

# San Diego Integrated Regional Water Management 2014 IRWM Drought Solicitation Implementation Grant Proposal Authorization and Eligibility Requirements

Attachment 1 consists of the following items:

- ✓ **Authorization and Eligibility Requirements.** This attachment includes information that explains how the projects and project proponents included within this Proposal meet the authorizing documentation and eligible applicant requirements set by the California Department of Water Resources (DWR) in the *Proposal Solicitation Package (PSP) for the 2014 IRWM Drought Grant Solicitation*.
- ✓ **Appendices.** Appended to this attachment are eleven separate files, each of which correspond to the eleven authorization and eligibility requirements described in the PSP. The hard copy of the Proposal that has been mailed to DWR includes original hard copies (with wet signatures) of the following documents as required within the PSP:
  1. Acknowledgement Form – Submittal of Additional Information
  2. AB 1420 Self-certification Form (as applicable for project sponsors that have not already submitted forms to DWR)
  3. Water Metering Self-certification Form (as applicable for project sponsors that have not already submitted forms to DWR)
  4. Groundwater Management Plan Compliance Self-certification Form

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### Authorizing Documentation

Resolution 2014-14 was adopted by the San Diego County Water Authority (SDCWA) Board of Directors on June 26, 2014 and authorizes SDCWA to submit this *San Diego IRWM Drought Solicitation Implementation Grant Proposal* and execute an agreement with the State of California for implementation of seven priority water resources projects (see **Appendix 1-1**).

### Eligible Applicant Documentation

This *San Diego IRWM Drought Solicitation Implementation Grant Proposal* is being submitted by SDCWA. Per the adopted *Memorandum of Understanding for the Integrated Regional Water Management Program for Fiscal Years 2012-2016*, the San Diego Regional Water Management Group (RWMG) – comprising the City of San Diego, the County of San Diego, and SDCWA – has determined that SDCWA shall have overall responsibility for submitting all applications to the State on behalf of the parties (see **Appendix 1-2**). SDCWA is also submitting this grant proposal on behalf of the following non-RWMG entities:

- Carlsbad Municipal Water District (Carlsbad)
- Fallbrook Public Utility District (Fallbrook)
- Rincon del Diablo Municipal Water District (Rincon)
- Sweetwater Authority

SDCWA's qualifications as an eligible applicant in accordance with the *IRWM Grant Program Guidelines*<sup>1</sup> are as follows:

1. SDCWA is a local public agency as defined in Appendix B of the *IRWM Grant Program Guidelines*. SDCWA is the regional water wholesale agency within San Diego County, whose mission is to provide a safe and reliable supply of water to its 24 member agencies.
2. SDCWA is a county water district organized and existing under Division 12, commencing with §30000, of the California Water Code. SDCWA was organized under the County Water Authority Act of 1943 to serve as the San Diego Region's water wholesaler.
3. SDCWA has legal authority to enter into a grant agreement with the State of California. Per the adopted *Memorandum of Understanding for the Integrated Regional Water Management Program for Fiscal Years 2012-2016*, the San Diego RWMG has determined that SDCWA shall have overall responsibility for submitting all applications to the State on behalf of the parties (see **Appendix 1-2**). Resolution 2014-14 authorizes SDCWA to submit this *San Diego IRWM Drought Solicitation Implementation Grant Proposal* and execute an agreement with the State of California for implementation of identified water resources projects (see **Appendix 1-1**).
4. SDCWA, the City of San Diego (City), and the County of San Diego (County) jointly developed and adopted a *Memorandum of Understanding for the Integrated Regional Water Management Program for Fiscal Years 2012-2016* (see **Appendix 1-2**). This MOU replaced the second MOU (dated March 10, 2009), as amended, between SDCWA, the City, and the County for FYs 2009-2013 of the IRWM Grant Program. Section 1b of the MOU states that the "Water Authority (SDCWA) shall submit the grant applications to the funding agency on behalf of the Parties." Additionally, section 3a of the MOU states that the "Water Authority shall administer and manage IRWM grant agreements, administer the local project sponsors' (LPS) contracts, develop and maintain a reporting and invoicing program, and communicate project and agreement progress to the RWMG, RAC [Regional Advisory Committee], and the funding agency."

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<sup>1</sup> Department of Water Resources (DWR). 2014. 2014 IRWM Drought Solicitation Integrated Regional Water Management Proposition 84 and 1E Guidelines. June.

### Acknowledgement Form

As the applicant authorized by its Board of Directors to apply for the *2014 IRWM Drought Solicitation Grant* on behalf of the San Diego RWMG, SDCWA has completed the 2014 IRWM Drought Grant Acknowledgement Form (see **Appendix 1-3**). A hard copy of this acknowledgment form with a wet signature has also been submitted to DWR via mail.

### Adopted IRWM Plan and Proof of Formal Adoption

The San Diego IRWM Region updated its 2007 IRWM Plan from 2011 through 2013 consistent with the *2012 IRWM Grant Program Guidelines*<sup>2</sup> and CWC §10543, as described in Chapter 6 of the 2013 IRWM Plan. The 2013 IRWM Plan was finalized in September 2013, and formally adopted by RWMG agencies' governing bodies and all project proponents on the dates provided below. Copies of all adoption resolutions are included in **Appendix 1-4**.

- SDCWA: September 26, 2013
- City of San Diego: October 8, 2013
- County of San Diego: October 9, 2013
- Carlsbad: June 17, 2014
- Fallbrook: June 23, 2014
- Rincon: June 10, 2014
- Sweetwater Authority: June 11, 2014

SDCWA, on behalf of the RWMG and San Diego IRWM Region, submitted the 2013 IRWM Plan to DWR for review in accordance with Appendix H of the *2012 IRWM Grant Program Guidelines*. The Plan Review Process is designed to assess whether an IRWM Plan is consistent with the IRWM Plan Standards included in the 2012 IRWM Grant Program Guidelines. The 2013 IRWM Plan was submitted to DWR and found to be consistent with the IRWM Planning Act and related IRWM Plan Standards contained in the 2012 IRWM Grant Program Guidelines on June 6, 2014. A confirmation letter of this finding is included in **Appendix 1-4**.

### Project Consistency with Adopted IRWM Plan

Projects included within this Proposal were entered into the online project database and meet Objective A, Objective B, and at least one additional IRWM Plan objective per requirements of the IRWM Plan. Per Chapter 9 of the 2013 IRWM Plan, these projects are part of the 2013 IRWM Plan, because they are included in the online project database (the "OPTI" system). The San Diego IRWM project list is hosted online at: <http://irwm.mrcwater.com/sd/login.php>. A copy of the list is included in **Appendix 1-5**.

The Project Selection Workgroup, approved by the RAC in 2014, reviewed and ranked all projects submitted to the online project database by April 30, 2014. Each project was ranked using the *RAC-Approved Project Scoring Criteria for Round 3 2014 IRWM Drought Solicitation* that are included within **Appendix 1-5**, which were developed and approved through an open and transparent process at a RAC meeting that was open to the public on April 22<sup>nd</sup>, 2014. The Project Selection Workgroup also evaluated projects using the *RAC-Approved Framework for Scoring Guidelines for Round 3 2014 IRWM Drought Solicitation*, which were also approved by the RAC on April 22<sup>nd</sup>, 2014. Each project included within this Proposal was prioritized and recommended by the Project Selection Workgroup, with the final recommendation validated by the RAC on June 4, 2014 and approved of by the SDCWA Board of Directors on June 26, 2014. **Appendix 1-5** contains the recommended package of projects that was put together by the Project Selection Workgroup, and meeting notes from the June 4<sup>th</sup> RAC meeting where the funding package was voted upon. Please note that project names and grant values vary slightly between the documents that were formally approved by the RAC and the project names included within

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<sup>2</sup> Department of Water Resources (DWR). 2012. Integrated Regional Water Management Proposition 84 and 1E Guidelines. November.

this grant proposal; project names were modified to fully represent each project’s intent and grant funding was slightly reduced for one project at the request of the local project sponsor.

**Table 1-1** shows how each of the projects included in this Proposal meet the objectives of the 2013 IRWM Plan. Chapter 2 of the 2013 IRWM Plan, which contains a detailed description of each objective, is also included in **Appendix 1-5**. The following sections provide a brief overview of each project included within this application.

**Table 1-1: Consistency of Proposed Projects with IRWM Plan Objectives**

Proposal Projects	IRWM Plan Objectives Addressed										
	A	B	C	D	E	F	G	H	I	J	K
1 Reynolds Groundwater Desalination Facility Expansion	•	•	•		•	•		•	○		•
2 Fallbrook Plant Nurseries Recycled Water Distribution System Extension	•	•			•	•		•	○	○	•
3 Carlsbad Recycled Water Plant and Distribution System Expansion	•	•			•	•		•	○	○	•
4 Regional Demand Management Program Expansion	•	•	•		•			•	•		•
5 San Diego Water Use Reduction Program	•	•			•	•		•		○	•
6 Rincon Customer-Driven Demand Management Program	•	•	•		•	○		•			•
7 Regional Emergency Storage and Conveyance System Intertie Optimization	•	•		•	•	•	○	•	•	•	•

• = directly related; ○ = indirectly related

As described above, the Project Selection Workgroup used the 2013 IRWM Plan as its guidebook in evaluating and selecting projects for this *San Diego IRWM Drought Solicitation Implementation Grant Proposal*. All projects proposed within this funding package are consistent with and help to implement multiple objectives in the 2013 IRWM Plan, as shown in **Table 1-1**. The seven projects included in this package can be grouped into three programs, 1) Direct potable water use reduction; 2) Drought relief through demand management, and 3) System interties. The proposed funding package includes:

**Direct Potable Water Use Reduction**

**Project 1: Reynolds Groundwater Desalination Facility Expansion**

The *Reynolds Groundwater Desalination Facility Expansion* will increase production of potable water from desalinated brackish groundwater by 5,200 acre-feet per year (AFY). The project will also drill 5 new wells in the San Diego Formation, and construct an additional 13,200 linear feet (LF) of pipeline. The desalinated groundwater produced by the project will be added directly into the potable supply, and will directly offset imported water. This new water supply is within the safe yield of the underlying groundwater basin, and is a drought-proof local supply, increasing water supply reliability in the Region, and providing drought protection. The project will be implemented by the Sweetwater Authority, in partnership with the City of San Diego.

**Project 2: Fallbrook Plant Nurseries Recycled Water Distribution System Expansion**

The *Fallbrook Plant Nurseries Recycled Water Distribution System Expansion* project is sponsored by Fallbrook Public Utility District in partnership with the Mission Resource Conservation District and the San Diego County Farm Bureau. Fallbrook will also work closely with San Diego Growers, Inc., DM Color Express Inc., Premier Color Nursery, Olive Hill greenhouses, and Roseland Nursery, which are local growers that will use recycled water provided by the project. This project will extend Fallbrook’s existing recycled waterline to serve growers in the southeastern portion of Fallbrook’s service area. Fallbrook already produces recycled water and currently discharges excess recycled water to the ocean. By delivering 642 AFY of additional recycled water to users, Fallbrook will efficiently use available water resources, offset potable water demands, and reduce discharges to the ocean.

**Project 3: Carlsbad Recycled Water Plant and Distribution System Expansion**

The *Carlsbad Recycled Water Plant and Distribution System Expansion* project will be implemented by Carlsbad in partnership with Olivenhain Municipal Water District. The proposed project will increase

treatment capacity at the Carlsbad Water Recycling Facility (Carlsbad WRF) from 4 MGD to 6 MGD – an increase of 2,240 AFY. This expansion will support the Phase III Recycled Water Project and the Carlsbad Recycled Water Master Plan, Carlsbad’s long-term vision for recycled water use within its service area. Potable supplement water will no longer be needed in the summer months with the expanded Carlsbad WRF capacity, offsetting 30 AFY of imported potable water. The proposed project will also construct pipeline Expansion Segments 1a and 7, to deliver 197 AFY recycled water to previously identified customers, and conduct retrofits to serve 126 AFY to customers located near existing recycled water pipelines. In total, the project will offset 353 AFY of potable water demands through delivery of recycled water.

### ***Drought Relief through Demand Management***

#### ***Project 4: Regional Demand Management Program Expansion***

The *Regional Demand Management Program Expansion* will be implemented by SDCWA, and includes partnerships with San Diego Gas & Electric (SDG&E), the California Landscape Contractors Association (CLCA), and SDCWA’s 24 member agencies. The project will include four components: 1) WaterSmart Landscape Efficiency Program that will include financial incentives to reduce outdoor water use, 2) Detention facility retrofit program, 3) Turf replacement rebate program, and 4) Landscape Workshops to provide education regarding water-efficient landscaping. The landscape efficiency and turf rebate programs will continue work currently being implemented by SDCWA and partner agencies to reduce irrigation inefficiencies and replace turf with water wise landscaping. The detention facility retrofit will reduce water waste by installing timers on the existing low-flow toilets at a juvenile detention facility. These timers will prevent excess flushing and help reduce water waste at the facility. In total, the project is expected to result in a total of 1,089 AF of water savings through implementation of the four program components.

#### ***Project 5: San Diego Water Use Reduction Program***

The City of San Diego’s *San Diego Water Use Reduction Program* will be implemented through two programs: the Pressure Regulator Incentive Pilot, and the Recycled Water Filling Station. Through a rebate program, the City of San Diego will encourage installation of an estimated 5,000 pressure regulators in the City. These pressure regulators will reduce the amount of excess water that flows from fixtures and reduce pipe and fixture leaks from excess pressure by reducing the pressure of water entering homes to the recommended functional range. The proposed project will also construct a multi-user recycled water filling station at the North City Water Reclamation Plant. This station will provide recycled water for soil suppression and other permitted construction-related water needs. The project is anticipated to result in a total combined potable water savings (through conservation and recycled water components) of 381 AFY.

#### ***Project 6: Rincon Customer-Driven Demand Management Program***

Rincon will install Advanced Metering Infrastructure (AMI), which is a mechanical meter with a radio transponder, for the remaining 20% of its customers that do not already have AMI installed. The project will also purchase WaterSmart software that will incorporate water use data from the AMI with customer data into a user-friendly, accessible interface that will allow customers to access their water use data hourly, alert them to potential leaks, and access easy-to-access links to resources from Rincon such as rebates and incentives programs. The WaterSmart software also includes a social component, which provides comparisons with neighbors and personalized recommendations to further incentivize water savings. Increased communication with customers will result in immediate reductions in water demands (estimated at 300 AFY) that are anticipated to be sustained through subsequent years, based on use of AMI+WaterSmart software in other cities.

### ***System Inerties***

#### ***Project 7: Regional Emergency Storage and Conveyance System Inertie Optimization***

Hodges Reservoir faces a number of water quality issues that prohibit shifting water from Hodges Reservoir to the regional water supply and conveyance system. Oxygenation of water in Hodges Reservoir will resolve these water quality issues, allowing water to be moved in and out of Hodges

Reservoir to respond to droughts and to efficiently manage water supplies during normal or wet years. In preparation for droughts and other emergency situations, the Region is implementing the Emergency Storage Project (ESP), which provides increased storage capacity and connectivity between regional water storage and aqueduct conveyance systems via a pumped storage facility. Hodges Reservoir is intended to be part of the ESP; however, poor water quality within the reservoir has prevented the use of this water even in drought conditions. Furthermore, during wet weather events Hodges Reservoir often overfills, and without the ability to move water from Hodges to the regional water system, water spills over the Hodges Dam and is thus wasted. In total, the project is anticipated to result in 102,163 AF of additional local supplies that are not currently available to the Region through installation of a Speece Cone at Hodges Reservoir to oxygenate the deep portions of the reservoir and improve water quality, increasing the volume of useable water in the reservoir, and reducing the need to import additional water.

### Urban Water Management Compliance

#### **Urban Water Management Plan Compliance**

There are six urban water suppliers included as project proponents within this *San Diego IRWM Drought Solicitation Implementation Grant Proposal*: SDCWA, City of San Diego, Carlsbad, Fallbrook, Rincon, and Sweetwater Authority. As required by the Urban Water Management Planning Act (CWC §10610 *et seq.*), each of these agencies submitted complete 2010 Urban Water Management Plans (UWMP). Four of the agencies (SDCWA, City of San Diego, Carlsbad, and Sweetwater Authority), have received approval by the Department of Water Resources (DWR) regarding their 2010 UWMPs and are currently eligible to receive grant funds (see **Appendix 1-6**).

The Rincon del Diablo Municipal Water District has received verbal confirmation from DWR that their 2010 and 2013 UWMP Updates have been reviewed and are adequate; however, Rincon has not yet received a formal compliance letter from DWR on this matter. **Appendix 1-6** includes contact information from the representative at DWR who has provided Rincon with verbal confirmation regarding the adequacy of their UWMPs, and notice that a formal approval letter is expected within the coming weeks. Fallbrook Public Utility District had previously been directed by DWR to update their UWMP with additional items; Fallbrook has updated the 2010 UWMP, which will be adopted by the Board of Directors on July 28, 2014. Documentation regarding Fallbrook’s revised 2010 UWMP, including the July 28<sup>th</sup> Board Agenda, the draft adoption resolution, and a Staff Report on this matter have been included within **Appendix 1-6**. Due to the timing of finalization of the 2010 UWMP, Fallbrook expects to have formal approval of the UWMP from DWR by the anticipated grant award date of October 16, 2014.

**Table 1-2: Contact Information for Urban Water Suppliers**

Agency	Contact Name	Phone	Email
<b>SDCWA</b>	Carlos Michelon	858-522-6756	cmichelon@sdcwa.org
<b>City of San Diego</b>	Jeffery Pasek	619-533-7599	Jpasek@sandiego.gov
<b>Carlsbad</b>	David Ahles	760-602-2748	David.Ahles@carlsbadca.gov
<b>Fallbrook</b>	Jack Bebee	760-728-1125x1105	jackb@fpud.com
<b>Rincon</b>	Julia Escamilla	760-745-5522x503	jescamilla@rinconwater.org
<b>Sweetwater Authority</b>	Michael Garrod	619-409-6752	mgarrod@sweetwater.org

#### **AB 1420 Compliance**

As defined in the *IRWM Grant Program Guidelines*, AB 1420 conditions the receipt of IRWM grant funds on implementation of demand management measures in compliance with CWC §10631. There are six urban water suppliers included in this Proposal that must also comply with AB 1420 requirements: SDCWA, City of San Diego, Carlsbad, Fallbrook, Rincon, and Sweetwater Authority. All six water suppliers have submitted AB 1420 compliance forms to DWR.

The City of San Diego, Carlsbad, and Fallbrook have submitted AB 1420 Self Certification forms to DWR on or after July 1, 2013. Carlsbad and Fallbrook have received confirmations of the receipt of these forms. Those compliance letters are included in **Appendix 1-6** along with electronic copies of the AB 1420 compliance forms from the other three agencies. Hard copies of the AB1420 compliance forms from SDCWA, Rincon, and Sweetwater with wet signatures have also been submitted to DWR via mail.

### Water Meter Compliance

As defined in the *IRWM Grant Program Guidelines*, CWC §525 *et seq.* requires urban water suppliers applying for IRWM grant funds to demonstrate that they meet the State's Water Meter requirements. There are six urban water suppliers included in this Proposal that must also comply with Water Meter requirements: SDCWA, City of San Diego, Carlsbad, Fallbrook, Rincon, and Sweetwater Authority. All six of these water suppliers have submitted Water Meter compliance forms to DWR (see **Appendix 1-6**). As the City of San Diego and Carlsbad have already submitted wet (original) hard copies of these forms to DWR, electronic versions of these forms as well as the electronic forms from the other agencies can be found in **Appendix 1-6**. Hard copies of the Water Meter compliance form from SDCWA, Fallbrook, Rincon, and Sweetwater with wet signatures have also been submitted to DWR via mail.

### Agricultural Water Management Compliance

None of the project proponents are agricultural water suppliers, and all agricultural water demands supplied by the project proponents are included in their respective UWMPs, therefore there are no Agricultural Water Management Plans required for any of the project proponents. **Appendix 1-7** includes a statement to DWR noting that this compliance criterion does not apply to the project proponents requesting funding within this Proposal.

### Surface Water Diverter Compliance

SDCWA, City of San Diego, Fallbrook, and Sweetwater Authority are surface water diverters. Each of these project proponents has submitted surface water diversion reports to the State Water Resources Control Board (SWRCB) in compliance with Part 5.1 of Division 2 of the CWC. The most recent diversion reports downloaded from the SWRCB's website are included as **Appendix 1-8**. Contact information for these surface water diverters is provided here.

**Table 1-3: Contact Information for Surface Water Diverters**

Agency	Contact Name	Phone	Email
SDCWA	Carlos Michelin	858-522-6756	cmichelon@sdcwa.org
City of San Diego	Jeffery Pasek	619-533-7599	Jpasek@sandiego.gov
Fallbrook	Jack Bebee	760-728-1125x1105	jackb@fpud.com
Sweetwater Authority	Michael Garrod	619-409-6752	mgarrod@sweetwater.org

### Groundwater Management Compliance

Three project proponents included in this Proposal are groundwater users: City of San Diego, Fallbrook, and Sweetwater Authority. Contact information for those agencies is included in **Table 1-4**.

**Table 1-4: Contact Information for Groundwater Users**

Agency	Contact Name	Phone	Email
City of San Diego	Jeffery Pasek	619-533-7599	Jpasek@sandiego.gov
Fallbrook	Jack Bebee	760-728-1125x1105	jackb@fpud.com
Sweetwater Authority	Michael Garrod	619-409-6752	mgarrod@sweetwater.org

One project included within this *San Diego IRWM Drought Solicitation Implementation Grant Proposal* requires compliance with or development of a Groundwater Management Plan (GWMP): Sweetwater Authority’s Reynolds Groundwater Desalination Facility Expansion. This project will extract brackish groundwater for desalination and use as a potable water supply. As such, Sweetwater Authority has completed self-certification of their Groundwater Management Plan (GWMP) in compliance with CWC §10753. Sweetwater Authority is in the process of developing a GWMP, and is currently using an interim GWMP, included as Appendix E of its UWMP. The Interim GWMP and self-certification is included here as **Appendix 1-9**. A hard copy of the self-certification form has also been submitted to DWR via mail.

The other six projects included within this *San Diego IRWM Drought Solicitation Implementation Grant Proposal* do not require compliance with or development of a GWMP because they would not involve groundwater management or recharge. These projects fall within the categories of water quality/stormwater, water supply, and recycled water. As such, these projects do not propose any direct action with regards to groundwater, and would not directly impact groundwater, either positively or negatively. Therefore, the GWMP (CWC §10753.7) self-certification documentation is not required from the remaining five project sponsors: SDCWA, City of San Diego, Carlsbad, Fallbrook, and Rincon. Even though the City of San Diego and Fallbrook have been identified as groundwater users, they are not subject to GWMP compliance in regards to this application, because their projects would not directly affect groundwater levels or quality.

### CASGEM Compliance

Within the San Diego IRWM Region there are four medium priority groundwater basins per the CASGEM Program definition: San Pasqual Valley, San Diego River Valley, Santa Margarita Valley, and San Luis Rey Valley. There are no high priority groundwater basins in the Region. **Table 1-5** shows the groundwater basins in the Region that underlie the projects included in this Proposal, and indicates their priority and monitoring status.

**Table 1-5: Groundwater Basin Monitoring Priority**

Groundwater Basin	Priority	Monitoring Entity	Overlying Projects						
			Reynolds Groundwater Desalination Facility	Fallbrook Plant Nurseries Recycled Water Distribution	Carlsbad Recycled Water Plant and Distribution System	Regional Demand Management Program Expansion	San Diego Water Use Reduction Program	Rincon Customer-Driven Demand Management Program	Regional Emergency Storage and Conveyance System
San Luis Rey Valley	Medium	Unmonitored				✓			
Santa Margarita Valley	Medium	Unmonitored				✓			
San Diego River Valley	Medium	Unmonitored				✓	✓		
San Pasqual Valley	Medium	City of San Diego				✓	✓	✓	
Batiquitos Lagoon Valley	Very Low	N/A			✓	✓			
Campo Valley	Very Low	N/A				✓			
Cottonwood	Very Low	N/A				✓			

Groundwater Basin	Priority	Monitoring Entity	Overlying Projects						
			Reynolds Groundwater Desalination Facility	Fallbrook Plant Nurseries Recycled Water Distribution	Carlsbad Recycled Water Plant and Distribution System	Regional Demand Management Program Expansion	San Diego Water Use Reduction Program	Rincon Customer-Driven Demand Management Program	Regional Emergency Storage and Conveyance System
Valley									
El Cajon Valley	Very Low	N/A				✓			
Escondido Valley	Very Low	N/A				✓		✓	
Mission Valley	Very Low	N/A				✓	✓		
Otay Valley	Very Low	N/A				✓	✓		
Pamo Valley	Very Low	N/A				✓			
Potrero Valley	Very Low	N/A				✓			
Poway Valley	Very Low	N/A				✓	✓		
Ranchita Town Area	Very Low	N/A				✓			
San Dieguito Creek	Very Low	N/A				✓	✓		
San Elijo Valley	Very Low	N/A				✓			
San Marcos Area	Very Low	N/A				✓			
San Mateo Valley	Very Low	N/A				✓			
San Onofre Valley	Very Low	N/A				✓			
Santa Maria Valley	Very Low	N/A				✓			
Sweetwater Valley	Very Low	N/A	✓			✓	✓		
Tijuana	Very Low	N/A				✓	✓		
Warner Valley	Very Low	N/A				✓			

As indicated in **Table 1-5**, there are three unmonitored medium-priority basins in the Region (San Luis Rey Valley, Santa Margarita Valley, and San Diego River Valley). There are no project sponsors that are also eligible monitoring entities whose service areas or projects overlie the San Luis Rey Valley or Santa Margarita Valley groundwater basins. The City of San Diego’s service area and its *San Diego Water Use Reduction Program* partially overlie the San Diego River Valley and San Pasqual Valley groundwater basins. The City of San Diego applied to be a monitoring entity for the San Diego River Valley Groundwater Basin on December 21, 2010, and provided a CASGEM monitoring plan for DWR for review (see monitoring plan in **Appendix 1-10**). The City was informed by DWR that they cannot qualify as an authorized monitoring entity for the San Diego River Valley Basin without an established groundwater management plan for the San Diego River Valley Groundwater Basin. As such, the City can continue to submit CASGEM groundwater levels to DWR for the San Diego River Valley Groundwater Basin on a

voluntary basis. The San Pasqual Valley Basin has been identified as a Tier A basin indicating that it is of high priority for salt and nutrient management, having both significant groundwater storage capacity and significant potential for municipal groundwater use. The San Pasqual Valley Basin is monitored by the City of San Diego and has an established groundwater management plan and salt and nutrient management plan.

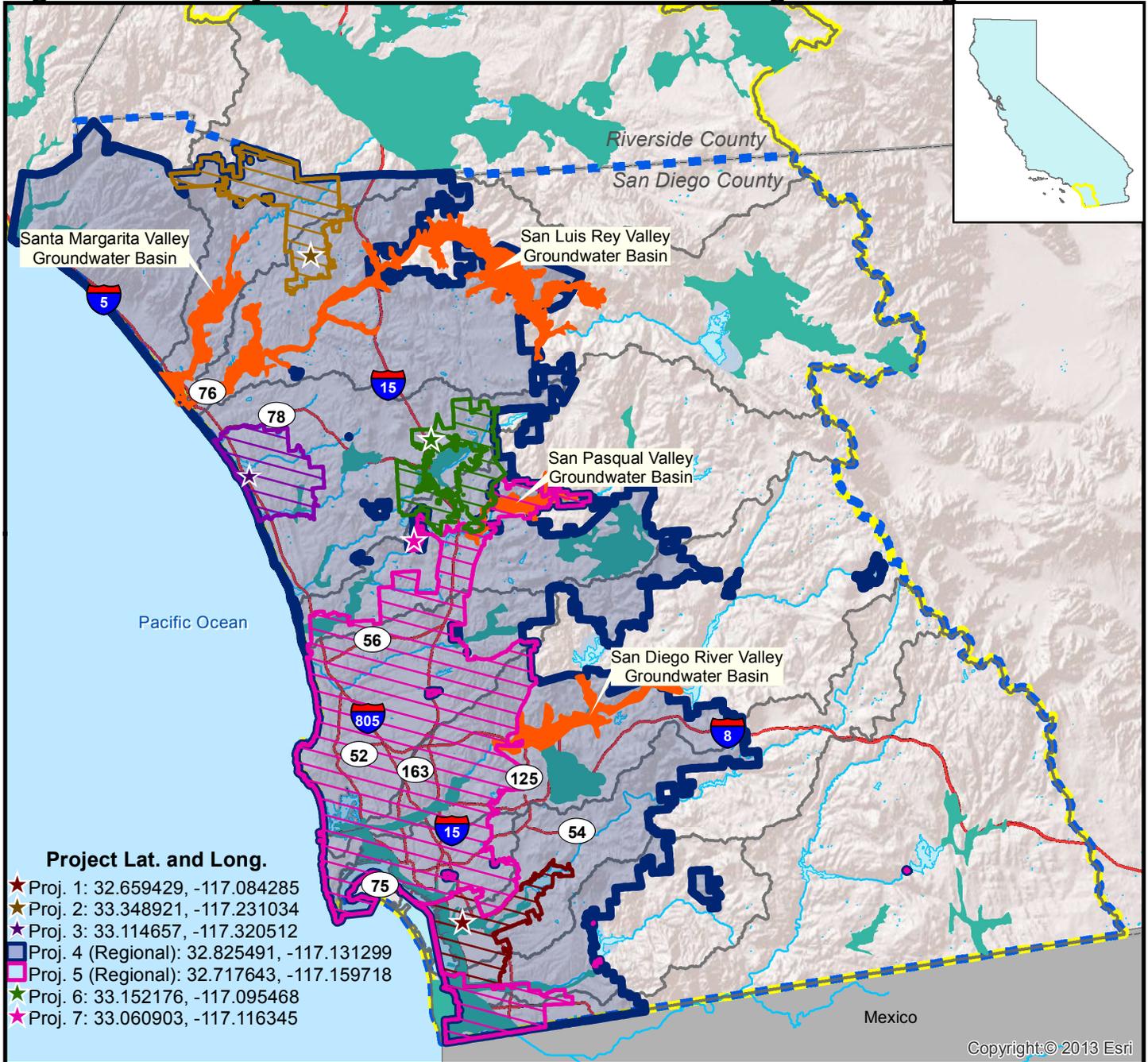
SDCWA's service area and *Regional Demand Management Program Expansion* project overlies all four medium priority groundwater basins in the Region. However, SDCWA is not an eligible monitoring entity because it has no jurisdiction over groundwater-related activities in the Region. SDCWA is a water wholesaler and does not have any jurisdictional connectivity with the San Diego County or have land use authority. SDCWA is governed by a Board of Directors that consists of member agencies (water agencies); while the County of San Diego is governed by their own separate Board of Supervisors.

**Figure 1-1** shows the location of the identified medium-priority groundwater basins in the Region along with the service areas of each project sponsor and the location of each project, including latitude and longitude. A folder titled "Agency Service Area Boundaries" that includes GIS shape files for each of the implementing agencies' (SDCWA, City of San Diego, Carlsbad, Fallbrook, Rincon, and Sweetwater) service area boundaries is included within the supporting CD that has been mailed to DWR with the hard copy of the grant application.

#### Water Conservation Programs and Measures

None of the seven projects included in this Proposal are categorized as Drought Project Element D.3, which includes projects that assist water suppliers and regions to implement conservation programs and measures that are not locally cost-effective. As demonstrated in **Table 3-1**, all seven projects meet Drought Project Element D.1 in that they provide immediate regional drought preparedness. As such, none of the projects included in this Proposal require documentation that confirms they are not locally cost-effective. **Appendix 1-11** includes a statement to DWR noting that this compliance criterion does not apply to the project proponents requesting funding within this Proposal.

**Figure 1-1: Priority Groundwater Basins in the San Diego IRWM Region**



**Legend**

- San Diego IRWM Region
- Funding Area Boundary
- Watershed
- Freeway
- Waterbody
- County
- Medium Priority Basin
- Groundwater Basin
- San Diego County Water Authority
- Carlsbad Municipal Water District
- Fallbrook Public Utility District
- Rincon del Diablo Municipal Water District
- City of San Diego
- Sweetwater Authority



Sources: San Diego Association of Governments (SANDAG) - GIS Data Warehouse  
 \\vmcsd\RMCS\Projects GIS\0188-003 SDIRWM Plan Update\DroughtGrantMaps1-1\_PriorityGWBasins\_15Jul14.mxd

## Appendix 1-1: Authorizing Documentation

Resolution 2014-14 was adopted by the San Diego County Water Authority (SDCWA) Board of Directors on June 26, 2014 and authorizes SDCWA to submit this *San Diego IRWM Drought Solicitation Implementation Grant Proposal* and execute an agreement with the State of California for implementation of seven priority water resources projects.



RESOLUTION No. 2014-14

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
SAN DIEGO COUNTY WATER AUTHORITY  
AUTHORIZING THE GENERAL MANAGER TO SUBMIT  
A 2014 IRWM DROUGHT SOLICITATION  
IMPLEMENTATION GRANT APPLICATION, ACCEPT  
THE AWARDED GRANT FUNDS AND DISTRIBUTE THE  
FUNDS TO PROJECT SPONSORS**

WHEREAS, Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Public Resources Code section 75001 *et seq.*), authorized the California Legislature to appropriate \$1 billion to encourage integrated regional water management planning in California; and

WHEREAS, Section 83002(b)(3)(A)(i) of the California Water Code appropriated to the Department of Water Resources (DWR) funds for integrated regional water management (IRWM) planning grants and other purposes; and

WHEREAS, DWR has made these funds available through a grant program that allocates specific amounts of money to 11 funding areas located throughout California, including the San Diego Funding Area; and

WHEREAS, grant application procedures established by DWR require applicants to provide a copy of a resolution adopted by the applicant's governing body designating an authorized representative to file an application for an IRWM implementation grant; and

WHEREAS, achieving IRWM grant funding will help to achieve the regional water supply goals established in the Water Authority's 2010 Urban Water Management Plan and to prepare the San Diego Region for the impacts of drought; and

WHEREAS, the San Diego Regional Water Management Group (RWMG), in close cooperation with the Regional Advisory Committee (RAC), is preparing an application for a 2014 IRWM Drought Solicitation implementation grant to further water supply reliability, water quality enhancement, natural resources stewardship and water resource management in the region; and

WHEREAS, on June 4, 2014, the RAC recommended that the Water Authority Board authorize submittal of the San Diego Region's application for a 2014 Integrated Regional Water Management Drought Solicitation implementation grant; and

WHEREAS, the memorandum of understanding that established the San Diego IRWM Program identifies the Water Authority as the program's authorized representative; and

WHEREAS, the Water Authority Board of Directors is the decision-making body for the Water Authority.

NOW, THEREFORE, the Board of Directors of the San Diego County Water Authority resolves the following:

1. The foregoing facts are true and correct.
2. The General Manager is authorized to prepare the necessary data, conduct investigations and submit a 2014 Integrated Regional Water Management Drought Solicitation implementation grant application.
3. The General Manager is authorized to enter into an agreement to receive a 2014 Integrated Regional Water Management Drought Solicitation implementation grant from the California Department of Water Resources.
4. The General Manager is authorized to enter into contracts to distribute the awarded grant funds to the project sponsors.

PASSED, APPROVED AND ADOPTED, this 26<sup>th</sup> day of June, 2014, by the following vote:

AYES: Unless noted below, all Directors present voted aye.

NOES: None

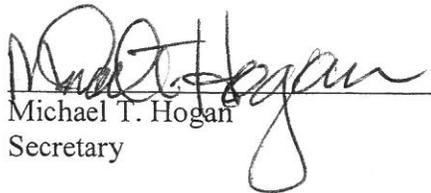
ABSTAIN: Brady and Murtland

ABSENT: Morrison, Razak, Topolovac (p), Tu, Watkins, and Williams



Thomas V. Wornham  
Chair

ATTEST:



Michael T. Hogan  
Secretary

I, Doria F. Lore, Clerk of the Board of the San Diego County Water Authority, certify that the vote shown above is correct and this Resolution No. 2014- 14 was duly adopted at the meeting of the Board of Directors on the date stated above.



Doria F. Lore  
Clerk of the Board

**San Diego IRWM 2014 IRWM Drought Solicitation Implementation Grant Application Project List**

Project Title	Project Sponsor	Grant Request	Estimated Acre-Feet/Year
Reynolds Groundwater Desalination Facility Expansion	Sweetwater Authority	\$ 5,150,000	5200.00
Fallbrook Plant Nurseries Recycled Water Distribution System Expansion	Fallbrook Public Utility District	\$ 795,160	644.00
Regional Demand Management Program Expansion	San Diego County Water Authority	\$ 1,039,270	191.00
San Diego Water Use Reduction Program	City of San Diego Public Utilities Department	\$ 720,506	381.00
Rincon Customer-Driven Demand Management Program	Rincon del Diablo Municipal Water District	\$ 618,955	505.00
Regional Emergency Storage and Conveyance System Intertie Optimization	City of San Diego Public Utilities Department (City)	\$ 2,631,135	Estimated amount to be determined
Carlsbad Recycled Water Plant and Distribution System Expansion	Carlsbad Municipal Water District	\$ 4,120,000	363.00
<b>TOTAL</b>		\$ 15,075,025	<b>7284.00</b>



## Appendix 1-2: Eligible Applicant Documentation

This *San Diego IRWM Drought Solicitation Implementation Grant Proposal* is being submitted by SDCWA. Per the adopted *Memorandum of Understanding for the Integrated Regional Water Management Program for Fiscal Years 2012-2016*, the San Diego Regional Water Management Group (RWMG) – comprising the City of San Diego, the County of San Diego, and SDCWA – has determined that SDCWA shall have overall responsibility for submitting all applications to the State on behalf of the parties. SDCWA is also submitting this grant proposal on behalf of the following non-RWMG entities:

- Carlsbad Municipal Water District (Carlsbad)
- Fallbrook Public Utility District (Fallbrook)
- Rincon del Diablo Municipal Water District (Rincon)
- Sweetwater Authority

SDCWA's qualifications as an eligible applicant in accordance with the *IRWM Grant Program Guidelines*<sup>1</sup> are as follows:

1. SDCWA is a local public agency as defined in Appendix B of the *IRWM Grant Program Guidelines*. SDCWA is the regional water wholesale agency within San Diego County, whose mission is to provide a safe and reliable supply of water to its 24 member agencies.
2. SDCWA is a county water district organized and existing under Division 12, commencing with §30000, of the California Water Code. SDCWA was organized under the County Water Authority Act of 1943 to serve as the San Diego Region's water wholesaler.
3. SDCWA has legal authority to enter into a grant agreement with the State of California. Per the adopted *Memorandum of Understanding for the Integrated Regional Water Management Program for Fiscal Years 2012-2016*, the San Diego RWMG has determined that SDCWA shall have overall responsibility for submitting all applications to the State on behalf of the parties. Resolution 2014-14 authorizes SDCWA to submit this *San Diego IRWM Drought Solicitation Implementation Grant Proposal* and execute an agreement with the State of California for implementation of identified water resources projects (see **Appendix 1-1**).
4. SDCWA, the City of San Diego (City), and the County of San Diego (County) jointly developed and adopted a *Memorandum of Understanding for the Integrated Regional Water Management Program for Fiscal Years 2012-2016*. This MOU replaced the second MOU (dated March 10, 2009), as amended, between SDCWA, the City, and the County for FYs 2009-2013 of the IRWM Grant Program. Section 1b of the MOU states that the "Water Authority (SDCWA) shall submit the grant applications to the funding agency on behalf of the Parties." Additionally, section 3a of the MOU states that the "Water Authority shall administer and manage IRWM grant agreements, administer the local project sponsors' (LPS) contracts, develop and maintain a reporting and invoicing program, and communicate project and agreement progress to the RWMG, RAC [Regional Advisory Committee], and the funding agency."

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<sup>1</sup> Department of Water Resources (DWR). 2014. 2014 IRWM Drought Solicitation Integrated Regional Water Management Proposition 84 and 1E Guidelines. June.



**MEMORANDUM OF UNDERSTANDING  
BETWEEN CITY OF SAN DIEGO  
COUNTY OF SAN DIEGO, and SAN DIEGO COUNTY WATER AUTHORITY  
for the  
INTEGRATED REGIONAL WATER MANAGEMENT PROGRAM  
For Fiscal Years 2012-2016**

This Memorandum of Understanding (MOU) between the San Diego County Water Authority (Water Authority); the City of San Diego, a municipal agency (City); and the County of San Diego, a political subdivision of the State of California (County), sets forth the respective roles of Water Authority, City and County in regard to the Integrated Regional Water Management (IRWM) Plan and Program. Water Authority, City and County are sometimes referred to in this MOU collectively as the "Parties" and individually as "Party."

This MOU replaces the Memorandum of Understanding (March 25, 2009), as amended, between City, County, and Water Authority for Fiscal Years 2009-2013 for the IRWM Grant Program.

RECITALS:

1. The California Legislature enacted SBX2 1 (Perata, Chapter 1 Statutes of 2008), the Integrated Regional Water Management Planning Act, which repealed and re-enacted Part 2.2 of Division 6 of the Water Code relating to integrated regional water management plans. SBX2 1 provides that a regional water management group may prepare and adopt an integrated regional water management (IRWM) plan.
2. In November 2002, Proposition 50, the Water Security, Clean Drinking Water, Coastal and Beach Protection Act, authorized the Legislature to appropriate funding for competitive grants for IRWM projects.
3. In November 2006, Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Act, authorized the Legislature to appropriate funding for competitive grants for IRWM projects.
4. The intent of the IRWM Grant Program (Program) established in accordance with Proposition 50 and SBX2 1, is to encourage integrated regional strategies for management of water resources and to provide funding, through competitive grants, for projects that protect communities from drought, protect and improve water quality, promote environmental stewardship, and improve local water security by reducing dependence on imported water.
5. To qualify as a regional water management group (RWMG) and comply with the Program Guidelines (Guidelines) established under Proposition 50 and SBX2 1, at least three agencies must participate in the group; two of the agencies must have statutory authority over

water management that may include water supply, water quality, flood control, or stormwater management.

6. In 2005, the Parties established an RWMG that consists of Water Authority, which has statutory authority over water management; City, which has statutory authority over water management, water quality, wastewater, flood management and stormwater; and County, which has statutory authority over water quality, stormwater and flood control in the unincorporated area.

7. The Parties understand that only through a collaborative effort with the many stakeholders involved in water management planning can the IRWM Plan process be successful in the San Diego region.

8. As part of the public outreach and stakeholder involvement effort, the Parties established the Regional Advisory Committee (RAC), which comprises up to 32 representatives appointed by the Parties from the water management areas of water supply, water quality and natural resources/watersheds management; and representatives of businesses, academia and tribes, as well as other interested members of the public. The purpose of the RAC is to make recommendations to the Parties on key issues related to IRWM planning and grant applications.

9. The Parties, acting with positive recommendations from the RAC, completed the first San Diego IRWM Plan (Plan) in 2007. Subsequently, the Parties have received funding for planning and implementation of projects from the California Department of Water Resources (DWR). Additional funding is available to the San Diego IRWM Program from Proposition 84, approved by California voters in 2006.

10. To qualify for Proposition 84 IRWM funding, a planning region must have an IRWM Plan that complies with the requirements of California Water Code Section 83002(b)(3)(B), or must have committed to bringing its plan into compliance within two years of receiving such funding.

11. A Local Project Sponsor (LPS) is a proponent of an individual project that will be funded as part of an IRWM Program grant from the State or other future funding agencies. An LPS may be Water Authority, County, City, a Water Authority member agency, a municipality, a local agency or a non-profit organization.

12. This MOU consists of five major components: general grant obligations, San Diego IRWM Plan update, IRWM grant administration, the role of the RAC, and funding for IRWM Program management.

Now, therefore, in consideration of the above incorporated recitals and mutual obligations of the Parties herein expressed, the Parties agree as follows:

### **1. General Grant Obligations**

- a. The Parties are equal partners in the development and submission of IRWM grant applications. All Parties shall provide timely reviews and approvals before grant

applications are submitted.

- b. Water Authority shall submit the grant applications to the funding agency on behalf of the Parties.
- c. To expedite the grant application process, Water Authority shall provide initial funding for a consultant to develop the applications. The total cost of the consultant and applications shall be shared by the parties consistent with Section 5 of this MOU.
- d. The funding commitment by the Parties under Section 5 of this MOU assumes that the Parties will continue to pay or provide in-kind services as allowed for the entire cost of grant applications for the IRWM Program. As part of the IRWM Plan Update described in Section 2 of this MOU, the Parties agree to study the concept of obtaining funding from other sources to fully or partially defray the cost of grant applications.
- e. Water Authority shall be responsible for administering funding for projects that are receiving IRWM Program grant funding with respect to submitting invoices and quarterly reports to the funding agency, distributing funding to LPS, and processing contract amendments as applicable.
- f. The Parties shall share equally in any and all contractual liability, regardless of nature or type, which arises out of or results from a LPS's performance of services under its agreement with the Water Authority. The Parties shall share equally in any of the default provisions listed in the grant agreements received by the Parties. The Water Authority also agrees to pursue contractual remedies.
- g. Each Party shall procure and maintain during the period of this MOU insurance from insurance companies admitted to do business in the State of California or shall self-insure to cover any contractual liability resulting from the conditions referenced in Section 1f.

## **2. San Diego IRWM Plan Update**

- a. The Parties are equal partners in the update of the Plan. Water Authority shall contract with a consultant to update the Plan in compliance with the Guidelines and schedule established by DWR, and submit the updated Plan to DWR.
- b. The update of the Plan shall be contingent upon receipt of grant funding for this purpose.

## **3. IRWM Grant Contracts Administration**

- a. The Water Authority shall administer and manage IRWM grant agreements, administer the LPS contracts, develop and maintain a reporting and invoicing program, and communicate project and agreement progress to the RWMG, RAC, and the funding agency.

- b. An LPS that has satisfied all invoicing requirements for a grant shall invoice the Water Authority, which shall in turn invoice the funding agency. The Water Authority shall, within 45 days of receipt of funds from the funding agency, disburse the funds to the LPS.
- c. The Water Authority shall appropriate a percentage of the grant money allocated to each LPS project to fund administration of the IRWM grants. The Parties shall agree mutually to the percentage of the grant money that is to be appropriated for this purpose. To the extent that costs exceed the amount in this fund, and that the Parties mutually agree to the additional cost, the Parties shall equally share the additional costs in accordance with Section 5a.
- d. Where a labor compliance requirement has been established by the granting agency, Authority shall report to the granting agency the compliance status of LPS, as reported by LPS, with applicable public works laws.

#### **4. Role of Regional Advisory Committee (RAC)**

The RAC shall be considered the project advisory committee. The Parties are committed to a cooperative relationship with the RAC and will incorporate the RAC's consensus recommendations in documents prepared for presentations to the Parties' governing bodies. The Parties' governing bodies will give primary consideration to the recommendations of the RAC as part of any decision related to the following:

- a. Adoption of updates to the IRWM Plan for the San Diego Region.
- b. Criteria for prioritizing projects to be submitted for IRWM grant programs.
- c. Reevaluation of all projects submitted for grant funding if a funding agency funds the Program at a level lower than the requested grant amount and does not provide direction on which projects to fund. Parties shall fund the projects based on consultation with the RAC and the criteria for project prioritization (Section 4b).
- d. Approval and submittal of grant applications.
- e. Transition of responsibility for implementation of the IRWM Plan to a new institutional structure.

#### **5. Funding**

- a. Funding for FY 2012-2016 shall not exceed \$1,470,000. Each Party shall provide an equal share of this funding in an amount not to exceed \$490,000. If a Party's contribution was not totally expended in the MOU (March 25, 2009), as amended, that Party shall be credited for the unexpended amount in this MOU.

- b. In-kind services provided by the Parties shall be considered in excess of the above funding amounts and are not reimbursable. The Parties' staff shall separately document time spent on in-kind services for IRWM planning, administration and grant applications.
- c. The funding commitment described in 5a shall not include expenditures to administer the IRWM Grant Program.
- d. Water Authority shall invoice City and County on a quarterly basis along with supporting documentation of expenses. City and County shall remit payment within 60 days of receipt of invoice.

## **6. Assignment**

Parties shall not assign or transfer this MOU or any rights under or interest in this MOU without written consent of all other Parties, which may be withheld for any reason.

## **7. Defense and Indemnity**

Water Authority, City, and County each agree to mutually indemnify, defend at its own expense, including attorneys' fees, and hold each other harmless from and against all claims, costs, penalties, causes of action, demands, losses and liability of any nature whatsoever, including but not limited to liability for bodily injury, sickness, disease or death, property damage (including loss of use) or violation of law, caused by or arising out of or related to any negligent act, error or omission of that party, its officers or employees, or any other agent acting pursuant to its control and performing under this Agreement.

Nothing in the foregoing shall be construed to require any Party to indemnify another for any claim arising from the sole negligence or willful act of the Party to be indemnified.

## **8. Document Review**

Water Authority, City and County each shall make available for inspection to the other Parties, upon reasonable advance notice, all records, books and other documents relating to the Plan and the Program, unless privileged.

## **9. Term**

The term of this MOU shall begin on the date of execution by all Parties and expire on June 30, 2016 expressly contingent upon funding by Water Authority, City and County. The term may be extended by written agreement of all Parties. The Parties shall continue to participate in the planning, development and coordination of the Plan and Grants to the maximum extent possible. The Parties agree to notify one another in the event that their agency's future budget appropriations impact Program funding continuity. If appropriations are different than anticipated, the MOU and Program funding shall be adjusted based on actual funding.

**10. Notice**

Any notice, payment, credit or instrument required or permitted to be given hereunder will be deemed received upon personal delivery or 24 hours after deposit in any United States mail depository, first class postage prepaid, and addressed to the Party for whom intended as follows:

If to the Water Authority:

San Diego County Water Authority  
4677 Overland Avenue  
San Diego, CA 92123  
Attn: Mark Stadler

If to City:

City of San Diego Water Department  
600 B Street, Suite 600  
San Diego, CA 92101  
Attn: Cathy Pieroni

If to County

County of San Diego  
5201 Ruffin Road, Suite P  
San Diego, CA 92123  
Attn: Sheri McPherson

Any Party may change such address or contact by notice given to the other Parties as provided herein.

**11. Amendments**

The MOU may be amended by written agreement of all Parties.

**12. Severability**

The partial invalidity of one or more parts of this MOU will not affect the intent or validity of this MOU.

**13. Governing Law**

This MOU shall be deemed a contract under the laws of the State of California and for all purposes shall be interpreted in accordance with such laws. Any action brought shall be in San Diego County, California.

**14. Obligations**

Nothing in this agreement shall create additional obligations with respect to the Plan or Program.

**15. Termination of MOU**

This MOU may be terminated by any Party with or without cause 30 days after notice in writing to the other Parties.

**16. Signatures**

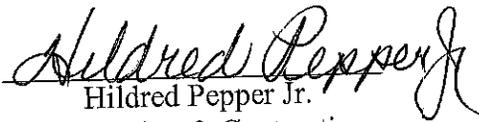
The individuals executing this MOU represent and warrant that they have the legal capacity and authority to do so on behalf of their respective legal entities.

IN WITNESS WHEREOF, the Parties have executed this MOU as of the date below.

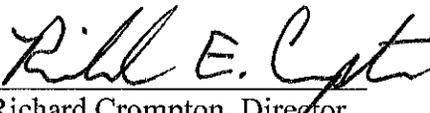
San Diego County  
Water Authority

City of San Diego

By:   
Ken Weinberg  
Director of Water Resources

By:   
Hildred Pepper Jr.  
Purchasing & Contracting  
Director

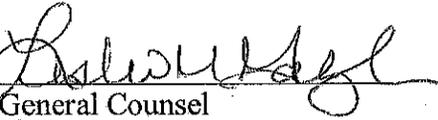
County of San Diego

By:   
Richard Crompton, Director  
Department of Public Works

By:  **RISKY**  
Winston F. McColl, Director  
Department of Purchasing and Contracting

APPROVED AS TO FORM:

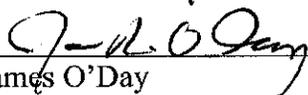
San Diego County  
Water Authority

By:   
General Counsel  
San Diego County Water Authority

City of San Diego

By:   
Raymond C. Palmucci  
Deputy City Attorney

County of San Diego

By:   
James O'Day  
County Counsel, Senior Deputy

Date: 9/21/11

## Appendix 1-3: Acknowledgement Form

As the applicant authorized by its Board of Directors to apply for the *2014 IRWM Drought Solicitation Grant* on behalf of the San Diego RWMG, SDCWA has completed the 2014 IRWM Drought Grant Acknowledgement Form. A hard copy of this acknowledgment form with a wet signature has also been submitted to DWR via mail.



## 2014 IRWM Drought Grant Acknowledgement Form

**IRWM Region:** San Diego

**RWMG:** San Diego

As the authorized representative of the above-referenced RWMG, I acknowledge and affirm that the RWMG understands that it must provide additional information to DWR in the event that the RWMG is conditionally selected to receive 2014 IRWM Drought Grant funding.

I further acknowledge that the RWMG understands that its request for 2014 IRWM Drought grant funding is part of an expedited solicitation effort and agrees to the following items:

- If conditionally awarded funding, the applicant, on behalf of the RWMG, will submit to DWR, within thirty (30) calendar days of written notification, which may include email or electronic notification, all of the following items:
  - A detailed Work Plan per Exhibit A of the PSP for each project contained in the Proposal
  - A detailed Budget per Exhibit B of the PSP for each project contained in the Proposal
  - Documentation to support the Project Justification claims contained in the Proposal
  - Project Performance Monitoring Plans for each project that received funding
  - Audited Financial Statements for the Grantee and the individual project proponents whose project(s) is/are about to begin construction/implementation
  - CEQA/NEPA documentation for those projects that are about to begin construction/implementation
  - Other materials that DWR deems necessary, which will be detailed in the award notification

I further acknowledge that the RWMG also understands that failure to submit the necessary information, within thirty (30) calendar days, may result in delayed execution of the grant agreement or revocation of the conditional award of funds.

Authorized Original Signature: Mark Stadler

Printed Name: Mark Stadler

Title: Principal Water Resources Specialist/San Diego IRWM Program Manager

Date: 7-14-2014



## Appendix 1-4: Adopted IRWM Plan and Proof of Formal Adoption

The San Diego IRWM Region updated its 2007 IRWM Plan from 2011 through 2013 consistent with the *2012 IRWM Grant Program Guidelines*<sup>1</sup> and CWC §10543, as described in Chapter 6 of the 2013 IRWM Plan. The 2013 IRWM Plan was finalized in September 2013, and formally adopted by RWMG agencies' governing bodies and all project proponents on the dates provided below. Copies of all adoption resolutions are included herein.

- SDCWA: September 26, 2013
- City of San Diego: October 8, 2013
- County of San Diego: October 9, 2013
- Carlsbad: June 17, 2014
- Fallbrook: June 23, 2014
- Rincon: June 10, 2014
- Sweetwater Authority: June 11, 2014

SDCWA, on behalf of the RWMG and San Diego IRWM Region, submitted the 2013 IRWM Plan to DWR for review in accordance with Appendix H of the *2012 IRWM Grant Program Guidelines*. The Plan Review Process is designed to assess whether an IRWM Plan is consistent with the IRWM Plan Standards included in the 2012 IRWM Grant Program Guidelines. The 2013 IRWM Plan was submitted to DWR and found to be consistent with the IRWM Planning Act and related IRWM Plan Standards contained in the 2012 IRWM Grant Program Guidelines on June 6, 2014. A confirmation letter of this finding is included in this appendix.

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<sup>1</sup> Department of Water Resources (DWR). 2012. Integrated Regional Water Management Proposition 84 and 1E Guidelines. November.



RESOLUTION No. 2013-21

**RESOLUTION OF THE BOARD OF  
DIRECTORS OF THE SAN DIEGO COUNTY  
WATER AUTHORITY ADOPTING THE 2013  
SAN DIEGO INTEGRATED REGIONAL WATER  
MANAGEMENT PLAN**

WHEREAS, the San Diego Regional Water Management Group (RWMG), in close cooperation with the Regional Advisory Committee (RAC), drafted the 2013 San Diego Integrated Regional Water Management (IRWM) Plan to improve the reliability and sustainability of regional supplies; protect water quality, watersheds and natural resources in the region; and promote sustainable IRWM; and

WHEREAS, THE 2013 San Diego IRWM Plan updates and expands upon the first San Diego IRWM Plan, adopted by the San Diego County Water Authority Board of Directors in 2007; and

WHEREAS, the 2013 San Diego IRWM Plan defines the San Diego Region as the 11 parallel hydrologic units that discharge to coastal waters in San Diego County; and

WHEREAS, the San Diego IRWM Plan establishes the San Diego IRWM Program's mission, vision, goals, objectives, regional priorities and performance metrics; and

WHEREAS, the San Diego IRWM Plan is the foundation of long-term IRWM planning in the region, fostering coordination, collaboration and communication among governmental agencies with differing jurisdictions and non-profit organizations; and

WHEREAS, DWR has awarded three IRWM grants totaling \$33.9 million to support 30 water-related projects in the San Diego IRWM Planning Region and the 2013 San Diego IRWM Plan Update;

WHEREAS, achieving IRWM grant funding has helped to achieve the regional water supply goals established in the Water Authority's 2010 Urban Water Management Plan; and

WHEREAS, the San Diego RWMG must update the 2007 San Diego IRWM Plan to fulfill new requirements established by the Department of Water Resources (DWR) and so maintain eligibility for State grant funds; and

WHEREAS, the Water Authority Board of Directors is the decision-making body for the Water Authority; and

WHEREAS, on August 7, 2013, the RAC unanimously recommended approval of the San Diego IRWM Plan; and

WHEREAS, the Board of Directors has considered reports submitted by Water Authority staff on IRWM Plan development dated January 18, 2012; March 14, 2012; February 20, 2013; and June 9, 2013.

NOW, THEREFORE, the Board of Directors of the San Diego County Water Authority resolves the following:

1. The foregoing facts are true and correct.
2. The Board of Directors adopts the 2013 San Diego Integrated Regional Water Management Plan.

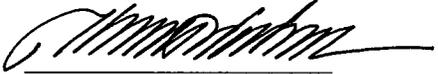
PASSED, APPROVED AND ADOPTED, this 26th day of September, 2013, by the following vote:

AYES: Unless noted below, all Directors present voted aye.

NOES: None

ABSTAIN: None

ABSENT: Arant (p), Hilliker, Linden, Morrison, Murtland, Saxod, Topolovac, Watkins, Watton, and Wight

  
Thomas V. Wornham  
Chair

ATTEST:

  
Michael T. Hogan  
Secretary

I, Doria F. Lore, Clerk of the Board of the San Diego County Water Authority, certify that the vote shown above is correct and this Resolution No. 2013- 21 was duly adopted at the meeting of the Board of Directors on the date stated above.

  
Doria F. Lore  
Clerk of the Board

ITEM 331  
10/08/13

(R-2014-131)

RESOLUTION NUMBER R- 308492

DATE OF FINAL PASSAGE OCT 22 2013

A RESOLUTION OF THE COUNCIL OF THE CITY  
OF SAN DIEGO ADOPTING THE 2013 SAN DIEGO  
INTEGRATED REGIONAL WATER MANAGEMENT  
PLAN UPDATE.

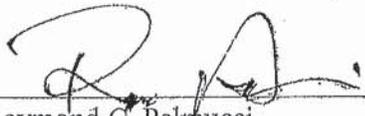
WHEREAS, in June 2005 by Resolution No. R-300517, the City Council authorized a Memorandum of Understanding with San Diego County and the San Diego County Water Authority to create and implement the 2007 Integrated Regional Water Management Plan [IRWMP] to pursue Proposition 50 and 84 grant funding for the San Diego region; and

WHEREAS, an update to the IRWMP is required in order to be eligible for additional grant funding, and the 2013 IRWMP has been prepared to comply with new requirements to make the San Diego region eligible for Proposition 50 and 84 grant funds; and

WHEREAS, the Natural Resources and Culture Committee considered this item on July 31, 2013 and requested additional information in the 2013 IRWMP regarding water reuse, recycling and wastewater discharge, and on September 25, 2013 considered this item with additional information, as set forth in Report to the City Council No. 13-073, and recommended adoption; NOW, THEREFORE,

BE IT RESOLVED, by the Council of the City of San Diego, that the Council adopts the 2013 San Diego Integrated Regional Water Management Plan, on file with the City Clerk as Document No. RR- 308492.

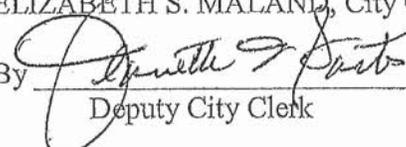
APPROVED: JAN I. GOLDSMITH, City Attorney

By   
Raymond C. Palmucci  
Deputy City Attorney

RCP:mb  
09/25/13  
Or.Dept:P.Util-Water  
Doc.No:630919

I hereby certify that the foregoing Resolution was passed by the Council of the City of San Diego,  
at its meeting of OCT 08 2013.

ELIZABETH S. MALAND, City Clerk

By   
Deputy City Clerk

Approved pursuant to Charter section 265(i)

\_\_\_\_\_  
Date

\_\_\_\_\_  
TODD GLORIA, Council President

Passed by the Council of The City of San Diego on OCT 08 2013, by the following vote:

Councilmembers	Yeas	Nays	Not Present	Recused
Sherr Lightner	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kevin Faulconer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Todd Gloria	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Myrtle Cole	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mark Kersey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lorie Zapf	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scott Sherman	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
David Alvarez	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marti Emerald	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Date of final passage OCT 22 2013

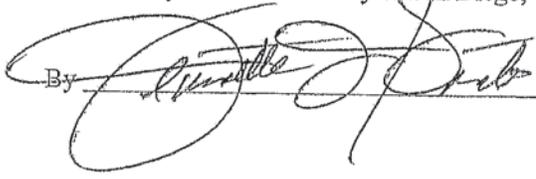
(Please note: When a resolution is approved by the Council President as interim Mayor, the date of final passage is the date the approved resolution was returned to the Office of the City Clerk.)

AUTHENTICATED BY:

TODD GLORIA, COUNCIL PRESIDENT  
as interim Mayor of The City of San Diego, California.

(Seal)

ELIZABETH S. MALAND  
City Clerk of The City of San Diego, California.

By , Deputy

Office of the City Clerk, San Diego, California

Resolution Number R- 308492

**RESOLUTION OF THE SAN DIEGO COUNTY BOARD OF SUPERVISORS  
AUTHORIZING ADOPTION OF THE 2013 SAN DIEGO INTEGRATED  
REGIONAL WATER MANAGEMENT (IRWM) PLAN**

**WHEREAS**, the County of San Diego, in cooperation with the San Diego County Water Authority (Water Authority) and the City of San Diego (City) has formed a San Diego Regional Water Management Group (RWMG); and

**WHEREAS**, on December 3, 2003, the Board of Supervisors authorized County of San Diego staff to apply for and accept Proposition 50 grant funds; and

**WHEREAS**, on May 11, 2005, the Board of Supervisors authorized County of San Diego staff to enter into a Memorandum of Understanding (MOU) with the Water Authority and the City to develop a Proposition 50 Integrated Regional Water Management Grant Application; and

**WHEREAS**, on July 25, 2007, the Board of Supervisors authorized the first amendment to the MOU with the Water Authority and the City; and

**WHEREAS**, on July 31, 2007, the Board of Supervisors authorized County of San Diego staff to apply for and accept Proposition 84 grant funds; and

**WHEREAS**, on November 7, 2007, the Board of Supervisors adopted the 2007 San Diego Integrated Regional Water Management (IRWM) Plan to optimize water supply reliability, protect and enhance water quality, provide stewardship of natural resources, and coordinate and integrate water resource management in the region; and

**WHEREAS**, on January 28, 2009, the Board of Supervisors authorized a new agreement for the IRWM grant program and application for state funding; and

**WHEREAS**, on January 13, 2010, the Board of Supervisors adopted a resolution authorizing amendment of the 2007 San Diego IRWM plan; and

**WHEREAS**, the San Diego IRWM Plan defines the San Diego Region as 11 parallel and similar hydrologic units within the county that discharge to coastal waters; and

**WHEREAS**, the RWMG, in close cooperation with a Regional Advisory Committee, has drafted the 2013 San Diego Integrated Regional Water Management (IRWM) Plan to update the 2007 Plan to continue to coordinate and integrate water resource management in the region; and

**WHEREAS**, the San Diego IRWM Plan establishes a mission, vision, goals, objectives, and regional priorities; and

**WHEREAS**, the San Diego IRWM Plan will form the foundation of long-term IRWM planning in the region, fostering coordination, collaboration, and communication among governmental and non-governmental water stakeholders; and

**WHEREAS**, having an IRWM Plan will position the San Diego Region to compete for funding opportunities; and

**WHEREAS**, the County of San Diego Board of Supervisors is the decision-making body for the County of San Diego; and

**WHEREAS**, acceptance of the San Diego IRWM Plan by the San Diego County Board of Supervisors is a requirement for eligibility of Integrated Regional Water Management Planning Act grant funds (CWC Section 10539); and

**WHEREAS**, on September 25, 2013, the Regional Advisory Committee recommended that the County of San Diego Board of Supervisors adopt the updated 2013 San Diego IRWM Plan; and

**WHEREAS**, adoption of the 2013 IRWM Plan does not constitute County of San Diego Board of Supervisors endorsement of or support for any particular element or project within the Plan.

**NOW, THEREFORE, BE IT RESOLVED** that the County of San Diego Board of Supervisors resolves the following:

- 1) The foregoing facts are true and correct.
- 2) The Board of Supervisors adopts the 2013 San Diego Integrated Regional Water Management Plan.

Approved as to form and legality  
County Counsel  
By: Thomas L. Bosworth, Senior Deputy

ON MOTION of Supervisor R. Roberts, seconded by Supervisor D. Roberts, the above Resolution was passed and adopted by the Board of Supervisors, County of San Diego, State of California, on this 10<sup>th</sup> day of October, 2013, by the following vote:

AYES: Jacob, D. Roberts, R. Roberts, Horn

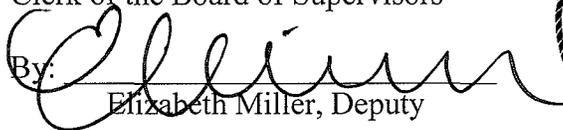
ABSENT: Cox

- - -

STATE OF CALIFORNIA)  
County of San Diego)<sup>SS</sup>

I hereby certify that the foregoing is a full, true and correct copy of the Original Resolution entered in the Minutes of the Board of Supervisors.

THOMAS J. PASTUSZKA  
Clerk of the Board of Supervisors

By:   
Elizabeth Miller, Deputy



Resolution No. 13-148  
Meeting Date: 10/09/13 (3)

RESOLUTION NO. 1491

A RESOLUTION OF THE BOARD OF DIRECTORS OF CARLSBAD MUNICIPAL WATER DISTRICT (CMWD), ADOPTING THE 2013 SAN DIEGO INTEGRATED REGIONAL WATER MANAGEMENT PLAN.

WHEREAS, CMWD is pursuing funding programs for development of the Phase III Recycled Water project; and

WHEREAS, the Board adopted Resolution No. 1409 which authorized a grant application to obtain a California State Proposition 84 Grant to be used for the Phase III Recycled Water Project; and

WHEREAS, on June 2, 2014, the San Diego Integrated Water Management (IRWM) Program notified CMWD that CMWD's Phase III Recycled Water Project had been recommended for the San Diego region's Round 3 Proposition 84 Integrated Resources Water Management (IRWM) grant application, and the Phase III Recycled Water Project was selected for inclusion in the San Diego IRWM; and

WHEREAS, before grant funding may be distributed for each individual project, each agency requesting funding must adopt the 2013 San Diego Integrated Water Management Plan.

NOW, THEREFORE, BE IT RESOLVED by the Carlsbad Municipal Water District Board of the City of Carlsbad, California, as follows that:

1. The above recitations are true and correct.
2. That the Board adopted the 2013 San Diego Integrated Regional Water Management Plan.

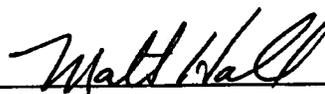
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PASSED, APPROVED AND ADOPTED at a Special Meeting of the Board of Directors of the Carlsbad Municipal Water District of the City of Carlsbad on the 17<sup>th</sup> day of June, 2014, by the following vote to wit:

AYES: Board Members Hall, Packard, Wood, Schumacher and Blackburn.  
NOES: None.  
ABSENT: None.

  
MATT HALL, President

ATTEST:

  
BARBARA ENGLESON, Secretary



**RESOLUTION NO. 4824**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF  
THE FALLBROOK PUBLIC UTILITY DISTRICT ADOPTING  
THE 2013 SAN DIEGO INTEGRATED REGIONAL WATER  
MANAGEMENT PLAN UPDATE**

\* \* \* \* \*

**WHEREAS**, the San Diego County Water Authority administered, created, and implemented the 2007 Integrated Regional Water Management Plan (IRWMP) to pursue Proposition 50 and 84 grant funding for the San Diego region; and

**WHEREAS**, an update to the IRWMP is required in order to be eligible for additional grant funding, and the 2013 IRWMP has been prepared to comply with new requirements to make the San Diego region eligible for Proposition 50 and 84 grant funds.

**NOW, THEREFORE, BE IT RESOLVED THAT** the Board of Directors of the Fallbrook Public Utility District does hereby adopt the 2013 San Diego Integrated Regional Water Management Plan.

**PASSED AND ADOPTED** by the Board of Directors of the Fallbrook Public Utility District at a regular meeting of the Board held on the 23<sup>rd</sup> day of June, 2014, by the following vote:

<b>AYES:</b>	<i>Gebhart, Hauptman, Davies</i>
<b>NOES:</b>	<i>McPhie</i>
<b>ABSTAIN:</b>	<i>None</i>
<b>ABSENT:</b>	<b>McDougal</b>

*AW Gebhart*  
\_\_\_\_\_  
President, Board of Directors

**ATTEST:**

*Mary Ann (McDougal)*  
\_\_\_\_\_  
Secretary, Board of Directors

**FALLBROOK PUBLIC UTILITY DISTRICT  
BOARD OF DIRECTORS**

**CERTIFICATION**

\* \* \* \* \*

I, Mary Lou Boultinghouse, Secretary of the Board of Directors of the Fallbrook Public Utility District, do hereby certify that the attached and foregoing is a full, true, and correct copy of Resolution No. 4824 of said Board passed and adopted at a regular meeting of the Board of Directors of the Fallbrook Public Utility District on June 23, 2014.

I, Mary Lou Boultinghouse, declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

June 24, 2014  
Dated / Fallbrook, CA

Mary Lou Boultinghouse  
Secretary, Board of Directors



**RESOLUTION NO. 14-03**

**Resolution of the Board of Directors of the  
Rincon del Diablo Municipal Water District  
Adopting the 2013 San Diego Integrated Regional  
Water Management (IRWM) Plan**

**WHEREAS**, the Board of Directors of the Rincon del Diablo Municipal Water District, as a member agency of the San Diego County Water Authority (Water Authority), is indirectly a member of the San Diego Regional Water Management Group (RWMG); and

**WHEREAS**, the RWMG, in close cooperation with a Regional Advisory Committee (RAC), has drafted a 2007 San Diego Integrated Water Management Plan (IRWM) to coordinate and integrate water resource management in the region; and

**WHEREAS**, the 2007 IRWM was updated by the 2013 IRWM.

**WHEREAS**, the San Diego IRWM Plan established a mission, vision, goals, objectives, and regional priorities; and

**WHEREAS**, the San Diego IRWM Plan will form the foundations of long-term IRWM planning in the region, fostering coordination, collaborations, and communication among government and non-governmental water stakeholders; and

**WHEREAS**, having an IRWM Plan will position the San Diego Region to compete for funding opportunities, and

**WHEREAS**, the Board of Directors is the decision-making body for the Rincon del Diablo Municipal Water District; and

**WHEREAS**, acceptance of the San Diego IRWM Plan by Rincon del Diablo's Board of Directors is a requirement for eligibility of Integrated Regional Water Management Planning Act grant funds (CWC Section 10539); and

**WHEREAS**, adoption of the 2013 IRWM Plan does not constitute Rincon del Diablo Municipal Water District Board of Directors' endorsement of or support for any particular element of project within the Plan; and

**WHEREAS**, the Rincon del Diablo Municipal Water District Board of Directors has authorized Rincon Water Staff to enter into Memorandum of Understandings (MOUs) with the Water Authority related to previous Proposition 50 and Proposition 84 grant funding; and

WHEREAS, the Rincon del Diablo Municipal Water District Board of Directors has authorized Rincon Water Staff to apply for and accept Proposition 50 and Proposition 84 grant funds.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Rincon del Diablo Municipal Water District resolves the following:

- 1) The foregoing facts are true and correct.
- 2) The Board of Director adopts the 2013 San Diego Integrated Regional Water Management Plan,

PASSED, APPROVED AND ADOPTED this 10<sup>TH</sup> day of June 2014 by the following roll call vote:

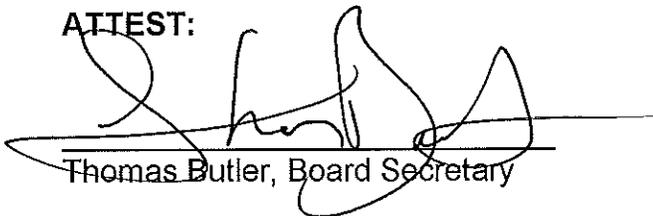
AYES: DRAKE, TOWNE & MURLANO  
NOES: N/A  
ABSENT: QUIST, DRAPER  
ABSTAIN: N/A

APPROVED:



David A. Drake, Vice President

ATTEST:



Thomas Butler, Board Secretary

**RESOLUTION 14-09**

**RESOLUTION OF THE GOVERNING BOARD  
OF SWEETWATER AUTHORITY  
ADOPTING THE SAN DIEGO INTEGRATED REGIONAL WATER MANAGEMENT PLAN  
(AN UPDATE OF THE 2007 IRWM PLAN)**

**WHEREAS**, the San Diego Regional Water Management Group (RWMC), comprised of the San Diego County Water Authority, City of San Diego, and County of San Diego has collaborated with the Regional Advisory Committee (RAC), comprised of water management stakeholders from throughout the San Diego region, to draft the 2013 San Diego Integrated Regional Water Management (IRWM) Plan (an update of the 2007 IRWM Plan); and

**WHEREAS**, the 2013 IRWM Plan seeks to optimize water supply reliability, protect and enhance water quality, provide stewardship of natural resources, and coordinate and integrate water resource management within the region; and

**WHEREAS**, the San Diego IRWM Plan forms the foundation of long-term IRWM planning in the region, fostering coordination, collaboration, and communication among governmental and non-governmental water management stakeholders; and

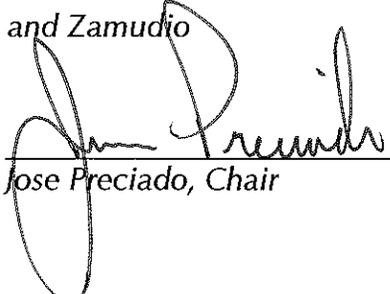
**WHEREAS**, the State of California encourages integrated water resource planning on a regional basis through IRWM Plans and by conditioning certain existing and possibly future grant funding programs, including Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Public Resources Code section 75001 et seq.) to activities contained in IRWM Plans;

**NOW, THEREFORE, BE IT RESOLVED** that the Governing Board of Sweetwater Authority hereby adopts the 2013 San Diego Integrated Regional Water Management Plan and is committed to continued development and implementation of the Plan to support water resources management in the San Diego region, and

**BE IT FURTHER RESOLVED** that the Governing Board encourages the California Department of Water Resources to fully fund the grant applications that are prepared as a result of this Plan.

**PASSED AND ADOPTED** at a regular meeting of the Governing Board of Sweetwater Authority held on the 11th day of June 2014, by the following vote, to wit:

AYES:	Directors Pocklington, Preciado, Rubalcaba, and Thomas
NOES:	None
ABSENT:	Directors Morrison, Van Deventer, and Zamudio
ABSTAIN:	None

  
\_\_\_\_\_  
Jose Preciado, Chair

ATTEST:

  
\_\_\_\_\_  
Janet Gonzalez, Board Secretary

**DEPARTMENT OF WATER RESOURCES**

1416 NINTH STREET, P.O. BOX 942836  
SACRAMENTO, CA 94236-0001  
(916) 653-5791



June 6, 2014

Mr. Mark Stadler  
San Diego IRWM Program Manager  
San Diego County Water Authority  
4677 Overland Avenue  
San Diego, California 92123

### San Diego Integrated Regional Water Management Plan Final Review

Dear Mr. Stadler:

This letter transmits the Department of Water Resources (DWR) final review of the San Diego Integrated Regional Water Management (IRWM) Plan. The public comment period on DWR's review of the San Diego IRWM Plan has closed and no public comments were received. DWR has determined that the San Diego IRWM Plan is consistent with the IRWM Planning Act and the related IRWM Plan Standards contained in the 2012 IRWM Program Guidelines. The final review is posted on the following link: <http://www.water.ca.gov/irwm/grants/prp.cfm>.

If adopted by the Regional Water Management Group and project proponents, by the appropriate dates, the San Diego IRWM Plan will satisfy the terms of the Round 1 and Round 2 Implementation Grant Agreements default clause and the adopted plan eligibility criteria for the 2014 Drought Solicitation. Each agreement and grant solicitation has its own date for adoption compliance.

To simplify submitting proof of adoption, DWR will compile and track this information and inform DWR grant managers and grant application review teams appropriately. You may submit proof of adoption material as often as necessary. When submitting information, please fill out and the IRWM Plan Adoption Form, found at: <http://www.water.ca.gov/irwm/grants/resourceslinks.cfm>, along with scanned proof of adoption, and then submit the material directly to Craig Cross at the email address listed below.

If you have any questions, please contact Craig Cross at (916) 651-9204 or [Craig.Cross@water.ca.gov](mailto:Craig.Cross@water.ca.gov)

Sincerely,

A handwritten signature in cursive script that reads "Tracie L. Billington".

Tracie L. Billington, P.E. Chief  
Financial Assistance Branch  
Division of Integrated Regional Water Management

**INTRODUCTION**

IRWM planning regions must have an IRWM Plan that has been reviewed and deemed consistent with the 2012 IRWM Plan Standards by DWR for eligibility to receiving Round 3 Proposition 84 funding. This 2012 IRWM Plan Standards Review Form for DWR staff use provides a consistent means in determining whether the 2012 IRWM Guidelines are being addressed in the IRWM Plan. It is part of the Plan Review Process that will begin prior to Round 3 solicitation. The form is similar to a grant application review form in that there is a checklist for each of the 16 Plan Standards and narrative evaluations where required. However, the evaluation is pass/fail; there is no numeric scoring. Each Plan Standard is either sufficient or not based on its associated requirements. Each Standard consists of between one and fourteen requirements. A Yes or No is automatically calculated in each Plan Standard header based on the individual requirement evaluations. In general, a passing score of "C" (i.e. 70% of the requirements for a given Plan Standard) is required for a Standard to pass. Standards with only one or 2 requirements will need one or both of those requirements to pass. Standards with 3 requirements will need at least 2 of the requirements to pass. Standards with 4 or 5 requirements will need at least 3 to pass. Some plan elements are legislated requirements. Such plan elements must be met in order to be considered consistent with plan standards. A summary of the sufficiency of each Standard is automatically calculated on the Standards Summary worksheet. A "No" evaluation indicates that a Standard was not met due to insufficient requirements comprising the Standard. The evaluation for each Plan Standard and any associated insufficiencies is automatically compiled on the Standards Summary page. Additional reviewer comments may be added at the bottom of each standards work sheet.

**Note: This review form is meant to be a tool used in conjunction with the 2012 IRWM Guidelines document to assist in the evaluation of IRWM plans. It is not designed to be a substitute for the Guidelines document itself. Reviewers must use the Guidelines in determining plan consistency.**

**DEFINITION OF TABLE HEADINGS**

**IRWM Plan Standard:** As named in the November 2012 IRWM Prop 84 and 1E Guidelines.

**Overall Standard Sufficient:** This field is either "YES" or "NO" and is automatically calculated based on the "Sufficient" column described below. If all fields are "y", the overall standard is deemed sufficient. Any entry other than a "y" in the Sufficient column (i.e. "n", "?", not sure, more detail needed, etc.) results in a NO.

**Plan Standard Requirements Which Must Be Addressed** Fields with an asterisk \* are required by legislation to be included in an IRWM Plan.

<b>Requirement</b>	Requirements are taken directly from the November 2012 Guidelines.
<b>Included</b>	Is the Guideline Requirement included in the IRWM Plan? The options are: y = yes, requirement is included in the IRWMP; or n = no, requirement is not included in the IRWMP. If only y or n then presence/absence of the requirement is sufficient for evaluation. If there is a "q" (qualitative) then add a brief narrative, similar to a Grant Application Review public evaluation or supporting information.
<b>Plan Standard Source</b>	
<b>2012 IRWM Grant Program Guidelines Source Page(s)</b>	Page(s) in the Guidelines (November 2012) which pertain to the Requirement.
<b>Legislative Support and/or Other Citations</b>	The CWC or other regulations that pertain to the Requirement, <b>if applicable</b> . This is for reference purposes. The cell links to a weblink of the regulatory code.
<b>Evidence of Sufficiency</b>	
<b>Location of Standard in Grantee IRWM Plan</b>	The page(s) or sections in the IRWM Plan where information on the Requirement can be found. This can be specific paragraphs or entire chapters for more general requirements.
<b>Brief Qualitative Evaluation Narrative</b>	Supporting information for the Requirement if a "q" is in the Included column. This can be just a few sentences or a paragraph and can be taken directly from the IRWM Plan. Comments or supporting information may be entered regardless of whether required.
<b>Sufficient</b>	Is the Guidelines requirement sufficiently represented in the IRWM Plan (y/n).

## 2012 IRWM Plan Standards Review Form

Regional Acceptance Process Planning Region: San Diego

Regional Water Management Group: San Diego

IRWM Plan Title: 2013 San Diego Integrated Water Management Plan

### PLAN IS SUFFICIENT

IRWM Plan Standard	Overall Standard Sufficient	Requirement(s) Insufficient
<a href="#">Governance</a>	Yes	
<a href="#">Region Description</a>	Yes	
<a href="#">Objectives</a>	Yes	
<a href="#">Resource Management Strategies</a>	Yes	
<a href="#">Integration *</a>	Yes	
<a href="#">Project Review Process</a>	Yes	
<a href="#">Impact and Benefit</a>	Yes	
<a href="#">Plan Performance and Monitoring</a>	Yes	
<a href="#">Data Management</a>	Yes	
<a href="#">Finance</a>	Yes	
<a href="#">Technical Analysis</a>	Yes	
<a href="#">Relation to Local Water Planning</a>	Yes	
<a href="#">Relation to Local Land Use Planning</a>	Yes	
<a href="#">Stakeholder Involvement</a>	Yes	
<a href="#">Coordination</a>	Yes	
<a href="#">Climate Change</a>	Yes	

\* If not included as an individual section use Governance, Project Review Process, and Data Management Standards per November 2012 Guidelines, p. 44.

#### Additional Comments:

IRWM Plan Standard: Governance				Overall Standard Sufficient		Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Regulatory and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
<b>Document a governance structure to ensure updates to the IRWM Plan</b>							
The name of the RWMG responsible for implementation of the IRWMP	y/n	Y	18/35	<a href="#">CWC §10539</a>	Section 1.3, P.1-7-10		Y
A description of the IRWM governance structure	y/n	Y	19/36		Section 6.3, P.6-5		Y
A description of how the chosen form of governance <b>addresses</b> and <b>ensures</b> :							
Public outreach and involvement processes	y/n/q	Y	19/36-37	<a href="#">§10540, §10541</a>	Section 6.4, P.6-12-19	Outreach includes website, emails, public workshops, presentations, summits, and partnerships. As evidence of public participation efforts to the Plan update the Regional Water Management Group (RWMG) provides formal comments letters received for their 2013 IRWM Plan Update in Appendix 6-D.	Y
Effective decision making	y/n/q	Y	19/37		Section 6.3 and 6.3.1-6.3.4, P.6-5-12	Organizational structure includes five major components (RWMG, Regional Advisory Committee (RAC), Workgroups, Tri-County Funding Area Coordinating Committee (FACC), and the public) that is essential to their decision making.	Y
Balanced access and opportunity for participation in the IRWM process	y/n/q	Y	19/37		Section 6.4, P.6-12-19, Section 6.4.1-2, P.6-19 25, & Appendix 6-B	Several outreach methods are used to solicit information from all applicable parties during the IRWM process. The information gathered is considered by the member elected RAC, which advises the RWMG on decisions related to IRWM.	Y
Effective communication – both internal and external to the IRWM region	y/n/q	Y	19/37-38		Section 6.3.4, P.6-12, Section 6.4, P.6-12-19, Section 6.4.1-2, P.6-19 25	Several outreach methods are used to communicate with both internally and externally in the region. In addition, the RWMG meets regularly and coordinates with the other IRWM groups in their funding region	Y
Long term implementation of the IRWM Plan	y/n/q	Y	19/38		Section 6.1, P.6-1-2, Section 6.4, P.6-12-26	The RWMG states a commitment of long term implementation the stakeholder involvement process which is described in the plan.	Y
Coordination with neighboring IRWM efforts and State and federal agencies	y/n/q	Y	19/38		Section 6.3.2, P.6-7-8, Section.6.3.5, P.6-12	The RWMG, Upper Santa Margarita RWMG, and South Orange County RWMG collaborate in an inter-regional body established via MOU and known as the Tri-County FACC to address issues and conflicts across planning regions. The SDIRWM also has state and federal agencies as non-voting members of their RAC.	Y
The collaborative process(es) used to establish plan objectives	y/n/q	Y	19/38		Section 2.2, P.2-1-2	The RWMG used workgroups and the RAC to develop the IRWM Plan. While the RWMG help developed the IRWM Plan based on input received from the various stakeholder, approval and acceptance was voted on by the RAC	Y
How interim changes and formal changes to the IRWM Plan will be performed	y/n/q	Y	19/38		Section 6.5, P.6-27	The IRWM governance structure states the Plan will be updated at a minimum every five-years. The Plan allows for periodic updates to the IRWM project list prior to new funding opportunities without a formal Plan Amendment.	Y
Updating or amending the IRWM Plan	y/n/q	Y	19/38		Section 6.5, P.6-27	The Plan discusses in detail how a formal update will be conducted, which includes public notice and adoption.	Y
Publish NOI to prepare/update the plan; adopt the plan in a public meeting	y/n/q	Y	35		<a href="#">CWC §10543</a>	Section 6.5, P.6-27	The RWMG indicates that a published NOI will be needed to prepare or update the Plan

IRWM Plan Standard: Region Description					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Legislative Support and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
If applicable, describe and explain how the plan will help reduce dependence on the Delta supply regionally	y/n	y	20	--	Section 2.7, P.2-9, Section 3.10, P. 3-92-98	The RWMG plans to reduce dependence on Delta and imported water supply by diversifying the region's water supply.	y
Describe watersheds and water systems	y/n	y	19/39	<a href="#">PRC §75026.(b)(1) and CWP Update 2009</a>	Ch.5, P.5-1-109		y
Describe internal boundaries	y/n	y	19/39	--	Section 3.6, P. 3.61-69		y
Describe water supplies and demands for minimum 20 year planning horizon	y/n	y	19/39	--	Section 3.10, P.3-92-98		y
Describe water quality conditions	y/n	y	19/40	--	Section 3.7, P.3-69-84		y
Describe social and cultural makeup, including specific information on DACs and tribal communities in the region and their water challenges.	y/n/q	y	19/40	--	Section 3.1,P.3-1-7, Section 3.3, P.3-11-22, Ch. 4, 4-1-22	The RWMG provides a brief overview of the region's social and cultural makeup, but discusses in detail the water challenges DAC's and tribal communities in the region face.	y
Describe major water related objectives and conflicts *	y/n/q	y	19/40	<a href="#">§10541. (e)(3)</a>	Section 3.11, P. 3-98-99, Sec 2.7, P. 2-4-14	Table 3-40 summarizes water management issues and potential conflicts, which coincide with the objectives stated in Ch.2 sec.2.7.	y
Explain how IRWM regional boundary was determined and why region is an appropriate area for IRWM planning.	y/n/q	y	19/40	--	Section 3.2, P.3-10-11	The IRWM region was determined based primarily on Regional Board jurisdiction, political jurisdictions, physical and hydrologic characteristics, the imported water supply service area, and wastewater service considerations.	y
Describe neighboring and/or overlapping IRWM efforts	y/n	y	19/40	--	Section 3.12, P.3-100-102		y
Explain how opportunities are maximized (e.g. people at the table, natural features, infrastructure) for integration of water management activities	y/n	y	38	--	Section 9.2, P.9-1-5		y

\* Requirement must be addressed.

IRWM Plan Standard: Objectives					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Legislative Support and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Qualitative Narrative	y/n
Through the objectives or other areas of the plan, the 7 items on pg 41 of GL are addressed.*	y/n	y	20/40 - 41	<a href="#">§10540.(c)</a>	Section 2.7, P.2-4-14		Y
Describe the collaborative process and tools used to establish objectives: - How the objectives were developed - What information was considered (i.e., water management or local land use plans, etc.) - What groups were involved in the process - How the final decision was made and accepted by the IRWM effort	y/n	y	20/41	--	Section 2.2, P.2-1-2		Y
Identify quantitative or qualitative metrics and measureable objectives: Objectives must be measurable - there must be some metric the IRWM region can use to determine if the objective is being met as the IRWM Plan is implemented. Neither quantitative nor qualitative metrics are considered inherently better. *	y/n/q	y	20/41 - 42	<a href="#">10541.(e)</a>	Section 2.10, P.2-15-25	The Plan describes targets and qualitative or quantitative metrics for each one of the group's eleven objectives identified. The metrics provided are appropriate for the given objective.	Y
Explain how objectives are prioritized or reason why the objectives are not prioritized	y/n/q	y	20/42-43	--	Section 2.7.1, P.2-11	The group did not prioritize it's eleven plan objectives due to limiting the potential breadth of water management activities, losing flexibility in the Plan, and losing stakeholder support.	Y
Reference specific overall goals for the region: RWMGs may choose to use goals as an additional layer for organizing and prioritizing objectives, or they may choose to not use the term at all.	y/n	y	43	--	Section 2.6, P.2-4		Y

\* Requirement must be addressed.

IRWM Plan Standard: Resource Management Strategies (RMS)					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Legislative Support and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
Identify RMS incorporated in the IRWM Plan: Consider all California Water Plan (CWP) RMS criteria (29) listed in Table 3 from the CWP Update 2009 *	y/n	y	20/43	<a href="#">CWP Update 2009 Volume II; 10541(e)(1)</a>	Ch.8, P.8-1-23		y
Consideration of climate change effects on the IRWM region must be factored into RMS	y/n	y	20/43	--	Section 8.7,P.8-25-26		Y
Address which RMS will be implemented in achieving IRWM Plan Objectives	y/n	y	44	--	Section 8.5-6, P.8-23-25		Y

\* Requirement must be addressed.

IRWM Plan Standard: Integration					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Legislative Support and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
Contains structure and processes for developing and fostering integration <sup>1</sup> : <ul style="list-style-type: none"> <li>- Stakeholder/institutional</li> <li>- Resource</li> <li>- Project implementation</li> </ul>	y/n/q	y	20/44 - 45	<a href="#">§10540.(g);</a> <a href="#">§10541.(h)(2)</a>	Section 9.2, P.9-1-5	The Plan contains a separate integration section with six separate sub-sections: Partnership Integration, Resource Management Integration, Beneficial Use Integration, Geographical Integration, and Hydrological Integration. Methods used to promote and encourage integration are discussed and examples of integration are presented.	Y

1. If not included as an individual section use Governance, Project Review Process, and Data Management Standards per November 2012 Guidelines, p. 44.

IRWM Plan Standard: Project Review Process					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Regulatory and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
Process for projects included in IRWM plan must address 3 components: - procedures for submitting projects - procedures for reviewing projects - procedures for communicating lists of selected projects	y/n	y	20/45	<a href="#">§75028.(a)</a>	Section 9.3, 9.4, 9.4.1, P.9-5-10		y
Does the project review process in the plan incorporate the following factors:							
How a project contributes to plan objectives	y/n	y	20		Section 9.3, 9.4, 9.4.1, P.9-5-10		y
How a project is related to Resource Management Strategies identified in the plan.	y/n	y	20		Section 9.4.2, P.9-9-13		y
The technical feasibility of a project.	y/n	y	20		Section 9.4.2, P.9-12		y
A projects specific benefits to a DAC water issue.	y/n	y	20		Section 9.4.2, P.9-11-12		y
Environmental Justice considerations.	y/n	y	20		Section 9.4.2, P.9-11-12		y
Project costs and financing	y/n	y	20		Section 9.4.2, P.9-12		y
Address economic feasibility	y/n	y	21		Section 9.4.2, P.9-12		y
Project status	y/n	y	21		Section 9.4.2, P.9-12		y
Strategic implementation of plan and project merit	y/n	y	21/48		Section 9.4.2, P.9-11-12		y
Project's contribution to climate change adaptation	y/n	y	21		Section 9.4.2, P.9-12		y
Contribution of project in reducing GHGs compared to project alternatives	y/n	y	21		Section 9.4.2, P.9-11	This is incorporated in the category of "Other" and will depend on Grant requirements.	y
Status of the Project Proponent's IRWM plan adoption	y/n	y	21		Section 6.5, P.6-27		y
Project's contribution to reducing dependence on Delta supply (for IRWM regions receiving water from the Delta).	y/n	y	21		Section 9.4.2, P.9-11	This is incorporated in the category of "Other" and will depend on Grant requirements.	y

IRWM Plan Standard: Impact and Benefit					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Legislative Support and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
Discuss potential impacts and benefits of plan implementation within IRWM region, between regions, with DAC/EJ concerns and Native American Tribal communities	y/n	y	21	--	Section 11.3.1, P.11-13-20		Y
State when a more detailed project-specific impact and benefit analysis will occur (prior to any implementation activity)	y/n	y	49	--	Section 11.3,P.11-12		Y
Review and update the impacts and benefits section of the plan as part of the normal plan management activities	y/n	y	50	--	Section 11.5.1, P.11-32-33		Y

IRWM Plan Standard: Plan Performance and Monitoring					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Legislative Support and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
Contain performance measures and monitoring methods to ensure that IRWM objectives are met *	y/n	y	21/53	<a href="#">PRC §75026.(a)</a>	Section 11.5.1, P.11-32-33		y
Contain a methodology that the RWMG will use to oversee and evaluate implementation of projects.	y/n	y	21/53		Section 11.5.2, P.11-33		y

\* Requirement must be addressed.

IRWM Plan Standard: Data Management					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Regulatory and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
Describe data needs within the IRWM region	y/n	y	54	--	Section 10.2.1, P.10-1		y
Describe typical data collection techniques	y/n	Y	54	--	Section 10.2.2.1		Y
Describe stakeholder contributions of data to a data management system	y/n	Y	54	--	Section 10.2.3-4, P.10-12-18		Y
Describe the entity responsible for maintaining data in the data management system	y/n	Y	54	--	Section 10.2.4, P.10-15		Y
Describe the QA/QC measures for data	y/n	Y	54	--	Section 10.2.2, P.10-6, Section 10.2.3 P. 10-17		y
Explain how data collected will be transferred or shared between members of the RWMG and other interested parties throughout the IRWM region, including local, State, and federal agencies *	y/n	y	54	--	Section 10.2.3-4, P.10-12-18		Y
Explain how the Data Management System supports the RWMG's efforts to share collected data	y/n	y	54	--	Section 10.2.4, P.10-13-14		y
Outline how data saved in the data management system will be distributed and remain compatible with State databases including CEDEN, Water Data Library (WDL), CASGEM, California Environmental Information Catalog (CEIC), and the California Environmental Resources Evaluation System (CERES).	y/n	y	54	--	Section 10.2.2, P.10-6		Y

\* Requirement must be addressed.

IRWM Plan Standard: Finance					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Legislative Support and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
Include a programmatic level (i.e. general) plan for implementation and financing of identified projects and programs* including the following:	y/n	y	21	<a href="#">§10541.(e)(8)</a>	Section 11.4, P.11-21		Y
List known, as well as, possible funding sources, programs, and grant opportunities for the development and ongoing funding of the IRWM Plan.	y/n	y	21		Section 11.4.1, P.11-21-23		Y
List the funding mechanisms, including water enterprise funds, rate structures, and private financing options, for projects that implement the IRWM Plan.	y/n	y	21		Section 11.4.2, P.11-24-31		y
An explanation of the certainty and longevity of known or potential funding for the IRWM Plan and projects that implement the Plan.	y/n	Y	21		Section 11.4.1&2, P.11-21-24		Y
An explanation of how operation and maintenance (O&M) costs for projects that implement the IRWM Plan would be covered and the certainty of operation and maintenance funding.	y/n	y	21		Section 11.4.3, P.11-24-31		y

\* Requirement must be addressed.

IRWM Plan Standard: Technical Analysis					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Legislative Support and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
Document the data and technical analyses that were used in the development of the plan *	y/n	y	22	--	Section 10.3.2, P.10-19-25		y

\* Requirement must be addressed.

IRWM Plan Standard: Relation to Local Water Planning					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Legislative Support and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
Identify a list of local water plans used in the IRWM plan	y/n	Y	22	<a href="#">§10540.( b )</a>	Table 7-1, P.7-3		Y
Discuss how the plan relates to these other planning documents and programs	y/n	Y	22		Section 7.2.1, P.7-1-2		Y
Describe the dynamics between the IRWM plan and other planning documents	y/n	Y	22		Section 7.2.1,P.7-1-2		Y
Describe how the RWMG will coordinate its water management planning activities	y/n	Y	58		Section 7.2.1,P.7-1-2		Y

IRWM Plan Standard: Relation to Local Land Use Planning					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Legislative Support and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
Document current relationship between local land use planning, regional water issues, and water management objectives	y/n	y	22/59 - 62	--	Section 7.7 & 7.7.1, P.7-31-33, Table 7-1		Y
Document future plans to further a collaborative, proactive relationship between land use planners and water managers	y/n	Y	22/59 - 62	--	Section 7.7.2-3, P.7-33-34, Table 7-1		Y

IRWM Plan Standard: Stakeholder Involvement					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Legislative Support and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
Contain a public process that provides outreach and opportunity to participate in the IRWM plan *	y/n	Y	22/63	<a href="#">§10541.(g)</a>	Section 6.4, P.6-12-19		Y
Identify process to involve and facilitate stakeholders during development and implementation of plan regardless of ability to pay; include barriers to involvement *	y/n	y	64	§10541.(h) (2)	Section 6.2 & 6.2.1, P.6-3 & 4		Y
Discuss involvement of DACs and tribal communities in the IRWM planning effort	y/n	y	23	--	Section 6.4.1&2, P.6-19-26		Y
Describe decision-making process and roles that stakeholders can occupy	y/n	y	23	--	Section 6.3.2&3, P.6-7-11		Y
Discuss how stakeholders are necessary to address objectives and RMS	y/n	y	23	--	Section 8.4, P.8-6-24		Y
Discuss how a collaborative process will engage a balance in interest groups	y/n	y	23	--	Section 6.3.2, P.6-7-9		Y

\* Requirement must be addressed.

IRWM Plan Standard: Coordination					Overall Standard Sufficient	Yes	
Requirement	Included		Plan Standard Source		Evidence of Sufficiency	Sufficient	
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Legislative Support and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n
Identify the process to coordinate water management projects and activities of participating local agencies and stakeholders to avoid conflicts and take advantage of efficiencies *	y/n	y	23/65	<a href="#">§10541.(e)(13)</a>	Section 9.2.6, P.9-4-5		Y
Identify neighboring IRWM efforts and ways to cooperate or coordinate, and a discussion of any ongoing water management conflicts with adjacent IRWM efforts	y/n	y	23/65	--	Section 3.12, P.3-100-101		Y
Identify areas where a state agency or other agencies may be able to assist in communication or cooperation, or implementation of IRWM Plan components, processes, and projects, or where State or federal regulatory decisions are required before implementing the projects.	y/n	y	23	--	Table 7-2, P.7-4		Y

\* Requirement must be addressed.

IRWM Plan Standard: Climate Change				Overall Standard Sufficient	Yes			
Requirement	Included		Plan Standard Source	Evidence of Sufficiency	Sufficient			
From IRWM Guidelines	y/n - Present/Not Present in the IRWMP. If y/n/q qualitative evaluation needed.		2012 IRWM Grant Program Guidelines Source Page(s)	Legislative Support and/or Other Citations	Location of Standard in Grantee IRWM Plan	Brief Evaluation Narrative	y/n	
Evaluate IRWM region's vulnerabilities to climate change and potential adaptation responses based on vulnerabilities assessment in the DWR Climate Change Handbook for Regional Water Planning *	y/n	y	23/66 - 73	Climate Change Handbook vulnerability assessment: <a href="http://www.water.ca.gov/climatechange/CCHandbook.cfm">http://www.water.ca.gov/climatechange/CCHandbook.cfm</a> ; November 2012 Guidelines Legislative and Policy Context, p. 66	Section 7.8.1, P.7-36-38		y	
Provide a process that considers GHG emissions when choosing between project alternatives *	y/n	y	23/68		Table 9-1 & 2, P.9-11-12		y	
Include a list of prioritized vulnerabilities based on the vulnerability assessment and the IRWM's decision making process.	y/n	y	23/66 - 73		Table 7-16, P.7-38		Y	
Contain a plan, program, or methodology for further data gathering and analysis of prioritized vulnerabilities	y/n	y	23/66 - 73		§10541.( e )(11)	Section 11.2.1, P.11-9		y
Include climate change as part of the project review process	y/n	y	23/68		Table 9-1 & 2, P.9-11-12		Y	

\* Requirement must be addressed.

Regulatory Citation	Link	Notes
IRWM Prop 84 and 1E Guidelines	<a href="http://www.water.ca.gov/irwm/grants/docs/Guidelines/GL_2012_FINAL.pdf">http://www.water.ca.gov/irwm/grants/docs/Guidelines/GL_2012_FINAL.pdf</a>	DWR November 2012 Guidelines - Final
CWC §10539	<a href="http://www.leginfo.ca.gov/cgi-bin/displaycode?section=wat&amp;group=10001-11000&amp;file=10532-10539">http://www.leginfo.ca.gov/cgi-bin/displaycode?section=wat&amp;group=10001-11000&amp;file=10532-10539</a>	
CWC §10540, §10541	<a href="http://www.leginfo.ca.gov/cgi-bin/displaycode?section=wat&amp;group=10001-11000&amp;file=10540-10543">http://www.leginfo.ca.gov/cgi-bin/displaycode?section=wat&amp;group=10001-11000&amp;file=10540-10543</a>	
CWC §10543	<a href="http://www.leginfo.ca.gov/cgi-bin/displaycode?section=wat&amp;group=10001-11000&amp;file=10540-10543">http://www.leginfo.ca.gov/cgi-bin/displaycode?section=wat&amp;group=10001-11000&amp;file=10540-10543</a>	
PRC §75026, §75028, CWP Update 2009, and California Watershed Portal	<a href="http://www.leginfo.ca.gov/cgi-bin/displaycode?section=prc&amp;group=75001-76000&amp;file=75020-75029.5">http://www.leginfo.ca.gov/cgi-bin/displaycode?section=prc&amp;group=75001-76000&amp;file=75020-75029.5</a>	The Department of Water Resources shall give preference to proposals that satisfy the criteria specified in PRC §75026.(b)(1). §75028.(a) - the department shall defer to approved local project selection, and review projects only for consistency with the purposes of Section 75026.
	<a href="http://www.waterplan.water.ca.gov/cwpu2009/index.cfm">http://www.waterplan.water.ca.gov/cwpu2009/index.cfm</a>	2009 California Water Plan Volumes I and II
	<a href="http://www.conservation.ca.gov/dlrp/watershedportal/Pages/Index.aspx">http://www.conservation.ca.gov/dlrp/watershedportal/Pages/Index.aspx</a>	California Watershed Portal
§10541. (e)(3)	<a href="http://www.leginfo.ca.gov/cgi-bin/displaycode?section=wat&amp;group=10001-11000&amp;file=10540-10543">http://www.leginfo.ca.gov/cgi-bin/displaycode?section=wat&amp;group=10001-11000&amp;file=10540-10543</a>	



## Appendix 1-5: Project Consistency with Adopted IRWM Plan

Projects included within this Proposal were entered into the online project database and meet Objective A, Objective B, and at least one additional IRWM Plan objective per requirements of the IRWM Plan. Per Chapter 9 of the 2013 IRWM Plan, these projects are part of the 2013 IRWM Plan, because they are included in the online project database (the "OPTI" system). The San Diego IRWM project list is hosted online at: <http://irwm.rmwater.com/sd/login.php>. A copy of the list is included herein.

The Project Selection Workgroup, approved by the RAC in 2014, reviewed and ranked all projects submitted to the online project database by April 30, 2014. Each project was ranked using the *RAC-Approved Project Scoring Criteria for Round 3 2014 IRWM Drought Solicitation* that are included in this appendix, which were developed and approved through an open and transparent process at a RAC meeting that was open to the public on April 22<sup>nd</sup>, 2014. The Project Selection Workgroup also evaluated projects using the *RAC-Approved Framework for Scoring Guidelines for Round 3 2014 IRWM Drought Solicitation*, which were also approved by the RAC on April 22<sup>nd</sup>, 2014. Each project included within this Proposal was prioritized and recommended by the Project Selection Workgroup, with the final recommendation validated by the RAC on June 4, 2014 and approved of by the SDCWA Board of Directors on June 26, 2014. This appendix contains the recommended package of projects that was put together by the Project Selection Workgroup, and meeting notes from the June 4<sup>th</sup> RAC meeting where the funding package was voted upon. Please note that project names and grant values vary slightly between the documents that were formally approved by the RAC and the project names included within this grant proposal; project names were modified to fully represent each project's intent and grant funding was slightly reduced for one project at the request of the local project sponsor.





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Project Title	Project Organization
2014 San Diego Regional Drought Response Program	SDCWA
22nd District Agricultural Association/San Dieguito Creek Sewer Force Main Replacement Project	22nd District Agricultural Association
51st St. Headwater Canyon Restoration Project	Groundwork San Diego-Chollas Creek
Acquiring Willow Glen Farm	Back Country Land Trust of San Diego County
Advanced Metering Infrastructure (AMI)	City of San Diego Public Utilities Dept.
Advanced Oxidation Alternatives at the Advanced Water Purification (AWP) Demonstration Facility	City of San Diego Public Utilities Dept.
Agua Hedionda Creek Integrated Restoration Project	City of Vista
Alpine Watershed Stewardship Initiative	City of San Diego Public Utilities Dept.
Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion	City of San Diego
Bannock Avenue Neighborhood Streetscape Improvements & Bacteria Treatment for Tecolote Creek Watershed Protection	City of San Diego - Storm Water
Bottle Peak property acquisition	The Escondido Creek Conservancy
Bridges Unit 7 property acquisition	The Escondido Creek Conservancy
CMP Rehabilitation and Replacement in the City of Chula Vista, Priority A	City of Chula Vista
CMP Rehabilitation and Replacement in the City of Chula Vista, Priority B	City of Chula Vista
CMP Rehabilitation and Replacement in the City of Chula Vista, Priority C	City of Chula Vista
CMP Rehabilitation and Replacement in the City of Chula Vista, Priority D	City of Chula Vista
CMP Rehabilitation and Replacement in the City of Chula Vista, Priority E	City of Chula Vista
California Friendly Makeover	Olivenhain Municipal Water District
California Friendly Replacement Incentive	Olivenhain Municipal Water District
Camino Del Sur Pipeline - North of SR56	City of San Diego Public Utilities Dept.
Campo Creek Erosion, Habitat and Groundwater Recharge Improvement.	Campo/Lake Morena Planning Group, advisors to the San Diego County Board of Supervisors.
Campo Creek Watershed Groundwater Management Plan	Campo/Lake Morena Planning Group, advisors to the San Diego County Board of Supervisors.



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<b>Carlsbad Desalination Project Local Conveyance</b>	Olivenhain Municipal Water District	
<b>Carlsbad MWD Recycled Water Project – Segment 2</b>	Carlsbad Municipal Water District	
<b>Central San Diego Formation Groundwater Desalination Demonstration Project</b>	City of San Diego/Water Department	
<b>Chollas Creek Integration Project Phase II</b>	Jacobs Center for Neighborhood Innovation	
<b>Chollas Creek Section 2A Enhancement Project (Phase II)</b>	Jacobs Center for Neighborhood Innovation	
<b>Chollas Creek Water Quality, Habitat, and Education Improvement Project</b>	Groundwork San Diego-Chollas Creek	
<b>Cielo Azul property acquisition</b>	The Escondido Creek Conservancy	
<b>City of Escondido's Agricultural Reuse and Salt Reduction Project</b>	City of Escondido	
<b>City of San Diego - Mt. Abernathy Green Street Project</b>	City of San Diego - Storm Water	
<b>City of San Diego Parklands Recycled Water Retrofit Program and Distribution System</b>	City of San Diego	
<b>City of San Diego Potable Water Use Reduction &amp; Drought Relief Project</b>	City of San Diego Public Utilities Department	
<b>City of San Diego Reservoir Sediment Removal and Storage Recovery Project</b>	City of San Diego Water Department	
<b>Conservation in the Campo Valley</b>	Back Country Land Trust of San Diego County	
<b>Conservation on Demand: Advanced Metering Infrastructure–Facilitated Conservation</b>	Rincon del Diablo Municipal Water District	
<b>County of San Diego Chollas Creek Runoff Reduction and Groundwater Recharge Project</b>	Department of General Services, County of San Diego	
<b>Dulzura Creek Source Water Protection through Property Acquisition and Habitat Restoration</b>	City of San Diego Water Department	
<b>East County Regional Treated Water Improvements Pro</b>	San Diego County Water Authority	
<b>East Los Coches Drainage Improvements</b>	County of San Diego	
<b>East Riparian Corridor Project Phase-1</b>	Zoological Society of San Diego	
<b>East and West Riparian Corridor Project</b>	Zoological Society of San Diego	
<b>Educational Demonstration Wetland Project</b>	Zoological Society of San Diego	
<b>El Cajon Storm Drainage Master Plan</b>	City of El Cajon/ Department of Public Works	
<b>El Capitan Reservoir Hypolimnetic Oxygenation System for Water Quality Improvement</b>	City of San Diego Water Department	
<b>El Capitan Reservoir Watershed Acquisition Program</b>	The San Diego River Park Foundation	
<b>El Corazon Alternative Water Supply Project - Phase I</b>	City of Oceanside	



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<b>El Monte Valley Groundwater Recharge and River Restoration Project - Phase 3</b>	Helix Water District	
<b>El Monte Valley Mining, Reclamation, and Groundwater Recharge Project - Phase 2</b>	Helix Water District	
<b>Escondido Creek Watershed Integrated Resource Management Project (ECWIRMP)</b>	San Elijo Joint Powers Authority	
<b>Evaluation and Replacement of Deteriorated Corrugated Metal Pipe Flood Control Infrastructure</b>	City of Poway	
<b>FPUD PLANT NURSERIES RECYCLED WATERLINE EXTENSION</b>	Fallbrook Public Utility District	
<b>FPUD Recycled Water Storage</b>	Fallbrook Public Utilities District	
<b>Failsafe Potable Reuse at the Advanced Water Purification Demonstration Facility</b>	WaterReuse Research Foundation	
<b>Forester Creek Improvement Project</b>	City of Santee	
<b>Grease In the Can, Not the Drain</b>	Fallbrook Public Utility District	
<b>Green San Dieguito</b>	Department of Parks and Recreation	
<b>Groundwater and Salt Management Program</b>	Santa Fe Irrigation District	
<b>Habitat Enhancement &amp; Invasive Species Control Program for the Elfin Forest Recreational Reserve</b>	Olivenhain Municipal Water District	
<b>Harmony Grove Water Factory</b>	Rincon del Diablo Municipal Water Dist.	
<b>Hodges Reservoir Oxygenation System (HOS) Project</b>	City of San Diego Public Utilities Department (City)	
<b>Hodges Reservoir Water Quality Improvements Implementation Projects</b>	City of San Diego Water Department	
<b>Hodges Reservoir Water Quality Improvements Plan</b>	City of San Diego Water Department	
<b>Implementation of Agricultural Efficiency Programs</b>	San Diego County Water Authority	
<b>Implementation of Integrated Landscape Program</b>	San Diego County Water Authority	
<b>Implementing Improvements to the Rose Creek Watershed: Controlling Invasive Exotic Species</b>	San Diego Earthworks	
<b>Implementing Improvements to the Rose Creek Watershed: Enhancing the Connection of Rose Creek to Mission Bay</b>	San Diego Earthworks	
<b>Implementing Nutrient Management in the Santa Margarita River Watershed - Phase I</b>	County of San Diego	
<b>Implementing Nutrient Management in the Santa Margarita River Watershed - Phase II</b>	County of San Diego	
<b>Integrated Commercial/Industrial/Institutional and Residential Indoor Conservation Programs.</b>	San Diego County Water Authority	
<b>Integrated Flood Control and Water Quality Protection Program</b>	City of Santee	



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<b>Integration of Lake Ramona/Lake Sutherland into CWA Local Storage Plans</b>	Ramona Municipal Water District	
<b>Joint Water Agency Natural Community Conservation Plan/ Habitat Conservation Plan (JWA NCCP/HCP): Initial Implementation</b>	Sweetwater Authority	
<b>La Jolla Shores Ocean Protection Project</b>	University of California, San Diego	
<b>Lake Hodges Pumped Storage Quagga Mussel Mitigation Measures</b>	San Diego County Water Authority	
<b>Lake Hodges Water Quality Improvements</b>	San Diego County Water Authority	
<b>Lake Hodges Water Quality and Quagga Mitigation Measures</b>	San Diego County Water Authority	
<b>Lake Morena Oak Shores Mutual Water Company Upgraded Residential Water Line Connections.</b>	Campo/Lake Morena Planning Group, advisors to the San Diego County Board of Supervisors.	
<b>Lake San Marcos Restoration Project, Phase 1 &amp; 2</b>	Friends of Lake San Marcos	
<b>Lake Wohlford Dam Project</b>	City of Escondido	
<b>Las Californias Binational Conservation Initiative: A Vision for Habitat Conservation and Watershed Protection</b>	The Nature Conservancy	
<b>Loma Alta Creek Retention Basins at Rancho Del Oro</b>	City of Oceanside	
<b>Loma Alta Lagoon Acquisition and Restoration</b>	City of Oceanside	
<b>Los Pea00730071uitos Habitat Diversification Project</b>	Los Pea00730071uitos Lagoon Foundation	
<b>Los Pea00730071uitos Lagoon Enhancement Plan and Program Update and Implementation.</b>	Los Pea00730071uitos Lagoon Foundation	
<b>Los Pea00730071uitos Lagoon Lo Flow Diversion Project</b>	Los Pea00730071uitos Lagoon Foundation	
<b>Los Pea00730071uitos Pollutant Monitoring Project</b>	Los Pea00730071uitos Lagoon Foundation	
<b>Los Pea00730071uitos Watershed Sediment Transport Analysis and Monitoring Project.</b>	Los Pea00730071uitos Lagoon Foundation	
<b>Low Impact Development (LID) Conference</b>	The County of San Diego	
<b>Low Impact Development (LID) Manual</b>	The County of San Diego	
<b>Lower Otay Pump Station Otay WTP Interconnection (LOPS)</b>	Otay Water District	
<b>Lower Otay Reservoir Hypolimnetic Oxygenation System for Water Quality Improvement</b>	City of San Diego	
<b>Maple Canyon Sustainable Canyon &amp; Flood Control Project - Phase I</b>	City of San Diego	
<b>Master Plan for Naturalizing Concrete Channels in the City of Chula Vista</b>	City of Chula Vista	
<b>Membrane Bioreactor Recycled Water Treatment Plant</b>	Otay Water District	
<b>Middle San Diego River Acquisition, Invasives Removal and Restoration Project</b>	Lakeside River Park Conservancy	



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<b>Middle San Diego River Acquisition, Invasives Removal and Restoration Project</b>	Lakeside River Park Conservancy	
<b>Mission Trails Project</b>	San Diego County Water Authority	
<b>Mission Valley Brackish Groundwater Desalination Pilot Project</b>	City of San Diego/Water Department	
<b>Mountain Empire Watershed Preservation Program Pollution Prevention Education</b>	The Southern California Center for Youth, Nature and the Arts, Inc.	
<b>Naturalize Telegraph Canyon Creek Channel in the City of Chula Vista at San Diego Bay</b>	City of Chula Vista	
<b>Non Potable Distribution Backbone</b>	Santa Fe Irrigation District	
<b>North City Recycled Water Distribution System Expansion - Phase II</b>	City of San Diego	
<b>North City Recycled Water Distribution System Expansion - Phase III</b>	City of San Diego	
<b>North County Brine Conveyance Pipeline Feasibility Study</b>	City of San Diego/Water Department	
<b>North County Regional Water Supply, Flood Control, Water Quality, and Habitat Protection/Enhancement Project</b>	Santa Fe Irrigation District	
<b>North San Diego County Cooperative Demineralization Project</b>	San Elijo Joint Powers Authority	
<b>North San Diego County Regional Recycled Water Project (NSDCRRWP) - Phase II</b>	Olivenhain Municipal Water District	
<b>Northern San Diego County Invasive Non-Native Species Control Program</b>	Mission Resource Conservation District (MRCD)	
<b>Otay WD Levy WTP Water Supply Conveyance and Storage System East County Regional Treated Water Improvement Program (ECRTWIP)</b>	Otay Water District	
<b>Otay Water District Groundwater Supply Strategy</b>	Otay Water District	
<b>Otay Water District North District Recycled Water System Development</b>	Otay Water District	
<b>Otay Water District Otay Mesa Recycled Water Supply System Link</b>	Otay Water District	
<b>Otay Water District Portion of San Diego 17 Pump Station and San Diego 17 Flow Control Facility Connection (SD17)</b>	Otay Water District	
<b>Over-Irrigation Runoff/Bacteria Reduction Project</b>	City of Encinitas	
<b>PLNU Water Management</b>	Point Loma Nazarene University	
<b>Padre Dam Recycled Water Demand Optimization Project</b>	Padre Dam Municipal Water District	
<b>Paradise Mountain Groundwater Development</b>	Valley Center MWD	
<b>Phase 1 - Upper San Marcos Creek Nutrient and Water Quality Abatement/Urban Stream Restoration- San Marcos Creek</b>	City of San Marcos	
<b>Phase I -- Chollas Creek Integration Project, Part B</b>	Jacobs Center for Neighborhood Innovatio	



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<b>Phase I-Chollas Creek Integration Project /Part A</b>	Groundwork San Diego-Chollas Creek	
<b>Phase I-Chollas Creek Integration Project/Part C</b>	University of California	
<b>Preserve Wrights Field</b>	Back Country Land Trust of San Diego County	
<b>Preserving the Peutz Valley Watershed</b>	Back Country Land Trust of San Diego County	
<b>Provide and Enhance recreational Opportunities for the Olivenhain Reservoir.</b>	OMWD	
<b>RE Badger Membrane Process Upgrade</b>	Santa Fe Irrigation District	
<b>RE Badger Treated Water Storage Improvements</b>	Santa Fe Irrigation District	
<b>Ramona Grasslands</b>	The Nature Conservancy (Conservancy)	
<b>Ramona Municipal Water District (RMWD) Santa Maria Interceptor Sewer and Manhole Relocation Project</b>	Ramona Municipal Water District	
<b>Ramona Municipal Water District (RMWD) Santa Maria Wastewater Treatment Plant Upgrade</b>	Ramona Municipal Water District	
<b>Ramona Municipal Water District (RMWD) Sprayfield Environmental Enhancements</b>	Ramona Municipal Water District	
<b>Rarnona Municipal Water District (RMWD) Recycled Water System</b>	Ramona Municipal Water District	
<b>Reclaimed Water System Expansion for Landscape Irrigation</b>	City of Poway	
<b>Recycled Water Distribution Pipeline Projects</b>	City of San Diego- Public Utilities Department	
<b>Recycled Water Easterly Main Extension and Agricultural Reuse Project</b>	City of Escondido	
<b>Recycled Water Retrofit Assistance Program II</b>	San Diego County Water Authority	
<b>Recycled Water Retrofit Assistance Program</b>	San Diego County Water Authority	
<b>Recycled Water System Improvements</b>	Santa Fe Irrigation District	
<b>Red Mountain Treatment Plant</b>	Fallbrook Public Utility District	
<b>Regional Sustainable Landscapes Program</b>	San Diego County Water Authority	
<b>Regional Upgrade of Flood Warning, Water Supply Monitoring, &amp; Water Quality Monitoring Systems</b>	County of San Diego - Watershed Protection Program	
<b>Regional Water Data Management Program</b>	County of San Diego	
<b>Renovation of the Dulzura Conduit at Barrett and Morena Reservoirs</b>	City of San Diego Water Department	
<b>Residential Landscape Wireless Irrigation Controllers Program</b>	Santa Fe Irrigation District	
<b>Restoring Chocolate Creek</b>	Back Country Land Trust of San Diego County	



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**Richard A. Reynolds Groundwater Desalination Facility Expansion**

Sweetwater Authority

**Rosarito Beach Binational Desalination Plant Study, Feasibility Evaluation and Preliminary Design**

San Diego County Water Authority

**Rose Creek Watershed Invasives Control Program: Implementation Phase 2**

The Chaparral Lands Conservancy

**Rural DAC Drought Partnership Project**

RCAC

**Rural Disadvantaged Community (DAC) Partnership Project-Phase II**

Rural Community Assistance Corporation (RCAC)

**Rural Disadvantaged Community (DAC) Partnership Project**

Rural Community Assistance Corp (RCAC)

**Ruxton Earthen Channel Improvements**

County of San Diego

**SFID EASTERN SERVICE AREA RECYCLED WATER PROJECT**

Santa Fe Irrigation District

**SFID Western Service Area Recycled Water Distribution System Expansion**

Santa Fe Irrigation District

**Safari Park Drought Relief and Outreach Project**

Zoological Society of San Diego

**Safari Park Storm Water Runoff Management Project**

Zoological Society of San Diego

**Sage Hills Open Space Acquisition**

The Conservation Fund

**San Diego Country Estates Association Long Range Program to use Recycled Water as a Potable Water Offset**

San Diego Country Estates Association

**San Diego County Beaches Wet Weather Contamination Assessment**

San Diego Coastkeeper

**San Diego County Rural Community Watershed Councils (primarily targeting inland areas not served by CWA/MWD infrastructure)**

Resource Conservation District of Greater San Diego County

**San Diego Green School Yard Alliance**

San Diego Coastkeeper

**San Diego National Wildlife Refuge - Otay Unit Land & Crestridge Linkage Acquisition**

The Nature Conservancy

**San Diego North Regional Recycled Water Project**

Olivenhain Municipal Water District

**San Diego Region Four Reservoir Intertie Project Feasibility Study**

Sweetwater Authority

**San Diego River Watershed Coordinator**

The San Diego River Park Foundation

**San Diego RiverNet**

San Diego State University

**San Diego Water Department Cornerstone Lands Management and Source Water Protection**

City of San Diego Water Department

**San Dieguito River/Lusardi Creek Riparian MSCP Acquisition & Restoration**

County of San Diego Dept of Parks & Recreation

**San Dieguito Watershed Council Staffing**

San Dieguito River Valley Conservancy



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<b>San Elijo Drainage Improvements</b>	County of San Diego	
<b>San Elijo Water Reclamation Facility Storage Optimization</b>	San Elijo Joint Powers Authority	
<b>San Luis Rey Groundwater Management Plan and Salinity/Nutrient Mangement Plan</b>	Valley Center Municipal Water District	
<b>San Luis Rey Water Reclamation Facility Expansion</b>	City of Oceanside	
<b>San Pasqual Academy Water Quality Control &amp; Stormwater Management Program</b>	SD County Dept. of General Services	
<b>San Pasqual Academy</b>	County of San Diego, General Services	
<b>San Pasqual Basin Brackish Groundwater Desalination Full-scale Project - Planning and Design</b>	City of San Diego/Water Department	
<b>San Pasqual Basin Conjunctive Use (Storage and Recovery) Full-scale Project - Planning and Design</b>	City of San Diego/Water Department	
<b>San Vicente Reservoir Hypolimnetic Oxygenation System for Water Quality Improvement</b>	City of San Diego Water Department	
<b>San Vicente Reservoir Source Water Protection through Watershed Property Acquisition</b>	City of San Diego Water Department	
<b>Santa Margarita Conjunctive Use Project</b>	Fallbrook Public Utility District	
<b>Santa Margarita River Corridor Protection</b>	San Diego State University Field Stations Program	
<b>Santa Margarita River Habitat Assessment and Enhancement Plan</b>	South Coast Chapter of Trout Unlimited	
<b>Santa Margarita Watershed Water Supply Augmentation, Water Quality Protection, and Environmental Enhancement Program</b>	U.S. Bureau of Reclamation	
<b>Santee Basin Groundwater Recharge Demonstration Project</b>	Padre Dam Municipal Water District	
<b>Santee Groundwater Recharge Project</b>	Padre Dam Municipal Water District	
<b>Santee Water Reclamation Facility Expansion Project</b>	Padre Dam Municipal Water District	
<b>Shade Covering for the Water Conservation Garden Amphitheater</b>	The Water Conservation Garden	
<b>Source Water and Treatment Improvements at David C. McCollom Water Treatment Plant</b>	Olivenhain Municipal Water District	
<b>South San Diego County Water Supply Strategy</b>	Sweetwater Authority	
<b>Southcrest Park Green Lot Infiltration &amp; Creek Restoration</b>	City of San Diego - Storm Water	
<b>Stabilization and Restoration of Bonita Canyon Creek - a Tributary of the Sweetwater River</b>	City of Chula Vista	
<b>Stabilization and Restoration of Long Canyon Creek - a Tributary of the Sweetwater River</b>	City of Chula Vista	
<b>Stormwater Diversion and Reuse</b>	Santa Fe Irrigation District	



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<b>Summit Drive Drainage Improvements</b>	County of San Diego	
<b>Sustainable Landscapes - City of Poway - Metate Triangle Irrigation System and Landscape Redesign</b>	City of Poway	
<b>Sustaining Healthy Tributaries to the Upper San Diego River and Protecting Local Water Supplies</b>	The San Diego River Park Foundation	
<b>Sweetwater Reservoir Wetlands Habitat Recovery Project (HRP)</b>	Sweetwater Authority	
<b>Tavern Road Drainage Improvements</b>	County of San Diego	
<b>Tertiary Wastewater Treatment Upgrade</b>	Zoological Society of San Diego	
<b>The City of San Diego Recycled Water Infill Projects</b>	City of San Diego	
<b>The San Marcos Creek Floodway Improvement Project</b>	City of San Marcos	
<b>The Sweetwater River Watershed Management Plan</b>	County of San Diego	
<b>The Water Conservation Garden Authority Multipurpose Building</b>	The Water Conservation Garden	
<b>Tijuana River - Smuggler's Gulch Sediment Basin</b>	City of San Diego - Storm Water	
<b>Tijuana River Valley Invasive Plant Control Program - Phase 4</b>	Southwest Wetlands Interpretive Association	
<b>Tijuana River Valley Recovery Strategy Implementation Project</b>	Earth Island Institute	
<b>Tijuana River Valley Sediment Management Plan</b>	City of San Diego - Storm Water	
<b>Tijuana River Valley Wetlands Restoration Project</b>	San Diego County Water Authority	
<b>Tijuana River Watershed Invasive Species Removal</b>	County of San Diego	
<b>Turf Replacement and Agricultural Irrigation Efficiency Program</b>	San Diego County Water Authority	
<b>UC San Diego Drought Response Project</b>	Facilities, Design and Construction University of California, San Diego	
<b>UC San Diego Water Conservation Program - Water Fixture Replacements/Retrofits</b>	University of California, San Diego	
<b>Undergrounding Water Supply Through the Sweetwater National Wildlife Refuge</b>	City of Chula Vista	
<b>Upper San Marcos Creek/Lake San Marcos Nutrient Diagnostic and Cleanup Project - Phases 1,2 and 3</b>	City of San Marcos	
<b>Upper San Marcos Creek/Lake San Marcos Voluntary Nutrient TMDL - Phase I Diagnostics</b>	City of San Marcos	
<b>Vista Flume Rehabilitation Project</b>	Vista Irrigation District	
<b>Vista Verde Reservoir Replacement</b>	City of Escondido	
<b>Volcan Mountain-Grand Property Acquisition for Watershed Management &amp; Habitat</b>	Volcan Mountain preserve Foundation	



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<b>The San Marcos Creek Floodway Improvement Project</b>	Cityof San Marcos	
<b>The Sweetwater River Watershed Management Plan</b>	County of San Diego	
<b>The Water Conservation Garden Authority Multipurpose Building</b>	The Water Conservation Garden	
<b>Tijuana River - Smuggler's Gulch Sediment Basin</b>	City of San Diego - Storm Water	
<b>Tijuana River Valley Invasive Plant Control Program - Phase 4</b>	Southwest Wetlands Interpretive Association	
<b>Tijuana River Valley Recovery Strategy Implementation Project</b>	Earth Island Institute	
<b>Tijuana River Valley Sediment Management Plan</b>	City of San Diego - Storm Water	
<b>Tijuana River Valley Wetlands Restoration Project</b>	San Diego County Water Authority	
<b>Tijuana River Watershed Invasive Species Removal</b>	County of San Diego	
<b>Turf Replacement and Agricultural Irrigation Efficiency Program</b>	San Diego County Water Authority	
<b>UC San Diego Drought Response Project</b>	Facilities, Design and Construction University of California, San Diego	
<b>UC San Diego Water Conservation Program - Water Fixture Replacements/Retrofits</b>	University of California, San Diego	
<b>Undergrounding Water Supply Through the Sweetwater National Wildlife Refuge</b>	City of Chula Vista	
<b>Upper San Marcos Creek/Lake San Marcos Nutrient Diagnostic and Cleanup Project - Phases 1,2 and 3</b>	City of San Marcos	
<b>Upper San Marcos Creek/Lake San Marcos Voluntary Nutrient TMDL - Phase I Diagnostics</b>	City of San Marcos	
<b>Vista Flume Rehabilitation Project</b>	Vista Irrigation District	
<b>Vista Verde Reservoir Replacement</b>	City of Escondido	
<b>Volcan Mountain-Grand Property Acquisition for Watershed Management &amp; Habitat Restoration</b>	Volcan Mountain preserve Foundation	
<b>Von Saggern property acquisition</b>	The Escondido Creek Conservancy	
<b>Watershed Information Integration Portal (WIIP)</b>	San Diego Supercomputer Center, UCSD	
<b>Weather-Based Irrigation Controllers Rebate Program</b>	Olivenhain Municipal Water District	
<b>Welk Water Reclamation Facility</b>	Valley Center Municipal Water District	
<b>Wing Avenue Flood Control Improvements</b>	County of San Diego	
<b>Woodside Avenue Drainage Improvements</b>	County of San Diego	



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**RAC-Approved Project Scoring Criteria for Round 3 2014 IRWM Drought Solicitation**  
**Adapted from Table 9-1 of the 2013 San Diego IRWM Plan**

Criterion	Scoring Procedure	Points Assigned	Percent of Total Score <sup>2</sup>
<b>Pass/Fail Criteria to Be Considered for Funding</b>			
Project must meet Objective A, Objective B, and at least one other objective articulated in the 2013 San Diego IRWM Plan			
Project must be ready to begin implementation by April 1, 2015			
To be eligible for Expedited Drought Relief Funding per State solicitation, project must do at least one of the following:			
<ol style="list-style-type: none"> <li>1. Provide immediate regional drought preparedness</li> <li>2. Increase local water supply reliability and delivery of safe drinking water</li> <li>3. Implement conservation programs and measures that are not locally cost-effective</li> <li>4. Reduce water quality or ecosystem conflicts created by drought</li> </ol>			
<b>Scoring Criteria</b>			
Addresses Multiple Objectives <sup>1</sup>	Score is based on # of objectives addressed <sup>3</sup>	6+ objectives = 4 pts 5 objectives = 3 pts 4 objectives = 2 pts 3 objectives = 1 pt	20%
Spans Multiple Watersheds	Score is based on the level of integration between watersheds	Multiple Watersheds = 4 pts Integration within a single Watershed = 2 pts Only site-specific = 0 pts	0%
Addresses Multiple Beneficial Uses (BUs)	Score is based on # of beneficial uses addressed	4+ BUs = 4 pts 3 BUs = 3 pts 2 BUs = 2 pts 1 BU = 1 pt	5%
Addresses Multiple Watershed Services within the Hydrologic Cycle	Score is based on the number of watershed services <sup>4</sup> within the hydrologic cycle	Includes 2+ watershed services = 2 pts Includes 1-2 watershed services = 1 pts Includes no watershed functions = 0 pts	0%
Creates New Applied Water or Offsets Potable Demand <sup>2</sup>	Score is based on Yes/No response	Yes = 4 pt No = 0 pts	35%
Linked to Other Water Management Projects	Score is based on Yes/No response	Yes = 4 pt No = 0 pts	5%
Involves More than One Entity	Score is based on Yes/No response	Yes = 4 pt No = 0 pts	10%
Implements IRWM Plan Recommendation or Addresses an IRWM Issue <sup>5</sup> , IRWM Workgroup Recommendation, or a Recommendation in an Adopted Water Management Plan	Score is based on the kind of planning document that suggests implementing benefits or components of the project	IRWM Plan Recommendation or Issue = 4 pts Workgroup Recommendation = 2 pts Other Adopted Water Management Plan Recommendation = 1 pt	20%
Directly Benefits Disadvantaged / Environmental Justice Communities	Score is based on the degree of benefit (direct vs. indirect)	Direct Benefits = 4 pts Indirect Benefit = 2 pts No Benefits = 0 pts	5%

1. ½ points may be applied if the project indirectly meets this criterion (see Table 2-2 for IRWM Plan Objectives).
2. Prior to each round of funding, percentages will be applied as appropriate to determine applicable weighting of each criterion in accordance with direction provided by the RAC and the RWMG. Please note that percentages may be set at 0 for any given criteria, indicating that any of these criteria may be removed from consideration for a specific funding opportunity. Conversely, the “Other” category provided in this table indicates that any number of new criteria may be added by the RAC and the RWMG to reflect new or modified funding priorities.
3. Note that to be considered for IRWM funding, Objectives A and B and one other must be addressed. RAC may be asked to prioritize the IRWM Plan Objectives prior to each grant cycle.
4. Watershed services are defined in Section 9.2.5
5. IRWM Issues are identified in Table 1-2 of the IRWM Plan Update
6. “Other” scoring shall consider contribution of project to reducing greenhouse gas emissions, how the project will reduce dependence on Delta Supply, and how the project is related to resource management strategies (see Chapter 8).

## RAC- Approved Framework for Scoring Guidelines for Round 3 2014 IRWM Drought Solicitation

Adapted from Table 9-2 of the 2013 San Diego IRWM Plan

Criteria	Suggested Workgroup Guidelines
<b>PROJECT-LEVEL CRITERIA</b>	
IRWM Plan Objectives	Select projects that contribute to the attainment of IRWM Plan objectives.
Legal, Scientific, and Technical Feasibility	Select projects that are well supported from a technical standpoint based on supporting studies and data.
Budget	Select projects that have well-developed budgets and exhibit reasonable costs. Note that DAC projects are exempt from the 25% funding match requirement.
Readiness to Proceed	Select projects that will be ready to proceed with implementation by April 1, 2015 and will be completed by June 2020. Extra consideration provided for projects that will be completed by June 2018.
Cost-Effectiveness – Water Supply, Water Quality, Flood Damage Reduction	Select projects that are cost-effective on both the short- and long-term, and provide quantifiable benefits to the region.
Benefits Tribes	Select projects that address the water resources needs of San Diego area tribes.
Integration	Review integration potential using pre-defined types of integration – Partnerships, Management strategies, Beneficial uses, Geographic, Hydrologic
Climate Change	Contributes to climate change adaptation or mitigation
Drought Relief	Select projects that meet SB104's expedited drought relief funding mandate as defined in the Draft PSP as projects that do at least one of the following: <ol style="list-style-type: none"> <li>1. Provide immediate regional drought preparedness</li> <li>2. Increase local water supply reliability and delivery of safe drinking water</li> <li>3. Implement conservation programs and measures that are not locally cost-effective</li> <li>4. Reduce water quality or ecosystem conflicts created by drought</li> </ol>
Responsiveness	Project sponsors must be immediately responsive to requests from Project Selection Workgroup, RWMG, grant writing team, grant administrators, and other grant support personnel
<b>PROPOSAL-LEVEL CRITERIA</b>	
IRWM Plan Objectives	Proposal to include a suite of projects that addresses all IRWM Plan objectives.
Linkages to Other Projects	Proposal to include projects with synergies and linkages among them.
Funding Match	Proposal to achieve an overall 30% funding match.
Schedule	Proposal must include at least one project that will begin implementation by April 1, 2015.
Project Physical Benefits – these are benefits in addition to the mandatory drought relief benefits	Proposal to include projects that realize quantifiable water supply benefits. Benefits include but are not limited to producing, saving, or recycling water.
	Proposal to include projects that realize quantifiable water quality and other expected benefits. Benefits include but are not limited to improving water quality or treating water.
	Proposal to include projects that realize quantifiable environmental and other expected benefits. Benefits include but are not limited to improving, restoring, or protecting habitat, floodplain, or species.
	Proposal to include projects that realize quantifiable energy or greenhouse gas benefits. Benefits include but are not limited to producing or saving energy or avoiding greenhouse gas emissions.
Geographic Parity	Proposal to include a suite of projects that will benefit watersheds across the Region.
Benefits Disadvantaged Communities	Proposal to include at least one project that addresses the critical water supply or water supply quality needs of disadvantaged communities.

Criteria	Suggested Workgroup Guidelines
Implementing Agency	Proposal to include a balance of projects sponsored by non-governmental organizations and agencies.
Cost Effectiveness	Compare cost effectiveness of projects within each functional area (\$/level of benefit). Note that conservation projects must be <i>not locally cost-effective</i> .
IRWM Integration	Compare integrated aspects of each project in accordance with the definition of integration established by the San Diego IRWM Program
Cutting-Edge Technology	Proposal to highly consider projects that implement cutting-edge or next-generation technologies that can effectively address water management issues
Proposal Funding and Amount of Projects	Proposal should request \$16.5-\$20 million in grant funding and include 6-8 projects. Minimum grant request per project should be \$500,000.



**2014 IRWM Drought Solicitation Implementation Grant Proposal  
Recommended Funding Package**

<b>Project</b>	<b>Sponsor</b>	<b>Grant Request</b>	<b>Total Project Cost</b>
Richard A. Reynolds Groundwater Desalination Facility Expansion	Sweetwater Authority	\$5,000,000	\$40,400,000
FPUD Plant Nurseries Recycled Waterline Extension	Fallbrook Public Utility District	\$772,000	\$1,259,000
2014 San Diego Regional Drought Response Program	SD County Water Authority	\$1,009,000	\$1,346,000
City of San Diego Potable Water Use Reduction & Drought Relief	City of San Diego	\$699,520	\$812,693
Conservation on Demand: Advanced Metering Infrastructure-Facilitated Conservation	Rincon del Diablo MWD	\$600,927	\$801,236
Hodges Reservoir Oxygenation System (HOS) Project	City of San Diego	\$2,554,500	\$3,406,000
Carlsbad MWD Recycled Water Project	Carlsbad MWD	\$4,000,000	\$12,208,080
<i>Grant Administration</i>	-	\$439,078	-
<b>Total</b>		<b>\$15,075,025</b>	<b>\$60,233,009</b>



## **Regional Advisory Committee (RAC) Meeting #51**

June 4, 2014

9:00 am – 11:00 am

San Diego County Water Authority Board Room  
4677 Overland Avenue, San Diego, CA 92123

### **NOTES**

#### **Attendance**

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##### **RAC Members**

Goldy Herbon for Marsi Steirer, City of San Diego (chair)  
Arne Sandvik for Albert Lau, Padre Dam  
Anne Bamford, Industrial Environmental Association  
Bill Hunter, Santa Fe Irrigation District  
Brian Olney for Mark Umphres, Helix Water District  
Cari Dale, City of Oceanside  
Crystal Najera, City of Encinitas  
Dave Harvey, Rural Community Assistance Corporation (and Alternate Natalie Smith)  
Denise Landstedt, Rancho California Water District representing the Upper Santa Margarita RWMG  
Dennis Bowling, Floodplain Management Association  
Eric Larson, San Diego County Farm Bureau  
Jack Simes, United States Bureau of Reclamation  
Jennifer Sabine, Sweetwater Authority  
Joe Kuhn, City of La Mesa  
Joey Randall for Kimberly Thorner, Olivenhain Municipal Water District  
Katie Levy, SANDAG  
Kimberly O'Connell, University of California – San Diego Clean Water  
Loretta Bates for Leigh Johnson, University of California Cooperative Extension  
Mike Thornton, San Elijo Joint Powers Authority  
Patrick Crais, California Landscape Contractors Association  
Rob Hutsel, San Diego River Park Foundation  
Robyn Badger, San Diego Zoological Society  
Ronald Wootton, Buena Vista Lagoon Foundation  
Toby Roy for Ken Weinberg, San Diego County Water Authority  
Troy Bankston, County of San Diego (and Alternate Nancy Stalnaker)

##### **RWMG Staff**

Jeffrey Pasek, City of San Diego  
Loisa Burton, San Diego County Water Authority

Mark Stadler, San Diego County Water Authority  
Mark Stephens, City of San Diego  
Peter Martin, City of San Diego

**Interested Parties to the RAC**

Bill Luksic, RMC Water and Environment  
Crystal Mohr, RMC Water and Environment  
David Ahles, City of Carlsbad  
Jeremy Barbenal, U.S. Bureau of Reclamation  
Mehdi Khalili, City of San Diego  
Roselyn Prickett, RMC Water and Environment  
Sally Johnson, RMC Water and Environment  
Soleil Develle, Fallbrook Public Utility District  
Terrell Breaux, City of San Diego  
Trish Boaz, San Dieguito River Valley Conservancy

**Welcome and Introductions**

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Ms. Goldy Herbon, City of San Diego, welcomed everyone to the meeting. Introductions were made around the room.

**IRWM Grant Program**

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**Grant Administration**

Ms. Loisa Burton, City of San Diego, updated the group on grant administration activities. The Proposition 50 grant will end in June 2016. Of the 19 projects in the San Diego Integrated Regional Water Management (IRWM) Region, six have been completed. Four other projects are at least 80% complete. Of the \$25 million award to the region from the Proposition 50 grant, over \$12 million has been billed to-date. \$9.7 million has been received, and \$1.7 million is expected to be delivered to the Water Authority by the end of the month.

Ms. Burton also updated the group on the status of the Prop. 84 Round 1 Implementation Grant. \$7.9 million was awarded to the region, and \$2.1 has been billed to-date, with \$1.16 million already received. Most of the projects are progressing as planned, and two of the projects are more than 80% complete. The Prop. 84 Round 2 Implementation Grant agreement is going for review with the Water Authority's legal team, but is expected to be executed by the end of the summer.

**Project Reports**

Ms. Herbon informed the group that two projects were complete or near completion and would be presented to the RAC. She introduced Mr. Jeffrey Pasek, City of San Diego, to present the Project Completion Report for the San Vicente Reservoir Source Water Protection Project. Mr. Pasek reminded the group that this was Project 7 of the Proposition 50 grant package. He reviewed a brief history of the San Vicente Reservoir, and explained that when the reservoir was enlarged, there was debate between the Water Authority and the City of San Diego regarding the appropriate environmental buffer side surrounding the new high water line. An agreement was reached between the two agencies that they would seek grant funding to acquire an appropriate buffer around the reservoir, and through the San Vicente Reservoir Source Water Protection Project, the City has been

successful in acquiring the identified target and high value properties around the reservoir. Mr. Pasek also presented lessons learned during the project. The project found that it benefitted from its partnership with a large agency (the Water Authority) that was able to absorb the lengthy delay between expenditures and reimbursement by the Department of Water Resources (DWR).

Ms. Herbon introduced Ms. Trish Boaz, San Dieguito River Valley Conservancy, to present the Project Report on the Hodges Natural Treatment System Project. Ms. Boaz informed the group that the project is almost finished, and that most of the work has been completed. The purpose of the Hodges Natural Treatment System Project was to model the watershed and develop a natural treatment option to address concerns with the watershed. The solution was determined to be construction of wetland upstream from Lake Hodges. The modeling effort focused on areas of urban and agricultural use – those areas where treatment efforts would be the most effective. The modeling found that a centralized natural treatment system would be most effective to handle nutrient loading in Lake Hodges, and further determined that smaller wetlands at three confluences draining urban areas into Lake Hodges is the preferred alternative. Ms. Boaz explained that the project did not extend to the construction of the preferred alternative, but the San Dieguito River Valley Conservancy is looking into potential integration opportunities with Lake Hodges.

Questions/Comments:

- The Buena Vista Lagoon has done some specific water quality testing in urban areas and has been surprised to find that there are not as many pollutants as they expected. The unwanted vegetation that was causing obstruction of flood protection features was filtering them out. So even though the obstructions were unwanted, they were working as natural filters.

**Addition of New Non-Voting RAC Members**

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Mr. Mark Stadler, San Diego County Water Authority, discussed the Regional Water Management Group's (RWMG's) recommendation to add two new non-voting members to the RAC. Mr. Stadler reminded the RAC that there are already non-voting members who provide different viewpoints. He reminded the RAC of the value of a wide variety of perspectives. The two potential new non-voting RAC members are Indian Health Services (IHS) and the U.S. Forest Service (USFS). The IHS would be able to help provide input on reaching rural disadvantaged communities and tribes, and may be especially useful in helping the region successfully reach out to the tribes, which has been challenging for the San Diego IRWM Program in recent years. Mr. Pasek told the group that the USFS would be a good non-voting RAC member because they are in charge of the Cleveland National Forest, which was created to protect municipal water supplies. He explained that the national forests in Southern California were all created to protect water, not trees, and that their boundaries align with watersheds that are the headwaters of important municipal supplies. USFS is also the largest land management agency in the Region.

Questions/Comments:

- The U.S. Bureau of Reclamation supports the addition of the USFS to the RAC, and encourages the region to build a strong alliance with the USFS. USFS has a number of good water management programs, and it's suggested that they be invited to give a presentation to the RAC on these programs.
- Who are the non-voting members of the RAC?

- Current non-voting members are U.S. Bureau of Reclamation, State Coastal Commission, the Tri-County FACC, the State Water Board, and Camp Pendleton.

Ms. Herbon told the group that to invite IHS and USFS to join the RAC as non-voting members, the RAC needs to vote. Mr. Eric Larson, San Diego County Farm Bureau, made a motion to accept the two agencies as non-voting RAC members. The motion was seconded by Ms. Toby Roy, San Diego County Water Authority.

YES: 21

NO: 0

The motion passed and HIS and USFS will be invited to join the RAC as non-voting members.

### **Project Selection Workgroup Recommendation**

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Ms. Crystal Mohr, RMC Water and Environment, presented on the Proposition 84 IRWM Drought Grant Solicitation process. She updated the RAC on the final Proposal Solicitation Package, which had recently been released and provides direction on how to apply. The grants will be a statewide competition for \$200 million, but will be capped per Funding Area. For the San Diego Funding Area, up to \$42.3 million will be available. The funds are prioritized for regions with the greatest drought impacts. The grant applications are due July 21, 2014, which is an extension from the previously anticipated July 2, 2014 deadline. Final awards are anticipated to be announced in October 2014. For interested parties, applicant workshops will be held in Bakersfield and Sacramento, with the Sacramento one webcast. The consultant team writing the grant application will attend one of the meetings. Ms. Mohr explained that the funding caps for each Funding Area means that money will be left for the region in a fourth round of Proposition 84 IRWM Implementation Grant, which is anticipated in 2015. Ms. Mohr reviewed the Project Selection Process for the San Diego IRWM Program, and reminded the group that today they would be voting on the recommended package of projects. The Region had 12 projects submitted for consideration and the RAC had recommended a final grant request of \$16.5-\$20 million and inclusion of 6-8 projects. The Project Selection Workgroup met over two weeks to narrow the project list to meet these recommendations and build a strong application package.

Ms. Robyn Badger, San Diego Zoo Global, presented on the Project Selection Workgroup. She explained their purpose and the process they underwent, which included 4 meetings, project review outside of these meetings, and interviews with 10 of the potential project sponsors. Ms. Badger informed the RAC that each meeting met the quorum required by the IRWM Plan, and that all formal votes met all requirements to be valid. The Project Selection Workgroup underwent a three-step process to build a suite of projects for the proposal:

1. Project evaluations – the workgroup reviewed the information submitted by project sponsors to the online project database, and questions were routed through the consultant team.
2. Project interviews – 10 project sponsors were invited to interview, which included a presentation on the project, and an opportunity of questions from the workgroup.
3. Final evaluation and recommendation – the Workgroup discussed considerations for the proposal as a whole and project-level considerations. The Workgroup voted on a proposal package and funding to award each included project.

Ms. Badger then presented the final Workgroup recommendation. Seven projects were selected for a total project cost of over \$60 million, and a grant request of \$15,075,000. Summaries of the selected projects were also provided:

1. Richard A. Reynolds Groundwater Desalination Facility Expansion: expands existing desalination facility, constructs 5 new groundwater wells and associated pipelines, and provides 5,200 AFY of new drought-proof local supply
2. FPUD Plan Nurseries Recycled Waterline: utilizes currently produced but unused recycled water by distributing to nurseries and agricultural customers.
3. 2014 San Diego Regional Drought Response Program: detention facility retrofits, turf rebate program, and WaterSmart landscape efficiency program and workshops.
4. City of San Diego Potable Water Use Reduction & Drought Relief Project: constructs a recycled water filling station and provides pressure regulator rebates to reduce water waste.
5. Conservation on Demand: Advanced Metering Infrastructure-Facilitated Conservation: completes installation of Advanced Metering Infrastructure to Rincon del Diablo MWD's customers and implements WaterSmart software to provide customer access to water use data and district resources.
6. Hodges Reservoir Oxygenation System: improves water quality in Lake Hodges through oxygenation, which will allow water to be moved into the aqueduct and used by the region.
7. Carlsbad MWD Recycled Water Project: expands the Carlsbad Water Recycling Facility capacity and recycled water distribution system, and converts additional users to recycled water.

Questions/Comments:

- What projects were not selected?
  - Projects from UCSD, Padre Dam, and the City of Escondido were interviewed but not selected, and the projects from Rural Community Assistance Corporation (RCAC) and the Zoo did not make it to the interview stage – these project proponents decided to remove their projects from consideration.

Ms. Cari Dale, City of Oceanside, made a motion to recommend the project package presented by the Workgroup. Mr. Mike Thornton, San Elijo Joint Powers Authority, seconded the motion. A vote was taken.

YES: 22

NO: 0

The motion passed and the project suite recommended by the Project Selection Workgroup will move to the Water Authority's Board of Directors for final approval, as required by the IRWM Program and the Memorandum of Understanding between the RWMG agencies.

Questions/Comments:

- Recommend a debrief of the process for people applying in the future. It was unfortunate that one group pulled out of workgroup.
  - A point of clarification: one caucus was not able to attend final day of the Project Selection Workgroup. The Workgroup went back to its charter to confirm that the process they used at the final meeting to select the project package was still within the rules. It was confirmed that the Workgroup operated in accordance with the charter.
- Thanks to the consultant team and all project sponsors for their responsiveness and extra work.
- Thanks to all project sponsors for their submittals. All of them were good projects. The Workgroup asked many questions and clarifications and turnaround was very quick. Everyone responded in the time the Workgroup needed to make their decision. There will be a Workgroup debrief once the application process is over to help make improvements in the process for the next round.
- It was really important for people to be available by phone during the project selection process, because being able to reach the project sponsors to get responses to question can make or break the project in terms of being selected.
- Commenter has been on both sides of the selection process. The region's process really makes us think seriously about projects and the proposal as a whole, which makes it a much stronger application for DWR.
- Thank you to the Workgroup for their hard work.

**Summary and Next Steps**

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Mr. Stadler presented the next steps in the application process. The project package will go the Water Authority's Board of Directors for final approval on June 26, 2014. The RWMG and consultant team will begin work on writing the application immediately. Mr. Stadler reminded the project sponsors that their governing bodies need to adopt the 2013 IRWM Plan by the end of June and send the Board Resolutions to the consultant team. The end of June is the preferred deadline, but it must be done prior to July 21. This is non-negotiable.

Next RAC Meeting:

- August 6, 2014 – 9-11:30am

2014 Meeting Schedule:

- October 1, 2014
- December 3, 2014

Questions/Comments

- Mr. Jack Simes, U.S. Bureau of Reclamation informed the group that the U.S. Environmental Protection Agency has a Catalog of Federal Funding Sources for Watershed Protection (available: <https://ofmpub.epa.gov/apex/watershedfunding/f?p=fedfund:1>) . The U.S. Department of Agriculture also has a Rural Energy for America Program (information available: [http://www.rurdev.usda.gov/bcp\\_reapreseei.html](http://www.rurdev.usda.gov/bcp_reapreseei.html)). These two sources are good resources for potential funding programs.





# 2013 San Diego Integrated Regional Water Management Plan

## 2 Vision and Objectives

This chapter addresses requirements set forth in the Objectives Standard included in the 2012 IRWM Program Guidelines (DWR 2012). Consistent with DWR's 2012 Guidelines, the objectives presented in this chapter were developed to manage or eliminate the challenges faced by the Region as described in detail in *Chapter 3, Region Description*.

### 2.1 Overview

The intent of this chapter is to document various aspects of the planning hierarchy established for the 2013 San Diego IRWM Plan. Specifically, this chapter includes information regarding:

- The process used to develop the IRWM objectives.
- How the objectives address major water-related issues and conflicts of the Region.
- How the objectives will be measured so that achievement of objectives can be monitored.
- An explanation of why the objectives were not prioritized.
- An explanation of the overall planning hierarchy (vision, mission, goals, and objectives) included in the 2013 IRWM Plan.

### 2.2 Describing the Process

The IRWM planning components (vision, mission, goals, and objectives) were revised for the 2013 IRWM Plan through a collaborative process that involved members of the public, stakeholders, workgroup members, the Regional Advisory Committee (RAC), and the Regional Water Management Group (RWMG).

As described in detail in *Chapter 6, Governance and Stakeholder Involvement*, the 2013 IRWM Plan involved a number of workgroups consisting of representatives from the RAC and interested stakeholders, which were convened to provide input on specific components of the 2013 IRWM Plan. One workgroup, the Priorities and Metrics Workgroup, was convened to complete the following tasks:

- Refine IRWM vision, mission, goals, and objectives
- Review information received during the IRWM Summit (described in detail below) and use that information to refine the vision, mission, goals, and objectives
- Develop a recommended list of targets and metrics that can be used to measure achievement of the IRWM objectives
- Discuss pros and cons of prioritization and potentially prioritize the IRWM objectives

The Priorities and Metrics Workgroup met a total of five times from February to December 2012 and provided substantial input on the development of the IRWM vision, mission, goals, and objectives. The workgroup used information received at a public IRWM Summit to refine those planning components. Further information regarding the Priorities and Metrics Workgroup,

including complete meeting agendas and notes are available online at the following web address: <http://sdirwmp.org/2013-irwm-plan-update-workgroups>.

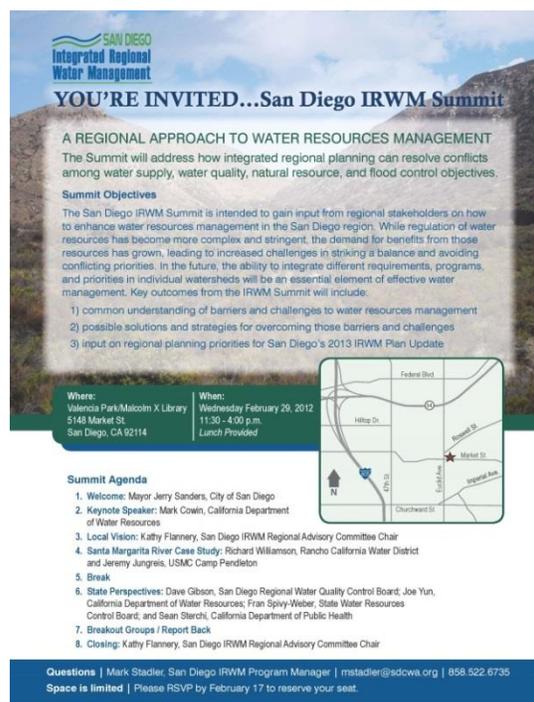
The 2007 IRWM Plan vision, mission, goals, and objectives were used as a starting point for the Priorities and Metrics, as these existing IRWM Plan components were previously determined by the Region's stakeholders. Further, the Priorities and Metrics Workgroup considered existing water management plans such as the Region's 2010 Urban Water Management Plans, the San Diego County General Plan Update, and requirements and considerations established by the California Department of Water Resources (DWR) in the 2012 IRWM Guidelines (DWR 2012).

The IRWM Summit, held on February 29, 2012, was open to members of the public, and had two purposes: 1) to increase awareness of the IRWM Program and 2013 IRWM Plan as part of the Region's public outreach and involvement process, and 2) to solicit stakeholder input on the existing IRWM objectives, and any additional objectives that may be suitable to include in the 2013 IRWM Plan. IRWM Summit attendees considered a wide array of information to make recommendations regarding the IRWM objectives. IRWM Summit attendees provided input via open discussions, and largely relied upon personal knowledge and experience as the basis for their input.

Determining the IRWM objectives was considerably more challenging than determining the IRWM vision, mission, or goals and included many revisions and substantial input from all stakeholders. Further, due to the planning hierarchy of the vision, mission, goals, and objectives; the goals were reviewed and revised as applicable when revising the objectives to ensure that the information and priorities included in the goals were reflected in the objectives, and vice versa.

The Priorities and Metrics Workgroup, in coordination with the RWMG, was responsible for compiling a draft version of the vision, mission, goals, and objectives for further vetting through the RAC and members of the public. On December 5, 2012, a joint Public Workshop/RAC meeting was held, which focused on receiving input on the revised IRWM vision, mission, goals, and objectives before they were incorporated into the 2013 IRWM Plan.

The information included in the following sections regarding the IRWM vision, mission, goals, and objectives represents a synthesis of the input received through the aforementioned processes and stakeholder groups. Together, these processes were highly collaborative, involving as many IRWM stakeholders and interested parties as possible. All input received on the IRWM vision, mission, goals, and objectives was compiled into the Public Draft version of the 2013 IRWM Plan, which was further reviewed and commented upon by IRWM stakeholders, ensuring that the IRWM vision, mission, goals and objectives were established through a collaborative stakeholder process.



**SAN DIEGO Integrated Regional Water Management**  
**YOU'RE INVITED...San Diego IRWM Summit**

**A REGIONAL APPROACH TO WATER RESOURCES MANAGEMENT**  
The Summit will address how integrated regional planning can resolve conflicts among water supply, water quality, natural resource, and flood control objectives.

**Summit Objectives**  
The San Diego IRWM Summit is intended to gain input from regional stakeholders on how to enhance water resources management in the San Diego region. While regulation of water resources has become more complex and stringent, the demand for benefits from those resources has grown, leading to increased challenges in striking a balance and avoiding conflicting priorities. In the future, the ability to integrate different requirements, programs, and priorities in individual watersheds will be an essential element of effective water management. Key outcomes from the IRWM Summit will include:

- 1) common understanding of barriers and challenges to water resources management
- 2) possible solutions and strategies for overcoming those barriers and challenges
- 3) input on regional planning priorities for San Diego's 2013 IRWM Plan Update

**Where:** Valencia Park/Malcolm X Library  
5148 Market St  
San Diego, CA 92114

**When:** Wednesday February 29, 2012  
11:30 - 4:00 p.m.  
Lunch Provided

**Summit Agenda**

1. Welcome: Mayor Jerry Sanders, City of San Diego
2. Keynote Speaker: Mark Cowin, California Department of Water Resources
3. Local Vision: Kathy Flannery, San Diego IRWM Regional Advisory Committee Chair
4. Santa Margarita River Case Study: Richard Williamson, Rancho California Water District and Jeremy Jungreis, USMC Camp Pendleton
5. Break
6. State Perspectives: Dave Gibson, San Diego Regional Water Quality Control Board; Joe Yun, California Department of Water Resources; Fran Spivy-Weber, State Water Resources Control Board; and Sean Storch, California Department of Public Health
7. Breakout Groups / Report Back
8. Closing: Kathy Flannery, San Diego IRWM Regional Advisory Committee Chair

**Questions |** Mark Stadler, San Diego IRWM Program Manager | [mstadler@sdcwa.org](mailto:mstadler@sdcwa.org) | 858.522.6735  
**Space is limited |** Please RSVP by February 17 to reserve your seat.

*The IRWM Summit, held in February 2012, provided a venue to receive public input on key aspects of the 2013 IRWM Plan, including the IRWM Objectives.*

## 2.3 Sustainability of Water Resources

The IRWM Program supports the concept of sustainability, which is integrated in the IRWM vision, mission, goals, and objectives (see sections below for further details). Sustainability, broadly stated, calls for meeting the needs of the present without compromising the ability of future generations to meet their own needs. The San Diego IRWM Program advocates for sustainable water resources planning and has adopted a triple-bottom line definition to foster comprehensive results. Below you will find the San Diego IRWM Program's definition of sustainability.

### *Definition of Sustainability for the 2013 IRWM Plan*

- **Social:** Fostering public health and safety and maintaining the community's quality of life through provision of safe, reliable water supplies, and recreational waters.
- **Environmental:** Providing effective stewardship of water-based natural resources, including protection of water quality, habitat, water supply and minimizing climate change impacts.
- **Economic:** Providing and protecting reliable, sustainable water resources that support the regional economy.

Ensuring long term sustainability requires effective leadership and commitment that encourages collaboration, improved integration of infrastructure and natural systems, and addresses conflicting regulations and policies. Sustainability is also furthered by the approach that is taken to assess and manage water resource projects. Considerations in assuring sustainable water management may include: water quality, habitat, floodplain functions, biodiversity, wetland and surface water functions, greenhouse gas emissions, resiliency and life cycle costing that broadly considers all costs associated with materials, construction, operations maintenance, and decommissioning. No-regret climate change strategies (discussed in the *Climate Change Study* in Appendix 7-D), which are defined as those strategies that would take place in the Region even in the absence of climate change, will also be considered for purposes of assessing sustainability.

As discussed in *Chapter 1, Introduction*, securing reliable sources of funding for these costs, particularly for operation and maintenance costs, is considered a potential implementation barrier as funding for these items is not readily available. For more information on implementation issues and challenges to sustainability, refer to *Chapter 11, Implementation*.



*Principles of Sustainability for the 2013 IRWM Plan*

## 2.4 IRWM Vision

The San Diego IRWM vision is to achieve:

***An integrated, balanced, and consensus-based approach to ensuring the long-term sustainability of the Region's water supply, water quality, and natural resources.***

## 2.5 IRWM Mission

The mission of the San Diego IRWM Program is:

***To develop and implement an integrated strategy to guide the Region toward protecting, managing, and developing reliable and sustainable water resources. Through a stakeholder-driven and adaptive process, the Region can develop solutions to water-related issues and conflicts that are economically and environmentally preferable, and that provide equitable resource protection for the entire Region.***

## 2.6 IRWM Goals

The San Diego IRWM goals are as follows:

- 1. Improve the reliability and sustainability of regional water supplies.***
- 2. Protect and enhance water quality.***
- 3. Protect and enhance our watersheds and natural resources.***
- 4. Promote and support sustainable integrated water resource management.***

## 2.7 IRWM Objectives

The 11 IRWM objectives described below were developed to meet the IRWM goals included as part of the 2013 IRWM Plan. Each objective has a number of targets and associated metrics designed to evaluate how well each objective is being met by the Region's water management activities. These targets, along with their metrics, are presented in Table 2-2. The IRWM objectives and targets were developed considering the State's planning guidance in CWC §10540(c), and encompass water supply reliability, water quality, groundwater overdraft, environmental stewardship, and water-related needs of economically disadvantaged communities (DACs). These objectives reflect the San Diego Region's efforts towards obtaining the State's goal for water and the environment.

In total, two new objectives were added to the existing 2007 IRWM Plan objectives: one that encourages integration (Objective A) and one that addresses climate change (Objective K). To be included in the IRWM Plan, projects only need to meet one of the 11 IRWM objectives (refer to *Chapter 9, Project Evaluation and Prioritization*). However, to be considered for IRWM funding, projects have to meet Objective A, Objective B, and at least one other objective. Each of the 11 IRWM objectives, as well as information regarding how each objective addresses relevant water management issues, is provided below.

**IRWM Funding Requirement – Objective A, Objective B, and One Other**

To be included in the IRWM Plan, projects must contribute to at least one IRWM objective. A new requirement of the 2013 IRWM Plan is that, in order to be **eligible for IRWM funding**, projects must meet Objective A, Objective B, and at least one additional IRWM objective.

**Objective A: Encourage the development of integrated solutions to address water management issues and conflicts.**

**Detailed Description of Objective A**

Implement projects and programs that effectively address local water management issues and conflicts through the following types of integration:

1. *Partnership*: Establishing partnerships between different organizations to increase cost-effectiveness through sharing of data, resources, and infrastructure.
2. *Resource Management*: Employing multiple resource management strategies within a single project to effectively address a variety of issues.
3. *Beneficial Uses*: Developing solutions that address multiple beneficial uses to expand benefits.
4. *Geography*: Implementing watershed- or regional-scale projects to benefit a greater amount of people and potentially save costs through economies of scale.
5. *Hydrology*: Addressing multiple watershed functions within the hydrologic cycle to holistically address issues and resolve conflicts.
6. *Sustainability*: Implement projects that meet the needs of the present without compromising the ability of future generations to meet their own needs and broadly support social, environmental, and economic benefits.

The focus of this objective is to meet the requirements of Goal 4, which focuses on integration of water resources management. Both the vision and mission emphasize an integrated approach to water management, which is also a Statewide Priority (refer to Section 2.9). Due to the importance of integration to the San Diego IRWM Region, stakeholders determined that in order to be included in the IRWM Plan, a project must meet one of the IRWM Plan Objectives. To be eligible for IRWM grant funding, a project must meet Objective A, Objective B, and at least one additional objective. Refer to *Chapter 9, Project Evaluation and Prioritization* for more information.

Table 1-2, which can be found in *Chapter 1, Introduction*, includes an overview of identified water management challenges and conflicts relevant to the Region. In addition to the integration definitions described above, attainment of this objective will be evaluated based upon the ability to address relevant issues listed in Table 1-2.

*Determination and Rationale for Objective A*: The Region is a large and diverse area, falling under the jurisdiction of multiple water management agencies and organizations. By creating an objective that specifically focuses on integrated approaches to water resources and their management, the 2013 IRWM Plan emphasizes the importance of addressing issues across the Region regardless of jurisdictional and other boundaries that are not necessarily conducive to effective water management. Integration is the “I” in IRWM planning, and is the emphasis of the State’s efforts towards IRWM planning, which encourages planning and understanding of the inter-relationships across a variety of resource areas rather than traditional water planning efforts through which different resource areas (water supply, water quality, natural resources, flood management, etc.) are not necessarily coordinated. For example, water reuse efforts in the Region integrate both

wastewater management and water supply development, and represent an integrated approach to managing water resources within the Region.

Incorporating cost-effective approaches to water management is essential for sustainable water management. Integration should also focus on the region’s ability to accomplish more with less. The IRWM mission seeks solutions to water-management issues that are economically preferable on a long-term basis. The following text box, developed by the Priorities and Metrics Workgroup, acknowledges some of the disincentives and benefits of integration.

<u>Potential Barriers or Disincentives to Integration</u>	<u>Potential Benefits or Incentives to Integration</u>
<ul style="list-style-type: none"> <li>• Takes a lot of time and energy to coordinate with other partners.</li> <li>• Integration may mean reducing the amount of grant funding that each organization receives.</li> <li>• Administrative costs associated with combining projects and completing grant administrative for multiple entities.</li> <li>• Integrating with other partners could mean losing some control over a project.</li> <li>• Integration makes projects more complex.</li> <li>• May have to give up some benefits or features of the original project concept to integrate with another project concept.</li> </ul>	<ul style="list-style-type: none"> <li>• Integration makes projects more competitive to receive grant funding, although integration in early or pre-design produces more win-win opportunities.</li> <li>• May be more cost-effective – partners such as NGOs can provide services at a lower cost and are adept at grant writing and grant administration.</li> <li>• May be more cost effective due to cost sharing with other agencies.</li> <li>• Integration reduces conflicts, which may result in streamlining for project approvals.</li> <li>• Integration may add additional expertise to a project.</li> </ul>

**Objective B: Maximize stakeholder/community involvement and stewardship of water resources, emphasizing education and outreach.**

Detailed Description of Objective B

Implement efforts to engage and educate the public on the IRWM Program and the interconnectedness of water supply, water quality, and natural resources. Build stewardship throughout the Region by providing opportunities to participate in water management and promote individual and community ownership of water resource problems and solutions.

The focus of this objective is to incorporate stakeholder and community involvement and engagement into realization of each IRWM goal. The IRWM vision emphasizes the need for a consensus-based approach in water resources management within the Region, and the mission emphasizes the need for a stakeholder-driven process. Maximizing stakeholder and community involvement and stewardship has been a critical focus of the IRWM Program, and is a component of every aspect of the IRWM planning hierarchy. Due to the importance of stakeholder involvement to the San Diego IRWM Region, stakeholders determined that in order to be eligible for IRWM grant funding, a project must meet Objective A, Objective B, and at least one additional objective. Refer to *Chapter 9, Project Evaluation and Prioritization* for more information.

*Determination and Rationale for Objective B:* Stakeholder involvement is a vital part of the IRWM Program, and is necessary to identify and address public interests and perceptions, address stakeholder questions and issues upfront, ensure that the 2013 IRWM Plan and projects are consistent with public interests, provide for public ownership and support of IRWM activities, and bring diverse viewpoints to improve the next iteration of the IRWM Plan.

Stakeholder involvement may assist in identifying areas where increased public education and outreach is required and help focus on the public's key water management issues and potential solutions. Public education and outreach at community events, workshops, and school-based educational programs are required to promote the identification and understanding of the Region's resources. Hands-on and volunteer participation of the public encourages community ownership of water resource problems and solutions. Stakeholder input is also an essential element in identifying and resolving potential water management conflicts within the Region, and has been a fundamental component of the 2007 and 2013 San Diego IRWM Plans.

### **Objective C: Effectively obtain, manage, and assess water resource data and information.**

#### *Detailed Description of Objective C*

Increase and expand sharing, integration, and comprehensive analysis of water resource and water quality data to provide a basis for improved water resources management.

Attainment of each IRWM goal can be enhanced through data and information sharing. Through this objective, the RWMG and RAC recognize that obtaining and evaluating water quality, water supply, environmental, and recreational data is essential to the successful development and implementation of regional water management actions and programs. Data collection and analysis is required to identify trends, document water quality improvements or impairments, assess the effectiveness of water resource management programs, and provide direction for future program planning and management strategies.

*Determination and Rationale for Objective C:* Organizations and individuals that collect data within the Region have historically worked separately, and have not compiled information into a central repository where data can be evaluated, formulated, compared, and shared with interested stakeholders. The IRWM Program has undertaken actions to address this issue, and is working toward development and implementation of a Data Management System (DMS) that will meet this very important regional need. Refer to *Chapter 10, Data and Technical Analysis* for more information.

Despite the IRWM Program's efforts towards implementing a Region-wide DMS, there are still challenges associated with data and data management that are the impetus for Objective C. Challenges associated with trying to collect regional data from multiple jurisdictions and organizations include: (1) differences and sometimes incompatibilities in electronic formats, (2) the lack of a centralized system or location for maintaining hard copy data such as reports or maps, (3) proprietary data use concerns, (4) inconsistent data protocols that make data comparison difficult and time-consuming, and (5) the cost of maintaining an ongoing regional data management system.

The RWMG and RAC recognize that the IRWM Program offers a potential opportunity for regional entities to coordinate the collection, storage, analysis, and distribution of water quality, water supply, and natural resources data to overcome the challenges stated above. Beyond the regional DMS, other potential data-related opportunities for managers and stakeholders may include:

- making it possible to identify and update water supply, water quality, and other related data that will assist with water management issues
- providing data collection and storage in compatible electronic formats so that it is easily accessible to water managers and regional stakeholders

- analyzing collected data from areas within the Region that will assist in supporting water management actions/decisions
- assessing integration efforts between managers and stakeholders to provide water quality, water supply, and natural resources data in a beneficial manner to all parties involved
- developing a method to implement adequate quality controls for data collection, record keeping and analysis for the Region
- soliciting public/stakeholder involvement on data management and distribution
- identifying gaps in existing data or research needs to improve water resource management

### **Objective D: Further the scientific and technical foundation of water management.**

#### ***Detailed Description of Objective D***

Promote actions, programs, and projects that increase scientific knowledge and understanding of water management issues and support sustainable science-based regulations and requirements. Coordinate with regulatory agencies to assess and resolve ambiguous or conflicting regulatory standards or requirements.

Attainment of each IRWM goal can also be enhanced through increasing the scientific and technical foundation of water management. Objective D recognizes that additional scientific information and technical understanding is required to effectively implement many water management strategies, as well as improve regulations pertaining to water management.

*Determination and Rationale for Objective D:* Water management actions for the Region must comply with existing water quality, public health, flood control, environmental, and other laws and regulations. While water management actions must be addressed within the framework of existing regulations, additional technical and scientific understanding is required to adjust regulations and the way in which regulations are implemented to ensure that such regulations are realistic, cost-effective, and being implemented in a meaningful way.

By addressing scientific and technical issues through regional coordination efforts, implementing agencies may recognize benefits of cost sharing, economies of scale and scope, and the increased potential for outside funding through collaborative approaches. Additionally, increased technical and scientific understanding allows for more consistent and expedient implementation of programs and activities.

Increased scientific data and technical comprehension may allow for the development of regionally-feasible or watershed-based compliance alternatives that may not have been feasible from site-specific or project-specific standpoints. Better scientific understanding will result in more effective use of technology and other natural approaches that will encourage the implementation of the most cost-effective solutions and improved water quality on a long-term basis. The IRWM Plan process may also allow regional agencies to coordinate with regulators to identify areas where modification of regulations or regulatory procedures may be appropriate for maximizing beneficial use and protecting the Region's water resources.

## Objective E: Develop and maintain a diverse mix of water resources, encouraging their efficient use and development of local water supplies.

### Detailed Description of Objective E

Continue to develop diverse water resources to meet local supply and conservation goals, reduce dependence on imported water supplies, and increase water supply reliability. A diverse mix of water resources includes imported water, water transfers, recycled water, water conservation, desalination, local surface water, and groundwater.

The focus of this objective is to meet the requirements of Goal 1. The Region's population of approximately three million and the Region's economy are both dependent upon a reliable, cost-effective, and diverse water supply. Securing a variety of water supply sources will help the Region ensure that even in drought or emergency conditions, reliable water supply can be made available now and in the future. Ensuring that water supplies are available to meet future demands is essential given that the Region's population is projected to increase by approximately one third by 2030. This objective addresses the variety of water supply sources – both imported and local – that are necessary to sustain the Region's water demands.

*Determination and Rationale for Objective E:*  
 As documented within the *California Water Plan Update 2009* (DWR 2009), water allocation, environmental, and hydrologic constraints present significant challenges to the sustainability of State Water Project and Colorado River supplies (imported water supplies), particularly during long-term droughts. Additionally, reliance on imported water supplies renders the Region potentially vulnerable to short-term reliability issues that may occur in the event of a catastrophic emergency such as an earthquake that cuts off imported water supplies for up to six months.



*El Capitan Reservoir has a storage capacity of 112,800 acre-feet and holds both surface runoff and imported water.*

*Photo credit: Jeff Pasek, City of San Diego*

Despite historic reliance on imported water supplies, the Region has made substantial progress in diversifying its water supply portfolio, a trend which will continue to occur in the future. Objective E aims to support the Region's water supply diversification efforts as well as the Region's water conservation efforts, which will both help to increase water supply reliability and reduce demands on imported water supplies.

## **Objective F: Construct, operate, and maintain a reliable water management infrastructure system.**

### *Detailed Description of Objective F*

Construct, operate, and maintain water conveyance, treatment, storage, and distribution facilities that comprise a reliable water infrastructure system consistent with the future planned mix of water resources, and provide flexibility in system operations.

The focus of this objective is to provide reliable infrastructure to meet IRWM goals 1, 2, and 3. The Region's residents and economy are both dependent upon a reliable infrastructure to deliver water to residents, businesses, industries, parks, and agricultural lands. The Region's existing water supply infrastructure is described in *Chapter 3, Region Description*, and is a complex system of aqueducts, reservoirs, treatment plants, water pipelines, pump stations, and other appurtenances. Further, this objective addresses water infrastructure required for the disposal and reuse of wastewater, as well as infrastructure required for stormwater, flood control, water quality-related concerns, and natural resources protection and enhancement.

*Determination and Rationale for Objective F:* Improvements to existing water supply infrastructure are required to ensure facilities are in place to produce, deliver, store, and treat supplies to reliably meet existing and future demands throughout the Region. Capital improvements will focus on increasing water supply flexibility, storage, supply diversity, and reliability.

This objective also addresses requisite improvements to other types of water infrastructure that are required to meet other objectives included in this IRWM Plan. Other types of infrastructure are related: wastewater, flood control, and stormwater infrastructure should be designed in a manner to address, improve, and maintain water quality, and protect and enhance natural resources and watersheds.

## **Objective G: Enhance natural hydrologic processes to reduce the effects of hydromodification and encourage integrated flood management.**

### *Detailed Description of Objective G*

Restore and enhance natural hydrologic processes, and promote best management practices that reduce negative effects on receiving systems such as natural stream systems, groundwater systems, local water supply reservoirs, and lagoons, bays, and the ocean. Reduce runoff from impervious surfaces, erosion, sedimentation, and flooding. Use integrated flood management to holistically address flood issues, water quality, natural resources, and other water management concerns.

The focus of this objective is to help achieve IRWM goals 2 and 3. Sediment pollution, erosion, and other development-related water quality and hydromodification issues have impacted the Region's water resources. This objective is intended to encourage restoration and floodplain management activities that help to address these historical issues, and includes activities that utilize natural infrastructure and mimic natural infrastructure functions.

*Determination and Rationale for Objective G:* Sedimentation, erosion, and hydromodification present significant water management challenges within many of the Region's watersheds. Development practices may decrease normal, distributed, at-source infiltration and therefore increase the volume and duration of stormwater runoff due to the increased amount of impermeable surfaces, such as paved areas and roofs. These development practices impact natural conveyance systems, such as creeks, streams and rivers due to increases of water loads from storm

drain and other discharge points not originally part of the natural drainage system. Future development in the Region will also contribute to these impacts.

Pollution loads due to runoff will reflect the change in residential, commercial, industrial, construction and agricultural activities (land use changes). These land use changes can result in physical changes (hydromodification) to the Region's waterways. Addressing these problems will require regional cooperation in identifying and implementing cost-effective strategies. By identifying and addressing areas that are already, or likely to be, affected by hydromodification, stakeholders and managers can prevent or decrease its impacts, mitigate its negative effects and address economic impacts that future development may have on the current infrastructure.



*Community flood damage loss can be addressed through integrated flood management solutions.*

*Photo credit: Bruce Phillips, PACE*

Further, integrated flood management, which is a Statewide Priority, is also included within this objective. Integrated flood management involves developing solutions for effectively managing flood risks through a watershed approach that allows for development of holistic strategies that can also address beneficial uses and watershed functions.

**Objective H: Effectively reduce sources of pollutants and environmental stressors to protect and enhance human health, safety, and the environment.**

***Detailed Description of Objective H***

Reduce pollutants and environmental stressors to maintain or improve water quality through the application of point and non-point source controls, stormwater best management practices, management measures such as land use planning and conservation, and reservoir management. Reduce pollutant loads to protect the health and safety of humans and the environment.

The focus of this objective is to help achieve IRWM goals 2 and 3. Existing regulatory programs control pollutants through a broad array of point source and non-point source programs. These programs are directed towards achieving compliance by mandating pollutant source controls and industry-standard best management practices. This objective is intended to encourage restoration, source control, and treatment activities that help to address water quality issues.

*Determination and Rationale for Objective H:* More than 54 inland surface waters (rivers or streams) and 13 reservoirs are listed on the 303(d) list of impaired water bodies as not attaining applicable water quality standards. Region-wide constituents of concern include bacteria, sediment, nutrients, and total dissolved solids (TDS). Toxic inorganic and toxic organic constituents are additional pollutants of concern in many of the Region's urbanized watersheds.

Cost-effective approaches to reducing pollutant loads, sources, and stressors is essential to bring listed water bodies into attainment of the standards, achieve Total Maximum Daily Load (TMDL) allocations, and prevent waters that currently meet the standards from slipping into non-attainment. Additional data and analysis are required to establish a correlation between the use of

pollutant source controls and water quality improvements, which will assist in the identification of predominant pollutant sources.

An important management consideration in addressing pollutants and stressors within local water supplies is reservoir and lake management. Reservoir and lake management strategies, including natural treatment systems, can be considered as a way to reduce problems associated with poor water quality and treatability resulting from stressors such as nitrogen, phosphorus, iron, manganese, and sulfur.

### **Objective I: Protect, restore, and maintain habitat and open space.**

#### *Detailed Description of Objective I*

Manage and acquire land to preserve open space and protect sensitive habitat for endangered, threatened, and locally-important plant and wildlife species. Invasive species management, habitat conservation, and water pollution prevention activities will help to maintain and enhance biological diversity.

The focus of this objective is to meet Goal 3. The Region features biologically diverse and important habitats and has a high degree of biological diversity (biodiversity). In recent decades, however, development and population growth within the Region have resulted in the loss of open space and habitat. Additionally, remaining native habitat may be subject to impacts or stress from invasive species, water quality degradation, or hydromodification.

*Determination and Rationale for Objective I:* More bird and plant species live within San Diego County than in any other county in the contiguous United States; however, the reduction of available open space lands that can support wildlife habitats has reduced the number of native plants and animals living in the Region, and has reduced overall biodiversity. The trend of decreasing open space land within the Region is projected to continue, and it is anticipated that biodiversity in the Region will decrease as well.



*Lower Otay Reservoir contains extensive wetlands habitats.*

*Photo credit: Jeff Pasek, City of San Diego*

Due to anticipated growth and development, preservation and maintenance of open space is an important component of ensuring protection of the Region's water quality, water availability, and protection of endangered and threatened species and habitats. Preserving and maintaining open space is also important for maintaining the Region's natural aesthetics, preserving and enhancing recreational opportunities, enhancing the quality of life for residents, and providing benefits relative to tourism and the economy. Further, the *Water Quality Control Plan for the San Diego Basin* (Basin Plan) identifies several beneficial uses that address the needs of aquatic, wildlife, and marine habitats. Due to Basin Plan beneficial

use designations pertaining to habitats, habitat management in the Region is a regulatory requirement that must be considered in water bodies that have such habitat-related beneficial uses, including Areas of Special Biological Significance (ASBS). Maintaining and expanding habitat can have an additional benefit of improving water quality.

## **Objective J: Optimize water-based recreational opportunities.**

### *Detailed Description of Objective J*

Protect and provide access to water-based recreational activities such as swimming, fishing, boating, as well as picnicking and hiking along waterways, while ensuring that the recreational activities do not adversely affect other beneficial uses of water. Improve public safety in water-based recreational areas so that members of the Region can use them freely.

The focus of this objective is to meet Goal 4. The Basin Plan designates both water contact recreation (swimming, wading, tide pooling, water skiing, surfing) and non-contact recreation (boating, fishing, hiking, bird watching, kayaking) as key beneficial uses of inland and marine waters within the Region.

*Determination and Rationale for Objective J:* Water contact and non-contact recreation are important components of the Region's quality of life and tourism-dependent economy. A considerable number of recreational opportunities exist at the beaches, rivers, streams, lakes, marine and estuarine waters within the Region.

Urban and agricultural stormwater runoff frequently degrades the water quality of the Region's coastal waters, resulting in the posting of advisories of potential public health threats and beach closures. Controlling these pollutant-contributing activities is critical to enhancing and maintaining water-based recreational opportunities within the Region.

The Region's inland lakes are all man-made water supply reservoirs. Many of these reservoirs permit recreational uses that may adversely affect water quality due to contamination from swimmers, boating equipment, camping activities, and littering. Recreational activities within the Region's reservoirs must therefore be balanced with water supply and water quality protection needs. While optimizing recreational opportunities is a Plan objective, restrictions on recreation (limiting public access, limiting certain recreational activities, or requiring implementation of best management practices) may be necessary to protect water supply and other beneficial uses.

## **Objective K: Effectively address climate change through greenhouse gas reduction, adaptation, or mitigation in water resource management.**

### *Detailed Description of Objective K*

Adapt to the potential effects of climate change, such as sea-level rise, temperature changes, and rainfall variability, by implementing 'climate-proof' water management projects and programs. Incorporate greenhouse gas emissions reduction and energy efficiency in planning and management efforts.

Each IRWM goal can potentially be enhanced by considering climate change. Climate change may have wide-spread impacts on water resources management, including less overall precipitation and associated water supply, more severe and unpredictable flood events, and sea level rise and associated impacts to coastal infrastructure. Planning for future water management infrastructure needs to consider both mitigation of additional contributions to climate change through greenhouse gas (GHG) reduction and adaptation to its future impacts (such as sea level rise).

*Determination and Rationale for Objective K:* The effects of climate change have the potential to dramatically alter the natural resources of the Region. As a coastal area, the Region is susceptible to changes in sea level, salt water inundation, and potential extreme weather events. Climate change is also likely to affect habitat availability for the Region's multitude of species, and increase the vulnerability of the Region's water supply. Implementation of projects and programs that are not

influenced by the effects of climate change, such as water recycling, will help the Region adapt to the potential effects of climate change.

### 2.7.1 Prioritizing the IRWM Objectives

The 11 IRWM objectives described above will be used to evaluate potential projects for inclusion in the 2013 IRWM Plan, and will therefore help to determine which projects are submitted in grant applications. The question of prioritizing objectives was discussed by stakeholders in the Priorities and Metrics Workgroup, who ultimately recommended against prioritizing objectives in the 2013 IRWM Plan. While recognizing that prioritizing objectives could make project evaluation easier and more transparent, it was determined that the costs of prioritizing objectives, including limiting the potential breadth of water management activities, losing some of the flexibility of the 2013 IRWM Plan, and losing stakeholder support, outweighed the benefits. All 11 IRWM objectives were developed by stakeholders because they address an identified priority for water management in the Region. Balancing project selection such that all objectives are addressed through IRWM funding opportunities will contribute to broader sustainability is the approach that the IRWM Region will take.

### 2.7.2 Climate Change Considerations

Climate change considerations pertaining to the IRWM objectives are addressed directly by Objective K, which was added to the 2013 IRWM Plan to reflect the Region's growing concern over climate change impacts on water resources management (refer to *Chapter 7, Regional Coordination* for more information on the Climate Change Study). In addition, several of the other IRWM objectives will generate climate change adaptation and mitigation benefits. Examples of how the other IRWM objectives will potentially address and consider climate change adaptation and mitigation are provided below:

1. *Climate Change Adaptation*: Objective E encourages development of diverse water supplies, including municipal recycled water. Increasing local water supplies such as recycled water and desalinated water will help the Region adapt to climate change by increasing the availability of 'drought-proof' local water supplies, which are not dependent on factors influenced by climate change such as temperature and precipitation. Local supply development also reduces the Region's reliance on imported water supplies that may be more severely impacted by climate change.
2. *Climate Change Mitigation*: Objective I encourages protection and restoration of habitat and open space. Conserving natural habitat and restoring native plants in the Region could mitigate climate change by sequestering greenhouse gases.

## 2.8 IRWM Planning Hierarchy

This chapter includes an overview of all aspects of the IRWM planning hierarchy. The IRWM planning hierarchy included in this 2013 IRWM Plan is consistent with the planning hierarchy originally developed for the 2007 IRWM Plan.

The individual components of the planning hierarchy – as illustrated in Figure 2-1 – are explained in the previous sections and are applied consistently throughout the 2013 IRWM Plan.

Figure 2-1: IRWM Planning Hierarchy



## 2.9 Consistency with Statewide Priorities

The IRWM objectives included in the previous sections address issues specific to the San Diego IRWM Region as identified by and vetted with regional stakeholders. While the objectives address issues specific to the IRWM Region, they are also in conformance with the Statewide Priorities set forth by DWR in the 2012 IRWM Guidelines (DWR 2012). The following table demonstrates how the IRWM objectives either directly or indirectly address each Statewide Priority included in the 2012 IRWM Guidelines.

## 2.10 IRWM Plan Targets

Each of the 11 IRWM objectives described above has a number of measurable targets designed to help evaluate how well each objective is being met. Each of these targets has one or more quantitative or qualitative metric to evaluate the targets. The targets and metrics for each objective are described in Table 2-2 below. The process of assessing attainment of each objective through the targets and metrics is detailed in *Chapter 11, Implementation*. Further, Table 2-2 indicates (with an “x”) whether each measurable target can be implemented through the IRWM Program or through IRWM Projects, which are organized by project type in the table.

**Table 2-1: Conformance of Plan Objectives with Statewide Priorities**

San Diego IRWM Objectives	Statewide Priorities							
	Drought Preparedness	Use and Reuse Water More Efficiently	Climate Change Response Actions	Expand Environmental Stewardship	Practice Integrated Flood Management	Protect Surface Water and Groundwater Quality	Improve Tribal Water and Natural Resources	Ensure Equitable Distribution of Benefits
Objective A: Encourage the development of integrated solutions to address water management issues and conflicts.	○	○	○	●	●	○	○	●
Objective B: Maximize stakeholder/community involvement and stewardship of water resources, emphasizing education and outreach.	○	●	○	●	●	○	●	●
Objective C: Effectively obtain, manage, and assess water resource data and information.	○	○	○	●	○	○	○	○
Objective D: Further scientific and technical foundation of water management.	○	○	○	●	○	○	○	○
Objective E: Develop and maintain a diverse mix of water resources, encouraging their efficient use and development of local water supplies.	●	●	○	●	○	○	○	○
Objective F: Construct, operate, and maintain a reliable infrastructure system.	●	●	○	○	○	○	○	○
Objective G: Enhance natural hydrologic processes to reduce the effects of hydromodification and encourage integrated flood management.			○	●	●	○	○	○
Objective H: Effectively reduce sources of pollutants and environmental stressors to protect and enhance human health, safety, and the environment.			○	●		●	○	○
Objective I: Protect, restore, and maintain habitat and open space.			○	●			○	○
Objective J: Optimize water-based recreational opportunities.							○	○
Objective K: Effectively address climate change through adaptation or mitigation in water resource management.	○	○	●	●	○	○	○	○

- IRWM Plan objective directly supports the listed Statewide Priority
- IRWM Plan objective indirectly supports the listed Statewide Priority

**Table 2-2: IRWM Objectives, Targets, and Metrics**

Objectives <i>Specific observable outcomes.</i>	Targets <i>Measurable and tangible actions to achieve the objectives.</i>	Metrics <i>Measurements that can be used to evaluate the actions – may be quantitative or qualitative.</i>	IRWM Program	Project Type						
				Water Supply	Wastewater	Recycled Water	Groundwater	Stormwater	Flood Control	Habitat / Open Space
<b>Objective A: Encourage the development of integrated solutions to address water management issues and conflicts.</b>	1. Encourage the development of partnerships to implement water management projects.	Number of IRWM-funded projects that have multiple partners	x	x	x	x	x	x	x	x
	2. Encourage the development of projects that achieve multiple IRWM Plan objectives.	Number of IRWM-funded projects that contribute to attainment of multiple IRWM Plan objectives	x	x	x	x	x	x	x	x
	3. Encourage the development of projects that integrate multiple Resource Management Strategies.	Number of IRWM-funded projects with multiple Resource Management Strategies	x	x	x	x	x	x	x	x
	4. Encourage the development of projects that provide regional or multi-watershed benefits.	Number of IRWM-funded projects that provide multi-watershed or regional benefits	x	x	x	x	x	x	x	x
	5. Encourage the development of projects that consider multiple hydrologic functions.	Number of IRWM-funded projects addressing multiple watershed functions considering the hydrology of the system (upstream/downstream, surface/groundwater)	x	x	x	x	x	x	x	x
	6. Realize efficiencies by implementing integrated approaches to water management.	Number of benefits per IRWM-funded project	x	x	x	x	x	x	x	x
<b>Objective B: Maximize stakeholder/community involvement and stewardship of water resources, emphasizing education and outreach.</b>	1. Maintain the regional IRWM website to provide centralized public access to IRWM program data and information.	Regular updates to the website Access provided Number of website visits	x							

Objectives <i>Specific observable outcomes.</i>	Targets <i>Measurable and tangible actions to achieve the objectives.</i>	Metrics <i>Measurements that can be used to evaluate the actions – may be quantitative or qualitative.</i>	IRWM Program	Project Type						
				Water Supply	Wastewater	Recycled Water	Groundwater	Stormwater	Flood Control	Habitat / Open Space
	2. Provide access (via active link) to the regional IRWM website to help inform the Region's population about the IRWM program.	Access provided		x	x	x	x	x	x	x
	3. Conduct education and outreach activities to obtain a measurable increase in the regional population's knowledge of sustainable water resources management, including the nexus between water and energy.	Public workshops, meetings and presentations held Outreach activities (brochures, fair booths, landscape contests); Survey results	x	x	x	x	x	x	x	x
	4. Provide "hands-on" stewardship and volunteer opportunities in the Region's watersheds, including underserved and disadvantaged communities.	Stewardship activities held Number of participants (new vs. returning)		x	x	x	x	x	x	x
	5. Encourage the use of partnerships and community contacts to collect and disseminate information on water management.	Partners utilized to collect and disseminate information	x	x	x	x	x	x	x	x
<b>Objective C: Effectively obtain, manage, and assess water resource data and information.</b>	1. Provide centralized public access to key water management data sets and contribute water resources data consistent with established standards to regional data management system (DMS)	Regional DMS developed and populated Data sets that meet quality standards contributed Access to regional water quality sampling and reporting data for public health and environmental protection purposes	x	x	x	x	x	x	x	x
	2. Collect and evaluate water resources data in order to assess and document regional conditions, issues, and potential solutions.	Collected data informs and supports decision-making	x	x	x	x	x	x	x	x

Objectives <i>Specific observable outcomes.</i>	Targets <i>Measurable and tangible actions to achieve the objectives.</i>	Metrics <i>Measurements that can be used to evaluate the actions – may be quantitative or qualitative.</i>	IRWM Program	Project Type						
				Water Supply	Wastewater	Recycled Water	Groundwater	Stormwater	Flood Control	Habitat / Open Space
<b>Objective D: Further scientific and technical foundation of water management.</b>	1. Work with the Regional Board to implement collaborative activities to update, improve, and validate the Basin Plan.	Collaborative activities with Regional Board Development of alternative strategies (such as implementation plans) to maintain compliance with Basin Plan water quality objectives Implementation of Regulatory Workgroup Strategies Number of scientifically-based site-specific objectives developed	x	x	x	x	x	x	x	x
	2. Work with regional flood managers to understand and encourage application of integrated flood management techniques.	Studies/projects implemented	x	x	x	x	x	x	x	x
	3. Promote the inclusion of sustainable water resource management policies in land use plans.	Number and diversity of water resource management policies included in land use plans	x							
	4. Expand the technical foundation of reusing local supplies (i.e. potable reuse, stormwater capture, greywater).	Study outcomes Guidelines or specifications developed Research and development, pilot testing, or conceptual design projects implemented New technologies used	x	x	x	x	x	x	x	x
	5. Apply innovative approaches to understanding the connectivity between regional groundwater and surface water supplies.	Study outcomes Research and development, pilot testing, or conceptual design projects implemented	x	x	x	x	x	x	x	x
	6. Expand the technical foundation of using riparian habitat for greenhouse gas mitigation.	Study outcomes	x							x

Objectives <i>Specific observable outcomes.</i>	Targets <i>Measurable and tangible actions to achieve the objectives.</i>	Metrics <i>Measurements that can be used to evaluate the actions – may be quantitative or qualitative.</i>	IRWM Program	Project Type						
				Water Supply	Wastewater	Recycled Water	Groundwater	Stormwater	Flood Control	Habitat / Open Space
	7. Explore innovative Low Impact Development concepts and develop new solutions to manage runoff.	Study outcomes Research and development, pilot testing, or conceptual design projects implemented	x					x		
<b>Objective E: Develop and maintain a diverse mix of water resources, encouraging their efficient use and development of local water supplies.</b>	1. Conserve or reuse water to meet aggregated retail agency SBX7-7 demand target of 167 gallons per capita day (gpcd) for the region by 2020.	AFY of water conserved AFY of recycled water produced for beneficial use or used by customers Urban and agricultural water conservation programs implemented		x		x				
	2. Increase local supply development (recycled water, groundwater, desalinated water, surface water) in urban areas.	AFY of seawater desalinated AFY of recycled water used Number of new recycled water connections AFY of potable reuse (purified water) used Number of potable reuse projects studied, designed, or implemented AFY of groundwater produced or recharged Maintenance of groundwater levels		x	x	x	x			
	3. Implement Colorado River conservation and transfer programs to augment local supply development.	AFY of Colorado River water delivered		x						
	4. Encourage efficient technologies, water conservation, and recharge area protection in rural areas in order to assure a sustainable long-term supply of groundwater.	AFY of groundwater produced or recharged Maintenance or increase of groundwater levels AFY of water conserved Water use audits performed Well meters installed Studies/projects implemented		x		x	x			

Objectives <i>Specific observable outcomes.</i>	Targets <i>Measurable and tangible actions to achieve the objectives.</i>	Metrics <i>Measurements that can be used to evaluate the actions – may be quantitative or qualitative.</i>	IRWM Program	Project Type						
				Water Supply	Wastewater	Recycled Water	Groundwater	Stormwater	Flood Control	Habitat / Open Space
	5. Develop and implement effective and cost efficient approaches for drinking water source protection.	Studies/projects implemented Improved local water supply quality		x	x	x	x	x	x	x
	6. Protect water supply from invasive Quagga mussels.	Number of sites with Quagga mussels present Amount of Quagga mussels removed, eradicated, or avoided								
<b>Objective F: Construct, operate, and maintain a reliable infrastructure system.</b>	1. Develop facilities and manage supplies to ensure adequate emergency and carry-over deliveries.	AFY of emergency and carry-over supply % of reservoir storage capacity used Increase in operational flexibility		x						
	2. Develop, maintain, and optimize infrastructure and water quality for delivering water, collecting wastewater, capturing stormwater, and transporting storm water and flood flows.	Infrastructure developed Length of conveyance pipe installed Construction or maintenance projects implemented Water quality projects that maintain use of infrastructure		x	x	x	x	x	x	
	3. Encourage innovative approaches to sustain or increase groundwater supplies in rural areas.	AFY of groundwater produced or recharged Infrastructure developed Soil humidity					x			
	4. Create, restore, protect, and maintain habitats that also serve a water resources management function.	Acreage of habitat associated with water resources Acreage of functioning wetlands Volume of transitory flood storage		x				x	x	x
	5. Enable small water systems to effectively construct and maintain their infrastructure.	AFY of supply impacted by project Infrastructure developed Small water systems brought into drinking water compliance Management plans developed		x	x		x			

Objectives <i>Specific observable outcomes.</i>	Targets <i>Measurable and tangible actions to achieve the objectives.</i>	Metrics <i>Measurements that can be used to evaluate the actions – may be quantitative or qualitative.</i>	IRWM Program	Project Type						
				Water Supply	Wastewater	Recycled Water	Groundwater	Stormwater	Flood Control	Habitat / Open Space
<b>Objective G: Enhance natural hydrologic processes to reduce the effects of hydromodification and encourage integrated flood management.</b>	1. Integrate cost-effective flood management benefits into water supply and water quality projects.	Integrated projects implemented AFY of stormwater captured, treated, or reused		x			x	x	x	x
	2. Enhance or restore healthy hydrologic processes in the Region’s watersheds, notably reducing the negative effects of impervious surfaces.	Decrease in peak flow or total runoff Reduction in flood claims Reduction in road closures due to flooding Acreage of impervious surface restored Acreage of functioning wetlands Volume of transitory flood storage						x	x	x
	3. Promote watershed management and land use planning that mitigates or avoids typical hydromodification impacts associated with urbanization.	Policies Acreage of permeable surface protected Acreage of riparian or floodplain buffer protected	x					x	x	x
<b>Objective H: Effectively reduce sources of pollutants and environmental stressors to protect and enhance human health, safety, and the environment.</b>	1. Maintain or improve the water quality entering local reservoirs, groundwater, recharge areas, watersheds, and other local water resources.	AFY flow reduction to ocean outfalls Decrease in pollutant concentrations Pounds of trash removed Pounds of trash prevented from entering water ways Acreage of buffer vegetation planted Strategies employed TMDL implementation plans developed Number of 303(d)-listed water bodies that are de-listed		x	x	x	x	x	x	x

Objectives <i>Specific observable outcomes.</i>	Targets <i>Measurable and tangible actions to achieve the objectives.</i>	Metrics <i>Measurements that can be used to evaluate the actions – may be quantitative or qualitative.</i>	IRWM Program	Project Type							
				Water Supply	Wastewater	Recycled Water	Groundwater	Stormwater	Flood Control	Habitat / Open Space	
		Measured decreases in pollutant concentrations Reduction in MS4 exceedances BMPs implemented									
	2. Implement 3-6 individual groundwater basin plans with stakeholder involvement that adhere to the Salinity/Nutrient Management Guidelines that will assist in the preservation of the quality of the Region's water resources.	Groundwater basin plans implemented		x		x	x		x	x	
	3. Develop and implement effective and cost efficient source management strategies to address regionally-significant constituents (e.g., pathogens, nutrients, sediments, solid waste).	Volume of fertilizer/pesticide applied Amount of organic versus chemical fertilizer applied Decrease in sediment transport Decrease in solid waste Strategies employed		x	x	x	x	x			x
	4. Implement wastewater improvements that reduce the frequency and volume of sanitary sewer overflows within the Region.	Number of sewer overflows Reduced beach postings Volume of sewer overflows per mile of pipe			x						
	5. Implement Low Impact Development (LID) practices to reduce non-stormwater runoff.	Decrease in peak flow or total runoff Volume of water retained						x			
	6. Plan and implement stormwater or natural treatment systems on a watershed scale to improve water quality.	Decrease in pollutant concentrations Reduced beach postings Acreage of functioning wetlands						x	x	x	
	7. Protect and improve groundwater quality in rural basins to ensure compliance with drinking water standards.	Decrease in pollutant concentrations Compliance with MCLs		x		x	x				

Objectives <i>Specific observable outcomes.</i>	Targets <i>Measurable and tangible actions to achieve the objectives.</i>	Metrics <i>Measurements that can be used to evaluate the actions – may be quantitative or qualitative.</i>	IRWM Program	Project Type						
				Water Supply	Wastewater	Recycled Water	Groundwater	Stormwater	Flood Control	Habitat / Open Space
<b>Objective I: Protect, restore, and maintain habitat and open space.</b>	1. Conserve, protect, and restore habitat, open space, and sensitive species associated with water resources, including functional aquatic, riparian, and wetland habitat and associated buffer habitat.	Acreage of habitat or open space Number of parcels acquired Number of sensitive species with potential to occur on site Presence/ absence of sensitive species		x				x	x	x
	2. Reduce, remove, and control sources of sediment and trash	Pounds of trash diverted Pounds of trash collected Metric for sediment						x		
	3. Remove and control non-native invasive plants that are impacting regional water resources.	Acreage of invasive plants % of native planting survival % percent increase in flow capacity Water resources affected					x	x	x	
	4. Monitor, manage, control, and prevent establishment of nuisance aquatic species in the Region.	Water resources affected Increase in operational time due to control		x						x
<b>Objective J: Optimize water-based recreational opportunities.</b>	1. Develop water-based recreational open space that is open to the public and focuses on underserved areas and ensures equal access for disadvantaged communities.	Acreage of open space Number of visitors								
	2. Develop new public access points (boat launch facilities, fishing floats or piers, swim beaches, trails, stairs, parking areas, or similar) to recreational surface waters.	Number of public access points Number of visitors Length of trail Connectivity between existing open spaces		x				x	x	x

Objectives <i>Specific observable outcomes.</i>	Targets <i>Measurable and tangible actions to achieve the objectives.</i>	Metrics <i>Measurements that can be used to evaluate the actions – may be quantitative or qualitative.</i>	IRWM Program	Project Type							
				Water Supply	Wastewater	Recycled Water	Groundwater	Stormwater	Flood Control	Habitat / Open Space	
	3. Improve quality of recreation through interpretation, signage, and ADA access.	Number/length of wheelchair accessible trails Number of visitors utilizing interpretation resources Number of interpretive signs Amount of trees and urban forests									
<b>Objective K: Effectively address climate change through adaptation or mitigation in water resource management.</b>	1. Encourage development of cost-effective and energy efficient strategies for water management projects.	kWh of energy offset Efficiency strategies implemented		x	x	x	x	x	x	x	x
	2. Incorporate adaptation strategies to respond to sea-level rise, rainfall variability, and temperature variability in planning for water and wastewater management.	Adaptation measures implemented		x	x	x	x	x	x	x	x
	3. Reduce or neutralize GHG emissions and embedded energy or capture GHG emissions in water resource management.	GHG emissions offset or neutralized Mitigation measures implemented		x	x	x	x	x	x	x	x

## 2.11 References

California Department of Water Resources (DWR). 2012. *Guidelines: Integrated Regional Water Management, Proposition 84 and 1E*. November 2012. Available: [http://www.water.ca.gov/irwm/grants/docs/Guidelines/GL\\_2012\\_FINAL.pdf](http://www.water.ca.gov/irwm/grants/docs/Guidelines/GL_2012_FINAL.pdf)

## Appendix 1-6: Urban Water Management Compliance

### Urban Water Management Plan Compliance

There are six urban water suppliers included as project proponents within this *San Diego IRWM Drought Solicitation Implementation Grant Proposal*: SDCWA, City of San Diego, Carlsbad, Fallbrook, Rincon, and Sweetwater Authority (see contact information in Attachment 1). As required by the Urban Water Management Planning Act (CWC §10610 *et seq.*), each of these agencies submitted complete 2010 Urban Water Management Plans (UWMP). Four of the agencies (SDCWA, City of San Diego, Carlsbad, and Sweetwater Authority), have received approval by the Department of Water Resources (DWR) regarding their 2010 UWMPs and are currently eligible to receive grant funds (see attached).

The Rincon del Diablo Municipal Water District has received verbal confirmation from DWR that their 2010 and 2013 UWMP Updates have been reviewed and are adequate; however, Rincon has not yet received a formal compliance letter from DWR on this matter. **Appendix 1-6** includes contact information from the representative at DWR who has provided Rincon with verbal confirmation regarding the adequacy of their UWMPs, and notice that a formal approval letter is expected within the coming weeks. Fallbrook Public Utility District had previously been directed by DWR to update their UWMP with additional items; Fallbrook has updated the 2010 UWMP, which will be adopted by the Board of Directors on July 28, 2014. Documentation regarding Fallbrook's revised 2010 UWMP, including the July 28<sup>th</sup> Board Agenda, the draft adoption resolution, and a Staff Report on this matter have been included within **Appendix 1-6**. Due to the timing of finalization of the 2010 UWMP, Fallbrook expects to have formal approval of the UWMP from DWR by the anticipated grant award date of October 16, 2014.

### AB 1420 Compliance

As defined in the *IRWM Grant Program Guidelines*, AB 1420 conditions the receipt of IRWM grant funds on implementation of demand management measures in compliance with CWC §10631. There are six urban water suppliers included in this Proposal that must also comply with AB 1420 requirements: SDCWA, City of San Diego, Carlsbad, Fallbrook, Rincon, and Sweetwater Authority. All six water suppliers have submitted AB 1420 compliance forms to DWR.

The City of San Diego, Carlsbad, and Fallbrook have submitted AB 1420 Self Certification forms to DWR on or after July 1, 2013. Carlsbad and Fallbrook have received confirmations of the receipt of these forms. Those compliance letters are included in **Appendix 1-6** along with electronic copies of the AB 1420 compliance forms from the other three agencies. Hard copies of the AB1420 compliance forms from SDCWA, Rincon, and Sweetwater with wet signatures have also been submitted to DWR via mail.

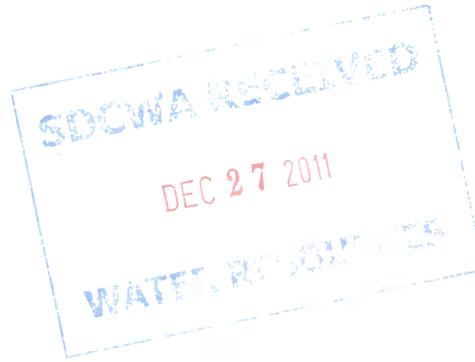
### Water Meter Compliance

As defined in the *IRWM Grant Program Guidelines*, CWC §525 *et seq.* requires urban water suppliers applying for IRWM grant funds to demonstrate that they meet the State's Water Meter requirements. There are six urban water suppliers included in this Proposal that must also comply with Water Meter requirements: SDCWA, City of San Diego, Carlsbad, Fallbrook, Rincon, and Sweetwater Authority. All six of these water suppliers have submitted Water Meter compliance forms to DWR (see **Appendix 1-6**). As the City of San Diego and Carlsbad have already submitted wet (original) hard copies of these forms to DWR, electronic versions of these forms as well as the electronic forms from the other agencies can be found in **Appendix 1-6**. Hard copies of the Water Meter compliance form from SDCWA, Fallbrook, Rincon, and Sweetwater with wet signatures have also been submitted to DWR via mail.



**DEPARTMENT OF WATER RESOURCES**

1416 NINTH STREET, P.O. BOX 942836  
SACRAMENTO, CA 94236-0001  
(916) 653-5791



December 22, 2011

Ms. Kelley Gage  
Sr. Water Resources Specialist  
San Diego County Water Authority  
4677 Overland Avenue  
San Diego, California 92123-1233

Dear Ms. Gage:

The Department of Water Resources (DWR) has reviewed the San Diego County Water Authority's (SDCWA) 2010 Urban Water Management Plan (UWMP) received on July 21, 2011. The California Water Code (CWC) directs DWR to report to the legislature once every five years on the status of submitted plans. In meeting this legislative reporting requirement, DWR reviews all submitted plans.

DWR's review of SDCWA's 2010 plan has found that the plan has addressed the requirements of the CWC. DWR's review of plans is limited to assessing whether suppliers have addressed the required legislative elements. In its review, DWR does not evaluate or analyze the supplier's UWMP data, projections, or water management strategies. This letter simply acknowledges that SDCWA's UWMP has addressed these requirements. The results of the review will also be provided to DWR's Financial Assistance Branch.

If you have any questions regarding the review of the plan or urban water management planning please don't hesitate to email or call.

Sincerely,

A handwritten signature in blue ink, appearing to read "Peter Brostrom".

Peter Brostrom  
UWMP Program Manager  
brostrom@water.ca.gov  
(916) 651-7034

cc: Sergio Fierro  
DWR Southern Regional Office

**DEPARTMENT OF WATER RESOURCES**

1416 NINTH STREET, P.O. BOX 942836  
SACRAMENTO, CA 94236-0001  
(916) 653-5791



December 22, 2011

Mr. Dave Glanville  
Associate Engineer  
City of San Diego  
600 B Street, Ste 600, MS 906  
San Diego, California 92101-4588

Dear Mr. Glanville:

The Department of Water Resources (DWR) has reviewed the City of San Diego's 2010 Urban Water Management Plan (UWMP) received on July 29, 2011. The California Water Code (CWC) directs DWR to report to the legislature once every five years on the status of submitted plans. In meeting this legislative reporting requirement, DWR reviews all submitted plans.

DWR's review of the City of San Diego's 2010 plan has found that the plan has addressed the requirements of the CWC. DWR's review of plans is limited to assessing whether suppliers have addressed the required legislative elements. In its review, DWR does not evaluate or analyze the supplier's UWMP data, projections, or water management strategies. This letter simply acknowledges that the City of San Diego's UWMP has addressed these requirements. The results of the review will also be provided to DWR's Financial Assistance Branch.

If you have any questions regarding the review of the plan or urban water management planning please don't hesitate to email or call.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Brostrom".

Peter Brostrom  
UWMP Program Manager  
brostrom@water.ca.gov  
(916) 651-7034

cc: Sergio Fierro  
DWR Southern Regional Office

**DEPARTMENT OF WATER RESOURCES**1416 NINTH STREET, P.O. BOX 942836  
SACRAMENTO, CA 94236-0001  
(916) 653-5791**RECEIVED**

APR 14 2014

**PUBLIC WORKS**

April 9, 2014

Ms. Kathy Dodson  
Acting City Manager  
City of Carlsbad Municipal Water District  
1200 Carlsbad Village Drive  
Carlsbad, California 92008

Dear Ms. Dodson:

The Department of Water Resources (DWR) has reviewed the City of Carlsbad Municipal Water District's (District) 2010 Urban Water Management Plan (UWMP) received July 7, 2011. The California Water Code (CWC) directs DWR to report to the legislature once every five years on the status of submitted plans. In meeting this legislative reporting requirement, DWR reviews all submitted plans.

DWR's review of the District's 2010 Plan has found that the Plan has generally addressed the overall requirements of the CWC. DWR recommends that when updating this Plan in 2015, the District:

Should provide more information and detail on how service area population was calculated for census years and the years in between for the baseline and compliance water use calculations. The District should also provide the background data and assumptions for the Method 4 target calculations.

By including this information in the 2015 Update, the District will better address the requirements of the California Water Code Section 10608 (f).

DWR's review of plans is limited to assessing whether suppliers have addressed the required legislative elements. In its review, DWR does not evaluate or analyze the supplier's UWMP data, projections, or water management strategies. This letter is meant to acknowledge that the District's 2010 UWMP has addressed these requirements. The results of the review will also be provided to DWR's Financial Assistance Branch.

Ms. Kathy Dodson  
April 9, 2014  
Page 2

If you have any questions regarding the review of the plan or urban water management planning, please do not hesitate to contact me.

---

Sincerely,



Peter Brostrom  
UWMP Program Manager  
brostrom@water.ca.gov  
(916) 651-7034

cc: Mr. Bill Plummer, District Engineer  
City of Carlsbad Municipal Water District  
1635 Faraday Avenue  
Carlsbad, California 92008

Sergio Fierro  
DWR Southern Regional Office

Marty Berbach  
DWR Headquarters Office

Gwen Huff  
DWR Headquarters Office

**DEPARTMENT OF WATER RESOURCES**

1416 NINTH STREET, P.O. BOX 942836  
SACRAMENTO, CA 94236-0001  
(916) 653-5791

File Gen  
UWMP 2010



April 10, 2014

Mr. James L. Smyth  
General Manager  
Sweetwater Authority  
Post Office Box 2328  
Chula Vista, California 91912-2328

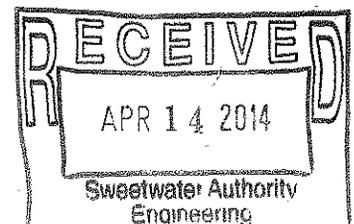
Dear Mr. Smyth:

The Department of Water Resources (DWR) has reviewed the Sweetwater Authority's (Agency) 2010 Urban Water Management Plan (UWMP) received July 11, 2011. The California Water Code (CWC) directs DWR to report to the legislature once every five years on the status of submitted plans. In meeting this legislative reporting requirement, DWR reviews all submitted plan.

DWR' review of the Agency's 2010 UWMP has found that the Plan generally addresses the overall requirements of the CWC. DWR recommends that when updating this Plan in 2015:

The Agency should provide more information and detail on how service area population was calculated for census years and the years in between for the baseline and compliance water use calculations.

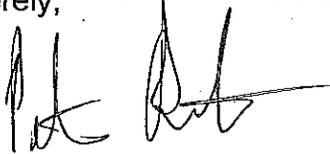
DWR's review of plans is limited to assessing whether suppliers have addressed the required legislative elements. In its review, DWR does not evaluate or analyze the supplier's UWMP data, projections, or water management strategies. This letter is meant to acknowledge that the Agency's 2010 UWMP has addressed these requirements. The results of the review will also be provided to DWR's Financial Assistance Branch.



Mr. James L. Smyth  
April 10, 2014  
Page 2

If you have any questions regarding the review of the plan or urban water management planning, please do not hesitate to contact me.

Sincerely,



Peter Brostrom  
UWMP Program Manager  
[brostrom@water.ca.gov](mailto:brostrom@water.ca.gov)  
(916) 651-7034

cc: Mr. Ron Mosher ✓  
Director of Engineering  
Sweetwater Authority

Sergio Fierro  
DWR Southern Regional Office

Marty Berbach  
DWR Headquarters

Gwen Huff  
DWR Headquarters Office

## Crystal Mohr

---

**From:** Julia Escamilla <jescamilla@rinconwater.org>  
**Sent:** Monday, June 30, 2014 11:07 AM  
**To:** Crystal Mohr  
**Subject:** DWR Conformation of Rincon's UWMP

Hi Crystal:

I wanted to provide you with an update regarding Rincon del Diablo MWD's 2010 Urban Water Management Plan and 2013 Urban Water Management Plan update.

On Friday, June 27<sup>th</sup>, I received a phone call from Joanne Tang (Water Resource Engineer) from DWR. She reported that both our 2010 and 2013 updates had been reviewed and were considered adequate and met the UWMP reporting requirements. A letter was in the processes of being drafted and signed by DWR indicating Rincon's compliance. She said this letter should arrive to us by mail within three weeks. Until then, she said that she could be contacted directly by phone or email as follows:

Joanne Tang  
J [Tang@water.ca.gov](mailto:Tang@water.ca.gov)  
916-651-9847

Regards,

**Julia Escamilla**  
Public Services Information Officer  
[Rincon del Diablo Municipal Water District](http://rinconwater.org)  
Phone – 760.745.5522 X503  
[jescamilla@rinconwater.org](mailto:jescamilla@rinconwater.org)



**FALLBROOK PUBLIC UTILITY DISTRICT  
BOARD OF DIRECTORS  
REGULAR BOARD MEETING**

**A G E N D A**

**MONDAY, JULY 28, 2014  
BEGIN: 4:00 PM**

**DISTRICT OFFICE BOARDROOM  
990 E MISSION RD, FALLBROOK, CA 92028  
PHONE: (760) 728-1125**

*If any accommodations are needed, please contact the Board Secretary at (760) 728-1125. Requests should be made as soon as possible but at least 48 hours prior to the scheduled meeting.*

*Writings that are public records under subdivision (a) and that are distributed during a public meeting shall be made available for public inspection at the meeting if prepared by the local agency or a member of its legislative body, or after the meeting if prepared by some other person. (GC § 54957.5(b))*

**I. PRELIMINARY FUNCTIONS**

CALL TO ORDER / ROLL CALL / ESTABLISH A QUORUM

PLEDGE OF ALLEGIANCE

ADDITIONS TO AGENDA PER GC § 54954.2(b)

APPROVAL OF AGENDA

PUBLIC COMMENT

*Members of the public are invited to address the Board of Directors on any item that is within the subject matter jurisdiction of the legislative body. The Board President may limit comments to three (3) minutes.*

A. EOQ

1. \_\_\_\_\_

B. LONGEVITY AWARD

1. Marcie Eilers

C. MANAGER'S AWARD

1. Jamison Davis

**II. CONSENT CALENDAR -----(ITEMS D - E)**

*All items appearing on the Consent Calendar may be disposed of by a single motion. Items shall be removed from the Consent Calendar if any member of the Board of Directors or the public requests removal prior to a vote on a motion to approve the items. Such items shall be considered separately for action by the Board.*

D. CONSIDER APPROVING MINUTES

1. Regular Board Meeting / Public Hearing of June 23, 2014
2. Special Board Meeting of June 26, 2014

Recommendation: Approve the minutes of the regular board meeting / public hearing of June 23, 2014, and the special board meeting June 26, 2014, of the Board of Directors of the Fallbrook Public Utility District.

E. CONSIDER ADOPTING THE 2010 URBAN WATER MANAGEMENT PLAN WITH THE ADDITION OF BEST MANAGEMENT PRACTICES RESULTS RESOLUTION NO. 4825

Recommendation: That the Board approve the 2010 Urban Water Management Plan with the addition of attachments to Appendix C; and, adopt Resolution No. 4825.

**III. ACTION / DISCUSSION CALENDAR ----- (ITEMS F - I)**

F. CONSIDER CONFLICT OF INTEREST CODE – 2014 BIENNIAL REVIEW AND AMENDING ADMINISTRATIVE CODE, ARTICLE 3, CONFLICT OF INTEREST CODE RESOLUTION NO. 4826

Recommendation: That the Board authorize the General Manager to execute the 2014 Conflict of Interest Code Biennial Review Reply Form to indicate amendments are necessary to “revise the titles of existing positions” and amend Administrative Code, Article 3, Appendix A to update a job title; and, adopt Resolution No. 4826.

G. CLEAN UP THE BURNED AREAS AT PLANT 1 CAUSED FROM THE RECENT TOMAHAWK FIRE

Recommendation: ...

H. CONSIDER AWARD OF MAINLINE LEAK SURVEY SERVICES

Recommendation: That the Board authorize award of the mainline leak detection survey project for fiscal years 2014-15 through 2016-17 to Utility Services Associates for survey of a total of 90 miles of pipeline for an amount not-to-exceed of \$55,778.

I. CONSIDER RECYCLED WATER PUMP REPLACEMENT

Recommendation: ...

**IV. ORAL / WRITTEN REPORTS -----(ITEMS 1 - 7)**

1. General Legal Counsel
2. SDCWA Representative/General Manager
3. Administrative Services Manager/Treasurer
4. Assistant General Manager
5. Operations Manager
6. Public Affairs Specialist
7. Director Comments/Reports on Meetings Attended

ADJOURN TO CLOSED SESSION

**V. CLOSED SESSION**

1. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION PER GC § 54956.9(a): US v. FPUD – Settlement Discussions
2. CONFERENCE WITH LEGAL COUNSEL– POTENTIAL LITIGATION PER GC § 54956.9(d)(2): One Potential Case

RECONVENE TO OPEN SESSION

REPORT FROM CLOSED SESSION (*As Necessary*)

**VI. ADJOURNMENT OF MEETING**

\* \* \* \* \*

**CERTIFICATE OF POSTING**

I, Mary Lou Boultinghouse, Secretary of the Board of Directors of the Fallbrook Public Utility District, do hereby certify that I posted a copy of the foregoing agenda in the glass case at the entrance of the District Office located at 990 East Mission Road, Fallbrook, California, at least 72 hours prior to the meeting in accordance with Government Code § 54954.2(a).

I, Mary Lou Boultinghouse, declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

\_\_\_\_\_  
Dated / Fallbrook, CA

\_\_\_\_\_  
Secretary, Board of Directors

**RESOLUTION NO. 4825**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
FALLBROOK PUBLIC UTILITY DISTRICT ADOPTING THE 2010  
URBAN WATER MANAGEMENT PLAN UPDATE FOR FALLBROOK  
PUBLIC UTILITY DISTRICT**

\* \* \* \* \*

**WHEREAS**, the proper and most effective conservation of our public water resources is essential to ensuring adequate water supplies now and in the future; and

**WHEREAS**, water conservation must be a permanent way of life for all residents living in semi-arid southern California; and

**WHEREAS**, the Fallbrook Public Utility District has updated their Urban Water Management Plan (the "Plan") pursuant to the requirements of California Water Code Section 10621, et. seq.; and

**WHEREAS**, the Plan is the formal document to discuss past, current, and projected water demands; current and alternate conservation measures; water supply deficiencies and future water management practices for the Fallbrook service area.

**NOW, THEREFORE, BE IT RESOLVED BY** the Board of Directors of the Fallbrook Public Utility District as follows:

1. The Board of Directors of the Fallbrook Public Utility District approves and adopts the updated Plan entitled "2010 Urban Water Management Plan update for Fallbrook Public Utility District" with the recent Best Management Practices updates to Appendix C.
2. The General Manager of the District is authorized and directed to implement the water conservation measures included in the updated Plan as the District's part in the local, regional, and statewide water conservation effort.

**PASSED AND ADOPTED** by the Board of Directors of the Fallbrook Public Utility District at a regular meeting of the Board held on the 28<sup>th</sup> of July, 2014, by the following vote:

AYES:  
NOES:  
ABSENT:  
ABSTAIN:

\_\_\_\_\_  
President, Board of Directors

ATTEST:

\_\_\_\_\_  
Secretary, Board of Directors

## M E M O

**TO:** Board of Directors  
**FROM:** Jack Bebee, Assistant General Manager  
**DATE:** July 28, 2014  
**SUBJECT:** Consider Adopting the 2010 Urban Water Management Plan with Addition of Best Management Practices Results  
Resolution No. 4825

---

### Purpose

To request Board adoption of the 2010 Urban Water Management Plan (UWMP) with the attached additions to Appendix C related to the District's compliance with the California Urban Water Agencies Best Management Practices (BMPs).

### Summary

In July 2011, the Board adopted the District's 2010 Urban Water Management Plan (UWMP). The UWMP identified the District's past, current, and projected water demands, conservation measures, and water management practices. A copy of the previously approved 2010 UWMP is available at:

[http://www.fpod.com/PublicRelations/Pressroom/UWMPdraft\\_%202010.pdf](http://www.fpod.com/PublicRelations/Pressroom/UWMPdraft_%202010.pdf)

As part of the adopted UWMP it was noted that the Best Management Practices Section in Appendix C was being revised based on changes in the reporting forms. Attached are the updated reporting forms that are to be added to Appendix C of the previously adopted UWMP. The UWMP must be amended to include the attached in order for the District to be eligible for state funding. There are no other changes.

### Recommended Action

That the Board approve the attached resolution adopting the 2010 Urban Water Management Plan with the addition of the attached documents to Appendix C; and, adopt Resolution No. 4825.



**DEPARTMENT OF WATER RESOURCES**1416 NINTH STREET, P.O. BOX 942836  
SACRAMENTO, CA 94236-0001  
(916) 653-5791**RECEIVED**

APR 04 2014

**PUBLIC WORKS**

April 2, 2014

Mr. David Ahles  
Senior Engineer  
Carlsbad Municipal Water District  
1635 Faraday Avenue  
Carlsbad, California 92008

Dear Mr. Ahles:

The Department of Water Resources (DWR) has reviewed Carlsbad Municipal Water District's (CMWD) Self-Certification Statement – Table 1 submitted on January 28, 2014, regarding implementation of the Urban Best Management Practices (BMPs).

The purpose of DWR's review is to determine CMWD's eligibility to receive water management grant or loan funds. DWR has followed the *AB 1420 Compliance Requirements* dated January 1, 2009. For detailed information, please visit <http://www.water.ca.gov/wateruseefficiency/finance/>.

Based on DWR's review of the information in Table 1, CMWD has and is currently implementing the BMPs consistent with AB 1420 and, therefore, is eligible to receive water management grant or loan funds.

DWR reserves the right to request additional information and documentation, including reports from CMWD to substantiate the accuracy of the information provided in Table 1. DWR may reverse or modify its eligibility determination and notify you and the funding agency if inaccuracies are found in the supporting documentation or in Table 1.

If you have any questions, please contact me at (916) 651-7034 or Betsy Vail at (916) 651-9667.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Brostrom".

Peter Brostrom  
Urban Water Unit  
Water Use and Efficiency Branch

**DEPARTMENT OF WATER RESOURCES**

1416 NINTH STREET, P.O. BOX 942836  
SACRAMENTO, CA 94236-0001  
(916) 653-5791



July 10, 2014

Mr. Jack Bebee  
Assistant General Manager  
Fallbrook Public Utility District  
P.O. Box 2290  
Fallbrook, California 92088-2290

Dear Mr. Bebee:

The Department of Water Resources (DWR) has reviewed Fallbrook Public Utility District's (FPUD) Self-Certification Statement – Table 1 submitted on July 1, 2014, regarding implementation of the Urban Best Management Practices (BMPs).

The purpose of DWR's review is to determine FPUD's eligibility to receive water management grant or loan funds. DWR has followed the *AB 1420 Compliance Requirements* dated January 1, 2009. For detailed information, please visit <http://www.water.ca.gov/wateruseefficiency/finance/>.

Based on DWR's review of the information in Table 1, FPUD has and is currently implementing the BMPs consistent with AB 1420 and, therefore, is eligible to receive water management grant or loan funds.

DWR reserves the right to request additional information and documentation, including reports from FPUD to substantiate the accuracy of the information provided in Table 1. DWR may reverse or modify its eligibility determination and notify you and the funding agency if inaccuracies are found in the supporting documentation or in Table 1.

If you have any questions, please contact me at (916) 651-7034 or Betsy Vail at (916) 651-9667.

Sincerely,

A handwritten signature in blue ink, appearing to read "Peter Brostrom".

Peter Brostrom  
Urban Water Unit  
Water Use and Efficiency Branch



BMPs required for Wholesaler Supplier	BMPs required for Retail Supplier	BMP Implemented by Retailers and/or Wholesalers / BMP			Compliance Options/Alternative Conservation Approaches (1)			BMP Is Exempt (2)			BMP Implementation Requirements Met						
		Retailer Yes/No	Wholesaler Yes/No	Regional Yes/No	BMP Checklist	Flex Track	Gallons Per Capita Per Day GPCD	Not Cost Effective	Lack of Funding	Lack of Legal Authority	CUWCC MOU Requirement Met: Retailer Yes/No	CUWCC MOU Requirement Met: Wholesaler Yes/No	Date of BMP Report Submitted to CUWCC for (2007-2008) (MOU Signatories) (3)	Date BMP Implementation Data Submitted to DWR in CUWCC Format (Non MOU Signatories) (3)	All Supporting Documents have been Submitted Yes/No		
		BMP 5 Large Landscape Conservation Programs and Incentives															
	✓	BMP 6 High-Efficiency Washing Machine Rebate Programs	N/A														
✓		BMP 7 Public Information	YES						V								YES
✓		BMP 8 School Education	YES						V								YES
		BMP 9 Conservation programs for Commercial, Industrial, and Institutional (CII) Accounts	N/A														
✓		BMP 10 Wholesale Agency Assistance Programs	N/A														
	✓	BMP 11 Conservation Pricing	YES														YES
✓		BMP 12 Conservation Coordinator	YES														
	✓	BMP 13 Water Waste Prohibitions	YES														YES
	✓	BMP 14 Residential ULFT Replacement Programs	N/A														YES

\*C6: Wholesaler may also be a retailer (supplying water to end water users)  
 \*\*C8, \*\*C9, \*\* and C10: Agencies choosing an alternative conservation approach are responsible for achieving water savings equal or greater than that which they would have achieved using only BMP list.

(1) For details, please see: <http://www.cuwcc.org/mou/exhibit-1-bmp-definitions-schedules-requirements.aspx>.

(2) BMP is exempt based on cost-effectiveness, lack of funding, and lack of legal authority criteria as detailed in the CUWCC MOU

(3) Non MOU signatories must submit to DWR reports and supporting documents in the same format as CUWCC.

**AB 1420 Self-Certification Statement Table 1**

Note: Table 1 documents Status of Past and Current BMP implementation.

**Self-Certification Statement:** The Urban Water Supplier and its authorized representative certifies, under penalty of perjury, that all information and claims, stated in this table, regarding compliance and implementation of the BMPs, including alternative conservation approaches, are true and accurate. This signed AB 1420 Self-Certification Statement Table 1, and Table 2 are the basis for granting funds by the Funding Agency. Falsification and/or inaccuracies in AB 1420 Self Certification Statement Table 1, and Table 2 and in any supporting documents substantiating such claims may, at the discretion of the funding agency, result in loss of all State funds to the applicant. Additionally, the Funding Agency, in its sole discretion, may halt disbursement of grant or loan funds, not pay pending invoices, and/or pursue any other applicable legal remedy and refer the matter to the Attorney General's Office.

Name of Signatory: Rincón del Diablo Municipal Water District Title of Signatory: General Manager Signature of signatory:  Date: 06/30/2014

**Application Date:**

Proposal Identification Number:  CUVCC Member? Yes/No  Yes  No

Has Urban Water Supplier submitted a 2010 an Water Management Plan? Yes/No  Yes  No

Is the UWM Plan Deemed Complete by DWR? Yes/No  Yes  No

Applicant Name:

**Project Title:** Rincón Customer-Driven Demand Management Program

Applicant's Contact Information: Name:  Phone:  E-mail:

**Participants:**

<i>Retailer (List Below)</i>	<i>Wholesaler (List Below)</i>
Rincón del Diablo Municipal Water District	San Diego County Water Authority

C1	C2	C3	C4	C5	C6	C7	**C8	**C9	**C10	C11	C12	C13	C14	C15	C16	C17	C18	
BMPs required for Wholesale Supplier	BMPs required for Retail Supplier	BMPs required for Single/Multi-Family Residential Customers	BMP 1 Water Survey for Single/Multi-Family Residential Customers	BMP 2 Residential Plumbing Retrofit	BMP 3 System Water Audits, Leak Detection	BMP 3 Leak Repairs	BMP 4 Metering with Commodity Rates for All New connections	BMP 4 Retrofit of Existing Connections	BMP Implemented by Retailers and/or Wholesalers / BMP			BMP Is Exempt (2)			BMP Implementation Requirements Met			
									Retailer Yes/No	Wholesaler Yes/No	Regional Yes/No	Not Cost Effective	Lack of Funding	Lack of Legal Authority	CUWCC MOU Requirement Met: Retailer Yes/No	CUWCC MOU Requirement Met: Wholesaler Yes/No	Date of BMP Report Submitted to CUWCC for (2007-2008) (MOU Signatories)	Date BMP Implementation Data Submitted to DWR in CUWCC Format (Non MOU Signatories) (3)
✓	✓	✓	yes	yes	yes	yes												
✓	✓	✓	yes	yes	yes	yes	X	X					yes				2/21/2014	Yes
✓	✓	✓	yes	yes	yes	yes	X	X					yes				2/21/2014	Yes
✓	✓	✓	yes	yes	yes	yes	X	X					yes				2/21/2014	Yes
✓	✓	✓	yes	yes	yes	yes	X	X					yes				2/21/2014	Yes

BMPs required for Wholesaler Supplier	BMPs required for Retail Supplier	BMP Implemented by Retailers and/or Wholesalers / BMP			Compliance Options/Alternative Conservation Approaches (1)			BMP Is Exempt (2)			BMP Implementation Requirements Met												
		Wholesaler Yes/No	Regional Yes/No	BMP Checklist	Flex Track	Gallons Per Capita Per Day GPCD	Not Cost Effective	Lack of Funding	Lack of Legal Authority	CUWCC MOU Requirement Met: Retailer Yes/No	CUWCC MOU Requirement Met: Wholesaler Yes/No	Date of BMP Report Submitted to CUWCC for (2007-2008) (MOU Signatories) (3)	Date BMP Implementation Data Submitted to DWR in CUWCC Format (Non MOU Signatories) (3)	All Supporting Documents have been Submitted Yes/No									
	✓	BMP 5 Large Landscape Conservation Programs and Incentives																					
	✓	BMP 6 High-Efficiency Washing Machine Rebate Programs																					
✓	✓	BMP 7 Public Information	yes				x											2/21/2014	Yes				
✓	✓	BMP 8 School Education	yes				x											2/21/2014	Yes				
	✓	BMP 9 Conservation programs for Commercial, Industrial, and Institutional (CII) Accounts																					
✓		BMP 10 Wholesale Agency Assistance Programs																					
	✓	BMP 11 Conservation Pricing								x									2/21/2014	Yes			
✓	✓	BMP 12 Conservation Coordinator								x										2/21/2014	Yes		
	✓	BMP 13 Water Waste Prohibitions								x											2/21/2014	Yes	
	✓	BMP 14 Residential ULFT Replacement Programs								x												2/21/2014	Yes

\*C6: Wholesaler may also be a retailer (supplying water to end water users)  
 \*\*C8, \*\*C9, \*\*, and C10: Agencies choosing an alternative conservation approach are responsible for achieving water savings equal or greater than that which they would have achieved using only BMP list.

(1) For details, please see: <http://www.cuwcc.org/mou/exhibit-1-bmp-definitions-schedules-requirements.aspx>.

(2) BMP is exempt based on cost-effectiveness, lack of funding, and lack of legal authority criteria as detailed in the CUWCC MOU

(3) Non MOU signatories must submit to DWR reports and supporting documents in the same format as CUWCC.



C1	C2	C3	C4	C5	C6	C7	**C8	**C9	**C10	C11	C12	C13	C14	C15	C16	C17	C18
		BMPs required for Wholesale Supplier	BMPs required for Retail Supplier	BMP Implemented by Retailers and/or Wholesalers / BMP		Compliance Options/Alternative Conservation Approaches (1)			BMP Is Exempt (2)			BMP Implementation Requirements Met					
			BMPs	Wholesaler Yes/No	Regional Yes/No	BMP Checklist	Flex Track	Gallons Per Capita Per Day GPCD	Not Cost Effective	Lack of Funding	Lack of Legal Authority	CUWCC MOU Requirement Met: Retailer Yes/No	CUWCC MOU Requirement Met: Wholesaler Yes/No	Date of BMP Report Submitted to CUWCC for (2007-2008) (MOU Signatories)	Date BMP Implementation Data Submitted to DWR in CUWCC Format (Non MOU Signatories) (3)	All Supporting Documents have been Submitted Yes/No	
			BMP 5 Large Landscape Conservation Programs and Incentives					yes				yes		12/31/2008		yes	
			BMP 6 High-Efficiency Washing Machine Rebate Programs					yes				yes		12/31/2008		yes	
			BMP 7 Public Information	yes								yes		12/31/2008		yes	
			BMP 8 School Education	yes								yes		12/31/2008		yes	
			BMP 9 Conservation programs for Commercial, Industrial, and Institutional (CII) Accounts									yes		12/31/2008		yes	
			BMP 10 Wholesale Agency Assistance Programs					yes				yes		12/31/2008		yes	
			BMP 11 Conservation Pricing	yes								yes		12/31/2008		yes	
			BMP 12 Conservation Coordinator	yes								yes		12/31/2008		yes	
			BMP 13 Water Waste Prohibitions	yes								yes		12/31/2008		yes	
			BMP 14 Residential ULFT Replacement Programs	yes								yes		12/31/2008		yes	
								yes				yes		12/31/2008		yes	

\*C6: Wholesaler may also be a retailer (supplying water to end water users)  
 \*\*C8, \*\*C9, \*\*C10: Agencies choosing an alternative conservation approach are responsible for achieving water savings equal or greater than that which they would have achieved using only BMP list.

(1) For details, please see: <http://www.cuwcc.org/mou/exhibit-1-bmp-definitions-schedules-requirements.aspx>.

(2) BMP is exempt based on cost-effectiveness, lack of funding, and lack of legal authority criteria as detailed in the CUWCC MOU

(3) Non MOU signatories must submit to DWR reports and supporting documents in the same format as CUWCC.



California State Water Resources Control Board  
California Department of Water Resources  
California Department of Public Health



**CERTIFICATION FOR  
COMPLIANCE WITH WATER METERING REQUIREMENTS  
FOR FUNDING APPLICATIONS**

Funding Agency name: State of California Department of Water Resources  
Funding Program name: Integrated Regional Water Management Grant Program  
Applicant (Agency): San Diego County Water Authority  
Project Title (as shown on application form): San Diego IRWM Proposition 84 Implementation Grants

Please check one of the boxes below and sign and date this form.

As the authorized representative for the applicant agency, I certify under penalty of perjury under the laws of the State of California, that the agency is not an urban water supplier, as that term is understood pursuant to the provisions of section 529.5 of the Water Code.

As the authorized representative for the applicant agency, I certify under penalty of perjury under the laws of the State of California, that the applicant agency has fully complied with the provisions of Division 1, Chapter 8, Article 3.5 of the California Water Code (sections 525 through 529.7 inclusive) and that ordinances, rules, or regulations have been duly adopted and are in effect as of this date.

I understand that the Funding Agency will rely on this signed certification in order to approve funding and that false and/or inaccurate representations in this Certification Statement may result in loss of all funds awarded to the applicant for its project. Additionally, for the aforementioned reasons, the Funding Agency may withhold disbursement of project funds, and/or pursue any other applicable legal remedy.

Ken Weinbers  
Name of Authorized Representative  
(Please print)

Director of Water Resources  
Title

[Signature]  
Signature

7/16/14  
Date

California State Water Resources Control Board  
 California Department of Water Resources  
 California Department of Public Health



**CERTIFICATION FOR  
 COMPLIANCE WITH WATER METERING REQUIREMENTS  
 FOR FUNDING APPLICATIONS**

Funding Agency name:	California Department of Water Resources
Funding Program name:	IRWM - Proposition 84 Round 3 Funding
Applicant (Agency name):	City of San Diego - Public Utilities Department
Project Title (as shown on application form):	City of San Diego Potable Water Use Reduction & Drought Relief Project

Please check one of the boxes below and sign and date this form.

As the authorized representative for the applicant agency, I certify under penalty of perjury under the laws of the State of California, that the agency is not an urban water supplier, as that term is understood pursuant to the provisions of section 529.5 of the Water Code.

As the authorized representative for the applicant agency, I certify under penalty of perjury under the laws of the State of California, that the applicant agency has fully complied with the provisions of Division 1, Chapter 8, Article 3.5 of the California Water Code (sections 525 through 529.7 inclusive) and that ordinances, rules, or regulations have been duly adopted and are in effect as of this date.

I understand that the Funding Agency will rely on this signed certification in order to approve funding and that false and/or inaccurate representations in this Certification Statement may result in loss of all funds awarded to the applicant for its project. Additionally, for the aforementioned reasons, the Funding Agency may withhold disbursement of project funds, and/or pursue any other applicable legal remedy.

<p>Marie Wright-Travis          _____          Name of Authorized Representative          (Please print)</p> <p>Assistant Director          _____          Title</p>	<p><i>Marie Wright-Travis</i>          _____          Signature</p> <p>6/4/14          _____          Date</p>
--	--

California State Water Resources Control Board  
California Department of Water Resources  
California Department of Public Health



**CERTIFICATION FOR  
COMPLIANCE WITH WATER METERING REQUIREMENTS  
FOR FUNDING APPLICATIONS**

Funding Agency name: California Department of Water Resources  
Funding Program name: Prop 84 - 2014 IRWM Grant Program  
Applicant (Agency name): Fallbrook Public Utility District  
Project Title (as shown on application form): FPUD Plant Nurseries  
Recycled Waterline Extension

Please check one of the boxes below and sign and date this form.

As the authorized representative for the applicant agency, I certify under penalty of perjury under the laws of the State of California, that the agency is not an urban water supplier, as that term is understood pursuant to the provisions of section 529.5 of the Water Code.

As the authorized representative for the applicant agency, I certify under penalty of perjury under the laws of the State of California, that the applicant agency has fully complied with the provisions of Division 1, Chapter 8, Article 3.5 of the California Water Code (sections 525 through 529.7 inclusive) and that ordinances, rules, or regulations have been duly adopted and are in effect as of this date.

January 1, 2010

I understand that the Funding Agency will rely on this signed certification in order to approve funding and that false and/or inaccurate representations in this Certification Statement may result in loss of all funds awarded to the applicant for its project. Additionally, for the aforementioned reasons, the Funding Agency may withhold disbursement of project funds, and/or pursue any other applicable legal remedy.

Jack Bebee

Name of Authorized Representative  
(Please print)

  
Signature

Assistant General Manager

Title

6/13/14

Date

**CERTIFICATION FOR COMPLIANCE WITH WATER METERING  
REQUIREMENTS FOR FUNDING APPLICATIONS**



Funding Agency name: State Water Resources Control Board

Funding Program name: Clean Water State Revolving Fund

Applicant (Agency name): Carlsbad Municipal Water District

Please check one of the boxes below and sign and date this form.

As the authorized representative for the applicant agency, I certify under penalty of perjury that the agency is not an urban water supplier, as that term is understood pursuant to the provisions of section 529.5 of the Water Code.

As the authorized representative for the applicant agency, I certify under penalty of perjury that the applicant agency has fully complied with the provisions of Division 1, Chapter 8, Article 3.5 of the California Water Code (sections 525 through 529.7 inclusive) and that the ordinances, rules, or regulations submitted with this certification as listed below have been duly adopted and are in effect as of this date.

---

I understand that the Funding Agency will rely on this signed certification in order to approve funding and that false and/or inaccurate representations in this Certification Statement may result in loss of all funds awarded to the applicant for its project. Additionally, for the aforementioned reasons, the Funding Agency may withhold disbursement of project funds, and/or pursue any other applicable legal remedy.

*Skip Hammann Jr*  
Name of Authorized Representative  
Skip Hammann Jr

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Public Works Director

8-29-13  
Date

California State Water Resources Control Board  
California Department of Water Resources  
California Department of Public Health



**CERTIFICATION FOR  
COMPLIANCE WITH WATER METERING REQUIREMENTS  
FOR FUNDING APPLICATIONS**

Funding Agency name: Department of Water Resources

Funding Program name: 2014 IRWM Drought Solicitation

Applicant (Agency name): Rincon del Diablo Municipal Water District

Project Title (as shown on application form): Conservation on Demand: Advanced

Metering Infrastructure-Facilitated Conservation

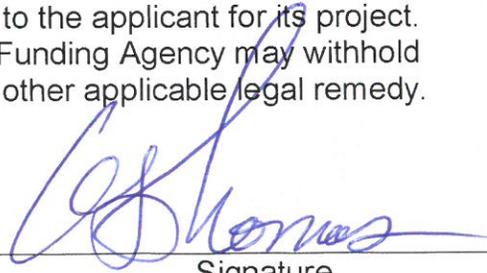
Please check one of the boxes below and sign and date this form.

As the authorized representative for the applicant agency, I certify under penalty of perjury under the laws of the State of California, that the agency is not an urban water supplier, as that term is understood pursuant to the provisions of section 529.5 of the Water Code.

As the authorized representative for the applicant agency, I certify under penalty of perjury under the laws of the State of California, that the applicant agency has fully complied with the provisions of Division 1, Chapter 8, Article 3.5 of the California Water Code (sections 525 through 529.7 inclusive) and that ordinances, rules, or regulations have been duly adopted and are in effect as of this date.

I understand that the Funding Agency will rely on this signed certification in order to approve funding and that false and/or inaccurate representations in this Certification Statement may result in loss of all funds awarded to the applicant for its project. Additionally, for the aforementioned reasons, the Funding Agency may withhold disbursement of project funds, and/or pursue any other applicable legal remedy.

Greg Thomas  
Name of Authorized Representative  
(Please print)

  
Signature

General Manager  
Title

6/10/14  
Date

California State Water Resources Control Board  
California Department of Water Resources  
California Department of Public Health



**CERTIFICATION FOR  
COMPLIANCE WITH WATER METERING REQUIREMENTS  
FOR FUNDING APPLICATIONS**

Funding Agency name: DWR  
Funding Program name: IRWM Grant Program  
Applicant (Agency name): Sweetwater Authority  
Project Title (as shown on application form): Reynolds Groundwater Desalination  
Facility Expansion

Please check one of the boxes below and sign and date this form.

As the authorized representative for the applicant agency, I certify under penalty of perjury under the laws of the State of California, that the agency is not an urban water supplier, as that term is understood pursuant to the provisions of section 529.5 of the Water Code.

As the authorized representative for the applicant agency, I certify under penalty of perjury under the laws of the State of California, that the applicant agency has fully complied with the provisions of Division 1, Chapter 8, Article 3.5 of the California Water Code (sections 525 through 529.7 inclusive) and that ordinances, rules, or regulations have been duly adopted and are in effect as of this date.

I understand that the Funding Agency will rely on this signed certification in order to approve funding and that false and/or inaccurate representations in this Certification Statement may result in loss of all funds awarded to the applicant for its project. Additionally, for the aforementioned reasons, the Funding Agency may withhold disbursement of project funds, and/or pursue any other applicable legal remedy.

James L. Smyth  
Name of Authorized Representative  
(Please print)  
General Manager

[Signature]  
Signature

6-20-14

Title

Date

## **Appendix 1-7: Agricultural Water Management Compliance**

None of the project proponents are agricultural water suppliers, and all agricultural water demands supplied by the project proponents are included in their respective Urban Water Management Plans, therefore there are no Agricultural Water Management Plans required for any of the project proponents.



## Appendix 1-8: Surface Water Diverter Compliance

SDCWA, City of San Diego, Fallbrook, and Sweetwater Authority are surface water diverters. Each of these project proponents has submitted surface water diversion reports to the State Water Resources Control Board (SWRCB) in compliance with Part 5.1 of Division 2 of the CWC. The most recent diversion reports downloaded from the SWRCB's website are included as **Appendix 1-8**. Contact information for these surface water diverters is provided in Attachment 1.



**[SUMMARY OF FINAL SUBMITTED VERSION]**

**REPORT OF LICENSEE FOR 2012**

Primary Owner: CITY OF SAN DIEGO  
 Primary Contact: CITY OF SAN DIEGO

Date Submitted: 2013-09-04

Application Number: A002992  
 License Number: 002674

Source(s) of Water	POD Parcel Number	County
FLUME NINE CREEK		San Diego

MAX Direct Diversion Rate: 0.0 GPD  
 MAX Collection to Storage: 298.0 AC-FT  
 Face Value: 298.0 AC-FT

Licensed Use(s)	Acres	Direct Diversion Season	Storage Season
Municipal	0.0		

**1. Project Abandoned**

The project has been abandoned and I request revocation of my water right license	No
---	----

**2. Compliance with License Terms and Conditions**

I have currently reviewed my water right license and I am complying with all terms and conditions	Yes
Description of noncompliance with terms and conditions	

**3. Changes to the Project**

Intake location has been changed	
Description of intake location changes	
Type of use has changed	
Description of type of use changes	
Place of use has changed	
Description of place of use changes	
Other changes	
Description of other changes	

**4. Purpose of Use**

Other	Storage
Municipal	1376173

**5. Amount of Water Diverted and Used**

Month	Amount directly diverted or collected to storage (Acre-Feet)	Amount used (Acre-Feet)
January	50	50
February	50	50
March	50	50
April	50	50
May	48	48

June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	50	50
Total	298	298
Comments		

**6. Maximum Rate of Diversion for each Month**

Month	Maximum Rate of Diversion ( )
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

**7. Storage**

Reservoir name	Spilled this year	Feet below spillway at maximum storage	Completely emptied	Feet below spillway at minimum storage	Method used to measure water level
Lower Otay Reservoir	No	7.3	No	9	Reservoir water gauge

**Conservation of Water**

8. Are you now employing water conservation efforts?	No
Description of water conservation efforts	
9. Amount of water conserved	

**Water Quality and Wastewater Reclamation**

10. During the period covered by this Report, did you use reclaimed water from a wastewater treatment facility, water from a desalination facility, or water polluted by waste to a degree which unreasonably affects the water for other beneficial uses?	No
11. Amount of reclaimed, desalinated, or polluted water used	

**Conjunctive Use of Groundwater and Surface Water**

12. During the period covered by this Report, were you using groundwater in lieu of available surface water authorized under your license?	No
13. Amounts of groundwater used	

**Additional Remarks****Attachments****File Name****Description****Size**

No Attachments

**Contact Information of the Person Submitting the Form**

First Name

Rosalva

Last Name

Morales

Relation to Water Right

Authorized  
OfficialHas read the form and agrees the information in the report is true to the best of his/her  
knowledge and belief

Yes

**[SUMMARY OF FINAL SUBMITTED VERSION]**

**REPORT OF LICENSEE FOR 2012**

Primary Owner: CITY OF SAN DIEGO  
 Primary Contact: CITY OF SAN DIEGO

Date Submitted: 2013-09-04

Application Number: A002992  
 License Number: 002674

Source(s) of Water	POD Parcel Number	County
FLUME NINE CREEK		San Diego

MAX Direct Diversion Rate: 0.0 GPD  
 MAX Collection to Storage: 298.0 AC-FT  
 Face Value: 298.0 AC-FT

Licensed Use(s)	Acres	Direct Diversion Season	Storage Season
Municipal	0.0		

**1. Project Abandoned**

The project has been abandoned and I request revocation of my water right license	No
---	----

**2. Compliance with License Terms and Conditions**

I have currently reviewed my water right license and I am complying with all terms and conditions	Yes
Description of noncompliance with terms and conditions	

**3. Changes to the Project**

Intake location has been changed	
Description of intake location changes	
Type of use has changed	
Description of type of use changes	
Place of use has changed	
Description of place of use changes	
Other changes	
Description of other changes	

**4. Purpose of Use**

Other	Storage
Municipal	1376173

**5. Amount of Water Diverted and Used**

Month	Amount directly diverted or collected to storage (Acre-Feet)	Amount used (Acre-Feet)
January	50	50
February	50	50
March	50	50
April	50	50
May	48	48

June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	50	50
Total	298	298
Comments		

**6. Maximum Rate of Diversion for each Month**

Month	Maximum Rate of Diversion ( )
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

**7. Storage**

Reservoir name	Spilled this year	Feet below spillway at maximum storage	Completely emptied	Feet below spillway at minimum storage	Method used to measure water level
Lower Otay Reservoir	No	7.3	No	9	Reservoir water gauge

**Conservation of Water**

8. Are you now employing water conservation efforts?	No
Description of water conservation efforts	
9. Amount of water conserved	

**Water Quality and Wastewater Reclamation**

10. During the period covered by this Report, did you use reclaimed water from a wastewater treatment facility, water from a desalination facility, or water polluted by waste to a degree which unreasonably affects the water for other beneficial uses?	No
11. Amount of reclaimed, desalinated, or polluted water used	

**Conjunctive Use of Groundwater and Surface Water**

12. During the period covered by this Report, were you using groundwater in lieu of available surface water authorized under your license?	No
13. Amounts of groundwater used	

**Additional Remarks****Attachments****File Name****Description****Size**

No Attachments

**Contact Information of the Person Submitting the Form**

First Name

Rosalva

Last Name

Morales

Relation to Water Right

Authorized  
OfficialHas read the form and agrees the information in the report is true to the best of his/her  
knowledge and belief

Yes

[SUMMARY OF FINAL SUBMITTED VERSION]

REPORT OF LICENSEE FOR 2012

Primary Owner: CITY OF SAN DIEGO
Primary Contact: CITY OF SAN DIEGO

Date Submitted: 2013-09-04

Application Number: A002995
License Number: 002677

Source(s) of Water POD Parcel Number County
MATCHIN CREEK San Diego

MAX Direct Diversion Rate: 0.0 GPD
MAX Collection to Storage: 436.0 AC-FT
Face Value: 436.0 AC-FT

Licensed Use(s) Acres Direct Diversion Season Storage Season
Municipal 0.0

1. Project Abandoned

Table with 2 columns: Description and Yes/No. Row 1: The project has been abandoned and I request revocation of my water right license | No

2. Compliance with License Terms and Conditions

Table with 2 columns: Description and Yes/No. Row 1: I have currently reviewed my water right license and I am complying with all terms and conditions | Yes

3. Changes to the Project

Table with 2 columns: Description and Yes/No. Rows include: Intake location has been changed, Description of intake location changes, Type of use has changed, Description of type of use changes, Place of use has changed, Description of place of use changes, Other changes, Description of other changes.

4. Purpose of Use

Table with 2 columns: Other and Storage.

5. Amount of Water Diverted and Used

Table with 3 columns: Month, Amount directly diverted or collected to storage (Acre-Feet), Amount used (Acre-Feet). Rows for January through June.

July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	80	80
Total	436	436
Comments		

**6. Maximum Rate of Diversion for each Month**

Month	Maximum Rate of Diversion ( )
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

**7. Storage**

Reservoir name	Spilled this year	Feet below spillway at maximum storage	Completely emptied	Feet below spillway at minimum storage	Method used to measure water level
Lower Otay Reservoir	No	7.3	No	9.05	Reservoir water gauge

**Conservation of Water**

8. Are you now employing water conservation efforts?	No
Description of water conservation efforts	
9. Amount of water conserved	

**Water Quality and Wastewater Reclamation**

10. During the period covered by this Report, did you use reclaimed water from a wastewater treatment facility, water from a desalination facility, or water polluted by waste to a degree which unreasonably affects the water for other beneficial uses?	No
11. Amount of reclaimed, desalinated, or polluted water used	

**Conjunctive Use of Groundwater and Surface Water**

12. During the period covered by this Report, were you using groundwater in lieu of available surface water authorized under your license?	No
13. Amounts of groundwater used	

**Additional Remarks**

--

--

<b>Attachments</b>		
<b>File Name</b>	<b>Description</b>	<b>Size</b>
No Attachments		

<b>Contact Information of the Person Submitting the Form</b>	
First Name	Rosalva
Last Name	Morales
Relation to Water Right	Authorized Official
Has read the form and agrees the information in the report is true to the best of his/her knowledge and belief	Yes

**[SUMMARY OF FINAL SUBMITTED VERSION]**

**REPORT OF LICENSEE FOR 2012**

Primary Owner: CITY OF SAN DIEGO  
 Primary Contact: CITY OF SAN DIEGO

Date Submitted: 2013-09-04

Application Number: A002993  
 License Number: 002675

Source(s) of Water	POD Parcel Number	County
RATTLESNAKE CREEK		San Diego

MAX Direct Diversion Rate: 0.0 GPD  
 MAX Collection to Storage: 660.0 AC-FT  
 Face Value: 660.0 AC-FT

Licensed Use(s)	Acres	Direct Diversion Season	Storage Season
Municipal	0.0		

**1. Project Abandoned**

The project has been abandoned and I request revocation of my water right license	No
---	----

**2. Compliance with License Terms and Conditions**

I have currently reviewed my water right license and I am complying with all terms and conditions	Yes
Description of noncompliance with terms and conditions	

**3. Changes to the Project**

Intake location has been changed	
Description of intake location changes	
Type of use has changed	
Description of type of use changes	
Place of use has changed	
Description of place of use changes	
Other changes	
Description of other changes	

**4. Purpose of Use**

Other	Storage
Municipal	1376173

**5. Amount of Water Diverted and Used**

Month	Amount directly diverted or collected to storage (Acre-Feet)	Amount used (Acre-Feet)
January	110	110
February	110	110
March	110	110
April	110	110
May	110	110

June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	110	110
Total	660	660
Comments		

**6. Maximum Rate of Diversion for each Month**

Month	Maximum Rate of Diversion ( )
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

**7. Storage**

Reservoir name	Spilled this year	Feet below spillway at maximum storage	Completely emptied	Feet below spillway at minimum storage	Method used to measure water level
Lower Otay Reservoir	No	7.3	No	9	Reservoir Water Gauge

**Conservation of Water**

8. Are you now employing water conservation efforts?	No
Description of water conservation efforts	
9. Amount of water conserved	

**Water Quality and Wastewater Reclamation**

10. During the period covered by this Report, did you use reclaimed water from a wastewater treatment facility, water from a desalination facility, or water polluted by waste to a degree which unreasonably affects the water for other beneficial uses?	No
11. Amount of reclaimed, desalinated, or polluted water used	

**Conjunctive Use of Groundwater and Surface Water**

12. During the period covered by this Report, were you using groundwater in lieu of available surface water authorized under your license?	No
13. Amounts of groundwater used	

**Additional Remarks****Attachments****File Name****Description****Size**

No Attachments

**Contact Information of the Person Submitting the Form**

First Name

Rosalva

Last Name

Morales

Relation to Water Right

Authorized  
OfficialHas read the form and agrees the information in the report is true to the best of his/her  
knowledge and belief

Yes

**[SUMMARY OF FINAL SUBMITTED VERSION]**

**REPORT OF LICENSEE FOR 2012**

Primary Owner: CITY OF SAN DIEGO  
 Primary Contact: CITY OF SAN DIEGO

Date Submitted: 2013-09-04

Application Number: A011658  
 License Number: 013532

Source(s) of Water	POD Parcel Number	County
SANTA YSABEL CREEK		San Diego

MAX Direct Diversion Rate: 19.2 CFS  
 MAX Collection to Storage: 27937.0 AC-FT  
 Face Value: 30575.0 AC-FT

Licensed Use(s)	Acres	Direct Diversion Season	Storage Season
Domestic	0.0	01/01 to 12/31	10/01 to 09/30
Municipal	0.0	01/01 to 12/31	10/01 to 09/30
Recreational		01/01 to 12/31	10/01 to 09/30
Stockwatering		01/01 to 12/31	10/01 to 09/30

**1. Project Abandoned**

The project has been abandoned and I request revocation of my water right license	No
---	----

**2. Compliance with License Terms and Conditions**

I have currently reviewed my water right license and I am complying with all terms and conditions	Yes
Description of noncompliance with terms and conditions	

**3. Changes to the Project**

Intake location has been changed	
Description of intake location changes	
Type of use has changed	
Description of type of use changes	
Place of use has changed	
Description of place of use changes	
Other changes	
Description of other changes	

**4. Purpose of Use**

Other	Diversion and Storage
-------	-----------------------

**5. Amount of Water Diverted and Used**

Month	Amount directly diverted or collected to storage (Acre-Feet)	Amount used (Acre-Feet)
January	868.1	868.1
February	812.03	812.03
March	812.03	812.03

April	812.03	812.03
May	812.03	812.03
June	812.03	812.03
July	1503.76	1503.76
August	1533.98	1533.98
September	1533.98	1533.98
October	1533.98	1533.98
November	0	0
December	0	0
Total	11033.95	11033.95
Comments		

#### 6. Maximum Rate of Diversion for each Month

Month	Maximum Rate of Diversion ( )
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

#### 7. Storage

Reservoir name	Spilled this year	Feet below spillway at maximum storage	Completely emptied	Feet below spillway at minimum storage	Method used to measure water level
Sutherland Reservoir	No	32.57	No	78.19	Reservoir Water Gauge

#### Conservation of Water

8. Are you now employing water conservation efforts?	No
Description of water conservation efforts	
9. Amount of water conserved	

#### Water Quality and Wastewater Reclamation

10. During the period covered by this Report, did you use reclaimed water from a wastewater treatment facility, water from a desalination facility, or water polluted by waste to a degree which unreasonably affects the water for other beneficial uses?	No
11. Amount of reclaimed, desalinated, or polluted water used	

#### Conjunctive Use of Groundwater and Surface Water

12. During the period covered by this Report, were you using groundwater in lieu of available surface water authorized under your license?	No
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13. Amounts of groundwater used	
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<b>Additional Remarks</b>

<b>Attachments</b>		
<b>File Name</b>	<b>Description</b>	<b>Size</b>
No Attachments		

<b>Contact Information of the Person Submitting the Form</b>	
First Name	Rosalva
Last Name	Morales
Relation to Water Right	Authorized Official
Has read the form and agrees the information in the report is true to the best of his/her knowledge and belief	Yes

**[SUMMARY OF FINAL SUBMITTED VERSION]**

**REPORT OF LICENSEE FOR 2012**

Primary Owner: CITY OF SAN DIEGO  
 Primary Contact: CITY OF SAN DIEGO

Date Submitted: 2013-09-04

Application Number: A002994  
 License Number: 002676

Source(s) of Water	POD Parcel Number	County
TUNNEL TWO CREEK		San Diego

MAX Direct Diversion Rate: 0.0 GPD  
 MAX Collection to Storage: 615.0 AC-FT  
 Face Value: 615.0 AC-FT

Licensed Use(s)	Acres	Direct Diversion Season	Storage Season
Municipal	0.0		

**1. Project Abandoned**

The project has been abandoned and I request revocation of my water right license		No
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**2. Compliance with License Terms and Conditions**

I have currently reviewed my water right license and I am complying with all terms and conditions		Yes
Description of noncompliance with terms and conditions		

**3. Changes to the Project**

Intake location has been changed	
Description of intake location changes	
Type of use has changed	
Description of type of use changes	
Place of use has changed	
Description of place of use changes	
Other changes	
Description of other changes	

**4. Purpose of Use**

Other	Storage
Municipal	1376173

**5. Amount of Water Diverted and Used**

Month	Amount directly diverted or collected to storage (Acre-Feet)	Amount used (Acre-Feet)
January	102.5	102.5
February	102.5	102.5
March	102.5	102.5
April	102.5	102.5
May	102.5	102.5

June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	102.5	102.5
Total	615	615
Comments		

**6. Maximum Rate of Diversion for each Month**

Month	Maximum Rate of Diversion ( )
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

**7. Storage**

Reservoir name	Spilled this year	Feet below spillway at maximum storage	Completely emptied	Feet below spillway at minimum storage	Method used to measure water level
Lower Otay Reservoir	No	7.3	No	9	Reservoir water gauge

**Conservation of Water**

8. Are you now employing water conservation efforts?	No
Description of water conservation efforts	
9. Amount of water conserved	

**Water Quality and Wastewater Reclamation**

10. During the period covered by this Report, did you use reclaimed water from a wastewater treatment facility, water from a desalination facility, or water polluted by waste to a degree which unreasonably affects the water for other beneficial uses?	No
11. Amount of reclaimed, desalinated, or polluted water used	

**Conjunctive Use of Groundwater and Surface Water**

12. During the period covered by this Report, were you using groundwater in lieu of available surface water authorized under your license?	No
13. Amounts of groundwater used	

**Additional Remarks****Attachments****File Name****Description****Size**

No Attachments

**Contact Information of the Person Submitting the Form**

First Name

Rosalva

Last Name

Morales

Relation to Water Right

Authorized  
OfficialHas read the form and agrees the information in the report is true to the best of his/her  
knowledge and belief

Yes



July	3	3
August	3	3
September	3	3
October	3	3
November	3	3
December	3	3
Total	36	36
Comments		

**6. Maximum Rate of Diversion for each Month**

Month	Maximum Rate of Diversion ( )
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

**7. Storage**

Reservoir name	Spilled this year	Feet below spillway at maximum storage	Completely emptied	Feet below spillway at minimum storage	Method used to measure water level

**Conservation of Water**

8. Are you now employing water conservation efforts?	No
Description of water conservation efforts	
9. Amount of water conserved	

**Water Quality and Wastewater Reclamation**

10. During the period covered by this Report, did you use reclaimed water from a wastewater treatment facility, water from a desalination facility, or water polluted by waste to a degree which unreasonably affects the water for other beneficial uses?	No
11. Amount of reclaimed, desalinated, or polluted water used	

**Conjunctive Use of Groundwater and Surface Water**

12. During the period covered by this Report, were you using groundwater in lieu of available surface water authorized under your license?	No
13. Amounts of groundwater used	

**Additional Remarks**

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**Attachments****File Name****Description****Size**

No Attachments

**Contact Information of the Person Submitting the Form**

First Name

Rosalva

Last Name

Morales

Relation to Water Right

Authorized  
OfficialHas read the form and agrees the information in the report is true to the best of his/her  
knowledge and belief

Yes

**[SUMMARY OF FINAL SUBMITTED VERSION]**

**PROGRESS REPORT BY PERMITTEE FOR 2013**

Primary Owner: FALLBROOK PUBLIC UTILITY DISTRICT  
 Primary Contact: FALLBROOK PUBLIC UTILITY DISTRICT

Date Submitted: 2014-02-14

Application Number: A012178  
 Permit Number: 011356

Source(s) of Water	POD Parcel Number	County
TUCALOTA CREEK		Riverside
TUCALOTA CREEK		Riverside

MAX Direct Diversion Rate: 0.0 GPD  
 MAX Collection to Storage: 10000.0 AC-FT  
 Face Value: 10000.0 AC-FT

Permitted Use(s)	Acres	Direct Diversion Season	Storage Season
Domestic	0.0		11/01 to 06/01
Irrigation	226665.0		11/01 to 06/01
Municipal	226665.0		11/01 to 06/01

**1. Permit Review**

I have reviewed my water right permit	Yes
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**2. Compliance with Permit Terms and Conditions**

I am complying with all terms and conditions	Yes
Description of noncompliance with terms and conditions	

**3. Changes to the Project**

Intake location has been changed	
Description of intake location changes	
Type of use has changed	
Description of type of use changes	
Place of use has changed	
Description of place of use changes	
Other changes	
Description of other changes	

**4-6. Permitted Project Status**

Project Status	Not Complete
6a. Construction work has commenced	Yes
6b. Construction is completed	Yes
6c. Beneficial uses of water has commenced	Yes
6d. Project will be completed within the time	

period specified in the permit	Yes
6e. Explanation of work remaining to be done	The District has fully exercised diligence as required; the only reason that it has not put the full volume of water to beneficial use is the weather/hydrology, resulting in limited water available for diversion.
6f. Estimated date of completion	12/31/2020

**7. Purpose of Use**

No Use

**8. Amount of Water Diverted and Used**

Month	Amount directly diverted or collected to storage (Acre-Feet)	Amount used (Acre-Feet)
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
Total	0	0
Comments	There was lack of rainfall in the watershed to provide adequate runoff to meet our permit's requirements for diversion and so the District was not able to divert any water during this calendar year.	

**9. Maximum Rate of Diversion for each Month**

Month	Maximum Rate of Diversion ( )
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

**10. Storage**

<b>Reservoir name</b>	<b>Spilled this year</b>	<b>Feet below spillway at maximum storage</b>	<b>Completely emptied</b>	<b>Feet below spillway at minimum storage</b>	<b>Method used to measure water level</b>
Skinner	No	2.24	No	11.31	Mechanical

**Conservation of Water**

11. Are you now employing water conservation efforts?	Yes
Description of water conservation efforts	Implementation of the District?s Urban Water Management Plan BMP?s.
12. Amount of water conserved	

**Water Quality and Wastewater Reclamation**

13. During the period covered by this Report, did you use reclaimed water from a wastewater treatment facility, water from a desalination facility, or water polluted by waste to a degree which unreasonably affects the water for other beneficial uses?	No
14. Amount of reclaimed, desalinated, or polluted water used	

**Conjunctive Use of Groundwater and Surface Water**

15. During the period covered by this Report, were you using groundwater in lieu of available surface water authorized under your permit?	No
16. Amounts of groundwater used	

**Additional Remarks**

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**Attachments**

<b>File Name</b>	<b>Description</b>	<b>Size</b>
No Attachments		

**Contact Information of the Person Submitting the Form**

First Name	Jack
Last Name	Bebee
Relation to Water Right	Primary Owner of Record
Has read the form and agrees the information in the report is true to the best of his/her knowledge and belief	Yes

**[SUMMARY OF FINAL SUBMITTED VERSION]**

**REPORT OF LICENSEE FOR 2012**

Primary Owner: SWEETWATER AUTHORITY  
 Primary Contact: SWEETWATER AUTHORITY

Date Submitted: 2013-03-19

Application Number: A010661  
 License Number: 011734

Source(s) of Water	POD Parcel Number	County
SWEETWATER RIVER		San Diego

MAX Direct Diversion Rate: 0.0 GPD  
 MAX Collection to Storage: 14600.0 AC-FT  
 Face Value: 14600.0 AC-FT

Licensed Use(s)	Acres	Direct Diversion Season	Storage Season
Industrial	0.0		01/01 to 12/31
Irrigation	524.0		01/01 to 12/31
Irrigation			
Municipal	0.0		01/01 to 12/31

**1. Project Abandoned**

The project has been abandoned and I request revocation of my water right license	No
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**2. Compliance with License Terms and Conditions**

I have currently reviewed my water right license and I am complying with all terms and conditions	Yes
Description of noncompliance with terms and conditions	

**3. Changes to the Project**

Intake location has been changed	
Description of intake location changes	
Type of use has changed	
Description of type of use changes	
Place of use has changed	
Description of place of use changes	
Other changes	
Description of other changes	

**4. Purpose of Use**

Recreational	Fishing
Irrigation	1240 Acres Mixed Crop Types
Municipal	186865
Fire Protection	Sweetwater Reservoir, Loveland

**5. Amount of Water Diverted and Used**

Month	Amount directly diverted or collected to storage (Acre-Feet)	Amount used (Acre-Feet)

January	872	1168
February	909	1360
March	2002	1203
April	1080	1006
May	349	1333
June	119	1446
July	40	1574
August	142	335
September	58	219
October	251	1316
November	102	1167
December	404	941
Total	6328	13068
Comments		

#### 6. Maximum Rate of Diversion for each Month

Month	Maximum Rate of Diversion (CFS)
January	278
February	305
March	173
April	44
May	123
June	22
July	19
August	21
September	15
October	20
November	17
December	54

#### 7. Storage

Reservoir name	Spilled this year	Feet below spillway at maximum storage	Completely emptied	Feet below spillway at minimum storage	Method used to measure water level
Loveland	Yes		No	24.32	Staff gauge
Sweetwater	No	7.22	No	29.82	Staff gauge

#### Conservation of Water

8. Are you now employing water conservation efforts?	Yes
Description of water conservation efforts	Implementation of all 16 BMP's specified in the MOU regarding Urban Water Conservation in California.
9. Amount of water conserved	

#### Water Quality and Wastewater Reclamation

10. During the period covered by this Report, did you use reclaimed water from a wastewater treatment facility, water from a desalination facility, or water polluted by waste to a degree which unreasonably affects the water for other beneficial uses?	No
--	----

11. Amount of reclaimed, desalinated, or polluted water used	
--	--

<b>Conjunctive Use of Groundwater and Surface Water</b>	
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12. During the period covered by this Report, were you using groundwater in lieu of available surface water authorized under your license?	No
--	----

13. Amounts of groundwater used	
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<b>Additional Remarks</b>
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The following amounts were spilled at Loveland: January 407.4 AF The following amounts were released from Loveland and recieved at Sweetwater: Released [Recieved] January 3991.6 AF [2422 AF] February 5381.0 AF [5930 AF] The folowing is a breakdown of irrigated land: Type ACRES % CalTrans 224.75 18.12% Cemetary 92.23 7.44% Church 0.88 0.07% Commercial 1.38 0.11% Farming 14.95 1.21% Golf Course 467.93 37.73% HOA 12.40 1.00% Hospital 2.13 0.17% Navy 13.09 1.06% Nursery 23.20 1.87% Park 243.19 19.61% Recreation 25.73 2.07% School 118.27 9.54% 1,240.13 100.00%
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<b>Attachments</b>		
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File Name	Description	Size
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No Attachments		
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<b>Contact Information of the Person Submitting the Form</b>	
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First Name	James
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Last Name	Smith
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Relation to Water Right	Other
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Has read the form and agrees the information in the report is true to the best of his/her knowledge and belief	Yes
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**[SUMMARY OF FINAL SUBMITTED VERSION]**

**PROGRESS REPORT BY PERMITTEE FOR 2013**

Primary Owner: SAN DIEGO COUNTY WATER AUTHORITY  
 Primary Contact: SAN DIEGO COUNTY WATER AUTHORITY

Date Submitted: 2014-03-18

Application Number: A030243  
 Permit Number: 020787

Source(s) of Water	POD Parcel Number	County
UNST		San Diego

MAX Direct Diversion Rate: 0.0 GPD  
 MAX Collection to Storage: 150.0 AC-FT  
 Face Value: 150.0 AC-FT

Permitted Use(s)	Acres	Direct Diversion Season	Storage Season
Municipal	0.0		01/01 to 12/31
Recreational	0.0		01/01 to 12/31

**1. Permit Review**

I have reviewed my water right permit	Yes
---------------------------------------	-----

**2. Compliance with Permit Terms and Conditions**

I am complying with all terms and conditions	Yes
Description of noncompliance with terms and conditions	

**3. Changes to the Project**

Intake location has been changed	
Description of intake location changes	
Type of use has changed	
Description of type of use changes	
Place of use has changed	
Description of place of use changes	
Other changes	
Description of other changes	

**4-6. Permitted Project Status**

Project Status	Complete
6a. Construction work has commenced	
6b. Construction is completed	
6c. Beneficial uses of water has commenced	
6d. Project will be completed within the time period specified in the permit	
6e. Explanation of work remaining to be done	
6f. Estimated date of completion	

**7. Purpose of Use**

Municipal	3300000
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**8. Amount of Water Diverted and Used**

<b>Month</b>	<b>Amount directly diverted or collected to storage (Acre-Feet)</b>	<b>Amount used (Acre-Feet)</b>
January	19.5	0
February	9	0
March	25.9	0
April	0.6	0
May	5.2	0
June	0	0
July	0	0
August	0	0
September	0	0
October	15.2	0
November	5.2	0
December	3.8	0
Total	84.4	0
Comments	Of the 84.4 AF captured from runoff or direct rainfall, all water was lost to evaporation (542.9 AF).	

**9. Maximum Rate of Diversion for each Month**

<b>Month</b>	<b>Maximum Rate of Diversion (CFS)</b>
January	0
February	0
March	0
April	0
May	0
June	0
July	0
August	0
September	0
October	0
November	0
December	0

**10. Storage**

<b>Reservoir name</b>	<b>Spilled this year</b>	<b>Feet below spillway at maximum storage</b>	<b>Completely emptied</b>	<b>Feet below spillway at minimum storage</b>	<b>Method used to measure water level</b>
Olivenhain Reservoir	No	26.5	No	39.5	Electronic

**Conservation of Water**

11. Are you now employing water conservation efforts?	No
Description of water conservation efforts	
12. Amount of water conserved	

**Water Quality and Wastewater Reclamation**

--

13. During the period covered by this Report, did you use reclaimed water from a wastewater treatment facility, water from a desalination facility, or water polluted by waste to a degree which unreasonably affects the water for other beneficial uses?	No
--	----

14. Amount of reclaimed, desalinated, or polluted water used	
--	--

<b>Conjunctive Use of Groundwater and Surface Water</b>	
---	--

15. During the period covered by this Report, were you using groundwater in lieu of available surface water authorized under your permit?	No
---	----

16. Amounts of groundwater used	
---------------------------------	--

<b>Additional Remarks</b>

<b>Attachments</b>		
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File Name	Description	Size
No Attachments		

<b>Contact Information of the Person Submitting the Form</b>	
--	--

First Name	Jim
------------	-----

Last Name	Fisher
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Relation to Water Right	Other: Authorized Official
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Has read the form and agrees the information in the report is true to the best of his/her knowledge and belief	Yes
--	-----

## Appendix 1-9: Groundwater Management Compliance

One project included within this *San Diego IRWM Drought Solicitation Implementation Grant Proposal* requires compliance with or development of a Groundwater Management Plan (GWMP): Sweetwater Authority's Reynolds Groundwater Desalination Facility Expansion. This project will extract brackish groundwater for desalination and use as a potable water supply. As such, Sweetwater Authority has completed self-certification of their Groundwater Management Plan (GWMP) in compliance with CWC §10753. Sweetwater Authority is in the process of developing a GWMP, and is currently using an interim GWMP, included as Appendix E of its UWMP. The Interim GWMP and self-certification is included here as **Appendix 1-9**. A hard copy of the self-certification form has also been submitted to DWR via mail.



# **Sweetwater Authority Interim Groundwater Management Plan**

## **A. Interim Plan**

This interim groundwater management plan shall govern the groundwater management activities of the Sweetwater Authority until a subsequent Groundwater Management Plan is adopted by the Sweetwater Authority Governing Board, pursuant to Water Code Section 10750 et seq. (AB 3030)

## **B. Groundwater Management Area Boundaries**

Sweetwater Authority shall engage in groundwater management in the area of the Sweetwater Valley basin. This basin is as described in the State of California Department of Water Resources Bulletin Number 118 as the Sweetwater Valley Basin Number 9-17. Also included in the groundwater management activities are the watershed of the Sweetwater River and the underlying San Diego Formation within the Service area of the Sweetwater Authority.

## **C. Groundwater Management Strategies**

### **1. Maintain static groundwater levels**

It shall be the policy and goal of Sweetwater Authority groundwater management to extract from the San Diego Formation so as to not cause a decline in the long term static water levels. In the Sweetwater Valley basin alluvial areas, the policy and goal of Sweetwater Authority groundwater management shall be to extract groundwater to not increase seawater intrusion or cause environmental impacts or damage other producers in the alluvial portion of the basin through the operations of Sweetwater Authority's groundwater projects.

### **2. Protect groundwater from pollution by manmade activities**

Sweetwater Authority shall work with the San Diego Regional Water Quality Control Board (Region 9) to ensure that the groundwater quality within the Sweetwater Valley Basin and the San Diego Formation is protected from contamination.

### **3. Monitor seawater intrusion**

Sweetwater Authority shall monitor groundwater levels, quality and seawater intrusion to ensure that activities of Sweetwater Authority are not causing seawater intrusion.

### **4. Monitor groundwater quality and quantity**

Sweetwater Authority shall periodically monitor the levels and quality of groundwater in the monitoring wells shown in Appendix A. The Authority

shall maintain a database of this periodic information for display on the Sweetwater Authority web page located at [www.sweetwater.org](http://www.sweetwater.org) .

#### **5. Sweetwater Authority Groundwater Projects**

Current Sweetwater Authority groundwater projects include the following:

- a. Existing National City Wells.
- b. Existing Richard A. Reynolds Brackish Groundwater Demineralization Facility and its nine groundwater extraction wells..
- c. Monitoring of existing groundwater monitoring wells and maintenance of a groundwater level and groundwater quality database.
- d. Proposed National City Aquifer Storage and Recovery (ASR) Project.

#### **6. Develop New or Expanded Groundwater Supplies**

Staff shall perform activities to develop new groundwater supplies and expand existing groundwater supplies and provide Budget Requests for the Governing Board's approval for these activities, as follows:

- a. Investigate the development of new wells to extract potable or brackish groundwater to facilitate expansion of existing groundwater projects as in paragraph C.5. above.
- b. Investigate new technologies and their application to existing groundwater sources.
- c. Explore conjunctive use activities to augment or expand existing groundwater supplies.

#### **7. Development of relationships with state and local regulation agencies – Bur. Rec. – USGS**

Sweetwater Authority has worked and consulted with the Bureau of Reclamation and the United States Geological Survey to receive funding and develop groundwater projects and to study water quality issues. These relationships have been ongoing since 1997. Sweetwater Authority is currently involved with a contract with the USGS to study groundwater quality issues in the San Diego Formation.

#### **D. Implementation**

Sweetwater Authority shall work within the watershed of the Sweetwater River, the Sweetwater Valley Basin (Number 9-17) and the San Diego Formation within the service area of the Sweetwater Authority to manage groundwater levels and protect groundwater quality. By adoption of this document, the Sweetwater Authority Governing Board hereby authorizes staff to maintain databases and perform groundwater management activities as described in this interim groundwater management plan.

#### **E. Data Collection and Management**

Sweetwater Authority shall maintain a database of groundwater levels and water quality for the existing monitoring wells shown in Appendix A. Staff shall, to the

best of its abilities, carry out groundwater management activities using the strategies in Section C of this interim groundwater management plan.

#### **F. Education**

The Sweetwater Authority Stakeholder Survey identifies issues important to stakeholders in the watershed of the Sweetwater River, the Sweetwater Valley basin and the San Diego Formation within the Sweetwater Authority service area. As a part of the groundwater management activities to be carried out under the auspices of this interim groundwater management plan, Sweetwater Authority staff is directed to meet with other public entities and the public interested in the groundwater activities of the Sweetwater Authority. The purpose of these meetings shall be to coordinate information about Sweetwater Authority groundwater management activities and projects, receive input and responses from the public and public entities. Also these meetings shall strive to develop a base of support and a forum for constructive criticism and input to Sweetwater Authority for the groundwater management activities of the Authority.

#### **G. Resolutions of the Governing board, Sweetwater Authority Policy and Legal Authority**

##### **1. Resolutions of the Governing Board**

Adoption of the attached Resolution 01-19 establishes governing board adoption of this interim groundwater management plan and provides authorization for Sweetwater Authority staff to proceed with the activities described within.

##### **2. Sweetwater Authority Policy concerning groundwater management**

Sweetwater Authority's policies regarding groundwater management activities are described within this plan and any subsequent amendments to this interim groundwater management plan authorized by the Governing Board.

##### **3. Legal Authority**

Sweetwater Authority operates under the legal authority contained in Irrigation District Law as included in water code section 20500 et seq. Under this authorization the Sweetwater Authority may control, distribute, store, spread, sink, treat, purify, recapture and salvage any water for the beneficial use of the district. Further Sweetwater Authority according to water code 22078 may do any act to put to any beneficial use any water under its control.

Also under water code section 22076 Sweetwater Authority has, though its groundwater management practices have not been previously memorialized in an AB 3030 plan (Water Code section 10750 et seq.) programs that relate to the following:

- a. the control of saline water intrusion
- b. identification of and management of wellhead protection areas and recharge areas
- c. replenishment of groundwater
- d. monitoring of groundwater levels and storage

- e. construction and operation of a brackish groundwater demineralization facility
- f. development of state and federal partnerships in the funding of groundwater management activities
- g. review and coordination of land use permitting with the County of San Diego to access development activities and their impact on groundwater
- h. management of its groundwater resources by Sweetwater Authority as a local agency thereby making state-controlled groundwater management unnecessary

**H. Program Coordination**

The General Manager and the Operations Manager of Sweetwater Authority shall be responsible to the Governing Board for the performance of the groundwater management activities described in this interim groundwater management plan.

## **H-4 Groundwater Management program**

### **Sweetwater Authority groundwater management program**

Sweetwater Authority has memorialized its groundwater management activities in an Interim Groundwater Management Plan (attached) as adopted by the Sweetwater Authority Governing Board in their Resolution 01-19 (attached). This interim plan directs the staff to continue as they have in the past, performing groundwater management activities, until such time as a formal Groundwater Management Plan has replaced the interim plan. Staff, per this interim plan is managing its groundwater projects so that static groundwater levels do not decline over the long term. It is anticipated that when a formal plan is adopted, it will enlarge upon the scope of the interim plan.

### **Stakeholder outreach**

Stakeholder outreach is a part of the interim plan and will continue to be a part of Sweetwater Authority's decision making process. Sweetwater Authority performed a stakeholder survey in the watershed of the Sweetwater River (Sweetwater Valley Basin 9-17) and the San Diego Formation. Public Notices were advertised and meetings were held with public agencies and individuals to ascertain concerns that existed about Sweetwater Authority's watershed and groundwater management activities. Sweetwater learned that there were no objections to groundwater projects that did not produce groundwater from the most eastern portion of the Sweetwater Valley, near Loveland Reservoir.

### **Education**

Public education continues to be an important part of the Sweetwater Authority public information program. Elementary school children are hosted to tours of The Robert A. Perdue Water Treatment Plant and the Richard A. Reynolds Brackish Groundwater Demineralization Facility. Semi-annual open houses at these facilities give families an opportunity to learn about their water supply agency and its water supply programs. Staff members give informational talks at service clubs and at public events and participate in community fairs to disseminate water supply and water quality information. The new demineralization facility has a public meeting room with video conferencing equipment and is dedicated to educating the public and water professional about water issues.

### **Monitoring of existing wells and monitoring wells**

Sweetwater Authority has a monitoring program which began in the 1930's when there was pumping in the Sweetwater River Valley. Over the years the monitoring has been adjusted to cover new facilities, for example, National City wells in 1952. In 1997 a more formal program was established to monitor the lower Sweetwater River Demineralization Facility wells. Additional wells will be added to the monitoring program for the National City ASR Project.

### **Installing new monitoring wells**

Sweetwater Authority from time to time installs new monitoring wells. In the past year new monitoring wells were installed in the Sweetwater River and near the National City Wells. The Authority has an existing monitoring program associated with the demineralization project and also maintains other monitoring data throughout the Sweetwater Valley Basin. The National City ASR project will install four additional monitoring wells. The attached Figure \_\_ shows the existing Sweetwater Authority monitoring wells.

### **Studies**

Montgomery Watson Harza is currently under contract to Sweetwater Authority to study the operation of the existing Sweetwater Authority brackish groundwater demineralization facility. They also are performing design for the National City ASR project, including setting up the monitoring program. Other groundwater studies by Sweetwater Authority are contained in Section C-8.

### **Working with other agencies**

Sweetwater Authority has worked with the San Diego County Water Authority's San Diego Formation task force. To date Sweetwater Authority is the only agency with long term, short term or planned groundwater projects in the San Diego Formation (SDF).

Other agencies who attended San Diego Formation Task Force meetings were the City of San Diego Water Utilities Department, California American Water Company and Otay Water District. Of these agencies the City of San Diego Water Utilities Department is the only other agency considering projects in this formation. However no other agency is planning projects in the SDF in the Sweetwater Valley Basin. The projects by San Diego will be in the San Diego River Basin and the SDF.

### **Agencies who participated in the shaping of Sweetwater Authority groundwater management activities**

Sweetwater Authority is a joint powers agency, the result of a Joint Powers Agreement between the South Bay Irrigation District, which includes the western and northern areas of the city of Chula Vista and the Bonita Valley in the County of San Diego and the City of National City. Sweetwater Authority is the successor in interest to the California American Water Company (Sweetwater District), California Water and Telephone Company, Sweetwater Water Corporation, Sweetwater Fruit Company and the Kimball Brother's Water Company dating back to 1869. All of the entities, as well as surrounding water agencies have had a role in shaping the Sweetwater Authority groundwater management activities and policies.

**RESOLUTION 01-19**

**RESOLUTION OF THE GOVERNING BOARD  
OF SWEETWATER AUTHORITY  
ADOPTING AN INTERIM  
GROUNDWATER MANAGEMENT PLAN**

**WHEREAS**, Sweetwater Authority and its predecessors have been engaged in groundwater management activities associated with the Authority's groundwater projects in the Sweetwater Valley (Department of Water Resources Basin Number 9-17) and the San Diego Formation for over one hundred and thirty-two years, and

**WHEREAS**, the Governing Board of Sweetwater Authority, by approval of Budget Project Number 99-21A approved funding of the preparation of a Groundwater Management Plan, and

**WHEREAS**, Sweetwater has plans to contract with an engineering consultant to work with staff to prepare a formal Groundwater Management Plan pursuant to Water Code Section 10750 et seq. (AB 3030), and

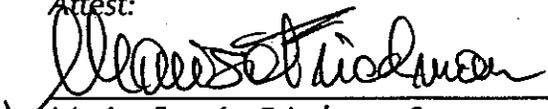
**WHEREAS**, the Governing Board wishes to memorialize it's existing groundwater management activities as an interim Groundwater Management Plan,

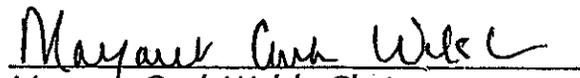
**NOW, THEREFORE, BE IT RESOLVED** by the Governing Board of Sweetwater Authority that, the attached Interim Groundwater Management Plan is adopted to guide the groundwater management activities of Sweetwater Authority until such time as it is replaced by a subsequent Groundwater Management Plan under Water Code Section 10750 et Seq. (AB3030) or other statutes.

**PASSED AND ADOPTED** at a regular meeting of the Governing Board of Sweetwater Authority held on this 9<sup>th</sup> day of November, 2001 by the following vote, to wit:

<b>AYES:</b>	Directors Doud, Jarrett, Pocklington, Waters, Welsh, Wolniewicz, and Wright
<b>NOES:</b>	None
<b>ABSENT:</b>	None
<b>ABSTAIN:</b>	None

Attest:

  
\_\_\_\_\_  
Marisa Farpón-Friedman, Secretary

  
\_\_\_\_\_  
Margaret Cook Welsh, Chair

California Department of Water Resources  
Integrated Regional Water Management Grant Programs

**CERTIFICATION FOR GROUNDWATER MANAGEMENT PLAN COMPLIANCE  
FOR THE  
PROPOSITION 84, IMPLEMENTATION AND  
PROPOSITION 1E, STORMWATER FLOOD MANAGEMENT  
GRANT PROGRAMS**

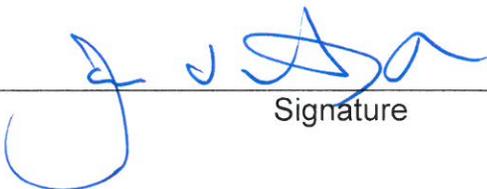
Grant Program:  Implementation  SWFM  
IRWM Region: San Diego IRWM  
Agency name: Sweetwater Authority  
Reynolds Groundwater Desalination Facility  
Project Title (as shown on application form): Expansion

Please check one of the boxes below and sign and date this form.

- As the authorized representative for the agency, I certify under penalty of perjury under the laws of the State of California, that the agency has prepared and implemented a GWMP in compliance with CWC §10753.7.
- As the authorized representative for the agency, I certify under penalty of perjury under the laws of the State of California, that the agency participates or consents to be subjected to an existing GWMP, basin-wide management plan, or other IRWM program or plan that meets the requirements of CWC §10753.7(a).
- As the authorized representative for the agency, I certify under penalty of perjury under the laws of the State of California, that agency consents to be subjected to a GWMP that will meet the requirements of CWC §10753.7 and be completed within 1-year of the grant application submittal date.
- As the authorized representative for the agency, I certify under penalty of perjury under the laws of the State of California that the agency conforms to the requirements of an adjudication of water rights in the subject groundwater basin.

I understand that the Department of Water Resources will rely on this signed certification in order to approve funding and that false and/or inaccurate representations in this Certification may result in loss of all funds awarded to the applicant for its project. Additionally, for the aforementioned reasons, the Department of Water Resources may withhold disbursement of project funds, and/or pursue any other applicable legal remedy.

James L. Smyth  
Name of Authorized Representative  
(Please print)

  
Signature

General Manager  
Title

6-20-14  
Date

## Appendix 1-10: CASGEM Compliance

The City of San Diego applied to be a monitoring entity for the San Diego River Valley Groundwater Basin on December 21, 2010, and provided a CASGEM monitoring plan for DWR for review (see monitoring plan herein). The City was informed by DWR that they cannot qualify as an authorized monitoring entity for the San Diego River Valley Basin without an established groundwater management plan for the San Diego River Valley Groundwater Basin. As such, the City can continue to submit CASGEM groundwater levels to DWR for the San Diego River Valley Groundwater Basin on a voluntary basis.

**Figure 1-1** in Attachment 1 shows the location of the identified medium-priority groundwater basins in the Region along with the service areas of each project sponsor and the location of each project, including latitude and longitude. A folder titled “Agency Service Area Boundaries” that includes GIS shape files for each of the implementing agencies’ (SDCWA, City of San Diego, Carlsbad, Fallbrook, Rincon, and Sweetwater) service area boundaries is included within the supporting CD that has been mailed to DWR with the hard copy of the grant application.



## **Kennedy/Jenks Consultants**

10920 Via Frontera, Suite 110  
San Diego, California 92127  
858-676-3620  
FAX: 858-676-3625

### Water Level Monitoring Plan City of San Diego

for Submittal to California  
State Department of Water  
Resources Under the  
CASGEM Program  
(6 June 2013)



**City of San Diego**  
600 B Street, Suite 600, MS906  
San Diego, California 92101

K/J Project No. 1187103\*00



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### Appendix C – Hydrogeologic Basin Descriptions

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1. San Pasqual Valley Groundwater Basin
2. Mission Valley Groundwater Basin
3. San Diego River Valley Groundwater Basin
4. El Cajon Valley Groundwater Basin
5. Sweetwater Valley Groundwater Basin
6. Otay Valley Groundwater Basin
7. Tijuana Groundwater Basin

### Appendix D – Groundwater Level Data from Manual Measurements

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Groundwater Level Data Form



## Executive Summary

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This groundwater elevation monitoring plan has been prepared to fulfill the requirements of the State of California Department of Water Resources (DWR), California Statewide Groundwater Elevation Monitoring (CASGEM) Program, in compliance with Senate Bill X7-6 (SBX7-6).

The City of San Diego (City) submitted a monitoring entity notification to the DWR CASGEM Program to indicate the City's intent to become a monitoring entity and to monitor groundwater levels in seven groundwater basins located in the City's local water resources area in San Diego County (County). This is a detailed monitoring plan for the proposed City's seven groundwater basins under the DWR CASGEM Program, in compliance with the legislation SBX7-6.

On November 4, 2009 the State legislature amended the Water Code with SBX7-6, which mandates a statewide, locally-managed groundwater elevation monitoring program to track seasonal and long-term trends in groundwater elevations in California's groundwater basins. To achieve that goal, the new law directs that groundwater elevations in all basins and sub-basins in California be regularly and systematically monitored, preferably by local entities, with the goal of demonstrating seasonal and long-term trends in groundwater elevations. In accordance with the SBX7-6, DWR developed the CASGEM Program to establish a permanent, locally-managed system to monitor groundwater elevations in California's groundwater basins and sub-basins identified in DWR Bulletin 118. The legislation requires collaboration between local monitoring entities and DWR to collect groundwater elevation data.

The primary objective of the CASGEM Program is to define the seasonal and long-term trends in groundwater elevations in California's groundwater basins. The scale for this evaluation should be the static regional groundwater table or potentiometric surface. A secondary objective is to provide sufficient data to draw representative contour maps of the elevations. These maps could be used to estimate changes in groundwater storage and to evaluate potential areas of overdraft and subsidence.

The City has been contacted by DWR and notified of its status as a monitoring entity. The City qualifies as a monitoring entity per the DWR CASGEM Guideline (DWR, 2010) under Scenario A – One Monitoring Entity submitting data for the region. A monitoring entity notification was submitted to DWR stating the City's intent to monitor groundwater levels in the following seven basins with their groundwater basin numbers as defined in the DWR Bulletin 118.

- San Pasqual Valley Groundwater Basin (Groundwater Basin Number: 9-10)
- Mission Valley Groundwater Basin (Groundwater Basin Number: 9-14)
- San Diego River Valley Groundwater Basin (Groundwater Basin Number: 9-15)
- El Cajon Valley Groundwater Basin (Groundwater Basin Number: 9-16)
- Sweetwater Valley Groundwater Basin (Groundwater Basin Number: 9-17)
- Otay Valley Groundwater Basin (Groundwater Basin Number: 9-18); and
- Tijuana Groundwater Basin (Groundwater Basin Number: 9-19).

The City submitted a monitoring entity notification to the DWR CASGEM Program to monitor groundwater levels in seven groundwater basins located in the City's local water resources area in the County. Among the seven basins, only the San Pasqual Valley Basin has a formal Groundwater Management Plan (GMP) adopted in compliance with the California Assembly Bill (AB) 3030.

Assembly Bill 1152 permits the DWR to authorize the City to conduct monitoring and reporting of groundwater elevations on an interim basis for all basins with the exception of San Pasqual Basin. The City accepts the role and responsibility of an interim monitoring entity. The City anticipates preparation of groundwater management plan(s) that may include the six groundwater basins that are without a plan by January 1, 2014.

Upon DWR review of the City's submittal of the notification, DWR provided inputs on the basin boundaries to be considered for the CASGEM Program. Modified boundaries were agreed on between the DWR and the City on 11 June 2012 to include portions of basins that were not in Bulletin 118. Five of the seven groundwater basins now have extended boundaries with no changes for the remaining two basins, namely San Pasqual Valley and El Cajon Valley. At the request of DWR, the City submitted new notifications on CASGEM system to indicate new Partial Basin monitoring with the recent modified basin boundaries.

### **Monitoring Well Network**

In general, the wells selected in the CASGEM Program monitoring network avoid shallow groundwater and are not near active pumping wells. The climatic regime of coastal California is bi-seasonal with most rainfall occurring in the winter, and little rainfall throughout most of the rest of the year. Therefore, *semi-annual monitoring is deemed appropriate* for the wells to be monitored. Water levels will be measured in the fall during the month of November, before the winter wet period, and in the spring during the month of May, right after the wet season. This will capture both the theoretical lowest and highest water levels in the basins.

The selection of wells for the CASGEM Program includes a systematic assessment of the existing well locations based on a set of well selection criteria identified in the DWR guidance. These criteria are:

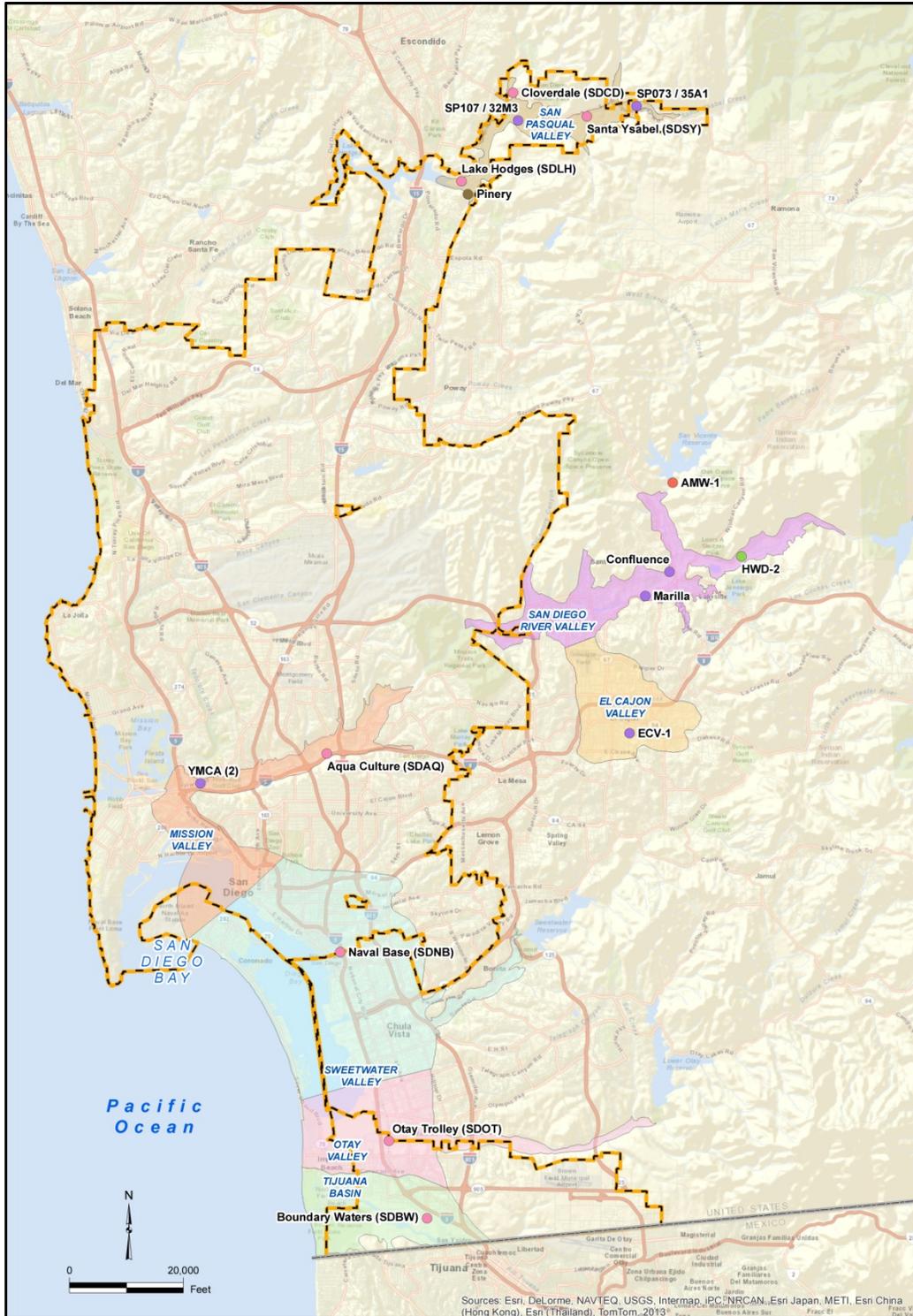
1. Wells that can provide static water levels for seasonal and long-term trends
2. Wells readily available and assumed to be accessible
3. Wells with known well screen data and are compatible with the primary water bearing zone(s)
4. Wells with known ownership
5. Well locations that can provide representative water level data within the basin; and
6. Relatively new wells.

There are a total of 16 monitoring wells currently proposed to be in the CASGEM network. Figure ES-1 depicts the proposed monitoring well locations and lists well names as part of the City's CASGEM Program.

<b>Groundwater Basin</b>	<b>Area (mi<sup>2</sup>)</b>	<b>No. of Proposed Wells</b>
San Pasqual Valley	5.50	6
Mission Valley	15.6	2
San Diego River Valley	13.8	4
El Cajon Valley	2.70	1
Sweetwater Valley	42.3	1
Otay Valley	16.1	1
Tijuana	12.3	1
<b>Total CASGEM Network Wells</b>	108.3	16

This monitoring plan is the City's submittal of an initial monitoring network. The plan will be updated periodically if needed primarily to address potential monitoring data gaps as the program collects groundwater data and more importantly to coordinate with the DWR to possibly improve the program by modifying the network of wells.

**Figure ES-1 Monitoring Well Locations - City of San Diego CASGEM Monitoring Network**



**San Pasqual Valley** – Six monitoring wells are selected to represent the groundwater condition. Well 1. SP073/35A1; Well 2. Santa Ysabel (SDSY); Well 3. SP107/32M3; Well 4. Cloverdale (SDCD); Well 5. Lake Hodges (SDLH); and Well 6. Pinery.

**Mission Valley** – Two monitoring wells are selected to represent the groundwater condition in this east-west trending elongate groundwater basin. Well 1. Aqua Culture (SDAQ); and Well 2. YMCA (2).

**San Diego River Valley (Santee El Monte Basin)** – Four monitoring wells are selected to represent the groundwater condition. Well 1. HWD-2; Well 2. AMW-1; Well 3. Confluence; and Well 4. Marilla.

**El Cajon Valley** – One monitoring well identified as 16S001W11R004S (referred to as ECV-1) is selected to represent the groundwater condition.

**Sweetwater Valley** – One monitoring well, Naval Base (SDNB), is selected to represent the groundwater condition.

**Otay Valley** – One monitoring well, Otay Trolley (SDOT), is selected to represent the groundwater condition.

**Tijuana Basin** – One monitoring well, Boundary Waters (SDBW), is selected to represent the groundwater condition.

## Section 1: Introduction

---

The City of San Diego submitted a monitoring entity notification to the DWR CASGEM Program to indicate the City's intent to become a monitoring entity and to monitor groundwater levels in seven groundwater basins located in the City's local water resources area in San Diego County (County) (Appendix A). This is a detailed monitoring plan for the City's seven groundwater basins under the DWR CASGEM Program, in compliance with Senate Bill X7-6 (SBX7-6).

This monitoring plan is the City's submittal of an initial monitoring network. The plan will be updated periodically if needed primarily to address potential monitoring data gaps as the program collects groundwater data and more importantly to coordinate with the DWR to possibly improve the program by modifying the network of wells.

The plan was prepared by Kennedy/Jenks Consultants and City of San Diego staff. Questions regarding information in this plan can be directed to the following:

### Kennedy/Jenks Consultants

Les Chau (Principal Author): (415) 243-2496

Sevim Onsoy (Hydrogeologist): (415) 243-2522

Matt A. Tebbetts, P.E. (Principal in Charge): (858) 676-7506

### City of San Diego

George Adrian, P.E. (Principal Water Resources Specialist): (619) 533-4680

Larry Abutin (Associate Engineer-Civil): (619) 533-5306

Antero Penaflor (Assistant Engineer-Civil): (619) 533-4224

## 1.1 Background and CASGEM Purpose

On November 4, 2009 the State legislature amended the Water Code with SBX7-6, which mandates a statewide, locally-managed groundwater elevation monitoring program to track seasonal and long-term trends in groundwater elevations in California's groundwater basins. To achieve that goal, the new law directs that groundwater elevations in all basins and sub-basins in California be regularly and systematically monitored, preferably by local entities, with the goal of demonstrating seasonal and long-term trends in groundwater elevations. In accordance with the SBX7-6, DWR developed the CASGEM Program to establish a permanent, locally-managed system to monitor groundwater elevation in California's groundwater basins and sub-basins identified in DWR Bulletin 118. The legislation requires collaboration between local monitoring entities and DWR to collect groundwater elevation data. DWR's main role is to administer the CASGEM Program in addition to coordinating information collected locally through the CASGEM Program and maintaining the collected groundwater elevation data in a readily and widely available public database. DWR prepared the first status report on the CASGEM Program to the Governor and the legislature by January 1, 2012 and will prepare future status reports thereafter in years ending in 5 or 0.

## 1.2 CASGEM Monitoring Objectives

The primary objective of the CASGEM Program is to define the seasonal and long-term trends in groundwater elevations in California's groundwater basins. The target in this monitoring program is the static regional groundwater table or potentiometric surface. A secondary objective is to provide sufficient data in a publicly available data warehouse in the future to construct representative contour maps of groundwater elevations. Future groundwater maps could be used to estimate changes in groundwater storage and to evaluate potential areas of overdraft and subsidence.

The City qualifies as a monitoring entity per the DWR CASGEM Guideline (DWR, 2010) under Scenario A – One Monitoring Entity submitting data for the region. A monitoring entity notification was submitted to DWR stating the City's intent to monitor groundwater levels in the following seven basins with their groundwater basin numbers as defined in the DWR Bulletin 118.

- San Pasqual Valley Groundwater Basin (Groundwater Basin Number: 9-10);
- Mission Valley Groundwater Basin (Groundwater Basin Number: 9-14);
- San Diego River Valley Groundwater Basin (Groundwater Basin Number: 9-15);
- El Cajon Valley Groundwater Basin (Groundwater Basin Number: 9-16);
- Sweetwater Valley Groundwater Basin (Groundwater Basin Number: 9-17);
- Otay Valley Groundwater Basin (Groundwater Basin Number: 9-18); and
- Tijuana Groundwater Basin (Groundwater Basin Number: 9-19).

Upon DWR review of the City's submittal of the notification, DWR provided inputs on the basin boundaries to be considered for the CASGEM Program. The basin boundaries initially submitted by the City as part of the monitoring entity notification followed the local basin boundary descriptions that are different than the DWR Bulletin 118 basin descriptions. Since the CASGEM Program is based on the DWR Bulletin 118 basin boundaries, DWR made some modifications to the basin boundaries for the San Pasqual Valley, Mission Valley, Sweetwater Valley, Otay Valley, and Tijuana groundwater basins, mainly to tie these basin boundaries to a known DWR defined basin boundary. The San Pasqual Valley groundwater basin was modified based on the newly interpreted DWR defined boundary because this basin boundary has been recently updated by DWR during work performed in that area. Based on discussions and coordination between the City and DWR, the updated basin boundaries as recommended by DWR are used in the CASGEM Program. Figure 1 (Appendix B) shows the boundaries of the seven basins considered for the CASGEM Program and the City's service area – a.k.a. City's jurisdictional boundary. At the request of DWR, the City submitted new notifications on CASGEM system to indicate new Partial Basin monitoring with the recent modified basin boundaries.

As part of the City's monitoring entity notification, the City is interested in being the monitoring entity for the basins within and outside of the City's boundary. The San Diego River Valley and El Cajon Valley groundwater basins, and portions of the Sweetwater Valley and Otay Valley groundwater basins are outside of the City boundary (Figure 1- Appendix B). As a local agency and water supplier, the City has managed all or parts of these seven basins, including the basins outside of the City boundary, and collected groundwater elevation data in these basins. The monitoring notification under the CASGEM Program is the City's effort to continue to manage and collect groundwater level data in these seven basins. The City is qualified in basin management activities with operations personnel experienced in groundwater data collection.

### 1.3 Assembly Bill No. 1152 CHAPTER 280

This bill allows local agencies that have been collecting and reporting groundwater elevations without an adopted groundwater management plan to conduct monitoring and reporting of groundwater elevations in all or part of a basin or subbasin, with authorization from DWR. It was approved by the governor on 7 September 2011 and took effect on 1 January 2012.

The City submitted a monitoring entity notification to the DWR CASGEM program to monitor groundwater levels in seven groundwater basins located in the City's local water resources area in the County. Only the San Pasqual Valley Basin has a current groundwater management plan out of the seven basins proposed for monitoring.

Assembly Bill 1152 permits the DWR to authorize the City to conduct monitoring and reporting of groundwater elevations on an interim basis for all basins with the exception of San Pasqual Basin. The City accepts the role and responsibility of an interim monitoring entity for the remaining basins.



## Section 2: CASGEM Monitoring Plan Components

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The organization in this monitoring plan takes off from the DWR CASGEM Program requirements. The CASGEM Program first requires local agencies to submit monitoring entity notification to DWR through the CASGEM website on or before January 1, 2011. The City submitted its notification to monitor the aforementioned seven basins of which five are located within the City's service area (see Figure 1 – Appendix B). The City's submission has been formally accepted and the basin boundaries for the CASGEM program were established based on coordination and discussions between DWR and the City. Figure 1 (Appendix B) shows the basin boundaries based on the outcome of the recommended changes by DWR as part of the City's monitoring entity notification.

The CASGEM Program requires the monitoring entity, in this case the City, to develop and submit a monitoring plan through the CASGEM Program website. The monitoring plan must include detailed discussions in five key sections, as briefly described below:

### **Monitoring Well Network (Section 3)**

The monitoring networks as whole and selected wells for CASGEM are summarized, resulting from reviews of existing monitoring programs. The City's CASGEM monitoring network is a distillation from existing monitoring points to a smaller and CASGEM-focused network that best represents the groundwater conditions and hydrogeological characteristics of the seven hydrologic basins.

### **Rationale for Monitoring Plan (Section 4)**

Discussed are well network design with selected (current) wells, monitoring frequency to capture seasonal highs and lows, monitoring density, rationale for selection of timing, table identifying wells to be monitored and timing of monitoring, maps and shape files with selected monitoring well locations.

### **Monitoring Well Information (Section 5)**

Discussed are the information required in the final monitoring plan and regular data submittals to DWR.

### **Field Methods for Groundwater Monitoring (Section 6)**

Discussed are standard procedures for the collection and documentation of groundwater elevations, including consistent collection of data and step-by-step description of methodologies for measuring reference point (RP), static water level, and depth to water table, and standardized form for data collection.

### **Data Reporting for Groundwater Levels (Section 7)**

Online submissions by January 1 and July 1 each year. DWR will provide standard forms for the monitoring entity to submit groundwater elevation data online electronically.



## Section 3: Monitoring Well Network

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This CASGEM monitoring well network is the result of reviews of existing monitoring programs and a distillation from existing monitoring points to a smaller and CASGEM-focused network that best represents the groundwater conditions and hydrogeological characteristics of the seven hydrologic basins. Detailed summaries of the physical and hydrogeological descriptions of the seven basins are provided in this section and summarized in Appendix C. First, an overview is provided for the region being discussed then each of the seven hydrologic basins is discussed separately.

### 3.1 Background and Existing Data Collection and Evaluation

Existing hydrogeologic reports, maps, and documents were compiled and reviewed to describe the general basin characteristics and identify existing wells (Figures 2 to 5 – Appendix B). Many USGS installed monitoring wells in the lower Mission Valley, Sweetwater Valley and Otay Valley basins, their lithologic logs, and well construction diagrams were examined and included as part of the final CASGEM well network. The results of these efforts are summarized here and in Appendix A. Wells for the CASGEM Program were identified in the seven hydrogeologic basins listed in Section 1.2

### 3.2 General Geologic and Hydrogeologic Conditions in San Diego County

San Diego County is located along the Pacific Rim, an area characterized by mountain ranges and earthquakes. Alluvium and four general rock types are found within the County: 1) Cretaceous Age crystalline rocks, 2) Upper Jurassic metavolcanics; 3) Mesozoic Age metamorphic rocks; and 4) Tertiary Age sedimentary rocks.

Deposits of recent alluvium, including sand, gravel, silt, and clay are found in river and stream valleys, around lagoons, in intermountain valleys, and in the desert basins. Within San Diego County, several different hydrogeologic environments exist. These different environments can be grouped into three generalized categories: alluvial and sedimentary aquifers, fractured rock aquifers, and desert basins.

Alluvial and sedimentary aquifers account for approximately 13 percent of the unincorporated areas of the County. These aquifers are typically found in river and stream valleys, around lagoons, near the coastline, and in the intermountain valleys. Sediments in these aquifers are comprised of mostly consolidated (defined as sedimentary rock) or unconsolidated (defined as alluvium or colluvium) gravel, sand, silt, and clay. Most of these aquifers have relatively high hydraulic conductivity, porosity, and storage and in general would be considered good aquifers on the basis of their hydrogeologic characteristics. It should be noted that some alluvial and sedimentary aquifers in the County have relatively thin saturated thickness and therefore limited storage. Alluvial and sedimentary aquifers can be underlain by fractured rock aquifers such as that in the San Diego Formation, which provides additional storage. Fractured rock underlies approximately 73 percent of the unincorporated area of the County. These rocks are typically crystalline or metavolcanics associated with the Peninsular Ranges batholith of southern California and Baja California. Desert basins account for approximately 14 percent of the

unincorporated area of the County and they are typically considered alluvial basins. Desert basins are located in the extreme eastern portions of the County and characterized by extremely limited recharge, but typically have large storage capacities.

In accordance with the SBX7-6, DWR developed the CASGEM Program to establish a permanent, locally-managed system to monitor groundwater elevation in California's alluvial groundwater basins and sub-basins identified in DWR Bulletin 118. The alluvial and sedimentary aquifers are the primary groundwater units that are being monitored as part of CASGEM in San Diego County.

### 3.3 Hydrogeological Implications for Monitoring Well Selections

The hydrogeology and groundwater conditions of the seven hydrologic basins determine which wells were selected, based on well constructions and screen depth-intervals. This section describes the general hydrogeology and groundwater conditions of each of the seven DWR-designated basins in San Diego County. This section also includes an assessment of hydrogeologic conditions and what bearing it has on the selection of monitoring wells for developing the City's CASGEM program. Descriptions are provided for the seven basins in the order listed below:

1. San Pasqual Valley Groundwater Basin (9-10);
2. Mission Valley Groundwater Basin (9-14);
3. San Diego River Valley Basin (Santee – El Monte Basin) (9-15);
4. El Cajon Valley Groundwater Basin (9-16);
5. Sweetwater Valley Groundwater Basin (9-17);
6. Otay Valley Groundwater Basin (9-18); and
7. Tijuana Groundwater Basin (9-19).

Among the seven basins, only the San Pasqual Valley Basin has a formal Groundwater Management Plan (GMP) adopted in compliance with the California Assembly Bill (AB) 3030.

The Tijuana River Valley Groundwater Basin has a GMP developed by the Tia Juana Valley County Water District in 1995. The City will serve as an interim monitoring entity for this basin under AB 1152 (Section 1.3). Because it was not developed by the City and is outdated, the City will not accept it as a GMP and plans to develop an updated GMP for the Tijuana Basin in the future.

#### 3.3.1 San Pasqual Valley Groundwater Basin

The San Pasqual Valley Groundwater Basin (San Pasqual Valley Basin) lies within the City, approximately 25 miles northeast of downtown San Diego, in northern San Diego County

(Figure 1 – Appendix B). The basin covers a surface area of 5.5 square miles (3,498 acres), and is bounded by Lake Hodges on the southwest and by nonwater-bearing rocks of the Peninsular Ranges to the northeast. The basin lies within the San Dieguito River Watershed and is identified as Groundwater Basin Number 9-10 in the DWR Bulletin 118 (DWR, 2003). Santa Ysabel and Guejito drain into the watersheds and converge with Santa Maria Creeks to form the San Diegueno River, which flows out of the basin into Lake Hodges (DWR, 2003).

The City owns the majority of the land within the San Pasqual Valley Basin. The land owned by the City is leased to a variety of tenants for primarily agricultural uses (City, 2007). In the basin, agricultural water demand is met almost solely from groundwater. Based on the land use, water use demand for agricultural uses is estimated to be approximately 8,800 acre feet per year (afy) for the entire basin (City, 2007).

### **3.3.1.1 Groundwater Basin Characteristics**

The San Pasqual Valley Basin is composed of three main geologic layers, from top to bottom: alluvial aquifer, residuum (also referred to as residual), and crystalline rocks. Only the alluvial aquifer is considered in Bulletin 118 to be part of the groundwater basin. The Quaternary alluvium ranges from 120 feet in the San Pasqual Narrows (area extending from the uppermost influence with Lake Hodges to the confluence of Cloverdale Creek) to greater than 200 feet thick in the upper part of the basin, with increasing trend toward the eastern portion of the basin. This unit is described as non-active Holocene age alluvial deposits, composed of unconsolidated gravel, sand, silt, and clay. Beneath the alluvial aquifer, the residuum, also referred to as decomposed granite, is typically deeply weathered Green Valley Tonalite (DWR, 1993), with a maximum thickness of 100 feet (Izbicki, 1983). The alluvial deposits are laterally adjacent or underlain by the crystalline rocks that are resistant to weathering and form the hills and ridge tops surrounding the basin (Izbicki, 1983; SDCWA, 1995). No geologic faults of major significance are present in the basin (SDCWA, 1995).

The water bearing unit which makes up the local aquifer in the San Pasqual Valley Basin is the Quaternary alluvium. Groundwater in the alluvium aquifer is unconfined, with an average specific yield of about 16 percent (Izbicki, 1983). Well yields in the alluvium can be as high as 1,600 gallons per minute (gpm). The transmissivity (T) of the alluvial aquifer was estimated by USGS to be less than 25,000 square feet per day (ft<sup>2</sup>/day), but, a small portion of the aquifer which extends along the Santa Ysabel Creek is believed to have a T value greater than 25,000 ft<sup>2</sup>/day (City, 2007). The residuum underlying the alluvium aquifer has a maximum thickness of 100 feet and average specific yield of about 1 percent (Izbicki, 1983).

Groundwater storage estimates for the entire basin range from 63,000 acre-feet (af) (Izbicki, 1983) to 73,000 af (DWR, 1975), with a total storage of about 58,000 af in the alluvium only (CDM, 2010). Estimated basin safe yield was reported as 5,800 af (SDCWA, 1995).

The primary source of recharge to the alluvial aquifer within the basin originates from the outside of the basin as streamflow of the Santa Ysabel, Guejito, and Santa Maria creeks. The recharge areas extend along the ephemeral stream and river channels where coarse alluvial sediments exist. Additional source of recharge comes from infiltration of precipitation to the valley floor, in addition to agricultural return flows from irrigation with groundwater and imported water (City, 2007). During typical years, no stream flow leaves the valley and all surface runoff becomes groundwater recharge (Izbicki, 1983). The primary outflows include groundwater pumping, evapotranspiration from native wetland, and underflow out to Lake Hodges (CDM,

2010). Estimates of groundwater pumping for agriculture range from 8,600 afy (Greeley and Hansen, 1992) to 8,800 afy based on the DWR land use map (City, 2007).

Groundwater generally moves westward through the basin (DWR, 2003), and is deeper on the eastern edge of the basin near the Santa Ysabel Creek and Santa Maria Creek, and shallower on the western edge near Lake Hodges (City, 2007). Early records of groundwater level data indicate groundwater was near the land surface in the early 1900s and gradually began to decline in 1940s through 1960s. During the historic low periods in the early 1960s and mid-1970s, groundwater storage was reduced by 50 percent, where water levels in the middle of the basin declined by 20 feet to 50 feet, and water levels at the edges of the basin declined by even greater levels. The drought in the late 1970s resulted in groundwater decline throughout the basin. Groundwater levels started to recover after the 1977 drought through the early 1980s to a full basin condition in 1982 (Izbicki, 1983). However, some locations experienced another decline in the early 1990s potentially in response to a dry period or increased pumping (City, 2007). In general, the eastern portion of the basin shows the greatest variability in groundwater levels in response to pumping and hydrologic year type (City, 2007).

Groundwater levels and water quality in the basin are monitored by the City, as part of the GMP. The City is currently monitoring groundwater levels from 12 wells every month and groundwater quality from 10 wells semi-annually (spring and fall) (City, 2007). Total dissolved solids (TDS) and nitrate are the two primary constituents of concern within the basin. Water quality in the eastern portion of the basin is substantially better than the western portion, with lower concentrations of TDS and nitrate (CDM, 2010). Average TDS concentrations measured from 2004 to 2007 ranged from approximately 580 milligrams per liter (mg/l) to 2,460 mg/l. Nitrate concentrations exceeded the drinking water standard (Maximum Contaminant Level (MCL) of 45 mg/l) in some areas.

### 3.3.2 Mission Valley Groundwater Basin

Mission Valley Groundwater Basin (Mission Valley Basin) underlies an east-west trending valley, which is drained by the San Diego River (Figure 1 – Appendix B). During the preparation of the City's CASGEM program, the Mission Valley Basin boundary was modified from the Bulletin 118 boundary. The modified boundary was agreed on between the DWR and the City to include portions of basin that were not in Bulletin 118. Selected monitoring area in the Mission Valley Basin extends beyond the Bulletin 118 boundary and includes the San Diego Formation Aquifer. The modified basin boundary includes an area of 15.6 square miles (9,951 acres) and is identified as Groundwater Basin Number 9-14 in the DWR Bulletin 118 (DWR, 2003). The basin is bounded by the contacts of alluvium with the semi-permeable San Diego and Poway Formations and the impermeable Lindavista Formation. The southwestern boundary is the San Diego Bay.

#### 3.3.2.1 Groundwater Basin Characteristics

Geologic units in the Mission Valley Basin include Quaternary alluvium and the San Diego Formation. The principle water-bearing deposit in the basin is the Quaternary age alluvium. Quaternary age alluvium consists of medium to coarse-grained sand and gravel. This alluvium has an average thickness of about 80 feet and a maximum thickness of about 100 feet. The average well yield is about 1,000 gpm. The San Diego Formation is found in this basin and thickens westward across the Rose Canyon fault. The San Diego Formation is generally less than 100 feet thick east of the Rose Canyon fault system, reaching a maximum thickness of

about 1,000 feet west of the Rose Canyon fault. The effect of this fault on groundwater movement is unknown.

Estimated storage capacity of the basin ranges from 40,000 af (SDCWA, 1997) to 42,000 af (DWR, 1975); with an estimated basin safe yield of 6,700 af (SDCWA, 1995). Approximate sustainable yield of the basin is 2,000 to 4,000 afy (City of San Diego, 2009). Average groundwater production is reported to be 807 afy (MWDSC, 2007).

Historically, the primary recharge to the alluvial aquifer was infiltration of streamflow from the San Diego River.

The Mission Valley Basin, located in the central region of San Diego, is a basin of interest. This basin is being studied to determine the feasibility of pumping and desalinating the groundwater using reverse osmosis. Desalinated water would be conveyed to the potable distribution system. The primary constituents of concerns in the basin include magnesium and sulfate for domestic use and TDS and chloride with high concentrations both for domestic and irrigation use (DWR, 2003). The water quality in this basin has been also negatively impacted due to petroleum products having been discharged by an adjacent storage facility since 1986. In 1992, a clean-up order was issued by the Regional Water Quality Control Board. Joint efforts by the USGS and the City are underway to collect and analyze groundwater data to estimate water supply potential of the basin. The City has conceptual plans to develop groundwater in the most favorable part of the basin; however, it is in the most favorable part of the basin that the contamination has occurred and remediation is ongoing. The most prudent course of action for the City is to let the discharger complete the remediation before any development occurs in this portion of the basin.

### 3.3.3 San Diego River Valley (Santee - El Monte) Groundwater Basin

The San Diego River Valley Groundwater Basin (San Diego River Valley Basin) is commonly known in San Diego as the Santee-El Monte Basin (Santee through El Monte Basin). The extent of the groundwater basin in the San Diego River Valley Basin is actually four separate but connected basins and from west-to-east they are named the: Santee Basin, Lakeside Basin, Moreno Valley Basin and El Monte Basin. San Diego River Valley Basin is located in the eastern portion of the greater San Diego metropolitan area (Figure – Appendix B). The San Vicente and El Capitan Reservoirs are located at the eastern and northern edges of the basin, respectively (SDCWA, 2001). During the preparation of the City's CASGEM program, the San Diego River Valley Basin boundary was modified from the Bulletin 118 boundary. The modified boundary was agreed on between the DWR and the City to include portions of basin that were not in Bulletin 118. The modified basin boundary includes an area of 13.8 square miles (8,818 acres), and is identified as Groundwater Basin Number 9-15 in the DWR Bulletin 118 (DWR, 2003). The basin is comprised of commingling alluvial valleys of the San Diego River, San Vicente Creek, Forester Creek, Los Coaches Creek, and Sycamore Canyon Creek (SDCWA, 2001). The California Supreme Court decreed in 1930 that the City has Pueblo Water Rights to all of the water (surface and underground) of the San Diego River including its tributaries, from its source to its mouth.

The San Diego River Valley Basin is currently used as a source of groundwater by local residents of Helix Water District (WD), Lakeside WD, Riverview WD, and historically used as a source of groundwater by the City (SDCWA, 2001). Given the presence of multiple water service districts in the basin, the local water agencies have a collective interest in the groundwater study, monitoring, protection, and management of the groundwater resources of

the basin. Currently, Padre Dam Municipal WD is evaluating the potential for additional development and management of the resources of the basin.

### **3.3.3.1 Groundwater Basin Characteristics**

In the San Diego River Valley Basin, four hydrogeologic units are defined on the basis of water-bearing characteristics: the Quaternary alluvium deposits, unweathered fractured plutonic and metamorphic rocks, residuum, and Eocene sedimentary rocks. Unweathered fractured plutonic and metamorphic rocks, residuum, and Eocene sedimentary rock lie adjacent to and underlie the alluvium. No geologic faults of major significance are present in the basin (SDCWA, 1995).

The alluvial aquifer represents the primary geologic unit for groundwater storage and development based on its favorable hydraulic properties (SDCWA, 2001). Geologic units other than the alluvium yield water to domestic wells in many areas, but these units are not generally considered to be significant source for municipal supply due to the limited storage capacity and permeability, and variable well yields (SDCWA, 1997). Hydraulic communication between the fractured rock system and alluvium appears to exist, but conflicting evidence is presented regarding the degree of hydraulic communication (DWR, 1955, Black and Veatch, 1994, SDCWA, 2001).

As the primary source of water supply, the Quaternary alluvium deposits consist of unconsolidated river and stream deposits of gravel, sand, silt, and clay, occupying a southwesterly trending valley about 13 miles long and 1,500 feet to 5,000 feet wide. The alluvium has a thickness of exceeding 200 feet near Lakeside and 150 feet east of Moreno Valley and thins to the west, typically about 70 feet thick. The alluvial aquifer in the San Diego River Valley consists of younger alluvial deposits (Holocene age) and underlain by older alluvial fill (Pleistocene age). The older alluvial fill composed of gravel, sand, silt, and clay is very similar to younger alluvium, with the exception that it is generally thicker and has been partly cemented and weathered and contains more frequent lenses of coarse sand and gravel.

In the alluvium aquifer, the most productive materials are buried river channels and a layer of coarse gravels near the base of the aquifer east of Moreno Valley (Izbicki, 1985). Groundwater in the alluvium is unconfined, with estimates of specific yield ranging from 0.05 for partly cemented sands and silts to 0.22 for clean sands. Well yields may exceed 2,000 gpm and average more than 500 gpm. In general, well yields are less in shallower parts of the alluvial aquifer west of the basin, but at least one well in this area yields more than 1,000 gpm. Transmissivities may exceed 5,000 ft<sup>2</sup>/day. Similar to the Mission Valley Basin, well yields are less in the older alluvial fill than in younger alluvial fill and groundwater tends to move freely between the older and younger units.

Estimated aquifer storage of the alluvial aquifer is 55,000 af based on a USGS study (Izbicki, 1985), compared to the previous estimates ranging from 24,000 af (Kimble, 1934) to 97,000 af (DWR, 1975).

Historically, the primary recharge to the alluvial aquifer has been stream flow in the San Diego River and San Vicente Creek. Natural recharge from these surface water bodies has been greatly altered by construction of water supply reservoirs upstream of the alluvial aquifer.

Movement of groundwater is from the major source recharge, which is the San Diego River below El Capitan Dam, and from smaller recharge areas in Moreno Valley, downgradient to the discharge area near Mission Gorge. With the exception of transpiration losses, all water entering the alluvial aquifer discharges to the San Diego River at Mission Gorge. Water levels in

the 1940s declined significantly and continued to decline through 1960s. By the late 1950s, groundwater levels were as much as 50 feet below land surface, compared to a few feet prior to groundwater development. In general, groundwater drawdown was less in the western parts of the aquifer than in the eastern (Izbicki, 1985).

The San Diego River Valley Basin has experienced increasing concentrations of TDS over time. Historically, the alluvium aquifer had TDS concentrations exceeding 1,000 mg/l, as high as 2,990 mg/l (Izbicki, 1985). The study conducted by USGS, in coordination with SDCWA and DWR, evaluated the feasibility of reclaimed water use in this basin for improving groundwater quality by pumping poor quality groundwater and replacing it with reclaimed water that has lower dissolved solids concentrations (Izbicki, 1985). The study indicated that reclaimed water use plans may be feasible in the western part of the aquifer.

### 3.3.4 El Cajon Valley Groundwater Basin

The El Cajon Valley Groundwater Basin (El Cajon Valley Basin) lies in the south central part of San Diego County (Figure 1 – Appendix B). During the preparation of the City's CASGEM program, the El Cajon Valley Basin boundary was modified from the Bulletin 118 boundary. The modified boundary was agreed on between the DWR and the City to include portions of basin that were not in Bulletin 118. The modified basin boundary includes an area of 2.7 square miles (1,752s acres) and is identified as Groundwater Basin 9-16 by DWR Bulletin 118 (DWR, 2003). The basin is bounded by impermeable crystalline rocks on the south and east, by semi-permeable older Tertiary sedimentary rocks on the west, and by the San Diego River Valley Basin on the north. Surface waters drain northwestward to the San Diego River.

#### 3.3.4.1 Groundwater Basin Characteristics

Water-bearing materials in the El Cajon Valley Basin include Pleistocene age alluvium, the Eocene age Poway Conglomerate, and an older, an underlying sandy siltstone unit (DWR, 1986). In addition, water is produced from the underlying fractured crystalline rocks. Total thickness of valley fill ranges to about 350 feet (DWR 1986). An average specific yield for this basin is about 5 percent (DWR 1986).

Pleistocene age alluvium ranges to 50 feet thick and consists of gravel, sand, and silt (DWR 1967; 1986). Wells in this unit yield as much as 250 gpm (DWR 1986). The Eocene age Poway Conglomerate consists of sandy conglomerate and conglomeratic sandstone with some interbeds of sand and shale (DWR 1986), with a thickness of more than 300 feet thick (DWR 1986). A sandy siltstone to mudstone unit underlying the Poway Conglomerate reaches a maximum of about 325 feet thick (DWR 1986). This unit bears some water, but wells typically yield less than 5 gpm.

The total capacity of the basin is estimated to be about 32,500 af (DWR 1986). Groundwater in storage was previously estimated to be about 27,800 af (DWR 1986).

Groundwater in the basin moves northwestward towards the San Diego River (DWR 1986). The dominant source of natural recharge to the basin is from percolation of precipitation, with lesser contributions from underflow from underlying fractured crystalline rocks (DWR 1986). Additional recharge comes from return of applied irrigation water and percolation of septic tank effluent (DWR 1986).

The primary constituents of concerns in the basin include TDS, chloride, and nitrate. Groundwater is generally of sodium chloride character (DWR 1967; 1986). Historical water quality data showed TDS concentrations ranging from 637 to 3,960 mg/l with a mean value of

1,640 mg/l (DWR 1986); nitrate concentrations ranging to 185 mg/l with a mean concentration of 69 mg/l, chloride concentrations ranging from 186 to 1,910 mg/l with a mean of 412 mg/l, and sulfate concentrations of 78 to 680 mg/l with a mean of 345 mg/l (DWR 1986).

### 3.3.5 Sweetwater Valley Groundwater Basin

The Sweetwater Valley Groundwater Basin (Sweetwater Valley Basin) is located adjacent the Pacific coast in southwestern San Diego County, situated south of the Mission Valley Basin and north of the Otay Valley Groundwater Basin (Figure 1 – Appendix B). The western boundary is the San Diego Bay. The basin underlies an alluvial valley that empties into the San Diego Bay. During the preparation of the City's CASGEM program, the Sweetwater Valley Basin boundary was modified from the Bulletin 118 boundary. The modified boundary was agreed on between the DWR and the City to include portions of basin that were not in Bulletin 118. The Sweetwater Valley with a modified basin boundary includes a surface area of 42.3 square miles (27,060 acres), and is identified as Groundwater Basin Number 9-17 in the DWR Bulletin 118 (DWR, 2003).

#### 3.3.5.1 Groundwater Basin Characteristics

Water-bearing formations in the Sweetwater Valley Basin include the Quaternary alluvium and the Pliocene age San Diego Formation. Impermeable basement rocks have limited significance in terms of groundwater storage. The La Nacion fault zone trends north and northwest and crosses the eastern part of the basin, but does not appear to create a barrier to groundwater movement (DWR 1986).

The most permeable water-bearing deposit in the basin is Quaternary alluvium, which consists of unconsolidated stream deposits of sandy silt, sand, and cobbles. This unit is the principal source of groundwater in the basin with an estimated average thickness of 80 feet (SDCWA 1997) to 100 feet (USACOE 1982) and specific yields ranging from 10 to 12 percent (DWR 1986). Groundwater in these deposits is unconfined, and wells produce an average yield of about 300 gpm (SDCWA 1997).

Groundwater is also produced from the San Diego Formation that is slightly to moderately consolidated and characterized by a wide range of textures. Sediments range from clay to gravel, and include well-sorted medium to coarse sand, silty sand, and clayey sand (Huntley and others 1996). The San Diego Formation reaches 800 feet thick based on borehole data (Huntley and others 1996), but SDCWA (1997) estimates that the average thickness is about 700 feet and the maximum thickness may exceed 2,000 feet. Well yields are as high as 1500 gpm (Huntley et. al., 1996), with an average well yield of about 500 gpm (SDCWA, 1997). The San Diego Formation is typically characterized as a confined aquifer (SDCWA, 1997). The top of the underlying Otay Formation is probably acting as a deep basal confining layer, due to thick clay at the geologic contact. The upper part of the San Diego Formation aquifer may have relatively low stratigraphic confinement, inasmuch as the near surface sediments (above the water table) are mostly relatively pervious sand and gravel, similar to the sediments below the water table. The site stratigraphy suggests there may be some unconfined aquifer behavior in the upper part of the aquifer (URS, 2012). The basin is reported to have a mean storage coefficient of about 0.001 (SDCWA, 1997). Based on data from the recently installed monitoring well Mt. Hope MW-1 by the City, T ranges approximately from 5,200 ft<sup>2</sup>/day to 5,600 ft<sup>2</sup>/day (CDM, 2007).

Groundwater storage capacity was estimated at 13,000 af in the Quaternary alluvium and about 960,000 af in the San Diego Formation, suggesting a total storage capacity of about 973,000 af for this basin (SDCWA, 1997). DWR (1986) estimated that between 17,000 and 20,000 af of groundwater was in storage.

Recharge in the basin is derived from the runoff of seasonal precipitation in the upper reaches of the Sweetwater River Valley, discharge from the Sweetwater Reservoir, and underflow from the reservoir. Subsurface flow may also contribute recharge (DWR, 1986). Annual groundwater production was estimated at 900 afy from the Quaternary alluvium and about 2,000 afy from the San Diego Formation (SDCWA, 1997).

Groundwater level data showed that the groundwater surface in the early 1980s was relatively stable, and higher than in the years preceding 1959. This is attributed to decreased groundwater pumping due to the importation of Colorado River water (USACOE, 1982). A study by the Sweetwater Authority indicates that water levels in production wells near National City have remained stable since about 1957 (Garrod, 2001). Groundwater flow follows surface flow of the Sweetwater River (DWR, 1986).

The Sweetwater Valley Basin has TDS, chloride and sodium content generally exceeding the recommended limits for drinking (DWR, 1986). Historical data indicate TDS concentrations ranging from 300 mg/l to more than 50,000 mg/l in the alluvium and ranging from 600 mg/l to 1,600 mg/l in the San Diego Formation (USACOE, 1982). Based on water quality data measured in 2007 from the City's recently installed monitoring well (Mt. Hope MW-1), TDS and chloride concentrations were 555 mg/l and 149 mg/l, respectively (CDM, 2007).

### 3.3.6 Otay Valley Groundwater Basin

The Otay Valley Groundwater Basin (Otay Valley Basin) is located adjacent the Pacific Ocean in southwestern San Diego County (Figure 1 – Appendix B). During the preparation of the City's CASGEM program, the Otay Valley Basin boundary was modified from the Bulletin 118 boundary. The modified boundary was agreed on between the DWR and the City to include portions of basin that were not in Bulletin 118. The modified basin boundary includes a surface area of 16.1 square miles (10,281 acres), and is identified as Groundwater Basin Number 9-18 in the DWR Bulletin 118 (DWR, 2003). The Otay River flows east to west through the valley toward the ocean, and numerous small lakes and ponds exist along the river's course (DWR 1986). The basin is bounded on the east by the San Ysidro Mountains, on the north and south by semi-permeable marine deposits, and on the west by the Pacific Ocean.

#### 3.3.6.1 Groundwater Basin Characteristics

The primary water bearing units in this area consist of the Quaternary alluvium, the Pliocene to Pleistocene age San Diego and the Miocene to Pliocene age Otay Formations. The alluvium yields water freely to wells that may discharge as much as 300 gpm. However, the alluvium is too thin to be considered a viable aquifer because the thickness is not more than 50 feet (DWR, 1986).

Coarse deposits within the San Diego Formation form the primary water-bearing materials in the basin (DWR, 1986; SDCWA, 1997). The formation is regional in extent and forms some of the most productive deposits in the Tijuana, Sweetwater Valley, and Mission Valley Groundwater Basins. The San Diego Formation consists of slightly- to moderately-consolidated, medium to coarse sand, silty sand, and clayey sand (Huntley et. al., 1996). These deposits generally thicken westward from about 100 feet east of La Nacion fault zone to as much as 1,400 feet

near Tijuana (Huntley et. al., 1996), and average about 800 feet thick west of La Nacion fault zone that crosses the basin from north to south (SDCWA, 1997). Well yields range from 150 to 400 gpm (DWR, 1986), though wells in the same formation yield as much as 1,500 gpm (Huntley et. al., 1996). The average specific yield for this formation is approximately 10 percent.

The Otay Formation has not been extensively developed. These deposits consist of sand that is weakly cemented and moderately permeable layered within finer materials (Huntley et. al., 1996). The few wells drilled into this deposit yield from 10 to 50 gpm (DWR, 1986).

The basin receives groundwater recharge from percolation of precipitation, stream-flow originating in the valley highlands, return of applied water, and rare releases from the Lower Otay Reservoir during flood conditions.

The primary constituents of concerns in groundwater include TDS and chloride. Groundwater in the coastal plain part of this basin had TDS ranging from about 500 mg/l to more than 2,000 mg/l (DWR, 1967). Historical data show concentration of TDS in the San Diego Formation ranging from 342 mg/l to about 12,000 mg/l throughout the region (SDCWA, 1997).

### 3.3.7 Tijuana Groundwater Basin

The Tijuana Groundwater Basin (Tijuana Basin) is located in the southwest corner of San Diego County along the Mexico border (Figure 1 – Appendix B). During the preparation of the City's CASGEM program, the Tijuana Basin boundary was modified from the Bulletin 118 boundary. The modified boundary was agreed on between the DWR and the City to include portions of basin that were not in Bulletin 118. The modified basin boundary includes a surface area of approximately 12.3 square miles (7,858 acres), and is defined as Groundwater Basin Number 9-19 in the DWR Bulletin 118 (DWR, 2003). The Tijuana Basin underlies the portion of the Tijuana River Valley that lies within California. The basin's southern boundary is the international border with Mexico; the eastern and northern boundaries are the contacts with semi-permeable marine deposits; and the western boundary is the Pacific Ocean. The La Nacion fault and several other smaller faults cross the Tijuana Basin (Izbicki, 1985).

The City is currently examining the feasibility of using the lower Tijuana River Valley alluvial aquifer and underlying San Diego Formation as a potential aquifer storage and recovery system to seasonally store recycled water during the wet season, and extract the recycled water from the ground and distribute it to meet maximum day demands during the warmer, drier season (Dudek, 2011). The study evaluated the additional storage capacity in the alluvial and San Diego Formation and the feasibility of injecting and extracting recycled water in these two formations. The source of recycled water is from the City of San Diego South Bay Water Reclamation Plant (SBWRP), located near the international border between the U.S. and Mexico. The injection and recovery of recycled water from the San Diego Formation is not considered feasible based on the relatively low hydraulic conductivity and T found in this formation. This investigation focused on the eastern portion of the alluvium formation where the depth to water table is greater than 10 feet below ground surface (bgs) (Dudek, 2011). In the western portion, water table is typically less than 10 feet bgs and extraction and recovery of recycled water may be of concern due to historical pumping that led seawater intrusion and degradation of water quality in the western basin.

Tijuana Basin has a GWP adopted in 1995 by Tijuana Valley County WD, in accordance with procedures by California AB 3030 (Dudek and Associates, 1995).

### 3.3.7.1 Groundwater Basin Characteristics

The water bearing units in the Tijuana Basin are the Quaternary age alluvium and the San Diego Formation (DWR, 2003). The marine deposits overlying the San Diego Formation can also be water bearing and do not yield water to wells as these deposits are generally less than 25 feet thick and frequently above the regional groundwater surface (Izbicki, 1985).

The Tijuana River has deposited alluvium along its stretch from the City of Tijuana westward to the Pacific Ocean. The alluvium is the most productive unit, consisting of river and stream deposits of gravel, sand, silt, and clay, covering approximately 7.4 square miles in the river valley (Dudek, 2011). As reported in the DWR Bulletin 118, the thickness of the alluvium is less than 150 feet and averages about 80 feet thick. The alluvial aquifer is divided into two separate hydrostratigraphic units: the upper silty sand unit and the lower sand and gravel unit. The upper silty sand unit of the alluvial aquifer is characterized by loose to medium dense, olive gray to olive brown, sandy silty to silty fine to medium sand interbedded with clay and some thin gravel lenses (Woodward-Clyde Consultants, 1994). The lower sand and gravel unit of the alluvial aquifer is characterized by very dense, well-graded with silt and sand that graded downward to poorly graded gravel with sand (Woodward-Clyde Consultants, 1994). Based on driller's information, the principal water-yielding zone of the alluvial aquifer is the lower sand and gravel unit (Izbicki, 1985). Many agricultural wells in the valley were completed in the upper silty sand unit and the lower sand and gravel unit (Dudek, 2011). Based on driller's information, estimated well yields in the alluvial aquifer may exceed 2,000 gpm and average 550 gpm (Izbicki, 1985) to 1000 gpm (SDCWA, 1997). Transmissivity was estimated at 3,800 ft<sup>2</sup>/day, compared to a higher T value of the lower sand and gravel unit estimated at 7,500 ft<sup>2</sup>/day (Dudek, 2011). Groundwater in this unit is unconfined and the specific yield is about 15 percent (SDCWA, 1997). Specific capacities for wells screened in the lower sand and gravel unit were found typically twice the specific capacities for wells completed in the upper silty sand unit of the alluvial aquifer.

Underlying the alluvium is the San Diego Formation consisting of Pliocene age well-sorted medium to coarse sand, silty and clayey sand, sandy silt, and sandy clay (Huntley and others 1996). Thickness of this unit is at least 1,700 feet in the basin. Well yields range from 60 gpm to 1,000 gpm with an average of about 350 gpm, based on well driller's information (Izbicki, 1985). Aquifer and drawdown tests conducted in this unit indicated low hydraulic conductivity and T estimates and the inability to sustain high pumping rates (e.g., 150 gpm) for more than a few hours (Dudek, 1997). Groundwater in this unit is confined with a storage coefficient of about 0.001 (SDCWA, 1997).

Recharge to the basin is mainly from the Tijuana River and controlled releases from the Barrett and Morena Reservoirs in San Diego County and Rodriguez Reservoir in Mexico. Recharge to the alluvial aquifer originates primarily outside the basin as flow in the Tijuana River. In a typical year, all flow in the river becomes groundwater recharge (Izbicki, 1985). In a wet year considerable potential recharge leaves the basin as stream flow and is discharged to the Pacific Ocean (Izbicki, 1985). Irrigation accounts for more than one third of the recharge in the basin (DWR, 2006). Some applied irrigation water recharge the basin by deep percolation and discharges from septic tanks also contribute to recharge.

Groundwater storage capacity was estimated to be about 50,000 af to 80,000 af for the alluvial aquifer for the part of the U.S. and 137,000 af for the entire alluvial aquifer (DWR, 1975). SDCWA reports about 1,500 af of groundwater is pumped from the alluvium and extraction data for the San Diego Formation are not available.

Movement of groundwater is from the major source of recharge, the Tijuana River near the international border, downgradient to the discharge area east of the basin toward the Pacific Ocean (Izbicki, 1985). Water levels declined in the alluvial aquifer during the 1950s through the early 1970s, as a result of extensive groundwater development, eventually reversing the historical westward groundwater flow. By the early 1950s water levels were below sea level in parts of the alluvial aquifer. Maximum water level drawdown throughout the aquifer occurred in the early 1960s. This reversal allowed seawater to infiltrate the alluvial aquifer and move eastward, degrading the groundwater quality and the productivity of agriculture in the western part of the valley. Changes in pumping in the 1970s allowed water levels to rebound. By the early 1990s, groundwater had resumed its historical flow direction (Dudek and Associates, 1994). Groundwater elevations measured in the alluvial aquifer since the 1990s indicated a westward groundwater flow direction from the international border to the Pacific Ocean (Dudek, 2011). The alluvial aquifer monitoring well network shows that groundwater elevations were above mean seal level in 2008 (Dudek, 2011).

Groundwater quality in the basin is generally poor; however some deeper wells yield water of good quality from partly consolidated sediments (Izbicki, 1985). Concerns of constituents in the alluvium aquifer include TDS, chloride, sulfate, and occasionally nitrate (Izbicki, 1985). A study conducted by the USGS, in coordination with SDCWA and DWR, evaluated the feasibility of improving groundwater quality and replacing it with reclaimed water that has lower dissolved solid concentrations (Izbicki, 1985). The study indicated reclaimed water use plans may be feasible, providing seawater intrusion can be controlled.

## Section 4: Rationale for Monitoring Plan

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This section discusses the selection of existing wells recommended for monitoring. Discussions include the hydrogeological rationale used for well selections, spatial density, and frequency of monitoring.

### 4.1 Well Network Design

DWR (2010b) provides some guidance for designing a monitoring well network, but gives no recommendations. Monitoring wells can be constructed in grids, at randomly selected points, or to target certain aquifer zones or hydrologically important locations. The CASGEM Program objective is to collect data at locations where collectively they could be beneficial to support the determination of natural seasonal or artificial groundwater elevation trends, storage, and gradient (flow direction). Hence, the primary rationale is to have a monitoring network of wells to represent a groundwater basin or adjacent basins in terms of temporal variability in water levels and to determine spatial groundwater flow directions (gradient). Where possible, selected wells in individual and adjacent basins have sufficient spacing such that groundwater contours can be constructed based on locations and historical trends.

This project targets existing and near-term planned wells and therefore the exercise to design a monitoring well network is largely unnecessary. Future existing or new wells added to the network may be needed based on the upcoming data collection and groundwater elevations. Where future wells may be necessary, they should be located such that water levels would not be significantly affected by nearby pumping, wells are accessible, and only the regional aquifer is being measured.

#### 4.1.1 Monitoring Well Spatial Density

Selected monitoring wells in Table 2 (Appendix A) were considered based on their geographic spacing relative to each other to assess groundwater gradient in the regional aquifer system. Future focus on enhancing spatial density of data will be in basins that currently have only one designated monitoring point.

As an example for assessment of regional gradient, the San Pasqual Basin averaged horizontal gradient is about 20-foot vertical change per one mile distance or 0.004 foot/foot. The six well sites proposed in San Pasqual in this work plan are no more than three (3) miles apart, providing current and new data to be analyzed for horizontal gradient as well as temporal trends representative of the aquifer in the basin.

DWR (2010b) provides quantitative measures of monitoring well density, with recommended spatial densities ranging from about 2 to 10 monitoring wells per 100 square miles. The approximate areas of the seven hydrologic basins are listed below, along with the range of wells considered appropriate based on the above DWR recommended densities.

Groundwater Basin	Area (mi <sup>2</sup> )	No. of Proposed Wells
San Pasqual Valley	5.50	6
Mission Valley	15.6	2
San Diego River Valley	13.8	4
El Cajon Valley	2.70	1
Sweetwater Valley	42.3	1
Otay Valley	16.1	1
Tijuana	12.3	1
<b>Total CASGEM Network Wells</b>	108.3	16

In general, wells should not be located too close together, nor should they be located exceedingly close to the edges of the basins or to surface water bodies such as rivers and lakes. The monitoring wells included in this plan were selected based on their best known locations to neighboring wells. The utility of all wells were researched plus information related to their proximity to natural basin boundaries, manmade surface water bodies, recharge basins, and production wells were compiled in a project-well-database. The wells in the database were mapped in a GIS that was used to assist in avoiding inclusion of monitoring wells that are close to the above boundaries. Qualitative information such as recharge history of basins and groundwater productions were gathered from groundwater reports to assess minimum distances from boundaries for each selected well.

#### 4.1.2 Monitoring Frequency

In general, the monitoring wells targeted in this monitoring well network avoid shallow groundwater and are not near active pumping wells. The climatic regime of coastal California is bi-seasonal with most rainfall occurring in the winter, and little rainfall throughout most of the rest of the year. Therefore, *semi-annual monitoring is deemed appropriate* for the wells to be monitored. Water levels should be measured in the fall during November, before the winter wet period, and in the spring during May, right after the wet season. This will capture both the theoretical lowest and highest water levels in the basins.

DWR (2010b) also discusses the frequency with which water level measurements should be taken. Soundings should be recorded at least semi-annually, unless conditions within the basins being monitored dictate more frequent measurements. Reasons for increasing the frequency of monitoring include large withdrawals, rapid recharge, and shallowness of the aquifer, highly conductive aquifer materials, and variable climate conditions.

#### 4.2 Selected Monitoring Wells

Selected monitoring wells listed in Table 2 (Appendix A) and depicted in Figure 6 (Appendix B) are for inclusion in the current CASGEM network. The following sections described the selected wells in each of the seven basins.

#### 4.2.1 San Pasqual Valley Basin – Selected Monitoring Wells

Six monitoring wells are selected to represent the San Pasqual Valley groundwater basin (Figure 6 – Appendix B).

The San Pasqual monitoring well SP073/35A1 is the furthest east monitoring location for collection of upgradient water level measurements.

About 1.8 miles west is the second selected monitoring well Santa Ysabel (SDSY) (012S001W34L004S). The shallow piezometer in this multi-level well will be used for the CASGEM Program.

About 2.7 miles downgradient is the third monitoring well SP107/32M3 for collection of water levels in the middle of the sinuous basin. This well was monitored by the USGS in the past from the 1960s to early 1970s.

The fourth selected well site in this basin is the USGS Cloverdale (SDCD) well (012S001W30J005S). This well is located about 4,500 feet north of third monitoring well SP107/32M3 and was constructed early 2013. The shallow piezometer in this multi-level well will be used for the CASGEM program.

The fifth selected monitoring well site is the Lake Hodges (SDLH) well (013S002W12M003S). This well is located about 2.6 miles southwest of selected well SP107/32M3. The fifth selected well is now the westernmost data point in the current CASGEM program for the San Pasqual Basin. The shallow piezometer in this multi-level well will be used for the CASGEM Program.

The sixth selected monitoring well is the Pinery well located about 0.55 mile from the fifth selected well Lake Hodges (SDLH).

#### 4.2.2 San Diego River Valley Basin (Santee - El Monte Basin) – Selected Monitoring Wells

Four monitoring wells are currently selected to represent the San Diego River Valley Basin (Figure 6 – Appendix B). Three monitoring points represent the main east and central portions of the basin and one well represents the northern extension of the basin where it connects to the middle of the main basin.

The easternmost monitoring point is well HWD-2 selected for an upgradient water level collection. In the middle of the basin, the selected wells include the Confluence monitoring well and the Marilla monitoring well, located about two and a half (2.5) and three and a half (3.5) miles, respectively, west and downgradient from HWD-2. Northwest of HWD-2 is the selected AMW-1 monitoring well located about three miles upgradient at the northern tip of the north-extension of the main groundwater basin.

These four monitoring wells will be joined by a fifth monitoring point (well) to be located in the western extent of the basin where the existing wells MW-1, 2, 4, 5, and 7 are located. Wells in this area are operated by the San Diego County Water Authority (SDCWA). The City is currently requesting information from the SDCWA and will assess their potential inclusion in the CASGEM Program.

#### 4.2.3 Mission Valley Basin – Selected Monitoring Wells

Two monitoring wells are selected to represent the east-west trending elongate Mission Valley Basin (Figure 6 – Appendix B). Selected monitoring well Aqua Culture (SDAQ) (016S002W18J007S) is located in the eastern half of the basin to collect upgradient water levels. Selected monitoring well YMCA (2) located 3.7 miles west of the Aqua Culture (SDAQ) well will represent downgradient water levels. It is noted that there is an inactive YMCA production well located close to the monitoring well YMCA (2).

These two wells can represent the entire basin in water level trends and flow gradient. It is noted that all monitoring wells in this basin are close to the river because of the narrow basin configuration (i.e., the paleo-channel) of the San Diego River. There are currently no identifiable wells in the large southwestern portion of this groundwater basin. City staff will continue its effort to locate existing monitoring wells that could be appropriate for the CASGEM Program and will report findings to DWR in the future.

#### 4.2.4 Sweetwater Valley Basin – Selected Monitoring Wells

A monitoring well, Naval Base (SDNB) (017S002W20F005S), is selected to collect data in the Sweetwater Valley Basin in the CASGEM Program (Figure 6 – Appendix B). The shallowest well (screened at 20 feet to 25 feet below ground surface, bgs) will be used for the CASGEM Program.

The Naval Base (SDNB) well is located in the center of the Sweetwater Valley Basin. The three monitoring points in the Sweetwater Valley Basin, Otay Valley Basin, Tijuana Basin, and the monitoring well in the adjacent Mission Valley Basin on the north is currently intended to provide sufficient water level data to represent trends and gradient in two groundwater basins combined.

It is the City's intention that other monitoring wells in this groundwater basin will be evaluated in the future to assess their conditions, screen depths, and groundwater levels. The City will then decide on their inclusion in the CASGEM Program to provide additional information to aid in characterizing groundwater flow gradients and potentially contouring groundwater levels.

#### 4.2.5 Otay Valley Basin – Selected Monitoring Wells

A monitoring well Otay Trolley (SDOT) (018S002W22E007S) is selected to collect data in the Otay Valley Basin in the CASGEM Program (Figure 6 – Appendix B). The well screened at 45 feet to 65 feet bgs is currently under USGS oversight.

Because this well is located in the southern portion of the County, the potable groundwater depths are greater than those in the north (e.g., shallower groundwater in the San Pasqual Valley).

It is the City's intention that other monitoring wells in this groundwater basin will be evaluated in the future to assess their conditions, screen depths, and groundwater levels. The City will then decide on their inclusion in the CAGSEM Program to provide additional information to aid in characterizing groundwater flow gradients and potentially contouring groundwater levels.

#### 4.2.6 Tijuana Basin – Selected Monitoring Wells

A monitoring well Boundary Waters (SDBW) (019S002W02C0011S) is selected to collect data in the Tijuana Basin (Figure 6 – Appendix B). This well is screened at 260 feet to 280 feet bgs which is most likely monitoring the shallowest potable groundwater zone of the San Diego Formation in this southern portion of the County. Currently, this monitoring well is the shallowest well identified in the basin for monitoring groundwater conditions of the water-bearing units.

It is the City's intention that other monitoring wells in this groundwater basin will be evaluated in 2013 to assess their conditions, screen depths, and groundwater levels. The City will then decide on their inclusion in the CASGEM Program to provide additional information to aid in characterizing groundwater flow gradients and potentially contouring groundwater levels.

#### 4.2.7 El Cajon Valley Basin – Selected Monitoring Well

The ECV-1 well (16S001W11R004S) is registered in the DWR Water Data Library and will be used for the CASGEM Program (Figure 6 – Appendix B).



## Section 5: Monitoring Well Information

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This section discusses the information required in this monitoring plan, subsequent updates, and regular data submittals to DWR. Available State Well Number of a well (Table 2-Appendix A) is retained to identify a selected monitoring well. Alternatively, an existing well designation (well name) is also used in Table 2 (Appendix A) to identify a selected monitoring well based on a local well name. Since the wells included in the monitoring network are mostly made up of wells owned by other public agencies, their existing designations are retained for ease of reference. Ground water data will be provided by other agencies to the City for CASGEM groundwater level submittals.

Under the DWR (2010a) guidelines, each well must have a unique identifier. DWR provides few rules in their guidelines that would restrict how well designations are constructed, except that they must be 15 characters or less, should avoid specific information referring to private owners or locations, and should not be so common as to be likely to be duplicated by other wells (e.g., MW-1).

### 5.1 Spatial Coordinates

Spatial coordinates for most of the wells included in Table 2 (Appendix A), and shown on Figures 1 through 6 (Appendix B) are based on coordinates received from the well owning agency or monitoring entity. Only the selected wells in Table 2 (Appendix A) are included in preparing this monitoring network; these well locations are surveyed and existing coordinates are verified by the owners or users of the monitoring wells.

### 5.2 Land Surface and Reference Point Elevations

Only a small percentage of wells have available land surface elevation information. Land surveys will be performed for monitoring wells with no site coordinates and are selected for the program (Table 2 –Appendix A). Reference point (RP) elevations relative to land surface will be determined during well location surveying.

Because most of the wells are owned by public agencies, having water levels measured regularly, these wells have established RP locations. Where the elevation of the reference point is not currently known or accurately known (e.g., due to unknown land surface elevation, minor changes in land surface elevation due to subsidence and hence inaccurate RP elevation). It shall be determined based on a well visit if the RP elevation needs to be surveyed (see Sections 6.1 and 6.2). The monitoring entity which is the City or a designated representative will perform the survey.

Establishment of RPs for wells in the current monitoring network was professionally surveyed by high precision GPS or by optical land surveys to obtain precise horizontal and vertical control data. Future wells will be surveyed in the same manner. If possible, the RP shall be flush with the top of the well lid or well vault, on the highest side or due north, punch marked and spray painted. All water level measurements will be made from this RP.

### 5.3 Well Type and Well Owner

Of the 16 wells currently selected for monitoring in Table 2 (Appendix A), the ownership of all the selected wells are known. In addition, the well 016S001W11R004S identified in El Cajon Valley is registered in the DWR Water Data Library. All 16 wells are known to be monitoring wells.

### 5.4 Well Construction Data

Of the 16 wells currently selected for monitoring in Table 2 (Appendix A), four wells remain with unknown screen intervals - SP107/32M3, Pinery, ECV-1, and YMCA (2). With the recent video survey by DWR staff, SP073/35A1 has screen intervals at 103-123 feet and 163-183 feet. Screen intervals for SP107/32M3 were not visible when the video survey was conducted. Well construction data for the well 016S001W11R004S (ECV-1) identified in El Cajon Valley with DWR registration in the Water Data Library is currently unknown.

## Section 6: Field Methods for Groundwater Monitoring

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### 6.1 Introduction

This guideline describes the field procedure that will be followed by City of San Diego when measuring groundwater levels in monitoring wells for the CASGEM Program. Following these guidelines help ensure that groundwater level measurements are accurate and consistent among the monitoring wells included in the CASGEM Program. The City's CASGEM Program currently includes only monitoring wells. Therefore, this guideline is prepared for water levels measurements from monitoring wells.

### 6.2 Well Coordinates

Well location coordinates for the selected monitoring wells are submitted to the DWR in the CASGEM online portal. High precision or optical land surveys of the horizontal locations for wells included in this and future updates of the monitoring program will provide the best possible comparability between water level measurements collected at different locations and times.

DWR (2010b) provided guidelines for the coordinate systems to be used in locating the well; with horizontal coordinates in decimal degrees, referenced to the North American Datum of 1983 (NAD83). The vertical elevation should be in feet, referenced to the North American Vertical Datum of 1988 (NAVD88).

### 6.3 Reference Point and Land Surface Elevation

Establishment of RPs for wells in the current monitoring network was professionally surveyed by high precision GPS or by optical land surveys to obtain precise vertical control data. Future wells will be surveyed in the same manner. Reference point elevations are updated in the DWR CASGEM web portal. Establishment of a consistent reference point (RP) location is important for comparability between different water level measurements at the same well.

If possible, the RP shall be flush with the top of the well lid or well vault, on the highest side or due north, punch marked and spray painted. DWR (2010b) recommends that a clearly labeled photograph of the reference point be produced for each well.

All water level measurements will be made from the RP. In the absence of unanticipated access restrictions, water levels will be measured from the RP of a well casing or sounding tube. Where this is not possible, a detailed description of the reference point used will be recorded so that the RP can be used for comparison with previous measurements. If the marker of the permanent RP is lost or rendered unviable, the RP used during that monitoring event will be marked and a survey will be conducted to reestablish that rim elevation as the permanent RP.

The horizontal and vertical coordinates of the RP should be surveyed (see Section 6.1). In addition, the land surface datum should be surveyed. DWR (2010b) recommends re-measuring the distance between the RP and land surface datum every 3 to 5 years to account for changes in the land surface.

## 6.4 Static Water Level

The water level collected should be confirmed to be representative of the regional static water level. If possible, it should not be affected by pumping in or near the monitored well. If the water level in the well to be measured is affected by pumping, measurement should be delayed until such time as the water level returns to a static level. If this is not possible (for example, because some nearby well is heavily relied-upon for water supply), the occurrence of pumping should be noted on the field forms. If known, the time since the last pumping in the area should also be noted, even if the water level has rebounded to its static level.

No selected monitoring wells are screened across multiple water-bearing zones. Currently, wells Santa Ysabel (SDSY), Aqua Culture (SDAQ), and Naval Base (SDNB) are recommended for monitoring of the shallowest screens. This is to ensure data collection of the most representative regional water level and to ascertain which paired wells are representative of regional data and the eventual elimination of one screen.

In the encounter that certain wells may be screened across multiple water-bearing zones, the regional water level is likely below one of the zones (i.e. that zone is perched), water may drip or cascade down the side of the well casing above the regional water level. Without proper precautions, this may lead to erroneous readings as an electronic sounding tape reacts to this water. If cascading water is suspected, the guidelines in DWR Groundwater Elevation Monitoring Guidelines (Guidelines for Measuring Water Levels) should be followed, and the presence of cascading water should be noted on the field form.

## 6.5 Detailed Field Method: Depth to Water Table

DWR (2010b) provides detailed guidelines for measuring water levels in wells for the CASGEM Program. The following step-by-step field procedures for sounding of water levels are consistent with the DWR Groundwater Elevation Monitoring Guidelines (Field Guidelines for CASGEM Water-Level Measurements).

An electric sounding tape is preferred for water level measurements because of its ease of use. The electric sounder used should be inspected before use to ensure that it is properly functioning and providing accurate measurements.

### 6.5.1 Equipment

- Electronic water level monitoring probe or other measuring device
- Decontamination supplies (e.g., buckets, Alconox, distilled water, squirt bottle)
- Groundwater Level Data Form (Appendix D)
- Field notebook
- Keys for locks (if necessary)
- Tools to open well covers (e.g., socket wrench, spanner wrench); and

- Disposable gloves (as a minimum), and other protective clothing (as necessary).

### 6.5.2 General Procedure

1. Static groundwater level measurements shall be conducted at each monitoring well to an accuracy of one-hundredth of a foot (0.01 foot). The depth to groundwater will be measured to the nearest 0.01 foot from the reference point (RP) at the top of casing using an electronic water level meter. The water level meter will be decontaminated prior to the initial use for each event and rinsed with clean water between well locations. The depth to water will be measured three (3) times to ensure that the water level readings are the same (i.e., the water level has stabilized). In cases where the water level continues to rise or drop very slowly, the groundwater will be allowed to stabilize and a measurement will be taken until two consecutive readings are in agreement, if feasible.
2. Remove well caps from all wells prior to initiation of water level measurement activities. This will allow water levels in the wells to equilibrate, if necessary.

Well caps are commonly used in monitoring wells to prevent the introduction of foreign materials to the well casing. There are two general types of well caps, vented and unvented. Vented well caps allow air movement between the atmosphere and the well casing. Unvented well caps provide an airtight seal between the atmosphere and the well casing.

In most cases it is preferred to use vented well caps because the movement of air between the atmosphere and the well casing is necessary for normal water level fluctuation in the well. If the cap is not vented the fluctuation of groundwater levels in the well will cause increased or decreased air pressure in the column of air trapped above the water in the casing. The trapped air can prevent free movement of the water in the casing and potentially impact the water level that is measured. Vented caps will allow both air and liquids into the casing so they should not be used for wells where flooding with surface water is anticipated or contamination is likely from surface sources near the well.

Unvented well caps seal the top of the well casing and prevent both air and liquid from getting into the well. They are necessary in areas where it is anticipated that the well will be flooded from surface water sources or where contamination is likely if the casing is not sealed. Because the air above the water in the casing is trapped in the casing and cannot equalize with the atmospheric pressure, normal water level fluctuation may be impeded. When measuring a well with an unvented cap it is necessary to remove the cap and wait for the water level to stabilize. The wait time will vary with many different factors, but if several sequential water-level measurements yield the same value it can be assumed the water level has stabilized (consistent with DWR Guideline 2010a,b).

3. If the potential exists for floating product (i.e. non aqueous phase) to be present, use an electric oil-water interface probe or oil-sensitive paper to measure depth of the floating product and the electronic depth probe to measure the depth-to-water. Record both depths in field notebook and note the water depth as the "depth with oil layer present." Unless

otherwise instructed, always measure depths to floating product layer and groundwater from the RP of the well casing.

4. When floating product is not present, measure depth-to-water using a pre-cleaned water level probe from the RP of the well casing.
5. Repeat measurements a minimum of three times or have field partner confirm measurement.
6. Record time of day the measurement was taken using military time (e.g., 16:00).
7. Decontaminate water level and/or oil-water interface probe and line prior to reuse in another well.

### 6.5.3 Electric Sounding Tape Method

Electric sounding tape method will be typically used for water level measurements. Step-by-step field guideline for this method is prepared following the method described in the DWR Groundwater Elevation Guidelines (DWR, 2010).

#### ***Before making a measurement:***

1. Inspect the electric sounding tape and electrode probe before using it in the field. Check the tape for wear, kinks, frayed electrical connections and possible stretch; the cable jacket tends to be subject to wear and tear. Test that the battery and replacement batteries are fully charged.
2. Check the distance from the electrode probe's sensor to the nearest foot marker on the tape, to ensure that this distance puts the sensor at the zero foot point for the tape. If it does not, a correction must be applied to all depth-to-water measurements. Record this in an equipment log book and on the field form.
3. Prepare the field forms and place any previous measured water-level data for the well into the field folder.
4. After reaching the field site, check that the RP is clearly marked on the well and is accurately described in the well file or field folder. If a new RP needs to be established, follow the procedures above.
5. Check the circuitry of the electric sounding tape before lowering the electrode probe into the well. To determine proper functioning of the tape mechanism, dip the electrode probe into tap water and observe whether the indicator needle, light, and/or beeper (collectively termed the "indicator" in this document) indicate a closed circuit. For an electric sounding tape with multiple indicators (sound and light, for instance), confirm that the indicators operate simultaneously. If they do not operate simultaneously, determine which is the most accurate and use that one.
6. Wipe off the electrode probe and the lower 5 to 10 feet of the tape with a disinfectant wipe, rinse with de-ionized or tap water, and dry.

***Making a measurement:***

1. If the water level was measured previously at the well, use the previous measurement(s) to estimate the length of tape that should be lowered into the well. Preferably, use measurements that were obtained during the same season of the year.
2. Lower the electrode probe slowly into the well until the indicator shows that the circuit is closed and contact with the water surface is made. Avoid letting the tape rub across the top of the well casing. Place the tip or nail of the index finger on the insulated wire at the RP and read the depth to water to the nearest 0.01 foot. Record this value in the column labeled "Tape at RP", with the appropriate measurement method code and the date and time of the measurement (see Table 5 - Appendix A).
3. Lift the electrode probe slowly up a few feet and make a second measurement by repeating step 2 and record the second measurement with the time in the row below the first measurement in the Depth Measurement Log (Appendix D). Make all readings using the same deflection point on the indicator scale, light intensity, or sound so that water levels will be consistent between measurements. If the second measurement does not agree with the first measurement within 0.02 of a foot, make a third measurement, recording this measurement with the time in the row below the second measurement. If more than two readings are taken, record the average of all reasonable readings.

***After making a measurement:***

1. Wipe down the electrode probe and the section of the tape that was submerged in the well water, using a disinfectant wipe and rinse thoroughly with de-ionized or tap water. Dry the tape and probe and rewind the tape onto the tape reel. Do not rewind or otherwise store a dirty or wet tape.



## Section 7: Data Reporting for Groundwater Levels

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DWR (2010a) provides details on the reporting of groundwater levels collected as part of the CASGEM Program. As part of the program, data should be submitted to DWR via their online system, located at [http://www.water.ca.gov/groundwater/casgem/submittal\\_system.cfm](http://www.water.ca.gov/groundwater/casgem/submittal_system.cfm). DWR recommends that data be submitted as soon as possible after the measurements are taken, with annual deadlines of January 1 and July 1. With the recommended monitoring frequency (see Section 4.1.2) of twice a year, in the fall (November) and spring (May), it is reasonable for the City to collect all semi-annual measurements from the network of monitoring wells and within two months process the data and upload them to the DWR web site. The following subsection discusses what information is required and recommended by DWR to be uploaded to the online system for the wells and the water level measurements.

### 7.1 Online Data Submittal

Data are submitted online using the hyperlink provided above. A variety of data are required or recommended for data submittal.

#### 7.1.1 Information of the City's Responsible Party

- The name, address, phone number, contact name, contact e-mail, and any other contact information of City staff;
- The name, address, phone number, e-mail address, and any other contact information for any separate entities that collect data for the City; and
- The groundwater basins monitored (including an indication of which basins are fully monitored by the City and which are only partially monitored).

#### 7.1.2 Information Required for Each Well

- A unique well identification number (can be the State Well Number, if available);
- Latitude and longitude of the well, as well as the method used to determine them (for privacy of well owners, false coordinates within 1,000 feet of the actual coordinates may be submitted);
- The groundwater basin or sub-basin in which the well is located;
- The elevation of the reference point;
- The elevation of the Land Surface Datum;
- The use of the well;
- The well completion type;

- The depth of the screened interval(s) and the total depth of the well; and
- The Well Completion Report number.

#### 7.1.3 Information for Each Groundwater Elevation Data Point

- The unique well identification number for the well provided by the Monitoring Entity;
- The date of the measurement;
- The reference point elevation of the well, in feet;
- The Land Surface Datum elevation of the well, in feet;
- The depth to water below the reference point, in feet;
- The method of measuring the depth to water (e.g. electric sounding tape, pressure transducer);
- Measurement Quality Codes;
- No Measurement Code, if applicable;
- Questionable Measurement Code, if applicable;
- The measuring agency;
- The time of the measurement; and
- Any applicable comments about the well and measurements.

#### 7.1.4 Measurement Quality

- “No Measurement”, and “Questionable Measurement” will have standard codes available on the online system. These codes will allow for the reporting of issues that could affect the quality of a measurement, such as pumping at a nearby well, obstructions present in the well casing, or the presence of oil on the water surface within the well.

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## Appendix A: Tables

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Table 1: Groundwater Basin Characteristics

Table 2: Selected Wells for Monitoring Plan



Table 1: Groundwater Basin Characteristics

Groundwater Basin (Bulletin 118)	Primary Aquifers (green) /Formations	Approximate Groundwater Depths (feet BGS)	Approximate Thickness
San Pasqual Valley	Alluvium – primary aquifer with high well yields; mostly unconfined conditions.	6 to 50	0 to over 200 ft; avg. 150 ft
	Crystalline rocks – yields small quantities of water from fractures		Basement complex
	Residual – yields a small quantity of water that can be important locally; thickness of about 100 feet.		100± ft, variable
Mission Valley	Alluvium – primary aquifer with high well yields; mostly unconfined conditions.	10 to 70	80 to 100 ft
	San Diego Formation – primary aquifer with relatively high well yields.	100 to 600	< 100 to max 1,000 ft
San Diego River Valley	Alluvium – primary aquifer with high well yields; thickness from 150 feet to over 200 feet; mostly unconfined conditions.	10 to 40	>200 ft
	Poway Group – yields variable quantities of water, but much less than the alluvial aquifer.		1,000 ft
	Crystalline rocks – yields small quantities of water from fractures.		Basement complex
El Cajon Valley	Alluvium – yields relatively significant quantities of water.		50 ft
	Poway Group – yields relatively significant quantities of water.		>300 ft
	Sandy siltstone unit – yields small quantities of water.		325 ft
	Crystalline rocks – yields small quantities of water from fractures.		Basement complex
Sweetwater Valley	Alluvium – principle source of groundwater; unconfined conditions.	10 to 70	80 ft
	San Diego Formation – yields significant quantities of water; confined conditions.		700-800 ft; max. 2,000 ft
Otay Valley	Alluvium – yields small quantities; too thin as a viable aquifer.		50 ft
	San Diego Formation – principle source of water with high yields.	10 to 70	800 ft
	Otay Formation – yields small quantities of water.		Unknown
Tijuana Basin	Alluvium – primary aquifer with high well yields; thickness exceeding 150 feet;	10 to 70	150± ft
	Marine terrace deposits – permeable but generally above regional water table		300 ft
	San Diego Formation – primary aquifer with relatively high well yields.	100 to 600	1,250 ft

Note: Highlighted rows represent aquifers/formations that are considered principal water source.



Table 2: Selected Wells for Monitoring Plan

State Well ID	#	Well Name	Owner	User	Well Location	Groundwater Basin	Primary Water Supply Zone (Thickness)	Primary Water Supply Aquifer	Well Type	Installed Date	Screen Depths (ft) (Selected in red)	Comments
	1	SP073 / 35A1	County of San Diego	City of San Diego	Witman Ranch, near City/County border	San Pasqual Valley		Alluvium	Monitoring	unknown	103 – 123 163 – 183	Video survey conducted by DWR staff
012S001W34L004S	2	Santa Ysabel (SDSY)	City of San Diego	USGS	Witman Ranch	San Pasqual Valley	100 <> 200	Alluvium	Monitoring	1/06/2011	70 – 90	
	3	SP107 / 32M3	AMSOD	City of San Diego	AMSOD	San Pasqual Valley		Alluvium	Monitoring	Unknown	undetermined	Video survey conducted by DWR staff
012S001W30J005S	4	Cloverdale (SDCD)	City of San Diego	USGS	South of SR-78, southeast of Cloverdale Bridge	San Pasqual Valley		Alluvium	Monitoring	Spring 2013	30-50	
013S002W12M003S	5	Lake Hodges (SDLH)	City of San Diego	USGS	Western end of basin, approx. 1000' north of San Dieguito River	San Pasqual Valley		Alluvium	Monitoring	Fall 2012	30-50	
	6	Pinery	The Pinery	The Pinery	The Pinery	San Pasqual Valley		Alluvium	Monitoring	unknown	unknown	
	1	HWD-2	Helix Water District	Helix Water District	South of Willow Rd., approx. 0.5 mile east of Stelzer County Park	San Diego River Valley (Santee)	>200	Alluvium	Monitoring	2008	6 – 95	
	2	AMW-1	SDCWA	SDCWA	Approx. 600 feet south of San Vicente Dam	San Diego River Valley (Santee)	>200	Alluvium	Monitoring	5/2/2008	30 – 70	
	3	Confluence	City of San Diego	City of San Diego	East side of Channel Rd., Lakeside, in Anderson Drilling steel yard	San Diego River Valley (Santee)	>200	Alluvium	Monitoring	6/7/2010	18 – 38	
	4	Marilla	City of San Diego	City of San Diego	Vacant lot north of Woodside Ave., east of Marilla Dr. in Lakeside	San Diego River Valley (Santee)			Monitoring	5/21/2010	15 – 35	
016S001W11R004S	1	ECV-1	Villa Las Palmas	City of San Diego	West of S. Anza St, north of E. Washington Ave (to be confirmed)	El Cajon Valley	-	-	Monitoring	Unknown	Unknown	No info available from facility
016S002W18J007S	1	Aqua Culture SDAQ	City of San Diego	USGS	North side of Camino Del Rio North, between I-805 & I-15	Mission Valley	220	Alluvium	Monitoring	11/22/2004	30 – 50	Most wells in Mission Valley are near the San Diego River
	2	YMCA (2)	City of San Diego	City of San Diego	South of YMCA parking lot	Mission Valley	220	Alluvium	Monitoring	unknown	unknown	Need blockage cleared
017S002W20F005S	1	Naval Base (SDNB)	Sweetwater Authority	USGS	Between I-5 and W. Division St., north end of parking lot at 32nd St Naval Base	Sweetwater Valley	80 <> 100	San Diego Formation	Monitoring	7/24/2006	20 – 25	
018S002W22E007S	1	Otay Trolley (SDOT)	Sweetwater Authority	USGS	East of Hollister St., east of trolley tracks, north of Otay River	Otay Valley	below 50 feet; 100 to 1400 feet thick	San Diego Formation	Monitoring	3/15/2008	45 – 65	
019S002W02C011S	1	Boundary Waters (SDBW)	City of San Diego	USGS	IBWC parking lot, east side of Dairy Mart Rd.	Tijuana Basin	~150	Alluvium / San Diego Formation	Monitoring	6/13/1995	260 – 280	Established as continuous monitoring site 5/27/2007



## Appendix B: Figures

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Figure 1: Regional Map

Figure 2: San Pasqual Valley Basin Selected Well Locations

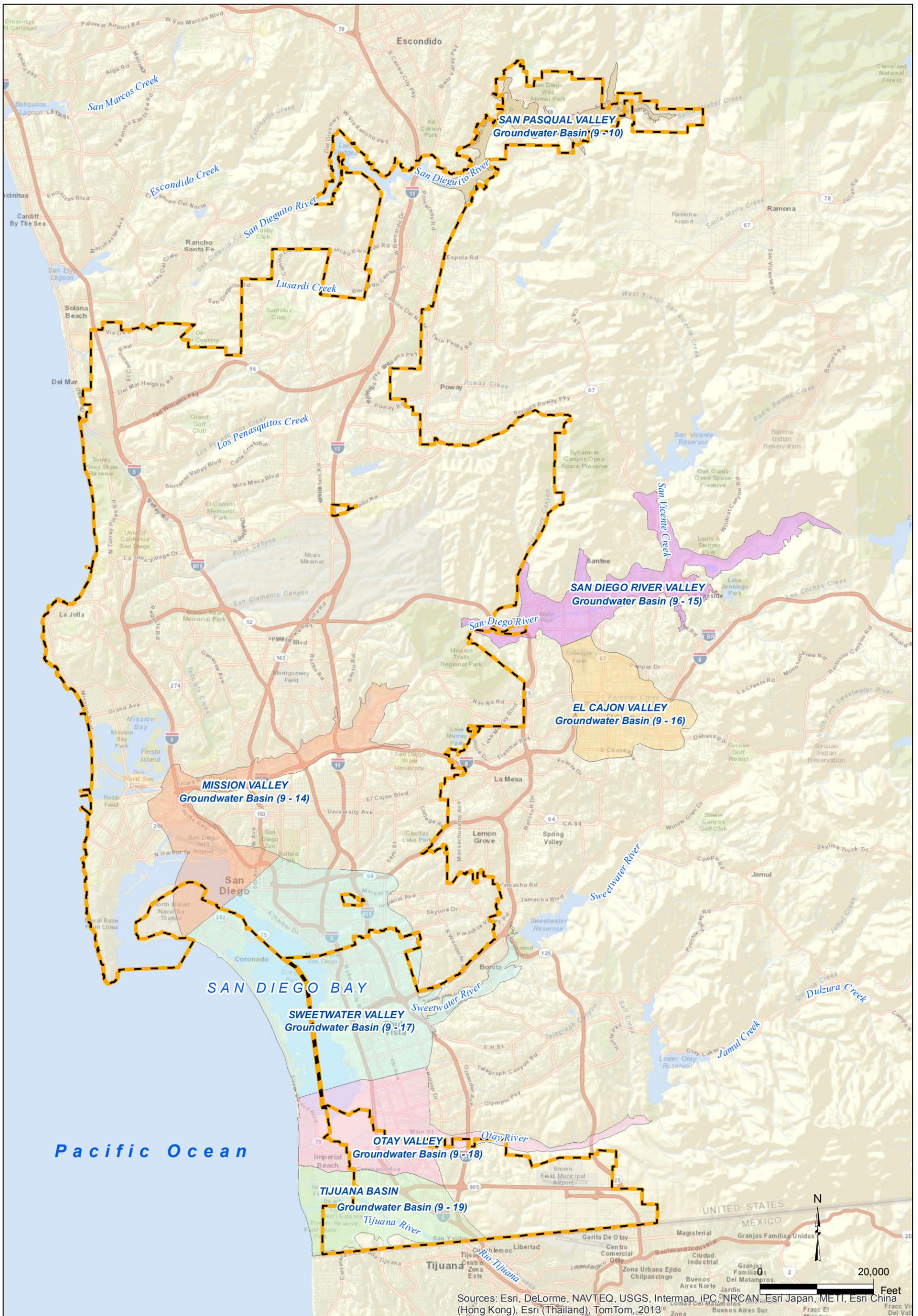
Figure 3: Mission Valley Basin Selected Well Locations

Figure 4: San Diego River Valley Basin and El Cajon Valley Basin Selected Well Locations

Figure 5: Sweetwater Valley Basin, Otay Valley Basin, and Tijuana Basin Selected Well Locations

Figure 6: Selected Well Locations





**Legend**

 San Diego City Boundary

**Kennedy/Jenks Consultants**

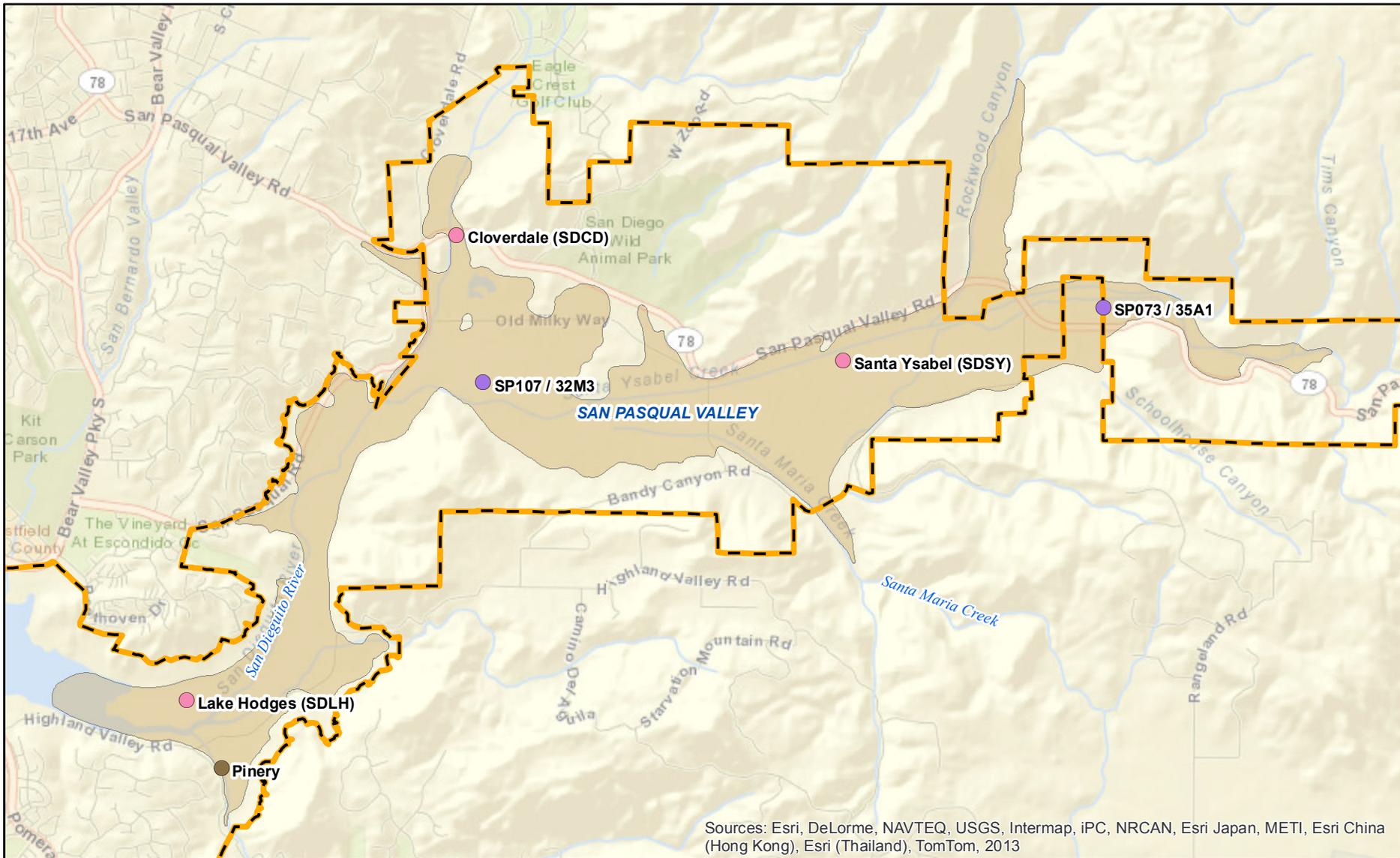
City of San Diego California Statewide Groundwater Elevation Monitoring (CASGEM) Program

**Regional Map**

K/J 1187103\*00  
June 2013

**Figure 1**





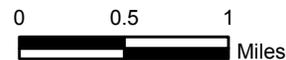
**Legend**

**Selected Wells**

 San Diego City Boundary

**User**

-  City of San Diego
-  The Pinery
-  USGS



**Kennedy/Jenks Consultants**

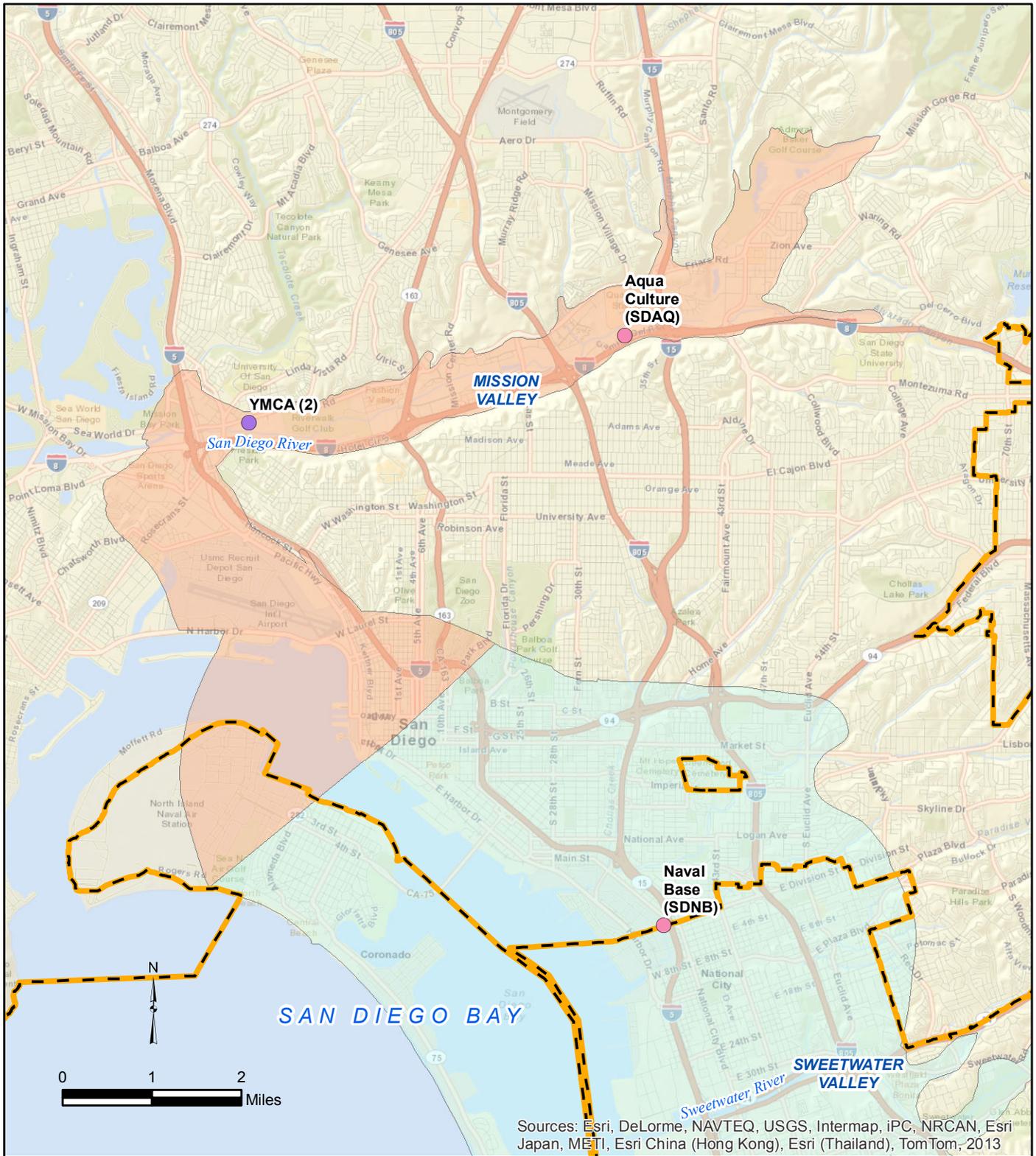
City of San Diego California Statewide  
Groundwater Elevation Monitoring (CASGEM) Program

**San Pasqual Valley Basin  
Selected Well Locations**

K/J 1187103\*00  
June 2013

**Figure 2**





**Kennedy/Jenks Consultants**

City of San Diego California Statewide  
Groundwater Elevation Monitoring (CASGEM) Program

**Mission Valley Basin  
Selected Well Locations**

**Legend**

**Selected Wells**  San Diego City Boundary

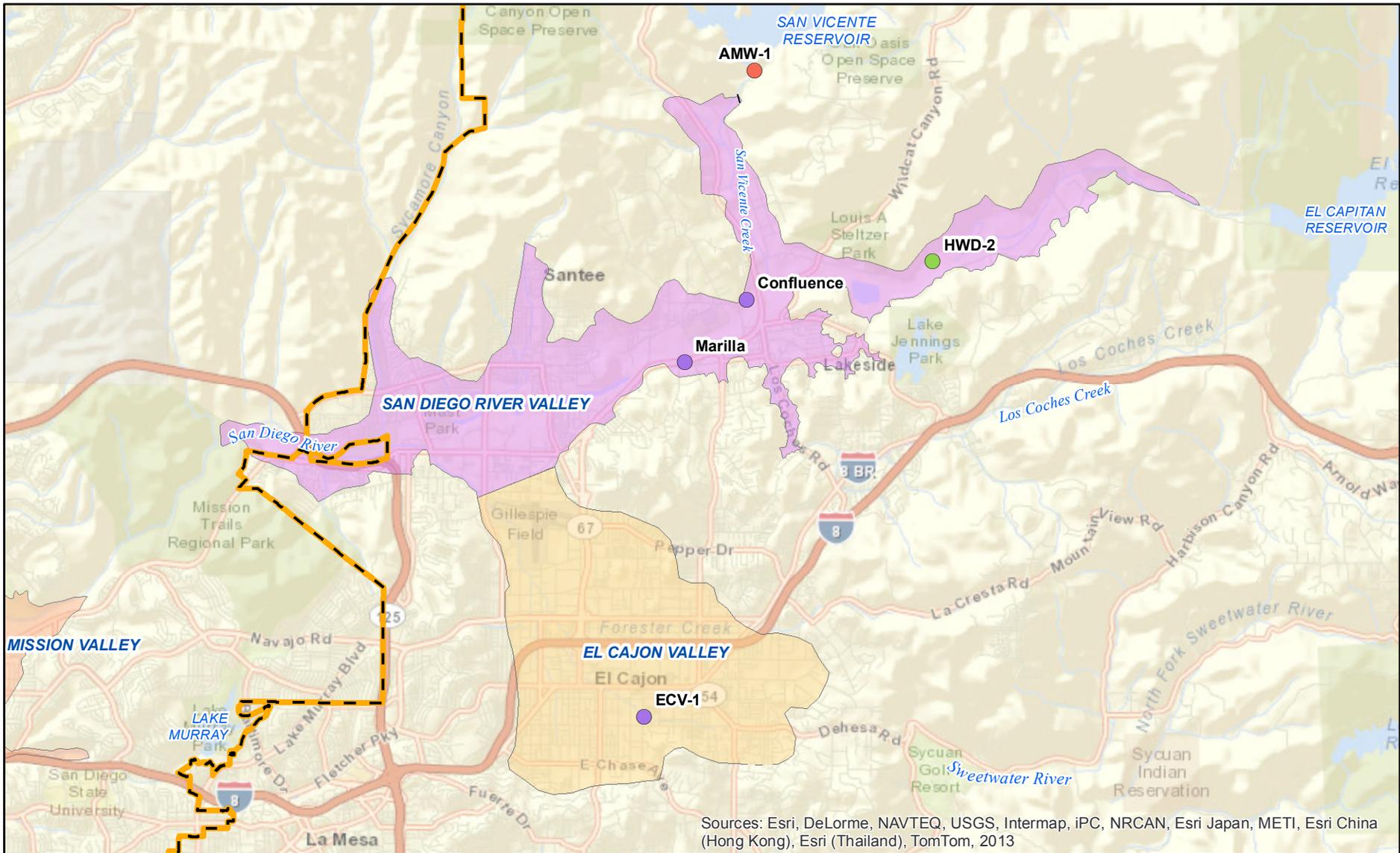
**User**

-  City of San Diego
-  USGS

K/J 1187103\*00  
June 2013

**Figure 3**





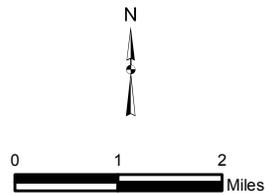
**Legend**

**Selected Wells**

**User**

- City of San Diego
- Helix Water District
- San Diego County Water Authority

San Diego City Boundary



**Kennedy/Jenks Consultants**

City of San Diego California Statewide  
Groundwater Elevation Monitoring (CASGEM) Program

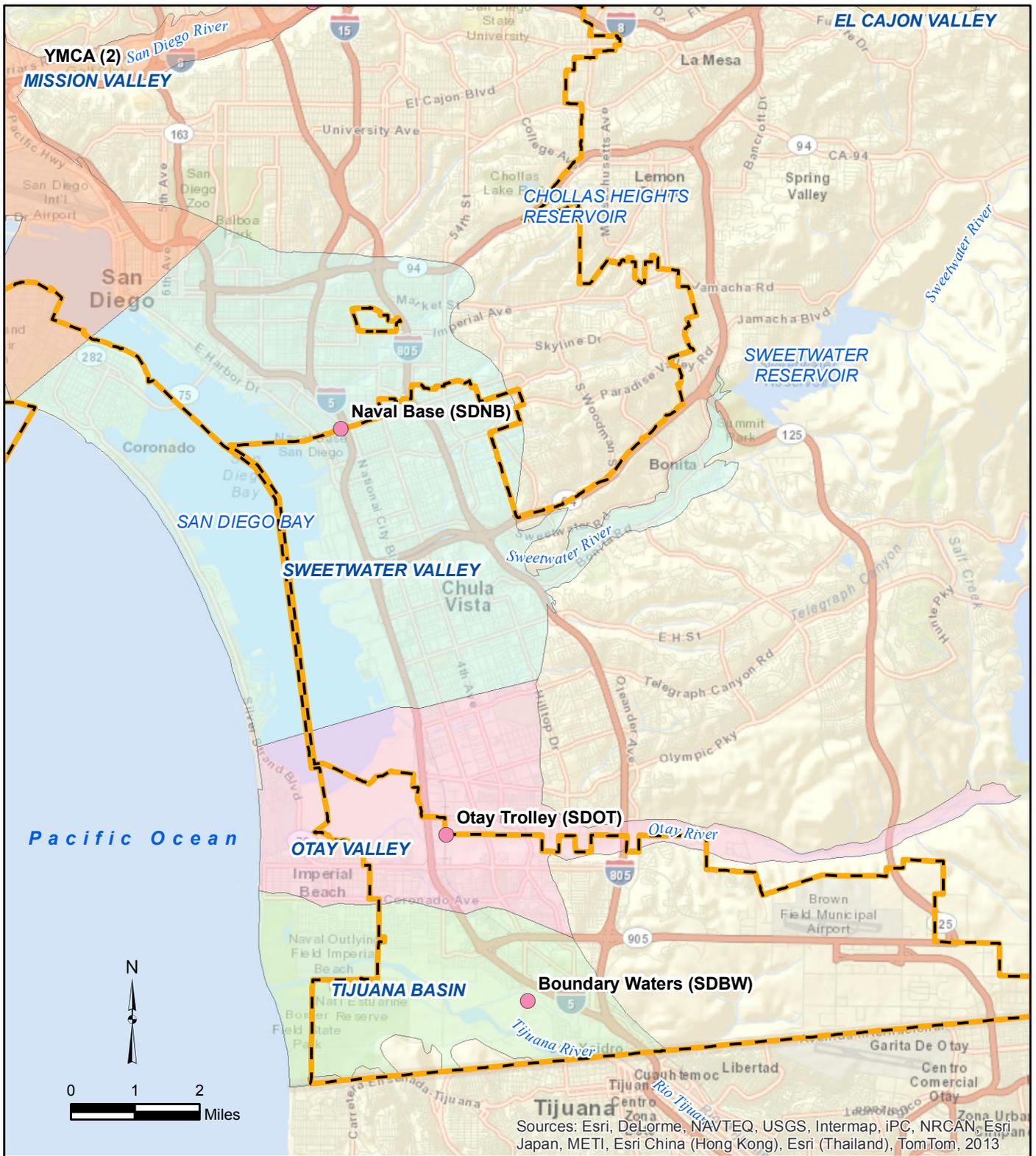
**San Diego River Valley Basin &  
El Cajon Basin  
Selected Well Locations**

K/J 1187103\*00

June 2013

**Figure 4**





**Legend**

- Existing Wells  San Diego City Boundary
- User
- USGS

**Kennedy/Jenks Consultants**

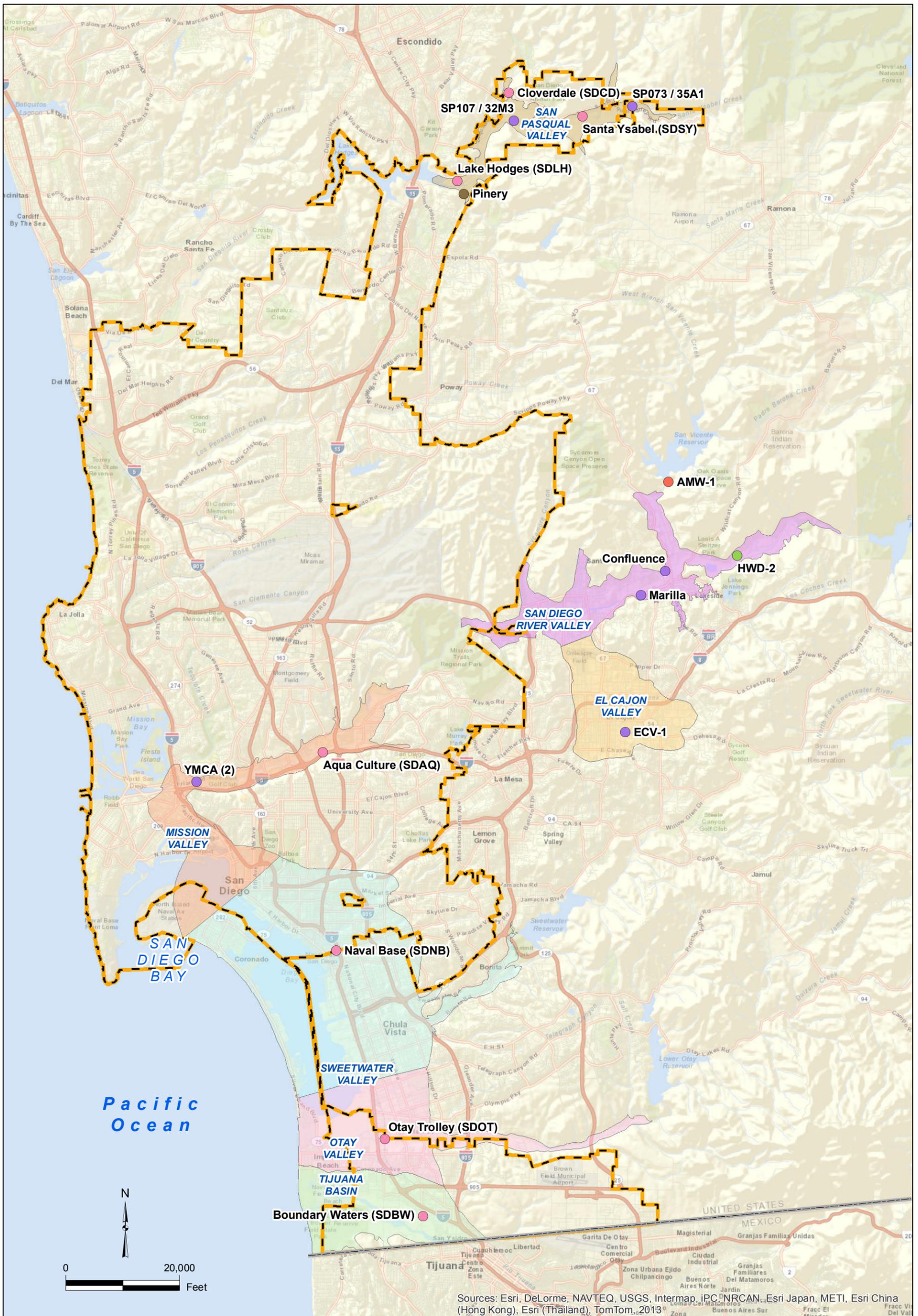
City of San Diego California Statewide Groundwater Elevation Monitoring (CASGEM) Program

**Sweetwater Valley Basin, Otay Valley Basin & Tijuana Basin Selected Well Locations**

K/J 1187103\*00  
June 2013

**Figure 5**





Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, DNRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013

**Legend**

**Selected Wells**

**User**

- San Diego County Water Authority
- City of San Diego

- Helix Water District
- The Pinery

- USGS
- San Diego City Boundary

**Kennedy/Jenks Consultants**

City of San Diego California Statewide Groundwater Elevation Monitoring (CASGEM) Program

**Selected Well Locations**

K/J 1187103\*00  
June 2013

**Figure 6**



## Appendix C: Hydrogeologic Basin Descriptions

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This section provides a brief description of the general hydrogeology and groundwater conditions for each of the seven DWR-designated basins in San Diego County.

### 1. San Pasqual Valley Groundwater Basin

The San Pasqual Valley Basin is located in the northeastern part of the City above Lake Hodges, and is predominately agricultural. There are three main geologic layers in the basin: Holocene alluvium (top), residuum, and crystalline bedrock. Of these, the bedrock can be considered non-water bearing. Although not enough information is available to make a full comparison between the alluvium and the residuum, the specific yield of the alluvium was reported to be sixteen times that of the residuum (Izbicki, 1983), indicating that the alluvium is likely the most important source of groundwater in the basin. Only the alluvium or alluvial aquifer is considered in Bulletin 118 to be part of the groundwater basin. The hydrogeologic data indicate that monitoring wells should be chosen that are not near active irrigation wells and are screened in the lower part of the alluvial aquifer.

### 2. Mission Valley Groundwater Basin

The Mission Valley Basin surrounds the San Diego River north of downtown San Diego, and extends to the San Diego Bay in the southwest. Of the two main geologic units in the basin (Quaternary alluvium, and the San Diego Formation), the alluvium is the principal water-bearing unit and should be targeted for monitoring. This groundwater basin has historically been used as a groundwater source to the City. In addition, wells were selected far enough from surface water bodies that are known to interact with groundwater so as not to simply reflect surface water levels.

### 3. San Diego River Valley Groundwater Basin

The San Diego River Valley Basin is located outside the eastern boundary of the City, surrounding the San Diego River and its tributaries, and begins just downstream of San Vicente and El Capitan Reservoirs. It has historically been used as a groundwater source to the City. Of the four main geologic units in the basin (Quaternary alluvium, unweathered fractured plutonic and metamorphic rocks, residuum, and Eocene sedimentary rocks), the alluvium is the principal water-bearing unit and should be targeted for monitoring. In addition, wells were selected far enough away from surface water bodies (e.g. the reservoirs and San Diego River) that are known to interact with groundwater so as not to simply produce a reflection of nearby surface water levels.

### 4. El Cajon Valley Groundwater Basin

The El Cajon Valley Basin is located outside the eastern boundary of the City, just south of the San Diego River Valley Basin. Of the main geologic units present in the basin (Pleistocene alluvium, Eocene Poway Conglomerate, and an older sandy siltstone unit), the Pleistocene alluvium produces the majority of groundwater, while the Poway Conglomerate produces an unknown amount and the underlying sandy siltstone yields a small amount of groundwater. Until the importance of the Poway Conglomerate is definitely known, it would be consistent with the intent of the CASGEM Program to monitor the alluvial aquifer in this groundwater basin. Major

surface water bodies are not present in the basin, so distance from rivers and lakes need not be considered.

## 5. Sweetwater Valley Groundwater Basin

The Sweetwater Valley Basin is located along the Pacific coast just southeast of the Mission Valley Basin, and stretches up the Sweetwater River Valley to below Sweetwater Reservoir. Of the two main geologic units present in the basin (Quaternary alluvium and Pliocene San Diego Formation), the alluvium is the principal water-bearing deposit, although the San Diego Formation can produce up to 1,500 gallons per minute (gpm) (Huntley et al., 1996). Both units should be targeted for monitoring. Wells were targeted that are not so close to the Sweetwater River and the Pacific Ocean that they simply reflect the water level in these surface water bodies.

## 6. Otay Valley Groundwater Basin

The Otay Valley Basin is located along the Pacific coast just south of the Sweetwater Valley Basin, and is transected by the Otay River. Of the three main geologic units present in the basin (Quaternary alluvium, Pliocene to Pleistocene San Diego Formation, and Miocene to Pliocene Otay Formation), the San Diego Formation is the principal water-bearing unit, and should be targeted for monitoring. While the alluvium can produce significant groundwater, it is generally too thin to be an extensive aquifer (DWR, 1986). The Otay Formation has only a few wells completed in it, and they do not yield large discharge rates. Wells were not selected so close to the Otay River or Pacific Ocean that their water levels are simply reflections of water levels in surface water bodies.

## 7. Tijuana Groundwater Basin

The Tijuana Basin is located in the southwestern corner of the City, along the Pacific Ocean between the Otay Valley Basin to the north and Mexico to the south. The two main geologic units in the basin, the Quaternary alluvium and Pliocene San Diego Formation, are the primary water-bearing units, and should be targeted for monitoring. The Tijuana River runs northwest through the basin from the border with Mexico to the Pacific Ocean, and wells should be selected far enough away from the river and the ocean so that water levels in the wells are not simply reflections of water levels in the surface water bodies.

Appendix D: Groundwater Level Data from Manual Measurements

City of San Diego CASGEM Groundwater Head Measurements

GROUNDWATER LEVEL DATA FROM MANUAL MEASUREMENTS													
STATE WELL NUMBER	WELL NAME	DATE	TIME	NM	QM	MM	TAPE at RP	TAPE at WS	RP to WS	LSD to WS	OBS	MEASURING AGENCY	COMMENTS
	SP073/35A1												
012S001W34L004S	Santa Ysabel (SDSY)												
	SP107/32M3												
012S001W30J005S	Cloverdale (SDCD)												
013S002W12M003S	Lake Hodges (SDLH)												
	Pinery												
	HWD-2												
	AMW-1												
	Confluence												
	Marilla												
016S001W11R004S	ECV-1												
016S002W18J007S	Aqua Culture (SDAQ)												
	YMCA (2)												
017S002W20F005S	Naval Base (SDNB)												
018S002W22E007S	Otay Trolley (SDOT)												
019S002W02C011S	Boundary Waters (SDBW)												
NM: No Measurement; QM: Questionable Measurement; MM: Measurement Method; RP: Reference Point; WS: Water Surface; LSD: Land Surface Datum; OBS: Observation													
NO MEASUREMENT (NM)				QUESTIONABLE MEASUREMENT (QM)				MEASUREMENT METHOD (MM)					
0. Measurement discontinued		5. Unable to locate well		0. Caved or deepened		5. Air or pressure gauge measurement		0. Steel tape					
1. Pumping		6. Well has been destroyed		1. Pumping		6. Other		1. Electric sounding tape					
2. Pump house locked		7. Special		2. Nearby pump operating		7. Recharge operation at or nearby well		2. Transducer					
3. Tape hung up		8. Casing leaky or wet		3. Casing leaky or wet		8. Oil in casing		3. Other					
4. Can't get tape in casing		9. Temporarily inaccessible		4. Pumped recently									



## **Appendix 1-11: Water Conservation Programs and Measures**

None of the seven projects included in this Proposal are categorized as Drought Project Element D.3, which includes projects that assist water suppliers and regions to implement conservation programs and measures that are not locally cost-effective.

