Meeting of the Metro Commission and Metro Wastewater JPA

AGENDA

Thursday, April 5, 2012
12:00 p.m.

9192 Topaz Way (MOC II) Auditorium
San Diego, California

"The Metro JPA's mission is to create an equitable partnership with the San Diego City Council and Mayor on regional wastewater issues. Through stakeholder collaboration, open dialogue, and data analysis, the partnership seeks to ensure fair rates for participating agencies, concern for the environment, and regionally balanced decisions."

Note: Any member of the Public may address the Metro Commission/Metro Wastewater JPA on any Agenda Item. Please complete a Speaker Slip and submit it to the Administrative Assistant or Chairperson prior to the start of the meeting if possible, or in advance of the specific item being called. Comments are limited to three (3) minutes per individual.

Documentation Included		
	1.	ROLL CALL
	2.	PLEDGE OF ALLEGIANCE TO THE FLAG
	3.	PUBLIC COMMENT *Persons speaking during Public Comment may address the Metro Commission/ Metro Wastewater JPA on any subject matter within the jurisdiction of the Metro Commission and/or Metro Wastewater JPA that is not listed as an agenda item. Comments are limited to three (3) minutes. Please complete a Speaker Slip and submit it prior to the start of the meeting.*
X	4.	**ACTION** – CONSIDERATION AND POSSIBLE ACTION TO APPROVE THE MINUTES OF THE REGULAR MEETING OF February 2, 2012 **(Attachment)**
	5.	**ACTION** – RATIFICATION OF APPOINTMENT BY CHAIR OF METRO JPA REPRESENTATIVE TO CITY OF SAN DIEGO FY 2013 STRATEGIC INITIATIVE DEVELOPMENT COMMITTEE – COMMISSIONER NATIVIDAD
X	6.	**ACTION** - CONSIDERATION AND POSSIBLE ACTION TO ADOPT THE METRO JPA STRATEGIC PLAN – FINAL VERSION **(Attachment)**
X	7.	**ACTION** - CONSIDERATION AND POSSIBLE ACTION TO APPROVE THE UPDATE TO THE COST ESTIMATE FOR BACK-UP GENERATORS **(Attachment)**
X	8.	**INFORMATIONAL ITEM:** SAN DIEGO RECYCLED WATER STUDY – FINAL DRAFT **(Attachment)**

Documentation
Included

X 9. **INFORMATIONAL ITEM:** DISCUSSION REGARDING THE PARTICIPATION ON THE SAN DIEGO INTEGRATED REGIONAL WATER MANAGEMENT (IRWM) REGIONAL ADVISORY COMMITTEE) **(Attachment)**

X 10. KEY RELATED ITEMS WE SHOULD BE TRACKING/GETTING UP TO SPEED ON **(Attachment)**

11. METRO TAC UPDATE

X 12. IROC UPDATE
   a. Appointment to IROC of Representative **(Attachment)**

13. FINANCE COMMITTEE
   a. Report from Finance Committee

14. REPORT OF GENERAL COUNSEL

15. PROPOSED AGENDA ITEMS FOR THE NEXT METRO COMMISSION/ METRO WASTEWATER JPA MEETING May 3, 2012

16. METRO COMMISSIONERS' AND JPA BOARD MEMBERS' COMMENTS

17. ADJOURNMENT OF METRO COMMISSION AND METRO WASTEWATER JPA

The Metro Commission and/or Metro Wastewater JPA may take action on any item listed in this Agenda whether or not it is listed "For Action."

Materials provided to the Metro Commission and/or Metro Wastewater JPA related to any open-session item on this agenda are available for public review by contacting L. Peoples at (619) 476-2557 during normal business hours.

In compliance with the
AMERICANS WITH DISABILITIES ACT

The Metro Commission/Metro Wastewater JPA requests individuals who require alternative agenda format or special accommodations to access, attend, and/or participate in the Metro Commission/Metro Wastewater JPA meetings, contact E. Patino at (858) 292.6321, at least forty-eight hours in advance of the meetings.

AGENDA ITEM 4
Attachment

Meeting of the Metro Commission and Metro Wastewater JPA

9192 Topaz Way (MOC II) Auditorium San Diego, California

February 2, 2012 DRAFT Minutes

Chairman Ewin called the meeting to order at 12:02 p.m. A quorum of the Metro Wastewater JPA and Metro Commission was declared, and the following representatives were present:

1. ROLL CALL

Agencies	Representatives		Alternate
City of Chula Vista	Cheryl Cox	X	Scott Tulloch
City of Coronado	Al Ovrom	X	
City of Del Mar	Donald Mosier	X	
City of El Cajon	Bill Wells	X	Dennis Davies
City of Imperial Beach	Ed Spriggs	X	
City of La Mesa	Ernie Ewin	X	
Lemon Grove Sanitation District	Jerry Jones	X	Mike James
City of National City	Louis Natividad	X	Joe Smith
City of Poway	Merrilee Boyack	X	Leah Browder
City of San Diego	Jerry Sanders		Roger Bailey
County of San Diego	Dianne Jacob		Daniel Brogadir
Otay Water District	Jose Lopez	X	David Gonzalez
Padre Dam MWD	Augie Caires	X	Augie Scalzitti
Metro TAC Chair	Greg Humora	X	
IROC	Jim Peugh		(No representative)

Others present: Metro JPA General Counsel Paula de Sousa; Metro JPA Secretary Lori Anne Peoples; Robert Yano – City of Chula Vista; Al Lau and Doug Wilson – Padre Dam Municipal Water District; John Gavares, Lee Ann Jones-Santos, Edgar Patino, Richard Snow and Ann Sasaki - City of San Diego Public Utilities; Karyn Keese of Atkins Global; Jeremy Jung – Deputy City of San Diego Attorney; Michael Uhrhammer – Michael Uhrhammer Communications

2. PLEDGE OF ALLEGIANCE TO THE FLAG

Commissioner Caires led the Pledge.

3. PUBLIC COMMENT

There was no public comment.

4. ACTION - CONSIDERATION AND POSSIBLE ACTION TO APPROVE THE MINUTES OF THE REGULAR MEETING OF JANUARY 5, 2012

ACTION: Upon motion by Commissioner Mosier, seconded by Commissioner Caires, the January 5, 2012 Minutes were approved unanimously.

5. ACTION - CONSIDERATION AND POSSIBLE ACTION TO APPROVE NORTH CITY COGENERATION FACILITY EXPANSION DESIGN AND BUILD CONTRACT AWARD

Guann Hwang, Deputy Director Engineering & Program Management, Public Utilities, City of San Diego provided a brief overview of the item which should generate energy savings and revenue of approximately $360,000 per year.

MetroTAC Chairman Humora stated the TAC had reviewed this item and recommended approval.

ACTION: Upon motion by Commissioner Caires, seconded by Commissioner Natividad, the item was approved with Commissioner Mosier abstaining.

6. ACTION - CONSIDERATION AND POSSIBLE ACTION TO APPROVE PUD/WWTD BACK UP GENERATION PROJECT

Richard Snow, Engineer, City of San Diego Public Utilities Wastewater Treatment Disposal, provided a brief PowerPoint presentation on the project which was the result of the September 8, 2011 power outage. A stand alone portable power supply unit will now be provided at each of the major pump stations. A permanent installation will follow by installing a concrete pad, transformers, underground cabling, automatic transfer switches and 3 days fuel supply at each site etc.

MetroTAC Chairman Humora stated the TAC had reviewed this item and recommended approval.

Commissioner Caires stated that the IROC had also reviewed this project and approved it as an essential project and voted unanimously to send it on.

ACTION: Upon motion by Vice Chairman Jones, seconded by Commissioner Natividad, the item was approved unanimously.

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7. METRO JPA STRATEGIC PLAN

MetroTAC Chairman Humora stated the TAC had reviewed the plan at their last meeting and would like to take a little more time and go into a little more detail. They think it is a fantastic document containing a wealth of information, however have some concerns and reservations regarding some of the specifics that are included and the potential resources that will be required, specific the language which should perhaps be more general than what do we want to do with the specific plan as a lot of the items are out of the control of the Metro JPA and rest with the City of San Diego. He then requested that Mr. Uhrhammer attend the next MetroTAC meeting and in the interim receive specific comments from the JPA that they would like the TAC to focus on. The TAC will then report back to the Metro JPA prior to the adoption of the Plan. They would also like the City of San Diego to provide input as well and will provide a redline version in the future for ease in review.

8. REQUEST FOR PARTICIPATION BY METRO COMMISSION/METRO WASTEWATER JPA IN CITY OF SAN DIEGO FY 2013 STRATEGIC INITIATIVE DEVELOPMENT PROCESS

John Gavares, City of San Diego Public Utilities Department Assistant with Strategic Plan initiative, requested a representative from the Metro JPA be appointed to participate in their four one-half day sessions currently scheduled for April 6, May 4, June 6 and June 29 from 8:30 to 1:30 at Lake Murray. He promised the sessions to be interactive dialogue and data rich, there will be no homework. In closing, he thanked last year's participants, Augie Caires from the Metro JPA and Roberto Yano from the MetroTAC.

9. INFORMATION – CITY OF SAN DIEGO PUBLIC UTILITIES DEPARTMENT MANAGEMENT UPDATED ORGANIZATION CHART

Ann Sasaki, Assistant Director, City of San Diego Public Utilities, stated that it had been previously noted that the City of San Diego had several employees who had left the City or moved up into permanent positions. Those persons the Metro JPA would be familiar with were that Chris McKinney, Deputy Director Treatment and Disposal had left to go to the City of Escondido and Lee Ann Jones-Santos had been promoted to Deputy Director of Finance and Information Technology.

10. KEY RELATED ITEMS WE SHOULD BE TRACKING/GETTING UP TO SPEED ON

Chairman Ewin stated that he felt this would now defer to the Strategic Plan efforts and can tie back into MetroTAC and the items they are tracking. He then requested MetroTAC Chair Humora revise this item to coincide with the Strategic Plan.

11. METRO TAC UPDATE

MetroTAC Chair Humora stated that in addition to the items previously discussed, the TAC was working with the City of San Diego on their CIP and Financing Plans to look at rates; record keeping, records retention and they are working on looking at who has records and to implement a source (website) for new members. The City of San Diego is looking at adjusting some of the sampling locations for sewer strength and flow and will work with TAC on same.

12. IROC UPDATE

Commissioner Caires stated that there was some mention of refunding and the City of San Diego is refunding some $230 million of bonds, mostly water bonds, some is Metro Wastewater and to the extent that is, we will participate in that savings which will be approximately $33 million over the life of the bond issues; received a report on the City of San Diego sewer spills which had been a serious problem in the past (33 in 2011 vs. 41 in 2010) they have tackled this issue in a big way and should be congratulated; received a presentation on the CIP streamlining program which is intended to streamline the process and reduce overall project timeframes and costs; received a report on the back up generators; the 2011 IROC report is on a fast track to be completed shortly and Commissioner Caires requested copies be forwarded to the Metro JPA and MetroTAC.

13. FINANCE COMMITTEE

a. Report from Finance Committee

Finance Committee Chair Ovrom stated the Finance Committee had not met and therefore did not have a report.

14. REPORT OF GENERAL COUNSEL

General Counsel de Sousa stated she wanted to make sure the PA staff was aware of new legislation that restricts the amount of retention that can be retained and progress payments made on Public Works projects (reduced from 10% to 5% unless specific findings are made). This will have adverse effects on surety bonding as the surety companies really appreciated public agencies having healthy amounts of retentions in the event the contractor defaulted. Also, what used to be called the Non-Collusion Affidavit is now called the Non-Collusion Declaration and PA contract documents need to be updated if they have not already.

15. PROPOSED AGENDA ITEMS FOR THE NEXT METRO COMMISSION/METRO WASTEWATER JPA MEETING MARCH 1, 2012

Chair Ewin noted that unless there were items that could not wait until April, the March 1, 2012 meeting would be cancelled.

16. METRO COMMISSIONERS' AND JPA BOARD MEMBERS' COMMENTS

Commissioner Caires introduced Jim Peasley, retired Chief Engineer of the Otay Water District who was elected to the Padre Dam Municipal Water District Board in 2010 and will be taking Commissioner Caires place as the Padre Dam Municipal Water District Representative effective April 1, 2012.

17. ADJOURNMENT

At 12:50 p.m., there being no further business, Chairman Ewin declared the meeting adjourned.

_____
Recording Secretary

AGENDA ITEM 6
Attachment

AGENDA ITEM 7
Attachment

Metro JPA/TAC
PUD/WWTD Backup Generation Project
Revised Cost Estimate for Backup Generators

	Original Estimate	Revised Estimate
Purchase of the generators, transformers, and required cables	$6,100,000	$7,178,816
Permanent Installation of the generators	$4,600,000	$6,322,387
Admininstration, engineering, land acquisition, permitting	$450,000	$473,147
Contingency for APCD emission control compliance		$3,771,250
Total	**$11,150,000**	**$17,745,600**

Muni	$5,717,744	$9,377,657
Metro	$5,433,456	**$8,367,943**
Metro JPA share (33.5%)	**$1,820,208**	**$2,803,261**

METRO JPA/TAC
Staff Report

Subject Title:
PUD/ WWTD Backup Generation Project – UPDATE OF COST ESTIMATE

Requested Action:
Approval to purchase and permanently install 7- 2MW and one 400kw generators for emergency backup power at 6 PUD WWTD facilities.

Recommendations:

Metro TAC:	Approved by Metro TAC on March 21, 2012
IROC:	
Prior Actions: (Committee/Commission, Date, Result)	

Fiscal Impact:

Is this projected budgeted? Yes ___ No _X__	
Cost breakdown between Metro & Muni:	$ 8,367,943 for Metro $ 9,377,657 for Muni
Financial impact of this issue on the Metro JPA:	$2,803,261, (33.5% of Metro Cost)

Capital Improvement Program:

New Project? Yes _ __ No X

Existing Project? Yes _X__ No ___ upgrade/addition _X__ change ___

Comments/Analysis:
This is an update to the cost estimate for this project. Previously the project was estimated at $11,150,000. The cost estimate has been revised to $17,745,600 This reflects the actual proposal from the National Joint Powers Alliance for the purchase of the generators and the addition of $ 3,771,250 in contingency to cover the possibility that these generators will need additional emission controls to make them compliant with APCD requirements for stationary generators. The 400 kw generator for the EMTS laboratory that was part of the generator purchase in the previous action will now be included in the design build contract.

Previous TAC/JPA Action: The original project was approved by the Metro TAC on January 18, 2012 and the Metro Commission on February 2, 2012.

Additional/Future Action:

City Council Action:

METRO JPA/TAC
Staff Report

Subject Title:
PUD/ WWTD Backup Generation Project

Requested Action:
Approval to purchase and permanently install 7- 2MW and one 400kw generators for emergency backup power at 6 PUD WWTD facilities.

Recommendations:

Metro TAC:	
IROC:	
Prior Actions: (Committee/Commission, Date, Result)	

Fiscal Impact:

Is this projected budgeted? Yes ___ No _X__	
Cost breakdown between Metro & Muni:	$5,433,456 for Metro $5,717,744 for Muni
Financial impact of this issue on the Metro JPA:	$1,820,208 (33.5% of Metro Cost)

Capital Improvement Program:

New Project? Yes _X__ No ___	
Existing Project? Yes ___ No ___ upgrade/addition _X__ change ___	

Comments/Analysis:
Funding for this project will come out of the Dedicated Reserve from Efficiency and Savings fund,

Previous TAC/JPA Action:

Additional/Future Action:

City Council Action:

EXECUTIVE SUMMARY:

BACKGROUND

On September 8, 2011, San Diego County suffered a regional power outage. Electrical power supplied by San Diego Gas and Electric (SDG&E) to the Public Utilities Department's (Department) facilities was out for approximately 4 to 12 hours, depending on the location. During this period, the Department incurred two sewer spills related to wastewater pump station shutdowns.

The wastewater system operates a total of 82 wastewater pump stations. Of these pump stations 60 pump stations or 73% have redundant electrical power supplies onsite. Fifty-four pump stations have onsite generators, five have dual SDG&E electrical feeds, and one has two natural gas engine driven pumps. Of the pump stations without redundant power feeds; eight are comfort stations that can be closed, eight overflow to gravity sewers, and six are low flow and can be served by portable generators.

Given the events of September 8, the Department has reviewed all facilities that rely on dual SDG&E electrical feeds for redundancy. Although this method of providing reliability is acceptable per the U.S. Environmental Protection Agency's technical bulletin titled "Design Criteria for Mechanical, Electrical, and Fluid System and Component Reliability", the Department had to consider that probability of losing both electrical feeds due to an extended power outage, earthquake, fire or other incident that could take out multiple substations or the power lines coming into the stations. Although the probability of losing both electrical feeds is still quite low, depending on the length of the power outage, the consequences from a spill could be very high given the amount of flow that is processed through these pump stations.

Therefore to provide added reliability to the wastewater system, the Department is recommending the installation of diesel backup generators at four of the five sewer pump stations with dual feeds, these include Sewer Pump Stations 1, 64, 65 and Penasquitos, the North City Water Reclamation Plant and an upgrade to the generator at the Environmental Monitoring and Technical Services Laboratory. The generator at the Laboratory will be upgraded from a 250 kW to 400 kW generator to ensure important biological specimens are not at risk of being lost during future extended outages.

In order to expedite the installation of the generators the Department is recommending the purchase of seven (7) identical 2,000 kW and one (1) 400 kW portable diesel fueled emergency generators. These generators will be installed as follows

Pump Station 1	Two 2,000 kW portable diesel generators
Pump Station 64	Two 2,000 kW portable diesel generators
Pump Station 65	One 2,000 kW portable diesel generator
Penasquitos Pump Station	One 2,000 kW portable diesel generator
North City Water Reclamation Plant	One 2,000 kW portable diesel generator
Environmental Monitoring and Technical Services Laboratory	One 400 kW portable diesel generator

The City of San Diego is a member of the National Joint Powers Alliance® (NJPA). This is a governmental agency that leverages the combined national purchasing power of participating government and education agencies to reduce the cost of purchased equipment. This process, which included issuance of an invitation to bid, advertising, timely and responsive submission, bid opening, bid evaluation, and award, resulted in a cooperative purchasing contract which meets all of the City of San Diego's competitive bidding requirements as outlined in Article 2, Division 30 of the City of San Diego Municipal code. The Department will purchase the generators through this NJPA. Hawthorne Power Systems is the San Diego area Caterpillar dealer under the NJPA.

Under a separate procurement the Department will select a design build contractor to perform all site development work and place the generators and transformers on concrete pads and provide for their permanent connection to the facilities. Additionally the Department will need to procure all necessary permits and any additional land and easements as may be required.

The total estimated cost of this project is $11,150,000. The total cost includes, engineering, procurement, installation, permitting, land acquisition, inspection, and contingency. The installation and permitting of the permanent portable generators is expected to be completed by July 2013. The funds for this project will come out of the Dedicated Reserve from Efficiency and Savings.

Prior to the install of the permanent generators, the Department is planning to lease seven (7) portable generators to have onsite in case of emergencies prior to the installation of the permanent generators. The cost for the leased generators is estimated to be $800,000 for a 6/month lease. The leased generators are expected to arrive on site by March of this year. The leased generators will be funded out of the operating budget.

AGENDA ITEM 8
Attachment

DRAFT

SAN DIEGO RECYCLED WATER STUDY – EXECUTIVE SUMMARY

Prepared for
City of San Diego, Public Utilities Department
March 2012

Project No. 137921

This is a draft and is not intended to be a final representation
of the work done or recommendations made by Brown and Caldwell.
It should not be relied upon; consult the final report.

Preface

This Recycled Water Study is the culmination of a two year process to develop a new vision for water reuse in the San Diego region. The Study's alternatives were developed through a participatory process involving work sessions and Stakeholder meetings. The combined contributions of the Stakeholders were invaluable in developing alternatives that considered diverse perspectives, concepts and approaches. This page recognizes the efforts of the Stakeholder participants that contributed substantially to this effort.

Bruce Bell, P.E.
Independent Technical Consultant

Jim Peugh
Independent Rates Oversight Committee (IROC)

Marco Gonzalez
Coastal Environmental Rights Foundation

Toby Roy
San Diego County Water Authority

Dawn Guendert
Surfrider Foundation, San Diego Chapter

Jill Witkowski
San Diego Coastkeeper

Scott Huth
Metropolitan Wastewater Joint Powers Authority

EXECUTIVE SUMMARY

Study Results and Conclusions

Overall, the Integrated Reuse Alternatives presented achieve the Study's goals, provide a bold vision for future water reuse in the Metro Service Area, and provide savings to ratepayers. The Study's Stakeholders provided valuable opinions and diverse viewpoints that added value to the process and the alternatives developed. While water reuse has been evolving in San Diego over the past few decades, the region's master plans have helped guide decision makers with a focus on making good investments, while still being flexible to adapt to future changes. This Study endeavors to continue this tradition and be looked upon as a milestone that helped provide long-term water sustainability to the San Diego region.

What are the Primary Study Results?

- **Alternatives.** Five Integrated Reuse Alternatives were developed based on an extensive, interactive Stakeholder process. Each Alternative includes 83 mgd of new indirect potable reuse and 3 mgd of new non-potable recycled (in addition to 4 mgd of already planned non-potable reuse).
- **Costs.** The Net Cost results for the Alternatives in this Study represent the costs that should be compared to other water sources – particularly imported untreated water. The average Net Costs are:
  - Net Cost assuming direct wastewater savings = $1,200/AF
  - Net Cost assuming above plus salt credit = $1,100/AF
  - Net Cost assuming above plus indirect wastewater savings = $700/AF

What are the Primary Study Conclusions?

- **Achieves Favorable Water Costs.** The reuse costs above are comparable to existing untreated water delivery costs of $904/AF, and are projected to be more economical than future water costs. Imported water costs have risen substantially in the past decade and this trend is projected to continue into the foreseeable future. Therefore, this new water supply will provide safe, affordable water for existing and future generations of San Diegans.
- **Provides Reliability and Local Control.** The new reuse supply reduces the region's reliance on imported water and increases local water supply reliability. Reliable water also promotes a strong San Diego economy and enhances our quality of life. Local reuse is considered an uninterruptable water source – an important trait since our imported water supply crosses great distances and major earthquake faults.
- **Enhances Sustainability.** The reuse solutions are more sustainable and environmentally friendly. They reduce importing water from Northern California and the Colorado River, lowering energy usage and our overall carbon footprint.
- **Improves Water Quality.** The reuse solutions produce additional water quality benefits such as significant regional salinity reductions. Ratepayers will see reduced salinity in the water. Their appliances, water heaters and fixtures will last longer.
- **Empowers Long-term Cost Control.** The solutions increase the City and Participating Agencies' ability to control long-term water and wastewater costs by reducing liability for pending issues such as the California Bay-Delta fix and costly wastewater treatment upgrades.
- **Support.** The solutions are supported by key rate oversight and environmental stakeholders.

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Background

In August 2009, the City of San Diego (City), along with key stakeholders, initiated the Recycled Water Study (Study) as part of a Cooperative Agreement (included in Appendix A). The culmination of the Study is this Recycled Water Study Draft Report (Draft Report), which is intended to serve as a guidance document in helping policy leaders make the important decisions ahead regarding water reuse and the region's water and wastewater infrastructure.

Why Is Water Reuse Important to San Diego?

Water is important to the health, safety, and quality of life of people living in the San Diego region. Historically, the region's 3.1 million residents have received a majority of their water supply from imported sources including the California Bay-Delta (Bay-Delta) and the Colorado River; conveyed via the California Aqueduct and the Colorado River Aqueduct respectively. Currently, 80 percent of the San Diego region's water supply is imported. Local supplies and conservation account for the remaining 20 percent of the total supply. The region's reliance on imported water causes San Diego's water supply to be vulnerable to impacts from shortages and susceptible to price increases. In 2008, water supplied from the Bay Delta was restricted to protect endangered fish species. In addition, drought conditions in Southern California further impacted water supply availability. With the region's population projected to reach 3.9 million people by 2030, demands will increase and strain these limited water supplies. Water reuse has been proven as a safe, reliable, locally controlled and sustainable option for the region.

***Water Reuse in San Diego**. Water reuse is an important component in San Diego's water supply portfolio.*

What Other Drivers Affected this Study?

In 2010, the United States (U.S.) Environmental Protection Agency (EPA) allowed the City to continue to operate the Point Loma Wastewater Treatment Plant (Point Loma Plant) as a chemically enhanced primary treatment facility under a modification to its NPDES Permit. The 2010 permit allows the City to operate in this fashion for five years until 2015, when the permit must be renewed. Members of the environmental community (San Diego Coastkeeper and Surfrider Foundation, San Diego Chapter) have traditionally opposed past permit modification issuance and have advocated for converting the Point Loma Plant to full secondary treatment to reduce solids loading into the ocean. However, during the 2008-2010 permit modification process, and in lieu of such opposition, the environmental community entered into a Cooperative Agreement with the City to conduct this Recycled Water Study. In accordance with the Cooperative Agreement, both of these organizations provided their support to the U.S. EPA's decision to grant the modification. The City's responsibility per the Cooperative Agreement is to execute this Study, which is also consistent with the City's long-term goals and objectives.

Water reuse programs provide valuable water supplies by using resources that otherwise are sent to the ocean. The decisions to invest in a water reuse program, or alternative large-scale wastewater system upgrades, will affect the rates, reliability, and regional assets for decades. The fundamental focus of this study was to develop water reuse alternatives and then weigh the alternatives against other options – with particular focus on the water supply benefits and the cost savings through reduced wastewater systems operations and improvements.

What Are Key Terms Used in this Study?

The following key terms are defined due to their frequent use and their importance in understanding the concepts involved in this Study. A more comprehensive glossary is included in the Draft Report.

Water Reuse: Water reuse is a broad term used to describe the process of converting wastewater to a valuable water resource through treatment processes. Water reuse includes non-potable recycled water development and indirect potable reuse involving integration with drinking water supplies.

Non-potable Recycled Water: Synonymous with Non-potable Reclaimed Water, State of California Title 22 Water, and tertiary treated water. Non-potable recycled water is a form of water reuse that includes primary, secondary and tertiary treatment to produce water suitable for a variety of applications, most notably for landscaping irrigation and industrial uses. Further treatment is required for integration with drinking water systems – see indirect potable reuse.

Purified, Advanced Purified, or Advanced Treated Water: Purified, advanced purified, or advanced treated water undergoes advanced treatment processes to convert non-potable recycled water to a highly purified water quality, suitable for augmentation to an untreated drinking water source. Advanced purified water is currently used for indirect potable reuse projects.

Indirect Potable Reuse: Indirect potable reuse is the planned use of advanced purified water for replenishment of a groundwater basin or an aquifer that has been designated as a source of water supply for a public water system, or the planned placement of recycled water into a surface water reservoir used as a source of domestic drinking water supply.

Direct Potable Reuse: The planned introduction of advanced purified water either directly into a public water system, or into an untreated water supply, immediately upstream of a water treatment plant.

Wastewater: Wastewater is generally used to describe sewage that comes from homes, industry or businesses. Wastewater is collected and treated at wastewater treatment plants. In San Diego, some wastewater is currently reclaimed as non-potable recycled water; however, the majority is treated and discharged to the ocean. Wastewater is needed for water reuse. Wastewater does not include stormwater in San Diego. Stormwater is collected in separate systems and typically not treated before discharge to streams and the ocean.

Uninterruptible Water Supply: Indirect potable reuse water is considered uninterruptible because it is not influenced by drought, water rights, or other supply interruptions such as the decision to decrease Southern California water supply because of endangered species in the California Bay-Delta.

Untreated Water (sometimes referred to as Raw Water): Water that is collected and stored in local surface water reservoirs and groundwater basins prior to treatment at a potable (drinking) water treatment plant. Untreated water examples include Colorado River water, water from the California Bay-Delta, and runoff from local rainfall.

Potable or Drinking Water: Potable water is water that meets the EPA's Safe Water Drinking Act and California Water Code requirements. Residents and businesses receive potable water at their water meter connection, and its use is unrestricted.

What Is Included in the Study?

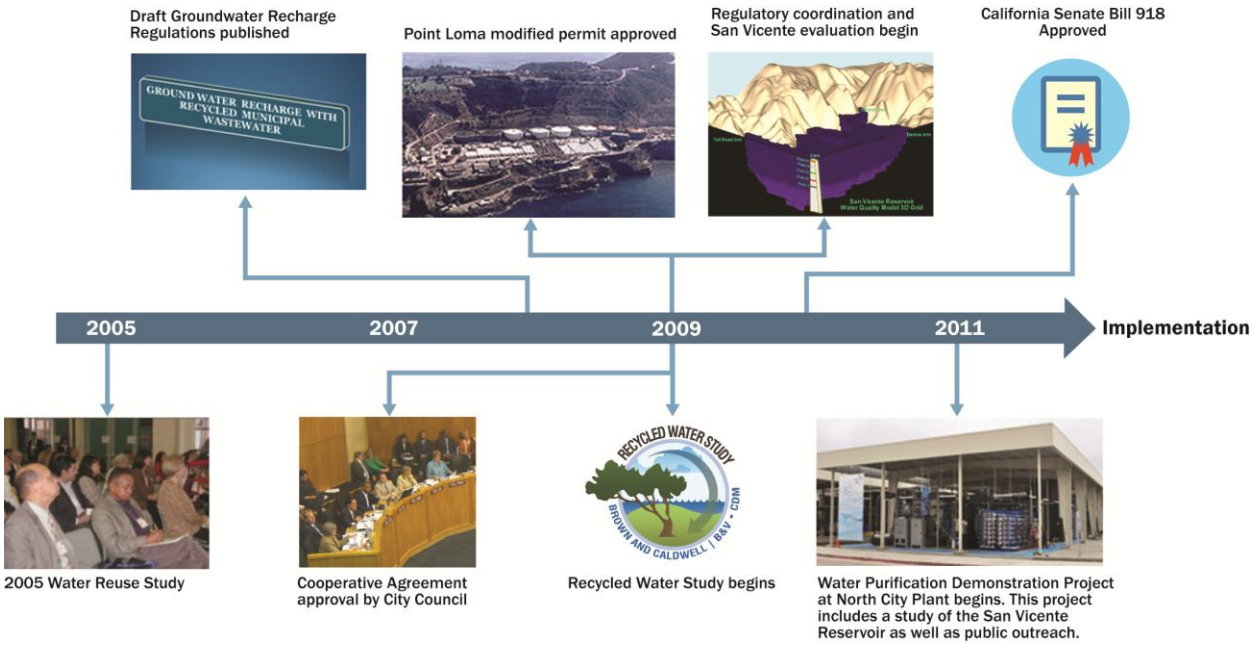
The following provides an overview of the Chapters and Appendices in the Study.

Report Chapters
Chapter 1 - Study Overview. Provides background and objectives of the San Diego Recycled Water Study, as well as describes the Study process and defines participating Stakeholders and Team Members, Study components, and important terminology used throughout the Report.
Chapter 2 – Water Reuse Need and Related Activities. Presents the dynamic water supply conditions in San Diego and the opportunity to implement water reuse as a local supply through related key studies and activities such as the 2005 Water Reuse Study and 2010 Recycled Water Master Plan Update.
Chapter 3 – Study Process and Evaluation Approach. Describes, in detail, the elements of the participatory Study process and defines the guidelines and criteria against which the potential recycled water opportunities were assessed.
Chapter 4 – Key Facilities, Water Demands and Wastewater Flows. Summarizes the principal elements of San Diego's current water, wastewater, and recycled water infrastructure systems that impact water reuse planning, and provides the related demands and flows from these systems.
Chapter 5 – Non-potable Recycled Water Opportunities. Describes the technical basis and foundation for developing the non-potable recycled water opportunities that were considered in the Study, such as existing and future demands, seasonal considerations, and locations and capacities of existing water recycling facilities.
Chapter 6 – Indirect Potable Reuse Opportunities. Describes the technical basis and foundation for developing the indirect potable reuse opportunities that were considered in the Study, including reservoir augmentation and groundwater recharge, and other potential benefits of indirect potable reuse.
Chapter 7 – Area Concepts. Provides detailed, comparable options, including both non-potable recycled water opportunities and indirect potable reuse opportunities, to develop comprehensive water reuse plans within three key Study areas.
Chapter 8 – Integrated Reuse Alternatives. Evaluates the water reuse concepts presented in Chapter 7 based on Study goals, as well as provides a comparable financial evaluation for key alternatives, including a description of the financial model and its components.

Supporting Information
Glossary. Defines important terminology and acronyms used throughout the Report.
Appendix A – Cooperative Agreement. Provides a copy of the signed agreement between the City of San Diego, the San Diego Coastkeeper, and the San Diego Chapter of the Surfrider Foundation to conduct a Recycled Water Study.
Appendix B – Point Loma Plant Conclusions. Provides conclusions and data on the Point Loma Plant based on the results of the Study, including an allocation of flows and discussion on chemically enhanced primary treatment.
Appendix C – Summary of Regulations That Affect Water, Wastewater and Recycled Water. Provides an overview of the key regulatory considerations for water, recycled water and wastewater, and includes anticipated regulatory criteria related to indirect potable reuse sizing.
Appendix D – California Senate Bill 918. Provides background on State of California Department of Public Health requirements for developing uniform criteria for groundwater recharge, reservoir augmentation and direct potable reuse.
Appendix E –Siting Analysis Documents. Provides siting information on the Harbor Drive, Camino del Rio and Morena sites, City ownership, and an alternatives analysis performed by the City.
Appendix F – Conceptual Cost Estimates for the Integrated Reuse Alternatives. Provides infrastructure sizing and costs for each Integrated Reuse Alternative component.
Appendix G – National Water Resource Institute (NWRI) White Paper on Direct Potable Reuse
Appendix H: Recycled Water Study Cost Methodology FAQ Document – An informative, frequently asked question (FAQ) style document on how the direct and indirect wastewater cost reductions/credits/savings were calculated
Appendix I – Participating Agency White Paper on Reuse Concepts
Appendix J – Comment/Response Form
Appendix K – Conceptual Metro System Flow Schematics. Graphics showing the reuse alternatives and accounting of flows throughout the system.

How Does This Study Fit into Other On-going Efforts?

The overarching objective of this Study is to develop and clearly present integrated reuse alternatives that the public and policy-makers can review and select from to guide the future of the reuse program located within the Metropolitan Sewerage System Service Area. The alternatives were evaluated to meet City, Participating Agency, and Project Stakeholder reuse goals through a 2035 planning horizon. This Study is one part of a comprehensive regional program to evaluate and develop water reuse in San Diego.



Who Participated in the Study?

The Stakeholders for this Project are comprised of the San Diego Coastkeeper, the San Diego Chapter of the Surfrider Foundation, and the Participating Agencies of the Metropolitan Wastewater Joint Power Authority (Metro JPA), who have capacity rights in the Metropolitan Sewerage System pursuant to the provisions of the 1998 *Regional Wastewater Disposal Agreement Between the City of San Diego and the Participating Agencies in the Metropolitan Sewerage System*. The San Diego County Water Authority (SDCWA), the agency that has primary responsibility for water supply planning efforts, and the Independent Rates Oversight Committee are also Stakeholders in the Study. The primary Project Team consisted of City staff from the Public Utilities Department and a consulting team from Brown and Caldwell, Black & Veatch, and CDM.

PROJECT STAKEHOLDERS

Environmental Groups
- San Diego Coastkeeper
- Surfrider Foundation, San Diego Chapter

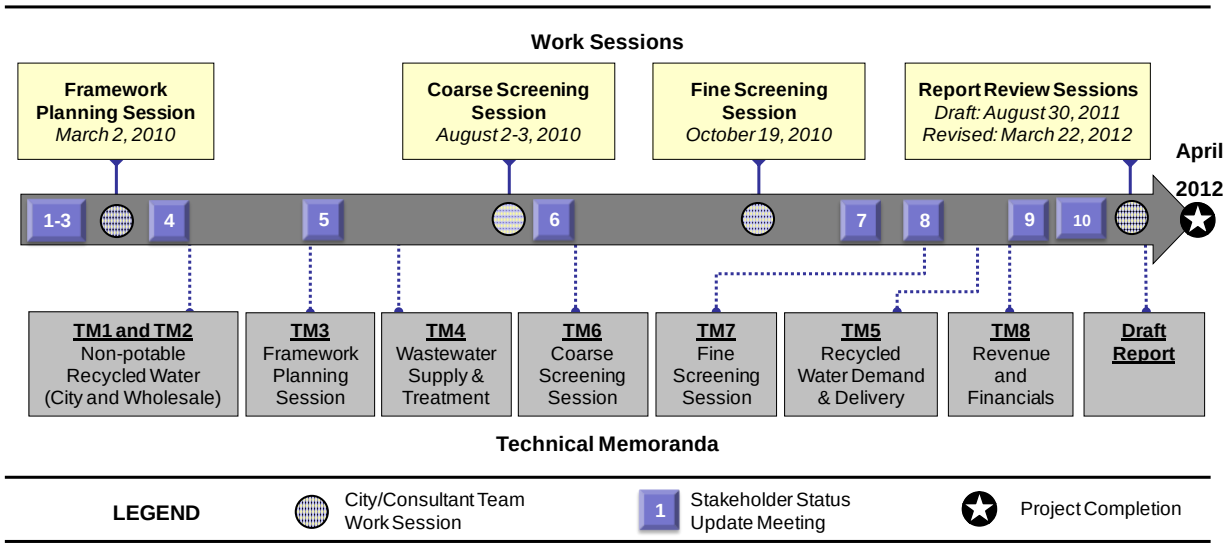
Oversight Groups
- Independent Rates Oversight Committee (IROC)

Regional Water Supplies
- San Diego County Water Authority (SDCWA)

Participating Agency Members
- City of Chula Vista
- City of Coronado
- City of Del Mar
- City of El Cajon
- City of Imperial Beach
- City of La Mesa
- City of National City
- City of Poway
- Lemon Grove Sanitation District
- Otay Water District
- Padre Dam Municipal Water District
- San Diego County Sanitation District
  - Alpine Sanitation District
  - Lakeside Sanitation District
  - Spring Valley Sanitation District
  - Winter Gardens Sewer Maintenance District)

What Was the Study Process?

The Study includes a number of technical evaluations and coordination steps to identify and evaluate reuse alternatives within the City as well as areas served by the Participating Agencies. Throughout the Study, regular Stakeholder Status Update meetings were held to present progress and to receive input and feedback on the activities. Eight technical memoranda were developed to document information.



How Were Alternatives Developed?

Alternatives were developed through a participatory process. Stakeholder Status Update meetings and four work sessions were used to frame, develop, refine, and communicate the Alternatives included in this Study.

Work Sessions. *The Coarse Screening and Fine Screening Sessions included presentations, team exercises, and facilitated discussions. The sessions leveraged the group's creativity and diverse perspectives to improve the quality of the Alternatives presented in the Study.*

What Issues and Opportunities Helped Determine the Water Reuse Target?

Four Measures that Established the Water Reuse Target:

- **Measure 1: Value of Water.** Reliable water supplies are needed for San Diego.
- **Measure 2: Water Quality.** Reuse can improve the ocean water quality. Indirect potable reuse can significantly reduce salinity levels benefiting ratepayers.
- **Measure 3: Project Size vs. Costs.** Water reuse targets should be based on project sizing that considers costs and regulatory limits.
- **Measure 4: Reuse Program Induced Savings.** The water reuse target sizing should consider reduced capital and operating costs in the drinking water and wastewater systems.

The water reuse target, similar to past efforts, was based on Study goals, Stakeholders' input, and findings from preliminary technical analyses. The goal of the 2005 Water Reuse Study was to maximize the available capacities at the North City and South Bay Plants, which coincided with a target of approximately 20 mgd for future water reuse projects. This 2012 Study was initiated with a broader basis: to consider the water reuse goal to be limited *only* by the amount of wastewater available in the Metro Service Area. This is a more comprehensive goal, providing the potential to reuse ten times more flow than previous targets, with approximately 200 mgd projected to be available in the Metro Service Area on an average dry weather year in 2035. During the Study, the following four measures evolved as primary drivers for establishing the water reuse target:

Measure 1: Value of Water. Multiple forces are driving water reuse in Southern California. Water reuse projects produce high-quality, reliable, uninterruptible local water to the region, serving the same purpose as imported untreated water. Imported untreated water rates will continue to rise, and conveyance system improvements will be needed to deliver imported water to the region's water treatment plants - unless the supply is supplemented with new local supplies. Indirect potable reuse can fulfill this need and, over time, do so at lower costs—especially when reduced capital and operating costs at the Point Loma Plant are considered. Savings would likely increase further if the regulatory framework for Direct Potable Reuse is finalized, allowing direct delivery to the region's potable water treatment plants. Based on these considerations, the reuse target for this study, especially the indirect potable reuse portion, should be maximized.

Measure 2: Water Quality Benefits. Two water quality considerations were taken into account in establishing a water reuse target: ocean water quality and imported water salinity. Both are important, and both would be significantly improved through implementation of the water reuse projects identified in this Study. For example, blending advanced purified water with imported water in San Vicente Reservoir and Otay Lakes could reduce salinity levels by 50 percent. On land, the reservoirs that receive the advanced purified water, the residents that use the water, and the soil that is irrigated with the water would benefit from having water with up to half the current salinity levels. Residents would benefit from softer water and extended lives of household appliances such as water heaters, dishwashers, clothes washers and faucets. Ocean water quality would also improve by removing and diverting solids to the Metropolitan Biosolids Center. Based on these considerations, the water reuse target for this Study should be maximized.

Measure 3: Beneficial Project Size versus Costs. Project sizing was considered a limiting factor in developing the water reuse target. Non-potable recycled water projects, while beneficial for targeted areas (such as Otay Water District's planned system expansion), did not have enough demand potential to use a substantial portion of the available wastewater. It also became apparent that developing indirect potable reuse projects to use all wastewater available in the Metro System would not be practical or provide the right balance of costs and benefits. Therefore, the water reuse target based on project constraints and permit considerations was approximately 80 to 120 mgd (upper end based on estimated flow limits to the San Vicente Reservoir and the South Bay Spring Valley No. 8 Diversion total).

Measure 4: Reuse Program Induced Savings, Offsets. San Diego has the potential to create a valuable new water supply cost effectively due to the reuse program's benefit of reducing capital and operating costs in the downstream wastewater system and water quality improvements benefitting the water systems. The largest cost savings generated by the reuse program is reduced capital and operational costs at the Point Loma Plant. Leading up to the Fine Screening Sessions, a reuse/Point Loma offload target of approximately 100 mgd was established to achieve cost savings by avoiding upgrades at the Point Loma Plant. At 100 mgd, and based on dry weather flows, certain treatment processes were avoided. This target was later re-evaluated against a scenario in the City's September 2011 Draft Wastewater Master Plan (which was based on 2050 annual average daily flows including a 10-year return flow event). To meet the larger wet weather flows, the Point Loma and South Bay strategies were adjusted. Point Loma Plant savings decreased with the new scenario. However, South Bay savings increased since the Wastewater Master Plan increased diversions to South Bay (reducing the cost to upgrade these facilities for reuse). Therefore, the Reuse Program costs remained consistent with previous drafts. No changes were made to the reuse targets or the Alternatives.

Point Loma Plant. *The land available at Point Loma Site is constrained, and any upgrades incur high costs.*

Cost Methodology

A detailed financial evaluation was performed for each Integrated Reuse Alternative considered in this Study. The financial evaluation was prepared to ultimately help decision-makers compare the costs of different water reuse approaches and to aid in making decisions about whether to invest in the water reuse system. The guiding principles for the evaluation included:

- **Transparency.** Provide transparent costing of alternatives.
- **Input and Access.** Provide multiple opportunities at workshops and Stakeholder meetings to review, discuss, and debate project costs.
- **Comparative and Comprehensive Alternatives Costs.** Prepare a comparative financial evaluation of the Integrated Reuse Alternatives and include financing costs.
- **Cost Context**. Compare the water reuse alternative costs to other options facing the City and Participating Agencies.

How were costs calculated, and was cost sharing discussed?

The financial evaluation process included the following steps:

- **Unit Costs.** Unit costs were developed from over 50 sources of information, including 23 bid summaries, two agency estimating tools, 14 project cost estimates, actual operating costs, and insight and experience from three national consulting firms.
- **Alternative Costs.** Capital costs and operational and maintenance (O&M) costs were compiled in an interactive model. Costs were thoroughly developed and reviewed in four interactive workshops and a series of status update meetings with the Project Stakeholders.
- **Financial Model Costs.** Capital and O&M costs for each alternative were entered into a net present value (NPV) financial model that included financing costs and other variables. The financial model assumptions were closely coordinated with the City's financial staff to match typical City financing assumptions. The model was also vetted with the project stakeholder group (including the Participating Agencies' independent financial model expert).
- **Cost Framework.** A cost framework for sharing project costs between the City and Participating Agencies was outlined in the Study. Multiple options were outlined based on an interactive workshop with project stakeholders.

How are Costs Presented in the Study?

Costs are presented in dollars per acre feet ($/AF). The costs are broken down into Gross Costs and Net Costs as defined below. Net Costs are broken out further into three tiers or thresholds to provide a breakout for different conditions and to display values at each calculation step. The following summarizes the cost methodology. The resulting Alternative Costs are presented later in this Executive Summary.

What are Gross Costs?

Gross costs include the capital and O&M costs for completing and operating the recycled water projects. The Gross Cost financial evaluation included a sensitivity analysis using the following three variables: project contingencies (ranging from 20 to 40 percent), Grants (ranging from 10 to 30 percent), and Metropolitan Water District/San Diego County Water Authority Local Resource Program (LRP) credits (ranging from $100/AF to $450/AF). The Favorable Scenario assumed the best case (20 percent contingency, 30 percent grants, $450/AF LRP). The Unfavorable Scenario assumed the worst case (40 percent contingency, 10 percent grants, $100/AF LRP). This sensitivity analysis was performed since stakeholder opinions varied on what the proper assumption should be. For the report, the Stakeholder group agreed to use an average of these values.

Gross Cost Variables

Item	Description	Favorable Scenario	Unfavorable Scenario	Average
Grants	To help offset the costs associated with projects, the City can apply for grants to help finance a portion of the capital projects.	30%	10%	20%
Local Resource Programs	To help offset the costs associated with new water projects, the City has participated in the Local Resource Program offered by MWD and the Local Water Supply Development funding provided by the SDCWA (these two programs are collectively referred to herein as the LRP).	$450/acre-foot, 20 years	$100/acre-foot, 20 years	$275/acre-foot, 20 years
Project Contingency	A project contingency was added to the construction costs of all alternatives to account for unanticipated project costs.	20%	40%	30%

What are Net Costs?

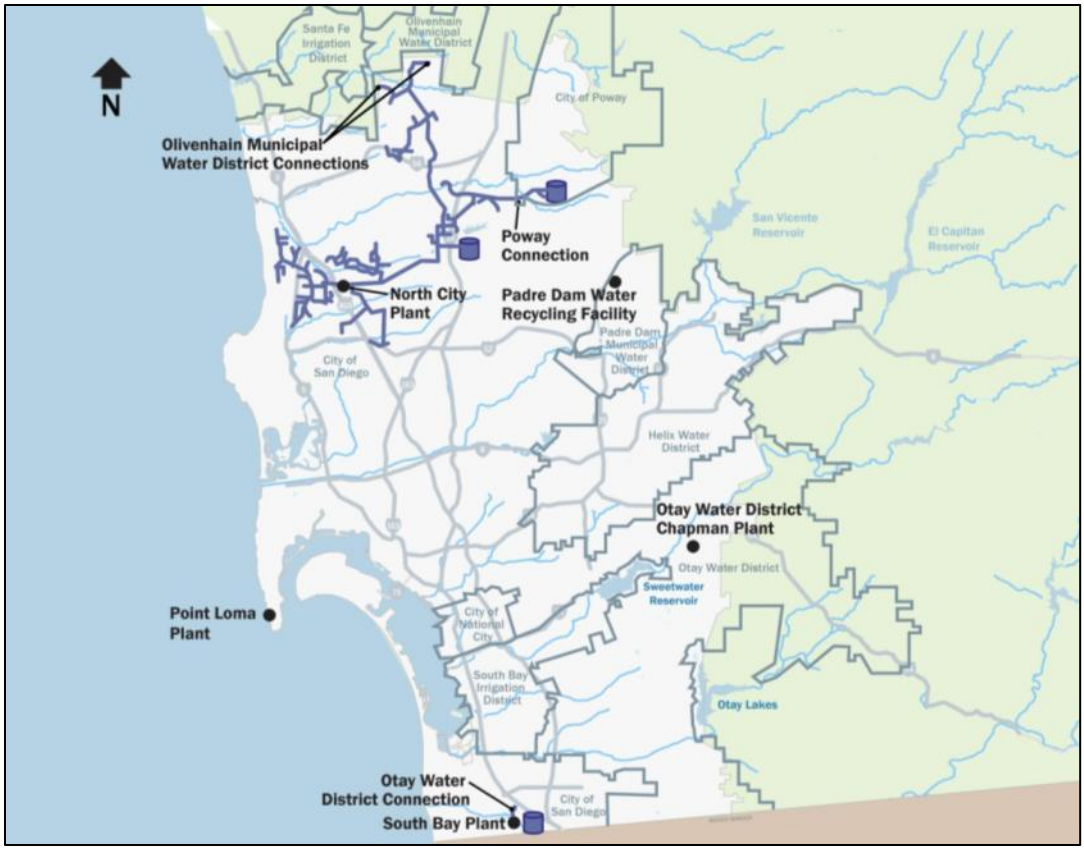
Net Costs are considered "real" or "true" costs for the purposes of comparing reuse projects to imported untreated water and other alternative water sources. Net Costs account for savings, offsets and credits that occur as a result of the reuse projects. For example, constructing a new reuse plant upstream of the Point Loma Plant reduces flows to the Point Loma Plant, resulting in lower capital and operational costs at the Point Loma Plant. These reduced costs are subtracted from the Gross Costs to get the Net Costs or "true" program cost. This is similar to the Orange County Groundwater Replenishment System, which was responsible for substantial savings by avoiding costly outfall improvements. The variables considered with the Net Cost calculations are described in the table on the next page. The Draft Report also includes a Cost Methodology Summary in Appendix H. The Cost Methodology Summary is presented in an informative, frequently asked question (FAQ) format. This document summarizes direct and indirect wastewater savings calculations and includes a graphical comparison of the key wastewater facilities included in this Study with the facilities included in the City's September 2011 Draft Wastewater Master Plan.

Net Cost Variables		
Component	**Description**	**Savings**
Direct Wastewater System Savings (through reduction of flows to downstream facilities)	The Study's Alternatives achieve the goal of offloading flows to the Point Loma Plant, resulting in reduced capital and operating costs at downstream wastewater facilities. The direct wastewater system savings were calculated by comparing: 1) the size of the Point Loma Plant in the City's September 2011 Draft Wastewater Master Plan (adjusted to a secondary treatment option); to 2) the smaller Point Loma Plant size assuming the reuse projects in this Recycled Water Study are implemented. The cost difference is the savings directly attributable to these reuse projects. Key savings include: • Smaller Point Loma Plant facilities (less flow is treated at the Point Loma Plant) • Smaller wet weather equalization basin (less flow reaches the Point Loma Plant) • Less pumping at Pump Station No. 2 (less flow is diverted to the Point Loma Plant) • Less pumping at Pump Station No. 1 (more reuse occurs at the South Bay Plant since more flow is diverted away from Pump Station No. 1)	$557 million (capital savings) $27.6 million/year (operation and maintenance savings)
Indirect Wastewater System Savings (reduced Point Loma costs associated with Maintaining CEPT Operation due to reuse projects)	The Point Loma Plant will either continue to use Chemically Enhanced Primary Treatment (CEPT) or will require upgrades to secondary treatment. This Study does not provide an opinion on whether CEPT or secondary treatment processes should be employed at the Point Loma Plant. However, it is prudent to summarize the reduced Point Loma Plant-related capital and operational costs if CEPT status could be maintained for the remaining Point Loma Plant capacity after reuse projects and with the South Bay Diversion. The indirect wastewater savings are therefore calculated as the avoided secondary treatment costs at the Point Loma Plant.	$463 million (capital savings) $13.0 million/year (operation and maintenance savings).
Salt Reduction Credit (from water quality improvements due to indirect potable reuse)	Similar to the 2005 Water Reuse Study, a salt credit was considered to account for the benefits of salinity reduction in the watershed. The salt credit basis is from the 1999 Salinity Management Study (MWD, USBR). The quantitative credit shown is the financial benefits of extending the life of the municipal treatment systems from having lower salinity levels in the water and wastewater flows. The San Vicente and Otay Lakes Reservoirs could see dramatic reductions in salinity levels from the proposed indirect potable reuse projects. Downstream agency facilities including drinking water treatment plants and the Harbor Drive advanced water purification facilities would benefit from this reduced salinity. In addition to the benefit shown, there is a benefit to water customers, since water heaters, clothes washers, dishwashers, and fixtures will also last longer with lower salinity levels. The combined savings included in the City's 2005 Water Reuse Study was $250/AF. The $100/AF value used in this Study only account for the estimated municipal treatment equipment savings.	$100/acre foot (not including customer savings)
Qualitative Water System Savings	The local, regional and statewide water systems were considered for potential savings from increasing water reuse. Since quantitative costs could not be developed with current available information, qualitative benefits were considered, particularly at the regional and statewide level. The region's local water treatment plants treat water from local runoff (which is limited) and imported untreated water from the SDCWA and MWD (which is subject to cutbacks and higher price fluctuations). Indirect potable reuse projects provide a reliable, uninterruptable untreated water equivalent that would help supply the local water treatment plants that ratepayers have invested in over the past decade. Indirect potable reuse projects may defer or eliminate the need to expand the imported untreated water conveyance system needed to serve these treatment plants. The SDCWA Master Plan (currently underway) may help quantify what these benefits are in future updates to this Study. In addition, Stakeholders emphasized an additional benefit related to the need to fix water supply conditions in the California Bay-Delta (which has the potential for substantial cost impacts for Southern California). Water reuse projects reduce the burden on importing water from the Bay-Delta, providing an additional quantitative benefit for these projects.	Quantitative benefits are speculative, therefore this category is currently considered qualitatively

What is the Existing Recycled Water System?

The City operates two water reclamation plants as part of the Metro System: the North City Plant and the South Bay Plant. Two additional reclamation plants (each separately owned and operated by a Participating Agency and separate from the Metro System) also offload flows before reaching the Metro System. The City also operates a non-potable recycled water system comprised of two service areas—the Northern Service Area and the Southern Service Area—supplied with recycled water from the North City and South Bay Plants, respectively. Three wholesale purchasers of recycled water for the City are located within the service area: City of Poway and Olivenhain Municipal Water District (Northern Service Area) and Otay Water District (Southern Service Area).

Key Components of Recycled Water System			
Reservoir	**Year Commissioned**	**Design Capacity**	**Description**
North City Water Reclamation Plant 	1997	30 mgd	Part of City of San Diego's Metro System. Treats wastewater generated in the Northern San Diego Region, including Cities of Del Mar and Poway, and the communities of Mira Mesa, Rancho Penasquitos, Scripps Ranch, and Rancho Bernardino. Tertiary-treated water is distributed to surrounding communities for irrigation and industrial uses. Excess wastewater ultimately flows to the Point Loma Plant.
South Bay Water Reclamation Plant 	2002	15 mgd	Part of City of San Diego's Metro System. Located in the Tijuana River Valley near the international border. Tertiary-treated wastewater is distributed to surrounding areas for non-potable recycled water use.
Padre Dam Water Recycling Facility 	1967	2.0 mgd	Owned and operated by Padre Dam Municipal Water District and treats wastewater from the City of Santee, portions of the City of El Cajon, and the unincorporated community of Lakeside. Treated wastewater that is not recycled for irrigation and industrial use is discharged to the Santee Lakes and ultimately reaches the San Diego River. Padre Dam, in conjunction with Helix Water District, is evaluating the ability to expand the plant as part of indirect potable reuse project in the El Monte Valley.
Ralph W. Chapman Water Recycling Facility 	1988	1.1 mgd	Owned and operated by Otay Water District. Recycled water is used as irrigation in Eastlake, Otay Ranch, Rancho Del Rey, and other areas of Chula Vista.

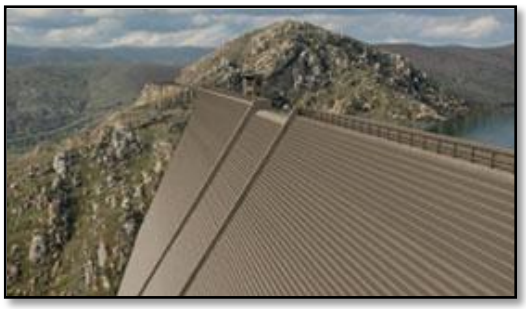


Existing Recycled Water Facilities

What Projects Will Affect Future Reuse in San Diego?

The City's 2005 Water Reuse Study recommended an indirect potable reuse project at the North City Plant that would deliver water to the San Vicente Reservoir. To begin implementing this project, the City completed construction of the Water Purification Demonstration Project in 2011 at the North City Plant. This project, and the corresponding hydraulic modeling study, at the San Vicente Reservoir will demonstrate the health, safety, and water quality benefits of indirect potable reuse. A separate project, the San Vicente Dam Raise, is currently underway and will increase the potential for integrated indirect potable reuse projects at this important regional facility.

Water Purification Demonstration Project. *The City's Water Purification Demonstration Project will demonstrate how one million gallons per day can be purified using technology that is able to produce one of the most pristine sources of water available anywhere.*



San Vicente Dam Raise*. The San Vicente Reservoir expansion (architectural rendering shown above) and its integration with regional facilities make this reservoir an ideal candidate for indirect potable reuse.*

What Opportunities Were Considered for the Reuse Solutions?

Non-Potable Recycled Water Opportunities

Since the City has a non-potable system in place, focus was placed on expanding this system by locating new demands. The demands would then be met by expanding the distribution system from an existing plant or by constructing a new treatment facility closer to the demand. Both Citywide (increasing use within the City's service area) and wholesale (increasing supply to agencies adjacent to or already connected to the existing system) were considered through a market assessment. The market assessment showed where potential conversion customers were concentrated (for example, the Rancho Bernardo area). Based on the markets, distribution systems were developed to determine costs. An analysis of the results, including a direct comparison of an alternative both with and without service to the Rancho Bernardo area, showed that the construction costs to dual pipe an existing community and the administrative costs required to permit, coordinate, bill and provide backflow testing were higher than the indirect potable reuse approaches for new areas. Therefore, the non-potable recycled water opportunities carried forward were focused on maximizing the existing system where most economical. The non-potable recycled water demands carried forward can be summarized as the existing demands, planned demands, and future demands (which includes 3 mgd for expanded service from the South Bay Plant occurring between 2026 and 2040).

Indirect Potable Reuse Opportunities

Achieving a water reuse target with the potential to use all the Metro Service Area resources reinforced the need to look for larger projects with improved economy of scale. Indirect potable reuse projects provided the needed scope and scale for this purpose. Two types of indirect potable reuse were considered: reservoir augmentation and groundwater recharge. Eleven regional reservoirs were initially considered. Three were advanced for more detailed evaluation: San Vicente Reservoir (with the current dam raise project), Otay Lakes, and Lake Hodges. Eight regional groundwater basins were reviewed, and two were carried forward for more detailed evaluation: El Monte Valley Basin and San Pasqual Basin. Advancing reservoirs/basins was based on the location, costs, potential project sizes, and ability to integrate into the water system.

Benefits of Indirect Potable Reuse

- Maximizes use of existing reclamation capacity
- Reduced capital and operating costs in downstream wastewater systems, particularly the Point Loma Plant
- Less seasonally limited than non-potable recycled water with fixed irrigation demands
- Superior ability to improve water quality by significantly reducing Total Dissolved Solids/Salinity

Successful Southern California Indirect Potable Reuse Projects

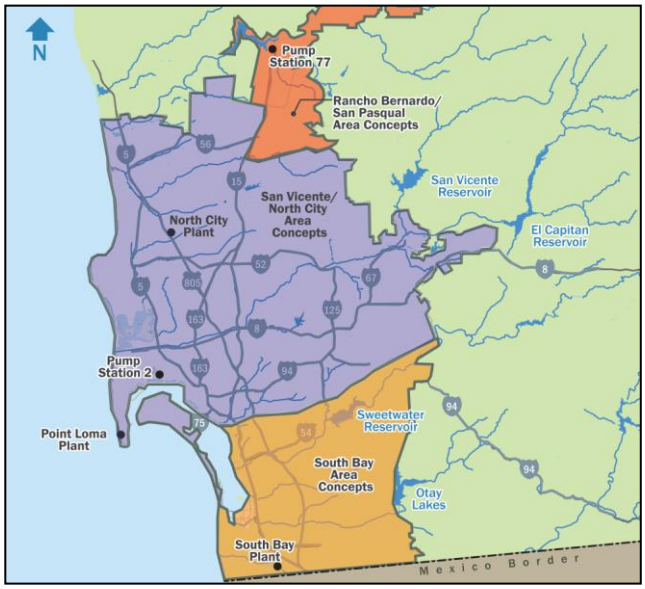
Orange County Water District's Groundwater Replenishment System. The Groundwater Replenishment System is the world's largest wastewater purification system for indirect potable reuse and it is located just north of San Diego in Orange County, California. The Orange County Groundwater Replenishment System can produce up to 70 mgd of highly purified recycled water that serves the water demands of nearly 600,000 residents.

Montebello Forebay. Located in Los Angeles County, the Montebello Forebay has been recharged dating back to 1960s. The area is currently recharged with 150,000 acre-feet of local, imported, and recycled water annually. Of the 5.6 million acre feet recharged into the basin since the 1960s, 26 percent was from recycled water sources.

West Coast, Dominguez Gap, and Alamitos Barriers. Los Angeles and Orange Counties also use seawater intrusion barriers to protect and supplement groundwater supplies. Recycled water is injected into wells along these basins to prevent high salinity seawater from reaching the groundwater basin supplies. The injected recycled water also supplements the groundwater that is extracted by wells and serves the drinking water system.

How Were Opportunities Compiled into Area Concepts?

Area Concepts were developed to provide detailed, comparable options for discussion at the Coarse Screening Session and Stakeholder Status Update meetings, and were then refined and compiled into Integrated Reuse Alternatives. The Area Concepts were strategically selected, based on the locations of available wastewater, existing facilities, and delivery points (non-potable recycled water customers, surface water reservoirs, or groundwater basins).



***Area Concepts**. Area Concepts were developed for three regions of the Metro Service Area. The Area Concepts were presented at the Coarse Screening Session.*

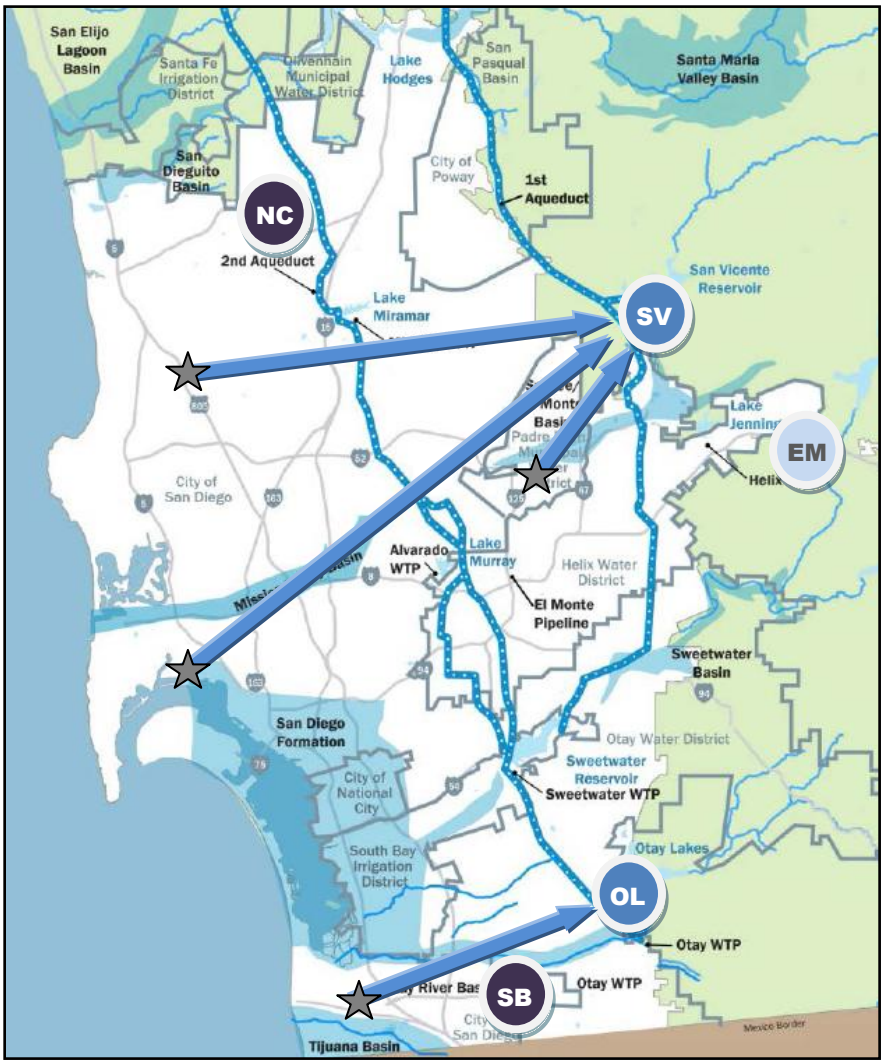
Opportunities were sized and then pieced together by laying out treatment and conveyance facilities. Cost information was also developed, with pumping costs being a particularly important component because of the variability of pumping costs for indirect potable reuse, non-potable water, and wastewater. The availability of this information allowed Stakeholders to compare the benefits of different approaches within each area. For example, Alternatives that required extensive wastewater pumping (which requires pumping approximately 30-percent more flow than advanced treated water), were identified as having added costs and risks compared to other Alternatives. This point led to development of the Harbor Drive Plant concept later in the Study.

Area Concept Summary

Area	Base Concept Presented at the Coarse Screening Session	Additional Considerations after Stakeholder Review
San Vicente/ North City	• Complete planned non-potable recycled water projects • Maximize indirect reuse of water produced at North City Plant with diversions from – Morena – Mission Valley • Treat and produce water at Mission Gorge • Account for El Monte Valley indirect potable reuse project	• Reduce pumping of wastewater by eliminating diversion of wastewater at Mission Valley • Treat and produce water at Harbor Drive site • Consider both split plant and consolidated plant at Harbor Drive and Mission Valley to minimize site needs • Consider additional costs and complexities related to expanded North City Plant beyond master-planned capacity of 45 mgd
South Bay	• Complete planned non-potable recycled water projects • Wastewater diversions from different locations along the South Metro Interceptor (depending on the option) • Consider serving additional non-potable recycled water demands • Indirect potable reuse of water produced at South Bay Plant	• Consider increased diversion totals by locating the diversion further North at the Spring Valley No. 8 connection
Rancho Bernardo/ San Pasqual	• Rancho Bernardo/I-15 Corridor, non-potable recycled water • San Pasqual indirect potable reuse (two variations)	• Determined that these options do not offload the Point Loma Plant and provide limited benefits to other opportunities • Consider private entities funding a majority of the improvements needed

How Were Area Concepts Refined into Integrated Reuse Alternatives?

Area Concepts were refined into Integrated Reuse Alternatives in the Fine Screening Session. Fine Screening Session participants considered a series of projects to meet the 100 mgd minimum water reuse target. The non-potable recycled water demands and the indirect potable reuse project delivery locations that advanced to the Fine Screening Session are summarized in the two adjacent tables and located as shown on the figure below.



Integrated Alternative Concepts

Legend

- Treatment Plant (varies by Alternative)

Non-potable Recycled Water Projects

- NC — North City
- SB — South Bay

Indirect Potable Reuse Projects

- SV — San Vicente Reservoir
- OL — Otay Lakes
- EM — El Monte Groundwater Recharge Project (by others)

Non-potable Recycled Water. Expansion of the non-potable recycled water systems is planned primarily through 2015, with additional growth in South Bay through 2040 based on Otay Water District's projections, as shown below.

Non-Potable Recycled Water Projected Demands

Map Code	Agency	Existing 2009/2010		Planned 2010-2015		Planned (OWD) 2015-2026		Future (OWD) 2026-2040		Total	
		AFY	mgd	AFY	mgd	AFY	mgd	AFY	mgd	AFY	mgd
North City Plant											
NC	City of San Diego	6,394	5.7	1,959	1.7	0	0.0	0	0.0	8,353	7.4
	City of Poway	428	0.4	323	0.3	0	0.0	0	0.0	751	0.7
	Olivenhain MWD	642	0.6	458	0.4	0	0.0	0	0.0	1,100	1.0
	Total North City	**7,464**	**6.7**	**2,740**	**2.4**	**0**	**0.0**	**0**	**0.0**	**10,204**	**9.1**
South Bay Plant											
SB	City of San Diego	1,539	1.4	-639	-0.6	0	0.0	0	0.0	900	0.8
	Otay Water District	3,209	2.9	1,395	1.2	1243	1.1	3,363	3.0	9,210	8.3
	Total South Bay	**4,748**	**4.2**	**756**	**0.7**	**1,243**	**1.1**	**3,363**	**3.0**	**10,110**	**9.0**
North City and South Bay Plants											
	Total Combined	**12,212**	**10.9**	**3,496**	**3.1**	**1,243**	**1.1**	**3,363**	**3.0**	**20,314**	**18.1**

Notes: See Draft Report Table 5-3 for notes. Demands shown are average annual demands. Reductions in demands for South Bay between 2010 and 2015 are associated with changes at the International Boundary and Water Commission Plant, which will no longer require non-potable recycled water for process uses.

Indirect Potable Reuse. Three surface water augmentation projects and a groundwater recharge project were advanced into the Fine Screening Session. In addition, the El Monte Valley Groundwater Augmentation Project (being planned by others) was assumed to occur and its impacts were taken into consideration.

Indirect Potable Reuse Projects Advanced

Map Code	Reservoir or Basin	Storage Capacity (acre-feet)	Reuse Potential		Key Considerations
			AFY	mgd	
Surface Water Reservoir Candidates Advanced to the Fine Screening Session					
SV	**San Vicente (w/ Dam Raise)** 	249,358	Up to 100,000	Up to 89	Recommended approach from 2005 Water Reuse Study. The dam raise, scheduled for completion between 2013 and 2014, will increase retention times and indirect potable reuse capacity potential, and provides the ability to distribute water throughout the region and to the largest water treatment plants.
OL	**Otay Lakes** 	49,849	Up to 25,000	Up to 22	Previous recommendation from 2005 Water Reuse Study, proximity to South Bay Plant. Located adjacent to the 33 mgd (2035 capacity) Otay Water Treatment Plant.
Groundwater Augmentation Project by Others Considered					
EM	**El Monte Groundwater** 	10,000 to 50,000	5,000	4.5 to 5.0	The El Monte basin is being evaluated by the Helix Water District and the Padre Dam Municipal Water District for an indirect potable reuse groundwater augmentation project. This project was considered as part of the study since wastewater flows for this project affect downstream wastewater availability in the Metro System. The detailed evaluations recently performed for the El Monte Groundwater Recharge project provided a baseline for extrapolating regulatory requirements and suitability for the other groundwater basins considered.

Notes: See Draft Report Tables 6-1 and 6-3 for notes. Demands shown are average annual demands.

What was the Rationale for Numbering the Integrated Reuse Alternatives?

The following summarizes the numbering system used. Each Alternative includes common South Bay components

Alternatives:

- **"A" Alternatives.** The "A" Alternatives expand the North City Plant to 45 mgd (the site's master-planned capacity) using the Morena Diversion. The added capacity at North City allows the Harbor Drive Plant to be smaller than the "B" Alternatives.
- **"B" Alternatives.** The "B" Alternatives maximize the existing North City Plant capacity at 30 mgd (which occurs once the initial 15 mgd indirect potable reuse project is complete). The smaller total at the North City Plant requires the Harbor Drive Plant to be larger than the "A" Alternatives.

Major Alternatives

"A" Alternatives =
North City at 45 mgd + South Bay with SV8 diversion

"B" Alternatives =
North City at 30 mgd + South Bay with SV8 diversion

Sub-Alternatives:

- **"1" Sub-Alternatives.** Alternatives "A1" and "B1" differ from the "2" and "3" alternatives by splitting the Harbor Drive water reclamation treatment processes and the advanced purification facility treatment into different sites (the advanced purification processes are located at the Camino Del Rio site described in Chapter 7). This adds a fourth plant site to these alternatives.
- **"2" Sub-Alternative.** Alternatives "A2" and "B2" also relate to the Harbor Drive Plant. The "2" Alternatives place all the Harbor Drive water reclamation and advanced purification treatment processes at a combined plant along Harbor Drive (similar to how the proposed North City and South Bay Plants will be configured). The Harbor Drive Plant in these alternatives is larger, but the operation is efficiently consolidated to a single site.
- **"3" Sub-Alternative.** Alternative "B3" is the same as Alternative "B2", except that it includes a small plant in Mission Gorge to collect, treat, and convey water to the San Vicente Reservoir. This adds a fourth plant, but it is the closest location to the San Vicente Reservoir.

Sub-alternatives Based on Siting Elements

"1" Alternatives
split plant between Harbor Drive & Camino del Rio

"2" Alternatives
combined Harbor Drive Plant

"3" Alternative
combined Harbor Drive plant and an additional plant at Mission Gorge

What Elements are Included in the Integrated Reuse Alternatives?

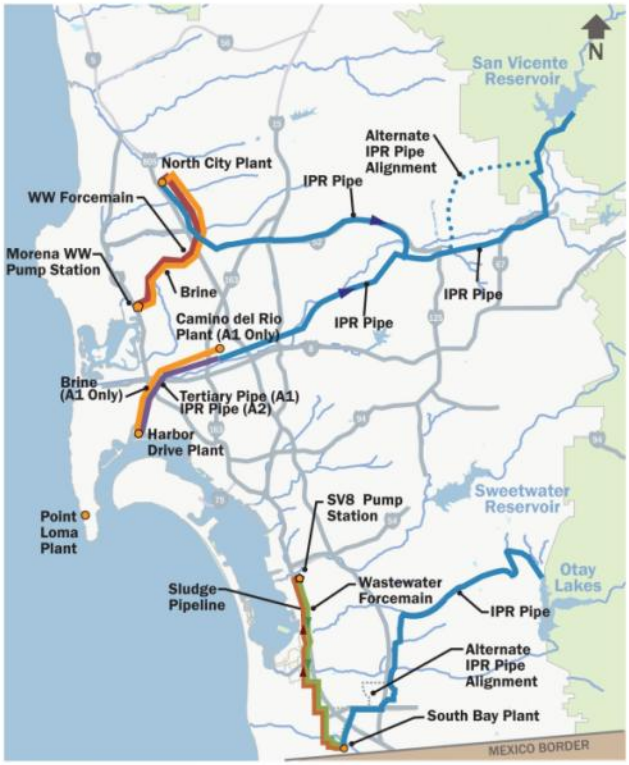
Integrated Reuse Alternatives were formed based on the project goals established by the project Stake-holders, the criteria developed at the Framework Planning Session, the screening work performed at the Coarse Screening Session, and the revision and refinement steps performed at the Fine Screening Session and subsequent Stakeholder Status Update meetings. The following table summarizes the elements included in each Integrated Reuse Alternative.

Integrated Reuse Alternative Summary - Elements Included					
Elements in the Area Concept	**A1**	**A2**	**B1**	**B2**	**B3**
Elements from the North City/San Vicente Area Concept Themes					
Existing non-potable recycled water demands (6.7 mgd)	✓	✓	✓	✓	✓
Planned non-potable recycled water demands (2.4 mgd)	✓	✓	✓	✓	✓
North City Plant w/indirect potable reuse to San Vicente (15.0 mgd)	✓	✓	✓	✓	✓
Morena Diversion w/North City Plant expansion & indirect potable reuse to San Vicente (11.9 mgd)	✓	✓			
Harbor Drive Plant w/indirect potable reuse to San Vicente (capacity varies depending on the Alternative: 40.9 mgd for A1/A2; 52.8 mgd for B1/B2; and 46.0 mgd for B3)	✓	✓	✓	✓	✓
Harbor Drive consolidated WRP/AWPF plant		✓		✓	✓
Harbor Drive WRP/Camino Del Rio AWPF split plant	✓		✓		
Mission Gorge Plant w/ indirect potable reuse to San Vicente (6.8 mgd)					✓
Elements from South Bay Area Concept C2					
Existing non-potable recycled water demands (4.2 mgd)	✓	✓	✓	✓	✓
Planned non-potable recycled water demands (1.8 mgd)	✓	✓	✓	✓	✓
Additional future non-potable recycled water demands (3.0 mgd)	✓	✓	✓	✓	✓
Spring Valley No. 8 Diversion to South Bay (31.1 mgd)	✓	✓	✓	✓	✓
South Bay indirect potable reuse to Otay Lakes (15.0 mgd)	✓	✓	✓	✓	✓
Elements from Other Agencies					
El Monte Groundwater Recharge Project (Helix and Padre Dam Municipal Water Districts)	✓	✓	✓	✓	✓

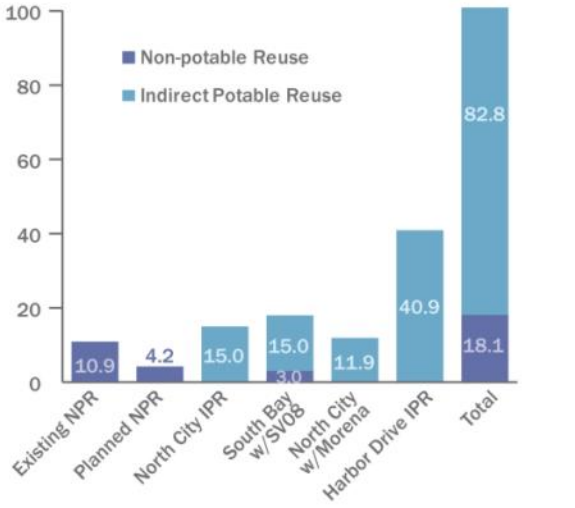
Note: Flows for non-potable recycled water and indirect potable reuse projects are average annual totals based on the output of the plant. Flows for the Spring Valley diversion are based on 2035 Dry Weather Flows. WRP = Water Reclamation Plant; AWPF = Advanced Water Purification Facility

Summary of Integrated Reuse Alternative A1 and A2

Facility Map

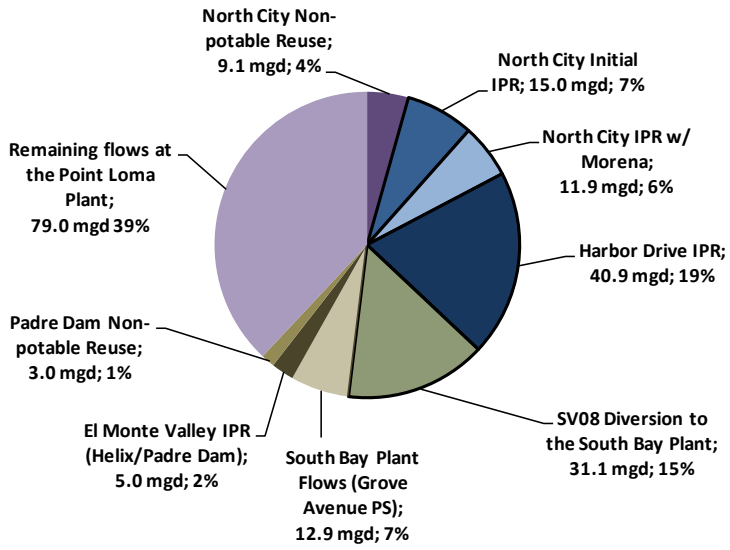


Reuse By Phase



Reuse Per Plant

A1/A2 Allocation of Metro System Flows (2035 Dry Weather Conditions)



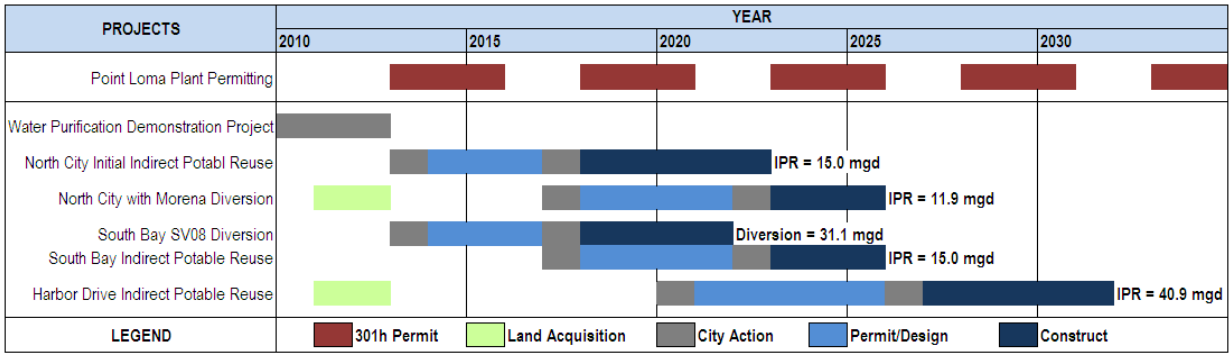
Integrated Reuse Alternatives A1 and A2

(upper left) – Displays the facilities included in Alternatives A1 and A2. A1 differs only in that the advanced treatment processes at the Harbor Drive Plant are located at the Camino del Rio site.

(Above) – The bar chart above includes reuse totals per project and per plant for both non-potable recycled water and indirect potable reuse.

(Left) – The pie chart to the left displays the allocation of Metro System flows estimated for the 2035 dry weather year flow scenario. The black bordered portions represent 99 mgd of offload provided by the facilities included in this Study. Wet weather allocations are presented in Appendix B.

Summary of Integrated Reuse Alternative A1/A2 Summary (Continued)



Alternative A1/A2 Implementation Schedule

Alternative A1/A2 New Water and Point Loma Offloading (Totals in mgd)

Start	New Water (mgd)					Wastewater Offload (mgd)		
	North City	Harbor Drive	Mission Gorge	South Bay	Cumulative	Reuse (N/I South Bay)	Diverted to South Bay	Cumulative
2014	15.0	0.0	-	0.0	15.0	15.0	0.0	15.0
2014	0	0.0	-	0.0	15.0	0.0	31.1	46.1
2018	11.9	0.0	-	0.0	26.9	11.9	0.0	58.0
2018	0.0	0.0	-	18.0	44.9	0.0	0.0	58.0
2021	0.0	40.9	-	0.0	85.8	40.9	0.0	98.9

Note: New water and wastewater offloading totals are based on the reuse projects included in the cost estimates for this Study. The totals do not include the proposed El Monte Groundwater Recharge IPR Project (5 mgd); existing and planned non-potable reuse for the North City Plant (9.1 mgd) and Padre Dam Plant (3.0 mgd); and the Grove Ave. Pump Station (12.9 mgd - which accounts for South Bay non-potable reuse thru 2026). South Bay new water totals include: 15 mgd for IPR and 3 mgd for non-potable reuse (Otay Water District, 2026 to 2040).Point Loma offload totals are based on 2035 Dry Weather Flows. Point Loma offloading due to South Bay is accounted for based on the diversion flows, not the new water created.

Alternative A1/A2 Capital and Annual O&M Costs

Item		2014 North City initial	2014 South Bay Diversion	2018 Morena	2018 South Bay IPR	2021 Harbor Drive (Alternative A1)	2021 Harbor Drive (Alternative A2)
Incremental Costs	Capital	$410,700,000	$20,700,000	$301,300,000	$455,400,000	$1,000,000,000	$1,012,200,000
	O&M	$17,600,000	$300,000	$13,100,000	$22,700,000	$51,000,000	$50,800,000
Cumulative Costs	Capital	$410,700,000	$431,400,000	$732,800,000	$1,188,200,000	$2,188,200,000	$3,200,400,000
	O&M	$17,600,000	$17,900,000	$31,000,000	$53,600,000	$104,700,000	$155,500,000

Note: Capital & O&M Costs shown above are from the Favorable financial model scenario, and include a 20-percent project contingency.

Alternative A1/A2 Reuse Water Cost Summary (2011 $/AF)

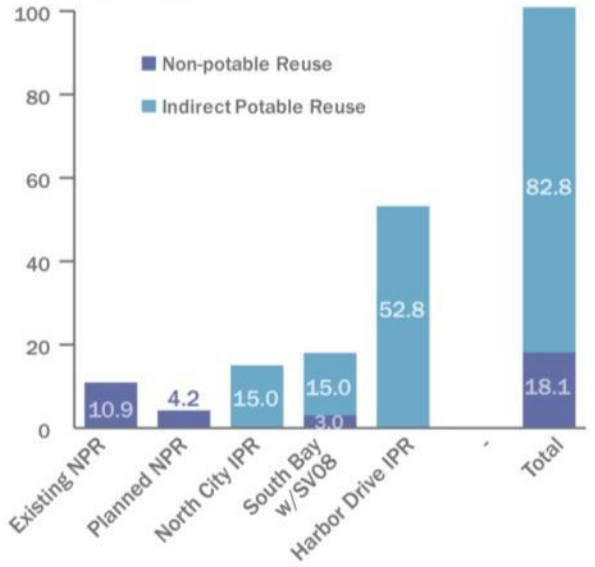
Cost Category	Alternative A1	Alternative A2
Gross Costs (Before Avoided Facilities and Other Offset Savings)	$1,900	$1,900
Tier 1 Net Costs (With Direct Wastewater System Savings)	$1,300	$1,300
Tier 2 Net Costs (With Salt Credit Plus Tier 1 Savings)	$1,200	$1,200
Tier 3 Net Costs (With Indirect Wastewater System Savings Plus Tier 1 and Tier 2 Savings)	$800	$800
Existing Untreated Water Costs (for comparison purposes)	$904	$904

Note: The reuse water cost summary above represents average costs based on the Favorable and Unfavorable financial model scenarios. See Section 8.5 for more details on the financial evaluation and cost descriptions. Tier 1 savings includes wastewater projects no longer necessary due to the reuse projects and offloading included in this Study. Tier 2 savings accounts for savings due to water quality improvements. Tier 3 conceptualizes the savings that could occur if maintaining chemically enhanced primary treatment at the Point Loma Plant was made possible due to the reuse program proposed in this Study. Costs shown above are for comparison of untreated water options, and do not include potable water treatment plant costs.

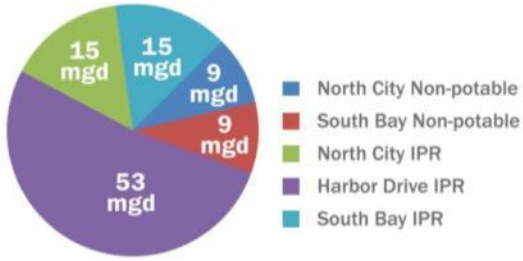
Summary of Integrated Reuse Alternative B1 and B2

Facility Map

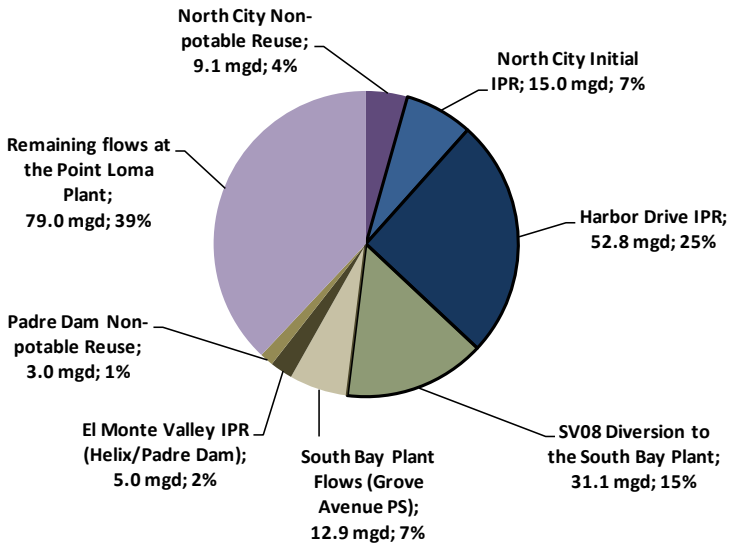
Reuse By Phase



Reuse Per Plant



B1/B2 Allocation of Metro System Flow (2035 Dry Weather Conditions)



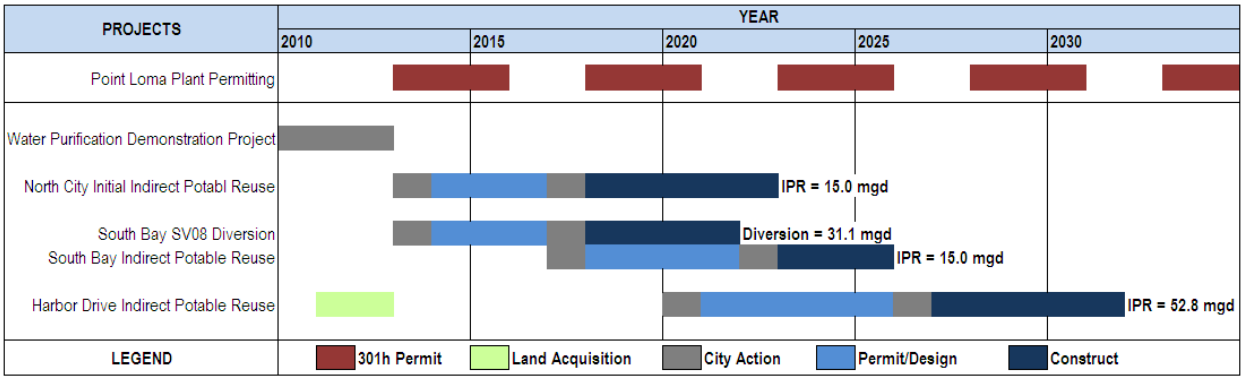
Integrated Reuse Alternatives B1 and B2

(upper left) – Displays the facilities included in Alternatives B1 and B2.B1 differs only in that the advanced treatment processes at the Harbor Drive Plant are located at the Camino del Rio site.

(Above) – The bar chart above includes reuse totals per project and per plant for both non-potable recycled water and indirect potable reuse.

(Left) – The pie chart to the left displays the allocation of Metro System flows estimated for the 2035 dry weather year flow scenario. The black bordered portions represent 99 mgd of offload provided by the facilities included in this Study. Wet weather allocations are presented in Appendix B.

Summary of Integrated Reuse Alternative B1 and B2 (Continued)



Alternative B1/B2 Implementation Schedule

Alternative B1/B2 New Water and Point Loma Offloading (Totals in mgd)

Start	New Water (mgd)					Wastewater Offload (mgd)		
	North City	Harbor Drive	Mission Gorge	South Bay	Cumulative	Reuse (N/I South Bay)	Diverted to South Bay	Cumulative
2014	15.0	0.0	-	0.0	15.0	15.0	0.0	15.0
2014	0.0	0.0	-	0.0	15.0	0.0	31.1	46.1
2018	0.0	0.0	-	18.0	33.0	0.0	0.0	46.1
2021	0.0	52.8	-	0.0	85.8	52.8	0.0	98.9

Notes: New water and wastewater offloading totals are based on the reuse projects included in the cost estimates for this Study. The totals do not include the proposed El Monte Groundwater Recharge IPR Project (5 mgd); existing and planned non-potable reuse for the North City Plant (9.1 mgd) and Padre Dam Plant (3.0 mgd); and the Grove Ave. Pump Station (12.9 mgd - which accounts for South Bay non-potable reuse thru 2026). South Bay new water totals include: 15 mgd for IPR and 3 mgd for non-potable reuse (Otay Water District, 2026 to 2040).Point Loma offload totals are based on 2035 Dry Weather Flows. Point Loma offloading due to South Bay is accounted for based on the diversion flows, not the new water created.

Alternative B1/B2 Capital and Annual O&M Costs

Item		2014 North City initial	2014 South Bay Diversion	2018 South Bay IPR & 3 mgd non-potable	2021 Harbor Drive (Alternative B1)	2021 Harbor Drive (Alternative B2)
Incremental Costs	Capital	$340,700,000	$20,700,000	$455,400,000	$1,159,900,000	$1,168,300,000
	O&M	$17,300,000	$300,000	$22,700,000	$61,200,000	$60,500,000
Cumulative Costs	Capital	$340,700,000	$361,400,000	$816,800,000	$1,976,700,000	$1,985,100,000
	O&M	$17,00,000	$17,600,000	$40,300,000	$101,500,000	$100,800,000

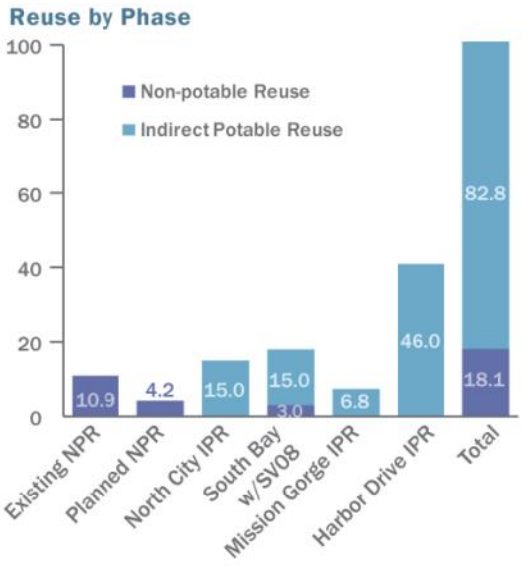
Note: Capital & O&M Costs shown above are from the Favorable financial model scenario, and include a 20-percent project contingency.

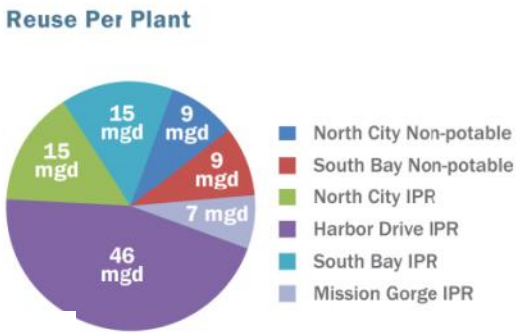
Alternative B1/B2 Unit Cost Summary (2011 $/AF)

Cost Category	Alternative B1	Alternative B2
Gross Costs (Before Avoided Facilities and Other Offset Savings)	$1,700	$1,700
Tier 1 Net Costs (With Direct Wastewater System Savings)	$1,100	$1,100
Tier 2 Net Costs (With Salt Credit Plus Tier 1 Savings)	$1,000	$1,000
Tier 3 Net Costs (With Indirect Wastewater System Savings Plus Tier 1 and Tier 2 Savings)	$600	$600
Existing Untreated Water Costs (for comparison purposes)	$904	$904

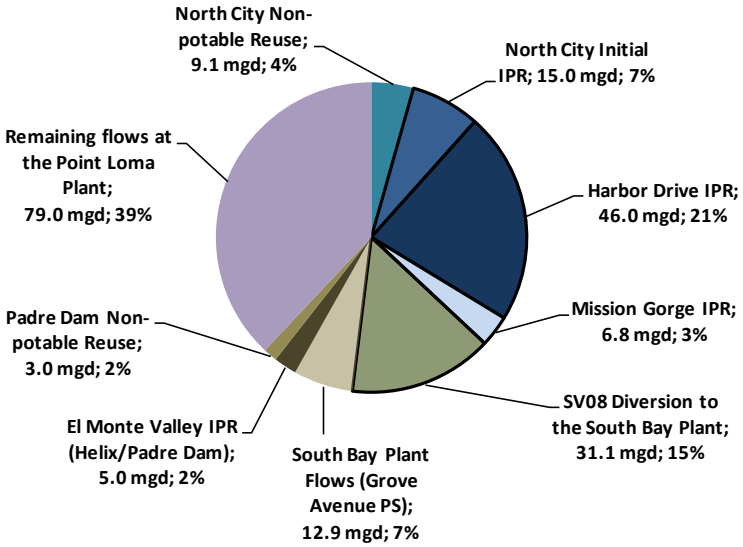
Note: The reuse water cost summary above represents average costs based on the Favorable and Unfavorable financial model scenarios. See Section 8.5 for more details on the financial evaluation and cost descriptions. Tier 1 savings includes wastewater projects no longer necessary due to the reuse projects and offloading included in this Study. Tier 2 savings accounts for savings due to water quality improvements. Tier 3 conceptualizes the savings that could occur if maintaining chemically enhanced primary treatment at the Point Loma Plant was made possible due to the reuse program proposed in this Study. Costs shown above are for comparison of untreated water options, and do not include potable water treatment plant costs.

Summary of Integrated Reuse Alternative B3





B3 Allocation of Metro System Flows (2035 Dry Weather Conditions)



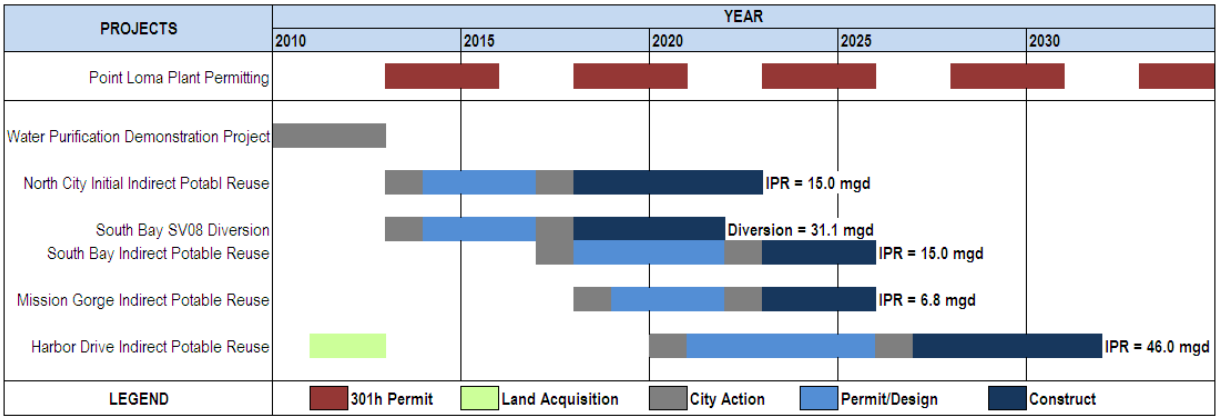
Integrated Reuse Alternative B3

(upper left) – Displays the facilities included in Alternative B3. The Mission Gorge Plant is the only difference between this Alternative and Alternative B2.

(Above) – The bar chart above includes reuse totals per project and per plant for both non-potable recycled water and indirect potable reuse.

(Left) – The pie chart to the left displays the allocation of Metro System flows estimated for the 2035 dry weather year flow scenario. The black bordered portions represent 99 mgd of offload provided by the facilities included in this Study. Wet weather allocations are presented in Appendix B.

Summary of Integrated Reuse Alternative B3 (Continued)



Alternative B3 Implementation Schedule

Alternative B3 New Water and Point Loma Offloading (Totals in mgd)

Start	New Water (mgd)					Wastewater Offload (mgd)		
	North City	Harbor Drive	Mission Gorge	South Bay	Cumulative	Reuse (N/I South Bay)	Diverted to South Bay	Cumulative
2014	15.0	0.0	0.0	0.0	15.0	15.0	0.0	15.0
2014	0.0	0.0	0.0	0.0	15.0	0.0	31.1	46.1
2018	0.0	0.0	0.0	18.0	33.0	0.0	0.0	46.1
2019	0.0	0.0	6.8	0.0	39.8	6.8	0.0	52.9
2021	0.0	46.0	0.0	0.0	85.8	46.0	0.0	98.9

Note: New water and wastewater offloading totals are based on the reuse projects included in the cost estimates for this Study. The totals do not include the proposed El Monte Groundwater Recharge IPR Project (5 mgd); existing and planned non-potable reuse for the North City Plant (9.1 mgd) and Padre Dam Plant (3.0 mgd); and the Grove Ave. Pump Station (12.9 mgd - which accounts for South Bay non-potable reuse thru 2026). South Bay new water totals include: 15 mgd for IPR and 3 mgd for non-potable reuse (Otay Water District, 2026 to 2040).Point Loma offload totals are based on 2035 Dry Weather Flows. Point Loma offloading due to South Bay is accounted for based on the diversion flows, not the new water created.

Alternative B3 Capital and Annual O&M Costs

Item		2014 North City initial	2014 South Bay Diversion	2018 South Bay IPR & 3 mgd non-potable	2019 Mission Gorge	2021 Harbor Drive
Incremental Costs	Capital	$332,600,000	$20,700,000	$455,400,000	$279,000,000	$1,073,200,000
	O&M	$17,300,000	$300,000	$22,700,000	$13,500,000	$55,000,000
Cumulative Costs	Cumulative Capital Cost	$332,600,000	$353,400,000	$808,800,000	$1,087,800,000	$2,160,900,000
	Cumulative O&M Cost	$17,300,000	$17,600,000	$40,300,000	$53,700,000	$108,700,000

Note: Capital & O&M Costs shown above are from the Favorable financial model scenario, and include a 20-percent project contingency.

Alternative B3 Unit Cost Summary (2011 $/AF)

Cost Category	Alternative B3
Gross Costs (Before Avoided Facilities and Other Offset Savings)	$1,900
Tier 1 Net Costs (With Direct Wastewater System Savings)	$1,300
Tier 2 Net Costs (With Salt Credit Plus Tier 1 Savings)	$1,200
Tier 3 Net Costs (With Indirect Wastewater System Savings Plus Tier 1 and Tier 2 Savings)	$800
Existing Untreated Water Costs (for comparison purposes)	$904

Note: The reuse water cost summary above represents average costs based on the Favorable and Unfavorable financial model scenarios. See Section 8.5 for more details on the financial evaluation and cost descriptions. Tier 1 savings includes wastewater projects no longer necessary due to the reuse projects and offloading included in this Study. Tier 2 savings accounts for savings due to water quality improvements. Tier 3 conceptualizes the savings that could occur if maintaining chemically enhanced primary treatment at the Point Loma Plant was made possible due to the reuse program proposed in this Study. Costs shown above are for comparison of untreated water options, and do not include potable water treatment plant costs.

What are the Alternative Costs and How Do They Compare with Other Water Supply Costs?

The Integrated Reuse Alternative costs are summarized in the table below. The table includes a tiered breakout of summary level costs based on the Gross Costs and Net Costs categories described earlier in this Executive Summary. As shown, the costs for A1, A2 and B3 are nearly identical to each other, and slightly higher than B1 and B2. For the A1/A2 comparison to B1/B2, the increased costs occur mainly due to the additional wastewater facilities and pumping needed to divert flows from Morena to the North City Plant. For the B3 comparison to B1/B2, B3 adds an additional plant and does not have the same economy of scale that the B1 and B2 Alternatives have. Implementation steps are included later in this Chapter, which include steps to further develop the Alternatives and look for additional cost savings.

Cost Summary (2011 $/AF)

Alternative	Average Gross Costs	Net Costs		
		Tier 1 w/Direct Wastewater System Savings	Tier 2 w/Salt Credit(Water Quality Benefit)	Tier 3 w/Indirect Wastewater Savings (maintaining CEPT operation)
A1: North City 45 mgd; Split Harbor Dr. AWPF	$1,900	$1,300	$1,200	$800
A2: North City 45 mgd; Consolidated Harbor Dr. AWPF	$1,900	$1,300	$1,200	$800
B1: North City 30 mgd; Split Harbor Dr. AWPF	$1,700	$1,100	$1,000	$600
B2: North City 30 mgd; Consolidated Harbor Dr. AWPF	$1,700	$1,100	$1,000	$600
B3: North City 30 mgd; Consolidated Harbor Dr. AWPF; Mission Gorge AWPF	$1,900	$1,300	$1,200	$800

Notes:

- *All Alternatives include South Bay with the Spring Valley No. 8 Diversion*
- *Direct and Indirect wastewater system savings based on a comparison between the City's September 2011 Draft Wastewater Master Plan and the reduced wastewater facility sizing and pumping required as a resulted of the projects included in this Recycled Water Study (see Appendix H).*
- *Totals are in 2011 dollars (ENR Los Angeles Index value of 10,051.30, June 2011) and are based on a net present value analysis using a detailed financial model.*

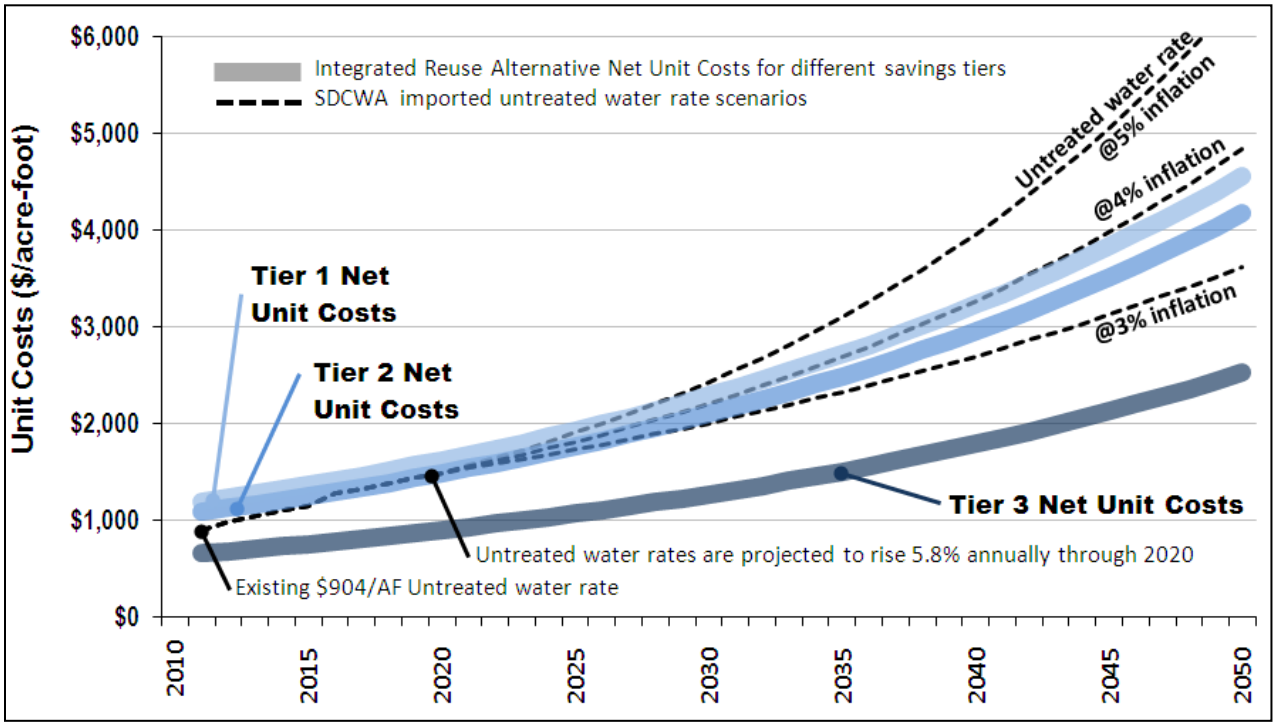
Key Study Conclusion

The Alternative Net Costs represent the costs that should be compared to other water sources – particularly imported untreated water. The average costs of the Alternatives above are:

- Cost assuming direct wastewater savings = $1,200/AF
- Cost assuming above plus salt credit = $1,100/AF
- Cost assuming above plus indirect wastewater savings = $700/AF

These costs compare well to the existing untreated water cost of $904 per acre foot, and are more economical than most other new water supply concepts being proposed.

The Study Alternative's Net Costs were extrapolated based on a 3.5-percent inflation rate and compared to projected imported untreated water rate as shown in the figure below. The 2011 SDCWA municipal and industrial untreated water rate for the City was $904 per acre foot. The existing rate was inflated through 2020 based on the "low-rate" scenario values provided by the SDCWA in April 2011 (which averages to a 5.8 percent annual increase). Beyond 2020, the untreated water cost projections were split into three scenarios showing 3-, 4- and 5-percent inflation scenarios (shown as dashed lines). These scenarios compare well to the Net Costs of the Study's Alternatives (shown as solid lines). The Study's Net Costs shown are the average of all the Study Alternatives and an average of the Favorable and Unfavorable scenario (i.e., the lower cost B1/B2 Alternatives and the favorable scenario would lower the reuse costs further). As shown, the average Tier 1 and Tier 2 cost curves have Net Costs lower than two of the untreated water rate scenarios. If the Tier 3 savings are attributed to the projects in this Study, the program would have significantly lower Net Costs than all three untreated water rate scenarios. An additional consideration is the long-term effects that other local water projects and reduced demands are causing to MWD/SDCWA rates. As purchases decline, rates must increase to cover fixed costs. This is likely to cause imported water costs to inflate faster than locally controlled projects. Overall, the conclusion of this analysis supports the water reuse program proposed in this Study.



Comparison of the Study's Unit Costs for New Water to the Cost of Imported Untreated Water

The Integrated Reuse Alternative Net Costs compare well to projected untreated water rates. Untreated water rates are projected to rise 5.8 percent through 2020 and there remain many uncertainties regarding future costs associated with the Bay-Delta fix and imported water.

What Were the Other Considerations for Each Alternative?

The Integrated Reuse Alternatives were evaluated during the Fine Screening Session and subsequent Stakeholder Status Update meetings. Each Integrated Reuse Alternative provides common and distinct benefits, as summarized below.

Integrated Reuse Alternative Comparative Summary

Alternative	Institutional Complexity	Technical Complexity	Treatment Plants	Wastewater Diversions	Key Infrastructure Siting and Complexity Considerations
A1	Med	High (Morena Diversion/Split Split Plant Harbor Drive-Camino del Rio)	4 North City, South Bay, Harbor Drive (WRP) w/ Camino del Rio (AWPF)	2	• Smallest area requirement at the Harbor Drive site • Challenging siting at Camino del Rio site • Challenging siting and operation of the Morena Wastewater Diversion Pump Station • Most pumping of all alternatives due to Morena Diversion • Increased costs due to added brine line
A2	Med	Med/High (Morena Diversion)	3 North City, South Bay Harbor Drive	2	• Reduced Harbor Drive Plant siting needs compared to the "B" alternatives • Challenging siting and operation of the Morena Wastewater Diversion Pump Station
B1	Med	Med/High (split Plant Harbor Drive-Camino del Rio)	4 North City, South Bay, Harbor Drive (WRP) w/ Camino del Rio (AWPF)	1	• Reduced Harbor Drive Plant siting needs compared to B2 • Minimal wastewater pumping • Challenging siting at the Camino del Rio site • Reduced ability to phase • Increased costs due to added brine line
B2	Med	Med	3 North City, South Bay, Harbor Drive	1	• Largest area requirement at the Harbor Drive site • Least cost option • Minimal wastewater and tertiary water pumping • Reduced ability to phase
B3	High (Harbor Drive site & Mission Gorge site)	High (4th Water Reclamation Plant/ Advance Water Purification Facility at Mission Gorge)	4 North City, South Bay, Harbor Drive, Mission Gorge	1	• Multiple agency collaboration could drive further economy of scale benefits • Allows for additional phasing opportunities • Closest plant to San Vicente Reservoir reduces overall pumping • Mission Gorge site requires interagency agreements and administration costs • Mission Gorge Plant is relatively small due to limited tributary wastewater flows. It does not have an economy of scale benefit and reduces some economy of scale benefit at the Harbor Drive Plant • Larger upstream treatment at Mission Gorge Plant impacts downstream water quality at Harbor Drive Plant • Reduced flows/concentrated waste downstream of Mission Gorge Plant may create maintenance issues

Notes:

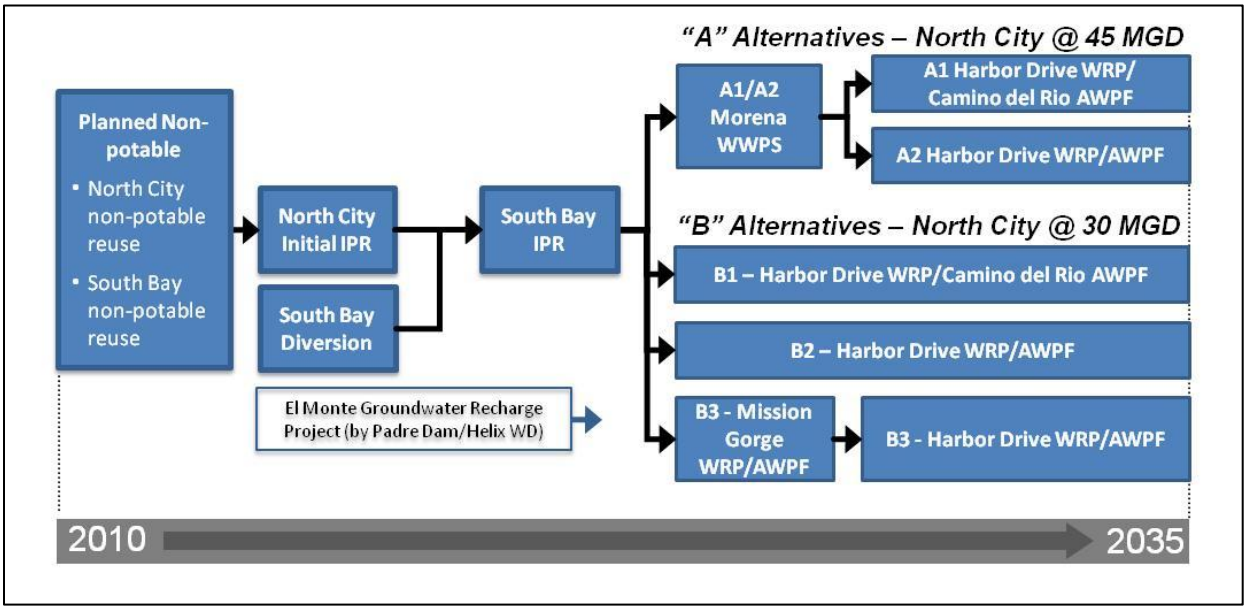
- *Alternative A1 and B1 include a split Harbor Drive Plant at the Harbor Drive site and Camino Del Rio site. Although these facilities work together, they were considered separate treatment plant sites in the table above.*
- *Wastewater Diversions can include the Morena diversion to the North City Plant and the Spring Valley No. 8 Diversion to the South Bay Plant. These diversions require wastewater pump stations.*
- *South Bay facilities not included above since common to all Alternatives.*

Why is Adaptability Important?

The implementation of this reuse plan will need to be adaptable to anticipated and unanticipated needs. Adaptability may be triggered based on financial constraints, changes in regulatory requirements, institutional coordination issues, favorable or unfavorable political and community support, and technical issues. The project implementation proposed below provides a number of key actions to help implement this reuse program and maximize adaptability to changing conditions.

How Will the Projects be Implemented?

Implementing the Integrated Reuse Alternatives involves a step-by-step process as shown in the figure below. Although part of the implementation process includes common elements regardless of the alternative, it is important to note that the latter steps are affected by these earlier phase projects. Therefore, implementation considerations are important even during the first phase projects.



Recycled Water Study Project Implementation Summary

The implementation plan summarizes the basic roadmap to complete the reuse plan.

What are Specific Implementation Steps Needed Directly Following this Study?

Achieving the benefits identified in this report requires an investment. Some of these investments have already been started, such as the Water Purification Demonstration Project now operating at the North City Plant. To proceed to the next steps in this study, additional investments will be needed to plan and develop the program to a level of detail that can be designed, permitted and constructed. These investments are referred to as program implementation steps. The following two pages organize and summarize these key implementation steps into an Implementation Checklist.

IMPLEMENTATION CHECKLIST: REGULATORTY, INSTITUTIONAL, POLICY, FINANCE

Water Purification Demonstration Project/Permitting. The Water Purification Demonstration Project (Demonstration Project) and the San Vicente flow modeling are key steps of the public involvement and regulatory permitting processes to confirm the health and safety of the new water supply. The following summarizes these key implementation steps:

- Obtain Advanced Water Purification Facility water quality and San Vicente limnology model final results
- Provide on-going public involvement and community outreach
- Coordinate with CDPH and the Regional Water Quality Control Board on processes and permitting (whether through uniform criteria being developed by CDPH or project specific criteria)
- Promote advocacy by Stakeholder groups with CDPH and the Regional Water Quality Control Board

Mayor and City Council. Support from the Mayor and City Council is essential to implement such an important program. While the reuse program appears to offer substantial cost savings to ratepayers (compared to upgrading the Point Loma Plant), support from policymakers to advance the program will be needed. The following summarizes these key Mayor and City Council implementation steps:

- Obtain Independent Rates Oversight Committee support
- Obtain Natural Resources and Culture Committee approval.
- Obtain stakeholder advocacy support of the Study by the Metro JPA, Independent Rates Oversight Committee, environmental groups, and other interested parties.
- Obtain City Council approval.
- Coordinate implementation with broader water policy issues and programs

Metro JPA Approval. As partners in the Metro System, support from the Metro JPA is also essential to implement such an important program. Support from JPA policymakers is needed to advance the program. The following summarizes these key Metro JPA implementation steps:

- Finalize the cost sharing framework, as summarized below. This includes policy and legal issues, costs and consensus.
- Promote stakeholder advocacy in support of the Study by the City, Independent Rates Oversight Committee, environmental groups, and other interested parties.
- Obtain Policymaker approval to support the Study and the reuse program.

Financials. Fiscal responsibility is important for all parties. For Metropolitan Wastewater System ratepayers, there is an important choice required regarding whether to fund this water reuse plan or fund the alternative improvements at the Point Loma Plant. The following summarizes key financial implementation steps:

- Finalize cost share framework concepts and agreements
- Provide comparative financial analyses with other sources (if desired)
- Determine/develop policy on local resource program funding from SDCWA/MWD.
- Seek out and apply for grants.
- Develop of rate impacts
- Develop a detailed financing plan
- Provide funding and staff to move forward with the program implementation, including the activities needed for near-term and long-term projects

IMPLEMENTATION CHECKLIST: TECHNICAL

Technical/Other. Implementing the reuse plan will require technical evaluations and engineering. The following summarizes these key technical implementation steps:

- North City treatment. Determine the North City treatment approach (existing filters, feed source, recovery rates, improvements to the treatment processes upstream of the filters, the fate of the electrodialysis reversal unit's, and other technical design parameters.
- Non-potable reuse demands and wastewater flow confirmation. Continue to evaluate non-potable reuse demands and use trends; and wastewater flow generation. These totals will be important to finalize the size of indirect potable reuse projects.
- Point Loma permitting. Continue permitting coordination amongst Stakeholders as part of the Point Loma Plant 301h Modified Permit process.
- New facility siting. Develop detailed siting studies for new pump stations and treatment plants, including evaluation and confirmation of availability of the Harbor Drive and Camino del Rio North sites.
- Wastewater treatment pilot testing. Test treatment strategies and high rate systems to develop area-specific design values.
- New conveyance facility alignments. Perform alignment studies for new conveyance facilities.
- SV8 Diversion to South Bay. Update the SV8 Pump Station Predesign and Sweetwater River crossing concept (with possible evaluation of constructing solids handling facilities at the South Bay Plant in lieu of diverting to the Point Loma Plant). Coordinate efforts between the Recycled Water Study needs and the September 2011 Draft Wastewater Master Plan (or any updates) needs.
- South Bay Plant. Continue discussion and coordination on South Bay Plant issues, including on-going evaluations regarding whether to treat biosolids produced at the South Bay Plant at a dedicated facility instead of continuing to send it to the Point Loma Plant and the MBC for treatment.
- South Bay indirect potable reuse delivery. Perform detailed evaluation of the South Bay Plant expansion including pump station and delivery pipeline to Otay Lakes.
- Otay Lakes operation. Perform an Otay Lakes operational evaluation in relation to local runoff and indirect potable reuse operation to confirm flow rates and optimal project sizing. Develop a hydraulic model similar to those developed for the San Vicente Reservoir to determine seasonal hydraulic patterns within the Otay Lakes system.
- Joint Project Evaluation. Identify opportunities of joint projects, such as brine pipelines or indirect potable reuse delivery pipelines coordinated with other regional projects.
- Mission Gorge Plant Evaluations. Coordinate further discussion and evaluation on the merits of a joint plant with Padre Dam Municipal Water District in the Mission Gorge area (conceptualized in Alternative B3).
- Groundwater updates. Complete groundwater studies including evaluation of the San Diego Formation and San Diego River system for possible inclusion into future master planning efforts. Update the status of other County groundwater studies including San Pasqual and Padre Dam Municipal Water District's studies.
- Waste stream recovery. Evaluate waste stream efficiency and recovery analysis to evaluate ways to further minimize waste streams.

- San Vicente regulatory limits and operational coordination. Perform San Vicente analysis to evaluate maximum potential indirect potable reuse. If it is limited, determine options such as further evaluation of the San Diego formation or integration with other reservoirs. Coordinate reuse operational activities with other San Vicente operations after the dam raise is complete.
- Regulatory update on minimum reservoir capacities. Check assumptions on smaller sized reservoirs (Lakes Murray and Miramar) once indirect potable reuse reservoir augmentation regulations are finalized.
- SDCWA Coordination. Coordinate with SDCWA on their Master Plan (currently underway), broader water policy support at the state level, and possible regional collaboration involving funding.
- Peak Wet Weather Flow strategies. Continue to evaluate fail-safe disposal strategies under wet weather conditions, including equalization, live stream discharge, and CEPT-secondary effluent blending at the Point Loma Plant.

Where Can I Find More Information on Water Reuse in the City?

Website. The Public Utilities Department maintains useful information on the City's website. See below for more information.

Recycled Water Home Page. The City's Recycled Water homepage includes extensive information on water reuse, rules and regulations, information on the existing system, and frequently asked questions. The website address is: http://www.sandiego.gov/water/recycled/

Water Reuse Homepage. The Water Reuse homepage includes links to the 2005 Water Reuse Study, the Water Purification Demonstration Project, and the Full Scale Reservoir Augmentation Page. The website address is: http://www.sandiego.gov/water/waterreuse/

General Information. If you are interested in learning more about recycled water, the City's Public Utilities Department can be contacted at (619) 533-7572 or e-mail at water@sandiego.gov.

Community Presentations. Recycled water professionals are available to speak to your community group, organization, special interest club or service organization. They are qualified to deliver their expertise, answer your recycled water questions, and will customize a presentation to meet the needs of your group. To schedule a speaker, simply call our Speakers Bureau Hotline at (619) 533-6638 at least two weeks prior to your program date. Or, you may e-mail requests to waterspeakers@sandiego.gov.

Who Can I Contact for More Information on this Study?

The project team consisted of City staff from the Public Utilities Department, and a consulting team from Brown and Caldwell, Black & Veatch, and CDM.

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BACK COVER

APPENDIX B: POINT LOMA WASTEWATER TREATMENT PLANT CONCLUSIONS

APPENDIX B
POINT LOMA WASTEWATER TREATMENT PLANT CONCLUSIONS

As the San Diego region continues to pursue local sustainable water supplies through the development of non-potable recycled water and indirect potable reuse opportunities, the Point Loma Plant will ultimately become a smaller wastewater treatment facility within the Metro System. Potential new water reuse facilities will use a portion of the flows that currently feed the Point Loma Plant; thus, reducing the quantity of flows received and treated at the Point Loma Plant. This section discusses the changes that may occur at the Point Loma Plant as a result of future increased reuse within the Metro System and conversion to secondary treatment.

B.1 Point Loma Plant

As Water Reclamation Plants and Advanced Water Purification Facilities are planned and constructed within the Metro System, wastewater flows will be diverted to these upstream locations and the Point Loma Plant will be required to treat smaller quantities of wastewater. However, it is expected that the concentration of the influent will change due to the added discharges from these potential Water Reclamation Plants and Advanced Water Purification Facilities. Figure B-1 lists the possible components that may characterize the influent stream in the case that the Point Loma Plant receives discharges from additional future water reuse facilities.

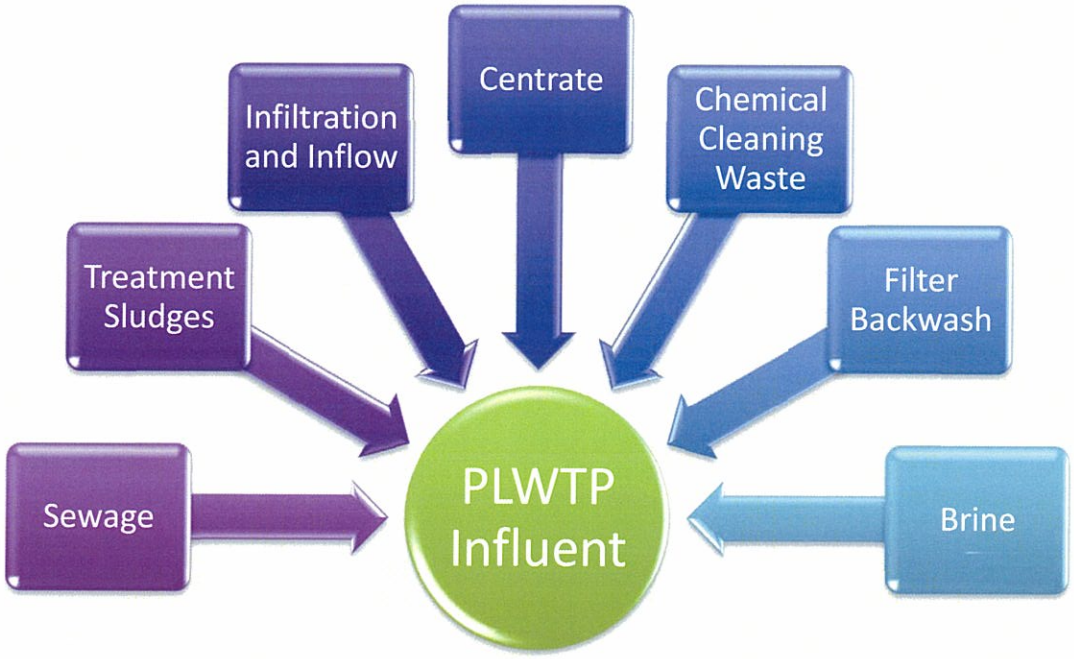


Figure B-1. Make-up of Point Loma Plant Influent

Table B-1 provides a detailed breakdown of the allocation of the 2050 Metro System 10-year annual average daily flow (AADF) and peak wet weather flow (PWWF) after reuse alternatives have been implemented. Figure B-3 presents the 2050 10-year AADF breakdown in pie chart format. When sizing the Point Loma Plant it was assumed that non-potable recycled water would not be used during wet weather which leaves approximately 143 mgd of flow reaching the Point Loma Plant. At this size, a biological aerated filter (BAF)

was assumed for the secondary process. This system, when sized at 143 mgd AADF, can only treat up to 243 mgd during storm events (77 mgd less than the anticipated peak flow reaching the plant). Blending of secondary and chemically-enhanced primary treatment (CEPT) effluents will be required during PWWF. A mass balance evaluation of the proposed blending scenario (77 mgd primary effluent blended with 243 mgd secondary effluent) indicates that it will meet secondary permit requirements for total suspended solids (TSS) and biochemical oxygen demand (BOD). A storage capacity of 28 million gallons (MG) is required to equalize flow during peak wet weather events so that the Point Loma Plant influent does not exceed 320 mgd. Note that the impact of the diversions on the Point Loma Plant influent will be relatively similar between the themes since the amount of source water diversion does not change, only the location where the additional treatment is provided changes.

Table B-1. Allocation of 2050 Metro System 10-Year AADF and PWWF

	2050 10-Year AADF	2050 10-Year PWWF	Remark
Metro System	278 mgd	647 mgd	Source: September 2011 Draft Metropolitan Wastewater Plan
South Bay Diversion (SV8)	47 mgd	133 mgd	An attenuation factor of 0.9 was applied to the PWWF at the SV8 diversion when subtracting it from the Point Loma Plant influent
GAPS	18 mgd	18 mgd	An attenuation factor of 0.9 was applied to the PWWF at the SV8 diversion when subtracting it from the Point Loma Plant influent
San Vicente IPR	68 mgd	68 mgd	Planned IPR to the San Vicente Reservoir
El Monte IPR	5 mgd	5 mgd	From the El Monte Project or equivalent project
South Bay Return Solids	3 mgd	3 mgd	Approximate solids return flow
Storage	N/A	28 MG	28 MG of storage can equalize 441 mgd so that the influent to the Point Loma Plant is 320 mgd
Point Loma Plant	143 mgd	320 mgd	

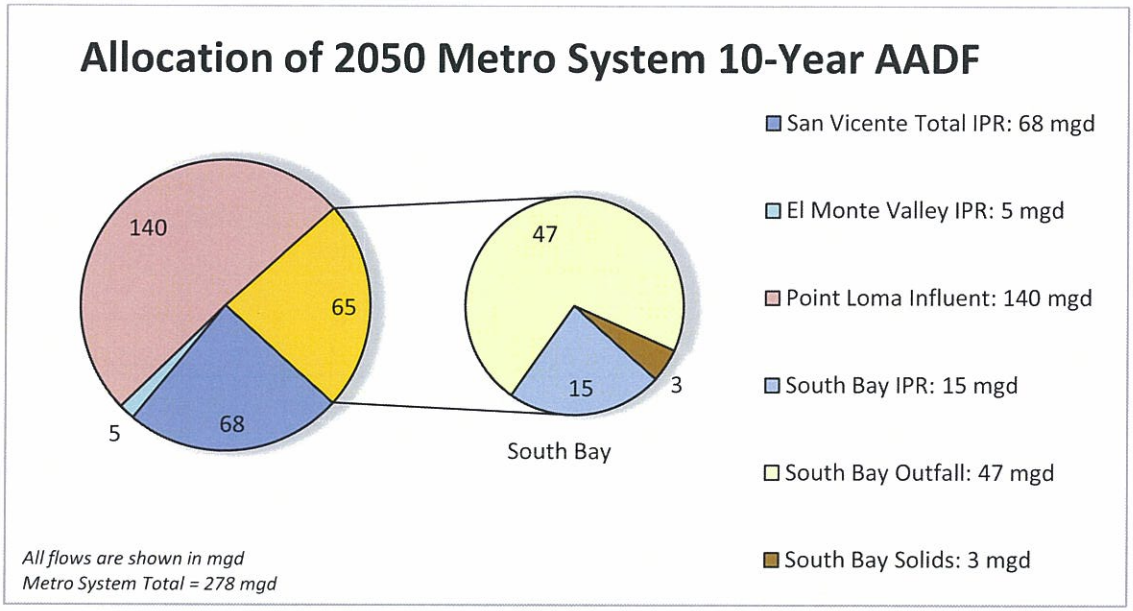


Figure B-3. Allocation of 2050 Metro System Annual Average Daily Flows with a 10-year Wet Weather Event

These flows were used by to size the Point Loma and South Bay Plants during a critical wet weather event. The 3 mgd of South Bay Solids is returned to the Point Loma Plant for a total influent of 143 mgd.

The major technologies and processes proposed to treat the remaining flows at the Point Loma Plant to secondary treatment standards are shown in Figure B-4. It is anticipated that these facilities will be capable of adequately treating the incoming wastewater to secondary treatment standards, but it is strongly suggested that a pilot test be conducted prior to design to confirm treatment process performance under local conditions.

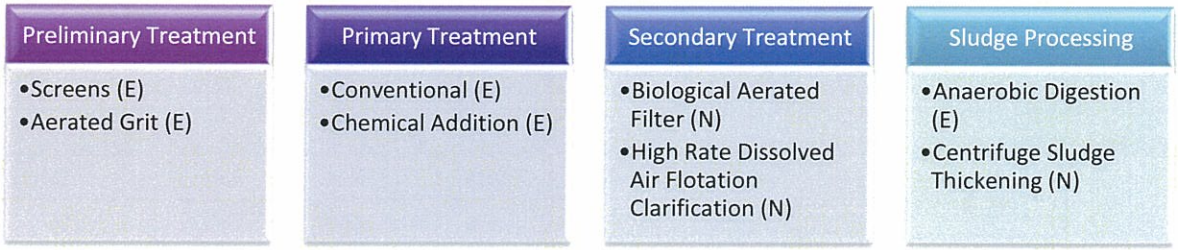


Figure B-4. Proposed Major Processes for a 143 mgd Point Loma Plant

(E = Existing Process; N = New Process)

B.1.1 Chemically Enhanced Primary Treatment (CEPT) Considerations

The Point Loma Plant currently processes incoming wastewater through a CEPT process prior to discharge. CEPT is a physical process that enhances the removal of total suspended solids (TSS) with the aid of a coagulant and flocculent. Organics, or biochemical oxygen demand (BOD), removal is also enhanced by virtue of removing organics in particulate forms. Removal efficiencies for TSS increase from 65 percent to about 75 to 85 percent; consequently BOD removal jumps from 35 percent to about 50 to 60 percent when

compared to conventional primary treatment. Over the years, City operations staff has managed to improve the process to a point where the TSS removal efficiency is as high as 90 percent and the BOD is at 60 percent. The Point Loma Plant effluent has been recorded to have a TSS concentration below the secondary TSS limit of 30 mg/L on occasion. The Point Loma Plant 2010 average effluent TSS and BOD values are provided in Table B-2.

Table B-2. 2010 Point Loma Plant Annual Average Effluent TSS and BOD

Constituent	Flow	Concentration	MER		Percent Removal
	(mgd)	(mg/L)	(lb/d)	(mt/yr)	(%)
TSS	157	37	48,585	8,006	88.5
BOD		104	135,410	22,503	63.8

Source: 2010 Annual Reports and Summary Point Loma Wastewater Treatment Plant & Ocean Outfall

The low cost of CEPT and the proven minimal impact of BOD on the receiving waters and indigenous organisms from its discharged flows has raised the idea of maintaining CEPT at the Point Loma Plant even after the proposed upgrades. If it were allowed, the Study Team estimated the amount of diversion required upstream so that the projected TSS mass emission rate (MER) for a smaller CEPT plant would be equivalent to the MER of a secondary plant at the current Point Loma Plant permitted capacity of 240 mgd. The required flow reduction to meet this standard is estimated to be between 29 and 60 mgd depending on the CEPT effluent quality. Table B-3 provides a preliminary summary of the MERs at the Point Loma Plant for various flow scenarios. Included in the summary are TSS MERs associated with a 143 mgd Point Loma Plant.

Table B-3. Estimated Point Loma Plant TSS Mass Emission Rates versus Capacity

Treatment	Capacity (mgd)	Point Loma Plant Effluent TSS			Offload to be Equivalent to Secondary MER			Final Capacity of CEPT at Point Loma Plant (mgd)
		(mg/L)	(lb/d)	(mt/yr)	(lb/d)	(mgd)	(mt/yr)	
Secondary	240	30	60,048	9,942	-	-	-	-
	200	30	50,040	8,285	-	-	-	-
	143	30	35,779	5,924	-	-	-	-
	100	30	25,020	4,142	-	-	-	-
CEPT	240	40	80,064	13,256	20,016	60	3,314	180
	240	35	70,056	11,599	10,008	34	1,657	206
	200	40	66,720	11,046	16,680	50	2,762	150
	200	35	58,380	9,666	8,340	29	1,381	171
	143	40	47,705	7,898	11,926	36	1,975	107
	143	35	41,742	6,911	5,936	20	987	123
	100	40	33,360	5,523	8,340	25	1,381	75
	100	35	29,190	4,833	4,170	14	690	86

Notes: *240 mgd is the permitted capacity of the Point Loma Plant. Secondary effluent limits include a 30/30 mg/L TSS/BOD limit.*

Due to the post process solids (e.g., sludge and centrate solids) that will be returned to the Point Loma Plant, a CEPT plant at 143 mgd capacity must remove up to 90 percent of the incoming TSS to meet the permitted TSS MER of 13,598 metric tons per year. There are several approaches to maintaining a 90 percent TSS removal efficiency, including 1) decreasing the surface overflow rate (SOR); 2) increasing chemical addition; and/or 3) install finer screens. It is recommended these approaches be pilot tested to confirm removal efficiencies under local conditions.

The Study approach includes a base assumption that secondary upgrades would be required at the Point Loma Plant; however, it does not preclude the assumption that an aggressive reuse plan, supported by regulators and the environmental community, could allow deferring and possibly eliminating the need for secondary upgrades. Allowing CEPT to be maintained after the reuse system expansion would provide significant cost savings to the region's ratepayers.

AGENDA ITEM 9
Attachment

SAN DIEGO Integrated Regional Water Management

San Diego IRWM Summit - 2012

A REGIONAL APPROACH TO WATER RESOURCES MANAGEMENT

The Summit will address how integrated regional planning can resolve conflicts among water supply, water quality, natural resource, and flood control objectives.

Summit Objectives

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

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

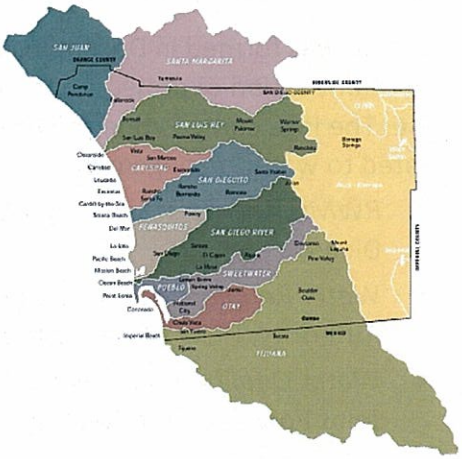
SUMMIT AGENDA

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

SAN DIEGO
Integrated Regional
Water Management

San Diego IRWM Region

The San Diego IRWM Region includes all or portions of eleven hydrologic units within San Diego County that discharge to coastal waters.



IRWM Vision

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

IRWM Mission

To develop and implement an integrated strategy to guide the San Diego Region toward *protecting, managing, and developing reliable and sustainable water resources*. Through a stakeholder-driven process 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.

IRWM Plan Goals

1. Optimize water supply reliability.
2. Protect and enhance water quality.
3. Provide stewardship of our natural resources.
4. Coordinate and integrate water resource management.

IRWM Plan Objectives

A. Maximize stakeholder and 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
D. Develop and maintain a diverse mix of water resources
E. Construct, operate, and maintain a reliable infrastructure system
F. Reduce the negative effects on waterways and watershed health caused by hydromodification and flooding
G. Effectively reduce sources of pollutants and environmental stressors
H. Protect, restore, and maintain habitat and open space
I. Optimize water-based recreational opportunities

Regional Water Management Group (RWMG)

The San Diego County Water Authority, City of San Diego, and County of San Diego formed the RWMG to fund, guide, and manage development of the IRWM Plan. The RWMG is now responsible for the day-to-day administration and implementation of the San Diego IRWM program. The RWMG meets bi-weekly to research, review, discuss, and formulate ideas and concepts for Plan implementation activities.

Regional Advisory Committee (RAC)

The RAC was formed in December 2006 to assist in completion of San Diego's first IRWM Plan and prioritization of projects both within the Plan and for future funding application(s) as they arise. The RAC composition provides diverse representation from various functional areas related to water management:

- *RWMG Agencies*: San Diego County Water Authority, City of San Diego, County of San Diego
- *Water Retailers*: Santa Fe Irrigation District, Yuima Municipal Water District, Sweetwater Authority, Helix Water District, City of Escondido
- *Water Quality (Wastewater/Stormwater)*: Padre Dam Municipal Water District, San Elijo Joint Powers Authority, City of Chula Vista, Industrial Environment Association
- *Natural Resources & Watersheds*: San Dieguito River Valley Conservancy, San Elijo Lagoon Conservancy, San Diego River Park Foundation, California Coastal Conservancy, Mission Resource Conservation District, The Nature Conservancy
- *At-Large Members*: San Diego CoastKeeper, Campo Kumeyaay Nation, Rural Community Assistance Corporation, Sustainability Consultant, Farm Bureau of San Diego County, San Diego Regional Chamber of Commerce, San Diego Association of Governments, U.S. Department of Navy/Camp Pendleton, Floodplain Management Association
- *Resource Agencies*: San Diego Regional Water Quality Control Board, U.S. Bureau of Reclamation
- *Tri-County FACC*: Rancho California Water District, County of Orange

The RAC has played a critical role in shaping and developing such key elements of the IRWM Plan as goals and objectives, long-term targets, the proposed institutional structure, and project prioritization. The RAC currently meets on a bi-monthly basis to provide guidance on upcoming IRWM planning and funding application activities. The RAC may be convened more frequently, as needed, for planning and funding proposals.

Tri-County Funding Area Coordinating Committee (Tri-County FACC)

The San Diego RWMG, Upper Santa Margarita RWMG, and South Orange County RWMG collaborate in an inter-regional body established via MOU and known as the Tri-County FACC. The Tri-County FACC enables the three RWMGs to balance the necessary autonomy of each planning region to plan at the appropriate scale with the need to improve inter-regional cooperation and efficiency. It ensures close coordination of the three planning regions to improve the quality and reliability of water in the San Diego Funding Area.

For more info, please visit www.sdirwmp.org

SAN DIEGO
Integrated Regional
Water Management

Overview of the San Diego Integrated Regional Water Management (IRWM) Program

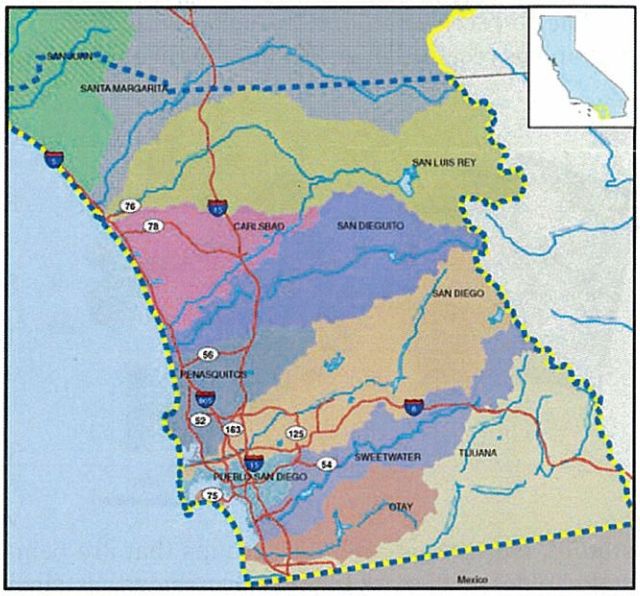
February 2012

Introduction

IRWM planning is a relatively new California initiative, aimed at developing long-term water supply reliability, improving water quality, and protecting natural resources. The Statewide IRWM Program is supported by Proposition 50 (2002) and Proposition 84 (2006), both of which provided bond funding to the California Department of Water Resources (DWR) to fund competitive grants for projects that improve water resources management. The San Diego region is currently embarking on an update to our 2007 San Diego IRWM Plan to become eligible for the next round of funding.

The San Diego IRWM Program began in 2005, and since then has achieved remarkable success! San Diego published its first IRWM Plan in 2007 and received $25 million in Proposition 50 grant funding to implement 19 prioritized water management projects. Under Proposition 84, the San Diego IRWM Program obtained $8 million to implement 11 more high-priority projects and $1 million for planning activities associated with preparing an IRWM Plan Update (currently underway).

San Diego's IRWM Program is an interdisciplinary effort by water retailers, wastewater agencies, stormwater and flood managers, watershed groups, the business community, tribes, agriculture, and non-profit stakeholders to improve water resources planning in the San Diego IRWM region. A key element of IRWM planning is to develop solutions to the critical water supply and water quality problems facing disadvantaged communities, tribes, and other stakeholders.



The San Diego IRWM Region includes all west-draining watersheds in San Diego County.

Stakeholder involvement is an essential element of the IRWM Program. To date, the San Diego IRWM Program has made significant efforts to identify and engage key stakeholders. A Regional Advisory Committee (RAC) was established to assist in completing the 2007 IRWM Plan and prioritizing projects to include within funding applications. The RAC, which currently consists of 32 diverse members, continues to play a critical role in shaping key elements of the IRWM Plan Update.

Go to www.sdirwmp.org and learn more!

San Diego IRWM Program Structure

The San Diego IRWM Program is led by the San Diego Regional Water Management Group (RWMG) – which consists of the San Diego County Water Authority (CWA), the City of San Diego (City), and the County of San Diego (County). The combined jurisdiction of the CWA, the City, and the County comprises the entire Region, and their combined responsibilities address all facets of water management. The RWMG is responsible for day-to-day administration and implementation of the San Diego IRWM Program; however the RAC and Workgroups provide essential review, guidance, and recommendations to the RWMG on all IRWM planning topics.

What is an IRWM Plan?

> ***"An integrated, balanced, and consensus-based approach to ensuring the long-term sustainability of San Diego's water supply, water quality, and natural resources."***
>
> **-2007 IRWM Plan Vision**

IRWM Plans are regional plans designed to improve collaboration in water resources management. IRWM Plans are designed to comprehensively address all aspects of water management and planning throughout an IRWM Region. IRWM Plans cross jurisdictional, watershed, and political boundaries; involve multiple agencies, stakeholders, individuals, and groups; and attempt to address the issues and differing perspectives of all the entities involved through mutually beneficial solutions. To this end, IRWM Plans include integrated projects that achieve multiple benefits and address regional objectives set forth within the IRWM Plan. Projects included within an IRWM Plan are then eligible to receive funding through competitive grant processes administered by DWR. To date, the Region has received over $34 million through Proposition 50 and Proposition 84 grant funding.

DWR requires IRWM Plans to follow a set of sixteen (16) specific standards to ensure that each IRWM Plan includes specific content; however IRWM Regions have flexibility in how issues are addressed.

San Diego's IRWM Plan Update

The San Diego region adopted its first IRWM Plan in 2007, and is currently working to update the IRWM Plan by 2013.

The IRWM Plan Update will include information from planning documents published since 2007, as well as information produced from planning studies, workshops, and workgroups that are being conducted to address region-specific issues. Our stakeholders will work together to achieve sustainable water solutions in San Diego by:

- Collaborating with local land-use planners to more effectively manage water resources
- Investing in cost-effective, reliable local water supplies that will help meet present and projected future needs
- Identifying high priority and achievable water quality improvements
- Addressing climate change adaptation and mitigation for water resources

The 2013 IRWM Plan will allow the Region to continue to be eligible for Statewide IRWM grant funding, focus on updated priorities and issues, facilitate project integration, forge partnerships with a variety of stakeholders, and move the Region forward in implementing high-priority projects. Approximately $50 million in Proposition 84 grant funding remains allocated to the San Diego region to support water resources management in the future.

SAN DIEGO Integrated Regional Water Management

August 2011

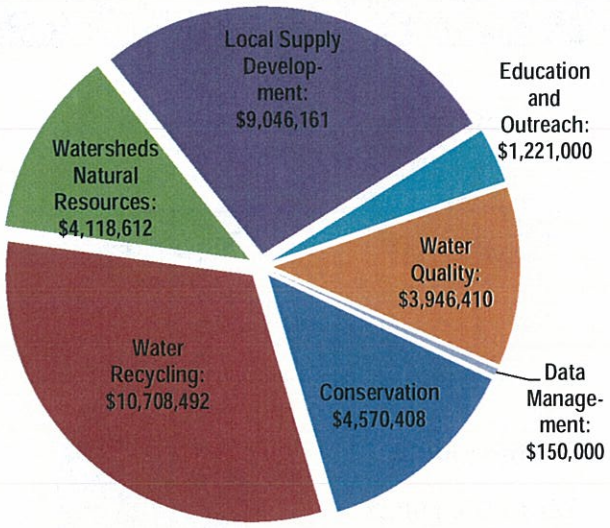
Prepared by the San Diego Regional Water Management Group and RMC Water and Environment

San Diego County Water Authority

San Diego IRWM Report Card
Executive Summary

The San Diego IRWM Program began in 2005, and since then has achieved remarkable success! The Program's major accomplishments are outlined below. (Please note: Because the IRWM Plan incorporates and tracks progress with goals set in other regional plans, much of the IRWM work is achieved by the IRWM Program stakeholders and is further supported by IRWM efforts.)

- ✓ **2005:** The City of San Diego, County of San Diego, and San Diego County Water Authority (SDCWA), who collectively comprise the San Diego Regional Water Management Group (RWMG), completed a Memorandum of Understanding (MOU) that formalized their commitment to fund, guide, and manage development of an IRWM Plan.
- ✓ **2006:** Establishment of the Regional Advisory Committee (RAC), which shapes regional planning and funding activities. The RAC is comprised of 32 members representing a broad spectrum of interests in San Diego County.
- ✓ **2007:** Finalization and adoption of the first San Diego IRWM Plan.
- ✓ **2008:** DWR awarded the San Diego IRWM region $25 million to support 19 high-priority local projects.
- ✓ **2009:** The San Diego region completed DWR's Region Acceptance Process and received formal approval of the region's boundary.
- ✓ **2009:** The San Diego RWMG, Upper Santa Margarita RWMG, and South Orange County RWMG formed the Tri-County Funding Area Coordinating Committee (FACC) as a collaborative inter-regional body that improved planning across regional boundaries and facilitated the allocation of Proposition 84 funding for IRWM projects.
- ✓ **2010:** DWR awarded the San Diego IRWM region a $1 million grant award for planning activities associated with preparing an IRWM Plan Update.
- ✓ **2011:** DWR awarded the San Diego IRWM region $8 million to implement 11 high-priority local projects.



Distribution of Funding Acquired through the San Diego IRWM Program by Program Area

Purpose of the IRWM Report Card

The San Diego IRWM Report Card provides an overview of the San Diego region's IRWM planning efforts. The 2007 San Diego IRWM Plan (available at www.sdirwmp.org) establishes a process to evaluate Plan performance. Each chapter of this report card serves to meet the Plan's evaluation requirements and provide an overview of progress to date.

Looking Ahead to 2012-2013 Plan Update

The San Diego IRWM Program will involve a continued and expanded focus on water supply reliability, impacts of climate change, salinity management, Total Maximum Daily Load (TMDL) compliance, ensuring regulatory certainty, and reducing delays in disbursements of funds from DWR. The Program will also focus on priorities that will provide a strong basis for selection of projects for funding. Moreover, the Program will look at diversifying funding sources to help ensure its long-term ability to support local needs.

San Diego IRWM Program
2011 Report Card on 2007 IRWM Plan

 Highest level of progress	 Substantial level of progress	 Moderate level of progress	 Plan targets have not been priority
Objective A Maximize public involvement 		**Objective F** Reduce negative effects on waterways and watersheds 	
Objective B Manage data effectively 		**Objective G** Reduce pollutants and stressors 	
Objective C Further water quality science management 		**Objective H** Protect habitat and open space 	
Objective D Develop diverse water resource mix 		**Objective I** Optimize water-based recreation 	
Objective E Operate reliable infrastructure system 			

Chapter 1 IRWM Program Status

1.1 Program Status

San Diego Regional Advisory Committee

The Regional Advisory Committee (RAC) was established in 2006 as an integral part of the San Diego IRWM Program, providing guidance and direction to the RWMG on IRWM planning efforts and grant applications. The RAC consists of 28 voting members and four non-voting members who represent water suppliers, wastewater agencies, environmental groups, flood managers, farm and business interests, disadvantaged communities (DACs), and tribes. RAC meetings are held approximately every two months and provide a forum in which to discuss IRWM planning topics. Thirty-two RAC meetings were held between March 2007 and June 2011. Meeting minutes and presentations can be found on the IRWM program's website: www.sdirwmp.org.

Regional Advisory Committee Meeting, April 2011

Stakeholder Outreach

One of the three long-term priorities of the San Diego IRWM Plan is to maintain public involvement. The San Diego region has carried out extensive stakeholder outreach, including workshops addressing Plan development and adoption, and grant opportunities. The following provides an overview on outreach efforts, including those focused on DACs and tribes.

Project Workshops

The San Diego IRWM Program held six workshops from April 2007 to August 2010 to educate people on the Proposition 50, 84, and 1E grant opportunities available through the IRWM Program. These meetings included information on how projects would be scored and ranked, and discussed requirements and criteria set forth by DWR for grant funding.

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

-Kirk Ammerman, Principal Civil Engineer
City of Chula Vista

Disadvantaged Communities

The San Diego IRWM Program held three outreach meetings between April and June 2010 with regional urban and rural DAC stakeholders and advocacy groups. The purpose of these meetings was to introduce DAC stakeholders to the IRWM Program, discuss grant opportunities, and discuss key water management issues facing DACs in the region.

As a result of these meetings and other outreach efforts, multiple projects aimed at meeting critical water supply and water quality needs of DACs were submitted for consideration of Proposition 84 grant funding. The final *Proposition 84 Implementation Grant Proposal* contained 11 high-priority projects, three of which have direct benefits to local DACs.

Tribal Groups

The San Diego IRWM Program held two outreach meetings for Tribal Groups in May and June 2010. These meetings provided an overview of the San Diego IRWM Program, and discussed grant opportunities and key water management issues facing tribes in the region.

Grant Opportunity Pursuits

The San Diego region, as an approved IRWM region with an adopted IRWM Plan, is eligible for grant funding through DWR's IRWM Program. The San Diego region has participated in three IRWM-related grant opportunities: Proposition 50, Proposition 84, and Proposition 1E.

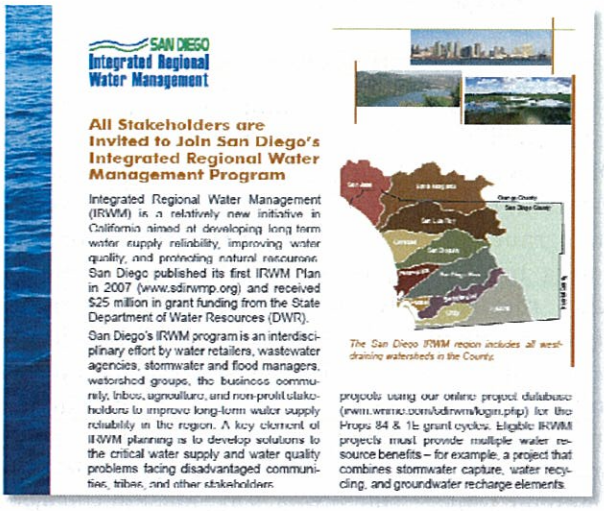
Proposition 50

In September 2007, the RAC recommended a project list that included 19 local projects for submission within San Diego's *Proposition 50 Implementation Grant Proposal*. The Proposition 50 Implementation Grant Program was a competitive process through which many IRWM regions in the state submitted projects for funding consideration. DWR awarded San Diego the maximum award of $25 million to support these regional projects. Specific details on San Diego's Proposition 50 projects are included in **Section 3.1**.

Proposition 84

The San Diego Region submitted one grant proposal for planning funds and one for implementation funds under the Proposition 84 Grant Program. In September 2010, the RAC recommended a work plan for submittal within San Diego's *Proposition 84 Planning Grant Proposal*. DWR awarded San Diego with $1 million to support planning and outreach activities associated with an IRWM Plan Update. Specific details of the work plan within San Diego's Planning Grant Proposal are included in **Section 3.2**.

In October 2010, the RAC recommended a project list with 11 high-priority projects for San Diego's *Proposition 84 Implementation Grant Proposal*. DWR awarded San Diego with approximately $8 million to support these regional projects. Specific details regarding the proposal are included in **Section 3.1**.



SAN DIEGO Integrated Regional Water Management

All Stakeholders are Invited to Join San Diego's Integrated Regional Water Management Program

Integrated Regional Water Management (IRWM) is a relatively new initiative in California aimed at developing long term water supply reliability, improving water quality, and protecting natural resources. San Diego published its first IRWM Plan in 2007 (www.sdirwmp.org) and received $25 million in grant funding from the State Department of Water Resources (DWR).

San Diego's IRWM program is an interdisciplinary effort by water retailers, wastewater agencies, stormwater and flood managers, watershed groups, the business community, tribes, agriculture, and non-profit stakeholders to improve long-term water supply reliability in the region. A key element of IRWM planning is to develop solutions to the critical water supply and water quality problems facing disadvantaged communities, tribes, and other stakeholders.

The San Diego IRWM region includes all west-draining watersheds in the County.

projects using our online project database (ewm.wrmc.com/sdirwm/login.php) for the Props 84 & 1E grant cycles. Eligible IRWM projects must provide multiple water resource benefits – for example, a project that combines stormwater capture, water recycling, and groundwater recharge elements.

Excerpt from Outreach Handout Distributed Prior to Proposition 84 Grant Solicitation

Proposition 1E

As a result of the San Diego region's inclusion in DWR's IRWM Program, public agencies and non-profits in the region are eligible to apply for Proposition 1E Stormwater Flood Management Grant funding. Unlike the previous applications, Proposition 1E applications are submitted by individual agencies with support of the RWMG. Three municipalities within the region applied for grant funding in April 2011. Draft awards have not been released.

"We were very impressed with the San Diego IRWM program's willingness to think 'outside the box'. This creativity allowed rural disadvantaged communities that otherwise would have been left out of process to participate in this essential water resources program."

-Dave Harvey,
Southern California Regional Environmental Manager
Rural Community Assistance Corporation

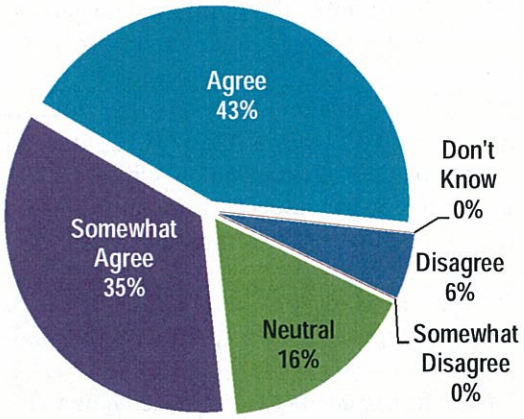
1.2 San Diego IRWM Survey Results

The RWMG recently distributed an online survey to all San Diego IRWM stakeholders. Fifty-four individuals representing agencies, stakeholders, local project sponsors, interested parties, and the general public submitted responses. The survey included questions regarding many aspects of the San Diego IRWM Program. **Appendix A** contains a detailed description of the survey results; below is a summary.

IRWM Planning

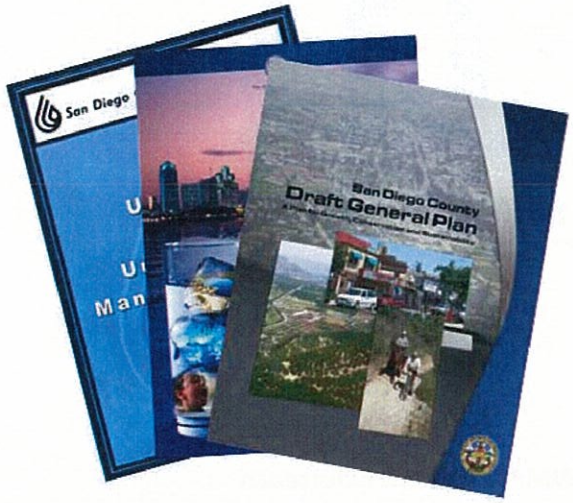
In total, regional stakeholders responded positively to IRWM Planning in the San Diego region. 87% of respondents said they consider the 2007 San Diego IRWM Plan as a resource for water resources information. Most respondents agreed that the 2007 San Diego IRWM Plan addresses the Region's key water issues.

Do You Think the 2007 San Diego IRWM Plan Addresses the Region's Key Water Issues?



Fifty-three percent of respondents noted that the 2007 San Diego IRWM Plan objectives need a little updating or revision, while 29% believe that the objectives remain current.

However, the survey indicated that the San Diego IRWM Plan is not having much influence in the development of individual agency water management plans or other local planning efforts. Only half of respondents noted that they have referenced the San Diego IRWM Plan in other planning documents. 82% of respondents said the IRWM Plan could be better integrated throughout the region by its inclusion in local General Plans, Urban Water Management Plans, and other regional planning documents.

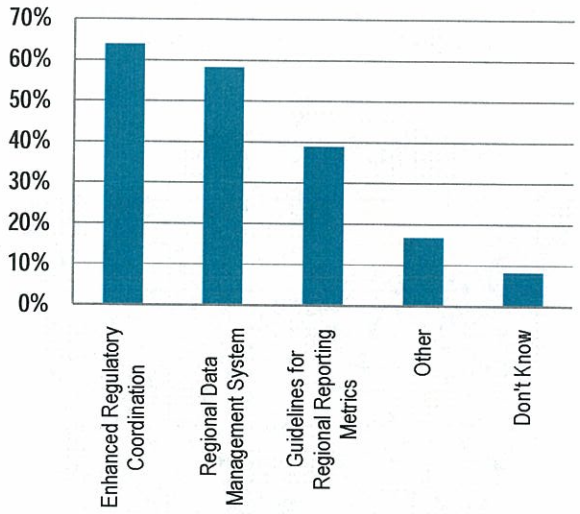


"The SDIRWM works effectively to bring diverse needs and opinions into a cohesive force to further common goals for the region's water resource planning requirements. They have developed consistent tools and protocols for those diverse interests to be heard and to fairly and objectively recommend projects that will ensure that the objectives of the region are met."

–Lori Vereker, Director of Utilities
City of Escondido

Looking into the future, the majority of respondents (64%) stated that they would like to see the IRWM Program include enhanced regulatory coordination with the Regional Water Quality Control Board, the California Department of Public Health, and other regulatory agencies. 58% of respondents said they would like to see the IRWM Program include a regional data management system, and 39% said they support development of guidelines for regional reporting metrics.

What Would You Like to See the IRWM Program Address in the Future?



IRWM Stakeholder Outreach

In terms of stakeholder outreach, the majority of respondents said that they use all three San Diego IRWM outreach and communication tools: RAC meetings, stakeholder emails, and the San Diego IRWM website. 82% said they find RAC meetings and presentations to be the most useful outreach and communication tools.

Several respondents noted that the San Diego IRWM Program should be reaching out to or increasing involvement with non-governmental organizations, including DACs and tribal groups.

IRWM Project Solicitation and Selection

The RWMG developed an online tool that allows local project sponsors to easily submit proposed projects during the grant application phase. The online project database facilitates easy collection of uniform information and is utilized by the Project Selection Workgroup to evaluate the merits of projects submitted for grant funding. While a large portion of respondents (45%) said that they did not use the online project database for the Proposition 84 project solicitation process, those who did had a generally positive experience.

IRWM Governance and Financing

San Diego's IRWM Program is financed by the three RWMG partners (the City and County of San Diego and SDCWA), and the IRWM Plan and updates must be adopted by each of the agencies' governing bodies. To date, the RWMG has committed $1,200,000 to the regional planning effort, in addition to in-kind contributions.

The three agencies are equal partners in all aspects of IRWM Program implementation. As the lead RWMG partner, SDCWA administers the IRWM Program.

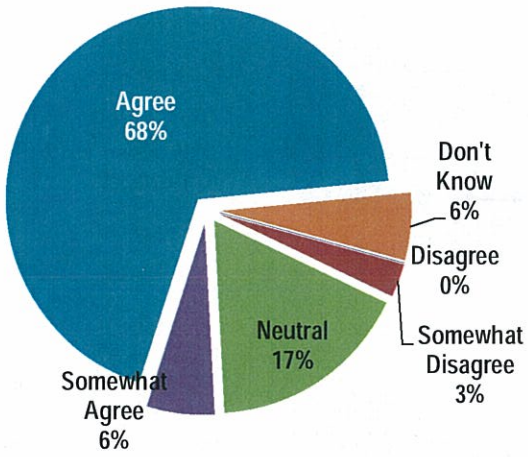
There has been much discussion regarding preferred governance and financing structures for the IRWM Program. Since time was of the essence when the Region applied for Proposition 50 grant funds, the current MOU structure was adopted with the promise that it would be revisited in the next Plan update.

With this in mind, the Survey asked several questions regarding the existing governance structure and potential options for the future. This discussion will be continued in the 2012 IRWM Plan update. Respondents largely stated that the existing governance structure has been successful so far. Approximately 74% of respondents consider the existing governance structure – with the RWMG, RAC and ad-hoc workgroups – successful, while 17% of respondents were neutral, and only 3% do not consider the current structure successful.

"The San Diego IRWM program brought together typically segregated sectors of sustainable planning – NGOs, water supply and water quality agencies, private sector, academia – and led to creating a more holistic and effective program proposal than any one of us had coming into the process."

– Paul Herzog, Ocean Friendly Gardens Coordinator Surfrider Foundation

Do You Feel the Existing Governance Structure Has Been Successful?



Respondents were mixed as to who they felt should pay for the San Diego IRWM Program in the future. 58% believe funding should come from RWMG members, while more than 25% believe RAC members, NGOs, tribes, and interested parties should also contribute. Respondents overwhelmingly agreed that DACs should not be asked to contribute to program financing.

Respondents were mixed on whether they would be willing to pay for a share of the costs associated with preparing a grant application, if they had a project selected for future funding. 53% of respondents said they would be willing to pay, while 6% would not be willing, and 41% were unsure.

IRWM Regional Advisory Committee

Of the total respondents, 53% stated they currently serve or have previously served on the RAC. When asked what have been the most valuable topics addressed by the RAC to date, over 30% of respondents expressed interest in the following topics:

- Coordination with land use planning
- Salinity and nutrient management
- Stormwater management program
- Adapting to climate change
- Water supply for agriculture

Two-thirds of respondents (67%) noted that they feel the RAC forum contributes to integrated planning and projects.

Regional Advisory Committee Meeting, March 2010

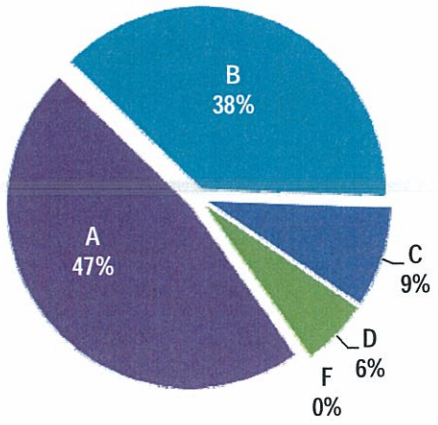
Survey Summary

Overall, respondents noted their support for the San Diego IRWM Program, giving the program a high "letter grade."

"The San Diego IRWM program enables local water agencies and NGOs to learn from each other and work together to protect the region's water and natural resources."

-Rob Hutsel, Executive Director
San Diego River Park Foundation

What Overall Letter Grade Would You Give the San Diego IRWM Program?



Chapter 2 IRWM Plan Performance

The 2007 San Diego IRWM Plan outlines a formal assessment process to evaluate overall performance of the IRWM Plan. The Plan established specific targets for measuring progress in achieving the designated IRWM Plan objectives. Section 2.1 below provides an overview of the objectives of the IRWM Plan, the targets established for achieving each objective, and the current progress towards meeting each target. **Appendix B** of this report provides a detailed table.

In addition to the targets and objectives outlined in Section 2.1, the 2007 IRWM Plan also identified seven short-term IRWM priorities. Section 2.2 discusses progress made toward these priorities.

2.1 Progress toward Achieving IRWM Plan Targets

The 2007 San Diego IRWM Plan includes 38 specific targets that were established for measuring progress in achieving the 9 designated IRWM Plan objectives. A summary of the objectives, their targets, and total progress to date is described below.

Please note that Section M, *Consistency with Local Plans* of the 2007 San Diego IRWM Plan notes that the IRWM Plan builds upon relevant planning documents and efforts within the San Diego Region. As such, many of the targets were based on existing efforts that are connected to, but not necessarily a part of IRWM planning efforts. Other targets are specific to the IRWM Program. Measures of success are directly related to achieving these targets.

Four graphics have been developed to easily identify progress toward each objective:

The highest level of progress has been made toward achieving IRWM Plan targets.

Substantial progress has been made toward achieving IRWM Plan targets, but modest additional progress is needed to fully meet the goals.

Moderate progress has been made toward achieving IRWM Plan targets, but moderate additional progress is needed to fully meet the goals.

Plan Targets have not been a priority for IRWM Plan implementation.

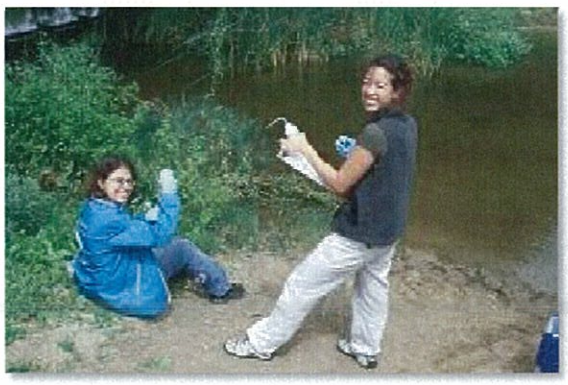
Objective A – Maximize stakeholder/ community involvement and stewardship.

The following four targets relate to Objective A:

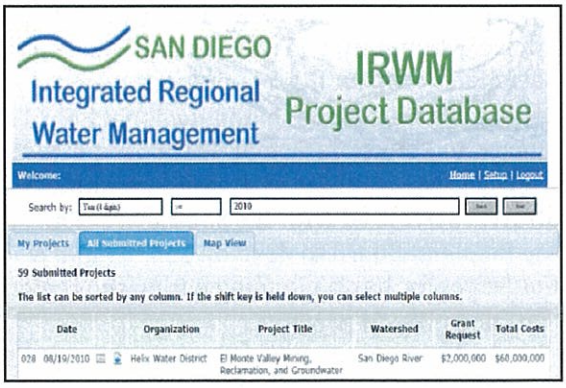
1. Develop by 2009 a regional IRWM website to provide centralized public access to water management data and information.
2. Develop by 2008 and implement by 2010 regional approaches to water management education.
3. Conduct water management outreach and solicit input from 2% of Region's population each year, including underserved and disadvantaged communities.
4. Provide "hands-on" stewardship opportunities in the Region's watersheds to 1% of Region's population each year, including underserved and disadvantaged communities.

Progress Summary: Objective A

- ✓ Successfully launched www.sdirwmp.org website in 2008.
- ✓ Successfully launched project database (www.sdirwmp.org) in 2010.
- ✓ Successfully launched online grant administration tool for projects awarded IRWM grant funding.
- ✓ San Diego IRWM stakeholder email list has approximately 180 members from a wide range of agencies and organizations.
- ✓ San Diego Municipal Stormwater Copermittees began implementing a Regional Residential Education Program.
- ✓ Various organizations provide ongoing "hands-on" stewardship opportunities for residents.
- ✓ San Diego IRWM projects:
  - *San Diego Regional Pollution Prevention Program / San Diego Regional Water Quality Assessment and Outreach Project (San Diego CoastKeeper)*
  - *Biofiltration Wetland Creation and Education Program (Zoological Society of San Diego)*
  - *Green Mall Porous Paving and Infiltration (City of San Diego)*
  - *Chollas Creek Runoff Reduction and Groundwater Recharge Project (County of San Diego)*



Volunteer Monitors for Proposition 50 Project: San Diego Regional Water Quality Assessment and Outreach Project



*SDIRWM Project Database (link from **www.sdirwmp.org**)*

Objective B – Effectively obtain, manage, and assess water resources data and information.

The following two targets relate to Objective B:

1. Develop standards for the integration and assessment of water management data and information by 2010.
2. Provide centralized public access to key water management data sets by 2010.

Progress Summary: Objective B

- ✓ Successfully launched project database (www.sdirwmp.org) in 2010.
- ✓ Successfully launched online grant administration tool for projects awarded IRWM grant funding.
- ✓ The Regional Board, partnered with the San Diego River Park Foundation, has developed a pilot website with public access to water quality data.
- ✓ San Diego IRWM projects:
  - *Regional Water Data Management Program (County of San Diego)*
  - *San Diego Regional Pollution Prevention Program / San Diego Regional Water Quality Assessment and Outreach Project (San Diego CoastKeeper)*

Objective C – Further scientific and technical foundation of water quality management.

The following five targets relate to Objective C:

1. By 2010, develop an agreed-upon system and metrics for tracking the progress of Basin Plan validation efforts through coordination with Regional Board staff.
2. Conduct water quality assessment for beneficial use attainment within 75 percent of surface waters by 2015.
3. Assess and validate Basin Plan beneficial uses and water quality objectives for the Region's watersheds by 2017.
4. By 2013, develop a system and metrics for tracking groundwater assessment information.
5. By 2015, develop a system and metrics for evaluating ocean water quality and marine habitat.

Progress Summary: Objective C

- ✓ Planning Grant is funding a white paper on coordination between the San Diego IRWM Program and Region Board on topics of mutual interest.
- ✓ RWMG was represented on the Regional Board's 2011 Triennial Review Advisory Committee (TRAC) to provide feedback on amendments to the Basin Plan from an IRWM perspective.
- ✓ RWMG will participate in the Regional Board's process of assessing water quality and developing four TMDLs to protect beneficial uses for regional water bodies.
- ✓ SDCWA partnered with the Southern California Salinity Coalition (SCSC) and the Regional Board to develop *Salinity and Nutrient Management Planning Guidelines* for basin planning within the region.
- ✓ San Diego IRWM projects:
  - *Implementing Nutrient Management in the Santa Margarita River Watershed project (County of San Diego)*
  - *Lake Hodges Water Quality and Quagga Mitigation Measures (SDCWA)*
  - *Regional Water Data Management Program (County of San Diego)*

Objective D – Develop and maintain a diverse mix of water resources.

The following eight targets relate to Objective D:

1. Increase water conservation savings from about 51,090 AFY in 2006 to at least 79,960 AFY by 2010 and 108,400 AFY by 2030.
2. Increase seawater desalination capability within the region from zero AFY to 34,690 AFY by 2015.
3. Increase recycled water use from 14,830 AFY in 2006 to 33,670 AFY by 2010 and 47,580 AFY by 2030.
4. Increase groundwater supply within SDCWA's service area from about 14,960 AFY in 2006 to 28,580 AFY by 2010 and 31,180 AFY by 2030.
5. Implement Colorado River conservation and transfer programs, increasing deliveries from 35,000 AFY in 2006 to 277,700 AFY by 2030.
6. Include an analysis in SDCWA's 2010 Urban Water Management Plan (UWMP) that assesses the effect of climate change on future water supplies.
7. Develop and implement regional drinking water source protection guidelines for the Region by 2012.
8. Meet groundwater supply and water quality objectives identified in the County's General Plan 2020 for groundwater-dependent communities by 2012.

Progress Summary: Objective D

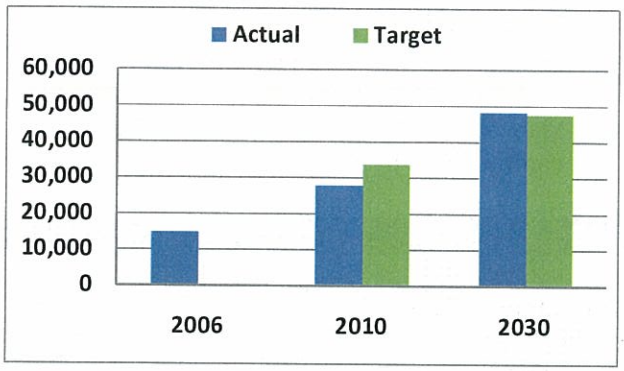
- ✓ SDCWA and member agencies reduced per capita water use by 27% between 2007 and 2010, and are committed to meeting a regional goal of 167 gpcd by 2020 under SBx7-7. Total conservation target for all member agencies of 138,400 AF by 2030. U.S. Marine Corps Camp Pendleton and SDCWA are exploring seawater desalination opportunities.
- ✓ Total recycled water from SDCWA member agencies was 27,931 AFY in 2010, and will total 48,278 AFY by 2030.
- ✓ The City of San Diego constructed an advanced water treatment pilot project that will produce 1 million gallons of purified water per day to study technologies for indirect potable reuse/reservoir augmentation.
- ✓ Groundwater supplies from SDCWA member agencies totaled 20,833 AFY in 2010, and will total 28,360 AFY by 2030. The City of Oceanside and Sweetwater Authority desalinate brackish groundwater for municipal use.
- ✓ SDCWA received 150,200 AFY in Quantification Settlement Agreement water in 2010.
- ✓ SDCWA coordinated its 2010 UWMP Update with its 24 member agencies, including both demand and supply assessment and the potential effect of climate change on future water supplies.

- ✓ San Diego IRWM projects:
  - *Implementation of Integrated Landscape and Agricultural Efficiency (SDCWA)*
  - *Irrigation Hardware Giveaway and Cash for Plants (City of San Diego)*
  - *Over-Irrigation/Runoff Reduction project (City of Encinitas)*
  - *Sustainable Landscapes Program (SDCWA)*
  - *Carlsbad Desalination Local Conveyance (Olivenhain MWD)*
  - *North San Diego County Cooperative Demineralization Project (San Elijo JPA)*
  - *Padre Dam Water Reclamation Facility Expansion Project (Padre Dam MWD)*
  - *El Monte Valley Groundwater Recharge and Restoration (Helix Water District)*
  - *Recycled Water Retrofit Assistance Program (SDCWA)*
  - *Recycled Water Distribution System Expansion and Parklands Retrofit, and Indirect Potable Reuse/Reservoir Augmentation Demonstration Project (City of San Diego)*

Progress Summary: Objective D

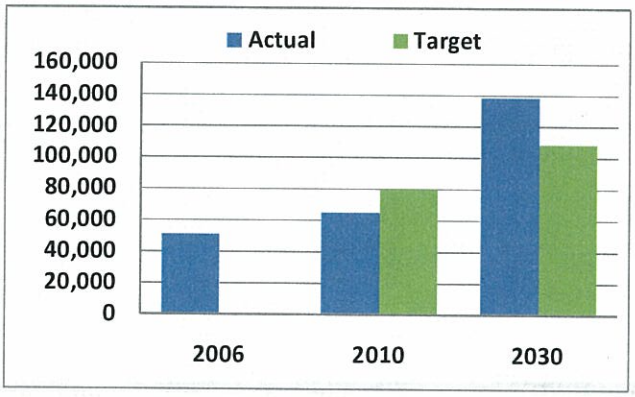
- *North San Diego County Regional Recycled Water Project (Olivenhain Municipal Water District)*
- *North San Diego County Cooperative Demineralization Project (San Elijo Joint Powers Authority)*
- *Santa Margarita Conjunctive Use Project (Fallbrook Public Utilities District)*
- *South San Diego County Water Supply Strategy (Sweetwater Authority)*
- *San Vicente Reservoir Source Water Protection through Watershed Property Acquisition (SDCWA)*
- *El Capitan Reservoir Watershed Acquisition and Restoration (San Diego River Park Foundation)*

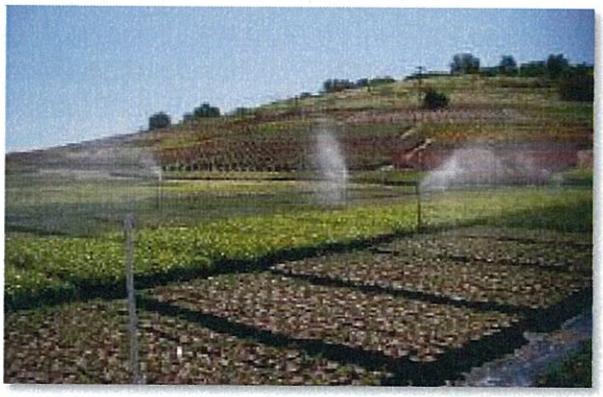
San Diego IRWM
Regional Recycled Water Target (in acre-feet)



Completed Demonstration Project Improvements in City of San Diego, Proposition 50 Project: Recycled Water Distribution System Expansion and Parklands Retrofit, and Indirect Potable Reuse/Reservoir Augmentation Demonstration Project

San Diego IRWM
Regional Conservation Target (in acre-feet)





Regional conservation through Proposition 50 Project: Implementation of Integrated Landscape and Agricultural Efficiency Programs

Objective E – Construct, operate, and maintain a reliable infrastructure system.

The following four targets relate to Objective E:

1. Develop facilities and manage supplies to ensure adequate emergency and carry-over deliveries.
2. Increase local treatment of imported and local surface waters from 597 mgd to 860 mgd in 2010 and 920 mgd in 2030.
3. Develop the conveyance facilities necessary to deliver a reliable supply and assure adequate resources to maintain existing conveyance systems.
4. Develop the infrastructure needed to support the targets identified for developing recycled water, desalination, and groundwater supplies.

Progress Summary: Objective E

- ✓ SDCWA's Emergency Storage Project (ESP) will increase local emergency water supply reliability by providing up to six months of emergency water storage through a system of reservoirs, pipelines, and pumping stations.
- ✓ SDCWA completed the Twin Oaks Valley Treatment Plant in 2008, adding 100 mgd capacity to regional total. Olivenhain MWD and City of San Diego have also expanded water treatment capacity since 2005.
- ✓ San Diego IRWM projects:
  - *San Diego Reservoir Intertie Project Conceptual Design (Sweetwater)*
  - *Padre Dam Water Reclamation Facility Expansion Project (Padre Dam MWD)*
  - *El Monte Valley Groundwater Recharge and Restoration (Helix WD)*
  - *North San Diego County Cooperative Demineralization Project (San Elijo JPA)*
  - *Rural Disadvantaged Communities Partnership Project (Rural Communities Assistance Corporation)*
  - *Carlsbad Desalination Local Conveyance (Olivenhain MWD)*

Objective F – Reduce the negative effects on waterways and watershed health caused by hydromodification and flooding.

The following three targets relate to Objective F:

1. Develop and implement regional standards for Low Impact Development (LID) practices by 2010.
2. Develop and implement regional approaches to hydromodification management by 2010.
3. By 2010, implement a system to track rates of change in area of impervious surfaces regionally.

Progress Summary: Objective F

- ✓ MS4 Copermittees completed a Countywide Model Standard Urban Stormwater Mitigation Plan (SUSMP), which includes a design guide for LID.
- ✓ MS4 Copermittees developed a Hydromodification Plan that was adopted by the San Diego Regional Water Quality Control Board, and incorporated the plan and hydromodification criteria into the Model SUSMP.
- ✓ San Diego IRWM projects:
  - *City of San Diego Green Mall Porous Paving Infiltration (City of San Diego)*
  - *Chollas Creek Runoff Reduction and Groundwater (County of San Diego)*
  - *Bannock Avenue Neighborhood Streetscape Enhancements for Tecolote Creek Watershed Protection Project (City of San Diego)*
  - *Pilot Concrete Channel Infiltration Project (City of Santee)*

Objective G – Effectively reduce sources of pollutants and environmental stressors

The following six targets relate to Objective G:

1. Implement Total Maximum Daily Loads (TMDLs) according to established schedules.
2. Reduce or avoid the need for TMDLs by monitoring and managing impacts to receiving waters, with an emphasis on 303(d)-listed water bodies and other Environmentally Sensitive Areas.
3. Develop by 2012 a regional management plan for Total Dissolved Solids (TDS).
4. Develop and implement comprehensive source management strategies to address regionally-significant constituents (e.g., pathogens, nutrients, sediments).
5. Reduce the frequency of sanitary sewer overflows in excess of 1,000 gallons from 180 overflows per year in 2005 to 120 overflows per year in 2012.
6. Reduce the volume of sanitary sewer overflows per mile of collection system.

Progress Summary: Objective G

- ✓ The Regional Board and jurisdictions with implementation responsibilities are on schedule with four adopted TMDLs.
- ✓ SDCWA partnered with SCSC and the Regional Board to develop *Salinity and Nutrient Management Planning Guidelines.*
- ✓ Proposition 84 Planning Grant will fund multiple Salinity and Nutrient Management Plans within the IRWM region.
- ✓ The City and County of San Diego are working on multiple methods to reduce sanitary sewer overflows.
- ✓ San Diego IRWM projects:
  - *San Diego Regional Pollution Prevention / San Diego Regional Water Quality Assessment and Outreach Project (San Diego CoastKeeper)*
  - *Over-Irrigation/Bacteria Reduction (City of Encinitas)*
  - *San Vicente Reservoir Source Water Protection through Watershed Property Acquisition (SDCWA)*
  - *El Capitan Reservoir Watershed Acquisition & Restoration Program (San Diego River Park Foundation)*
  - *Biofiltration Wetland Creation and Education Program (Zoological Society of San Diego)*
  - *San Dieguito Watershed Management Plan Implementation -- Lake Hodges Natural Treatment System Conceptual Design (San Dieguito Watershed Council)*
  - *City of San Diego Green Mall Porous Paving Infiltration (City of San Diego)*
  - *Chollas Creek Runoff Reduction and Groundwater Recharge Project (County of San Diego)*
  - *Lake Hodges Water Quality and Quagga Mitigation Measures (SDCWA)*
  - *Implementing Nutrient Management in the Santa Margarita River Watershed (County of San Diego)*
  - *Bannock Avenue Neighborhood Streetscape Enhancements for Tecolote Creek (City of San Diego)*
  - *Pilot Concrete Channel Infiltration Project (City of Santee)*

Concrete Channel in Woodglen Vista Creek, Proposition 84 Project: Pilot Concrete Channel Infiltration Project

Santa Margarita (SM) River, Proposition 84 Project: Implementing Nutrient Management, SM River

Objective H – Protect, restore, and maintain habitat and open space.

There are four targets relating to Objective H, including:

1. Conserve by 2012 a minimum of 10,000 acres of habitat and open space, including functional riparian habitat and associated buffer habitat, and functional wetland habitat.
2. Restore by 2012 a minimum of 1,000 acres of habitat and open space, functional riparian habitat and associated buffer habitat, and functional wetland habitat.
3. Remove and control a minimum of 1,000 acres of non-native invasive plants by 2012.
4. Monitor, manage, control, and prevent establishment of nuisance aquatic species.

Progress Summary: Objective H

- ✓ The San Diego County Multiple Species Conservation Program (MSCP) led to local acquisition of 6,454 acres and federal/state acquisition of 29,050 acres.
- ✓ The City of San Diego MSCP had led to conservation of 33,215 acres.
- ✓ SDCWA finalized its Subregional Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) in 2010.
- ✓ San Diego IRWM projects:
  - *San Vicente Reservoir Source Water Protection through Watershed Property Acquisition and Restoration (SDCWA)*
  - *El Capitan Reservoir Watershed Acquisition and Restoration Program (San Diego River Park Foundation)*
  - *Northern San Diego County Invasive Non-Native Species Control Program (Mission Resource Conservation District)*
  - *Chollas Creek Integration Project (Jacobs Center for Innovation)*
  - *Lake Hodges Water Quality and Quagga Mitigation Measures (SDCWA)*

Objective I – Optimize water-based recreational opportunities

The following two targets relate to Objective I:

1. Develop 200 acres of water-based recreational open space that focuses on underserved areas and ensures equal access for disadvantaged communities.
2. By 2015 provide 20 new public access points (boat launch facilities, fishing floats or piers, swim beaches, trails, stairs, parking areas, or similar) to recreational surface waters.

Progress Summary: Objective I

- ✓ San Diego provides more than 45 recreational trails available for hiking, bird-watching, and picnicking at local reservoirs, lagoons, and bays.
- ✓ San Diego has 18 boat-launching areas providing recreational fishing and boating access to local water supply reservoirs.
- ✓ San Diego IRWM projects:
  - *San Vicente Reservoir Source Water Protection through Watershed Property Acquisition and Restoration (SDCWA)*
  - *El Capitan Reservoir Watershed Acquisition and Restoration Program (San Diego River Park Foundation)*
  - *Chollas Creek Integration Project (Jacobs Center for Neighborhood Innovation)*

2.2 Progress on Short-Term Priorities

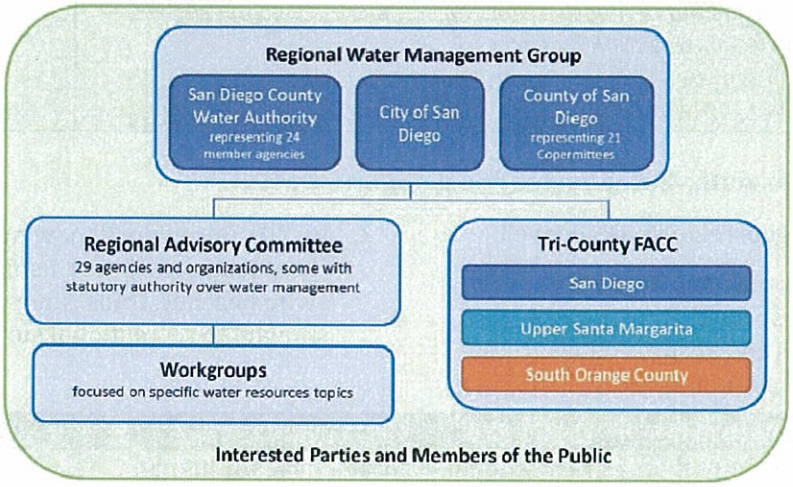
The 2007 San Diego IRWM Plan identifies seven short-term priorities that address immediate Plan implementation needs. The short-term priorities are listed below, followed by a discussion of progress toward achieving each priority.

Priority 1. Implement priority projects and programs that support the Region's IRWM goals and objectives.

- ✓ Project and program selection for IRWM-related funding programs (Proposition 50 and Proposition 84) has emphasized support for San Diego's IRWM goals and objectives.
- ✓ Each IRWM grant proposal submitted to DWR has included projects that meet multiple IRWM Plan objectives.

Priority 2. Formally establish a long-term institutional structure to guide the ongoing development and implementation of the San Diego IRWM Plan.

- ✓ The RWMG agencies adopted a revised MOU in March 2009 that clarified their roles and responsibilities through 2013.
- ✓ In 2009, the RAC indicated support for the existing institutional structure, which had been in place since before adoption of the 2007 IRWM Plan.
- ✓ The MOU serves as a formal establishment of an institutional structure for the San Diego IRWM region through 2013.



San Diego IRWM Governance Structure

Priority 3. Implement and update (as needed) a Public Outreach Plan that ensures key stakeholders and affected parties are informed and engaged in IRWM planning and implementation.

- ✓ The 2007 IRWM Plan included a *Public Outreach and Disadvantaged & Environmental Justice Community Involvement Plan* designed to ensure key stakeholders and others are involved in IRWM activities. The plan was updated in 2009.
- ✓ Since 2007, the RWMG and RAC have continued to identify stakeholders as necessary additions to the IRWM planning process. Original RAC members were selected to represent water suppliers, wastewater agencies, environmental groups, stormwater and flood managers, agricultural and business interests, and DACs. New RAC members invited to participate represent the Rural Community Assistance Corporation, the military community, U.S. Bureau of Reclamation, San Diego Regional Water Quality Control Board and representatives from adjacent Tri-County FACC regions.
- ✓ The RWMG has developed an email distribution list for the IRWM Program that is used to communicate regularly with stakeholders.

Priority 4. Establish a regional, web-based system for sharing, disseminating, and supporting the analysis of water management data and information.

- ✓ The RWMG has developed a website dedicated to IRWM planning for the San Diego region (www.sdirwmp.org).
- ✓ The website contains information about how one may get involved with the San Diego IRWM planning process, including how to submit projects to the IRWM project database.
- ✓ The region's Proposition 84 IRWM Implementation Grant includes funding for the County of San Diego's Regional Data Management Program, which will synthesize existing data management efforts.

Priority 5. Complete a needs assessment and develop recommendations for addressing existing deficiencies in the technical and scientific foundation of San Diego Basin Plan beneficial uses and water quality objectives.

- ✓ The RWMG and RAC have identified resolving deficiencies in the San Diego Basin Plan as a major need for the San Diego Region. Filling the existing gaps in knowledge and data related to the link between beneficial uses and water quality objectives will provide a sound basis for improved decision-making and will allow for improved water quality.
- ✓ The RWMG will develop a white paper on collaboration with the San Diego Regional Board with input from the RAC and Regional Board staff. The RWMG will explore the extent to which the IRWM program may partner with the Regional Board to achieve greater regulatory certainty and better address supporting beneficial uses and meeting water quality objectives. Reviewing the technical and scientific basis for specific use designations and standards established under the Basin Plan will allow an open dialogue with IRWM stakeholders on the validity of water quality standards.

Priority 6. Complete an updated assessment of local water management plans to ensure effective and upfront input from these plans during all phases of IRWM planning and implementation. Where planning deficiencies are identified, address these deficiencies as part of the IRWM Plan update process.

- ✓ The RWMG will conduct a planning study of water management and land use planning in the IRWM Plan Update. This will involve an updated assessment of water management plans in the region, as well as acknowledgement and resolution of any inconsistencies with the IRWM Plan and local land use plans.
- ✓ The study will describe how the San Diego region may practice integrated land use and watershed management, including:
  - timely planning of water supply and wastewater improvements,
  - supporting use of recycled water by large-scale irrigators,
  - improved coordination with land use planning efforts,
  - coordinated flood management and stormwater capture,
  - enhanced habitat protection and restoration, and
  - improved protection of groundwater and surface water quality.

Priority 7. Revise the IRWM Plan and publish the Second Edition of the San Diego IRWM Plan.

- ✓ DWR awarded the San Diego Region a $1,000,000 planning grant to revise the 2007 San Diego IRWM Plan. This project is described in detail in Chapter 3, *Project Performance.* The RWMG is moving forward with the IRWM Plan update.

Chapter 3 Project Performance

3.1 Proposition 50 and 84 Implementation Grants

In 2007, the San Diego RWMG submitted a grant proposal to DWR for Proposition 50 funding. This proposal included 19 projects identified by the RWMG and RAC that would implement high priority programs to meet the San Diego Region's water supply, conservation, water quality, and natural resources needs. DWR awarded the Region the maximum award of $25,000,000 to support these projects

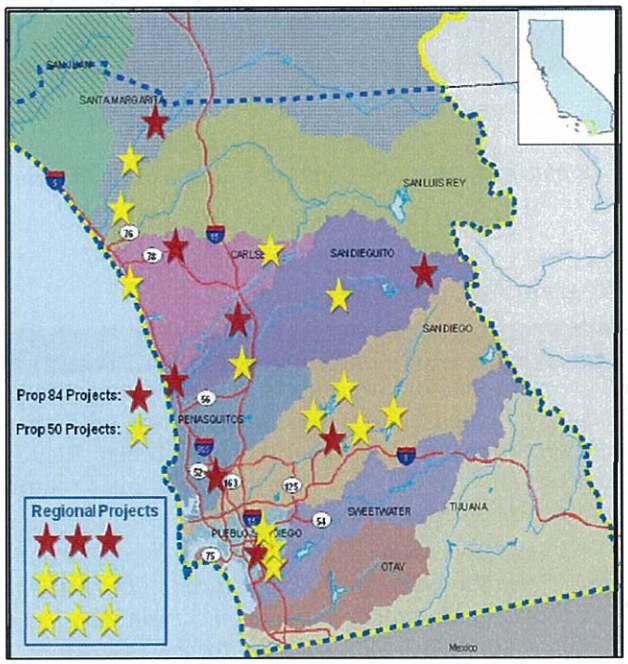
In January 2011, the San Diego RWMG submitted an implementation grant proposal to DWR for Proposition 84 funding. This proposal included 11 projects that would implement high priority programs to meet the San Diego Region's water supply, conservation, water quality, and data management needs. In May 2011, DWR recommended that the San Diego Region receive its entire implementation grant request of $7,900,000, plus an additional $70,000 as part of a joint project with the Upper Santa Margarita IRWM region (see map at right).

The following sections provide information regarding the performance of projects contained within the Proposition 50 and Proposition 84 Implementation Grant Proposals. These projects have been categorized into seven Program Areas: Conservation, Water Recycling, Watersheds/ Natural Resources, Local Supply Development, Education and Outreach, Water Quality, and Data Management.

The following provides an overview of each of the Proposition 50 Implementation Grant Projects, including funding allocated to each program to date, and alignment with the IRWM Objectives established within the 2007 IRWM Plan. This information is current as of June 2011, and is therefore subject to change as grant disbursements and matching funding are allocated to the various projects.

Since the Proposition 84 implementation grant contract has not been finalized, no funds have been billed to date for these projects. As such, the summaries contain information regarding any design completed for these projects.

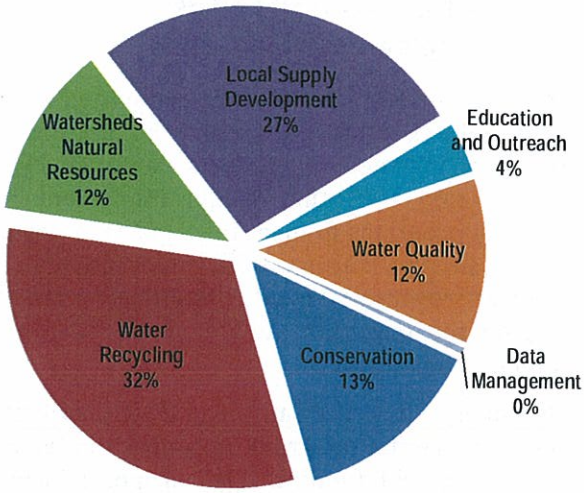
The graphic below indicates the approximate location of each Proposition 50 and 84 Implementation Grant Project, demonstrating that these projects span throughout the entirety of San Diego County.



Proposition 50 and 84 Implementation Grant Project Locations

Appendix C of this document contains a detail overview of each Proposition 50 and Proposition 84 Implementation Grant Project.

Ribbon-Cutting Ceremony at the 1st Completed San Diego IRWM Project: Biofiltration Wetland Creation and Education Program



Funding Allocation Percentage by Program Area (Proposition 50 and Proposition 84)

Program Area 1: Conservation

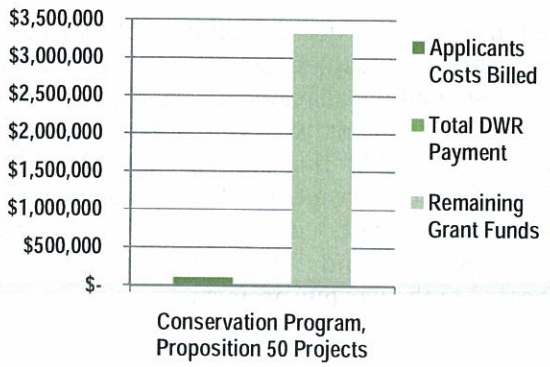
Program Description

Three Proposition 50 projects and one Proposition 84 project fall in this Program Area. These projects were selected, in part, for their conformance with the 2007 San Diego IRWM Plan, which notes that future conservation programs in the San Diego Region will focus on landscape and commercial/industrial conservation. As such, the projects in this Program Area aim to implement agricultural, commercial, and residential energy efficiency projects.

- ✓ *Implementation of Integrated Landscape and Agricultural Efficiency (SDCWA)*
- ✓ *Irrigation Hardware Giveaway and Cash for Plants (City of San Diego)*
- ✓ *Over-Irrigation Runoff/Bacteria Reduction Project (City of Encinitas)*
- ✓ *Sustainable Landscapes Program (SDCWA)*

Program Status

Much work is under way on these projects. The City of San Diego is issuing cash for plants rebates, SDCWA has met its match requirements and is fully implementing the Agricultural Audit and Landscape Intern Programs. Other program elements are awaiting amendments from DWR due to change in scope. As demonstrated within the graphic to the right, to date applicants have billed a total of $101,293, $13,750 of which has been reimbursed by DWR. In total, $3,319,748 in grant funds remain for this Program Area.



The program design of the conservation project included in the Proposition 84 Implementation Grant Proposal will begin implementation in early 2012, once grant funds are available.

Program Area 2: Water Recycling

Program Description

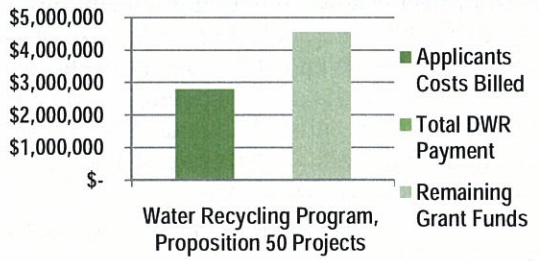
Three Proposition 50 projects and two Proposition 84 projects are in this Program Area. These projects were selected, in part, for their conformance with the 2007 San Diego IRWM Plan, which lists diversification of regional water portfolios as a major goal. As such, the projects in this Program Area are designed to increase recycled water supply throughout the San Diego Region.

- ✓ *Padre Dam Water Reclamation Facility Expansion Project (Padre Dam Municipal Water District)*
- ✓ *Recycled Water Retrofit Assistance Program (SDCWA)*
- ✓ *Recycled Water Distribution System Expansion and Parklands Retrofit, and Indirect Potable Reuse/Reservoir Augmentation Demonstration Project (City of San Diego)*
- ✓ *North San Diego County Regional Recycled Water Project (Olivenhain Municipal Water District)*
- ✓ *North San Diego County Cooperative Demineralization Project (San Elijo Joint Powers Authority)*

Program Status

As demonstrated in the graphic on the right, Proposition 50 recycled water projects are moving ahead and applicants have billed approximately $2,797,815 to date within this Program Area. A large portion of funding, $4,540,935, still remains for this program.

Although the Proposition 84 projects have not begun, design work has been initiated for both of the Water Recycling Program Area projects.



Program Area 3: Watersheds/Natural Resources

Program Description

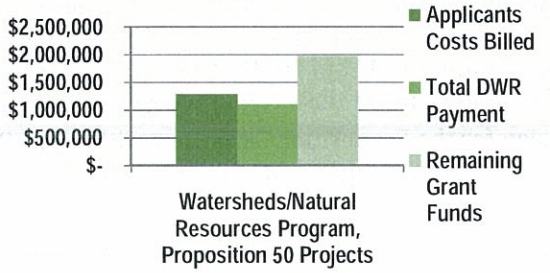
This Program Area includes three Proposition 50 projects and one Proposition 84 project. These projects were selected, in part, for their conformance with the 2007 San Diego IRWM Plan, which includes the objective of protecting, restoring, and maintaining habitat and open space. As such, this Program Area comprises the following projects.

- ✓ *San Vicente Reservoir Source Water Protection through Watershed Property Acquisition and Restoration Project (City of San Diego)*
- ✓ *El Capitan Reservoir Watershed Acquisition and Restoration Program (San Diego River Park Foundation)*
- ✓ *Northern San Diego County Invasive Non-Native Species Control (Mission Resource Conservation District)*
- ✓ *Chollas Creek Integration Project (Jacobs Center for Neighborhood Innovation)*

Program Status

Substantial progress has been made towards completing Proposition 50 projects within this Program Area. To date, approximately $1,284,757 has been billed for these projects, and $1,096,478 has been reimbursed by DWR. A total of $1,967,639 remains in grant funds for the Watersheds/Natural Resources Program Area.

Design for the Proposition 84 Implementation Grant project in this Program Area has not yet begun, but is anticipated to be 90% complete by January 2012.



Program Area 4: Local Supply Development

Program Description

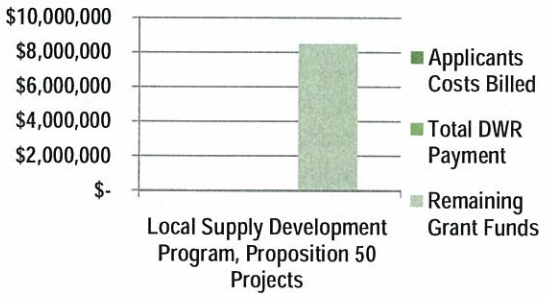
Five Proposition 50 projects and one Proposition 84 project fall in the Local Supply Development Program Area. These projects were selected, in part, because they conform to the 2007 San Diego IRWM Plan, which has an objective of developing and maintaining a diverse mix of water resources. As such, the projects in this Program Area aim to develop new water supplies and expand or protect existing local supplies.

- ✓ *Santa Margarita Conjunctive Use Project (Fallbrook Public Utility District)*
- ✓ *Carlsbad Desalination Project Local Conveyance (Olivenhain Municipal Water District)*
- ✓ *San Diego Region Reservoir Intertie Project Feasibility Study (Sweetwater Authority)*
- ✓ *South San Diego County Water Supply Strategy (Sweetwater Authority)*
- ✓ *El Monte Valley Groundwater Recharge and River Restoration Project (Helix Water District)*
- ✓ *Rural Disadvantaged Community Partnership Project (Rural Community Assistance Corporation)*

Program Status

Due to project changes due to altered circumstances and project-specific issues, only a small amount of money has been billed for Proposition 50 Projects within this Program Area. To date, approximately $78,206 has been billed for these projects, and $34,189 has been reimbursed by DWR. Therefore, $8,462,900 in grant funds remains for these projects.

Design for the Proposition 84 Implementation Grant project in this Program Area has not begun, but is anticipated to be complete by January 2012.



Program Area 5: Education and Outreach

Program Description

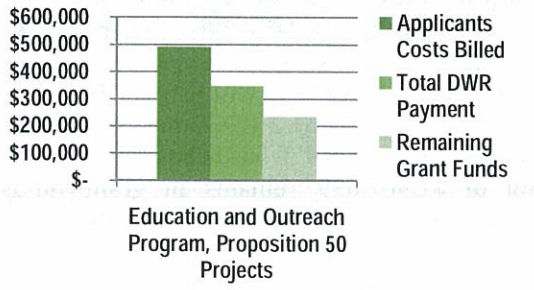
The Education and Outreach Program Area includes one project from the Proposition 50 grant program and one from the Proposition 84 program. These projects were selected, in part, for their conformance with the 2007 San Diego IRWM Plan, which includes maximizing stakeholder/community involvement and stewardship as an objective. The projects in this Program Area are designed to increase stakeholder/community involvement through education and other methods.

- ✓ *San Diego Regional Pollution Prevention (San Diego CoastKeeper)*
- ✓ *San Diego Regional Water Quality Assessment and Outreach Project (San Diego CoastKeeper)*

Program Status

To date, a substantial amount of the work for the Proposition 50 project within this Program Area has been completed. Approximately $489,508 has been billed by the project applicant, and $346,683 of this amount has been reimbursed by DWR. Only $231,492 of grant funding remains for this Program Area.

Design for the Proposition 84 project within this Program Area is not anticipated to begin until 2012.



Program Area 6: Water Quality

Program Description

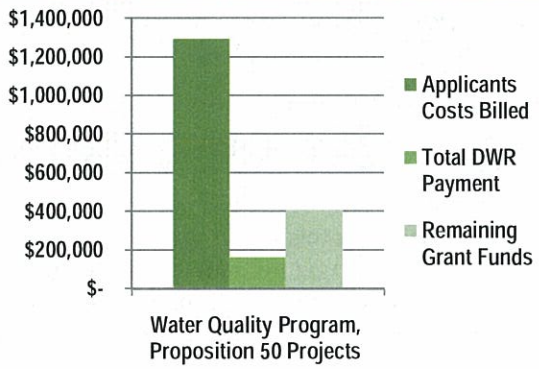
The Water Quality Program Area comprises four Proposition 50 projects and four Proposition 84 projects. These projects were selected, in part, for their conformance with the 2007 San Diego IRWM Plan, which lists water quality improvement as an important component. The projects listed in this Program Area intend to address high priority water quality concerns throughout the San Diego Region.

- ✓ *Biofiltration Wetland Creation and Education Program (Zoological Society of San Diego)*
- ✓ *San Dieguito Watershed Management Plan Implementation – Lake Hodges Natural Treatment System Conceptual Design (San Dieguito River Valley Conservancy)*
- ✓ *City of San Diego Green Mall Porous Paving and Infiltration, Phase 1 (City of San Diego)*
- ✓ *County of San Diego Chollas Creek Runoff Reduction and Groundwater Recharge (County of San Diego)*
- ✓ *Lake Hodges Water Quality and Quagga Mitigation Measures (San Diego County Water Authority)*
- ✓ *Implementing Nutrient Management in the Santa Margarita River Watershed (County of San Diego)*
- ✓ *Bannock Avenue Neighborhood Streetscape Enhancements for Tecolote Creek Watershed (City of San Diego)*
- ✓ *Pilot Concrete Channel Infiltration Project (City of Santee)*

Program Status

To date, a substantial amount of the work has been completed for this Program Area. As indicated in the graphic on the right, approximately $1,291,943 has been billed by project applicants under Proposition 50, and $158,844 of this amount has been reimbursed by DWR. Therefore, only $404,467 of grant funds remain in this Program Area.

Design work has been initiated for several of the Proposition 84 projects within this Program Area.



Water Quality Program, Proposition 50 Projects

Program Area 7: Data Management

Program Description

The Data Management Program Area contains the Regional Water Data Management Program, which is sponsored by the County of San Diego and included in the Proposition 84 Implementation Grant Proposal. The intent of this project is to meet regional priorities described in prior sections of this report regarding data management and coordination.

Program Status

To date, no design work has been completed for the Regional Water Data Management Program.

3.2 Proposition 84 Planning Grant

In September 2010, the San Diego RWMG submitted a *San Diego IRWM Planning Grant Proposal* to DWR. This proposal included a work plan to update the 2007 San Diego IRWM Plan. In December 2010, DWR recommended that the San Diego Region receive its entire planning grant request of $1,000,000. Along with this funding, the RWMG anticipates allocating an additional $465,880 towards this planning effort. The following provides information regarding the anticipated work plan and schedule for this project. Please note that since the grant contract has not been completed with DWR, these items are subject to change.

Work Plan Overview

Task 1: Outreach and Communication – This task contains seven sub-tasks, including RWMG meetings and coordination, RAC Meetings and Coordination, Public Involvement, Coordination with Disadvantaged Communities, Coordination with Tribes, Coordination with Tri-County Funding Area Coordinating Committee, and IRWM Website Updates.

Task 2: Planning Studies – This task contains four sub-tasks, including collaboration with Regional Board, salinity and nutrient management planning, water management and land use planning, and integrated flood management.

Task 3: IRWM Plan Update – This task contains eight sub-tasks associated with revising the 2007 IRWM Plan and publishing the updated Plan.

Task 4: Proposal Administration – This task involves administration of the IRWM Planning Grant Proposal.

Proposal Status

This grant application received a final award recommendation from DWR, but is still awaiting a formal contract. As was established in the grant schedule, the RWMG began outreach and communication, planning studies, and IRWM update activities in January 2011. The RWMG has begun efforts towards Salinity and Nutrient Management Planning, collaboration with the Regional Board, and conducting the IRWM Plan Update.

Chapter 4 Looking Ahead

4.1 IRWM Program Evaluation

The San Diego IRWM program has succeeded in bringing stakeholders together to discuss water management issues, strategies, and priorities. The relationships and trust that have developed since 2005 allows for candid and productive discussions of how to solve the region's water resource challenges.

The IRWM program is further buoyed by the region's success in securing $34 million in grant funding for high-priority regional projects. In addition to this State funding, the IRWM program has also leveraged a much larger amount of local and federal funding to address local needs.

This success was reflected when respondents to this year's survey gave the San Diego IRWM program a "B+" for its wide-ranging accomplishments. This grade acknowledges the current success of the San Diego IRWM Program, and indicates that local stakeholders are in alignment with the direction of the Program moving forward into the IRWM Plan update.

4.1 IRWM Plan Update

Updating the San Diego IRWM Plan provides the region's stakeholders with an opportunity to revisit and, potentially, re-prioritize the water resource objectives identified in 2007 Plan. The Update will also allow local stakeholders to develop collaborative solutions to the water related conflicts that still exist among various agencies.

4.2 Challenges Ahead

While San Diego's IRWM Program has made a positive contribution to addressing the region's water supply reliability and water quality issues, its long-term viability is uncertain. Existing State grant funds are limited and it is not known if the Program offers sufficient benefit to keep its momentum without the grant funding element. In the meantime, the San Diego IRWM Program is exploring other opportunities for offering value-added services to the region.

San Diegans have long struggled with water management challenges and no one expects the San Diego IRWM Program to fully resolve all of the Region's water-related challenges. If San Diego's IRWM Program is able to continue its efforts, it does provide a unique forum for working through the Region's challenges in a holistic fashion. Through the relationships established by the IRWM program, these challenges and conflicts are being addressed, or at least discussed. Over time, as solutions are found and conflicts are resolved, the IRWM program will become a stronger forum for conflict resolution.

Regional Advisory Committee Meeting, April 2010

Supply Reliability

Historically, SDCWA has relied on imported water supplies purchased from MWD to meet the needs of its member agencies. MWD's supplies come from two primary sources: State Water Project (SWP) and Colorado River. Severe shortages from MWD during the 1987–1992 drought, combined with environmental concerns and associated pumping restrictions in the Sacramento River-San Joaquin Delta, motivated SDCWA to aggressively pursue actions to diversify the region's supply sources. SDCWA's portfolio currently includes SWP and Colorado River supplies, agriculture-to-urban transfer water from Imperial Irrigation District, and conserved water from the All-American and Coachella Canal lining projects. These imported supplies are augmented by member agency surface water supplies, groundwater, recycled water, and conservation. Future verifiable supplies include desalinated seawater from the Carlsbad

Desalination Project. Due to the unreliability of imported water supplies, the region will continue to pursue supply reliability as a primary objective of the IRWM Program.

Climate Change

Climate change is expected to impact the region through changes in precipitation and surface runoff volume. More extreme storm events may exceed reservoir storage capacity and therefore result in potential water supplies discharged to the ocean. Sea level rise may impact local aquifers and SWP water quality via seawater intrusion, as well as local coastal water and wastewater infrastructure. All of these uncertainties could further reduce delivery of imported supplies and the ability of local agencies to meet demands. In accordance with DWR's Plan Standards, the IRWM Plan Update will address both adaptation to and mitigation of climate change impacts.

Salinity

Salinity in both local and imported supplies will continue to be a challenge for local water agencies. SDCWA recently partnered with the Southern California Salinity Coalition and the Regional Board to develop *Salinity and Nutrient Management Planning Guidelines* to guide local water managers in development of basin-specific salt and nutrient plans in accordance with the State Board's Recycled Water Policy. The San Diego IRWM and Tri-County FACC partners will continue to collaborate on salinity management throughout the Funding Area.

Regulatory Uncertainty

Water and wastewater agencies in the region are concerned about the increasing uncertainty associated with regulatory permitting. Water quality permitting should allow for and support local supply development, while also protecting surface and groundwater quality. As part of the Plan update, the RWMG and RAC will explore a collaborative partnership between the IRWM Program and the Regional Board. The study will identify how Basin Plan water quality objectives might be informed and met by IRWM Plan and associated projects. In sum, the IRWM region is working to ensure that meaningful changes occur in the regulatory setting through coordination with the Regional Board.

TMDL Compliance

Surface water quality issues in the region are dominated by storm water and urban runoff, which contribute contaminants to local creeks and rivers, water supply reservoirs, lagoons, beaches, and bays. More than 40 inland surface water bodies within the region are designated by the Regional Board as not attaining water quality objectives. The Regional Board has adopted or is developing TMDLs for Chollas Creek, San Diego Bay, Tijuana River and Estuary, Agua Hedionda Creek, Los Penasquitos Lagoon, and many local water bodies. Implementation of these TMDLs will require significant regional investment in water quality programs over the long term. The San Diego IRWM Program is committed to targeting the various causes of pollution through collaborative efforts to improve water quality and protect beneficial uses.

Funding Delays

While the San Diego region appreciates the grant funding received from DWR through the IRWM Grant Programs, the region is concerned about delays that have occurred once invoices have been submitted to DWR. During administration of the Proposition 50 grant over the last 1½ years, grant reimbursements were made up to six months following submittal of invoices to DWR. These types of delays have a disproportionate impact on non-profits and DACs that are sponsoring IRWM projects, and threaten their ability to participate in future grant opportunities. In addition, budget shortfalls and delays throughout the State potentially threaten the long-term viability of IRWM-related funding.

The San Diego region has taken an active role in this issue, speaking directly with DWR and making recommendations on how to improve the process for future grant disbursements. The region is committed to continuing these actions to support its projects sponsors and increase the reliability of IRWM funding.

The San Diego IRWM Report Card can be downloaded from the San Diego IRWM website:

www.sdirwmp.org

(Click on "IRWM Plan" in box at right)

There are also three appendices available on the www.sdirwmp.org website, including:

Appendix A: Results of the San Diego IRWM Survey
Appendix B: Progress Toward Achieving IRWM Plan Targets
Appendix C: Proposition 50 and Proposition 84 Project Overviews

San Diego County Water Authority

Mark Stadler
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AGENDA ITEM 10
Attachment

MetroTAC
2011/12 Work Plan

MetroTAC Items	Description	Subcommittee Member(s)
Advanced Water Purification Demonstration Project	San Diego engaged CDM to design/build/operate the project for the water repurification pilot program. *2/8/11: Equipment arrived 3/2011; tours will be held when operational (June/July 2011 timeframe).* *2/12: Tours are available*	Al Lau
Fiscal Items	The Finance committee will continue to monitor and report on the financial issues affecting the Metro System and the charges to the PAs. The debt finance and reserve coverage issues have been resolved. Refunds totaling $12.3 million were sent to most of the PA's.10/26/11: 2010 will be the first year where the PAs will be credited with interest on the debt service reserve and operational fund balances. Interest will be applied as an income credit to Exhibit E when that audit is complete.	Greg Humora Scott Huth Karen Jassoy Karyn Keese
Recycled Water Revenue Issue	Per our Regional wastewater Agreement revenues from SBWTP are to be shared with PA's. 4/11: City has agreed to pay out revenue to Wastewater Section and PA's credit will be on the Exhibit E adjustments at year end Open issues: Capacity reservation lease payments and North City Optimized System Debt service status. 12/11: Letter sent to San Diego regarding outstanding recycled water revenue issues.	Scott Huth Scott Tulloch Karyn Keese
Water Reduction - Impacts on Sewer Rates	The MetroTAC wants to evaluate the possible impact to sewer rates and options as water use goes down, and consequently the sewer flows go down, reducing sewer revenues. Sewer strengths are also increasing because of less water to dilute the waste. We are currently monitoring the effects of this. 2/2011:wastewater revenues are declining due to conservation and flow reductions and agencies are re-prioritizing projects to be able to cover annual operations costs	Eric Minicilli Manny Magaña Karyn Keese
"No Drugs Down the Drain"	The state has initiated a program to reduce pharmaceuticals entering the wastewater flows. There have been a number of collection events within the region. The MetroTAC, working in association with the Southern California Alliance of Publicly-owned Treatment Works (SCAP), will continue to monitor proposed legislation and develop educational tools to be used to further reduce the amount of drugs disposed of into the sanitary sewer system. 8/2010: County Sheriff and Chula Vista have set up locations for people to drop off unwanted medications and drugs.4/11: *Local law enforcement has taken a proactive role and is sponsoring drug take back events. 3/11: TAC to prepare a position for the board to adopt; look for a regional solution; watch requirements to test/control drugs in wastewater.* 10/26/11: A prescription drug take back day is scheduled for 10/29/11. Goto www.dea.gov to find your nearest location.	Greg Humora
Flushable Items that do not Degrade	Several PAs have problems with flushable products, such as personal wipes, that do not degrade and cause blockages. MetroTAC is investigating solutions by other agencies, and a public affairs campaign to raise awareness of the problems caused by flushable products. We are also working with SCAP in their efforts to help formulate state legislation to require manufacturers of products to meet certain criteria prior to labeling them as "flushable." Follow AB2256 and offer support.	Eric Minicilli

MetroTAC Items	Description	Subcommittee Member(s)
Grease Recycling	To reduce fats, oils, and grease (FOG) in the sewer systems, more and more restaurants are being required to collect and dispose of cooking grease. Companies exist that will collect the grease and turn it into energy. MetroTAC is exploring if a regional facility offers cost savings for the PAs. The PAs are also sharing information amongst each other for use in our individual programs. *3/11: get update on local progress and status of grease rendering plant near Coronado bridge*	Eric Minicilli
Padre Dam Mass Balance Correction	11/11: Padre Dam has been overcharged for their sewage strengths since 1998. Staff from City of San Diego presented a draft spreadsheet entitled Master Summary Reconciliations Padre Dam Mass Balance Corrections Calculation. Rita Bell and Karyn Keese were elected to review the documentation and report back to Metro TAC.	Rita Bell Karyn Keese
Recycled Water Study	As part of the secondary waiver process, San Diego agreed to perform a recycled water study within the Metro service area. That study is currently underway, and MetroTAC has representatives participating in the working groups. TM #8 Costs estimates are out and PAs provided comments on TM#8 and have asked for a technical briefing. 10/16/11: Final draft of report is due out in November 2011.1/12: Final draft of report is due in March 2012.	Scott Huth Al Lau Karyn Keese Jennifer Duffy
Recycled Water Rate Study	San Diego is working on a rate study for pricing recycled water from the South Bay plant and the North City plant. MetroTAC, in addition to individual PAs, have been engaged in this process and have provided comments on drafts San Diego has produced. We are currently waiting for San Diego to promulgate a new draft which addresses the changes we have requested. 10/26/11: draft study still not issued	Karyn Keese Scott Huth Rita Bell
Metro JPA Strategic Initiatives	MetroTAC to develop success measures for the JPA strategic initiatives and suggest a schedule to complete certain items. 1/12: Paula de Sousa requested the Board Secretary to provide all past policy decisions.	Scott Huth Dan Brogadir Karyn Keese Paula de Sousa
Salt Creek Diversion	9/2010: OWD, Chula Vista and San Diego met to discuss options and who will pay for project; Chula Vista and OWD are reviewing options. 2/2011: OWD and PBS&J reviewed calculations with PUD staff; San Diego to provide backup data for TAC to review. This option is also covered in the Recycle Water Study.10/26/11: Back-up information has still not been received from staff.	Roberto Yano Manny Magaña Karyn Keese Rita Bell
Recycled Water Study Cost Allocation	A small working group was formed to discuss options to allocate PLWTP offset project costs among the water and wastewater rate payers; Concepts will be discussed at TAC and JPA Board in near future.	Scott Huth Roberto Yano Al Lau Karyn Keese
Board Members' Items		
Metro JPA Strategic Plan	2/2011: committee to meet 2/28/11 to plan for retreat to be held on 5/5/11 Retreat held and wrap up presented to the Commission at their June Meeting. JPA strategic planning committee to meet to update JPA Strategic Plan and prepare action items. 1/12: Draft strategic plan reviewed by Board and referred to Metro TAC for input. MetroTAC has created a subcommittee to work on this project.	Augie Caires Ernie Ewin
Rate Case Items	1/12: San Diego is in the process of hiring a consultant to update their rate case. As part of that process, MetroTAC and the Finance Committee will be monitoring the City's proposals as they move forward.	Karyn Keese
Schedule E	MetroTAC and the Finance Committee are active and will monitor this process. Individual items related to Schedule E will come directly to the Board as they develop.	Karen Jassoy Karyn Keese

MetroTAC Items	Description	Subcommittee Member(s)
Future bonding	MetroTAC and the Finance Committee are active and will monitor this process. Individual items related to bonding efforts will come directly to the Board as they develop. 10/26/11: San Diego is issuing an RFP for a cost of service study to support a future bond issue potentially in mid-2013. Kristin Crane to sit on the selection panel.	Karen Jassoy Karyn Keese Kristen Crane
Changes in water legislation	MetroTAC and the Board should monitor and report on proposed and new legislation or changes in existing legislation that impact wastewater conveyance, treatment, and disposal, including recycled water issues	Paula de Sousa
Role of Metro JPA regarding Recycled Water	As plans for water reuse unfold and projects are identified, Metro JPA's role must be defined with respect to water reuse and impacts to the various regional sewer treatment and conveyance facilities	Scott Huth Karyn Keese
Border Region	Impacts of sewer treatment and disposal along the international border should be monitored and reported to the Board. These issues would directly affect the South Bay plants on both sides of the border.	
IROC Performance Audits	Work with IROC to identify areas to be audited; participate in audit process. 8/20/10: provide the top 5 areas to audit by September IROC meeting.	Augie Caires
SDG&E Rate Case	SDG&E has filed Phase 2 of its General Rate Case, which proposes a new "Network Use Charge" which would charge net-energy metered customers for feeding renewable energy into the grid as well as using energy from the grid. The proposal will have a significant impact on entities with existing solar facilities, in some cases, increases their electricity costs by over 400%. Ultimately, the Network Use Charge will mean that renewable energy projects will no longer be as cost effective. SDG&E's proposal will damage the growth of renewable energy in San Diego County. A coalition of public agencies has formed to protest this rate proposal.	Paula de Sousa

Completed Items	Description	Subcommittee Member(s)
Debt Reserve and Operating Reserve Discussion	In March 2010, the JPA approved recommendations developed by Metro JPA Finance Committee, MetroTAC, and the City of San Diego regarding how the PA's will fund the operating reserve and debt financing. MetroTAC has prepared a policy document to memorialize this agreement. **Project complete: 4/10**	Scott Huth Karyn Keese Doug Wilson
State WDRs & WDR Communications Plan	The Waste Discharge Requirements (WDRs), a statewide requirement that became effective on May 2, 2006, requires all owners of a sewer collection system to prepare a Sewer System Management Plan (SSMP). Agencies' plans have been created. We will continue to work to meet state requirements, taking the opportunity to work together to create efficiencies in producing public outreach literature and implementing public programs. **Project complete: 5/10**	Dennis Davies Patrick Lund
Ocean Maps from Scripps	Schedule a presentation on the Sea Level Rise research by either Dr. Emily Young, San Diego Foundation, or Karen Goodrich, Tijuana River National Estuarine Research Reserve **Project complete: 5/10**	Board Member Item
Secondary Waiver	The City of San Diego received approval from the Coastal Commission and now the Waiver is being processed by the EPA. The new 5 year waiver to operate the Point Loma Wastewater Treatment Plant at advanced primary went into effect August 1, 2010. **Project complete 7/10**	Scott Huth
Lateral Issues	Sewer laterals are owned by the property owners they serve, yet laterals often allow infiltration and roots to the main lines causing maintenance issues. As this is a common problem among PAs, the MetroTAC will gather statistics from national studies and develop solutions. 4/11: There has been no change to the issue. We will continue to track this item through SCAP and report back when the issue is active again. **Efforts closed 3/11**	Tom Howard Joe Smith
"Power Tariff"	Power companies are moving to a peak demand pricing scheme which negatively impacts PAs with pump stations and other high energy uses. MetroTAC wants to evaluate the new legislation and regulations, and to identify and implement cost savings efforts for the PAs. (8/2010): John Helminski at the City of San Diego is working on a sustainability project for CoSD 3/11: Prepare a position paper for the JPA board to consider 4/11: John Helminski no longer works for the City. Request update from Paula.5/31/11: Roberto Yano met with SCAP representatives. Each agency should meet with their SDG&E representative to determine if there are special programs or incentives they can qualify for .Per SCAP there is no new legislation.10/26/11: We will continue to track this item through SCAP and report back when the issue is active again.	Tom Howard Paula de Sousa Roberto Yano

AGENDA ITEM 12
Attachment

JOB DESCRIPTION: METRO COMMISSION/JPA REPRESENTATIVE TO THE SAN DIEGO INDEPENDENT RATES OVERSIGHT COMMITTEE (IROC)

The Commission/JPA has one Representative (and one Alternate) who sits on the IROC as an ex-officio, non-voting member. Although the Representative is non-voting at the IROC Meetings, he/she is a voting member at the Subcommittee meetings, if appointed to one. There are three IROC Subcommittees; Public Outreach and Education, Environmental and Technical, and Finance.

MEETINGS: The IROC Rep attends two meetings per month on the second and third Monday's of each month. On the second Monday the Public Outreach and Education, and Environmental and Technical Subcommittees meet from 8:30 AM to Noon; and on the third Monday the Finance Subcommittee meets from 8:00 to 9:30 AM followed by the IROC regular meeting from 9:30 AM to Noon. The Rep also attends occasional special IROC and Subcommittee meetings and infrequent tours and field trips.

RESPONSIBILITIES:

1. Represent the Commission/JPA and Participating Agencies at IROC Committee and Subcommittee meetings, presenting their perspective on issues as necessary. Our focus is centered on Metro waste water and Recycling issues, and related matters that impact these. Act as the liaison and communication link between these groups and generally stay out of the internal City politics that surface from time to time.

2. Build a collegial relationship with other IROC Representatives because their service is to represent various customer classes--not too dissimilar from the Commission/JPA's role. The studies and audits that they are involved with are also of interest and value to the PA's. The members of the IROC take their responsibilities very seriously and generally seek overall improvement in the functions of the Public Utilities Department (PUD).

3. Articulate the impacts of PUD projects, programs and policies on the PA's. We represent about one third the cost of the Metro waste water function and are therefore a major stakeholder.

4. Provide a monthly report to the Commission/JPA of relevant IROC actions and activities. Keep the Chair informed of issues that require timely response from the Commission/JPA.

5. Provide a monthly report to IROC, summarizing the relevant Commission/JPA actions and activities from their last meeting.

6. Track issues that the TAC is reviewing to stay abreast of issues that may come before the Commission/JPA and IROC. Occasional attendance at TAC meetings is necessary.

7. Other assignments and requests also occur, such as participating in the PUD Strategic Planning process.

CURRENT MAJOR ISSUES:

1. IPR Demonstration Project
2. Recycled Water Optimization Study
3. Rate Cases

4. 2007-11 Rate Case Audit
5. PUD Performance Audits
6. CIP Streamlining Program
7. 2010 and 2011 IROC Annual Reports
8. Cost of Service Study
9. Taxpayer's Association proposal to change IROC duties (requires City Council action)
10. Controversy over PUD reserves and fund balances (Taxpayer's Association/UT Article)
11. Sewer spills reduction program
12. CIP Projects Planning