Attachment 3

Work Plan

San Diego Integrated Regional Water Management Grant Application

PIN 13105

San Diego Region Implementation Grant Proposal
ATTACHMENT 3:
Work Plan

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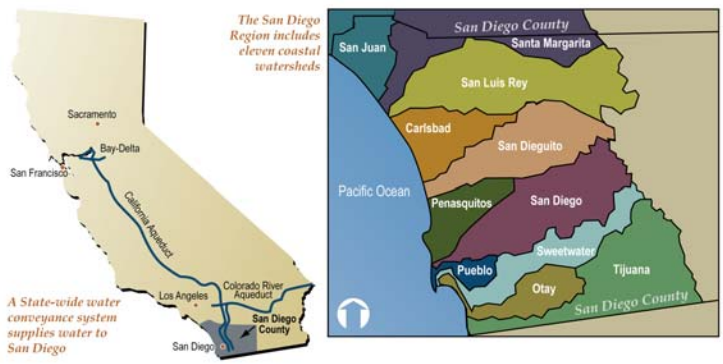
INTRODUCTION

Integrated Regional Water Management Planning in the San Diego Region (Region) has been led by three agencies comprising the Regional Water Management Group (RWMG):

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



The San Diego Region

A Regional Advisory Committee (RAC) was formed to advise the RWMG and their governing bodies on the conduct of integrated regional water management planning (IRWMP), which included development of the 2007 San Diego Integrated Regional Water Management Plan (IRWM Plan). The RAC consists of the following members:

<u>RWMG</u>

- City of San Diego
- County
- Water Authority

<u>Retail Water Entities</u>

- Fallbrook Public Utility District
- Helix Water District
- Olivenhain Municipal Water District
- Santa Fe Irrigation District
- Sweetwater Authority

<u>Natural Resources and Watersheds</u>

- Mission Resource Conservation District
- The Nature Conservancy
- San Diego River Park Foundation
- San Dieguito River Valley Conservancy
- San Elijo Lagoon Conservancy
- Southern California Wetlands Recovery Project

<u>Water Quality</u>

Wastewater / Recycled Water

- Padre Dam Municipal Water District
- San Elijo Joint Powers Authority

Stormwater

- City of Chula Vista
- City of Encinitas

<u>Members At Large</u>

- Camp Kumeyaay Nation
- Farm Bureau of San Diego County
- Planning and Engineering for Sustainability
- San Diego Association of Governments
- San Diego Coastkeeper
- San Diego Regional Chamber of Commerce
- San Diego Regional Water Quality Control Board (RWQCB)

Advisory Resource Agencies

- RWQCB
- United States Bureau of Reclamation (USBR)

Through development and adoption of the IRWM Plan, the San Diego RWMG and RAC members identified a suite of water management projects and programs that, together, will improve water supply reliability and water quality for the Region, reduce dependence on imported water, assist in achieving the regional objectives, provide multiple benefits, and eliminate or reduce pollution in sensitive habitat areas and areas of special biological significance.

One of the most significant issues for the Region is the availability and reliability of its water supplies, which currently consist primarily of imported water. The Region receives imported water from the State Water Project (SWP) and the Colorado River, via the Metropolitan Water District of Southern California (MWD). It also receives Colorado River water that results from the Water Authority's transfer agreement with the Imperial Irrigation District and its canal-lining projects in the Imperial and Coachella valleys. A recent legal decision to protect the threatened Delta smelt will reduce by up to one-third the amount of water that can be pumped from the Sacramento-San Joaquin River Delta via the SWP, thus reducing the amount of water delivered by the project. This situation, coupled with the recent droughts affecting both the SWP and the Colorado River Aqueduct and further reducing available supplies, serves as a reminder that the Region's water supply is vulnerable to events outside the Region. The Region's water providers are working to improve the quantity and reliability of local supplies, which typically comprise only about 20 percent of the total water supplies in the Water Authority service area.

Water quality is also an important issue for the Region, which contains a number of 303(d) listed waters. Total Maximum Daily Loads (TMDLs) have been established for the higher priority impairments in beaches, creeks and lagoons and San Diego Bay. Among the waterbodies for which specific TMDLs have been established are Rainbow Creek and Chollas Creek. The impact to water quality posed by increasing urban runoff from development is a significant concern. The Region is also blessed with many natural resources, including a wealth of critical riparian habitat that is home to a number of endangered species. An important aspect of integrated regional water management planning is to develop projects that can address the critical water supply and water quality issues while also achieving goals of habitat preservation and expanded recreational opportunities.

As a result, water use efficiency in the form of conservation and recycling, source water protection to protect and enhance local supplies, development of new, drought-resistant supplies (including both groundwater and desalinated seawater), and education and outreach to further water resources management in the Region, have been identified as the cornerstones of the Region's future water supply portfolio.

Through the IRWMP effort, the RWMG and RAC solicited information on integrated water management projects being planned and implemented throughout the Region. A detailed prioritization process was developed to prioritize these projects based on several factors, including the ability of projects to: achieve regional objectives; integrate water management strategies; benefit multiple hydrologic units (HUs); address considerations such as synergies with other projects, environmental justice and disadvantaged community (DAC) benefits; and engage multiple project partners. Through this process, the Region identified a top tier of projects to be carried forward for consideration. This top tier of projects was reviewed for eligibility for funding through the Proposition 50 program, and projects that did not meet the program requirements were eliminated from consideration.

A nine-member, multi-disciplinary workgroup was developed to review this top tier of candidate projects. The workgroup included representatives of retail water, water quality, and natural resources and watershed interests, as well as members-at-large representing DAC, tribal, and governmental/regulatory interests. This group reviewed each candidate project in detail to assess consistency with regional objectives and Proposition 50 program preferences, scale of potential benefit to the Region, integration with other projects, cost-effectiveness, and other factors. Through this process, four programs were developed to best address the needs of the Region, consistent with the cornerstones to future water supply identified above. Each program is comprised of a set of projects aimed at generating geographic

balance and a wide array of benefits throughout the Region. These programs and their component projects are:

- **Program: Conservation**
  Component Projects:
  - **Implementation of Integrated Landscape and Agricultural Efficiency Programs**
  - **Irrigation Hardware Giveaway and Dry-Weather Runoff Reduction Demonstration**
  - **Over-Irrigation/Bacteria Reduction**
- **Program: Recycled Water**
  Component Projects:
  - **Santee Water Reclamation Facility Expansion Project**
  - **Recycled Water Retrofit Assistance Program**
  - **City of San Diego Recycled Water Distribution System Expansion, Parklands Retrofit, and Indirect Potable Reuse / Reservoir Augmentation Project**
- **Program: Local Supply Protection and Development**
  Component Projects:
  - **San Vicente Reservoir Source Water Protection through Watershed Property Acquisition and Restoration**
  - **El Capitan Reservoir Watershed Acquisition and Restoration Program**
  - **Northern San Diego County Invasive Non-Native Species Control**
  - **Santa Margarita Conjunctive Use Project**
  - **Carlsbad Desalination Project Local Conveyance**
  - **San Diego Region Four Reservoir Intertie Project Conceptual Design**
  - **South San Diego County Water Supply Strategy**
  - **El Monte Valley Groundwater Recharge and River Restoration Project, Phases 1 and 2**
- **Program: Education and Outreach**
  Component Projects:
  - **San Diego Regional Pollution Prevention**
  - **Biofiltration Wetland Creation and Education Program**
  - **San Dieguito Watershed Management Plan Implementation**
  - **San Diego River Watershed Management Plan Implementation**
  - **City of San Diego Green Mall Porous Paving and Infiltration, Phase 1**
  - **County of San Diego Chollas Creek Runoff Reduction and Groundwater Recharge**

Each of these programs integrates projects to address the major water supply, water quality, and resource management needs of the Region. In addition, each of the projects selected for inclusion in these programs has been shown to integrate many water management strategies. Further, projects within each program contain synergies and linkages with projects included in other programs, resulting in a truly integrated suite of projects that, when implemented together, will assist the Region in meeting its critical water management needs in a real and measurable fashion.

Implementation of the San Diego Proposal will provide multiple benefits through integrated projects.

The above programs and projects are being submitted as the San Diego Region Proposition 50 IRWM Implementation Grant Round 2 Proposal (Proposal). Implementation of the Proposal will provide multiple benefits through project integration both within and between programs. In addition, the programs themselves are designed to target the Region's key water supply, water quality, and natural resources needs as expressed in the IRWM Plan goals:

- Optimize water supply reliability;
- Protect and enhance water quality;
- Provide stewardship of our natural resources; and
- Coordinate and Integrated Water Resource Management.

The Proposal addresses the water management related needs of DACs in the Region; in addition, the Proposal provides a number of long-term environmental benefits which are expected to far outweigh any potential impacts, which are mainly temporary construction impacts.

The Region presents a unique setting for water management. This Proposal is organized into three program categories; however, each project included in the program categories was selected for its ability to achieve geographic balance for the Region, generate multiple benefits for a variety of water management challenges, and address the Region's future water supply needs. This Proposal includes the suite of projects best suited to meeting the current and future challenges of the Region. Each aspect of the Proposal is tailored to meet those unique challenges, as discussed below.

Water Supply Benefits

A major feature of the Region is its heavy reliance on imported supplies, which are vulnerable to catastrophic interruption, droughts, and other disasters and are not managed by local agencies.. The water supply reliability and potential water quality issues associated with the Region's imported supplies place the Region at risk for water shortages, as evidenced by the recent droughts and associated water supply cutbacks. Further, there are significant energy costs associated with imported water due to the need to transport these supplies over long distances. All of these issues underscore the need to further develop local water resources and protect existing resources. A central focus point of this Proposal is increasing local supply and reliability. Seven proposed projects were identified for their ability to generate new, reliable, local water supplies for the Region. These projects serve as the unifying foundation for this Proposal, tying together additional projects to generate a wide array of benefits throughout the Region. These seven foundational projects best address the water supply needs of the Region:

- The Implementation of Integrated Landscape and Agricultural Efficiency Programs will address the demand management side of water supply through a variety of water efficiency programs that focus on the two sectors that possess the highest potential for achieving additional water savings: the outdoor landscape and agricultural irrigation sectors. This project has the potential to generate 3,618 acre feet per year (AFY) of additional conservation.
- The Irrigation Hardware Giveaway and Dry Weather Runoff Reduction Demonstration project is projected to conserve at least 91 AFY of water by providing an opportunity to offer customized commercial landscape and residential surveys along with state-of-the-art efficient irrigation hardware free-of-charge to customers maintaining irrigation systems at landscaped sites throughout the City of San Diego.
- The Over-Irrigation/Bacteria Reduction project will conserve 353 AFY while protecting and enhancing water quality by reducing irrigation runoff through improved water use efficiency at eight pilot sites located within the Carlsbad Watershed in San Diego County.
- The Recycled Water Retrofit Assistance Program will provide direct financial assistance to homeowners' associations, public agencies, and other customer types to facilitate the conversion from potable to recycled water for landscape irrigation and other uses, allowing approximately 2,000 AFY of additional recycled water to be used.
- The The City of San Diego Recycled Water Distribution System Expansion, Parklands Retrofit and Indirect Potable Reuse / Reservoir Augmentation Project will install 18,000 feet of new recycled water pipe to distribute 1,500 AFY of recycled water to irrigate community open spaces, medians, slopes, and the State Route 56 (SR-56) freeway - all located in the northern portion of the City of San Diego. In addition, the project will extend the existing recycled water distribution system to selected City of San Diego parklands and retrofit irrigation systems at these parklands to use recycled water, creating an additional 209 AFY recycled water demand in these areas. In addition, it will establish a 16 million gallons per day (MGD) demonstration-scale advanced water treatment plant, a necessary step to ultimately provide 12,000 AFY of recycled water for indirect potable use.

- The Carlsbad Desalination Project Local Conveyance project will provide the infrastructure necessary to deliver 56,000 AFY of new supply that will be produced by a desalination treatment plant at the Encina Power Plant site.
- The Santa Margarita Conjunctive Use Project will divert water available from the Santa Margarita River during high flows for spreading, ultimately percolating into the local groundwater basin. The project will maximize the potential of the groundwater basin through efficient conjunctive use of the basin, providing up to 6,800 AFY of new local supply.
- The Santee Water Reclamation Facility (WRF) Expansion Project will expand the WRF treatment capacity from 2 MGD to 4 MGD and then eventually to 10 MGD, allowing increased recycled water production from the facility. Phase 2 of the project, included in this proposal will generate an additional 2,240 AFY of recycled water supply.
- The El Monte Groundwater Recharge and River Restoration Project, Phases 1 and 2 will utilize recycled water from the WRF for groundwater recharge and subsequent withdrawal, providing an example of the advantages of integrating efforts in the Region. With the second phase of expansion at the WRF, there would be an additional 5,000 AFY of supply created.
- The South San Diego County Water Supply Strategy and the San Diego Region Four Reservoir Intertie Project Conceptual Design will position the Region for maximum utilization of surface water and groundwater resources. The Four Reservoir Intertie Project Conceptual Design will improve the management of imported water in the Region by providing an initial design and work plan for a conveyance system of new or upgraded pipelines connecting four existing reservoirs. The South San Diego County Water Supply Strategy will further understanding of sustainable water extraction and potential in-lieu conjunctive use of the San Diego Formation (SDF), an extensive groundwater basin underlying the Region. This implementation study is critical to the cultivation and management of the Region's groundwater resources.

These projects will form the nucleus of water supply for the Proposal. Taken together, these anchor water supply projects offer the potential to provide a total of more than 68,900 AFY of local water supply and conserve another 4,000 AFY.

Water Quality

Maintaining and improving surface water quality is an important water management challenge for the Region. The increasing impact of development is being felt as the volume of urban runoff increases and carries with it higher loads of pollutants. There are a number of 303(d) listed waters in the Region, including San Elijo Lagoon and Chollas Creek. Two projects in the Proposal will implement stormwater best management practices (BMPs) at government facilities to demonstrate BMP effectiveness, provide leadership, and serve as a model for similar efforts in the Region. These projects will be implemented in a disadvantaged community (DAC), generating benefits for the residents of the DAC by improving the quality of surface waters running though the community and raising awareness of water quality issues in the community. Two other water conservation projects will reduce the effects of over irrigation by promoting the use of smart irrigation controllers. Two source water protection projects in the Proposal will serve to slow the spread of impervious surfaces in the Region, reducing the impacts associated with runoff and hydromodification, while also protecting source water quality. These projects have been strategically placed adjacent to local supply reservoirs to maximize the water quality benefits generated. Finally, a citizen-based, region-wide pollution prevention program is included to generate valuable water quality data to be used in assessing the state of the waterbodies in the Region and and raise awareness of water quality and water management needs in the community. Finally, the Proposal includes a project to remove invasive plant species, which can contribute to water quality degradation.

Stewardship of Natural Resources

The Region contains a wealth of natural resources and undeveloped areas. This Proposal will help to meet water supply and water quality objectives while working in a coordinated fashion to provide habitat and open space benefits wherever possible, thus maximizing the benefit of Proposal implementation to all aspects of water management. The Region has several watershed management plans in place; however, without coordinated implementation, these plans lose their effectiveness. Two projects in the Proposal will implement elements of watershed management plans in the Region in a coordinated fashion: the San Diego River Watershed Management Plan Implementation and the San Dieguito River Watershed

Management Plan Implementation projects. These projects will create effective management of watershed-level efforts, support restoration activities in two of the Region's hydrologic units, and ensure implementation of the projects and actions that have been developed in the watershed management plans. The source water protection and land acquisition and restoration projects described above for their water quality benefits have the additional benefits of preserving and restoring natural habitat and minimizing development impacts. A goal of source water protection through acquisition is often to create a continuous buffer zone, which is synchronous with the objectives of the Region's Multi Species Conservation Plans (MSCPs) and Habitat Conservation Plans (HCPs) to provide continuous habitat corridors. Habitat conservation is also incorporated in the proposed groundwater recharge projects in the El Monte Valley and on the Santa Margarita River.

Proposal Goals and Objectives

The objective of this Proposal is to present a suite of programs that:

- ✓ Further the mission, vision, goals, and objectives established in the IRWM Plan.
- ✓ Provide multiple benefits through integration of water management strategies.
- ✓ Have been identified as high priorities for implementation.
- ✓ Assist in meeting the Region's critical water supply, water quality, and natural resources needs.

The IRWM Plan established multiple objectives relating to water supply, infrastructure, water quality, habitat preservation/restoration, open space, scientific and technical knowledge, stakeholder participation, and recreational needs. These objectives are summarized in **Table A**.

Table A: San Diego Region IRWM Plan Goals and Objectives

GOALS	OBJECTIVES	
Optimize water supply reliability	**D**	Develop and maintain a diverse mix of water resources
	E	Construct, operate, and maintain a reliable infrastructure system
Protect and enhance water quality	**F**	Reduce the negative effects on waterways and watershed health caused by hydromodification and flooding
	G	Effectively reduce sources of pollutants and environmental stressors
Provide stewardship of our natural resources	**H**	Protect, restore and maintain habitat and open space
Coordinate and integrate water resource management	**I**	Optimize water-based recreational opportunities
	A	Maximize stakeholder / community involvement and stewardship
	B	Effectively obtain, manage and assess water resources data and information
	C	Further the scientific and technical foundation of water management

Consistency with Adopted IRWM Plan

The projects included within this Proposal are consistent with the IRWM Plan. Each project included was identified as a Tier 1, high priority project, in Section F of the IRWM Plan (refer to Table F-2, beginning on page F-11). As shown in **Table B**, each of the projects included within this Proposal meets one or more of the water management objectives established for the Region. In addition, each of these projects was identified as a Tier 1 project following prioritization.

Table of Projects

Table C presents the specific projects included as part of the Proposal, organized by program. An abstract, current project status, priority of the project, and implementing agency is provided for each project.

Table B: Consistency of Projects with IRWM Plan Objectives

Proposal Projects	IRWM Plan Objectives Addressed				
	A	B	C	D	[redacted]

Table C: Projects Included in the San Diego Region Proposal

Project	Description	
PROGRAM: CONSERVATION		
Implementation of Integrated Landscape and Agricultural Efficiency Program	Abstract:	Implementation of Integrated Landscape and Agricultural Efficiency Programs support regional efforts to increase water efficiency in the agricultural industry and in the area of landscape irrigation while also improving water quality through runoff reduction. Agriculture and landscape irrigation offer the highest potential for additional water savings in the Region. The Water Authority will conduct agricultural audits that will improve water efficiency without compromising crops or production. This will include an assessment of agriculture, by crop and water requirement. The Water Authority will address landscape water efficiency by: 1) retrofitting sites to improve irrigation efficiency and promoting water-wise and /or California Friendly landscapes; 2) developing a web-driven water budget program to communicate water use targets to customers and to identify a regional conservation target; 3) conducting a branding study and outreach to determine how to deliver water conservation messages most effectively; and 4) developing a Regional Landscape Model Ordinance and leading regional adoption efforts and implementation of the ordinance. The programs that comprise this project have the potential to achieve over 3,600 AFY of water savings.
	Status:	Both the agricultural and landscape water efficiency components have already been planned and designed and some elements are either in implementation or about to be implemented.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]**:**	Implementation of Agricultural Efficiency Programs, Implementation of Integrated Landscape Program
	Lead Agency:	San Diego County Water Authority
Irrigation Hardware Giveaway and Dry Weather Runoff Reduction Demonstration	Abstract:	The Irrigation Hardware Giveaway and Dry Weather Runoff Reduction Demonstration project is being implemented by the City of San Diego to provide an opportunity to offer customized commercial landscape and residential surveys along with state-of-the-art efficient irrigation hardware free-of-charge to customers maintaining irrigation systems at landscaped sites throughout the City of San Diego. A selected group of 50 participating sites will also serve as a study group to demonstrate the link between use of landscape conservation hardware and observable levels of urban runoff reduction. The giveaway program will promote further utilization (and market penetration) of up to 700 residential and commercial weather-based irrigation controllers (WBICs), also known as “smart controllers” as well as other types of distribution hardware (i.e. drip/micro spray/sprinkler heads). The project is expected to conserve approximately 91 AFY of water and will reduce the extensive amount of over-watering that occurs in commercial, residential, and institution urban landscapes, thereby conserving potable water and reducing pollutant-laden dry weather urban runoff flows into sensitive receiving waters.
	Status:	Planning is complete.
	Priority	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.

Project	Description	
	IRWMP Title(s)[1]:	Integrated Commercial/Industrial/Institutional and Residential Indoor Conservation Programs
	Lead Agency:	City of San Diego
Over-Irrigation / Runoff Reduction	Abstract:	The Over-Irrigation/Bacteria Reduction project will protect and/or enhance water quality by reducing irrigation runoff through improved water use efficiency at eight pilot sites located within the Carlsbad Watershed in San Diego County. These sites represent a mix of residential areas and small commercial/public areas and have been identified as high water users with frequent over-irrigation runoff. Six of the sites are located in close proximity to San Elijo Lagoon, which is a 303(d) listed water body impaired for bacteria, nutrients and sediment. The objectives of the project are to provide measurable water conservation and water quality benefits and to demonstrate the link between over-irrigation reductions and reductions in pollutant loads. This will be accomplished through water use assessment, flow monitoring and water quality monitoring both on-site and at key locations in the storm drain system. This project will conserve an estimated 353 AFY.
	Status:	Site selection is complete. Implementation will begin in 2008.
	Priority	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]:	Over-Irrigation / Runoff Reduction
	Lead Agency:	City of Encinitas
PROGRAM: WATER RECYCLING		
Santee Water Reclamation Facility Expansion Project	Abstract:	The Santee Water Reclamation Facility (WRF) Expansion Project includes the design and construction of facilities necessary to expand the Title 22 treatment capacity of the WRF from 2 million gallons per day (MGD) to 4 MGD, with further expansion to 10 MGD and advanced treatment in a subsequent phase. This project is part of a coordinated effort to jointly implement two projects that will enhance local supplies through an expansion of recycled water production coupled with increased groundwater recharge using recycled water. Expansion of WRF capacity could involve design and construction of either a secondary clarifier and tertiary filter facilities or a membrane bioreactor.
	Status:	The feasibility study is complete. A Mitigated Negative Declaration is scheduled to be completed by June 2008. Design is scheduled to begin in January of 2008, with construction beginning in March 2009.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]:	Santee Water Reclamation Facility Expansion Project
	Lead Agency:	Padre Dam Municipal Water District

Project	Description	
Recycled Water Retrofit Assistance Program	Abstract:	The Recycled Water Retrofit Assistance Program will provide direct financial assistance to homeowners' associations, public agencies, and other customer types to facilitate the conversion from potable to recycled water for landscape irrigation and other uses. The project will reimburse all, or a portion of the reasonable costs incurred by customers for retrofit work reviewed and approved by member agencies. The project will target approximately 40 sites throughout the Water Authority's service area which will allow approximately 2,000 AFY of additional recycled water to be used. The Water Authority's ultimate goal is to promote the development and use of recycled water capable of supplying 5% of the Region's water demand by 2011.
	Status:	Potential retrofit sites have been identified. Selection of recipients for financial assistance will proceed in July 2008.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]:	Recycled Water Retrofit Assistance Program
	Lead Agency:	San Diego County Water Authority
City of San Diego Recycled Water Distribution System Expansion, Parklands Retrofit, and Indirect Potable Reuse / Reservoir Augmentation Project	Abstract:	The City of San Diego Recycled Water Distribution System Expansion, Parklands Retrofit, and Indirect Potable Reuse / Reservoir Augmentation Project has three parts. Part 1 will install 18,000 feet of new recycled water pipe to distribute 1,500 AFY of recycled water to irrigate community open spaces, medians, slopes, and the SR-56 freeway - all located in the north of the City of San Diego. Part 2 will extend the existing recycled water distribution system to selected City of San Diego parklands and retrofit irrigation systems at these parklands to use recycle water, creating an additional 209 AFY demand for recycled water. The City has committed to beneficially reuse 50% of the flows from its North City Water Reclamation Plant by 2010. By distributing recycled water and creating demand, this project moves the City substantially toward that goal. Part 3 will implement a 16 MGD advanced water treatment plant designed to demonstrate the ability to treat water for indirect potable reuse in the San Diego Region. The demonstration project is a necessary step in ultimately implementing 12,000 AFY of indirect potable reuse. Using recycled water reduces imported water demand and increases local water supply, and results in less wastewater to be treated and the discharged into the ocean.
	Status:	Design is complete and construction is occurring on portions of the North City Recycled Water Distribution System Expansion. Design on the retrofit sites will begin in July 2008. Environmental documentation has been completed.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]:	City of San Diego Recycled Water Retrofit Program and Distribution System Expansion, City of San Diego Parklands Recycled Water Retrofit Program and Distribution System, Indirect Potable Reuse / Reservoir Augmentation Project
	Lead Agency:	City of San Diego

Project	Description	
PROGRAM: LOCAL SUPPLY PROTECTION AND DEVELOPMENT		
San Vicente Reservoir Source Water Protection through Watershed Property Acquisition and Restoration	Abstract:	The San Vicente Reservoir Source Water Protection through Watershed Property Acquisition and Restoration project will acquire lands from willing sellers around San Vicente Reservoir for the purpose of creating an expanded drinking source water protection buffer, and will restore those lands following acquisition. San Vicente Reservoir is being enlarged to nearly 200,000 AF as part of the SDCWA's Emergency Storage Project. The keystone in San Diego's reservoir system, San Vicente Rservoir ultimately supplyies water to nearly two million people. The buffer will provide high quality habitat and protect associated sensitive species. Lands more distant from the reservoir, but still within its watershed, will also be identified and acquired for the purpose of source water protection.
	Status:	Target Parcels have been identified for acquisition and restoration. In-house prioritization of parcels will occur in June 2008. Negotiations with willing landowners will occur in 2008. Appraisal of the selected parcel(s) will be performed in 2008.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]**:**	San Vicente Reservoir Source Water Protection through Watershed Property Acquisition
	Lead Agency:	City of San Diego Water Department
El Capitan Reservoir Watershed Acquisition Program and Restoration	Abstract:	The El Capitan Reservoir Watershed Acquisition and Restoration Program will acquire and restore two to three properties from willing sellers representing approximately 120 acres of targeted vacant undeveloped lands upstream and in the immediate vicinity of the El Capitan Reservoir. The owners of these properties have already indicated their willingness to sell. These purchases would help to place the last pieces of privately owned property at the reservoir high water mark into public hands. The project will protect source water quality at the reservoir by reducing the potential for non-point source pollution from development, removing trash and debris from the properties and planting 800 trees, and maintaining a biologically significant wildlife corridor and preserving habitat.
	Status:	Target Parcels have been identified for acquisition and restoration. Negotiations with willing landowners will occur in June 2008. Appraisal of the selected parcel(s) will be performed in June 2008.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]**:**	El Capitan Reservoir Watershed Acquisition Program
	Lead Agency:	The San Diego River Park Foundation
Northern San Diego County Invasive Non-Native Species	Abstract:	The Northern San Diego County Invasive Non-Native Species Control Program will eradicate 373.5 acres of targeted invasive non-native plant species throughout Northern San Diego County. It would protect and enhance habitat in the San Juan, Santa Margarita, San Luis Rey, Carlsbad and San Dieguito hydrologic units; conserve water resources by increasing available groundwater; protect water delivery and storage systems by reducing flood risk

Project	Description	
Control Program		and damage; improve water quality by reducing erosion through minimizing bank failures and normalizing sediment discharge processes; and reduce fire risk. Control of invasive species and native re-vegetation of riparian habitat would also benefit many federally endangered species in the area.
	Status:	Extensive mapping of invasive species has already been performed. Removal of invasives is underway under other programs. Removal of invasives under this project will commence in 2008.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]**:**	Northern San Diego County Invasive Non-Native Species Control Program
	Lead Agency:	Mission Resource Conservation District
Santa Margarita Conjunctive Use Project	Abstract:	The Santa Margarita Conjunctive Use Project provides for enhanced recharge and recovery from the groundwater basin underlying Camp Pendleton to provide a water supply for both Camp Pendleton and Fallbrook as resolution of a long-standing water rights dispute between the U.S. and Fallbrook. The project will provide approximately 6,800 AFY of new local supply from the Santa Margarita River by conjunctively managing the groundwater basins on Camp Pendleton. Additionally, 1380 acres of sensitive habitat will be preserved along the river as a result of this project. The project also includes a seawater intrusion barrier using recycled water and a distribution system able to deliver water both to Fallbrook PUD and the SDCWA aqueduct system. Membrane treatment of extracted groundwater and brine disposal will reduce the TDS of the lower basin over time.
	Status:	Pre-feasibility studies are complete. Feasibility study and EIR are being performed currently and will be complete by December, 2008.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]**:**	Santa Margarita Conjunctive Use Project
	Lead Agency:	Fallbrook Public Utilities District
Carlsbad Desalination Project Local Conveyance	Abstract:	The Carlsbad Desalination Project Local Conveyance project will provide 56,000 AFY of new water supply for the San Diego Region through the design and construction of pipelines and facilities to serve local desalinated water from the Carlsbad Desalination Project to SDCWA member agencies, including Carlsbad Municipal Water District, City of Oceanside, Olivenhain Municipal Water District, Vallecitos Water District, Vista Irrigation District and Santa Fe Irrigation District. The project provides the project participants with a secure and reliable water supply for 30 years with two possible 30-year extensions. Benefits include a local source of potable water, improved water supply reliability and improved water quality. This project includes conveyance infrastructure alone (excludes the desalination facility itself).
	Status:	~~A Feasibility Study for the project has been completed and an Environmental Impact Report certified in 2006. Design~~

Project	Description	
		of the conveyance system and facilities will begin in August 2008 and construction following in July 2009.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]:	Carlsbad Desalination Project Local Conveyance
	Lead Agency:	Olivenhain Municipal Water District
San Diego Region Four Reservoir Intertie Project Conceptual Design	Abstract:	The San Diego Region Four Reservoir Intertie Project Conceptual Design (Conceptual Design) will provide an initial design and work plan for a conveyance system that will increase the capability to manage and store imported water in four existing reservoir systems, making the San Diego Region more resistant to drought and water delivery service interruptions. Connecting the San Vicente, El Capitan, Loveland, and Murray Reservoir systems would create an enhanced and integrated reservoir system to more efficiently use existing storage; increase water supply reliability in the San Diego Region; more efficiently supply water at the lowest possible cost; more effectively use imported water aqueducts; increase accessibility to ~100,000 AF of surface storage without creating new reservoirs or new storage capacity, and take advantage of potential energy management opportunities. The environmental effects of the future conveyance system would be minimal because each reservoir has been in place since the 1940s or earlier, and reservoir footprints would not increase.
	Status:	The Conceptual Design will begin in July 2008.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]:	San Diego Region Four Reservoir Intertie Project Feasibility Study
	Lead Agency:	Sweetwater Authority
South San Diego County Water Supply Strategy	Abstract:	The South San Diego County Water Supply Strategy (Strategy) investigates the sustainable use of the apparently vast groundwater resources of the San Diego Formation (SDF), a natural underground aquifer that underlies the central and south San Diego Bay area. Reliable assessments currently estimate that the SDF holds upward of 1,000,000 AF of water. This extensive local water resource has the potential to significantly supplement water supplies and reduce dependence on imported water through its efficient development and use. The project will consist of an implementation study of the SDF to further understanding of sustainable water extraction and potential in-lieu conjunctive use and to guide the development of the Strategy.
	Status:	Phase 1 of the project is complete, and Phase 2 is underway. Phase 3 will begin in July 2008.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]:	South San Diego County Water Supply Strategy

Project	Description	
	Lead Agency:	Sweetwater Authority
El Monte Valley Groundwater Recharge and River Restoration Project, Phases 1 and 2	Abstract:	The El Monte Valley Groundwater Recharge and River Restoration Project, Phases 1 and 2, located in Lakeside, would recharge the El Monte Valley Basin using highly treated recycled water, raise the groundwater level to support habitat restoration and subsequently withdraw up to 2,240 AFY of groundwater to supply the R.M. Levy Water Treatment Plant. Phase 1 would develop the necessary Groundwater Management Plan and institutional support, and Phase 2 includes design and construction of spreading basins, conveyance pipelines and river restoration. Benefits include restoration of natural habitat, improvement of the water quality, and expansion of the local water portfolio by providing a new renewable water supply. This project is integrally linked to the Santee Water Reclamation Facility (WRF) Expansion Project.
	Status:	The Feasibility Study has been completed. A Subsequent EIR will be completed by June 2008. Design is complete and construction is scheduled to begin July 2008.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]**:**	El Monte Valley Groundwater Recharge and River Restoration Project, Phases 1 and 2
	Lead Agency:	Helix Water District
PROGRAM: EDUCATION AND OUTREACH		
San Diego Regional Pollution Prevention	Abstract:	The San Diego Regional Pollution Prevention project will remove trash and debris and assess the water quality within San Diego County through citizen monitoring. It seeks to establish a baseline of trash and water quality data that will be transferable to the local communities that live in the Region. Data collected through this project will be incorporated into two web-based, publicly accessible data portals. Stakeholder involvement and community participation are at the core of this project. The project will teach a minimum of 300 members of the community – citizens, decision makers, tribal members, and stakeholders - how to access publicly available water quality data and to analyze and interpret these data to identify water quality impacts on a watershed level.
	Status:	The program is ready and scheduled to begin in July 2008.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]**:**	San Diego Regional Water Quality Assessment and Outreach
	Lead Agency:	San Diego Coastkeeper
Biofiltration Wetland Creation and	Abstract:	The Biofiltration Wetland Creation and Education Program will develop a biofiltration wetland within the San Diego Wild Animal Park (Park) which will be used to improve water quality within the Park through natural biological filtration, enhance wetlands habitat, and reduce water consumption. The constructed wetlands will be biological

Project	Description	
Education Program		filters that are very effective at removing high biological oxygen demand (BOD), total suspended solids, organic nitrogen, and nitrates. In addition to constructed wetlands, providing pond edge habitat is another important aspect of this project. Finally, the wetlands will also be used to educate visitors about water conservation and the importance of conserving wetlands.
	Status:	The Feasibility Study is complete. Construction documents are to be prepared in July 2008 and with construction beginning in December 2008. A building permit will be obtained by November 2008.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]**:**	Educational Demonstration Wetland Project
	Lead Agency:	Zoological Society of San Diego
San Dieguito Watershed Management Plan Implementation	Abstract:	This project will support the newly-formed San Dieguito Watershed Council (Council) in implementing the San Dieguito Watershed Management Plan. The project will provide grant writing and reporting, coordination of the activities and work products of the Working Groups, oversight of specific projects,and management of public relations. This project will allow the Council to begin implementation of the San Dieguito Watershed Management Plan, which includes projects coordinated throughout the watershed offering benefits of habitat restoration, water quality improvement and water conservation.
	Status:	This project is ready and scheduled to begin July 2008.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]**:**	San Dieguito Watershed Council Staffing
	Lead Agency:	San Dieguito River Valley Conservancy
San Diego River Watershed Management Plan Implementation	Abstract:	This project will support implementation of the San Diego River Watershed Management Plan. The project will include identification of long-term funding strategies and sources to continue the effort beyond the grant period, as well as coordination of stakeholder groups and their projects, with particular attention to DACs. The project includes data management through a clearinghouse tracking project status and archiving data collected throughout the watershed. An annual "State of the Watershed" report will be used for public education and outreach.
	Status:	This project is ready and scheduled to begin July 2008.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	IRWMP Title(s)[1]**:**	San Diego River Watershed Coordinator
	Lead	The San Diego River Park Foundation

Project	Description	
	Agency:	
City of San Diego Green Mall Porous Paving and Infiltration, Phase 1	Abstract:	The City of San Diego Green Mall Porous Paving and Infiltration, Phase 1 project will retrofit storm water systems on two commercial & industrial streets in the Chollas Creek sub-watershed of the Pueblo Hydrologic Unit (in the City of San Diego), allowing urban runoff and pollutants carried with it to infiltrate into the ground instead of discharging directly to the storm drain system and adjacent waterbodies. Existing asphalt street paving will be replaced with pervious concrete. Existing curbs & gutters will be moved into the street, and bio-retention systems of crushed rock and trees will be installed in the created space. The project will include water quality monitoring and educational outreach.
	Status:	Design is ready to proceed.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	Lead Agency:	City of San Diego
County of San Diego Chollas Creek Runoff Reduction and Groundwater Recharge	Abstract:	The County of San Diego Chollas Creek Runoff Reduction and Groundwater Recharge project will demonstrate practical implementation of a range of low impact development (LID) practices to reduce runoff from three County of San Diego (County) facilities in the Chollas Creek sub-watershed of the Pueblo San Diego hydrological unit. These facilities occupy sites that are highly impervious and could be retrofitted with LID components to promote infiltration and reduce runoff. The project will include demonstrations of porous pavements over stone reservoirs, capture/infiltration technologies and landscape elements such as rain gardens and swales. Each site will demonstrate a different combination of technologies and techniques, allowing a comparison of the relative effectiveness of the methods. The project helps to reduce transport of pollutants to Chollas Creek, which is listed as impaired by copper, lead, and zinc and is the subject of a TMDL currently proposed for approval by the RWQCB.
	Status:	Design is ready to proceed.
	Priority:	High. This project was ranked Tier 1 in the prioritization process and was subsequently selected by the Project Workgroup as a project that should be implemented without delay.
	Lead Agency:	Department of General Services, County of San Diego

1. Some projects in this proposal are the result of integrating Tier 1 projects from the 2007 Integrated Regional Water Management Plan; in these cases, the titles used herein do not match the title or titles in the IRWMP exactly. Additionally, some titles have been changed from thoses appearing in the IRWMP for improved clarity. Original titles used in the 2007 San Diego IRWM Planare provided for reference purposes.

Project Synergies and Linkages

Several of the projects included in this Proposal are linked, and the coordinated implementation of each project is critical to the success of the Proposal as a whole. The Proposal has been crafted to maximize the linkages and integration between the projects within the Proposal, and projects included in the Proposal have been selected based on their ability to generate multiple benefits.

A primary focus of the Proposal is on creating new sources of local supply, as well as protecting the quality of existing and future supply sources. There is a need to protect water quality in the Region's many open reservoirs. At the same time, the Region is home to a wealth of habitat and natural resources that should be preserved for future generations. Land acquisition has proven to be an effective method of protecting water quality by preserving strategically selected parcels of land that can create buffers between drinking water sources and urban development. In turn, the acquisition of such parcels maintains the natural state and preserves habitat and species. Thus, efforts to expand local supply should be combined and linked with efforts to protect the quality of that supply.

A prime example of the linkages and interdependencies within this Proposal is found between the Santee WRF Expansion Project and the El Monte Groundwater Recharge and River Restoration Project, Phases 1 and 2. The two projects are directly linked. The recycled water that will be used to recharge the El Monte basin will be made available through expansion of tertiary treatment capacity at the Santee WRF. The scheduling of these projects has been closely coordinated to ensure that each project can meet its individual objectives while at the same time maximizing the value of the recycled water resource that will become available.

Projects within the programs identified in this Proposal are linked through their shared objectives and methods. Often, there are synergies created by the sharing of knowledge among the projects within a single program. Further, coordinated implementation of projects within a program is necessary to maximize the benefits generated and avoid duplication of efforts. For example, the Water Authority's Recycled Water Retrofit Program and the City of San Diego Recycled Water Distribution System Expansion, Parklands Retrofit, and Indirect Potable Reuse / Reservoir Augmentation project both have similar objectives, target customers, and methods. The coordination occurring between these two projects is necessary to minimize the overlap between the areas of coverage where retrofits will occur.

Two projects that are linked from a water quality standpoint are the County of San Diego Chollas Creek Runoff Reduction and Groundwater Recharge project and the City of San Diego Green Mall Porous Pavement and Infiltration, Phase 1 project. Both of these projects will implement storm water BMPs to reduce runoff and improve water quality. The projects are in close proximity to each other and will both contribute to improving water quality in Chollas Creek, an impaired water body. Coordination between these projects and other similar water quality projects affecting Chollas Creek is important in order to obtain optimal coverage and to account for the contributions of each project in determining compliance with regulatory requirements such as TMDLs. Further, both of these projects are located above the SDF groundwater basin and nicely demonstrate the linkage between water quality protection efforts and groundwater supply. The SDF is the subject of the South San Diego County Water Supply Strategy, which will explore sustainable groundwater extraction and potential in-lieu conjunctive use of the SDF. As storm water detention for water quality purposes may also serve to recharge the groundwater basin, it would be advantageous for proponents of water quality projects that implement recharge to coordinate with this study to determine potential sites that will allow recharge opportunities to be maximized.

The San Diego Region Four Reservoir Intertie Project Conceptual Design shares linkages to the El Capitan Reservoir Watershed Acquisition and Restoration Program and the San Vicente Reservoir Source Water Protection through Watershed Property Acquisition and Restoration projects because these projects will protect the sources of supply that the former project is evaluating.

Many projects in the Proposal are complementary to each other. For instance, the Northern San Diego County Invasive Non-Native Species Control Program, which will take place across many hydrologic units (HU), including the Santa Margarita HU, may serve to assist the Santa Margarita Conjunctive Use Project

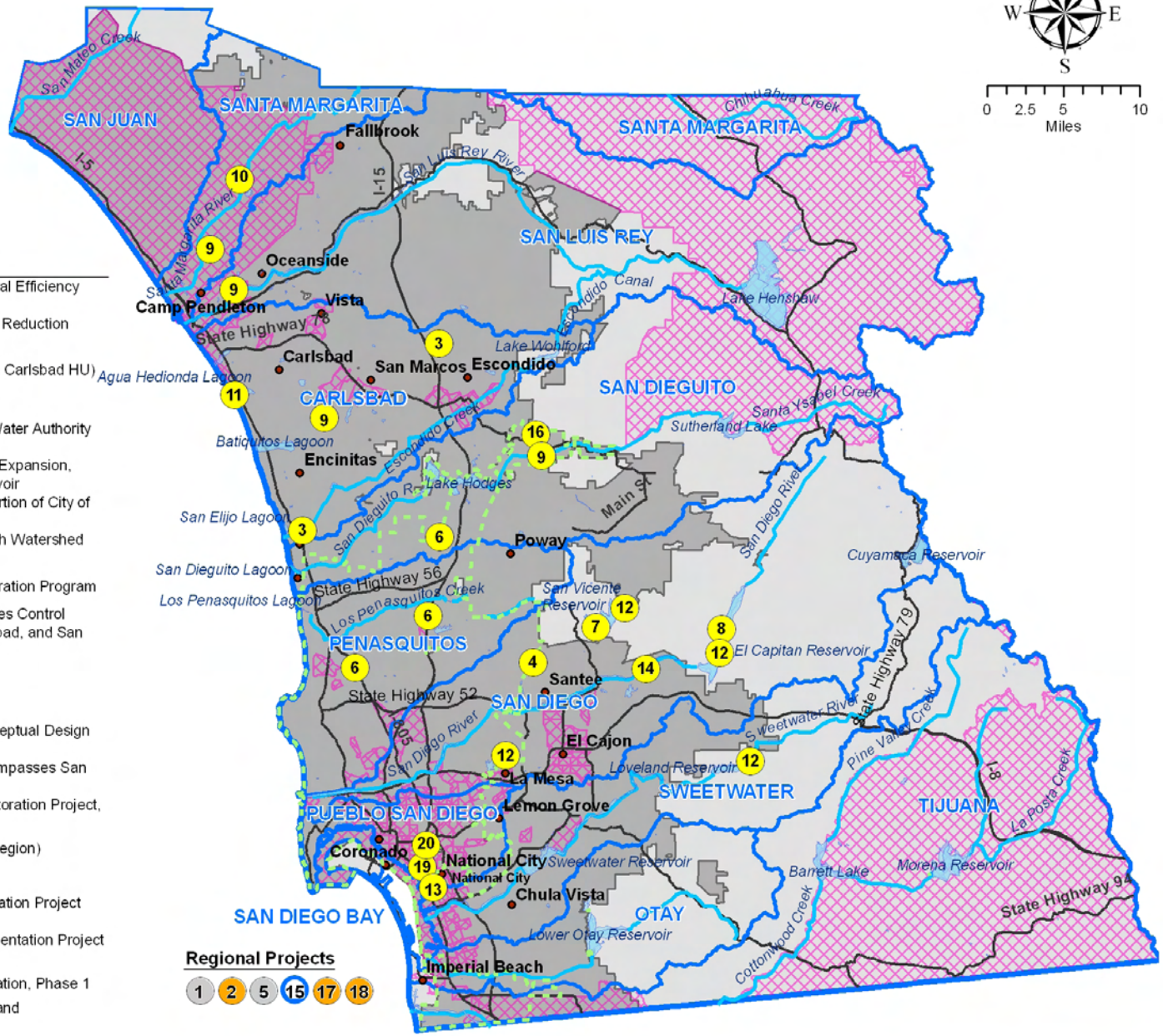
by removing invasive species from upstream locations, thus preventing flooding events and sedimentation that may impact the diversion structure that is being installed to capture flows for conjunctive use. The San Diego River Watershed Management Plan Implementation and the San Dieguito Watershed Management Plan Implementation projects will facilitate the implementation of other projects in those watersheds and coordinate related efforts.

These are just a few examples of how the projects included in this Proposal work synergistically to achieve multiple benefits for the Region as a whole. These examples illustrate how the coordinated implementation of the projects included in this Proposal is critical to successful implementation of the Proposal itself. Without coordinated implementation of these projects, the feasibility, success, and potential benefits associated with each would be threatened.

Project Maps

Figure A-1 presents the location of each project included in this Proposal with respect to Region boundaries, major waterbodies, jurisdictional boundaries and DACs. **Figures A-2 through A-11** show the location of projects within each HU. Each map shows the locations of the proposed project, and the water bodies and groundwater basins that will be affected by projects in the Proposal. **Figure A-10** shows the location of projects in relation to natural resources in the Region such as environmentally sensitive areas, wetlands, vegetation, and national forests. **Figure A-11** shows historic fire areas relative to project locations.

Figure A-1: Locations of Proposed Projects, Major Waterbodies, Jurisdictional Boundaries, and Disadvantaged Communities in the Region

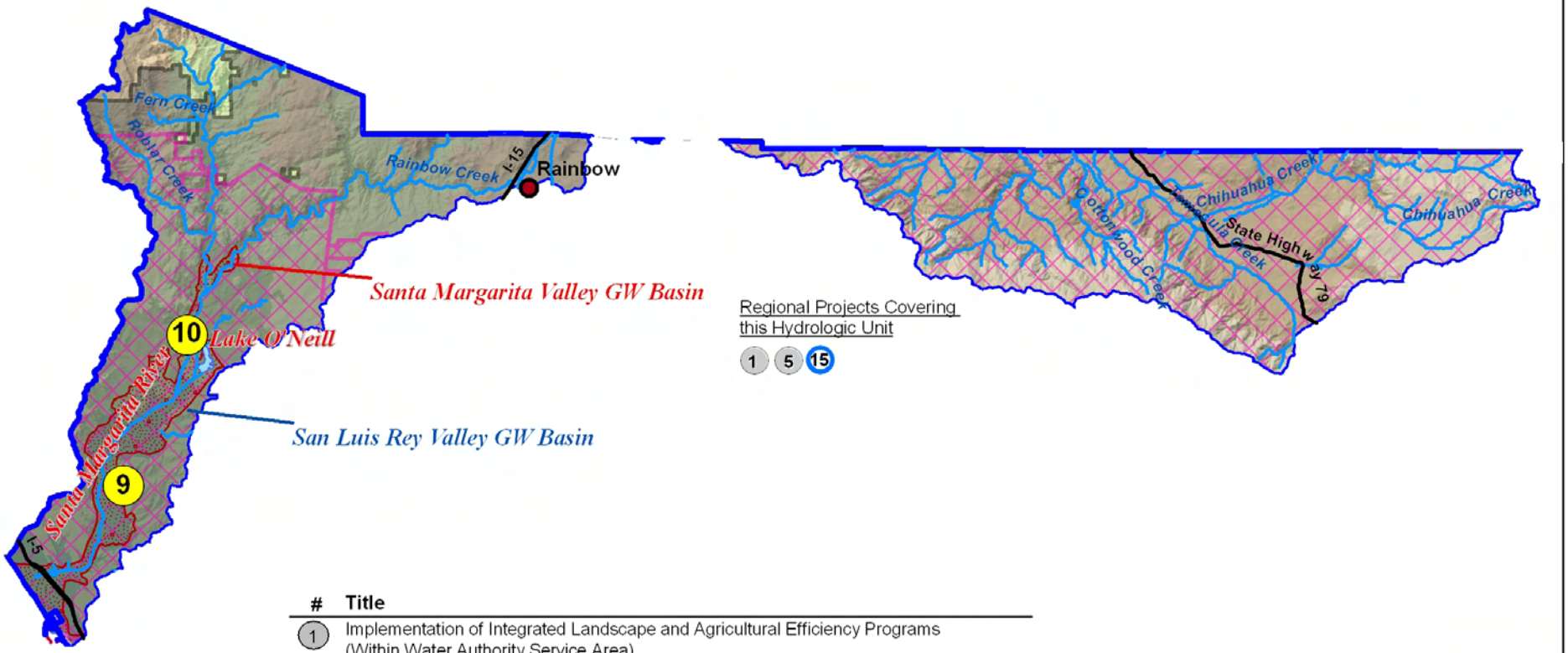


#	Project Title
1	Implementation of Integrated Landscape and Agricultural Efficiency Programs (Within Water Authority Service Area)
2	Irrigation Hardware Giveaway and Dry Weather Runoff Reduction Demonstration (Throughout City of San Diego)
3	Over-Irrigation/Bacteria Reduction (Multiple locations in Carlsbad HU)
4	Santee Water Reclamation Facility Expansion Project
5	Recycled Water Retrofit Assistance Program (Within Water Authority Service Area)
6	City of San Diego Recycled Water Distribution System Expansion, Parklands Retrofit, and Indirect Potable Reuse / Reservoir Augmentation Project (Multiple locations in northern portion of City of San Diego)
7	San Vicente Reservoir Source Water Protection through Watershed Property Acquisition and Restoration
8	El Capitan Reservoir Watershed Acquisition and Restoration Program
9	Northern San Diego County Invasive Non-Native Species Control Program (Within Santa Margarita, San Luis Rey, Carlsbad, and San Dieguito HUs - Locations shown are approximate)
10	Santa Margarita Conjunctive Use Project
11	Carlsbad Desalination Project Local Conveyance
12	San Diego Region Four Reservoir Intertie Project Conceptual Design (Four Reservoirs)
13	South San Diego County Water Supply Strategy (Encompasses San Diego Formation)
14	El Monte Valley Groundwater Recharge and River Restoration Project, Phases 1 and 2
15	San Diego Regional Pollution Prevention (Throughout region)
16	Biofiltration Wetland Creation and Education Program
17	San Dieguito Watershed Management Plan Implementation Project (Within San Dieguito Hydrologic Unit)
18	San Diego River Watershed Management Plan Implementation Project (Within San Diego Hydrologic Unit)
19	City of San Diego Green Mall Porous Paving and Infiltration, Phase 1
20	County of San Diego Chollas Creek Runoff Reduction and Groundwater Recharge

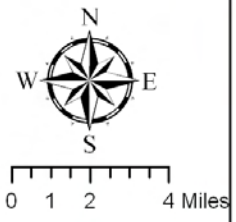
Point Project | SDCWA Service Area Project | Region Boundary | Water Authority Service Area | City of San Diego | River | Highway

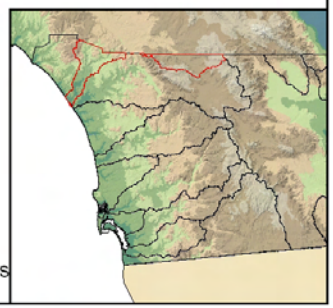
Area Project (City, HU, etc.) | Regional Project | Hydrologic Unit (HU) | Disadvantaged Community | City | Water Body

Figure A-2: Proposed Projects in the Santa Margarita Hydrologic Unit and Affected Surface and Ground Waters



#	Title
1	Implementation of Integrated Landscape and Agricultural Efficiency Programs (Within Water Authority Service Area)
5	Recycled Water Retrofit Assistance Program (Within Water Authority Service Area)
9	Northern San Diego County Invasive Non-Native Species Control Program (Within Santa Margarita, San Luis Rey, Carlsbad, and San Dieguito HUs - Locations shown are approximate)
10	Santa Margarita Conjunctive Use Project
15	San Diego Regional Pollution Prevention (Throughout region)



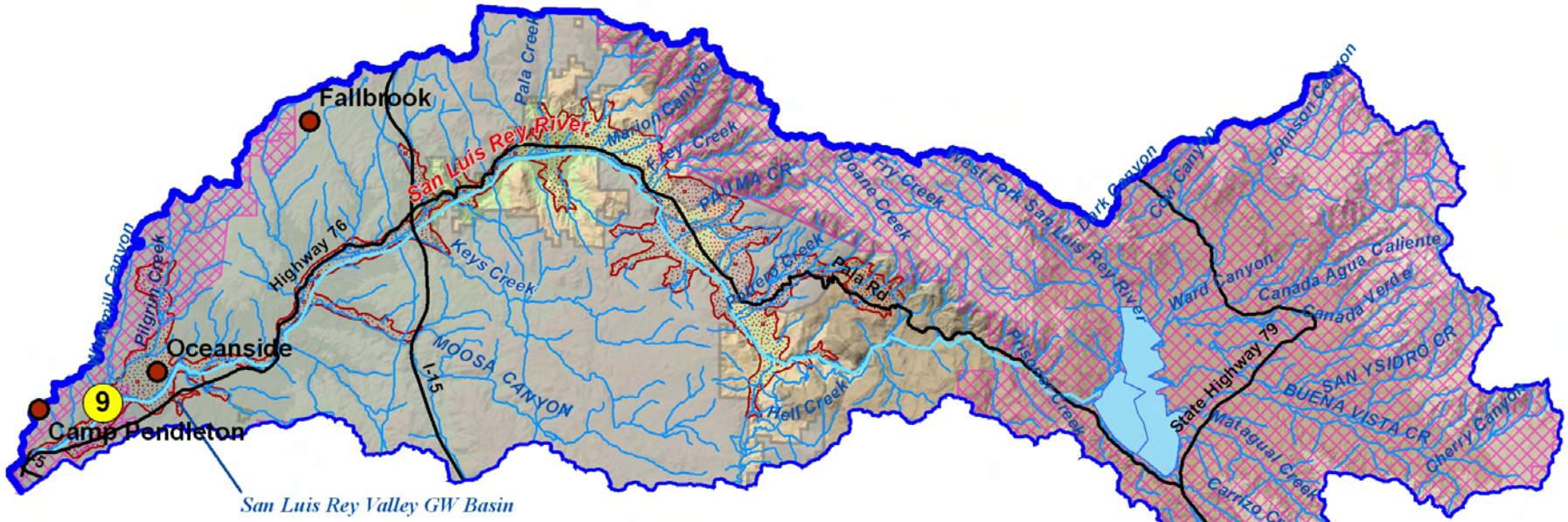


* *Red text indicates affected water body or groundwater (GW) basin.*

Point Project | SDCWA Service Area Project | Hydrologic Unit (HU) | Groundwater Basins | City | River
Area Project (City, HU, etc.) | Regional Project | Water Authority Service Area | Disadvantaged Communities | Highway | Water Body

Figure A-3: Proposed Projects in the San Luis Rey Hydrologic Unit and Affected Surface and Ground Waters

#	Title
1	Implementation of Integrated Landscape and Agricultural Efficiency Programs (Within Water Authority Service Area)
5	Recycled Water Retrofit Assistance Program (Within Water Authority Service Area)
9	Northern San Diego County Invasive Non-Native Species Control Program (Within Santa Margarita, San Luis Rey, Carlsbad, and San Dieguito HUs - Locations shown are approximate)
15	San Diego Regional Pollution Prevention (Throughout region)



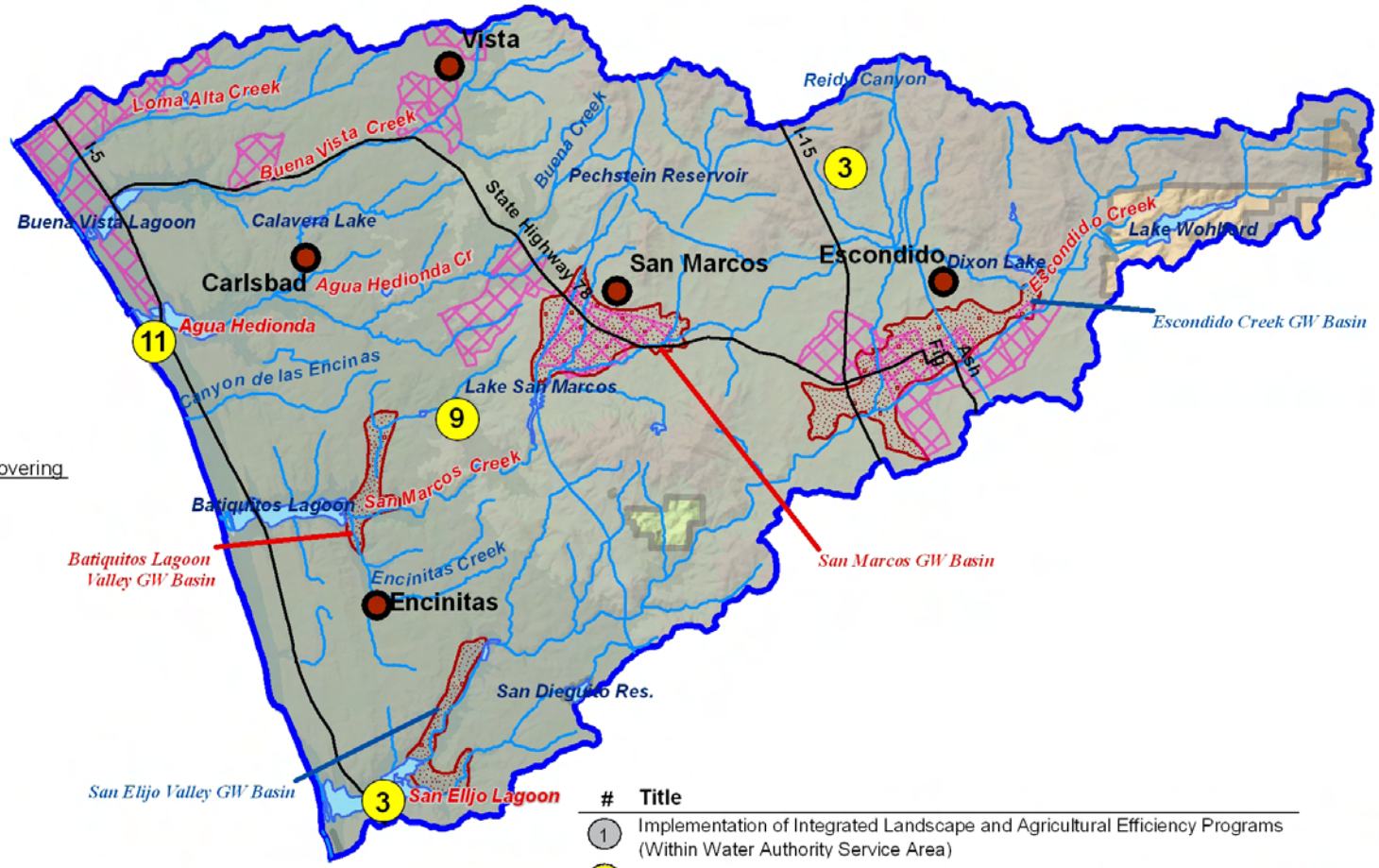
Regional Projects Covering this Hydrologic Unit

1 5 15

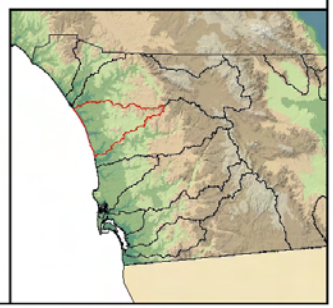
* *Red text indicates affected water body or groundwater (GW) basin.*

Point Project | SDCWA Service Area Project | Hydrologic Unit (HU) | Groundwater Basins | City | River
Area Project (City, HU, etc.) | Regional Project | Water Authority Service Area | Disadvantaged Communities | Highway | Water Body

Figure A-4: Proposed Projects in the Carlsbad Hydrologic Unit and Affected Surface and Ground Waters



#	Title
1	Implementation of Integrated Landscape and Agricultural Efficiency Programs (Within Water Authority Service Area)
3	Over-Irrigation/Bacteria Reduction (Multiple locations in Carlsbad HU)
5	Recycled Water Retrofit Assistance Program (Within Water Authority Service Area)
6	City of San Diego Recycled Water Distribution System Expansion, Parklands Retrofit, and Indirect Potable Reuse / Reservoir Augmentation Project (Multiple
9	Northern San Diego County Invasive Non-Native Species Control Program (Within Santa Margarita, San Luis Rey, Carlsbad, and San Dieguito HUs - Locations shown are approximate)
11	Carlsbad Desalination Project Local Conveyance
15	San Diego Regional Pollution Prevention (Throughout region)

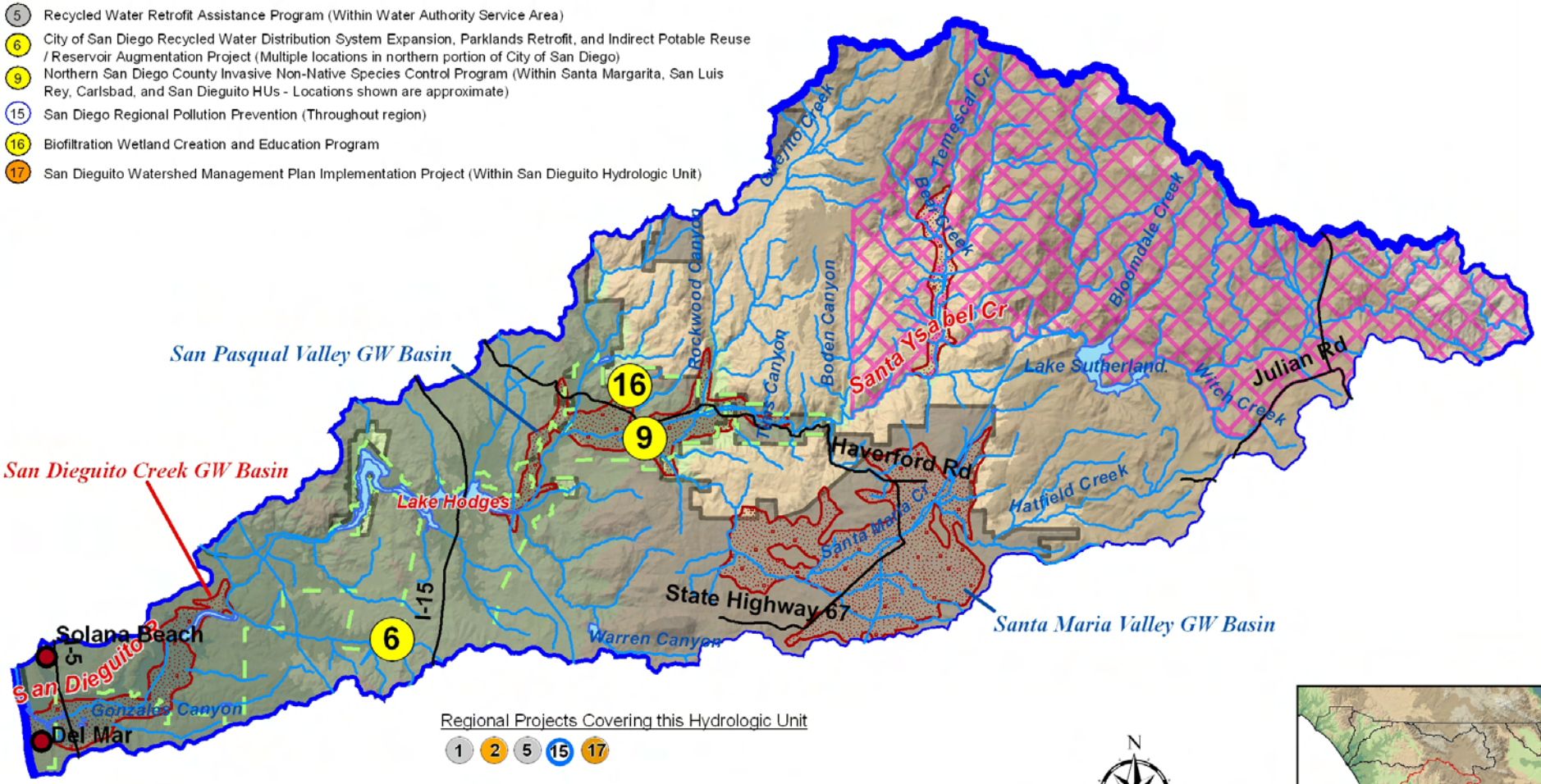


* *Red text indicates affected water body or groundwater (GW) basin.*

Point Project | SDCWA Service Area Project | Hydrologic Unit (HU) | Groundwater Basin | City | River
Area Project (City, HU, etc.) | Regional Project | Water Authority Service Area | Disadvantaged Communities | Highway | Water Body

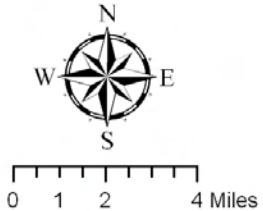
Figure A-5: Proposed Projects in the San Dieguito Hydrologic Unit and Affected Surface and Ground Waters

#	Title
1	Implementation of Integrated Landscape and Agricultural Efficiency Programs (Within Water Authority Service Area)
2	Irrigation Hardware Giveaway and Dry Weather Runoff Reduction Demonstration (Throughout City of San Diego)
5	Recycled Water Retrofit Assistance Program (Within Water Authority Service Area)
6	City of San Diego Recycled Water Distribution System Expansion, Parklands Retrofit, and Indirect Potable Reuse / Reservoir Augmentation Project (Multiple locations in northern portion of City of San Diego)
9	Northern San Diego County Invasive Non-Native Species Control Program (Within Santa Margarita, San Luis Rey, Carlsbad, and San Dieguito HUs - Locations shown are approximate)
15	San Diego Regional Pollution Prevention (Throughout region)
16	Biofiltration Wetland Creation and Education Program
17	San Dieguito Watershed Management Plan Implementation Project (Within San Dieguito Hydrologic Unit)



Regional Projects Covering this Hydrologic Unit

1 2 5 15 17



* *Red text indicates affected water body or groundwater (GW) basin.*

Point Project | SDCWA Service Area Project | Hydrologic Unit (HU) | Groundwater Basins | City | River | Highway

Area Project (City, HU, etc.) | Regional Project | Water Authority Service Area | Disadvantaged Communities | City of San Diego | Water Body

Figure A-6: Proposed Projects in the Penasquitos Hydrologic Unit and Affected Surface and Ground Waters

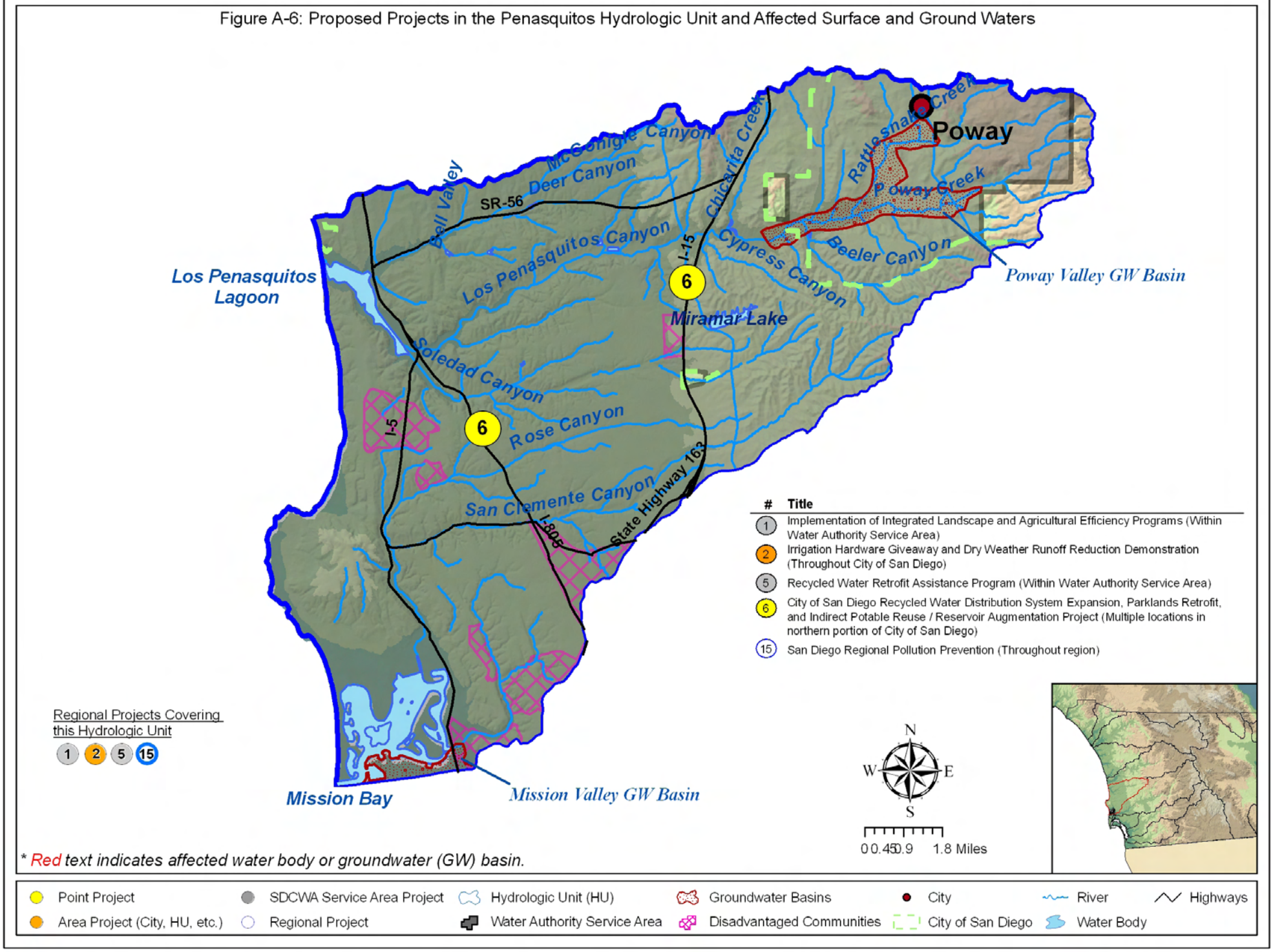


Figure A-7: Proposed Projects in the San Diego Hydrologic Unit and Affected Surface and Ground Waters

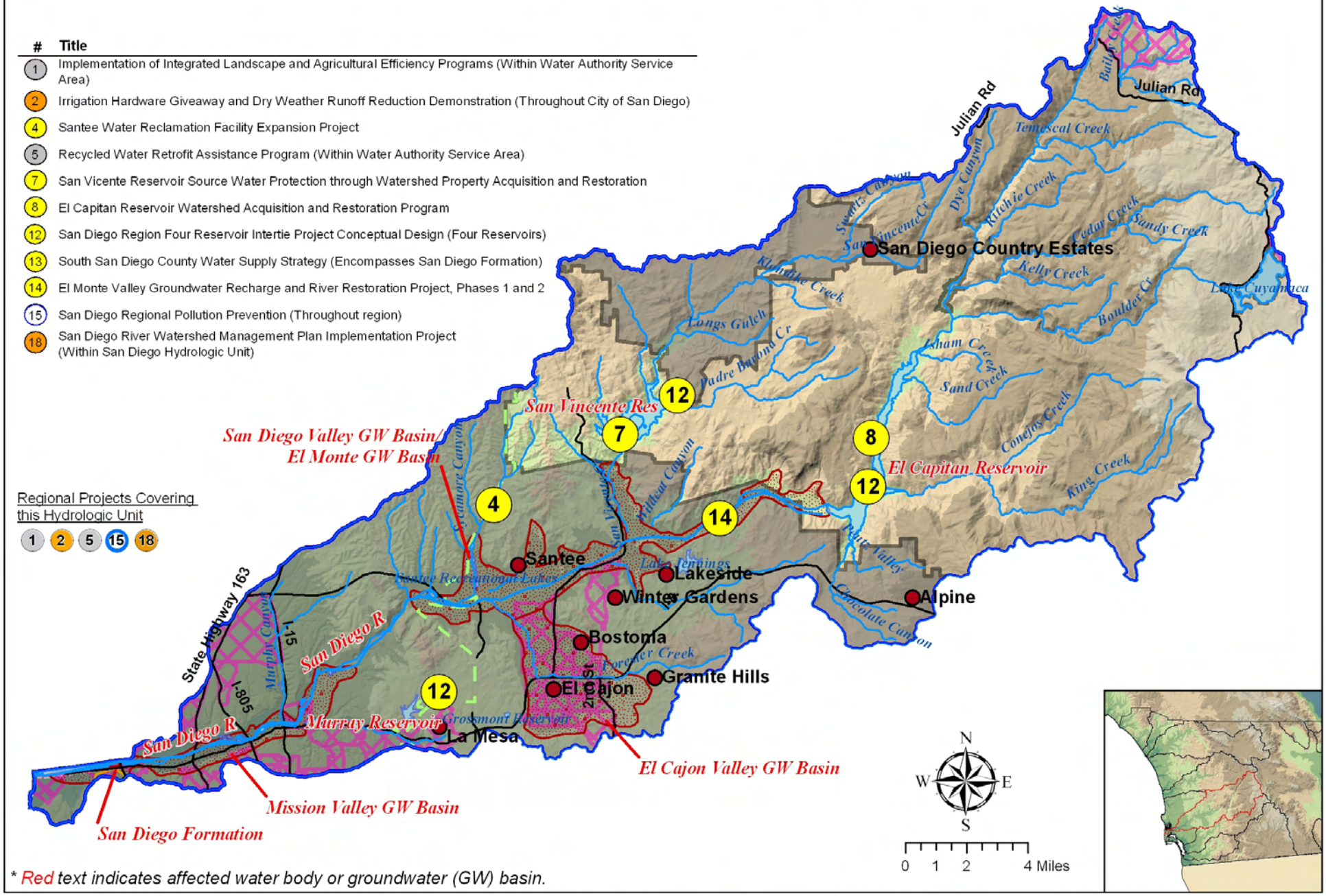
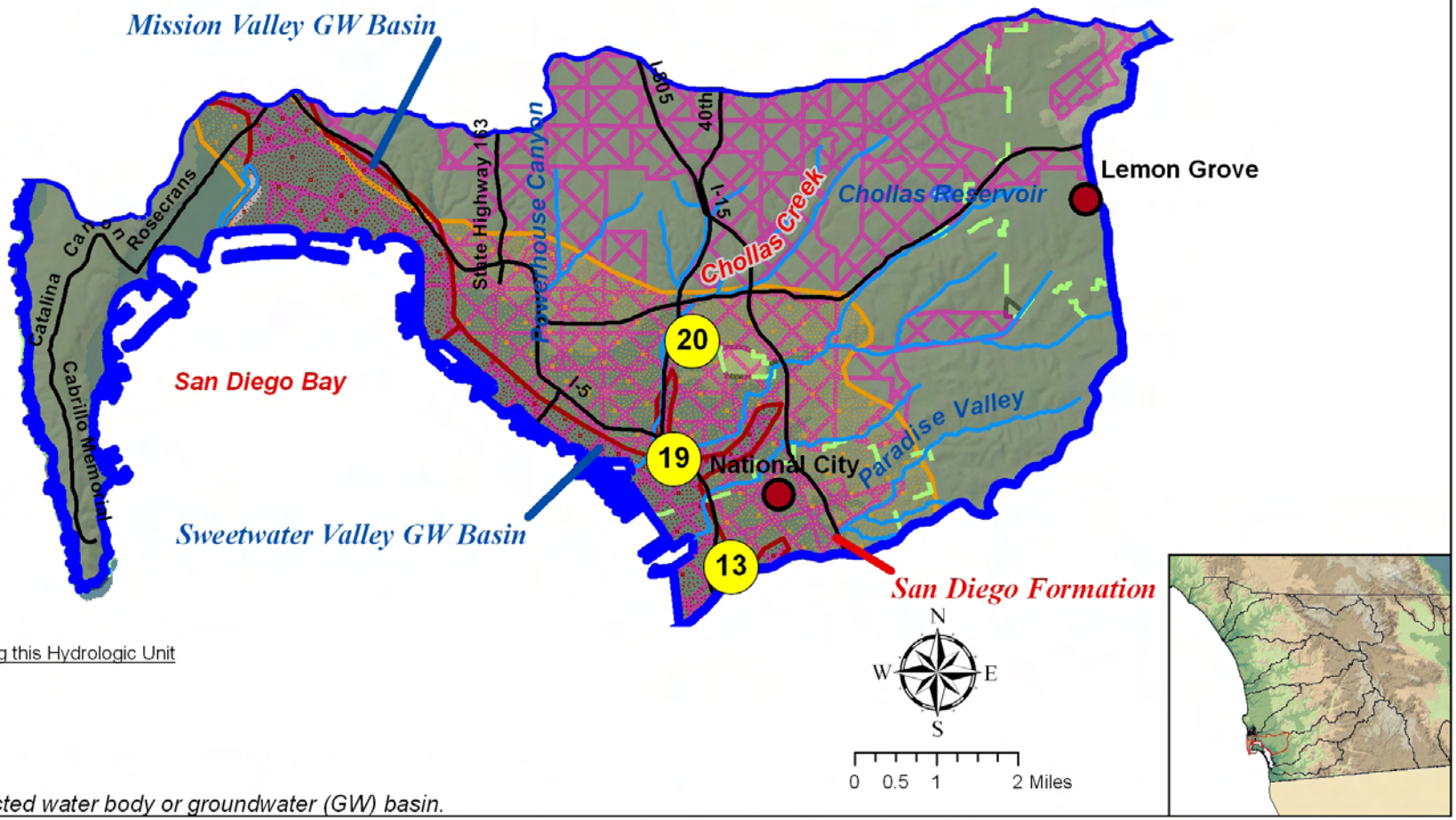


Figure A-8: Proposed Projects in the Pueblo San Diego Hydrologic Unit and Affected Surface and Ground Waters

#	Title
1	Implementation of Integrated Landscape and Agricultural Efficiency Programs (Within Water Authority Service Area)
2	Irrigation Hardware Giveaway and Dry Weather Runoff Reduction Demonstration (Throughout City of San Diego)
5	Recycled Water Retrofit Assistance Program (Within Water Authority Service Area)
13	South San Diego County Water Supply Strategy (Encompasses San Diego Formation)
15	San Diego Regional Pollution Prevention (Throughout region)
19	City of San Diego Green Mall Porous Paving and Infiltration, Phase 1
20	County of San Diego Chollas Creek Runoff Reduction and Groundwater Recharge



Regional Projects Covering this Hydrologic Unit

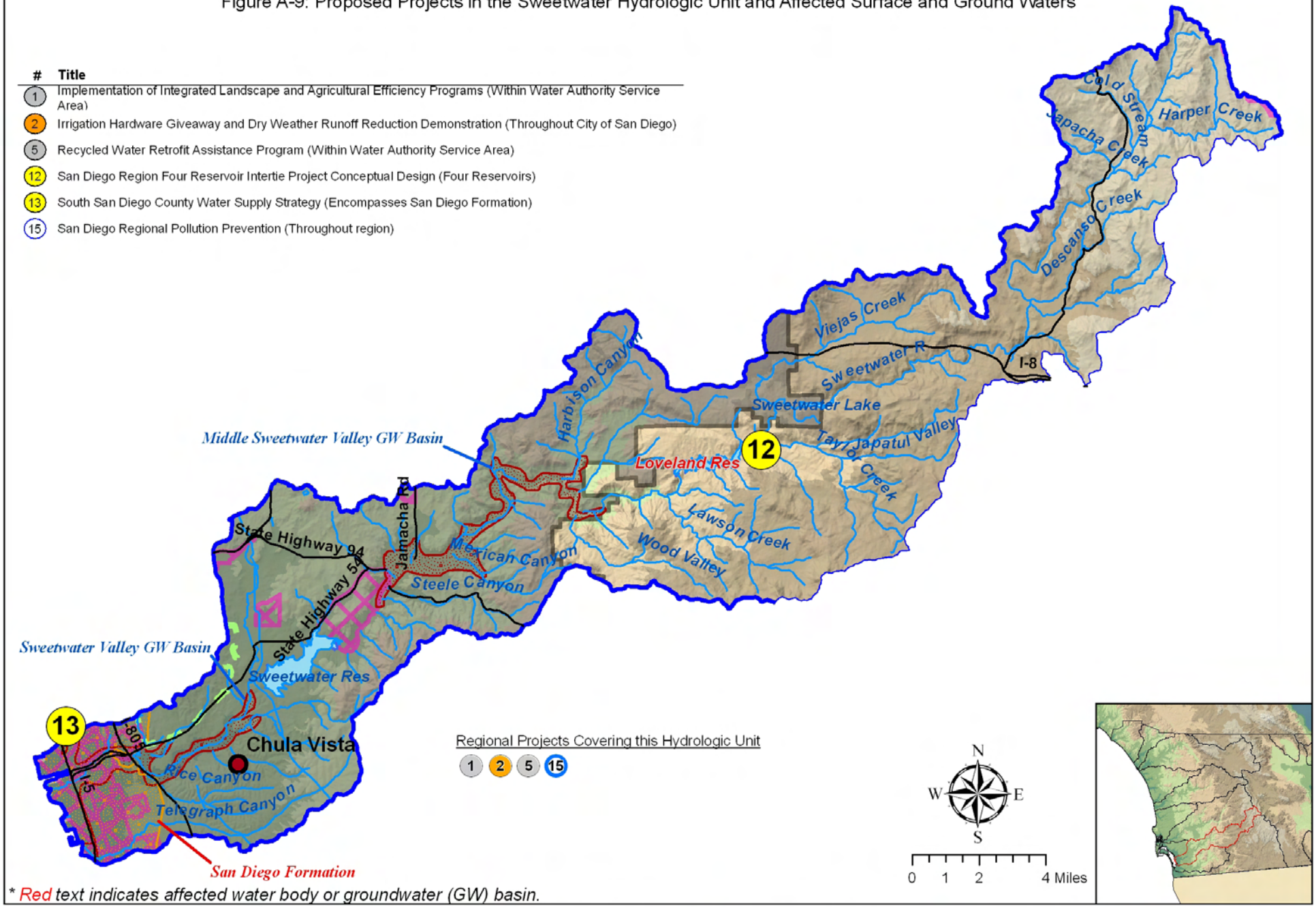
1 2 5 15

* *Red text indicates affected water body or groundwater (GW) basin.*

Point Project | SDCWA Service Area Project | Hydrologic Unit (HU) | Groundwater Basins | City | River | Highway

Area Project (City, HU, etc.) | Regional Project | Water Authority Service Area | Disadvantaged Communities | City of San Diego | Water Body

Figure A-9: Proposed Projects in the Sweetwater Hydrologic Unit and Affected Surface and Ground Waters



#	Title
1	Implementation of Integrated Landscape and Agricultural Efficiency Programs (Within Water Authority Service Area)
2	Irrigation Hardware Giveaway and Dry Weather Runoff Reduction Demonstration (Throughout City of San Diego)
5	Recycled Water Retrofit Assistance Program (Within Water Authority Service Area)
12	San Diego Region Four Reservoir Intertie Project Conceptual Design (Four Reservoirs)
13	South San Diego County Water Supply Strategy (Encompasses San Diego Formation)
15	San Diego Regional Pollution Prevention (Throughout region)

* Red text indicates affected water body or groundwater (GW) basin.

Point Project | SDCWA Service Area Project | Hydrologic Unit (HU) | Groundwater Basins | City | River | Highway

Area Project (City, HU, etc.) | Regional Project | Water Authority Service Area | Disadvantaged Communities | City of San Diego | Water Body