METRO WASTEWATER JPA

METRO TAC AGENDA
(Technical Advisory Committee to Metro JPA)

TO: Metro TAC Representatives and Metro Commissioners

DATE: Wednesday, February 21, 2018

TIME: 11:00 a.m. to 1:30 p.m.

LOCATION: 9192 Topaz Way, (PUD MOC II Auditorium) – Lunch will be provided

PLEASE DISTRIBUTE THIS NOTICE TO METRO COMMISSIONERS AND METRO TAC REPRESENTATIVES

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1. Review and Approve MetroTAC Action Minutes for the Meeting of November 15, 2017 (**Attachment**)

2. Metro Commission/JPA Board Meeting Recap (Standing Item)

3. **REPORT:** Update from Regional Wastewater Disposal Agreement Flow Commitment Working Group (Yazmin Arellanos)

4. **REPORT:** Update from Pure Water Facilities Working Group (Roberto Yano)

5. **REPORT:** Update from Pure Water Cost Allocation Working Group (Scott Tulloch/Dexter Wilson)

6. **REPORT:** Update from Sample Rejection Protocol Working Group (Edgar Patino)

7. **ACTION:** Consideration and Possible Action to Recommend Approval to the Metro Comm/Metro JPA of a Contract with Cal Sierra Construction, Inc. (ITB 10088277-18V) for Rehabilitation of Anthracite Media Beds, for Wastewater Treatment and Disposal Division Facilities (Juan Guerreiro) (**Attachment**)

8. **ACTION:** Consideration and Possible Action to Recommend Approval to the Metro Comm/Metro JPA of a Contract with U.S. Peroxide, LLC, for the Proprietary Programs for Peroxide Regenerated Iron – Sulfide Control Programs for Wastewater Odor Control Values at Various City Facilities (Juan Guerreiro) (**Attachment**)

9. **ACTION:** Consideration and Possible Action to Recommend Approval to the Metro Comm/Metro JPA of a Central Area Alternative Evaluation (Doug Owen, Pure Water Program Consultant, Stantec) (**Attachment**)

10. **ACTION:** Consideration and Possible Action to Recommend Approval to the Metro Comm/Metro JPA of an As-Needed Construction Management Services – Conveyance Projects Agreement with CH2M Hill, Inc. (John Helminski, Asst. Director, San Diego Public Utilities Department) (**Attachment**)

11. Metro Wastewater Update (Standing Item) (Edgar Patino)

12. Pure Water Program Update (Standing Item) (John Helminski) (**Attachment**)

13. Metro Capital Improvement Program and Funding Sources (Standing Item) (Tung Phung)

14. Financial Update (Standing Item) (Karyn Keese)
    - Metro JPA Treasurers Report – 6 Months Ending December 21, 2017 (**Attachment**)

15. IRWMP Update (Standing Item) (Robert Yano) (**Attachment**)

16. MetroTAC Work Plan (Standing Item) (Greg Humora) (**Attachment**)

17. Review of Items to be Brought Forward to the Regular Metro Commission/Metro JPA Meeting (**March 1, 2018**)

18. Other Business of Metro TAC

19. Adjournment (To the next Regular Meeting March 21, 2017)

Metro TAC 2018 Meeting Schedule

January 17	May 16	September 19
February 21	June 20	October 17
March 21	July 18	November 21
April 18	August 15	December 19

Attachment 1

Action Minutes of November 15, 2017

METRO WASTEWATER JPA

Metro TAC
(Technical Advisory Committee to Metro Commission/JPA)

ACTION MINUTES

DATE OF MEETING: November 15, 2017

TIME: 11:00 AM

LOCATION: MOC II Auditorium

MEETING ATTENDANCE:

Greg Humora, La Mesa
Roberto Yano, Chula Vista
Ed Walton, Coronado
Joe Bride, Delmar
Yazmin Arellano, El Cajon
Dexter Wilson, Lemon Grove
Steve Beppler, Otay
Al Lau, Padre Dam MWD
Karen Jassoy, Padre Dam
Mike Obermiller, Poway
Rudy Guzman, Poway
Alex Heide, Poway
Dan Brogadir, County of San Diego

Lee Ann Jones-Santos, City of San Diego
Seth Gates, City of San Diego
Edgar Patino, City of San Diego

Scott Tulloch, NV5
Carmen Kasner, NV5
Karyn Keese, Keze Group

1. Review and Approve MetroTAC Action Minutes for the Meeting October 18, 2017

Mike Obermiller moved approval of the October 18, 2017 minutes. The motion was seconded by Ed Walton, and the minutes were approved with Al Lau and Roberto Yano abstaining as they were not at the October meeting.

2. Metro Commission/JPA Board Meeting Recap (Standing Item)

Chair Humora reported that the Commission had approved the As-Needed Construction Manager Contract for Pure Water Treatment Plant and Facilities Projects. In addition, Metro Commission/JPA Chair Jones was appointed to represent the JPA on IROC.

3. REPORT: Update from Regional Wastewater Disposal Agreement Flow Commitment Working Group

Yazmin Arellano stated there was no report from the Working Group this month. Al Lau asked if the data the Working Group is using was post-drought planning data for wastewater flows. Yazmin confirmed that it is.

4. REPORT: Update from Pure Water Facilities Working Group

Roberto Yano stated that the update from the Working Group is attached to the agenda. He also reported that the Group is working with the City of San Diego staff on five design packages and has provided input on all five. The Group is currently awaiting San Diego's responses.

5. REPORT: Update from Pure Water Cost Allocation Working Group

There was no report this month.

6. REPORT: Update from Sample Rejection Protocol Working Group

Edgar Patino stated that he is still working on the closeout memo and a training program with the City's engineering staff. Dexter Wilson asked when these would be completed. Edgar replied that he hopes the memo will be completed for the December Metro TAC agenda and that the training would be after the first of the year.

7. Metro Wastewater Update (Standing Item)

There was no update this month.

8. Pure Water Program Update (Standing Item)

John Helminski was not in attendance at the meeting. There was no update this month.

9. Metro Capital Improvement Program and Funding Sources (Standing item)

There was no report.

10. Financial Update (Standing Item)

Karen Jassoy handed out updated Metro Wastewater JPA Treasurer's Report's for the Twelve Months Ending June 30, 2017 (Year-end Report FYE 2017) and the Four Months Ending October 31, 2017 (FYE 2018). Copies of these updated financial reports are attached to these minutes for reference. Although there were

anticipated

additional expenses in excess of budgeted amounts due to the Pure Water Program and the Modified Permit Application the JPA still finished FYE 2017 with $56,000 over the required operating reserve.

For the first four months of FYE 2018 the JPA's expenses are under budget. In addition, the report included a vendor accrual summary as of October 31, 2017 of $45,837 from the JPA's consultants that will be reflected in the November 2017 financial statements.

On a motion by Roberto Yano and seconded by Yazmin Arellano, both sets of Treasurer's Reports were unanimously accepted and approved to move forward to the Metro JPA Finance Committee and Metro Commission/JPA at their next meetings.

11. IRWMP Report (Standing Item)

Next meeting will be in December. Metro TAC members are reminded to check the IRWMP website for announcements.

12. MetroTAC Work Plan (Standing Item)

MetroTAC Chair Humora stated the Work Plan was attached to the agenda. Karyn Keese again requested any additional information from the working groups to be provided to her on a monthly basis so that the Work Plan can be kept current.

13. Review of Items to be Brought Forward to the Regular Metro Commission/Metro JPA Meeting (December 7, 2017)

Chair Humora stated that most likely the next Commission/JPA meeting will not be until after the first of the year. The only Item to move forward from this meeting are the Treasurer's Reports.

14. Other Business of Metro TAC

There was none.

19. Adjournment to the next Regular Meeting, December 20, 2017

At 11:30 p.m. the meeting was adjourned.

Metro Wastewater Joint Powers Authority
Treasurer's Report
Twelve months ending June 30, 2017

Metro Wastewater JPA
Treasurer's Report
Twelve months ending June 30, 2017
Unaudited

Beginning Cash Balance at July 1, 2017	$	231,585
Operating Results		
Membership Dues & Interest Income		113,718
Expenses		(230,196)
Change in Net Position		(116,479)
Net change in Receivables & Payables		55,865
Cash used in Operations		(60,614)
Ending Cash Balance at June 30, 2017	$	170,971

Submitted by:

Karen Jassoy, Treasurer, 11/14/17

Metro Wastewater JPA
Statement of Net Position
As of June 30, 2016 and Jun 30, 2017
Unaudited

	June 30, 2016	Jun 30, 2017	$ Change
ASSETS			
Checking/Savings	$ 231,585	$ 170,971	$ (60,614)
Accounts Receivable	35,278	-	(35,278)
Total Assets	**$ 266,863**	**$ 170,971**	**$ (95,892)**
LIABILITIES			
Accounts Payable	$ 16,821	$ 37,408	$ 20,587
Unearned Membership Billings	-	-	-
Total Liabilities	**$ 16,821**	**$ 37,408**	**$ 20,587**
NET POSITION			
Net Position at Beginning of Period	$ 126,475	$ 250,042	$ 123,567
Change in Net Position	123,567	(116,479)	(240,046)
Net Position at End of Period	**$ 250,042**	**$ 133,563**	**$ (116,479)**
TOTAL LIABILITIES & NET POSITION	**$ 266,863**	**$ 170,971**	**$ (95,892)**

Net Position at 6/30/17	*$ 133,563*
FY '17 JPA Required Operating Reserve, based on 4 months of Operating Expenses	*76,732*
Over (under) required reserve	*$ 56,831*

Metro Wastewater JPA
Statement of Operations
Budget vs. Actual

Twelve months ending June 30, 2017
Unaudited

	Actual	Budget	Over (Under) Budget
Income			
Membership Dues	$ 113,650	$ 113,650	$ -
Interest Income	68	50	18
Total Income	$ 113,718	$ 113,700	$ 18
Expenses			
Administrative Assistant	$ 4,845.24	$ 8,000	$ (3,155)
Admin & Treasury Services-Padre	14,366	19,000	(4,634)
Bank Charges	-	200	(200)
Dues & Subscriptions	538	600	(62)
JPA/TAC meeting expenses	5,448	5,000	448
Miscellaneous	-	250	(250)
Professional Services			
Engineering - Atkins	6,000	50,000	(44,000)
Engineering - NV5	10,500	-	10,500
Audit - White Nelson Diehl Evans	10,000	12,000	(2,000)
Financial - Kese Group	63,360	65,000	(1,640)
Legal - BB&K	95,344	45,000	50,344
Per Diems	16,360	18,000	(1,640)
Postage & Supplies	464	-	464
Printing & Copying	3	500	(497)
Telephone	472	1,400	(928)
Website Maintenance & Hosting	2,495	2,400	95
Total Expenses	$ 230,196	$ 227,350	$ 2,846
Change in Net Position	$ (116,479)	$ (113,650)	$ (2,829)

Metro Wastewater JPA
Statement of Cash Flows

Twelve months ending June 30, 2017
Unaudited

OPERATING ACTIVITIES		
Change in Net Position	$	(116,479)
Adjustments to Reconcile Change in Net Position to Net Cash Provided by Operations:		
Accounts Receivable		35,278
Accounts Payable		20,587
Deferred Revenue		-
Net cash provided by (used in) Operations		(60,614)
Net cash increase (decrease) for period		(60,614)
Cash at beginning of period		231,585
Cash at end of period	**$**	**170,971**

Metro Wastewater Joint Powers Authority
Treasurer's Report
Four months ending October 31, 2017

Metro Wastewater JPA
Treasurer's Report
Four months ending October 31, 2017
Unaudited

Beginning Cash Balance at July 1, 2017	$	170,971
Operating Results		
Membership Dues & Interest Income		131,054
Expenses		(53,652)
Change in Net Position		77,402
Net change in Receivables & Payables		77,062
Cash used in Operations		154,464
Ending Cash Balance at October 31, 2017	$	325,436

Submitted by:

Karen Jassoy, Treasurer, 11/14/17

Metro Wastewater JPA
Statement of Net Position
As of June 30, 2017 and Oct 31, 2017
Unaudited

	June 30, 2017	Oct 31, 2017	$ Change
ASSETS			
Checking/Savings	$ 170,971	$ 325,436	$ 154,464
Accounts Receivable	-	194,434	194,434
Total Assets	**$ 170,971**	**$ 519,869**	**$ 348,898**
LIABILITIES			
Accounts Payable	$ 37,408	$ 46,837	$ 9,429
Unearned Membership Billings	-	262,067	262,067
Total Liabilities	**$ 37,408**	**$ 308,904**	**$ 271,496**
NET POSITION			
Net Position at Beginning of Period	$ 250,042	$ 133,563	$ (116,479)
Change in Net Position	(116,479)	77,402	193,881
Net Position at End of Period	**$ 133,563**	**$ 210,966**	**$ 77,402**
TOTAL LIABILITIES & NET POSITION	**$ 170,971**	**$ 519,869**	**$ 348,898**

Net Position at 10/31/17	*$ 210,966*
FY '18 JPA Required Operating Reserve, based on 4 months of Annual Operating Expenses	*131,033*
Over (under) required reserve	*$ 79,932*

Metro Wastewater JPA
Statement of Operations
Budget vs. Actual

Four months ending October 31, 2017
Unaudited

		YTD Actual	YTD Budget	Over (Under) Budget	*Annual Budget*
Income					
Membership Dues		$ 131,033	$ 131,033	$ -	*$ 393,100*
Interest Income		21	20	1	*60*
Total Income		$ 131,054	$ 131,053	$ 1	*$ 393,160*
Expenses					
Administrative Assistant	(2)	$ 525	$ 2,667	$ (2,142)	*$ 8,000*
Admin & Treasury Services-Padre	(1)	6,000	6,333	(333)	*19,000*
Bank Charges		-	67	(67)	*200*
Dues & Subscriptions		-	200	(200)	*600*
JPA/TAC meeting expenses	(1)	1,128	1,667	(539)	*5,000*
Miscellaneous		-	83	(83)	*250*
Professional Services					
Engineering - Dexter Wilson	(2)	9,748	25,850	(16,103)	*77,550*
Engineering - NV5	(3)	-	25,000	(25,000)	*75,000*
Financial - Kese Group	(1)	14,360	25,067	(10,707)	*75,200*
Legal - BB&K	(1)	16,679	20,000	(3,321)	*60,000*
Per Diems	(1)	3,750	6,000	(2,250)	*18,000*
Postage & Supplies	(2)	80	-	80	-
Printing & Copying	(2)	241	167	74	*500*
Telephone	(2)	341	467	(126)	*1,400*
Website Maintenance & Hosting	(1)	800	800	-	*2,400*
Contingency		-	16,667	(16,667)	*50,000*
Total Expenses		$ 53,652	$ 131,033	$ (77,382)	*$ 393,100*
Change in Net Position		$ 77,402	$ 20	$ 77,382	*$ 60*

(1) Billing through 10/31/17

(1) Billing through 9/30/17

(2) No billing received for FY '18

Metro Wastewater JPA
Statement of Cash Flows
Four months ending October 31, 2017
Unaudited

OPERATING ACTIVITIES		
Change in Net Position	$	77,402
Adjustments to Reconcile Change in Net Position to Net Cash Provided by Operations:		
Accounts Receivable		(194,434)
Accounts Payable		9,429
Deferred Revenue		262,067
Net cash provided by (used in) Operations		154,464
Net cash increase (decrease) for period		154,464
Cash at beginning of period		170,971
Cash at end of period	**$**	**325,436**

Metro Wastewater JPA
Vendor Balance Summary
As of October 31, 2017

Best, Best and Krieger	$	10,633	(1)
City of Lemon Grove (Dexter Wilson)		9,748	(1)
Keze Group		4,160	(1)
Lori Ann Peoples		2,145	(1)
Padre Dam		15,152	(2)
White Nelson Diehl Evans		4,000	(3)
Total	**$**	**45,837**	

(1) Bills received in November

(2) $6,000 for FY '18, $11,152 expensed in FY '17

(3) Estimate for final bill from FY '17

Attachment 7

Cal Sierra Construction, Inc

METRO JPA/TAC
Staff Report
Date:

Project Title:
Cal Sierra- Anthracite Media Beds

Requested Action: Execute a contract with Cal Sierra Construction, Inc. (ITB 10088277-18V) for rehabilitation of anthracite media beds, for Wastewater Treatment and Disposal Division facilities within the Public Utilities Department, in an amount not to exceed $6,304,200.

Recommendations: Approve authorization to execute a five (5) year contract.

Metro TAC:	N/A
IROC:	N/A
Prior Actions: (Committee/Commission, Date, Result)	The previous rehabilitation of media beds services contract with the vendor IMC Consulting began March 16, 2012 and ended March 15, 2017. Council approval was not needed based on dollar threshold.

Fiscal Impact:

Is this projected budgeted?	Yes _X_ No ____
Cost breakdown between Metro & Muni:	Metro: $6,304,200 over five years (FY 2018-FY 2022) Muni: (0)
Fiscal impact to the Metro JPA:	$2,080,386 (33%) over five fiscal years (FY 2018-FY 2022)

Capital Improvement Program:

New Project?	Yes __ No ___ N/A _X_
Existing Project?	Yes ___ No __ Upgrade/addition ___ Change ___

Previous TAC/JPA Action:
N/A

Additional/Future Action:
Present to the Metro Commission and Environment Committee and then presented for approval by City Council.

City Council Action: To be considered by Council once approved by Metro Joint Power Authority (JPA)/Technical Advisory Committee (TAC), and Environment Committee.

Background: The Public Utilities Department, Wastewater Treatment and Disposal Division utilizes permanently installed filters at both the North City Water Reclamation Plant and the South Bay Water Reclamation Plant to produce Title 22 compliant reclaimed water.

Discussion: These filters are at the core of the tertiary treatment process which utilizes the filter media beds as a physical means of removing additional material within the treatment process. These filter media beds serve as a final barrier in the water reclamation process before the product is either a) disinfected and pumped into the reclaimed water distribution system; or b) sent for advanced water treatment to the Demonstration Pure Water Facility. These filter media beds require periodic rehabilitation, cleaning and replacement of media.

It is recommended by staff to adopt this resolution to approve the five year contract with Cal Sierra Construction, Inc. to provide rehabilitation of media bed services to Wastewater Treatment and Disposal Division Facilities.

Bid Results: An Invitation to Bid (ITB), No. 10088277-18-V for purchase of rehabilitation of media beds was issued by Purchasing & Contracting Department on October 31, 2017. Purchasing & Contracting Department received notice from six (6) potential bidders who downloaded the bid from the City's third party provider. Upon closing, only one (1) bidder submitted a bid and was deemed responsive and evaluated, Cal Sierra Construction, Inc. Carbon Activated, one of the six potential bidders is listed as a subcontractor for Cal Sierra Construction, Inc. The rehabilitation of anthracite media beds is highly specialized work and a possible reason as to why there was only one bid submitted.

Attachment 8

US Peroxide, LLC

METRO JPA/TAC
Staff Report
Date: February 14, 2018

Project Title:
U.S. Peroxide, LLC, Peroxide Regenerated Iron – Sulfide Control Programs (PRI-SC™/PRI-CEPT™) for wastewater odor control at various City facilities

Requested Action:
The Wastewater Treatment and Disposal Division (WWTD) of the Public Utilities Department recommends approval to amend Contract No. 4600001444, with U.S. Peroxide, LLC, and moving it forward to City Council for approval.

Recommendations:
Approve Contract Amendment

Metro TAC:	Submitted for consideration
IROC:	
Prior Actions: (Committee/Commission, Date, Result)	City Council approved the contract with U.S. Peroxide, LLC, for the proprietary programs for Peroxide Regenerated Iron – Sulfide Control Programs (PRI-SCTM/PRI-CEPTTM) under Resolution No. R-308108 on April 16, 2013.

Fiscal Impact:

Is this projected budgeted?	Yes _X_ No ____
Cost breakdown between Metro & Muni:	Metro: $35,916,603.13 over six years (FY 2018-FY 2023) Muni:
Fiscal impact to the Metro JPA:	$11,852,479.03 over six fiscal years (FY 2018-FY 2023)

Fiscal Impact by Year – USP Technologies, LLC

Fiscal Year	Metro Amount per Fiscal Year * (100%)	Funding Duration	JPA Fiscal Impact (33%)
2018	$1,625,000.00	April 2018-June 2018 (Three Months)	$536,250.00
2019	$6,581,250.00	July 2018 - June 2019 (Twelve Months)	$2,171,812.50
2020	$6,910,312.50	July 2019 - June 2020 (Twelve Months)	$2,280,403.13
2021	$7,255,828.13	July 2020 - June 2021 (Twelve Months)	$2,394,423.28
2022	$7,618,619.53	July 2021 - June 2022 (Twelve Months)	$2,514,144.45
2023	$5,925,592.97	July 2022 - March 2023 (Nine Months)	$1,955,445.68
Total	**$ 35,916,603.13**		**$11,852,479.03**

***Metro annual amount reflects an estimated 5% price increase. (Contract Terms indicate a 5-6% price increase annually.)**

Capital Improvement Program:

New Project?	Yes ___ No _X_ N/A __X__
Existing Project?	Yes ___ No _X_ Upgrade/addition ___ Change ___

Previous TAC/JPA Action:

Additional/Future Action:
Pending Metro Joint Power Authority (JPA) approval

City Council Action: To be considered by the Environmental Committee once approved consideration by the full City Council.

Background:

In accordance with SDMC §22.3016, the Public Utilities Department received sole source #3956 approval for procurement and continued services and with U.S. Peroxide, LLC (USP) to utilize the proprietary Peroxide Regenerated Iron – Sulfide Control Programs (PRI-SC^{TM}/PRI-CEPT^{TM}) for wastewater odor control. The City desires to continue using the patented program for regenerated iron-sulfide control for wastewater treatment which includes program management, equipment systems, chemicals, supplies, and technical services.

The City's existing Memorandum of Agreement (MOA), Outline Agreement #4600002659, has exercised its fourth and final option year (April 14, 2017 – April 15, 2018); the respective Sole Source Certification #2720 will expire that same timeframe. As such, the MOA may only be amended by obtaining sole source procurement certification approval and an instrument in writing duly executed by both parties. In adherence with City guidelines, the Public Utilities Department is seeking authorization to amend the USP contract's term (i.e., one (1) year, for an amount not to exceed $6,500,000) with the option to renew for up to four (4) additional one-year periods under the terms and conditions set forth in the Contract, contingent upon the adoption of the Appropriation Ordinance for the applicable fiscal year. Total duration of the MOA, including options to renew, shall not exceed five (5) years unless approved by ordinance of the City Council. In adherence with City guidelines, the Department is seeking sole source authorization in order to amend the USP contract.

Per the existing Memorandum of Agreement's scope and term of work, USP shall provide the City with full service PRI-SC^{TM}/PRI-CEPT^{TM} program of Supply, Equipment and Services for Peroxide Regenerated Iron-Sulfide Control, which includes Hydrogen Peroxide and Ferrous Chloride, on an as-needed basis and in strict compliance with the approved contract documents. As such, these services are critical to the continued operations at the Public Utilities Department (PUD), Wastewater Treatment and Disposal facilities, such as the Point Loma Wastewater Treatment Plant (PLWTP) and the North City Water Reclamation Plant (NCWRP). In addition, this request is submitted to extend the existing scope of services to include other City facilities.

The total amount payable to USP for the first contract year shall not exceed $6,500,000. The total amount payable to the USP for subsequent contract years shall not exceed the actual compensation amount of the first contract year plus the maximum percentage increase in prices allowed in the Pricing Proposal.

Discussion:

USP holds a US Patent (US 6,773,604 B2) for the PRI-SCTM/PRI-CEPTTM odor

control process which utilizes a combination of iron salts and oxidants. Various locations within the Metro Wastewater System rely heavily on the PRI-SCTM/PRI-CEPTTM process. They not only provide cost effective odor control, but in addition the PRI-SCTM/PRI-CEPTTM process supports chemically enhanced primary treatment of the wastewater to improve Total Suspended Solids and Biochemical Oxygen Demand removals. This supports the PLWTP ability to comply with its National Pollutant Discharge Elimination System (NPDES) permit. Although there are various known chemicals that can provide effective odor control, the City is not aware of any proven competitors to the PRI-SCTM/PRI-CEPTTM process that can provide the additional chemically enhanced primary treatment benefit.

However, the City is in the early stages of investigating potential competitors to the PRI-SCTM/PRI-CEPTTM process. The currently known competitors are in the early stages of the development of their products and have not had opportunities to prove their ability to ensure the continued pretreatment benefits experienced using the PRI-SCTM/PRI-CEPTTM process, thus ensuring the City's continued compliance with the PLWTP's NPDES permit. Pilot projects are being developed to investigate and evaluate the effectiveness of the potential competition. If proven to offer the chemically enhanced preliminary treatment benefits provided by the PRI-SCTM/PRI-CEPTTM process, then we can allow the vendors to competitively bid with confidence that we are not compromising our ability to comply with the PLWTP's NPDES permit.

Throughout the 10 years of service, USP's highly effective PRI-SCTM/PRI-CEPTTM Program has saved the City between $8 - $9 million in wastewater treatment chemicals while improving treatment processes and effluent water quality at the PLWWTP, NCWRP, and other facilities. USP has worked efficiently in partnership with the City of San Diego to maximize value through the enhancement of both economics and performance. As such, these services are critical to the continued operations at the Public Utilities Department, Wastewater Treatment and Disposal facilities, and in the best interest of the City at this time.

Bid Results: Sole Source #3956 was approved as a competitive process at this time would not have produced an advantage as the City desires to continue use of US Patent (US 6,773,604 B2) for the PRISC odor control process. USP pricing is pursuant to pricing adjustment terms and a formal Request for Quote process for USP's chemical suppliers as part of the contract agreement. USP pricing has been found to be comparison to the market therefore the competitive bidding process would not produce an advantage and is undesirable. The unique qualifications of USP Technologies and the need to procure these products and services as quickly as possible, warrant a sole source procurement.

USP Technologies, LLC Pricing Table by Fiscal Year

Term (12 Mths)	Dollar Amount per 12 Month Term	5% Increase	Monthly Amount	Fiscal Year	Dollar Amount per Fiscal Year	JPA Impact per Fiscal Year	Funding Duration
1	$ 6,500,000.00	$ 325,000.00	$ 541,666.67	FY 2018	**$ 1,625,000**	**$ 536,250**	Three Months (April 2018 - June 2018)
2	$ 6,825,000.00	$ 341,250.00	$ 568,750.00	FY 2019	**$ 6,581,250**	**$ 2,171,813**	Twelve Months (July 2018 - June 2019)
3	$ 7,166,250.00	$ 358,312.50	$ 597,187.50	FY 2020	**$ 6,910,313**	**$ 2,280,403**	Twelve Months (July 2019 - June 2020)
4	$ 7,524,562.50	$ 376,228.13	$ 627,046.88	FY 2021	**$ 7,255,828**	**$ 2,394,423**	Twelve Months (July 2020 - June 2021)
5	$ 7,900,790.63	$ 395,039.53	$ 658,399.22	FY 2022	**$ 7,618,620**	**$ 2,514,144**	Twelve Months (July 2021 - June 2022)
				FY 2023	**$ 5,925,593**	**$ 1,955,446**	Nine Months (July 2022 - March 2023)
	$ 35,916,603.13	**Total Contract Amount**		**Total**	**$ 35,916,603.13**	**$ 11,852,479**	
	$ 11,852,479.03	**JPA Fiscal Impact at 33%**					

Contract term will start in April 2018 so first three months of contract will incur in FY 2018.
5% pricing increase built in to address potential pricing changes each Fiscal Year.

Attachment 9

Central Area Alternative Evaluation

Central Area Alternative Evaluation

Metro TAC Meeting
February 21, 2018

Doug Owen, Stantec
Consultant Team Manager
Pure Water Program

The City of SAN DIEGO

Acknowledgements

Roberto Yano, City of Chula Vista
Dexter Wilson, Dexter Wilson Engineering
Scott Tulloch, Consultant (NV5)

John Helminski, City of San Diego
Lee Ann Jones-Santos, City of San Diego
Amer Barhoumi , City of San Diego
Alan Langworthy , City of San Diego
Victor Occiano, Brown and Caldwell
Jeff Schulz, Stantec

Phase 1 – North City

2050 annual average flow = 200 mgd

Currently under implementation
Waiver in place

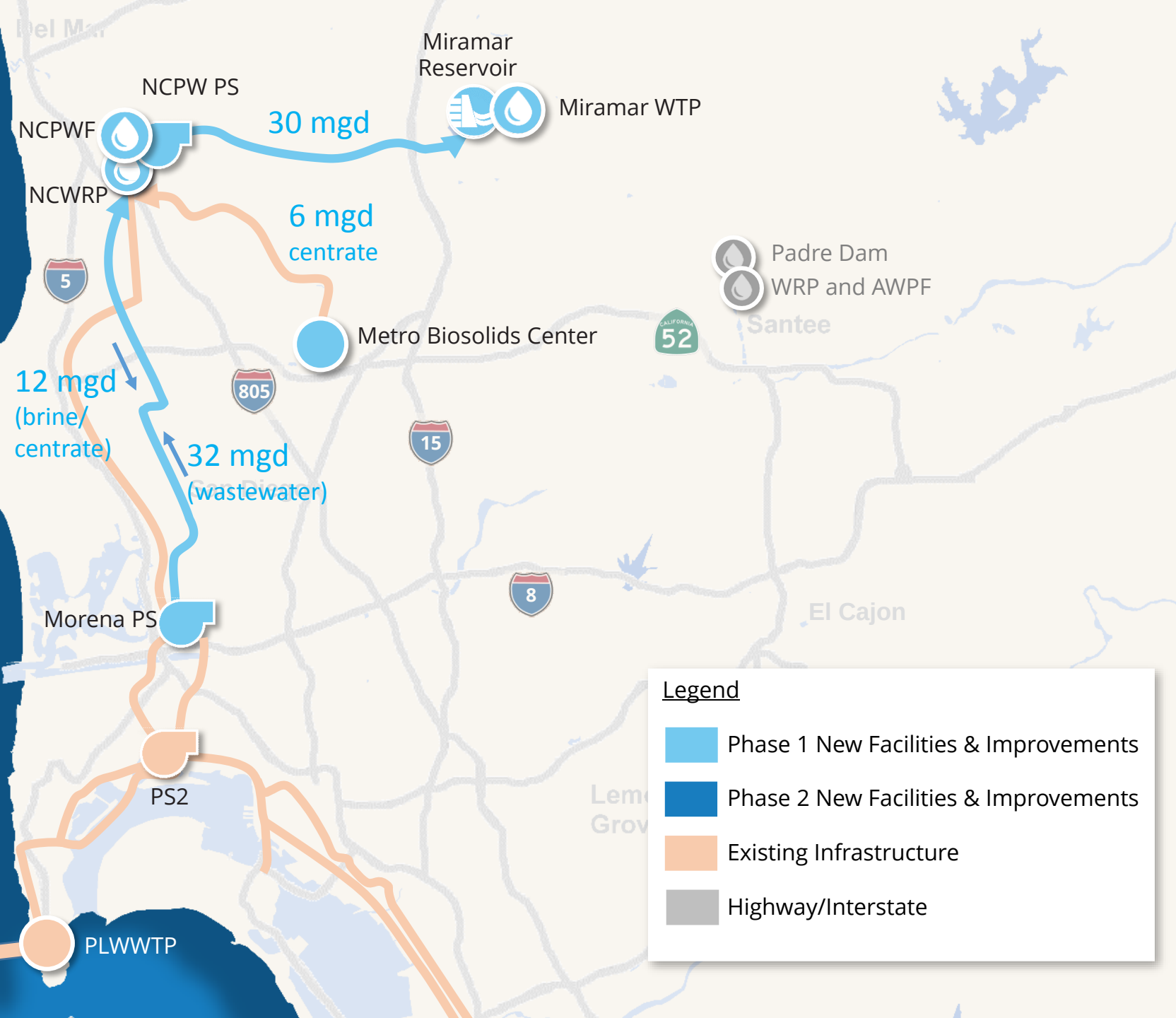
- NCWRP = 53 mgd secondary
  - 30 mgd purified water at NCPWF
  - 12 mgd non-potable reuse
- RSWRF (Padre Dam) = 15 mgd secondary
  - 10.5 mgd purified water at AWPF
  - 2.3 mgd non-potable reuse
- SBWRP = 15 mgd secondary
  - 9 mgd non-potable reuse
- PLWWTP = 240 mgd advanced primary capacity (existing)

Current Planned Capacity Without Phase 2 Pure Water

- 83 mgd secondary treatment
- 240 mgd advanced primary treatment

= 323 mgd total

129 mgd advanced primary to ocean



Alternative 1a:
Baseline Central Area approach

Secondary Equivalency or Waiver Secured

- NCWRP = 53 mgd secondary
  - 30 mgd purified water at NCPWF
  - 12 mgd non-potable reuse
- SBWRP = 15 mgd secondary
  - 9 mgd non-potable reuse
- RSWRF (Padre Dam) = 15 mgd secondary
  - 10.5 mgd purified water at AWPF
  - 2.3 mgd non-potable reuse
- CAWRP at Harbor Drive area
  - 70 mgd influent
- CAPWF in Mission Valley area
  - 53 mgd purified water to Lake Murray
- PLWWTP
  - 76 mgd influent
  - 240 mgd advanced primary available

Alternative 1b:
Baseline Central Area Approach

Full Secondary Required

- NCWRP = 53 mgd secondary
  - 30 mgd purified water at NCPWF
  - 12 mgd non-potable reuse
- RSWRF (Padre Dam) = 15 mgd secondary
  - 10.5 mgd purified water at AWPF
  - 2.3 mgd non-potable reuse
- SBWRP = 15 mgd secondary
  - 9 mgd non-potable reuse
- CAWRP at Harbor Drive area
  - 70 mgd influent
- CAPWF in Mission Valley area
  - 53 mgd purified water to Lake Murray
- PLWWTP
  - 78 mgd full secondary treatment

Alternative 2:
Bypass North City and Central Area treated flows to outfall

Full Secondary Required

- NCWRP = 53 mgd secondary
  - 30 mgd purified water at NCPWF
  - 12 mgd non-potable reuse
- RSWRF (Padre Dam) = 15 mgd secondary
  - 9 – 10.5 mgd purified water at AWPF
  - 3 mgd non-potable reuse
- SBWRP = 15 mgd secondary
  - 9 mgd non-potable reuse
- CAWRP in Harbor Drive area
  - 70 mgd secondary feeds CAPWF
- CAPWF in Mission Valley area
  - 53 mgd purified water to Lake Murray
- PLWWTP
  - 57 mgd full secondary treatment
- 23 mgd brine/treated centrate to outfall

Alternative 3a: Central Area WRP and partial advanced primary at PLWWTP

Secondary Equivalency or Waiver Secured

- NCWRP = 53 mgd secondary
  - 30 mgd purified water at NCPWF
  - 12 mgd non-potable reuse
- RSWRF (Padre Dam) = 15 mgd secondary
  - 10.5 mgd purified water at AWPF
  - 2.3 mgd non-potable reuse
- SBWRP = 15 mgd secondary
  - 9 mgd non-potable reuse
- PLWWTP with WRP (split plant)
  - 63 mgd WRP feeds CAPWF
  - 55 mgd advanced primary to ocean
- 23 mgd brine/treated centrate to outfall
- CAPWF in Harbor Drive area
  - 53 mgd purified water to Lake Murray

Alternative 3b:
Central Area WRP at PLWWTP
Full Secondary Required

- NCWRP = 53 mgd secondary
  - 30 mgd purified water at NCPWF
  - 12 mgd non-potable reuse
- RSWRF (Padre Dam) = 15 mgd secondary
  - 9 – 10.5 mgd purified water at AWPF
  - 3 mgd non-potable reuse
- SBWRP = 15 mgd secondary
  - 9 mgd non-potable reuse
- PLWWTP with WRP
  - 122 mgd secondary
  - Of 122 mgd, 63 mgd feeds CAPWF
- 23 mgd brine/treated centrate to outfall
- CAPWF in Harbor Drive area
  - 53 mgd purified water to Lake Murray

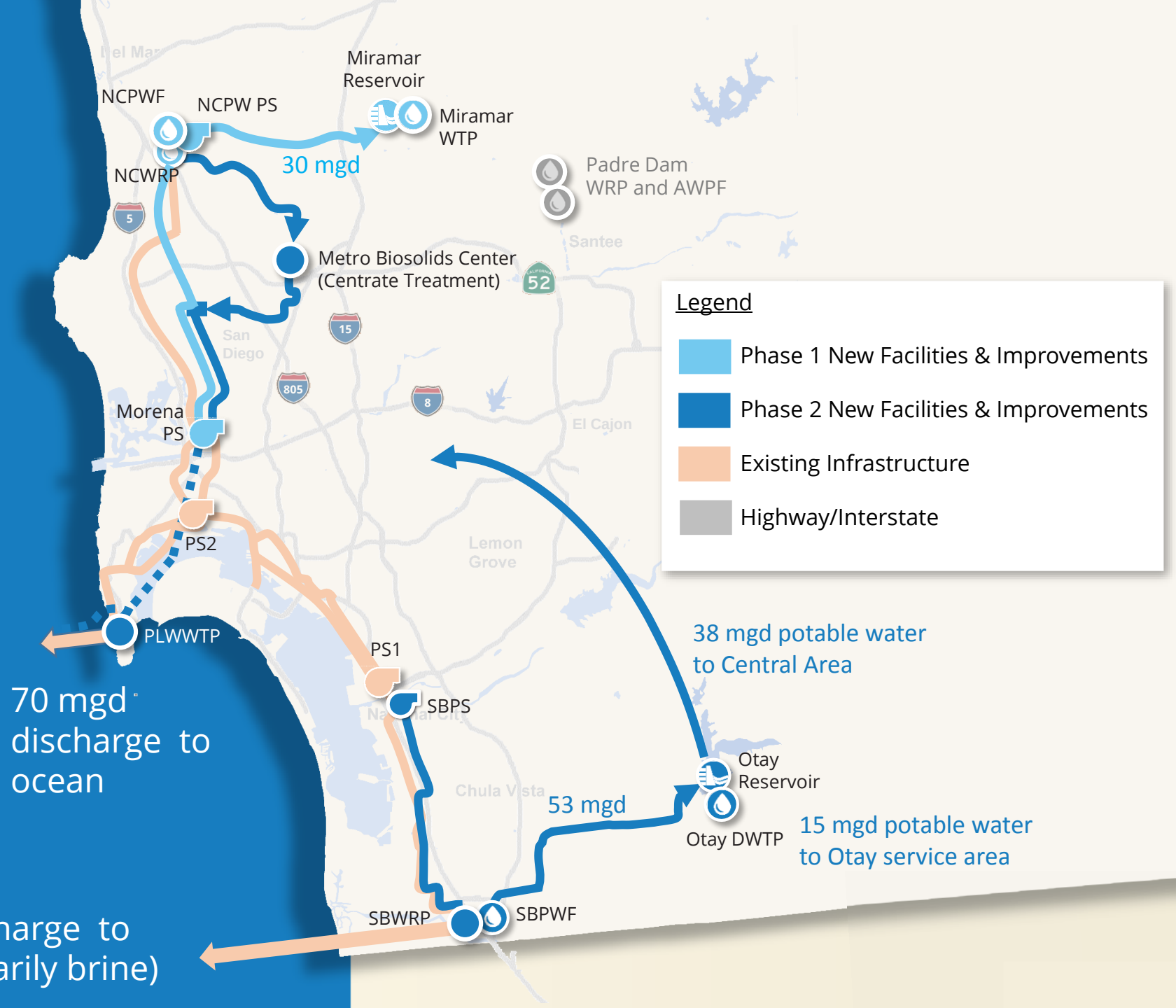
Alternative 4a:
South Bay WRP for 53 mgd IPR/DPR

Secondary Equivalency or Waiver Secured

- NCWRP = 53 mgd secondary
  - 30 mgd purified water at NCPWF
  - 12 mgd non-potable reuse
- RSWRF (Padre Dam) = 15 mgd secondary
  - 10.5 mgd purified water at AWPF
  - 2.3 mgd non-potable reuse
- SBWRP
  - 75 mgd WRP
  - 9 mgd non-potable reuse
  - 8 mgd biosolids treatment
- SBPWF
  - 53 mgd purified water to Otay Reservoir
- Otay DWTP
  - Expand from 34 to 53 mgd
- PLWWTP
  - 69 mgd advanced primary

Alternative 4b:
South Bay WRP for 53 mgd IPR/DPR
Full Secondary Required

- NCWRP = 53 mgd secondary
  - 30 mgd purified water at NCPWF
  - 12 mgd non-potable reuse
- RSWRF (Padre Dam) = 15 mgd secondary
  - 10.5 mgd purified water at AWPF
  - 2.3 mgd non-potable reuse
- SBWRP
  - 75 mgd WRP
  - 9 mgd non-potable reuse
  - 8 mgd biosolids capacity
- SBPWF
  - 53 mgd purified water to Otay Reservoir
- Otay DWTP
  - Expand from 34 to 53 mgd
- PLWWTP
  - 59 mgd secondary treatment
- 13 mgd brine/treated centrate to PLWWTP outfall

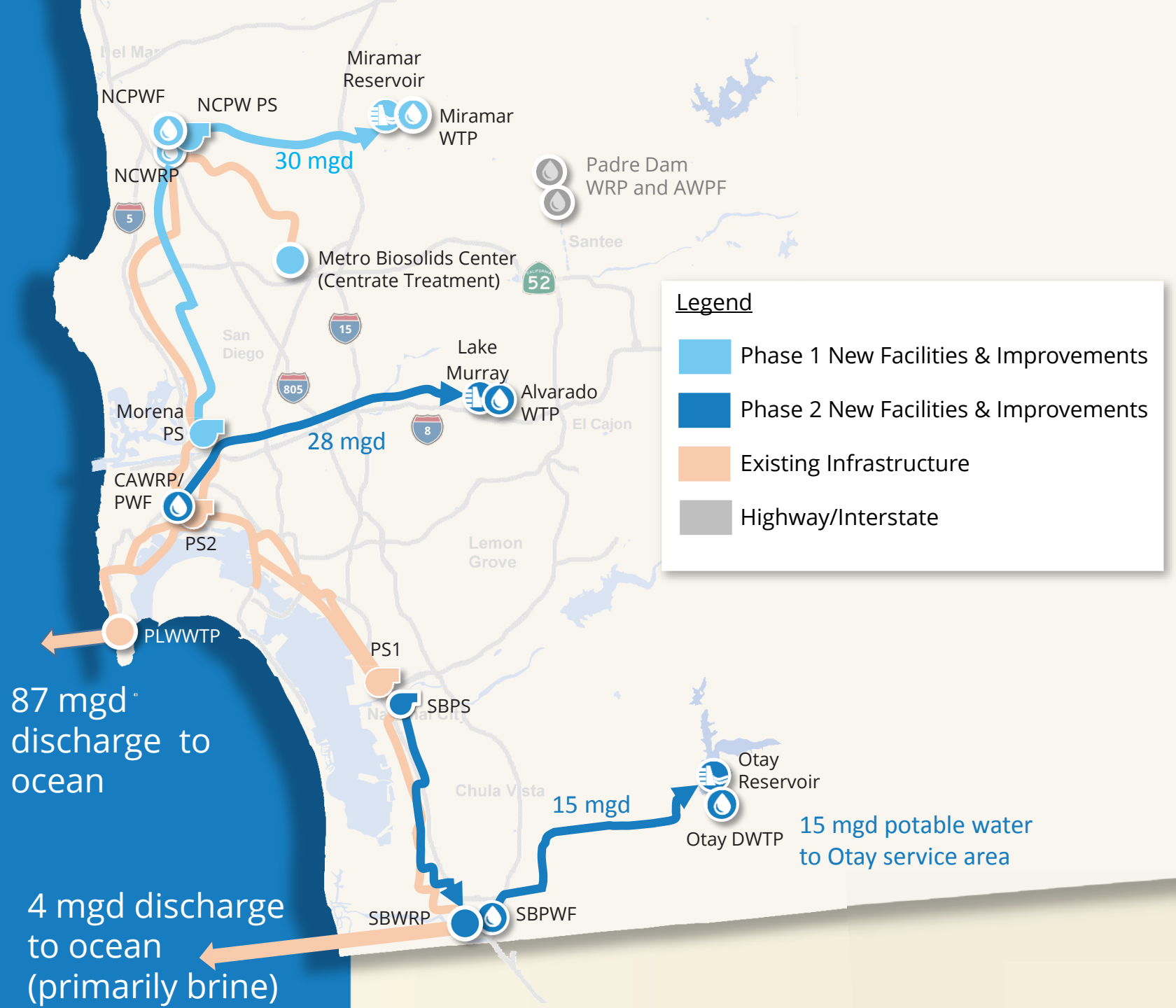


Alternative 5a:
Hybrid Central Area and South Bay WRP

Padre Dam Purified Water Reduces City's Pure Water Production to 73 mgd

Secondary equivalency or waiver secured

- NCWRP = 53 mgd secondary
  - 30 mgd purified water at NCPWF
  - 12 mgd non-potable reuse
- RSWRF (Padre Dam) = 15 mgd secondary
  - 10.5 mgd purified water at AWPF
  - 2.3 mgd non-potable reuse
- PLWWTP
  - 88 mgd advanced primary
- CAPWRP/PWF in Harbor Drive area
  - 36 mgd secondary at CAWRP
  - 28 mgd purified water to Lake Murray
- SBWRP
  - 28 mgd WRP
  - 9 mgd non-potable reuse
  - 3 mgd biosolids capacity
- SBPWF
  - 15 mgd purified water to Otay Reservoir

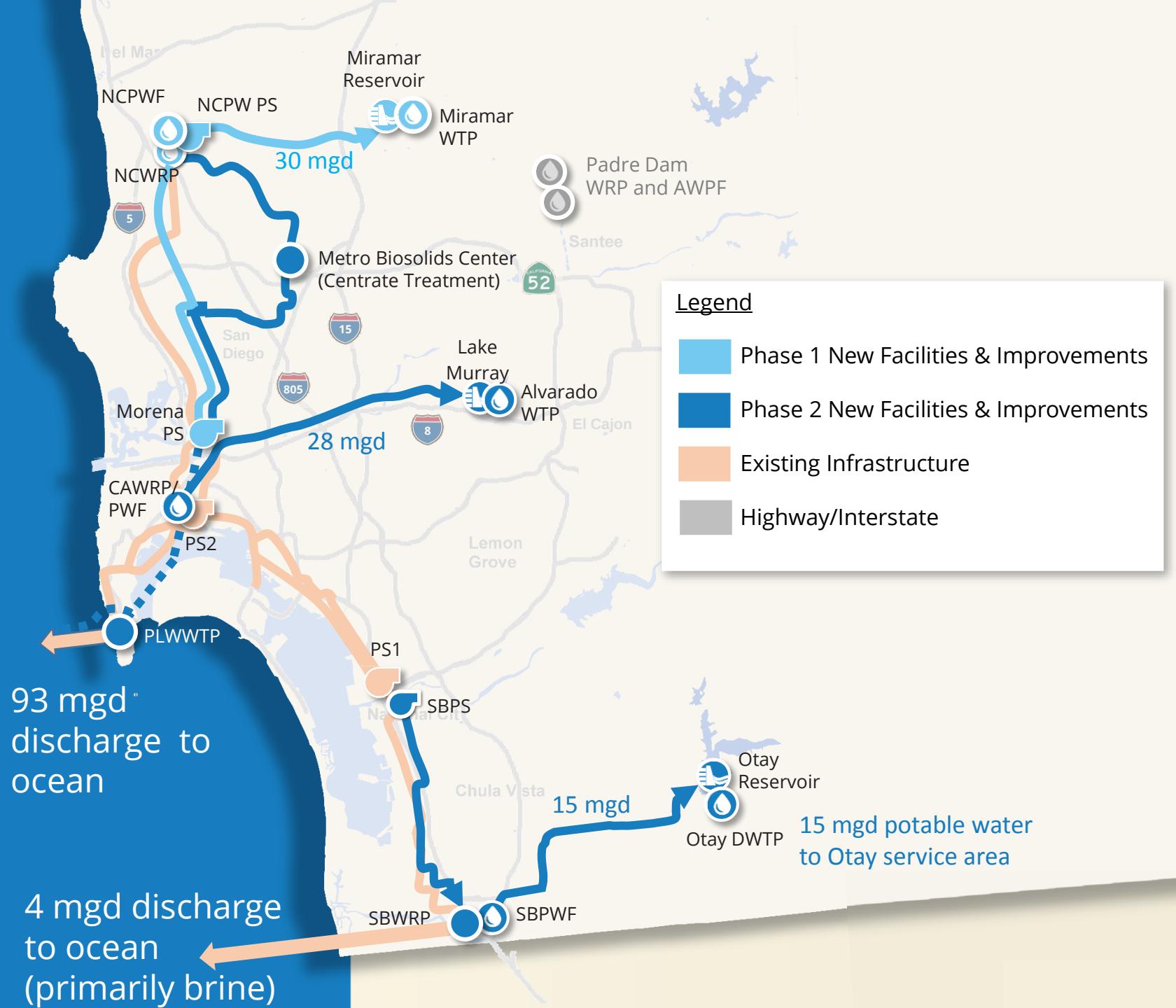


Alternative 5b:
Hybrid Central Area and South Bay WRP

Padre Dam Purified Water Reduces City's Pure Water Production to 73 mgd

Full Secondary Required

- NCWRP = 53 mgd secondary
  - 30 mgd purified water at NCPWF
  - 12 mgd non-potable reuse
- RSWRF (Padre Dam) = 15 mgd secondary
  - 10.5 mgd purified water at AWPF
  - 2.3 mgd non-potable reuse
- PLWWTP
  - 79 mgd secondary
- 17 mgd brine/treated centrate to outfall
- CAWRP/PWF in Harbor Drive area
  - 36 mgd secondary at CAWRP
  - 28 mgd purified water to Lake Murray
- SBWRP
  - 28 mgd WRP
  - 9 mgd non-potable reuse
  - 3 mgd biosolids capacity
- SBPWF
  - 15 mgd purified water to Otay Reservoir



Scope of Work

1. Define alternatives
   - *Includes summary table of flows from all facilities*
2. Define Fail-Safe and Treatment Performance Criteria
   - *Discharge water quality and duration*
   - *Permit compliance*
   - *Discharge options*
3. Define Evaluation Criteria to Compare Alternatives
   - *Quantitative and qualitative*
4. Develop Alternatives
   - *Borrow from previous work wherever possible*
   - *Conceptual level*
5. Prepare Conceptual, Planning-Level Cost Estimates
   - *Borrow from previous work and escalate costs where appropriate*
6. Apply Evaluation Criteria, Screen and Select Highest Ranking Alternatives
7. Develop Conceptual Phase 2 Central Area Delivery Schedule

Attachment 10
CH2M Hill

Public Utilities Department

Pure Water Division

As-Needed Construction Management Services – Conveyance Projects
Agreement with CH2M Hill, Inc.

John Helminski
Assistant Public Utilities Director

Metro TAC

February 21, 2018

The City of SAN DIEGO

Agreement Purpose

Provide Construction Management Services for Pure Water Phase 1 Conveyance Project.

Key Scope Elements

Preconstruction CM Services:

- Constructability Reviews

General CM Services:

- CM Plan Development
- Safety Management
- Project Controls
- Contract Compliance

Project Specific CM Services:

- Field and Special Inspections
- Environmental Compliance Assistance
- Testing/Start-up/ Commissioning Services
- Contract Closeout
- Cost Estimating Support
- Assist in Claim Resolution As Needed

CH2M Hill, Inc. Qualifications

- Recent construction management of similar-size and complex capital programs
- Breadth of water and wastewater construction management experience
- Deep bench strength of local resources
- Proactive CM approach
- Understanding of the unique nature of doing business in the City and coordinating with local communities

Selection Process

- Request for Proposal advertised, September 2017
- Four (4) teams submitted proposals, both teams interviewed

- Selection Panel

  * JPA Representative
    -Dexter Wilson
  * City of SD, Public Utilities:
    - John Helminski
    - Rania Amen
  *City of SD, Equal Opportunity
    -Contracting - Claudia Abarca
  * City of SD, Public Works:
    - Wendy Gamboa

- CH2M Hill, Inc. was selected as the most qualified team

Selection Process and Contract Terms

- September 2017, Request for Proposal (RFP) advertised
- Four teams submitted proposals, all teams interviewed
- CH2M Hill, Inc. was selected as the most qualified team
- Total not-to-exceed contract amount: $45,000,000
- Contract duration: 5 years
- Work to be authorized on a task-order basis

Projected Expenditure

Total Conveyance CM Contract Not-To-Exceed:	$45M
Wastewater % of Total Conveyance Cost:	~65%
Wastewater Portion of Conveyance CM Contract:	~$29M
JPA portion of the Contract (33%)	~$9.7M

Projected Expenditures Per Fiscal Year

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Wastewater	$1,170,000	$2,470,000	$12,060,000	$10,680,000	$2,680,000
JPA-Only	$390,000	$820,000	$4,020,000	$3,560,000	$890,000

Based on current project schedules

CM Conveyance Contract Approval Schedule

Activity	Date
Metro TAC	February 2018
Metro JPA/Metro Commission	March 2018
Environment Committee	March 2018
City Council Approval	April 2018
CM Notice to Proceed	May 2018

Attachment 12

Pure Water Program Update

Public Utilities Department

Pure Water Program Implementation Update

Metro TAC

February 21, 2018

The City of SAN DIEGO

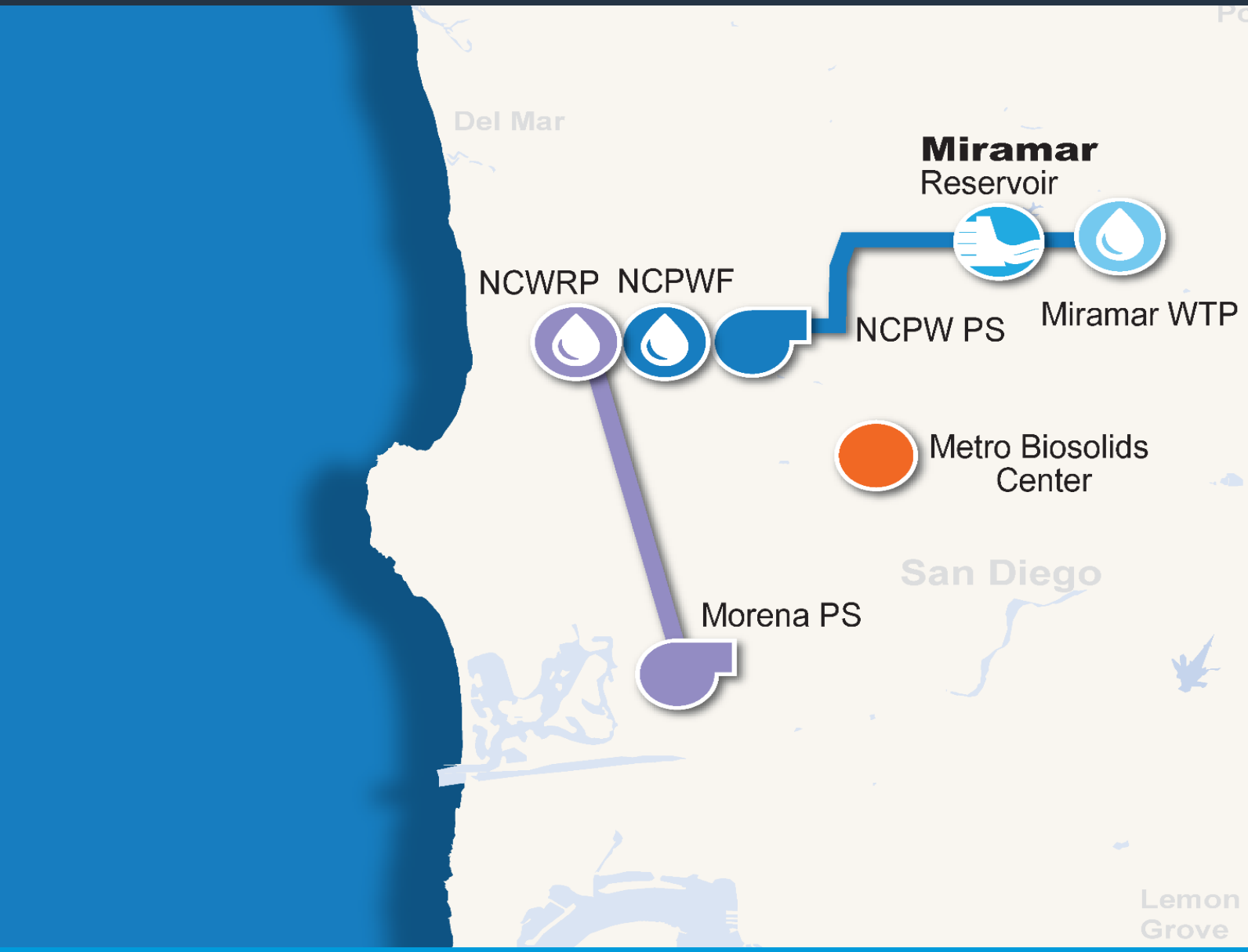
Pure Water Update

- North City Phase 1 Project Delivery
- Regulatory Approval Process
- Research and Optimization
- Environmental Review
- Debt Management
- Public Outreach
- Next Steps

Project Delivery

- Phase 1 Design
  - All core project design contracts nearing completion
  - Renewable Energy Project - Request for statement of qualifications advertised
- Construction Management
  - Public Utilities and Public Works Departments selecting construction management firms

Phase 1 - North City Projects



Facility	Design Level Percent Submittal Date
Morena Pump Station and Pipeline	60 percent September 2017
North City Water Reclamation Plant Expansion	60 percent October 2017
North City Pure Water Facility	60 percent October 2017
North City Pure Water Pump Station and Pipeline	90 percent August 2017
MBC Improvements	60 percent December 2017

Regulatory Process/NPDES

- **Point Loma Modified NPDES (Waiver) Renewal**
  - ✓ Regional Water Quality Control Board (RWQCB) Approved
  - ✓ Coastal Commission Approved
  - ✓ US EPA Final Permit Approved
  - ✓ Renewed Modified Permit (Waiver) Approved

Regulatory Process

- ✓ Title 22 Engineering Report submitted to Division of Drinking Water (DDW)
- ✓ NPDES permitting is starting
- ✓ EIR/EIS is out for public review

Regulatory Process Schedule

Title 22 ER

May 19, 2017
T22 ER 1st Draft
Submittal to DDW

→

Jan 2018
T22 ER 2nd Draft
DDW Submittal

→

Aug 2018 DDW
Approval Letter

Miramar NPDES

Jan 2018
NPDES RWD
1st Draft Submittal to City

→

Sept 2018
Draft Tentative Order
Released by RWQCB

→

Dec 2018
RWQCB Public Hearing
and Permit Adoption

EIR/EIS

Sept 2017
Draft NC EIR Release
for Public Comment

→

Jan 2018
Response to
Comments

→

Feb 2018
City Finalizes
NC EIR/EIS

→

Apr 2018
Notice of Decision
by City Council

→

June 2018
Record of
Decision by
BOR

Ongoing Research and Process Optimization

- **Research Completed**
  - Sodium Hypochlorite
  - Analyzers
  - Membrane Filtration (MF) and Ultraviolet (UV) Systems Pre-selection
  - Reverse Osmosis Membrane Pre-qualification
  - Reverse Osmosis Brine Study
- **Ongoing Research**
  - Antiscalant Pre-selection
  - No Chloramines
  - Miramar Drinking Water Treatment Plant Pilot and Pipe Loop Studies

Environmental Review

- North City Project Environmental Impact Report/ Environmental Impact Statement Update
  - Draft EIR Released for Public Comment
  - Comment Period ended November 21, 2017
  - Comment Period for NEPA ended January 8, 2017

Environmental Review

- Three alternatives evaluated: No Project, Miramar Reservoir Alternative, and San Vicente Alternative

Significant Environmental Impacts		
Area	Miramar Alternative	San Vicente Alternative
Aesthetics		✓
Air Quality/Odor		✓
Noise	✓	✓
Transportation	✓	✓

Environmental Impacts that can be Mitigated		
Area	Miramar Alternative	San Vicente Alternative
Land Use	✓	✓
Air Quality/Odor	✓	
Historical Resources	✓	✓
Paleontological Resources	✓	✓
Biological Resources	✓	✓
Health & Safety/ Hazards	✓	✓
Public Utilities	✓	✓

Environmental Review

- Miramar Reservoir Water Quality and Recreational Fishing
  - No significant difference between existing condition and future condition
  - No loss or impairment of beneficial uses
  - A functioning aquatic ecosystem would continue to exist
  - No significant impact to warm water fishery

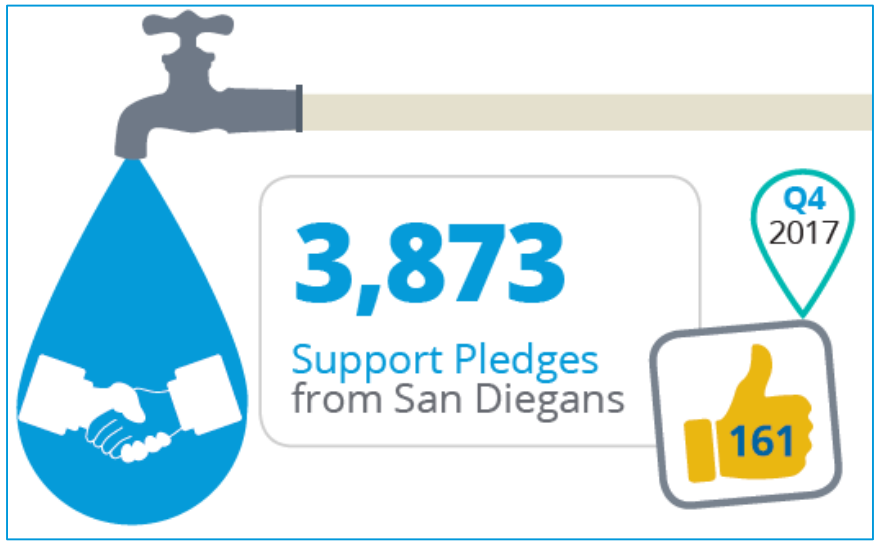
Debt Management Funding Opportunities

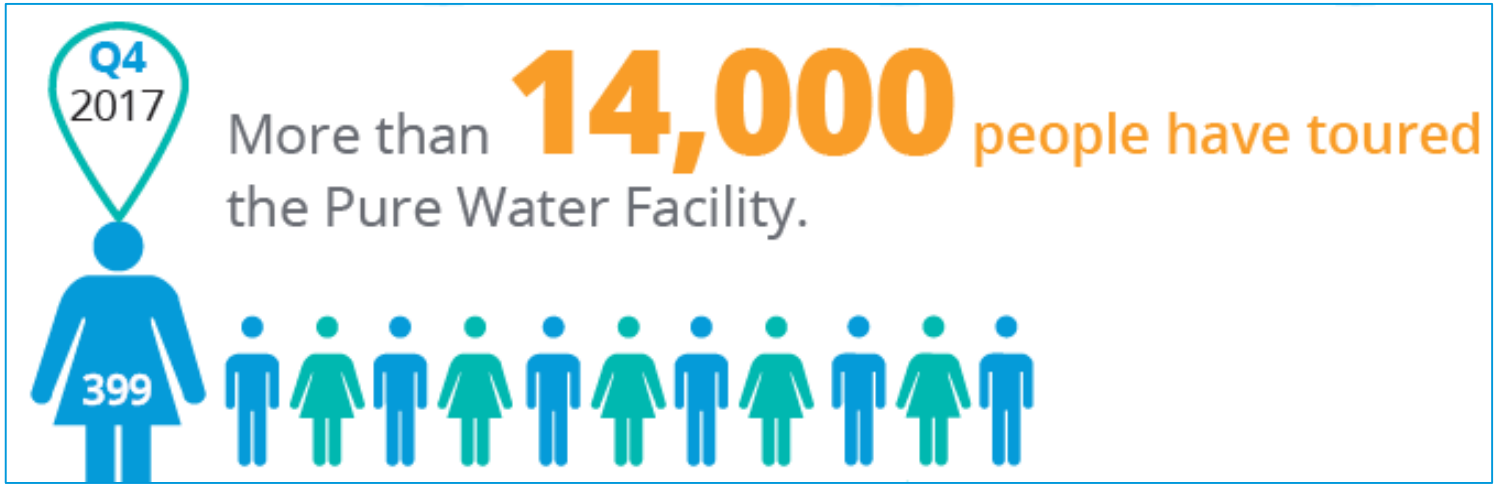
- **Estimated Funding Opportunities**
  - **Pure Water Phase I Approximate Capital Costs: $1.1-1.3 Billion**

Water Costs	$700M-800M
Wastewater Costs	$400M-500M

  - **Water Storage Investment Program (WSIP) Grant Application, Proposition 1**
    - Applied for $219M Grant
    - Anticipated June 2018
  - **Clean Water SRF loan & EPA WIFIA applications**
    - SRF loans offer lowest cost source of funding with 30 year repayment
      - Applied for $1.27 billion
    - EPA WIFIA additional low cost funding source with 35 year repayment option. WIFIA capped at an estimated $530M
  - **Local Resource Program Funding (Metropolitan Water District of Southern California)**
  - **Pay-go funds, bonds/notes are additional funding sources as required**

Outreach Metrics





2017 Outreach Efforts

- Pure Water Day Open House
- Industry and media involvement
- Youth engagement
- “Meet the Artist” event – June 10

Presentations to 600+ community members

- Presented to community planning groups, town councils, civic associations, HOAs, recreation councils and stakeholder groups
- Continued outreach to San Diego Council of Bass Clubs and fishing community
- Public workshop held for North City Project Draft EIR

Recognition

Next Steps

- City Council Record of Decision on Final NC EIR/EIS
  - Anticipated April 2018
- Construction Management firms begin Constructability review
  - Anticipated May 2018
- DDW Approval of Title 22 Engineering Report
  - Anticipated August 2018
- Miramar NPDES Permit from Regional Water Quality Control Board
  - Anticipated December 2018

Pure Water Supporters

Pure Water Program
Annual Progress Report

2017

City of San Diego

Public Utilities Department

Table of Contents

1. Introduction

The Pure Water San Diego Program (Pure Water) made substantial progress over the last year, with efforts focused on the implementation of Phase 1 – North City projects.

This Pure Water Program Annual Progress Report (Progress Report) highlights achievements over the last year, provides a status update on Phase 1 – North City scope and schedule status and discusses critical initiatives that are in progress. No changes have been made to the Central Area and South Bay projects (Phases 2 and 3) since the distribution of the Pure Water Preliminary Capital Improvement Plan (CIP), in July 2015.

2. Pure Water Accomplishments

It has been a year of forward progress, decision-making and major accomplishments!

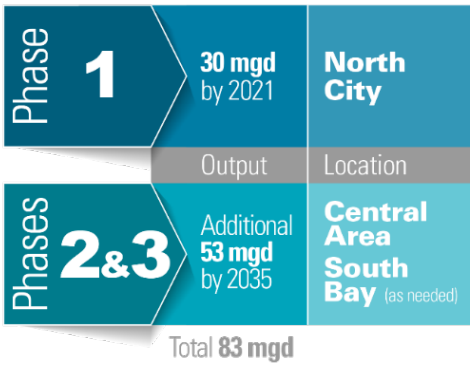
The table below provides an overview of this year's accomplishments; more details are provided on the following pages.

Table 1: At A Glance Accomplishments

Area of Achievement		What Was Accomplished
✓	**Phase 1 – North City Program Implementation**	Completed the following design milestones for Phase 1 – North City Projects: • 100% Design for the North City Pure Water Pipeline and Dechlorination Facility; design review is ongoing • 90% Design for the North City Pure Water Pump Station • 60% Design for the Morena Pump Station and Pipelines Project, North City Water Reclamation Plant Expansion and North City Pure Water Facility • 30% Design for the Metropolitan Biosolids Center Improvements Project • 10% Preliminary Design for North City Renewable Energy Project initiated
✓	**Regulatory Progress**	Submitted first draft of the Title 22 Engineering Report to the California Division of Drinking Water in May 2017 and received comments back during the first week of October 2017
✓	**Environmental Review**	Released draft of the Phase 1 - North City Projects Environmental Impact Report and Environmental Impact Statement for public review on September 7, 2017 and November 24, 2017, respectively
✓	**Engineering and Process Optimization Accomplishments**	Conducted research and improvements at the North City Demonstration Pure Water Facility (Demonstration Facility) to increase efficiency and answer design questions related to life-cycle cost savings and operational stable of future full-scale facilities
✓	**Pure Water Public Outreach**	Partnered with Stone Brewing on an event that was covered by more than 80 news outlets, held the second Pure Water Open House that was attended by more than 500 people and welcomed our 14,000th Demonstration Facility tour participant
✓	**Program Recognition**	The City of San Diego and Stone Brewing received the 2017 Public-Private Partnership Award from the Water Reliability Coalition

3. Phase 1 – North City Implementation Update

Pure Water is the City of San Diego's (City) program that will provide 1/3 of San Diego's water supply locally by 2035. The Pure Water Program will include a system of treatment facilities, pump stations and pipelines that will be constructed in three phases.



The Pure Water Team developed the Phase 1 – North City plan to achieve 30 million gallons per day (mgd) of purified water production. Figure 1 provides an overview of the Phase 1 facilities. As of the end of 2017, all Phase 1 projects are on schedule to be completed by the end of 2021.

The Pure Water Team is being led by the Public Utilities Department; the Public Works Department and consultant staff have been integrated into the Pure Water Team to manage the design and construction of all Pure Water projects. This partnership leverages design, construction and project management expertise that will benefit Phase 1 – North City delivery. The Pure Water Team is overseeing the preliminary design and detailed design for all key Phase 1 – North City projects, which are highlighted below and detailed on the following pages:

- NC01 – Morena Pump Station and Pipelines: 60% Design Completed
- NC02 – North City Water Reclamation Plant Expansion: 60% Design Completed
- NC03 – North City Pure Water Facility: 60% Design Completed
- NC04 – North City Pure Water Pump Station and Pipeline:
    - North City Pure Water Pipeline and Dechlorination Facility: 100% Design Review Ongoing
    - North City Pure Water Pump Station: 90% Design Completed
- NC05 – North City Renewable Energy Project: 10% Preliminary Design Ongoing
- NC06 – Metropolitan Biosolids Center Improvements: 30% Design Completed
- NC07 – Miramar Drinking Water Treatment Plant Improvements: Preliminary Planning Ongoing

Figure 1: North City Project Map

Phase 1 – North City Projects

The Pure Water Team has advanced design of Phase 1 – North City projects. The scope of Phase 1 – North City projects has been refined through the completion of preliminary design and detailed design submittals. Project details are provided in the following pages:

NC01 Morena Pump Station and Pipelines Project

The Morena Pump Station and Pipelines Project (Morena Project) is designed to increase wastewater flows to the North City Water Reclamation Plant, which would require 52 mgd of wastewater to meet both Pure Water and recycled water needs.

The Morena Project would transport an annual average of 32 mgd of wastewater from four existing sanitary sewers near the intersection of Friars Road and Morena Boulevard and would use a pump station to send the wastewater north to the North City Water Reclamation Plant. This would enable the North City Water Reclamation Plant to operate consistently at 52 mgd and the new North City Pure Water Facility to produce 30 mgd of purified water to add to the drinking water supply system.

A wastewater pump station would be built at the intersection of Sherman and Custer Streets, near Morena Boulevard (see Figure 2). Two 10.7-mile wastewater pipelines would also be constructed: one pipeline would transport wastewater from the pump station to the North City Water Reclamation Plant and one would transport salts and contaminants (brine) from the North City Water Reclamation Plant to the Point Loma Wastewater Treatment Plant. The wastewater pipelines would start at Sherman Street, follow West Morena Boulevard to Clairemont Drive, continue to Genesee Avenue and go through University City to the North City Water Reclamation Plant on Eastgate Mall.

This project would also include construction of two approximately 3.5-mile water pipelines (a 16-inch water distribution pipeline and a 36-inch transmission main), which would run parallel to the wastewater pipelines along West Morena Boulevard and Morena Boulevard.

Status: Recently completed 60% Design

Figure 2: Draft Design Rendering for Morena Pump Station

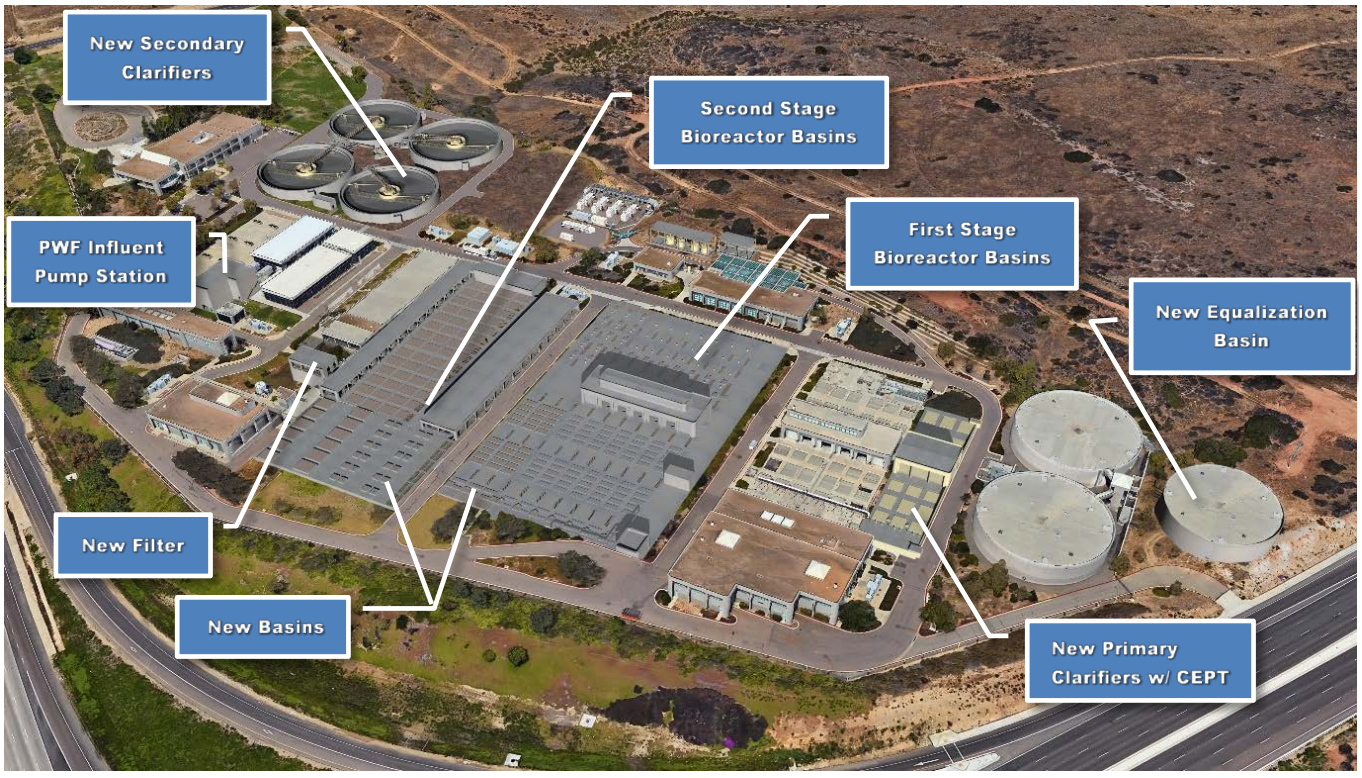
NC02 North City Water Reclamation Plant Expansion Project

The North City Water Reclamation Plant treats wastewater from several San Diego communities and distributes recycled water for irrigation and industrial purposes in the northern San Diego region. As part of the Pure Water Program, the North City Water Reclamation Plant would be expanded from producing 30 mgd to 52 mgd so the facility can continue to serve recycled water customers as well as provide recycled water to the future North City Pure Water Facility.

Major design elements for the North City Water Reclamation Plant expansion are illustrated in Figure 3 and include new secondary clarifiers, addition of chemically-enhanced primary treatment, expansion of the aeration basins, a new tertiary filter and a new equalization basin. This project also includes design of a 42.5 mgd pump station and a wastewater pipeline that would convey recycled water produced at the North City Water Reclamation Plant to the future North City Pure Water Facility. The rendering below shows the upgrades that would be made at the North City Water Reclamation Plant.

Status: Recently completed 60% Design

Figure 3: Draft Design Rendering for North City Water Reclamation Plant Expansion



NC03 North City Pure Water Facility Project

The North City Pure Water Facility would treat recycled water produced at the North City Water Reclamation Plant to purified water standards. The new facility would be constructed north of Eastgate Mall across the street from the existing North City Water Reclamation Plant. The North City Pure Water Facility would feature a state-of-the-art five-step treatment process that includes:

1. Ozonation
2. Biological Activated Carbon filters
3. Membrane filtration
4. Reverse osmosis
5. Ultraviolet light with advanced oxidation

Other North City Pure Water Facility design elements include chemical feed systems, site work, yard piping and electrical installations. The facility would also include an operations building, illustrated in Figure 4, which would house North City Pure Water Facility operations, maintenance and laboratory staff as well as a visitor center.

Once operational in 2021, the new plant would have a production capacity of up to 34 mgd. The purified water from the North City Pure Water Facility would be conveyed to Miramar Reservoir. The North City Pure Water Facility will include a public art component, which is currently in the planning stages.

Status: Recently completed 60% Design

Figure 4: North City Pure Water Facility Draft Design Rendering

NC04 North City Pure Water Pump Station and Pipeline Project

The North City Pure Water Pump Station and Pipeline Project is needed to convey purified water produced by the new North City Pure Water Facility to Miramar Reservoir.

The purified water would be pumped from the North City Pure Water Facility by a new 30 mgd pump station, which would be located on the southeast portion of the North City Pure Water Facility on Eastgate Mall. Next, the purified water would be conveyed via a pipeline that would start at Eastgate Mall, follow Miramar Road, tunnel under the Interstate 15 (I-15) Highway, and continue through the Scripps Ranch community up to Miramar Reservoir. There, the purified water would be dispersed throughout the reservoir via an underwater pipeline that would be constructed on site and installed along the base of the reservoir.

The North City Pure Water Pump Station and Pipeline Project includes the following:

- 30 mgd purified water pump station
- Over 7.5 miles of 48-inch diameter pipeline
- 0.9 miles of 12-inch to 54-inch diameter underwater pipeline at Miramar Reservoir
- Dechlorination facility (illustrated in Figure 5)

The purified water would blend with the City's imported and local water supplies and be treated again at the adjacent Miramar Drinking Water Treatment Plant and distributed to customers.

Status: 100% Design submitted for North City Pure Water Pipeline and Dechlorination Facility (design review is ongoing); 90% Design completed for the North City Pure Water Pump Station

Figure 5: Draft Design Rendering of the North City Pure Water Dechlorination Facility

NC05 North City Renewable Energy Project

The North City Renewable Energy Project would capture Miramar Landfill gas to generate energy and help meet Climate Action Plan targets to reduce greenhouse gas emissions. The project would produce the majority of power needed for the Phase 1 - North City facilities, including the expanded North City Water Reclamation Plant, North City Pure Water Facility, North City Pure Water Pump Station, and Metropolitan Biosolids Center. The City would install a new 15.4 MW generation facility at North City Water Reclamation Plant, 1.6 MW generation facility at Metropolitan Biosolids Center, landfill gas compressor station and pipeline.

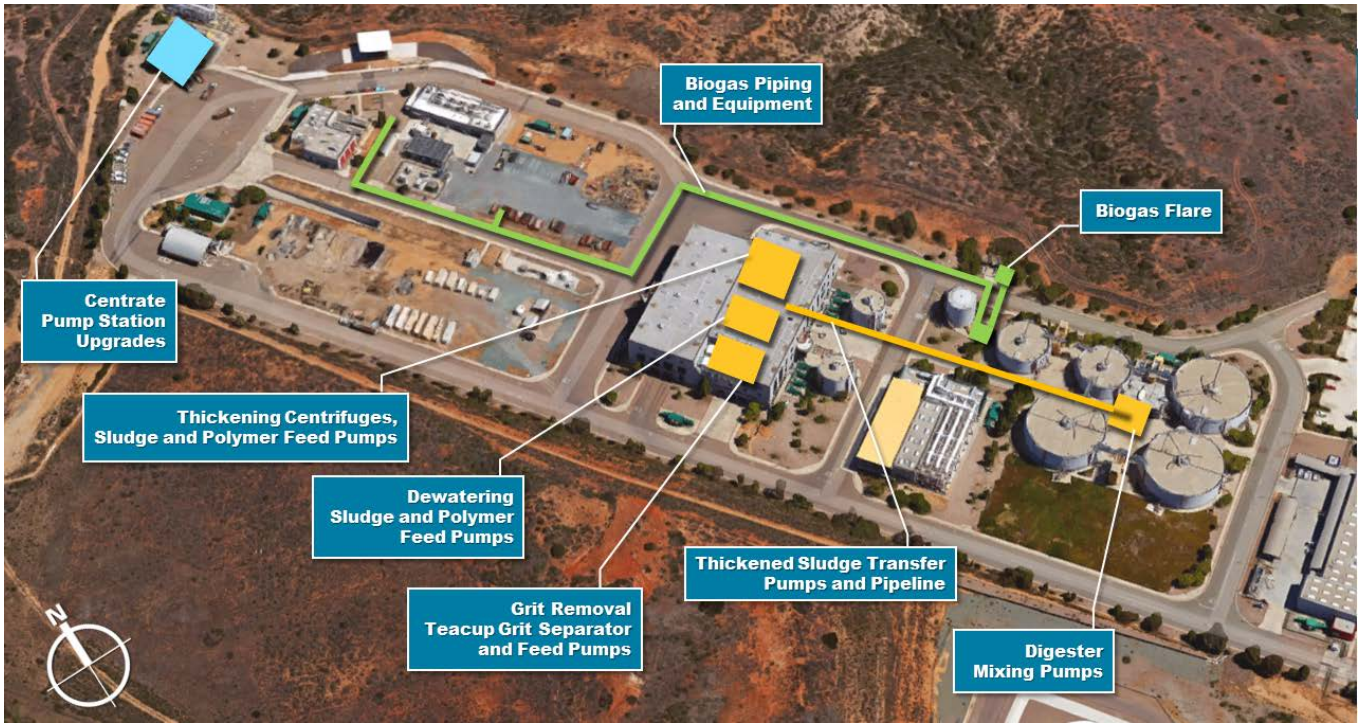
Status: Currently in Preliminary Design (10%); working with Debt Management, Office of the City Attorney and consultants to finalize Request for Statement of Qualifications (RFSQ) for issuance in the first quarter of 2018

NC06 Metropolitan Biosolids Center Improvements Project

The Metropolitan Biosolids Center is the City's regional biosolids facility that receives and processes solids from both the North City Water Reclamation Plant and the Point Loma Wastewater Treatment Plant. Upgrades and improvements to the existing process systems are necessary. The major project scope elements at the Metropolitan Biosolids Center are illustrated on Figure 6 and entail improvements to the following process areas: grit removal, biosolids thickening, anaerobic digestion and centrate pump station.

Status: Recently completed 30% Design

Figure 6: Metropolitan Biosolids Center Improvements Draft Site Plan



NC07 Miramar Drinking Water Treatment Plant Improvements Project

A potential project to improve the Miramar Drinking Water Treatment Plant in support of Pure Water is being considered. More details on progress are provided on pages 9-10.

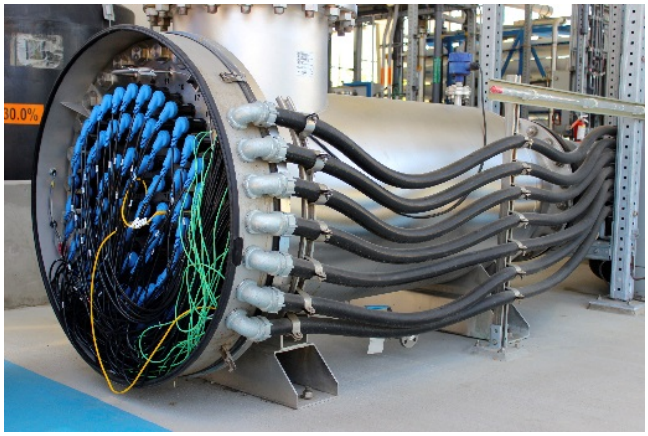
Status: Preliminary planning ongoing; Pump Station Condition Assessment completed December 2017

Engineering and Process Optimization Supporting Studies

The Pure Water Team has been conducting important studies to confirm program and project scope, including a full evaluation to assess the potential impacts of integrating purified water into the existing water and wastewater system.

Advanced Water Treatment Equipment Pre-selection

The Pure Water Team has undertaken a full-scale testing program to preselect membrane filtration and ultraviolet equipment and to prequalify reverse osmosis equipment. The Pure Water Team used a comprehensive testing protocol with pre-established performance standards that has allowed the City to identify which vendors will be considered further for selection of North City Pure Water Facility equipment. This approach was used to ensure the treatment equipment's performance and reliability, and to control potential change orders during construction.



Ultraviolet Disinfection Located at the North City Demonstration Pure Water Facility

Final selection of equipment was completed in 2017 and vendors are working with the North City Pure Water Facility final designer to incorporate layout and equipment needs. In addition, in 2017, the City started the process to prequalify antiscalant suppliers to ensure reliable performance of reverse osmosis membranes at the North City Pure Water Facility. Testing is scheduled to be completed in 2018 with qualifying antiscalant suppliers to be issued a Request for Proposal following testing.

Miramar Drinking Water Treatment Plant and Distribution System Impacts

Bench- and Pilot-Scale Testing

In 2016, bench-scale testing was conducted to assess the impact Pure Water will have, if any, on the drinking water system. The study evaluated the impact of blending Pure Water with other raw water supplies on the reservoirs, treatment plants, and drinking water distribution system to ensure public health protection following a change in the source water. The Pure Water Team performed in-depth data collection; assessed operation, mixing and water quality in the reservoirs; and analyzed implications for treatment plant operation via bench-scale tests. The team investigated implications of the finished water for the distribution system based on water chemistry modeling and recommended improvements and provided associated costs to mitigate any potential impacts. In 2017, to supplement the bench-scale work, additional pilot-scale testing is being conducted to validate the findings from the bench-scale work. The pilot-scale testing is scheduled to be completed in 2018.

Pump Station Condition Assessment

A condition assessment on the Miramar Reservoir Pump Station was performed in 2017. With the Pure Water program in place, the Miramar Pump Station will need to be adapted to additional flows and new operations. The condition assessment evaluates the existing condition of the Miramar Pump Station to ensure that any required upgrades to the existing pumps along with various mechanical and electrical upgrades to the valves, piping, and instrumentation and control system are completed prior to receiving purified water.

The condition assessment was completed in December 2017. The preliminary condition assessment findings are as follows: pumps and pump check valves require rehabilitation, appurtenances to the pumps and small piping require replacement, electrical power equipment is in good condition, and the station instrumentation system programmable logic controllers (PLCs) meet the current standards. Noise assessment study results indicate that the pump station, while operating at full capacity, meets noise level standards and therefore does not require any enclosure.

North City Pure Water Facility Research

The City continues to operate and maintain the Demonstration Facility, a 1 mgd plant that comprises the advanced treatment processes that will be used in the full-scale North City Pure Water Facility. The Pure Water Team conducted additional research and improvements to the Demonstration Facility to increase efficiency and answer specific design questions related to life-cycle cost savings and assuring stable operation of future full-scale facilities.

Grant-funded Research Projects

In 2017, the City was awarded two U. S. Bureau of Reclamation grant-funded research projects, which the Pure Water Team is managing. The two grant-funded research projects are titled “Site Specific Analytical Testing of Reverse Osmosis Brine Impacts to the Treatment Process” (Brine Impacts Study) and “Demonstrating Innovative Control of Biological Fouling of Microfiltration/Ultrafiltration and Reverse Osmosis Membranes and Enhanced Chemical and Energy Efficiency in Water Reuse” (No Chloramine Study).

Lab Technician Performing Water Quality Testing

Brine Impacts Study

A by-product of the North City Pure Water Facility’s reverse osmosis treatment process is brine. The brine produced at the North City Pure Water Facility will be conveyed to the Point Loma Wastewater Treatment Plant via the brine pipeline, which is being designed and constructed as part of the Morena Project. The objective of the Brine Impacts Study was to assess the effect of future brine inputs on Chemically Enhanced Primary Treatment (CEPT) and methane gas production through the anaerobic digestion process at the Point Loma Wastewater Treatment Plant. The study was completed in September 2017; the preliminary findings show that the current CEPT baseline can be restored by increasing coagulant doses. In addition, no apparent effects on gas production were observed.

No Chloramine Study

The objective of the No Chloramine Study is to demonstrate efficiency of the Ozone and Biological Activated Carbon (BAC) pretreatment to eliminate the need for chloramines, which would result in chemicals and energy savings and extending the lifecycle of membranes. This study is currently in progress and will conclude in 2018.

North City Demonstration Pure Water Facility

Tertiary Filter Loading Rate Evaluation

The Pure Water Team recently completed a tertiary filter loading rate evaluation at the North City Water Reclamation Plant to determine if an equal degree of treatment could be achieved for higher filtration rates. The evaluation was modeled off the Filter Loading Evaluation for Water Reuse (FLEWR) study. It has been successfully demonstrated that North City Water Reclamation Plant can operate at filtration rates of 7.5 gal/ft^2-min.

Pathogen Study

To demonstrate pathogen removal at the North City Water Reclamation Plant, the Pure Water Team completed a comprehensive pathogen study, which is one of the largest microbiological datasets ever collected at a wastewater treatment facility. The year-long microbiological monitoring effort included 11 microbiological assays, sample collection from the raw influent, secondary and tertiary effluent, 21 virus sampling events, and 24 protozoa sampling events. The results of the study are being used to support Title 22 Engineering Report approval efforts related to the consequent pathogen removal credits for the North City Water Reclamation Plant. The pathogen removal credits will further promote redundancy in the overall system's pathogen removal capability and operational flexibility in Phase 1 - North City.

4. Regulatory and Environmental Progress

Regulatory Progress

The City is committed to continued close collaboration with the State Water Resources Control Board's (SWRCB) Division of Drinking Water (DDW) and Regional Water Quality Control Board (RWQCB) staff in the development of a project that protects public health as well as meets basin objectives for discharge to Miramar Reservoir. The staff from the City and the DDW met monthly between 2016 and May 2017, when the draft Title 22 Engineering Report was submitted for DDW's review.

Title 22 Engineering Report

The Title 22 Engineering Report describes all aspects of the Phase 1 – North City projects and the framework for compliance with the California Code of Regulations Title 22 Water Recycling Criteria (CCR, 2014) and future surface water augmentation regulations.

The purpose of the Title 22 Engineering Report is to request approval from DDW for the North City Pure Water Project and form the basis for the National Pollutant Discharge Elimination System (NPDES) permit to be issued by the RWQCB. Preparation of this very comprehensive report was initiated in early 2016; the first draft was submitted to the DDW in May 2017.

The North City Pure Water Project Title 22 Engineering Report covers a variety of topics, including:

- Regulatory Requirements
- Wastewater Source Control
- Detailed Project Facilities Description
- Reclaimed and Purified Water Quality
- Drinking Water Supply System
- Treatment Safety Features
- Response & Notification Plan and Contingency Plan
- Monitoring and Reporting Program
- Operations Optimization Plan
- Operations and Maintenance (O&M) Readiness Plan
- Technical, Managerial and Financial Capacity

DDW completed their review of the first draft of the Title 22 Engineering Report and submitted comments to the City the first week of October 2017. The City is in the process of responding and preparing a second draft for DDW's review. The City's goal is to receive an approval letter from DDW with conditions for the project by fall 2018.

Miramar Reservoir

Independent Advisory Panel

The City reconvened the Independent Advisory Panel (IAP) on October 9-10, 2017 to provide their opinion on a couple of key issues important to approval of the project. The DDW and SWRCB were in attendance on the first day of the IAP to engage with panel members. Key issues discussed were related to:

- Dilution modeling at Miramar Reservoir
- Pathogen removal credit at the North City Water Reclamation Plant

In the November 29, 2017 National Water Research Institute Memorandum, the IAP supported the City's approach to enable the use of sophisticated reservoir modeling to determine withdrawal locations at the Miramar Reservoir outlet tower as a demonstration of meeting DDW's dilution criteria under the Surface Water Augmentation regulations.

The IAP recommended a modified approach for addressing pathogen removal credit from the North City Water Reclamation Plant that is statistically defensible and supports the approach proposed by the City, based upon the data collected in the Pathogen Study. In addition, the IAP recommended that appropriate North City Water Reclamation Plant operating and performance criteria be determined that would allow DDW to grant the desired pathogen removal credit. Details of the pathogen study are found on page 11.

California Potable Reuse Regulations Update

The California Water Code requires the DDW, a division of the SWRCB, to adopt regulations for surface water augmentation, which is a form of indirect potable reuse. The Code also requires DDW to investigate and report to the Legislature on the feasibility of developing uniform regulations for direct potable reuse.

Surface Water Augmentation Regulations

The DDW released a draft of the surface water augmentation regulations for public comment on July 21, 2017. The comment period closed on September 12, 2017 and DDW is currently developing responses to public comments. A little more than 20 comment letters were received. The City submitted a letter to DDW in support of the draft surface water augmentation regulations, which are consistent with development of the Phase 1 - North City projects. The City is looking forward to DDW finalizing the surface water augmentation regulations.

Direct Potable Reuse Feasibility

DDW was required to convene two independent groups to assess direct potable reuse feasibility:

1) Expert Panel of scientists and engineers

2) Advisory Group of stakeholders to assist with the feasibility assessment

The City participated in the Advisory Group, helping to ensure that the Pure Water Program was aware of and had representation in formulation of the feasibility assessment. The DDW released its draft report on the feasibility of developing direct potable reuse regulations to the California Legislature on September 2, 2016. The draft report concludes that it is feasible to begin the process of developing direct potable reuse regulations and that the regulations can be adopted, provided that certain research and key knowledge gaps are addressed. The City supports the draft report's overall conclusion that it is feasible to develop uniform criteria for direct potable reuse in California.

Since that time, Assembly Bill 574 was passed in the California Legislature that provides specific definitions for various types of direct potable reuse and for the SWRCB to adopt uniform recycling criteria for direct potable reuse through raw water augmentation (excluding an environmental buffer) by December 31, 2023. The SWRCB must convene an expert panel to review proposed criteria to ensure that they are protective of public health.

Regional Water Quality Control Board

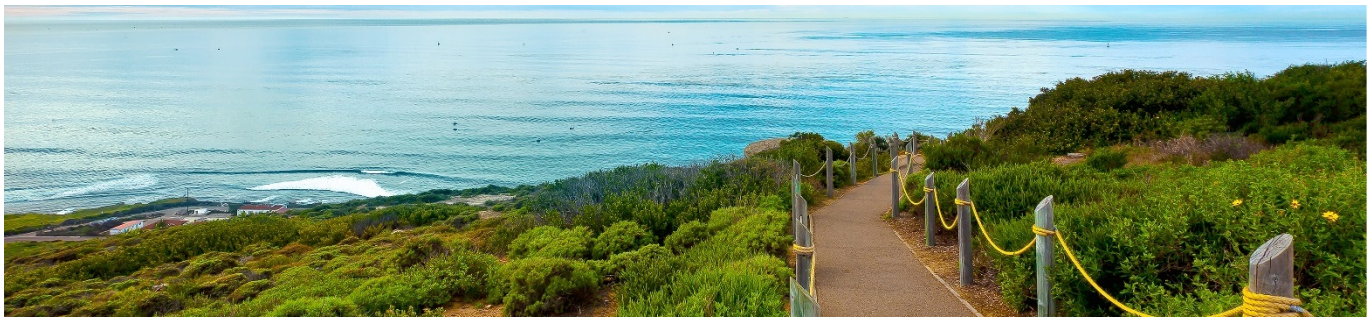
During the past year, the City initiated discussions with the RWQCB staff, which is part of the SWRCB. Those initial meetings and communications have focused on the City's proposed approach for ensuring that:

- The Miramar Reservoir purified water discharge complies with applicable Basin Plan objectives
- A pure water conveyance system discharge under emergency conditions to a stormwater drain, prior to the reservoir, meets ambient water quality objectives

Now that the draft Title 22 Engineering Report has been submitted to the DDW and comments have been received by the City, the City will begin preparing the appropriate NPDES permits.

The City began meeting with the California Department of Fish and Wildlife in late spring of 2017 to balance beneficial use designations for Miramar Reservoir while ensuring that the water quality meets all applicable receiving water and drinking water requirements established by the SWRCB and DDW. The City has studied the ecosystem in Miramar Reservoir based on vetted, well-accepted modeling and on thoroughly researched assessments of nutrient inputs. The results were included in the Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) document and indicate that:

- There will be no loss or impairment of beneficial uses in Miramar Reservoir
- A functioning aquatic community will continue to exist
- Impacts to warm water habitats are less than significant



Point Loma Area

Environmental Review

Significant progress has been made on the project-level environmental document for Phase 1 - North City.

A Draft North City Project joint EIR/EIS (SCH No. 2016081016) has been prepared in compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The project-level analysis includes all projects necessary to produce 30 mgd of purified water for the first phase of the Pure Water Program.

Phase 1 – North City Projects EIR and EIS

Accomplishments

- Notice of Preparation of an EIR for the Phase 1 - North City projects released on August 4, 2016
- Notice of Intent to Prepare an EIS for the Phase 1 - North City projects published by the U.S. Bureau of Reclamation on August 5, 2016
- Draft of the Phase 1 - North City Projects EIR released for CEQA public review on September 7, 2017
    - Numerous comments were received from individuals, organizations and agencies
    - Comment topics include CEQA process, clarifications, project alternatives, traffic and community impacts, project details, future project coordination, health and safety, noise, biological resources, air quality and project timing
- Draft EIR Public Workshop conducted on October 11, 2017
- Notice of Availability for the EIS (NEPA) public review period released by the U.S. Environmental Protection Agency (EPA) on November 24, 2017

Anticipated Timeline for Completion

- Response to EIR (CEQA) Comments in January 2018
- EIS (NEPA) public comments are due by January 8, 2018
- City to finalize EIR/EIS in February 2018
- Notice of Decision by City Council in April 2018
- Record of Decision by the U.S. Bureau of Reclamation is anticipated in June 2018

Phase 1 – North City Projects Environmental Regulatory Permitting Accomplishments

Permit applications for impacts to jurisdictional waterways and wetlands were submitted to the California Department of Fish and Wildlife, RWQCB, and the U.S. Army Corps of Engineers in 2017.

5. Phase 1 – North City Schedule and Budget Update

Schedule

The table below shows milestone dates for the Phase 1 - North City projects. NC07 – Miramar Drinking Water Treatment Plant Improvements Project is not included since it is still in preliminary planning stages.

Table 2: Current Phase 1 – North City Schedule

Project Name	Design Finish	Construction Contract Advertisement*	Construction Start*	Project Complete*
NC01 Morena Pump Station and Pipelines	Jul-2018	Aug-2018	Apr-2019	Nov-2021
NC02 North City Water Reclamation Plant Expansion	Apr-2018	May-2018	Feb-2019	Dec-2021
NC03 North City Pure Water Facility	Apr-2018	Jun-2018	Feb-2019	Nov-2021
NC04 North City Pure Water Pump Station and Pipeline	Feb-2018	Feb-2018	Nov-2018	Mar-2021
NC05 North City Renewable Energy Project**	Feb-2020	N/A	Mar-2020	Dec-2021
NC06 Metropolitan Biosolids Center Improvements	May-2018	Jun-2018	Feb-2019	Oct-2021

*Projects are broken into multiple construction contracts; dates are representative of the primary construction contract.

**North City Renewable Energy Project is anticipated to be procured via a design-build-finance-operate-maintain (DBFOM) contract method. RFSQ is expected to be released in early 2018 with a follow-on Request for Proposals in the summer of 2018.

Budget

The draft Phase 1 – North City budget was updated in mid-2017 to reflect the projects' 30% Design estimates. The estimates will continue to be updated as the projects progress through design and construction.

Table 3: Draft Phase 1 – North City Budget

Project Name	Project Cost Estimate
Total	**$1,226,014,000**
NC01 Morena Pump Station and Pipeline	$297,256,000
NC02 North City Water Reclamation Plant Expansion	$195,719,000
NC03 North City Pure Water Facility	$502,486,000
NC04 North City Pure Water Pump Station and Pipeline	$113,724,000
NC05 North City Renewable Energy Project*	$76,380,000
NC06 Metropolitan Biosolids Center Improvements	$40,449,000

* North City Renewable Energy Project cost estimate based on project validation

City of San Diego

Value Engineering

Value Engineering Studies were performed on key projects at the completion of 30% Design to support cost and schedule saving measures. As a result, multiple recommendations were incorporated into the detailed designs moving forward, such as:

- Morena Project: Utilizing open cut technique in lieu of micro tunneling
- North City Pure Water Facility: Modify the O&M building to reduce the footprint and increase the height of Reverse Osmosis Skids to reduce building size
- North City Pure Water Pump Station and Pipeline Project: Reduce the pipe size at strategic locations, such as locations that require tunneling

Grants/Loans

The City has successfully submitted multiple applications for grants and initiated several applications for additional grants and loans. The EPA has invited the City of San Diego to apply for a $492 million Water Infrastructure Finance and Innovation Act (WIFIA) loan. The City submitted a letter of interest to the EPA for the Pure Water Program in April 2017 and was selected from a group of projects to move forward in the process. Additionally, the EPA has notified the City that there may be additional funds up to $20-30 million available. The City is concurrently applying for Clean Water State Revolving Fund (CWSRF) loans from the SWRCB, which would provide a low cost source of financing. If awarded these loans, the City will use the funds to construct Phase 1 – North City.

Thus far, the City has procured or plans to procure the grants/loans that are detailed in Table 4 on the following page.

Table 4: Grant/Loans Procured or Being Procured by City

Title	Agency	Project Title	Amount Awarded	Award Date
Grants Awarded				
Watersmart: Title XVI Water Reclamation and Reuse Program FY16	Bureau of Reclamation	Pure Water North City Planning and Design	$4,940,000	9/13/2016
Watersmart: Title XVI Water Reclamation and Reuse Program FY17	Bureau of Reclamation	Pure Water North City Planning and Design	$4,200,000	8/7/2017
Title XVI Feasibility Studies	Bureau of Reclamation	Biological Fouling Grant	$300,000	8/21/2017
Title XVI Feasibility Studies	Bureau of Reclamation	Analytical Testing of Reverse Osmosis Brine Impacts	$48,526	8/21/2017
Grant Application Submitted - Under Review by Agency				
Proposition 1 Water Storage Investment Program	California Water Commission	Pure Water San Diego	$219,310,000 (Amount Requested)	TBD
Border Environment Cooperation Commission (BECC) / North American Development Bank	BECC / North American Development Bank	Pure Water North City	$8,000,000 (Amount Requested)	TBD
Grant and Loan Applications In Process				
Proposition 1 Regional Water Reliability - Integrated Regional Water Management Program Grant	Department of Water Resources	Pure Water San Diego	TBD	TBD
Clean Water State Revolving Fund Loans	SWRCB	Pure Water San Diego	$1,150,000,000* (Amount to be Requested)	TBD
Watersmart: Title XVI Water Reclamation and Reuse Program FY18 Grant	Bureau of Reclamation	Pure Water North City Planning and Design	$44,567,750** (Amount Requested)	TBD
WIFIA Loan Program***	EPA	Pure Water North City	$492,000,000*** (Amount Requested)	TBD

*The City will apply for State Revolving Fund loans for the full amount of Phase 1 eligible projects.

** It is anticipated funding in the amount of $5 million may be awarded, based on prior awards.

*** The City submitted a Letter of Interest for WIFIA funding and was invited to apply for $492 million in WIFIA loans.

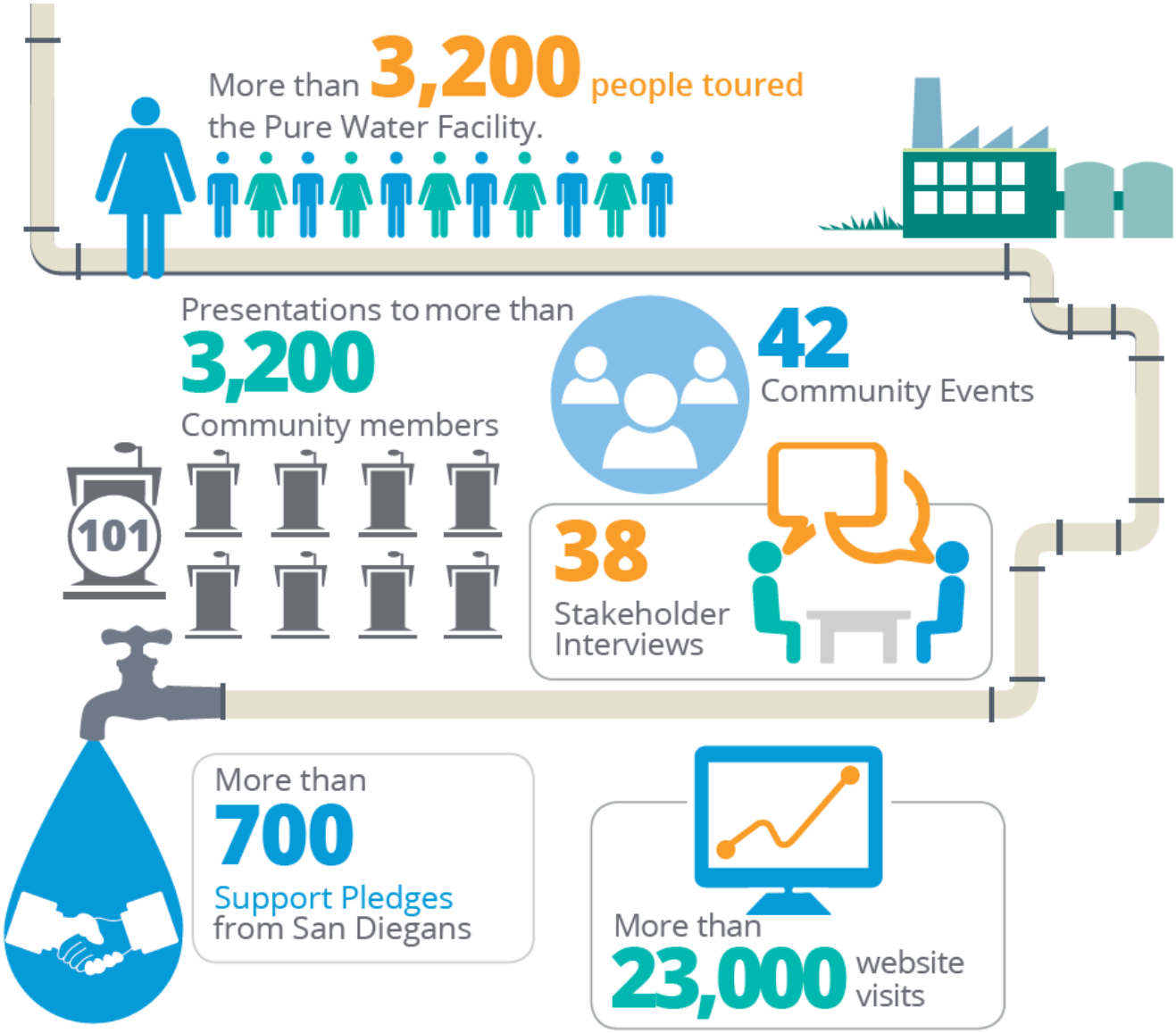
6. Other Critical Initiatives in Progress

Program and Project-Specific Outreach

The Pure Water Team has continued to implement a comprehensive program outreach plan. This year, the North City Demonstration Pure Water Facility welcomed its 14,000th tour participant and the City of San Diego partnered with Stone Brewing to brew beer using purified water from the Demonstration Facility for an event that was covered by more than 80 local, national and international news outlets.

In addition, program outreach made many accomplishments in 2017, as shown in Figure 7 below.

Figure 7: Public Outreach Accomplishments



Pure Water Day Open House

More than 500 people attended the second annual Pure Water Day Open House event to learn more about the Program, Phase 1 projects and tour the Demonstration Facility.

With construction on the Phase 1 Pure Water projects beginning in 2018, project-specific outreach on several projects has continued. As part of this effort, the Pure Water Team held an Open House event in October 2017 for the public at the North City Water Reclamation Plant, which includes the Demonstration Facility. The goal of this event was to increase awareness of the Pure Water Program and upcoming projects. The Open House included tours of the Demonstration Facility, tastings of the purified water, a video testimonial booth, an interactive Kid Zone, tours of the North City Waterwise Garden, a succulent planting station and free snow cones, kettle corn and hot dogs. The Demonstration Facility hosted a record 21 tours over 5 hours.

Pure Stone Partnership

In March 2017, the Pure Water Program partnered with Stone Brewing to brew Stone Full Circle Pale Ale, using purified water from the Demonstration Facility.

The March 16, 2017 event marked the first time a commercial brewery had brewed beer with 100% advanced-treated recycled water. Mayor Kevin Faulconer and Pat Tiernan, Chief Operating Officer (COO) of Stone Brewing, kicked off the Pure Stone event by pouring the first pints of sustainably-brewed beer.

More than 200 City leaders and elected officials gathered at Stone Brewing World Bistro & Gardens in Liberty Station to hoist a glass and taste the beer for themselves. The partnership's shared commitment to sustainability and ingenuity helped the City cement its reputation as a leader in potable reuse nationwide. To recognize the importance and significance of the partnership, Mayor Kevin Faulconer presented a proclamation that declared March 16 "Pure Stone Day." The innovative partnership was covered by more than 80 local, national and international media outlets.

Phase 1 Project Outreach

In preparation for start of construction on Phase 1 projects, project-specific outreach increased in 2017, with 20 presentations provided to more than 600 community members in City Council Districts 1, 5, 6 and 7 – the communities within the Phase 1 project area.

These presentations included information on the proposed pipeline alignments and facility locations, work hours during construction, renderings of facilities and traffic control plans. Presentations were made to community planning groups, town councils, civic associations, home owner associations, recreation councils, and stakeholder groups. Additionally, the Pure Water Team provided presentations to the San Diego Council of Bass Clubs and increased outreach efforts to the fishing community in San Diego.

Demonstration Pure Water Facility Tour Participants Drinking Pure Water

Public Art Outreach

An event was held on June 10, 2017, to obtain public input on the public art piece that will be designed for the full-scale North City Pure Water Facility. Approximately 30 attendees met the artist, toured the Demonstration Facility and shared their memories and thoughts on the importance of water to their lives via an interactive activity.

Pure Water Working Group

The Pure Water Working Group reconvened on June 29, 2017 to review and provide input on the 30% design renderings of the full-scale North City Pure Water Facility. The Pure Water Working Group was established in 2014 and consists of representatives from San Diego community planning groups, businesses, City Council District offices, environmental organizations and community leaders.

Contractor Forum

The Pure Water Team participated in the Contractor Forum, held on August 28, 2017. The purpose of the Contractor Forum was to provide the construction industry with the timing and scope of Pure Water construction contracts, as well as to provide a general update on construction for the rest of Public Utilities Department's water and wastewater Capital Improvement Program (CIP). The event outlined how projects will be implemented and how contractors can partner together to bid on these upcoming projects. City staff were available to answer questions related to both programs.

Youth Outreach

The next generation of San Diegans will be the main beneficiaries of the Pure Water Program, which is why the City continues to place emphasis on engaging youth. Throughout the past year, 2,908 San Diego youth were engaged through tours, events and presentations. In November 2017, the City partnered with Carollo Engineers and the Fleet Science Center Better Education for Women in Sciences and Engineering (BE WiSE) Program to hold a workshop for aspiring female scientists and engineers. More than 30 middle and high school students attended the workshop and toured the Demonstration Facility. Female engineers from the City and Carollo Engineers discussed their careers in water and answered questions from workshop attendees. More than 300 students participating in the FIRST LEGO League robotics competition toured the Demonstration Facility as part of their research to develop a project that helps solve a water supply challenge.

Awards and Recognition

The City of San Diego and Stone Brewing received the 2017 Public-Private Partnership Award from the Water Reliability Coalition. The partnership was recognized for increasing awareness of the safety and reliability of potable reuse by brewing* Stone Full Circle Pale Ale *beer with purified water produced from the City's demonstration Pure Water Facility.

The Pure Water Program received the Outstanding Public Involvement/Education Program from the California Association of Environmental Professionals and the Public Outreach Award from the American Planning Association San Diego Section. The City received two San Diego/Imperial Counties Mark of Excellence Silver Awards from the Public Relations Society of America for the first annual Pure Water Day Open House and Pure Stone event, in addition to the 2017 Public Relations (PR) Team of the Year Special Award and the Best of Show Award for the Pure Stone event.

2017 Public-Private Partnership Award from the Water Reliability Coalition (left and middle), Public Outreach Award from the American Planning Association San Diego Section (right)

San Diego/Imperial Counties Mark of Excellence Silver Awards from the Public Relations Society of America (left), Outstanding Public Involvement/Education Program Award from the California Association of Environmental Professionals (right)

Construction Management Planning

The Pure Water Team has initiated construction management (CM) procurement, is establishing the CM organizational Structure and protocols and is implementing PMWeb.

As-needed CM Procurement

The Pure Water Team initiated the procurement process for CM services to assist with the oversight of Phase 1 - North City construction projects. Two CM consultants have been selected, one for treatment facilities and one for conveyance facilities. The CM contracts are currently in negotiation and the selected CM consultants are scheduled to be onboard during the first and second quarters of 2018.

Establish CM Organizational Structure and Protocols

The Pure Water Team is developing the organizational structure for managing the construction of Phase 1 - North City projects. The organizational structure defines the functional roles and responsibilities to be performed by the City, Program Management Team, CM Consultants and other consultant staff and outlines the roles and responsibilities for each of the positions in the CM organizational structure.

The Pure Water Team coordinated with the Public Works Department Construction Management and Field Services Division and CM leadership to outline the requirements for various CM procedures, business processes and systems to be used for construction of Phase 1 - North City projects. The Pure Water Team is using these requirements to develop CM Plan Guidelines for the Pure Water Program that will detail the specific procedures and protocols that will be followed during construction and specific Construction Management Information System (CMIS) requirements processes to be followed.

PMWeb Implementation for Program Controls and Reporting

Last year, the City selected PMWeb as the CMIS controls and reporting platform that will be used during construction. The PMWeb tool is currently configured to be utilized for Pure Water Program, but with the flexibility to be used on other City infrastructure projects and programs. The Pure Water Team is defining the specific CM business processes that will be managed and various reports that will be generated using PMWeb and is working with the PMWeb integration consultant to establish the required workflows, document management and reporting functions to support the construction of Phase 1 – North City projects. All construction contractors, the CM consultants as well as the Pure Water Team will use the CMIS for all data management, CM procedures and information management during the construction phase. The PMWeb team integrated the PMWeb tool directly with the City's accounting system, which allows for accurate and timely project financial reporting.

Phase 1 - North City Commissioning Plan

The Phase 1 – North City facilities are interconnected and part of a linear system that functions sequentially to produce pure water. Commissioning, startup and testing of these facilities therefore require careful planning to assure the system functions as a whole to meet objectives, regulatory requirements and the overall Program schedule.

Construction of all Phase 1 – North City projects will consist of approximately 12 separate prime construction contracts. The final commissioning, startup and testing activities to be completed as part of all these contracts will need to be coordinated carefully to address schedule and operational inter-dependencies. Therefore, the Pure Water Team's commissioning planning efforts are being implemented to take into consideration project-specific commissioning; start-up and testing requirements; commissioning inter-dependencies between construction packages; North City facilities system-wide commissioning and testing requirements; and sequencing, timing and risks associated with releasing some prime construction contractors prior to the system-wide commissioning and costs associated with keeping construction contractors on stand-by for system-wide commissioning.

Following the initial November 2016 Commissioning Planning Workshop (Workshop 1), the Pure Water Team conducted project-specific commissioning planning meetings with each project design team, comprising City and final design consultant staff throughout 2017. The purpose of the project-specific meetings was to initiate discussion with the design consultants and understand their approach to address commissioning, startup and testing requirements within the contract documents for their project. These meetings identified questions and areas for additional investigation and cross-project coordination between the design teams. The meetings resulted in identification of the design consultants' planned sequences, acceptance and performance test requirements and language for inclusion in the project technical specifications describing these requirements.

A second Commissioning Planning Workshop was conducted in November 2017 that included the participants from Workshop 1 and final design consultant team members from each project. This workshop focused on the interfaces between North City Projects and identified additional questions for the City to consider and specific cross-project coordination items for the design consultants to address in the projects' contract documents. In addition, this workshop identified areas where the Distributed Control System (DCS) elements require cross-project coordination in order to achieve the performance and acceptance testing requirements of the facilities.

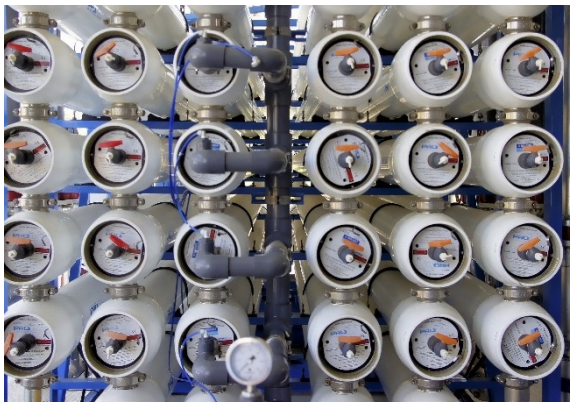
Microfiltration Canisters at the North City Demonstration Pure Water Facility

Operator Readiness

The Pure Water Team is working to ensure that the correct O&M staff are in place and have the qualifications and training required to operate the new Pure Water facilities in a safe and reliable manner.

Operator Training on Demonstration Facility

The 1 mgd Demonstration Facility has been operated and maintained by the City with support of consultant staff since 2011. In 2017, the Demonstration Facility's O&M was transitioned to City staff through comprehensive operator training and development of an O&M plan. The Pure Water Team will leverage the Demonstration Facility O&M plan to train staff on the future operation of the full-scale North City Pure Water Facility.



RO Pressure Vessels Located at the North City Demonstration Pure Water Facility

O&M Readiness Plan

In 2017, the Pure Water Team completed development of the comprehensive O&M Readiness Master Plan for Phase 1 – North City. The City is currently using the O&M Readiness Plan as a guide to budget, hire and onboard staff, as identified in the hiring plan. The content of the Pure Water North City O&M Readiness Master Plan was used to develop the O&M-related sections of the Title 22 Engineering Report and will support creation of the North City Pure Water Operations Optimization Plan, which will be developed prior to the commissioning of all Phase 1 – North City facilities.

In addition, City staff have been involved in planning of a new Advanced Water Treatment Certification Program through participation in the SWRCB Advisory Group on Feasibility of Developing Criteria for Direct Potable Reuse and a collaborative effort led by the California Urban Water Agencies. Through this involvement, the City is participating in development of certification requirements that will be applicable to the North City Pure Water Facility operations staff.

7. Summary of 2017 Accomplishments

When the Pure Water Team entered 2017, we wanted to capitalize on the planning and outreach work that set the foundation for Phase 1 – North City and begin design and regulatory approval efforts in earnest. During 2017, we met this goal with all major projects advancing well into design development and some nearing completion.

The Pure Water Team has continued our engineering and optimization studies, prequalifying specialized treatment equipment and conducting studies to better understand the:

1) Impact of Pure Water on Miramar Drinking Water Treatment Plant performance and the drinking water distribution system
2) Approaches to further optimize the North City Pure Water Facility treatment processes
3) Removal of pathogens and indicator organisms at the North City Water Reclamation Plant
4) Impact of purified water treatment residuals on the performance of the Point Loma Wastewater Treatment Plant

In addition, the Pure Water Team has made significant progress on the regulatory front, releasing the North City Projects EIR/EIS, completing the first draft of the Title 22 Engineering Report, and beginning the NPDES permit process. At the same time, we have made significant progress with the submittal of funding requests, including grant and low-interest loan applications at both the State and Federal level. Finally, we have maintained our award-winning Public Outreach Program, rallying support for Pure Water across a wide range of stakeholders.

As we move into 2018, the Pure Water Team will complete project designs, welcome CM consultants onboard to guide the next phase of project implementation, and begin procurement for construction contracts. We will continue to focus on O&M readiness to build capacity for project start-up in 2021 and beyond. 2018 will be a critical year for regulatory approvals from the SWRCB. It is an exciting time for the Pure Water Team and the City of San Diego – stay tuned!

The Pure Water Team continues to move ahead with Phase 1 – North City implementation and looks forward to another successful year of progress towards meeting the Phase 1 goal - producing 30 mgd of purified water in 2021.

Attachment 14

JPA
Treasurers
Report 12/31/17

Metro Wastewater Joint Powers Authority
Treasurer's Report
Six months ending December 31, 2017

Metro Wastewater JPA
Treasurer's Report
Six months ending December 31, 2017
Unaudited

Beginning Cash Balance at June 30, 2017	$	170,971
Operating Results		
Membership Dues & Interest Income		196,591
Expenses		(90,044)
Change in Net Position		106,547
Net change in Receivables & Payables		179,900
Cash provided by Operations		286,447
Ending Cash Balance at Dec 31, 2017	$	457,418

Submitted by:

Karen Jassoy, Treasurer, 1/12/18

Metro Wastewater JPA
Statement of Net Position
As of June 30, 2017 and Dec 31, 2017
Unaudited

	June 30, 2017	Dec 31, 2017	$ Change
ASSETS			
Checking/Savings	$ 170,971	$ 457,418	$ 286,447
Accounts Receivable	-	17,587	17,587
Total Assets	**$ 170,971**	**$ 475,005**	**$ 304,033**
LIABILITIES			
Accounts Payable	$ 37,408	$ 38,344	$ 936
Unearned Membership Billings	-	196,550	196,550
Total Liabilities	**$ 37,408**	**$ 234,894**	**$ 197,486**
NET POSITION			
Total Net Position at Beginning of Period	$ 250,042	$ 133,563	$ (116,479)
Change in Net Position	(116,479)	106,547	223,026
Total Net Position at End of Period	**$ 133,563**	**$ 240,110**	**$ 106,547**
TOTAL LIABILITIES & NET POSITION	**$ 170,971**	**$ 475,005**	**$ 304,033**

Net Position at 12/31/17	*$ 240,110*
FY '18 JPA Required Operating Reserve	
(based on 4 months of Operating Expenses)	*131,033*
Over (under) required reserve	*$ 109,077*

Metro Wastewater JPA
Statement of Operations
Budget vs. Actual

Six months ending December 31, 2017
Unaudited

	Actual	Budget	Over (Under) Budget	
Income				
Membership Dues	$ 196,550	$ 196,550	$ (0)	
Interest Income	41	30	11	
Total Income	$ 196,591	$ 196,580	$ 11	
Expenses				
Admin Assistant - L. Peoples	$ 525	$ 4,000	$ (3,475)	*Through 9/30/17*
Admin & Treasury Services-Padre	8,000	9,500	(1,500)	*Through 12/31/17*
Bank Charges	-	100	(100)	
Dues & Subscriptions	-	300	(300)	
JPA/TAC meeting expenses	1,692	2,500	(808)	*Through 11/15/17*
Miscellaneous	-	125	(125)	
Professional Services				
Engineering - NV5	11,225	37,500	(26,275)	*Through 11/31/17*
Engineering - Dexter Wilson	9,748	38,775	(29,028)	*Through 9/30/17*
Financial - Kese Group	24,840	37,600	(12,760)	*Through 12/31/17*
Legal - BB&K	25,357	30,000	(4,643)	*Through 11/30/17*
Per Diems	6,750	9,000	(2,250)	*Through 11/2/17*
Postage	129	-	129	
Printing	238	250	(12)	
Telephone	341	700	(359)	
Website Maintenance & Hosting	1,200	1,200	-	*Through 12/31/17*
Contingency	-	25,000	(25,000)	
Total Expenses	$ 90,044	$ 196,550	$ (106,506)	
Change in Net Position	$ 106,547	$ 30	$ 106,517	

Metro Wastewater JPA
Statement of Cash Flows

Six months ending December 31, 2017
Unaudited

OPERATING ACTIVITIES		
Change in Net Position	$	106,547
Adjustments to reconcile Change in Net Position to net cash provided by operations:		
Accounts Receivable		(17,587)
Accounts Payable		936
Deferred Revenue		196,550
Net cash provided by (used in) Operations		286,447
Net cash increase (decrease) for period		286,447
Cash at beginning of period		170,971
Cash at end of period	**$**	**457,418**

Attachment 15
IRWMP

SAN DIEGO
Integrated Regional
Water Management

Joint IRWM Plan Update Workshop #3 & Regional Advisory Committee (RAC) Meeting #72

February 7, 2018
9:00 – 11:30 am

San Diego County Water Authority
Board Room
4677 Overland Ave., San Diego CA 92123
(858) 522-6600

Agenda

1. **Welcome and Introductions**
2. **San Diego RWQCB Update**
3. **Stormwater Capture & Use Feasibility Study Update** ✓
4. **San Diego IRWM Program Update**
5. **San Diego IRWM Plan Update** ✓
   - Objectives (Chapter 2)
   - Scoring Criteria (Chapter 9)
6. **DAC Needs Assessment Update**
7. **Grant Administration**
8. **Public Comments**
9. **Summary and Next Steps**
   - Next RAC Meeting: April 4, 2018 at San Diego County Water Authority

2018 RAC Meeting Schedule

- April 4
- June 6
- August 1
- October 3
- December 5

Joint IRWM Plan Update Workshop #3 & San Diego IRWM Program RAC Meeting #72

SAN DIEGO Integrated Regional Water Management

February 7, 2017

Agenda

- Welcome and Introductions
- San Diego RWQCB Update
- Stormwater Capture & Use Feasibility Study Update
- San Diego IRWM Program Update
- San Diego IRWM Plan Update
- DAC Needs Assessment Update
- Grant Administration
- Public Comments
- Summary and Next Steps

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Agenda

- Welcome and Introductions
- San Diego RWQCB Update
- Stormwater Capture & Use Feasibility Study Update
- San Diego IRWM Program Update
- San Diego IRWM Plan Update
- DAC Needs Assessment Update
- Grant Administration
- Public Comments
- Summary and Next Steps

3

Agenda

- Welcome and Introductions
- **San Diego RWQCB Update**
- Stormwater Capture & Use Feasibility Study Update
- San Diego IRWM Program Update
- San Diego IRWM Plan Update
- DAC Needs Assessment Update
- Grant Administration
- Public Comments
- Summary and Next Steps

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San Diego Regional Water Quality Control Board Update

Laurie Walsh, San Diego Regional Water Quality Control Board

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Agenda

- Welcome and Introductions
- San Diego RWQCB Update
- **Stormwater Capture & Use Feasibility Study Update**
- San Diego IRWM Program Update
- San Diego IRWM Plan Update
- DAC Needs Assessment Update
- Grant Administration
- Public Comments
- Summary and Next Steps

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Stormwater Capture & Use Feasibility Study Update

Stephanie Gaines, County of San Diego

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Agenda

- Welcome and Introductions
- San Diego RWQCB Update
- Stormwater Capture & Use Feasibility Study Update
- **San Diego IRWM Program Update**
- San Diego IRWM Plan Update
- DAC Needs Assessment Update
- Grant Administration
- Public Comments
- Summary and Next Steps

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Statewide IRWM Updates

- Changes in DWR leadership
- End of Gov. Brown's term – what does it mean to IRWM?
- DWR Implementation Coordination Workgroup
- IRWM Roundtable of Regions

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Statewide IRWM Updates (cont.)

- Prop 1 IRWM Implementation Grants
- Round 1 (*tentative!*):
  - Draft PSP in Spring 2018;
  - Final PSP in Summer 2018;
  - Consultations in Fall 2018;
  - Applications due Winter 2018-19
- Round 2: Anticipated in 2020 (*tentative!*):
- Concern about lack of IRWM funding in proposed bills and initiatives

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Agenda

- Welcome and Introductions
- San Diego RWQCB Update
- Stormwater Capture & Use Feasibility Study Update
- San Diego IRWM Program Update
- **San Diego IRWM Plan Update**
- DAC Needs Assessment Update
- Grant Administration
- Public Comments
- Summary and Next Steps

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Work Plan & Schedule

Jun 2018	Public Draft – Phase 1
Sept 2018	Final IRWM Plan – Phase 1
Oct 2018	IRWM Plan – Phase 1 Adoption
Dec 2018	Final SWCFS & DAC Needs Assessment
Jan 2019	Public Draft – Phase 2
May 2019	Final IRWM Plan – Phase 2
July 2019	IRWM Plan – Phase 2 Adoption

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RAC Input (tentative)

✓ Oct 2017	Technical Dev. Areas, Example Projects, Data Needs
✓ Dec 2017	DAC Definitions, Regional Water Supply Security
✓ Feb 2018	Plan Objectives, Scoring Criteria
Apr 2018	Region Description, Impl. Actions
Jun 2018	Draft IRWM Plan – Phase 1
Aug 2018	Comments/Responses on Draft IRWM Plan – Phase 1
Dec 2018	Final SWCFS & Final Regional DAC Needs Assessment
Feb 2019	Draft IRWM Plan – Phase 2
Apr 2019	Comments/Responses on Draft IRWM Plan – Phase 2

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Chapter 2: Vision and Objectives

- Four 2013 IRWM Plan Goals
  1. Improve the reliability and sustainability of regional water supplies.
  2. Protect and enhance water quality.
  3. Protect and enhance our watersheds and natural resources.
  4. Promote and support sustainable integrated water resource management.
- Eleven 2013 IRWM Plan Objectives

See Handout for List of IRWM Plan Objectives

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Chapter 2 Revisions

Proposed revisions include consideration of:

- How to incorporate Technical Development Areas (TDAs) prioritized by RAC
- How to incorporate Climate Change response
- Limited revisions, given the stakeholder-driven process used to develop them

15

Incorporating Priority TDAs

- Objectives narrative revised to reflect TDAs prioritization exercise done in October 2017

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RAC-Identified TDA Priorities

Sustainable Water Development	• Increase availability and reliability of local water supply • Conserve, reuse, and recycle water • Implement potable reuse
Value Stormwater as a Resource	• Consider potential habitat and environmental benefits of stormwater projects • Increase public knowledge about importance of stormwater as a resource and watershed/water quality protection • Emphasize need for economic feasibility of stormwater projects
Invest in DAC-EDA-URC-EJ Water Systems	• Invest/assist in necessary DAC-EDA-URC-EJ water system improvements • Invest in training – address financial, technical, managerial needs
Optimize Regional Infrastructure	• Focus on asset management to support use of existing infrastructure • Hazard risk assessment based on sea level rise
2016 Guideline Update	• None

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RAC-Identified TDA Priorities

Sustainable Water Development	• Increase availability and reliability of local water supply • Conserve, reuse, and recycle water • Implem
Value Stormwater as a Resource	• Conside • Increas watersh • Emphas
Invest in DAC-EDA-URC-EJ Water Systems	• Invest/ • Invest
Optimize Regional Infrastructure	• Focus • Hazar
2016 Guideline Update	• None

Example: Objective E

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

Detailed Description of Objective E

Continue to develop diverse water resources to meet local supply and conservation goals, reduce dependence on imported water supplies, and increase water supply availability and reliability. A diverse mix of water resources includes imported water, water transfers, recycled water, water conservation, desalination (brackish groundwater or seawater), local surface water, stormwater capture and use, potable reuse, and groundwater. Promote effort of "conserve, reuse, and recycle".

ter projects
esource and
improvements
eeds
structure

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Incorporating Climate Change

- Climate change adaptation and mitigation requires an integrated approach
- IRWM can serve as a forum to build knowledge, capacity, and coordination among diverse groups to address climate change through integrated solutions
- *2013 IRWM Plan* identified and prioritized climate change vulnerabilities

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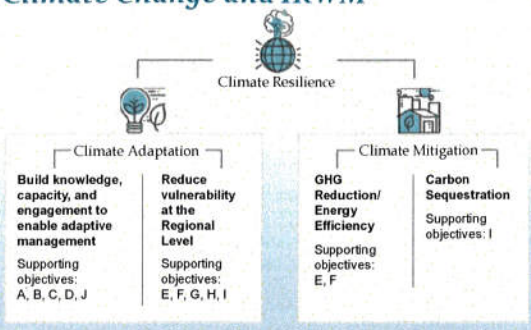
Climate Change and IRWM



See Handout for Climate Change Definitions and Framework

20

Objective K Revision

- Aspects of Objective K apply to each of the other 10 Objectives, and is better suited as a goal

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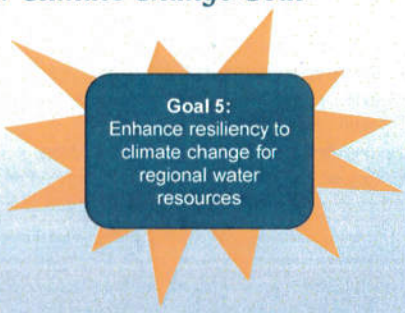
New Climate Change Goal



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Other Objective Revisions

Obj. F: Construct, operate, and maintain a reliable water management infrastructure system	Obj. F: Construct, operate, and maintain a reliable and resilient water management infrastructure system
Obj. J: Optimize water-based recreational opportunities	Obj. J: Advance water-based enriching experiences

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Chapter 9: Project Evaluation and Prioritization

- Scoring Criteria used for objective evaluation and separating projects into Tier 1 and Tier 2 for further consideration
- Criteria are *flexible* – adapt to funding opportunity priorities
  - Criterion often added/removed
  - Criterion scoring is weighted

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Scoring Criteria Revisions

- Removed criteria that did not differentiate projects
- Incorporated TDA priorities
- Addressed climate change resiliency
- Revised language based on how criteria were applied in previous funding rounds

See Handout for Revised IRWM Plan Scoring Criteria

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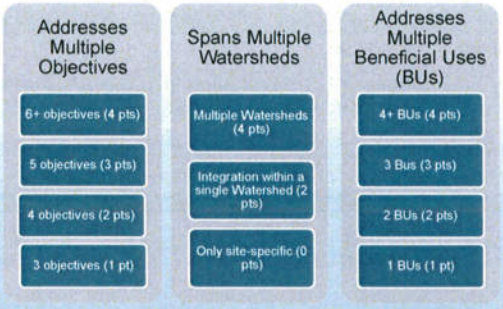
Unchanged Scoring Criteria



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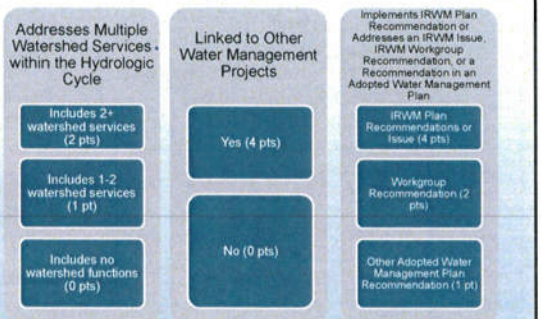
Removed Scoring Criteria



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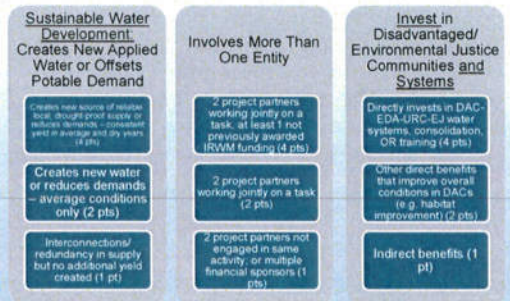
Revised Scoring Criteria



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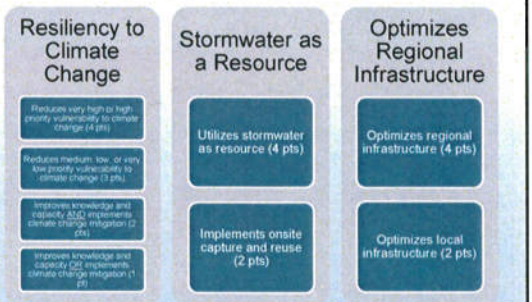
New Scoring Criteria



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Framework for Scoring Guidelines

- Qualitative project selection considerations for Project Selection Workgroup
- Minor updates to formalize existing Workgroup considerations
- Removed specific dates in favor of timelines
  - Readiness to proceed, start dates, timing of benefits
- Added "Realization of Benefits" consideration

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Revised Scoring Guidelines

Criteria	Suggested Workgroup Guidelines
Project-Level Criteria	
Readiness to Proceed	Select Projects that will be ready to proceed by ~~December 2014~~ deadline established in PSP or within 3 months of LPS contract execution.
Realization of Benefits	Consider timing of project benefit realization compared to project completion date (e.g., when water meter will begin recording deliveries vs completion of the pipeline).

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Revised Scoring Guidelines

Criteria	Suggested Workgroup Guidelines
Proposal-Level Criterion	
Schedule	Proposal must include at least one project that will begin implementation by ~~May 2014~~ deadline established in PSP or within 1 month of LPS contract execution.
	Proposal to include majority of projects that realize benefits within 3 years of project completion.

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Current Status: DAC Needs Assessment

- Anticipated schedule:
  - Definitions and Mapping: November 2017 – March 2018 (*underway*)
  - DAC Outreach and Presentations: March – September 2018
  - Draft Regional DAC Needs Assessment: December 2018
- Next steps:
  - DACI partnership contracting

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DAC Needs Assessment Partnership

- Partner(s) has been selected!
  - RCAC and Climate Science Alliance
  - Currently under contracting
- Non-Profit/Academic partners will support consulting team
  - Experience working with DACs/EDAs/URCs/EJs
  - Assist with identifying DAC organizations and updating DAC Outreach contact list
  - Support outreach to targeted DACs/EDAs/URCs/EJs

Look for announcement for the DAC Workshop this Spring

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IRWM Grant Program

Grant Funding Summary

Funding Source	Grant Award ($)	# of Projects Funded	# Projects Completed/ at least 80% Complete	Grant Billed to DWR ($)
Proposition 50	$25.0M	18	18	$24.9M
Proposition 84, Plan Update	$1.0M	1	1	$1.0M
Proposition 84, Round 1	$7.9M	11	9	$6.4M
Proposition 84, Round 2	$10.5M	7	3	$7.4M
Proposition 84, Round 3	$15.1M	7	4	$10.9M
Proposition 84, Round 4	$31.1M	13	0	$2.5M
Proposition 1, Plan Update	$250K	1	0	$0
Proposition 1, DACI	$5.5K	9	0	$0
Total	$96.4M	67	35	$53.1M

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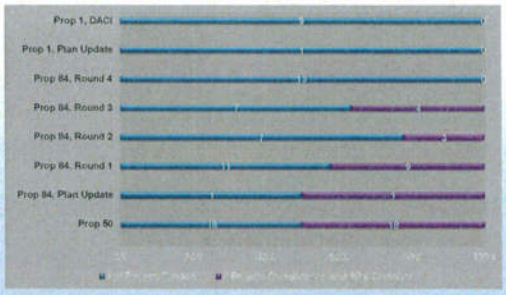
IRWM Grant Program

Project Completion Status per Funding Round



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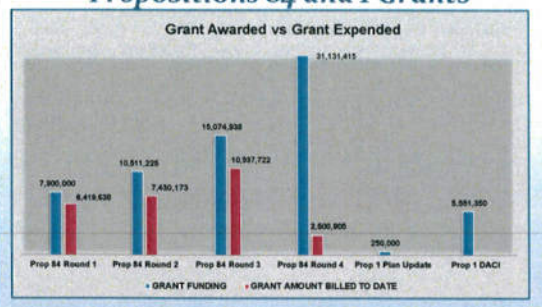
Propositions 84 and 1 Grants



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PROPOSITION 84 IMPLEMENTATION, ROUND 1

Proposition 84 Implementation, Round 1

Project 8 – Pilot Concrete Channel Infiltration

Before

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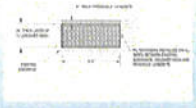
Proposition 84 Implementation, Round 1

Project 8 – Pilot Concrete Channel Infiltration

After



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Proposition 84 Implementation, Round 1

Project 1 – Sustainable Landscapes Program - DWR Site Visit – January 2018

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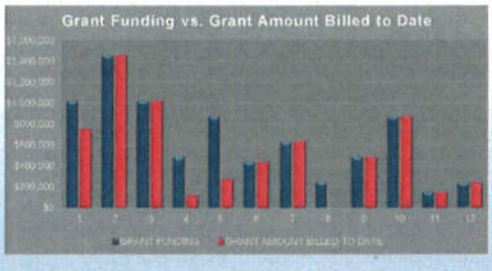
Proposition 84 Implementation, Round 1



Total Costs Billed $6.4M

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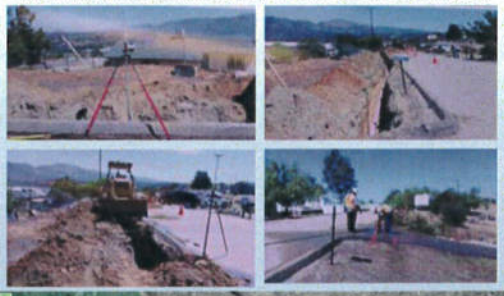
PROPOSITION 84 IMPLEMENTATION, ROUND 2

Proposition 84 Implementation, Round 2

Project 2 – Rural DAC Partnership Project - Phase II
San Pasqual Water Reclamation Project - DWR Site Visit – January 2018



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Proposition 84 Implementation, Round 2

Project 5 – Sustaining Healthy Tributaries to Upper San Diego River

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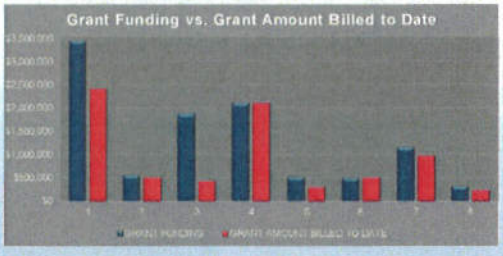
Proposition 84 Implementation, Round 2



Total Costs Billed $7.4M

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PROPOSITION 84 IMPLEMENTATION, ROUND 3

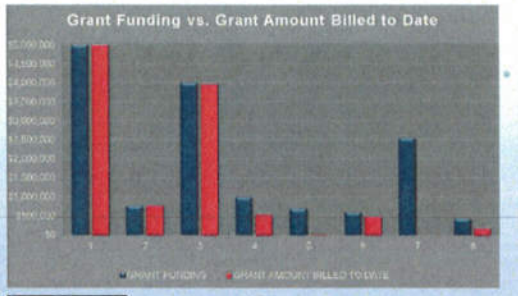
Proposition 84 Implementation, Round 3

Project 2 –Fallbrook Plant Nurseries Recycled Water Distribution Expansion
DWR Site Visit – January 2018

Proposition 84 Implementation, Round 3

Project 2 – DWR site visit - Fallbrook Plant Nurseries Recycled Water Distribution Expansion

Proposition 84 Implementation, Round 3



Total Costs Billed $10.9M

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PROPOSITION 84 IMPLEMENTATION, ROUND 4

Proposition 84 Implementation, Round 4

Project 2 – Conservation Home Makeover in Chollas Creek Watershed
DWR Site Visit – January 2018

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Proposition 84 Implementation, Round 4

Project 2 – Conservation Home Makeover in Chollas Creek Watershed

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Proposition 84 Implementation, Round 4

Project 2 – Conservation Home Makeover in Chollas Creek Watershed

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Proposition 84 Implementation, Round 4

Project 5 – Rural Disadvantaged Community, Phase 3, Smuggler's Gulch Floating Trash Booms in the Tijuana River Valley

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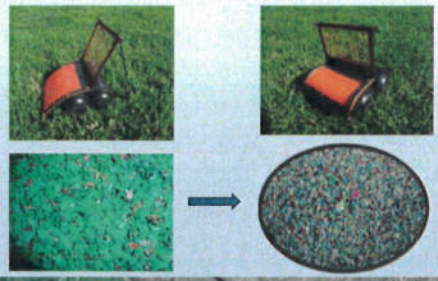
Proposition 84 Implementation, Round 4

Project 5 – Rural Disadvantaged Community, Phase 3, Smuggler's Gulch Floating Trash Booms in the Tijuana River Valley



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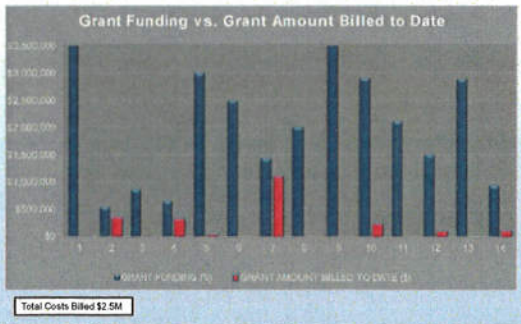
Proposition 84 Implementation, Round 4



Total Costs Billed $2.5M

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PROPOSITION 1, PLAN UPDATE

Proposition 1 Plan Update

- Significant Milestones:
  - January 2018- First progress report
    - Submitted first deliverable – Stormwater Technical Memo
- Upcoming:
  - February 2018- Second progress report

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PROPOSITION 1, DISADVANTAGED COMMUNITY INVOLVEMENT (DACI)

Proposition 1 Disadvantaged Community Involvement (DACI)

- Significant Milestones:
  - Grant Program Kickoff Meeting and training- January 2018
  - DWR Agreement- final DWR approval routing
- Upcoming*:
  - February 2018
    - DWR/LPS agreements execution
    - One-on-one training
    - Advance payment request
  - March 2018 - First reporting/invoicing

*All dates are estimate and subject to change

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Proposition 50 Post-Performance Reporting

Project 16 - Biofiltration Wetland Creation & Education Program

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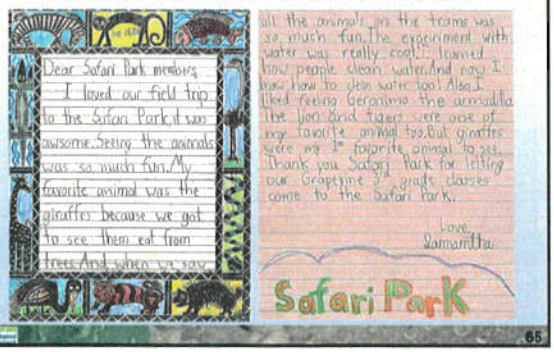
Proposition 50 Post-Performance Reporting

Project 16 - Biofiltration Wetland Creation & Education Program



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Proposition 50 Post-Performance Reporting

Project 1 – Integrated Landscape & Agricultural Efficiency Program

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DWR Site Visit Comments

"...They (project tours) were memorable. I won't forget meeting with Irma and how much Groundwork changed that woman's life by giving her a backyard paradise. Then to see Charles and his children get some help as well, it was special. There are so many good things being done in your IRWM region. I look forward to helping how I can, because those are projects helping locals on another level. You could see the joy in their faces, and I know I don't get to see that at my job very often.

Keep up the good work. I am confident that your team has the best interests of the community in mind, and this visit highlighted that. The leadership helping the locals with water consciousness and beautification through conservation is impressive. The coming years and the investment into the Disadvantaged Communities can only reap massive benefits going forward."

– Erik Goodman (DWR, Regional Service Area Representative)

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Agenda

- Welcome and Introductions
- San Diego RWQCB Update
- Stormwater Capture & Use Feasibility Study Update
- San Diego IRWM Program Update
- San Diego IRWM Plan Update
- DAC Needs Assessment Update
- Grant Administration
- Public Comments
- Summary and Next Steps

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Public Comments

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Agenda

- Welcome and Introductions
- San Diego RWQCB Update
- Stormwater Capture & Use Feasibility Study Update
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- Grant Administration
- Public Comments
- Summary and Next Steps

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Current Funding Opportunities

Project Types	Deadline	Website
California State Coastal Conservancy		
USFWS Wetlands Conservation Grant: $1M for coastal land acquisition; wetland restoration, enhancement, or management	February 14	Joel Gerwein External Grants Manager 510-286-4170 Joel.Gerwein@scc.ca.gov
USBR WaterSMART Programs (various)		
Drought Resiliency Projects: $750K for projects that increase system flexibility and development of alternative supplies	February 13	https://www.grants.gov/web/grants/view-opportunity.html?oppId=298763
Reservoir Operations Alternatives: $150K for economic effects of reservoir operations alternatives methodology (only 1 available)	February 27	https://www.grants.gov/web/grants/view-opportunity.html?oppId=299096
USBR Bay-Delta Restoration Program		
CALFED Water Use Efficiency Grant: $3M for water use efficiency projects within the CALFED Solution Area (including western San Diego County)	March 15	https://www.grants.gov/view-opportunity.html?oppId=299930

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2018 Meeting Schedule

- Next RAC Meeting: April 4, 2018
- 2018 Meeting Schedule:
  - June 6
  - August 1
  - October 3
  - December 5

- Regular Meetings Held First Wednesday of Every Other Month -

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Joint IRWM Plan Update
Workshop #3 &
San Diego IRWM Program
RAC Meeting #72
SAN DIEGO
Integrated Regional
Water Management
February 7, 2017

SAN DIEGO
Integrated Regional
Water Management

Revised San Diego IRWM Plan Objectives from the 2013 San Diego IRWM Plan

DRAFT - February 6, 2018

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

Detailed Description of Objective A

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

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

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

Detailed Description of Objective B

Implement efforts to engage and educate the public on the IRWM Program and the interconnectedness of water supply, water quality, and natural resources. Build stewardship throughout the Region by providing opportunities to participate in water management and promote individual and community ownership of water resource problems and solutions. Increase public knowledge and understanding of the importance of water resource management, including stormwater as a resource, watershed and water quality protection, and supply diversification.

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

Detailed Description of Objective C

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

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

Detailed Description of Objective D

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

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

Detailed Description of Objective E

Continue to develop diverse water resources to meet local supply and conservation goals, reduce dependence on imported water supplies, and increase water supply availability and reliability. A diverse mix of water resources includes imported water, water transfers, recycled water, water conservation, desalination (brackish groundwater or seawater), local surface water, stormwater capture and use, potable reuse, and groundwater. Promote ethic of "conserve, reuse, and recycle".

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

Detailed Description of Objective F

Construct, operate, and maintain water conveyance, treatment, storage, and distribution facilities that comprise a reliable water infrastructure system consistent with the future planned mix of water resources, ~~, and p~~Provide flexibility in system operations, including utilization of natural systems for stormwater management. Improve asset management to allow ~~for utilization~~use of existing infrastructure to meet water management needs and reduce the need for future projects. Address potential hazards to infrastructure ~~based on~~from sea level rise and flooding.

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

Detailed Description of Objective G

Restore and enhance natural hydrologic processes, and promote best management practices that reduce negative effects on receiving systems such as natural stream systems, groundwater systems, local water supply reservoirs, and lagoons, bays, and the ocean. Reduce runoff from impervious surfaces, erosion, sedimentation, and flooding. Use integrated flood management to holistically address flood issues, sea level rise, water quality, natural resources, and other water management concerns. Maximize environmental, habitat, and water quality benefits of stormwater projects. Prioritize green infrastructure where feasible.

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

Detailed Description of Objective H

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

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

Detailed Description of Objective I

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

Objective J: ~~Optimize~~ Advance water-based ~~recreational opportunities~~ enriching experiences.

Detailed Description of Objective I

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

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

~~Detailed Description of Objective K~~

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

SAN DIEGO
Integrated Regional
Water Management

Climate Change and IRWM – Definitions and Framework

February 6, 2018

Defining Climate Change

Preparing for and responding to climate change will require an integrated approach to resource management, which makes the IRWM program uniquely suited to take action. A key benefit of the San Diego IRWM program is that all Plan Objectives either directly or indirectly support building climate *resilience* through *adaptation* and *mitigation*. We conceptualize climate resilience, adaptation, and mitigation as related concepts and for the purposes of the IRWM Plan, these terms are defined as:

Climate Resilience: Resilience is the capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience (Safeguarding California Plan, Appendix C, 2017).

Climate Adaptation: Adjustment in natural or human systems to a new or changing environment. Adaptation to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (United State Environmental Protection Agency, 2013).

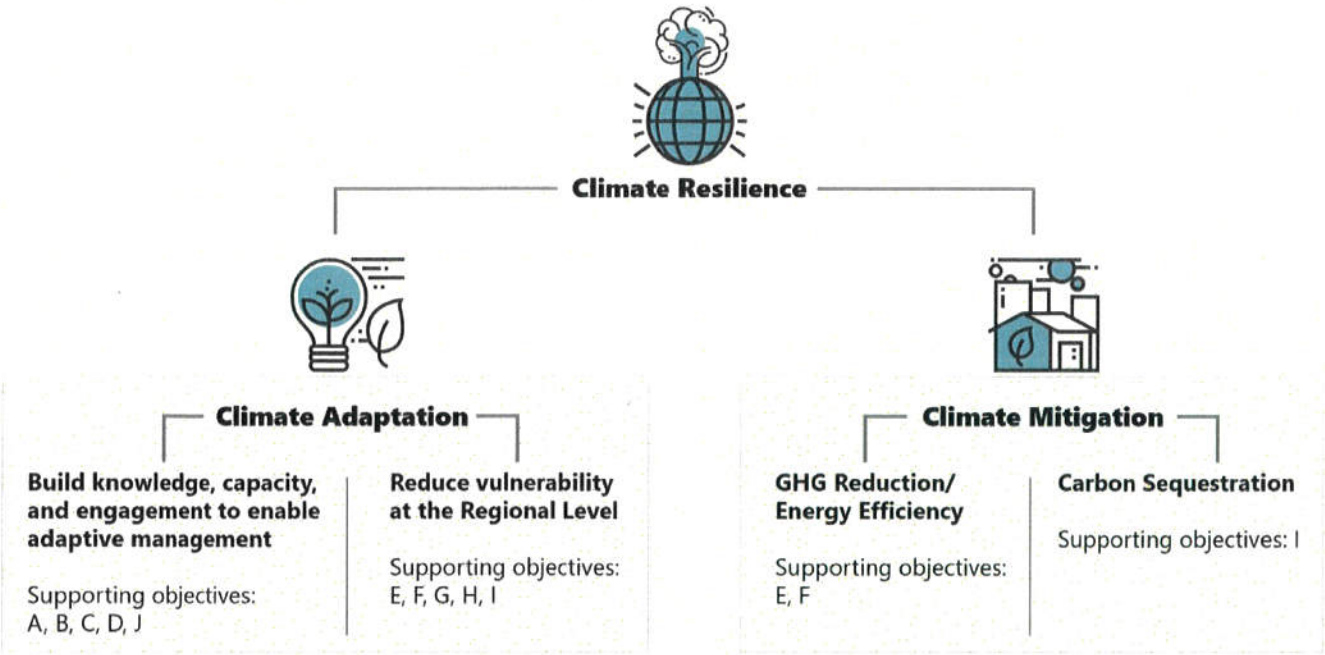
Mitigation (climate): A human intervention to reduce the human impact on the climate system; it includes strategies to reduce greenhouse gas sources and emissions and enhancing greenhouse gas sinks (e.g., carbon storage) (United State Environmental Protection Agency, 2013).

Mitigation (of disaster risk and disaster): The lessening of the potential adverse impacts of physical hazards (including those that are human-induced) through actions that reduce hazard, exposure, and vulnerability (International Panel on Climate Change, 2014).

Vulnerability: In the most general sense, a susceptibility to harm or change. More specifically, the degree to which a system is exposed to, susceptible to, and unable to cope with, the adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, as well as of non-climatic characteristics of the system, including its sensitivity, and its coping and adaptive capacity.

Definitions of resilience, adaptation, mitigation, and vulnerability used in the San Diego IRWM Plan were adapted from Appendix C of the 2017 Safeguarding California Plan, available: http://resources.ca.gov/wp-content/uploads/2017/05/DRAFT-Safeguarding-California-Plan-Appendix-C.pdf

Climate Change Framework for IRWM



2013 IRWM Plan Objectives:

- Obj. A - Encourage integrated solutions to water management issues and conflicts
- Obj. B - Maximize stakeholder and community involvement and stewardship
- Obj. C - Effectively obtain, manage, and assess water resources data and information
- Obj. D - Further the scientific and technical foundation of water management
- Obj. E - Develop and maintain a diverse mix of water resources
- Obj. F - Construct, operate, and maintain a reliable infrastructure system
- Obj. G - Enhance natural hydrologic processes to reduce the negative effects of hydromodification and flooding
- Obj. H - Effectively reduce sources of pollutants and environmental stressors
- Obj. I - Protect, restore, and maintain habitat and open space
- Obj. J - Optimize water-based recreational opportunities

SAN DIEGO Integrated Regional Water Management

Revised Scoring Criteria for 2019 IRWM Plan

DRAFT

January 26, 2018

Table 9-1: Scoring Criteria for IRWM Grant Opportunities

Criterion	Scoring Procedure	Points Assigned	Percent of Total Score[2]
Addresses Multiple Objectives[1]	Score is based on # of objectives addressed[2]	6+ objectives = 4 pts 5 objectives = 3 pts 4 objectives = 2 pts 3 objectives = 1 pt	TBD
Spans Multiple Watersheds	Score is based on the level of integration between watersheds	Multiple Watersheds = 4 pts Integration within a single Watershed = 2 pts Only site-specific = 0 pts	TBD
Addresses Multiple Beneficial Uses (BUs)	Score is based on # of beneficial uses addressed	4+ BUs = 4 pts 3 BUs = 3 pts 2 BUs = 2 pts 1 BUs = 1 pt	TBD
~~Addresses Multiple Watershed Services within the Hydrologic Cycle~~	~~Score is based on the number of watershed services[4] within the hydrologic cycle~~	~~Includes 2+ watershed services = 2 pts~~ ~~Includes 1-2 watershed services = 1 pts~~ ~~Includes no watershed functions = 0 pts~~	~~TBD~~
Sustainable Water Development: Creates New Applied Water or Offsets Potable Demand[3]	Score is based on yield of water created or offset	Creates new source of reliable, local, drought-proof supply or reduces demands – consistent yield in average and dry years = 4 pt Creates new water or reduces demands – average conditions only = 2 pts NoInterconnections/ redundancy in supply but no additional yield created = 1 pt	TBD
~~Linked to Other Water Management Projects~~	~~Score is based on Yes/No response~~	~~Yes = 4 pt~~ ~~No = 0 pts~~	~~TBD~~
Involves More than One Entity[4]	Score is based on ~~Yes/No response~~degree of partnership	2 project partners working jointly on a task, at least 1 not previously awarded IRWM funding = 4 pts 2 project partners working jointly on a task = 2 pts 2 project partners not engaged in same activity; or multiple financial sponsors = 1 pt	TBD
~~Implements IRWM Plan Recommendation or Addresses an IRWM Issue[5]; IRWM Workgroup Recommendation, or a Recommendation in an Adopted Water Management Plan~~	~~Score is based on the kind of planning document that suggests implementing benefits or components of the project~~	~~IRWM Plan Recommendation or Issue = 4 pts~~ ~~Workgroup Recommendation = 2 pts~~ ~~Other Adopted Water Management Plan Recommendation = 1 pt~~	~~TBD~~

Criterion	Scoring Procedure	Points Assigned	Percent of Total Score[2]
Invest in Disadvantaged / Environmental Justice Communities and Systems	Score is based on the degree of benefit (direct vs. indirect)	Directly invests in DAC-EDA-URC-EJ water systems, consolidation, OR training = 4 pts Other direct benefits that improve overall conditions in DACs (e.g. habitat improvement) = 4[2] pts Indirect benefits = 1 pt	TBD
Resiliency to Climate Change	Score is based on extent of climate change adaptation or mitigation activity (Climate Change Conceptual Model[5])	Reduces very high or high priority vulnerability to climate change[6] = 4 pts Reduces medium, low, or very low priority vulnerability to climate change[6] = 3 pts Improves knowledge and capacity AND implements climate change mitigation = 2 pts Improves knowledge and capacity OR implements climate change mitigation = 1 pt	TBD
Stormwater as a Resource	Score is based on benefit provided	Utilizes stormwater as a resource (e.g., environmental, source water replenishment) = 4 pts Implements onsite capture and reuse = 2 pts	TBD
Optimizes Regional Infrastructure	Score is based on the degree of benefit (regional vs local)	Optimizes regional infrastructure (improved use of existing infrastructure)[7] = 4 pts Optimizes local infrastructure (improved use of existing infrastructure) = 2 pts	TBD
Other[8]	TBD	TBD	TBD

1. ½ points may be applied if the project indirectly meets this criterion (see Table 9-3 example for 2007 Objectives).

2. Note that to be considered for IRWM funding, Objectives A and B and one other must be addressed. RAC may be asked to prioritize the IRWM Plan Objectives prior to each grant cycle.

3. Prior to each round of funding, percentages will be applied as appropriate to determine applicable weighting of each criterion in accordance with direction provided by the RAC and the RWMG. Please note that percentages may be set at 0 for any given criteria, indicating that any of these criteria may be removed from consideration for a specific funding opportunity. Conversely, the "Other" category provided in this table indicates that any number of new criteria may be added by the RAC and the RWMG to reflect new or modified funding priorities.

~~4. Watershed services are defined in Section 9.2.5~~

4. Partnership under this criterion is financial or physical support (active partnership). Passive support, such as letters of support, are not considered partnerships.

~~5. IRWM Issues are identified in Table 1-2 of the IRWM Plan Update~~

5. Climate Change Conceptual Model is included in Section 2.7.

6. Refer to Table 7-16 for prioritized climate change vulnerabilities.

7. For the purposes of project scoring, "regional infrastructure" is defined as infrastructure serving more than one agency of the same type (e.g., serves two water districts) and "local infrastructure" is defined as infrastructure serving a single agency.

8. "Other" scoring shall consider contribution of project to reducing greenhouse gas emissions, how the project will reduce dependence on Delta Supply, and how the project is related to resource management strategies (see Chapter 8).

Attachment 16

MetroTAC Update

Metro TAC Work Plan
Active & Pending Items
October 2017
Updated Items in Red Italics

Active Items	Description	Member(s)
Muni Transportation Rate Study Working Group	*San Diego has hired Carollo Engineers to review the existing transportation rate structure. A work group has been formed to review and give input. First meeting will be in December 2017. Although this is a muni issue it is included on the work plan due to its significance and potential effect on all Metro TAC members.*	Dan Brogadir Erin Bullers Mark Niemiec Dexter Wilson Karyn Keese SD staff
Point Loma Permit Ad Hoc TAC	*Metro Commission/JPA Ad Hoc established 9/17. GOAL: Create regional water reuse plan so that both a new, local, diversified water supply is created AND maximum offload at Point Loma is achieved to support legislation for permanent acceptance of Point Loma as a smaller advanced primary plant. Minimize ultimate Point Loma treatment costs and most effectively spend ratepayer dollars through successful coordination between water and wastewater agencies. 10/17: Group has met several times. Discussions are ongoing.*	Jerry Jones Jim Peasley Ed Spriggs Bill Baber Steve Padilla Metro TAC staff & JPA consultants
Pure Water EIR Comment Ad Hoc Sub Committee	*Created at September 2017 Metro TAC meeting. Purpose to provide technical review of the Pure Water Program EIR and provide draft comments for Metro TAC/JPA review. 10/17: Dexter Wilson & Carmen Kasner reviewed their comments w/Metro TAC. They will forward comments to Chair Humora & he will forward to San Diego.*	Dexter Wilson Carmen Kasner Lisa Coburn-Boyd Paula de Sousa Mills
Pure Water Facilities Working Group	This subcommittee was formed by Metro TAC and is a technical group of engineers and supporting financial staff to work with San Diego staff and consultants on cost allocations for proposed Pure Water facilities. This group meets at least monthly. Current projects include North City and MBC expansions. First meeting was 3/24/17. Roberto Yano is the chair. 5/17: Group continues to meet monthly with PUD and PWP consultants. Reviewed and accepted cost allocation for MBC.7/17: Facilities WG has submitted their comments to the City of SD on the 30% design of the North City Expansion Project. They are working cooperatively with PUD staff and consultants in the review of the design and their comments. 9/17: Positive progress, reviewed Construction package 1 and 3 and provided comments *10/17: Continued work w/SD on cost allocation of major PWP facilities. Projected draft cost allocation document in November/December 2017.*	Yazmin Arellano Dan Brogadir Steve Beppler Al Lau Scott Tulloch Dexter Wilson Roberto Yano SD staff & consultants
Sample Rejection Protocol Working Group	7/16: The sample rejection protocol from the B&C 2013 report has been under discussion between PUD staff and Metro TAC. A working group was formed to deal with this highly technical issue and prepare draft recommendations on any changes to current sampling procedures. The existing protocol is to be used through FY17. If changes are approved to the protocol they will be implemented in FY18. 1/17: Work group continues to meet monthly. 6/17: Working Group has complete their review. Three work items to be brought forward at June Metro TAC and during the next fiscal year quarter: 1) Edgar Patino will write memo to support decisions of working group. 2) PUD financial staff to provide workshop for PAs during next fiscal year quarter to go over strength based billing and how to understand sampling data and quarterly billings. Training session to be videotaped and uploaded to the JPA website 3) Dexter Wilson to provide draft protocol on how to read and validate quarterly billings.	Dennis Davies Dan Brogadir Al Lau Dexter Wilson Erin Bullers SD staff

Metro TAC Work Plan
Active & Pending Items
October 2017
Updated Items in Red Italics

Active Items	Description	Member(s)
PLWTP Permit Ad Hoc Working Group	1/17: Greg Humora and Scott Tulloch continue to meet with stakeholders. . Milestones are included in each month Metro TAC and Commission agenda packet.	Greg Humora Scott Tulloch SD staff & consultants Enviro members
Flow Commitment Working Group	6/16: Upon the request of Metro Com Chair Jim Peasley Chairman Humora created a working group to review the Flow Commitment section of the Regional Agreement and make recommendations on the fiscal responsibilities of members who might withdraw their flow from the Metro System. The Work Group held their first meeting June 24, 2016. Yazmin Arellano chairs the work group. 1/17: Work group continues to meet monthly. 4/17: Group has prepared draft RFP to hire engineering consultant to update Pt. Loma capacities. 7/17: Working Group is waiting for additional data from PUD staff and is finalizing the scope and selection of a consultant for the Pt. Loma Cost Capacity Study *10/17: Metro System Sewage Generated Flow projections worksheet handed out. Copy attached.*	Yazmin Arellano Roberto Yano Eric Minicilli Al Lau SD staff Erin Bullers Karyn Keese
Social Media Working Group	6/16: Upon the request of Metro Com Chair Jim Peasley Chairman Humora created a working group to research and provide input on the creation of policies and procedures for Metro JPA social media. Mike Obermiller will chair this work group. He sent out an email to all Metro TAC members requesting copies of their agency's policies. 9/16: A draft policy has been approved by Metro TAC and will be presented to the Commission in October by Alexander Heide. 1/17: Draft policy and consultants contracts to be reviewed by Finance Committee in April 2017. 5/17: Finance Committee reviewed budget and requested scope/fee from NV5 for monitoring only 6/17: Alex Heide to research monitoring software and bring back report to next Finance Committee Meeting. Language included in NV5 2018 contract to provide social media support services but they will not proceed with task unless approved by JPA	Mike Obermiller Alexander Heide
Secondary Equivalency	5/14: Definition of secondary equivalency for Point Loma agreed to be enviros 12/14: Cooperative agreement signed between San Diego and enviros to work together to pass legislation for secondary equivalency (until 8/1/19) San Diego indicated that passage of Federal legislation is not possible under the current political environment. San Diego is exploring options for State legislation 9/15: Letter received from EPA endorsing modified permit for Point Loma 6/16: Pursuit of Federal Legislation will be held off until after the November 2016 election. City of San Diego to consult with DC lobbyists on 2/4/17 6/17: Mayor Faulconer to meet with EPA Washington re: proceeding with Admin Fix. JPA to send letter stating that they do not support Admin Fix and request pursuit of permanent legislation instead. *10/17: SD is pursing both Admin Fix and Secondary Equivalency legislation in Washington; Ad Hoc to monitor efforts. Updates to be provided by SD staff/consultants at each Metro Commission meeting.*	Greg Humora Scott Tulloch
Pure Water Program Cost Allocation Working Group	A working group was formed to discuss Pure Water program cost allocation policies. 9/16: Concepts to be refined by Metro TAC and San Diego staff for presentation to Commission 1/17. 4/17: This group is currently being supported on a technical level by the Pure Water Facilities Subcommittee.7/17: Working group is reviewing full PWP components list with PUD staff.	Greg Humora Scott Tulloch Roberto Yano Karyn Keese SD staff & consultants

Metro TAC Work Plan
Active & Pending Items
October 2017
Updated Items in Red Italics

Active Items	Description	Member(s)
Pure Water Program Cost Allocation Metro TAC Working Group	5/14: Draft facility plan and cost allocation table provided to Metro TAC working group 3/15: Draft cost allocation presentation provided to Metro TAC	Greg Humora Scott Tulloch Rick Hopkins Roberto Yano Al Lau Bob Kennedy Karyn Keese
Exhibit E Audit	6/16: FY 2013 audit accepted by Metro Commission; 9/16: FYE 2014 audit accepted by Metro Commission. FYE 2015 audit report to be issued by end of 2016 and then all audits will be caught up. 1/17: FYE 2015 to be issued in February 2017. FYE 2016 fieldwork is underway with anticipated draft 7/17. 3/17: FYE 2015 audit report issued. Acceptance pending resolution of PWP cost allocation for cost incurred in that fiscal year. 5/17: FYE 2015 audit to move forward as requested costs have been received. FYE 2016 audit field work complete. 6/17: FYE 2015 audit accepted by JPA with assurances that once the PWP cost allocation is complete and approved by all parties that incurred costs will be adjusted as necessary to approved split of shared costs between water and wastewater. FYE 2016 audit field work complete. Completion anticipated in October 2017. *10/17: FYE 2017 Exhibit E Audit has begun.*	Karyn Keese Karen Jassoy
Amend Regional Wastewater Disposal Agreement	The addition of Pure Water facilities and costs will likely require the amendment of the 1998 Regional Wastewater Disposal Agreement. The Padre Dam billing errors have led to a need to either amend the Agreement and/or develop administrative protocols to help resolve potential future billing errors. After Pure Water cost allocation had been agreed to this effort will begin.	Greg Humora Roberto Yano Dan Brogadir Paula de Sousa Mills Karyn Keese
Management of Non-Disposables in Wastewater	9/13: Eric Minicilli handed out a position paper prepared by the NEWEA. 6/15 Chairman Humora provided attached from SCAP. 2/16: Chairman Humora distributed Robbins Geller Rudman & Dowd memorandum.	Eric Minicilli
2015/16 Transportation Rate Update	5/14: Metro TAC approved 2014 transportation rate w/caveat that PUD staff hires a consultant to review/revise methodology for 2015.	Al Lau Dan Brogadir Karyn Keese
IRWMP	8/15 RAC minutes included in August Metro TAC agenda. Padre Dam received a $6 million grant for their project. 9/16: June 2, 2016 and August 3, 2016 minutes presented to Metro TAC. 12/16: Roberto Yano and Yazmin Arellano appointed to IRWMP. 5/17: Roberto Yano providing monthly updates as well as grant funding opportunities 6/17: Robert Yano urged Metro TAC members to visit the IRWMP website to keep on top of funding opportunities: http://www.sdirwmp.org; Yazmin to attend June meeting. *10/17: Roberto Yano requested comments from TAC on storm water presentation to be provided to IRWMP10/17: Yazmin gave update on Prop 1 and other funding sources. Members should monitor funding opportunities at:* http://www.sdirwmp.org	Roberto Yano Yazmin Arellano
"No Drugs Down the Drain"	The state has initiated a program to reduce pharmaceuticals entering the wastewater flows. There have been a number of pharmaceutical collection events within the region sponsored by law enforcement.	Greg Humora
Strength Based Billing Evaluation	San Diego will hire a consultant every three years to audit the Metro metered system to insure against billing errors.	Al Lau Dan Brogadir Karyn Keese

Metro TAC Work Plan
Active & Pending Items
October 2017
Updated Items in Red Italics

Active Items	Description	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.	Eric Minicilli
Point Loma Modified NPDES Permit	1/15: Permit was submitted. EPA has begun their review. 11/16 first possible date at the Regional Board for consideration. 12/16: First hearing of Permit Application held at San Diego Regional Board. 4/17: Regional Board hearing on accelerated PWP facilities timeline 4/12/17. 5/17: Coastal Commission hearing 5/10/17. 6/17: Coastal Commission approved modified permit application. EPA to issue permit within the next few months. *10/17: Permit issued*	Greg Humora Scott Tulloch Karyn Keese
Changes in water legislation	Metro TAC 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 Mills
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.	New Board Members to be Appointed

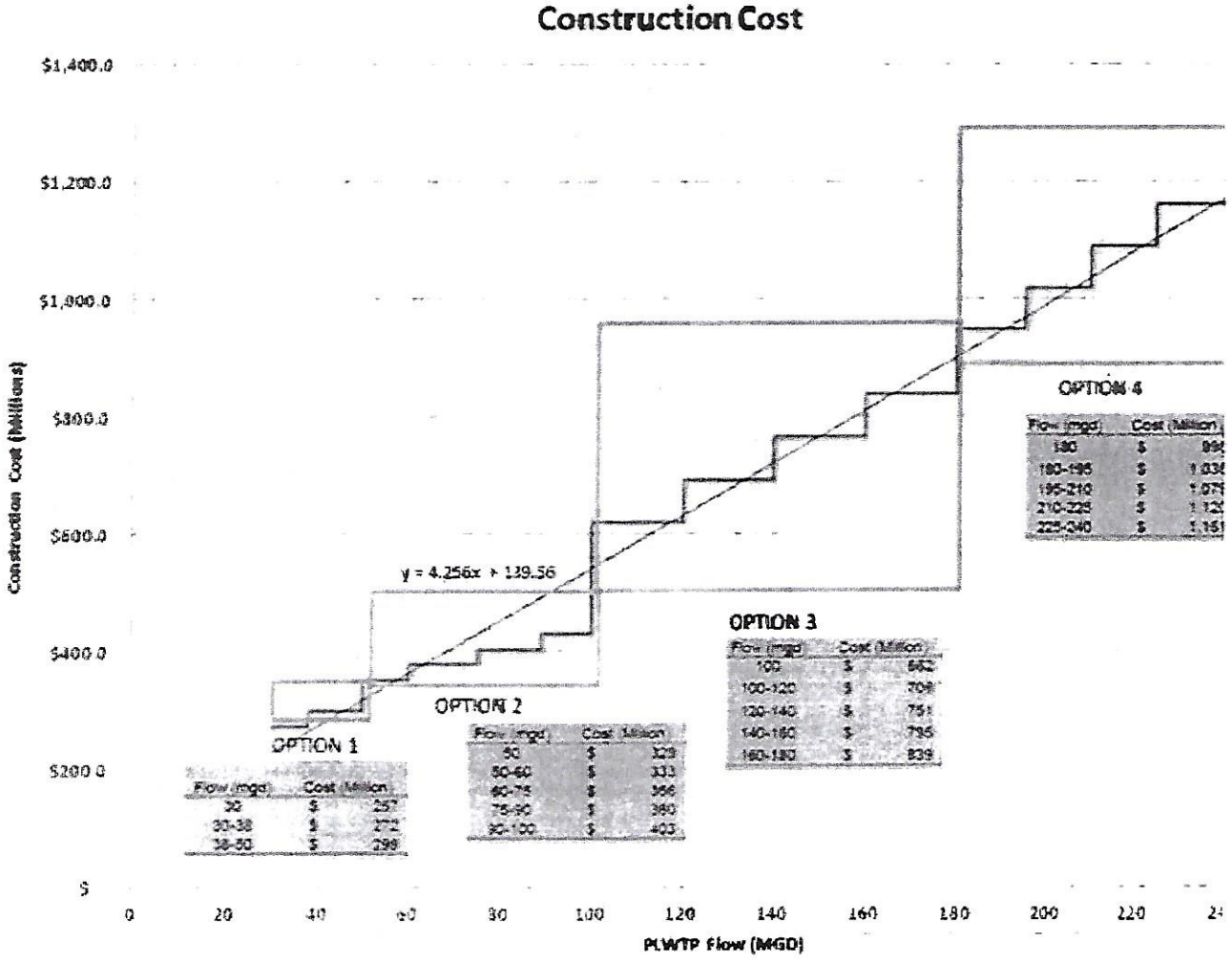
Metro System Sewerage Generated Flow Projections

	with Drought Restriction DWF (MGD)	DWF (MGD)	Median Flow (MGD)	10-Yr Flow (MGD)
2015	**146.5**	**158.5**	**163.7**	**174.3**
2016	146.9	159.2	164.4	175.2
2017	147.3	159.9	165.2	176.1
2018	147.7	160.7	166.0	177.0
2019	148.1	161.5	166.9	178.1
2020	**148.4**	**162.4**	**167.9**	**179.1**
2021	148.4	162.9	168.5	179.9
2022	148.3	163.5	169.1	180.6
2023	148.3	164.1	169.8	181.4
2024	148.2	164.8	170.5	182.3
2025	**148.1**	**165.5**	**171.3**	**183.1**
2026	147.9	166.2	172.0	184.0
2027	147.8	166.9	172.8	184.9
2028	147.6	167.6	173.6	185.9
2029	147.4	168.4	174.4	186.8
2030	**147.2**	**169.2**	**175.3**	**187.8**
2031	146.9	170.0	176.1	188.8
2032	146.7	170.8	177.0	189.7
2033	146.4	171.6	177.9	190.7
2034	146.1	172.4	178.7	191.8
2035	**145.7**	**173.2**	**179.6**	**192.8**
2036	146.4	173.6	180.1	193.3
2037	147.1	173.9	180.5	193.9
2038	147.8	174.3	180.9	194.4
2039	148.5	174.7	181.4	195.0
2040	**149.2**	**175.1**	**181.8**	**195.6**
2041	149.9	175.5	182.3	196.2
2042	150.5	175.9	182.7	196.8
2043	151.2	176.3	183.2	197.4
2044	151.9	176.7	183.7	198.0
2045	**152.6**	**177.2**	**184.2**	**198.6**
2046	153.3	177.6	184.7	199.2
2047	154.0	178.0	185.2	199.9
2048	154.7	178.5	185.7	200.5
2049	155.4	178.9	186.2	201.1
2050	**156.0**	**179.4**	**186.7**	**201.8**

- Flow is an annual average daily flow based on SANDAG Series 13
- UGR was calibrated at 60 gpdpc (residential) and gradually decreasing to 55 gpdpc by 2035 and 53 gpdpc by 2050. UGR of approximately 18 gpdpc was assumed for employment
- UGR under drought restrictions was assumed 10% reduced from the base year 2014 (61 gpdpc) for for 2015 then it gradually declines further more to about 45 gpdpc for residential in 2035 while the employment UGR declines about 10% between 2015 and 2035

Option 1: CEPT + Conventional Activated Sludge + Secondary Clarifiers →30-50 mgd average treatment capacity
Option 2: High Rate Clarifier + Conventional Activated Sludge + DAF → 50-100 mgd
Option 3: CEPT + BAF → 100-180 mgd
Option 4: High Rate Clarifier + BAF →180-240 mgd

Construction cost estimate for Point Loma based on capacity in 2013 dollars are below for your understanding of the ballpark cost – you need to do ENR conversions.
Estimates included O&M costs as well.

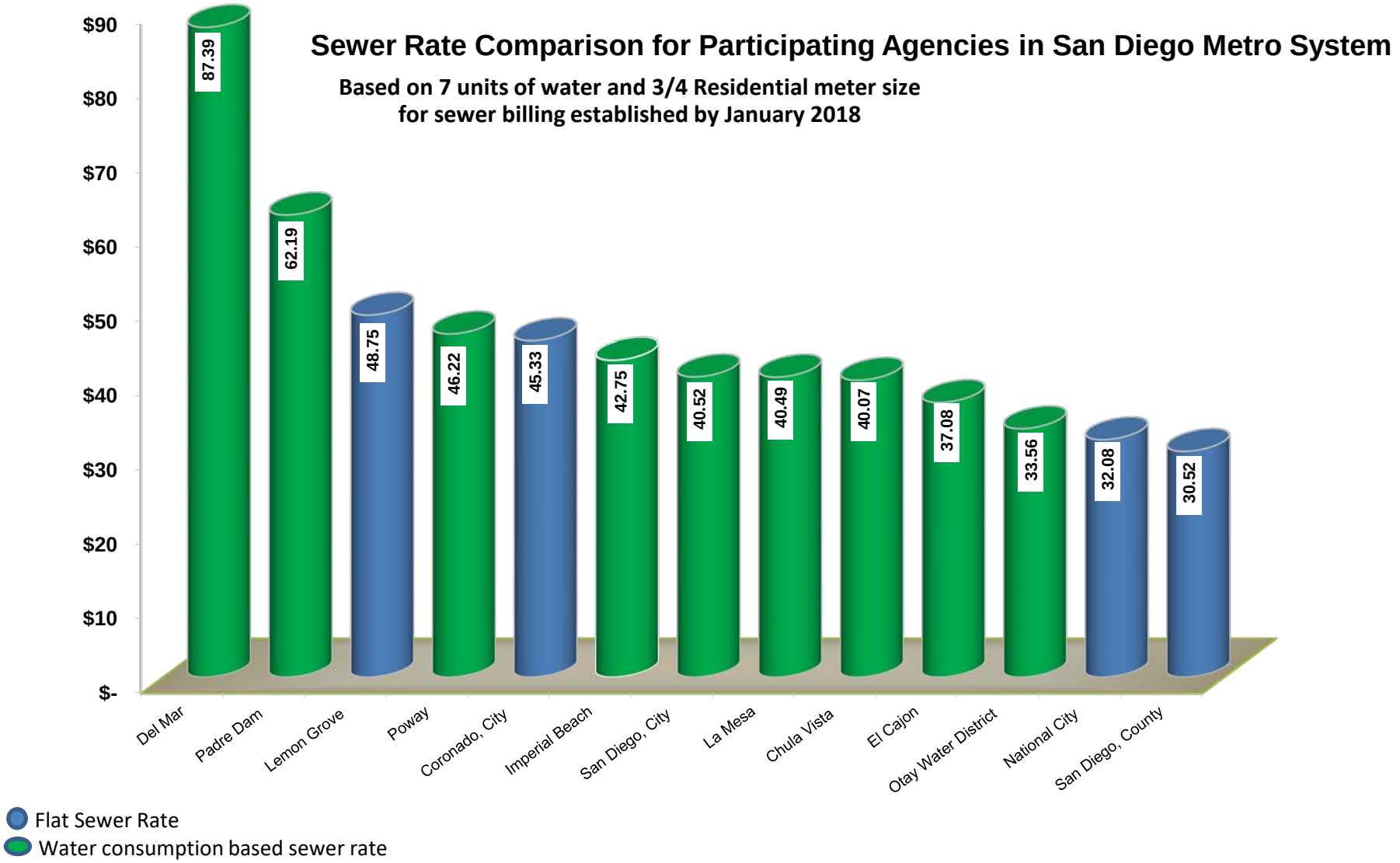


Hope this helps!

Seval Sen, P.E.
Engineer
Padre Dam Municipal Water District
Engineering and Planning
P 619 258 4631

ENR 2013 10,289
ENR 2017 11,642
Factor 1.1315

180 mGD Option 3 2013 839m
2017 949m
100 mGD Option 2 2013 403m
2017 456m


Sewer Rate Comparison for Participating Agencies in San Diego Metro System
Based on 7 units of water and 3/4 Residential meter size
for sewer billing established by January 2018
$90
$80
$70
$60
$50
$40
$30
$20
$10
$-
87.39
62.19
48.75
46.22
45.33
42.75
40.52
40.49
40.07
37.08
33.56
32.08
30.52
Del Mar
Padre Dam
Lemon Grove
Poway
Coronado, City
Imperial Beach
San Diego, City
La Mesa
Chula Vista
El Cajon
Otay Water District
National City
San Diego, County
Flat Sewer Rate
Water consumption based sewer rate

Metro TAC
Participating Agencies
Selection Panel Rotation

Agency	Representative	Selection Panel	Date Assigned
Padre Dam	Neal Brown	IRWMP – Props 50 & 84 Funds	2006
El Cajon	Dennis Davies	Old Rose Canyon Trunk Sewer Relocation	9/12/2007
La Mesa	Greg Humora	As-Needed Piping and Mechanical	11/2007
National City	Joe Smith	MBC Additional Storage Silos	02/2008
Otay Water District	Rod Posada	As-Needed Biological Services 2009-2011	02/2008
Poway	Tom Howard	Feasibility Study for Bond Offerings	02/2008
County of San Diego	Dan Brogadir	Strategic Business Plan Updates	02/2008
Coronado	Scott Huth	Strategic Business Plan Updates	09/2008
Coronado	Scott Huth	As-needed Financial, HR, Training	09/2008
PBS&J	Karyn Keese	As-needed Financial, Alternate HR, Training	09/2008
Otay Water District	Rod Posada	Interviews for Bulkhead Project at the PLWTP	01/2009
Del Mar	David Scherer	Biosolids Project	2009
Padre Dam	Neal Brown	Regional Advisory Committee	09/2009
County of San Diego	Dan Brogadir	Large Dia. Pipeline Inspection/Assessment	10/2009
Chula Vista	Roberto Yano	Sewer Flow Monitoring Renewal Contract	12/2009
La Mesa	Greg Humora	Sewer Flow Monitoring Renewal Contract	12/2009
Poway	Tom Howard	Fire Alarm Panels Contract	12/2009
El Cajon	Dennis Davies	MBC Water System Improvements D/B	01/2010
Lemon Grove	Patrick Lund	RFP for Inventory Training	07/2010
National City	Joe Smith	Design/Build water replacement project	11/2010
Coronado	Scott Huth	Wastewater Plan update	01/2010
Otay Water District	Bob Kennedy	RFP Design of MBC Odor Control Upgrade/Wastewater Plan Update	02/2011
Del Mar	Eric Minicilli	Declined PS 2 Project	05/2011
Padre Dam	Al Lau	PS 2 Project	05/2011
County of San Diego	Dan Brogadir	RFP for As-Needed Biological Services Co.	05/2011
Chula Vista	Roberto Yano	North City Cogeneration Facility Expansion	07/2011
La Mesa	Greg Humora	confined space RFP selection panel	10/2011
Poway	Tom Howard	COSS's for both Water and WW	10/2011
El Cajon	Dennis Davies	Independent Accountant Financial Review & Analysis – All Funds	01/2012

Lemon Grove	Mike James	MBC Dewatering Centrifuges Replacement (Passed)	01/2012
National City	Joe Smith	MBC Dewatering Centrifuges Replacement (Passed)	01/2012
Coronado	Godby, Kim	MBC Dewatering Centrifuges Replacement (Passed)	01/2012
Otay Water District	Bob Kennedy	MBC Dewatering Centrifuges Replacement (Accepted)/Strategic Planning Rep	01/2012
Del Mar	Eric Minicilli	New As Need Engineering Contract	02/2012
Padre Dam	Al Lau	PA Rep. for RFQ for As Needed Design Build Services (Passed)	05/2012
County of San Diego	Dan Brogadir	PA Rep. for RFQ for As Needed Design Build Services (Cancelled project)	05/2012
Chula Vista	Roberto Yano	As-Needed Condition Assessment Contract (Accepted)	06/2012
La Mesa	Greg Humora	New programmatic wastewater facilities condition (Awaiting Response)	11/2012
Poway	Tom Howard	Optimization Review Study	01/2013
El Cajon	Dennis Davies	PUD 2015 Annual Strategic Plan	1/15/14
Lemon Grove	Mike James	As-Needed Engineering Services (Passed)	7/25/14
National City	Kuna Muthusamy	As-Needed Engineering Services	7/25/14
Coronado	Ed Walton	Strategic Planning	01/2014
Otay Water District	Bob Kennedy	Strategic Planning (Volunteered, participated last year)	01/2014
Del Mar	Eric Minicilli	Pure Water Program Manager Services	9/1/14
Padre Dam	Al Lau	Pure Water Program Manager Services	9/1/14
County of San Diego	Dan Brogadir	As-Needed Condition Assessment Contract	3/24/2015
Chula Vista	Roberto Yano	Out on Leave	6/10/15
La Mesa	Greg Humora	North City to San Vicente Advanced Water Purification Conveyance System	6/10/15
Poway	Mike Obermiller	Real Property Appraisal, Acquisition, and Relocation Assistance for the Public Utilities Department	11/30/15
El Cajon	Dennis Davies	PURE WATER RFP for Engineering Design Services	12/22/15
Lemon Grove	Mike James	PURE WATER RFP Engineering services to design the North City Water reclamation Plant and Influence conveyance project	03/16/15
National City	Kuna Muthusamy	Passes	04/04/2016
Coronado	Ed Walton	As-Needed Environmental Services - 2 Contracts	04/04/2016
Otay Water District	Bob Kennedy	As Needed Engineering Services Contract 1 & 2	04/11/2016
Del Mar	Eric Minicilli	Pure Water North City Public Art Project	08/05/2016
Padre Dam	Al Lau	Biosolids/Cogeneration Facility solicitation for Pure Water	08/24/2016
County of San Diego	Dan Brogadir	Pure Water North City Public Art Project	08/10/2016
Chula Vista	Roberto Yano	Design Metropolitan Biosolids Center (MBC) Improvements Pure Water Program	9/10/2016
La Mesa	Greg Humora	Design of Metropolitan Biosolids Center (MBC) Improvements	9/22/16
Poway	Mike Obermiller	Electrodialysis Reversal (EDR) System Maintenance	12/7/16
El Cajon	Yazmin Arellano	As-Needed Construction Management Services for Pure Water	3/13/17

Lemon Grove	Mike James		
National City	Kuna Muthusamy		
Coronado	Ed Walton		
Otay Water District	Bob Kennedy		
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Padre Dam	Al Lau		
County of San Diego	Dan Brogadir		
Chula Vista	Roberto Yano		
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