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.rmcwater.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 22nd, 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 22nd, 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 4th 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.

My Projects Shared Projects Like Projects Other Projects

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.

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

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

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

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

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

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 Acauisition	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	

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

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

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

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[2]
Pass/Fail Criteria to Be Considered for Funding			
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: 1. Provide immediate regional drought preparedness 2. Increase local water supply reliability and delivery of safe drinking water 3. Implement conservation programs and measures that are not locally cost-effective 4. Reduce water quality or ecosystem conflicts created by drought			
Scoring Criteria			
Addresses Multiple Objectives[1]	Score is based on # of objectives addressed[3]	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 BUs = 1 pt	5%
~~Addresses Multiple Watershed Services within the Hydrologic Cycle~~	~~Score is based on the number of watershed services[4] 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[2]	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[5], 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
PROJECT-LEVEL CRITERIA	
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: 1. Provide immediate regional drought preparedness 2. Increase local water supply reliability and delivery of safe drinking water 3. Implement conservation programs and measures that are not locally cost-effective 4. Reduce water quality or ecosystem conflicts created by drought
Responsiveness	Project sponsors must be immediately responsive to requests from Project Selection Workgroup, RWMG, grant writing team, grant administrators, and other grant support personnel
PROPOSAL-LEVEL CRITERIA	
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 *not locally cost-effective*.
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.

SAN DIEGO Integrated Regional Water Management

2014 IRWM Drought Solicitation Implementation Grant Proposal
Recommended Funding Package

Project	Sponsor	Grant Request	Total Project Cost
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
Grant Administration	-	*$439,078*	-
	Total	**$15,075,025**	**$60,233,009**

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

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
Rosalyn 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

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

IRWM Grant Program

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

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

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

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). These two sources are good resources for potential funding programs.

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:

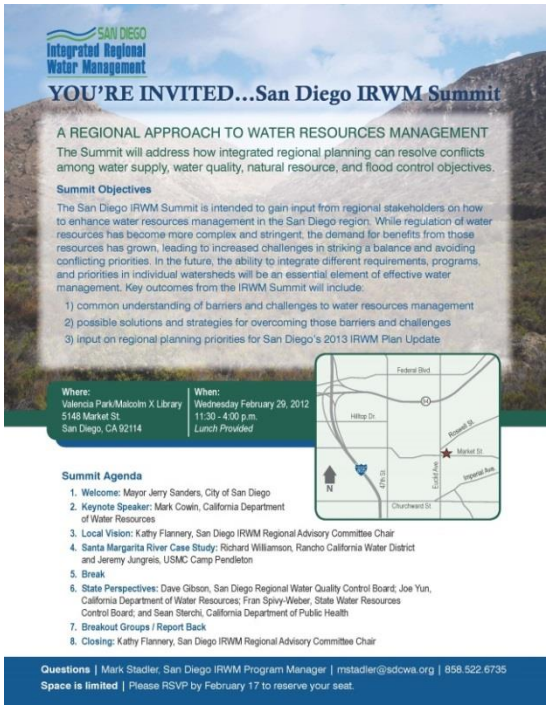
- Refine IRWM vision, mission, goals, and objectives
- Review information received during the IRWM Summit (described in detail below) and use that information to refine the vision, mission, goals, and objectives
- Develop a recommended list of targets and metrics that can be used to measure achievement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



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.

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.

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.

Potential Barriers or Disincentives to Integration	***Potential Benefits or Incentives to Integration***
• Takes a lot of time and energy to coordinate with other partners. • Integration may mean reducing the amount of grant funding that each organization receives. • Administrative costs associated with combining projects and completing grant administrative for multiple entities. • Integrating with other partners could mean losing some control over a project. • Integration makes projects more complex. • May have to give up some benefits or features of the original project concept to integrate with another project concept.	• Integration makes projects more competitive to receive grant funding, although integration in early or pre-design produces more win-win opportunities. • 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. • May be more cost effective due to cost sharing with other agencies. • Integration reduces conflicts, which may result in streamlining for project approvals. • Integration may add additional expertise to a project.

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 mangers 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 *Specific observable outcomes.*	**Targets** *Measurable and tangible actions to achieve the objectives.*	**Metrics** *Measurements that can be used to evaluate the actions – may be quantitative or qualitative.*	**IRWM Program**	**Project Type**						
				Water Supply	Wastewater	Recycled Water	Groundwater	Stormwater	Flood Control	Habitat / Open Space
Objective A: Encourage the development of integrated solutions to address water management issues and conflicts.	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
Objective B: Maximize stakeholder/community involvement and stewardship of water resources, emphasizing education and outreach.	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 *Specific observable outcomes.*	Targets *Measurable and tangible actions to achieve the objectives.*	Metrics *Measurements that can be used to evaluate the actions – may be quantitative or qualitative.*	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 measureable 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
Objective C: Effectively obtain, manage, and assess water resource data and information.	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 *Specific observable outcomes.*	Targets *Measurable and tangible actions to achieve the objectives.*	Metrics *Measurements that can be used to evaluate the actions – may be quantitative or qualitative.*	IRWM Program	Project Type						
				Water Supply	Wastewater	Recycled Water	Groundwater	Stormwater	Flood Control	Habitat / Open Space
Objective D: Further scientific and technical foundation of water management.	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 *Specific observable outcomes.*	Targets *Measurable and tangible actions to achieve the objectives.*	Metrics *Measurements that can be used to evaluate the actions – may be quantitative or qualitative.*	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		
Objective E: Develop and maintain a diverse mix of water resources, encouraging their efficient use and development of local water supplies.	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 *Specific observable outcomes.*	Targets *Measurable and tangible actions to achieve the objectives.*	Metrics *Measurements that can be used to evaluate the actions – may be quantitative or qualitative.*	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								
Objective F: Construct, operate, and maintain a reliable infrastructure system.	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 *Specific observable outcomes.*	Targets *Measurable and tangible actions to achieve the objectives.*	Metrics *Measurements that can be used to evaluate the actions – may be quantitative or qualitative.*	IRWM Program	Project Type						
				Water Supply	Wastewater	Recycled Water	Groundwater	Stormwater	Flood Control	Habitat / Open Space
Objective G: Enhance natural hydrologic processes to reduce the effects of hydromodification and encourage integrated flood management.	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
Objective H: Effectively reduce sources of pollutants and environmental stressors to protect and enhance human health, safety, and the environment.	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 *Specific observable outcomes.*	Targets *Measurable and tangible actions to achieve the objectives.*	Metrics *Measurements that can be used to evaluate the actions – may be quantitative or qualitative.*	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 *Specific observable outcomes.*	Targets *Measurable and tangible actions to achieve the objectives.*	Metrics *Measurements that can be used to evaluate the actions – may be quantitative or qualitative.*	IRWM Program	Project Type						
				Water Supply	Wastewater	Recycled Water	Groundwater	Stormwater	Flood Control	Habitat / Open Space
Objective I: Protect, restore, and maintain habitat and open space.	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
Objective J: Optimize water-based recreational opportunities.	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 *Specific observable outcomes.*	Targets *Measurable and tangible actions to achieve the objectives.*	Metrics *Measurements that can be used to evaluate the actions – may be quantitative or qualitative.*	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								
Objective K: Effectively address climate change through adaptation or mitigation in water resource management.	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
	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
	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

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