertainties regarding future water bond funding.</p>	<p>The IRWM Program allows for greater public understanding and acceptance of water management issues and the potential solutions (projects) to address those issues through extensive outreach and education efforts. The IRWM Program conducts outreach and education efforts in an attempt to educate the public on the potential future of the program.</p>

Challenges and Conflicts in Water Management	How the IRWM Program Can Address Challenges
<p>6. Funding:</p> <p>Given the limited amount of funding available through DWR's IRWM Grant Program and the increasing amount of resource limitations for public agencies, there is a need for affordable solutions to manage water and address water-related issues. In addition, limited funding makes prioritization of water management needs imperative. Given the uncertainty of DWR's future IRWM Grant Program, which is based on voter-approved water bonds, there is a need to determine how the Region will augment future IRWM planning efforts.</p>	<p>The IRWM Program brings entities together to prioritize projects for IRWM Program funding. The Region's project prioritization process specifically takes long-term, triple bottom line cost-effectiveness into consideration when evaluating projects and the online project database that has been developed for the IRWM Program can also increase cost-effectiveness by allowing stakeholders to learn about similar projects, and potentially collaborate or coordinate efforts with other entities to reduce duplicative or redundant projects. The Regional Water Quality Control Board has also experienced interest in working with the San Diego IRWM Program and potentially using the online project database to prioritize supplemental environmental projects (SEPs). In addition, the IRWM Program keeps track of other (non-IRWM) grant opportunities that are available, and announces those opportunities to stakeholders during regular meetings and email announcements.</p>
<p>7. IRWM Grant Administration:</p> <p>To-date there have been substantial concerns with IRWM grant funding delays by the State, as these delays affect the ability for the Region's local project sponsors to effectively implement projects and programs to manage water resources. Given the uncertainty of the IRWM Program's future, it is uncertain at this time if the Program will continue on its current path – that focuses on grant funding efforts – or become a larger, regional planning effort.</p>	<p>The IRWM Program is continuing to attempt to resolve grant funding issues through communications with DWR, meeting in Sacramento to discuss Region's needs, participation in DWR forums and workshops, and providing feedback to DWR. The IRWM Program has not created a long-term plan for governance or a programmatic structure in the absence of a MOU between the RWMG agencies or State grant funding.</p>
<p>8. Affordability:</p> <p>The Region is pressed to find solutions that meet regulatory, outreach, IRWM Program, and other needs, while maintaining affordability for the Region's residents. Affordability is an issue that is considered to span across all other issues listed in this table as it pertains to all aspects of the IRWM Program and of regional water management.</p>	<p>IRWM grant funding can be used to offset project-related costs in the Region. In addition, because the IRWM project prioritization process encourages projects with multiple benefits, the IRWM Program aims to fund projects that represent up-front investments with holistic solutions that can prevent negative impacts (and associated costs) from occurring. There are still additional costs incurred due to program administration and other components, which are not reimbursed by grant funding. As affordability is a regional issue, it cannot be wholly resolved by the IRWM Program.</p>
<p>9. Political Coordination:</p> <p>Regulatory, awareness, conflicts, and other items listed above present challenges to the Region's water managers with respect to political coordination. Specifically, issues that arise may present difficulties associated with project approvals that are necessary for the Region's water managers to move forward with water management efforts.</p>	<p>To-date the IRWM Program has not focused on political coordination, but rather has focused on public and stakeholder outreach efforts. Additional outreach and coordination efforts with other regulatory agencies and political bodies may be possible through the IRWM Program. Also, effective public outreach may impact political decision-making.</p>
<p>10. Managing Water Rights and Compliance:</p> <p>There is a need to reconcile water rights and water quality management for a variety of beneficial uses. Specifically, addressing water quality compliance concerns can result in reduced water recharge/discharge, which can potentially impact downstream or adjacent uses that may have an existing "right" to water sources.</p>	<p>The IRWM Program provides a mechanism to bring different entities together to potentially resolve or avoid water rights conflicts, including the potential for funding for water supply and water quality projects.</p>
<p>11. Sustainability of Water Resources:</p> <p>There is a need to manage water sustainably throughout the Region, meaning that solutions to water-related issues and conflicts are economically and environmentally preferable, and also provide equitable resource protection for the entire Region. Sustainably managing the Region's water resources will help to ensure the long-term availability of water supplies for multiple beneficial uses.</p>	<p>The IRWM Program has adopted the concept of sustainability, and incorporated this concept throughout the IRWM Vision, Mission, Goals and Objectives (refer to <i>Chapter 2, Vision and Objectives</i>). The project prioritization process also encompasses the idea of sustainability by prioritizing projects that provide multiple benefits (to the environment and to people) and are also cost-effective.</p>

1.6 IRWM Plan Development

To facilitate plan review, the 2013 IRWM Plan is organized in accordance with DWR's IRWM Plan Standards established by the 2012 IRWM Program Guidelines (DWR, 2012). Table 1-3 summarizes how the 2013 IRWM Plan chapters correspond with required elements of the IRWM Program Guidelines. Figure 1-1 (page 1-2) presents a schematic depicting how the chapters of this 2013 IRWM Plan are organized to establish Plan goals and objectives, select water management strategies, establish regional priorities, and identify how the Plan is to be implemented. Remaining chapters of the 2013 Plan address conformance with state-mandated planning elements as set forth in the IRWM Program Guidelines.

Table 1-3: Organization of the 2013 IRWM Plan

IRWM Program Guidelines Requirement ¹	2013 IRWM Plan Chapter that Addresses the Requirement
1. Governance	6. Governance and Stakeholder Involvement
2. Region Description	3. Region Description
3. Objectives	2. Vision and Objectives
4. Resource Management Strategies (RMS)	8. Resource Management Strategies
5. Integration	9. Project Evaluation and Prioritization
6. Project Review Process	9. Project Evaluation and Prioritization
7. Impacts and Benefits	11. Implementation
8. Plan Performance and Monitoring	11. Implementation
9. Data Management	10. Data and Technical Analysis
10. Financing	11. Implementation
11. Technical Analysis	10. Data and Technical Analysis
12. Relation to Local Water Planning	7. Regional Coordination
13. Relation to Local Land Use Planning	7. Regional Coordination
14. Stakeholder Involvement	6. Governance and Stakeholder Involvement
15. Coordination	7. Regional Coordination
16. Climate Change	* Incorporated throughout Plan – see Chapters 2, 3, 5, and 6

¹From Appendix A (IRWM Plan Standards) in the 2012 IRWM Program Guidelines (DWR, 2012).

1.6.1 Plan Preparation Team

The RWMG provided overall direction in the development and preparation of this 2013 IRWM Plan. The RWMG was assisted in preparing Plan documents by a team of consultants that included:

- RMC Water and Environment
- Katz and Associates
- Michael R. Welch, Ph.D., P.E., Consulting Engineer
- CityPlace Planning
- PACE
- AECOM

1.6.2 Plan Development Process and Stakeholder Input

Development of the 2013 IRWM Plan involved a significant public input/stakeholder process (see *Chapter 6, Governance and Stakeholder Involvement*) that endeavored to secure participation from as many stakeholders as possible in the IRWM process. The RWMG and consultants coordinated with the following regional groups in organizing the stakeholder input process as well as organizing, preparing, and reviewing the IRWM Plan:

- *Regional Advisory Committee.* Policy-level input to the IRWM Plan was provided by a Regional Advisory Committee (RAC) that included subject matter experts representing environmental groups, academic entities, local business, agricultural groups, water suppliers, wastewater agencies, water quality interests, and regulatory agencies. The RAC includes representatives of both public agencies and non-government organizations that serve DACs. The RAC served as the primary organization that provided direction to the RWMG for plan preparation.
- *Workgroups.* Technical input was provided by various workgroups that participated in 2013 IRWM Plan topics and/or planning studies. The workgroups were comprised of representatives from the RAC and other stakeholders and interested parties.



San Diego Regional Advisory Committee, 2011

Photo Credit: Crystal Mohr, RMC Water and Environment

Additional technical and stakeholder input was achieved through an outreach effort to planning groups, environmental organizations, watershed groups, municipalities, water and wastewater agencies, transportation agencies, flood control agencies, regulatory agencies, business groups, community groups including DACs, environmental justice organizations, local Tribal Nations, and general members of the public. This outreach effort included workshops and workgroups conducted throughout 2012 and 2013 to discuss Region-specific issues, priorities, and needs. Stakeholder involvement was encouraged through the 2012 IRWM Summit, RAC meetings and public workshops, and public review of draft materials (see *Chapter 6, Governance and Stakeholder Involvement* for a detailed description of the IRWM Plan outreach effort).

1.6.3 California Environmental Quality Act (CEQA) Exemption

This 2013 IRWM Plan consists of a data collection effort and planning study that will not result in the disturbance of environmental resources. Approval or adoption of this Plan does not entail any direct commitment of resources by the RWMG or any other agency. Preparation and adoption of this Plan are thus exempt from the California Environmental Quality Act (CEQA) pursuant to Sections 15262 and 15306 of the CEQA Guidelines, and programmatic analysis under CEQA is not required.

1.7 References

- California Department of Water Resources. *California Water Plan Update* 2005. At: <http://www.waterplan.water.ca.gov/previous/cwpu2005/>. 2005.
- California Department of Water Resources. *California Water Plan Update* 2009. At: <http://www.waterplan.water.ca.gov/cwpu2009/index.cfm>. 2009.
- California Department of Water Resources. No. 26 – *San Diego Integrated Regional Water Management Region, Region Acceptance Process Summary*. September 2009. Available: http://www.water.ca.gov/irwm/grants/docs/Archives/Prop84FirstRAPCycle/RAP%20Documents/2009_RAP_Summaries/SanDiego_RAPSummary.pdf
- California Department of Water Resources (DWR) and State Water Resources Control Board (State Board). *Integrated Regional Water Management Grant Program Guidelines*. November 2004.
- California Department of Water Resources (DWR) and State Water Resources Control Board. *Integrated Regional Water Management Grant Program Guidelines, Proposal Solicitation Packages, Round 2*. June 2007. Located at State Board website: http://www.swrcb.ca.gov/funding/irwmgp/irwm_imple.html
- California Regional Water Quality Control Board, San Diego Region (Regional Board). *Water Quality Control Plan for the San Diego Region* (Basin Plan). Located at: <http://www.waterboards.ca.gov/sandiego/programs/basinplan.html>. 1994
- City of San Diego Water Department. *2010 Urban Water Management Plan*. June 2010.
- City of San Diego Metropolitan Wastewater Department. Metropolitan Wastewater Department website: <http://www.sandiego.gov/mwwd/general/history.shtml>. 2007a.
- City of San Diego. City of San Diego Stormwater Pollution Prevention Program website: <http://www.sandiego.gov/stormwater/index.shtml>. 2007b.
- County of San Diego. County of San Diego Multiple Species Conservation Program website: http://www.sdcountry.ca.gov/pds/mscp/NCMSCP_Overview.html. 2009.
- Project Clean Water. Project Clean Water website: www.projectcleanwater.org. 2007.
- San Diego Association of Governments (SANDAG). *2050 Regional Growth Forecast*. 2010.
- San Diego County Water Authority. *Urban Water Management Plan*. 2010.
- San Diego County Water Authority. *Updated 2005 Urban Water Management Plan*. 2007.
- San Diego Regional Chamber of Commerce Economic Research Bureau and County of San Diego. *Regional Economic Indicators Project*. 2007.
- State Water Resources Control Board. *Water Quality Control Plan, Ocean Waters of California* (Ocean Plan). 2005.
- State Water Resources Control Board. *Water Quality Control Plan for Enclosed Bays and Estuaries*. 1991.