

OTAY WATER DISTRICT
DESALINATION PROJECT COMMITTEE MEETING
and
SPECIAL MEETING OF THE BOARD OF DIRECTORS

2554 SWEETWATER SPRINGS BOULEVARD
SPRING VALLEY, CALIFORNIA
Boardroom

WEDNESDAY
April 8, 2015
11:30 A.M.

This is a District Committee meeting. This meeting is being posted as a special meeting in order to comply with the Brown Act (Government Code Section §54954.2) in the event that a quorum of the Board is present. Items will be deliberated, however, no formal board actions will be taken at this meeting. The committee makes recommendations to the full board for its consideration and formal action.

AGENDA

1. ROLL CALL
2. PUBLIC PARTICIPATION – OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO SPEAK TO THE BOARD ON ANY SUBJECT MATTER WITHIN THE BOARD'S JURISDICTION BUT NOT AN ITEM ON TODAY'S AGENDA

DISCUSSION ITEMS

3. APPROVE AMENDMENT NO. 3 TO THE EXISTING CONTRACT WITH AECOM TECHNICAL SERVICES, INC. (AECOM) FOR THE DESIGN OF THE OTAY MESA DESALINATION CONVEYANCE AND DISINFECTION SYSTEM PROJECT; INCREASING THE CONTRACT BY \$96,506, RESULTING IN A HIGHER CONTRACT AMOUNT NOT-TO-EXCEED \$3,778,438 (COBURN-BOYD)
4. INFORMATIONAL UPDATE FOR THE ROSARITO DESALINATION PLANT AND CONVEYANCE AND THE OTAY MESA CONVEYANCE AND DISINFECTION SYSTEM PROJECTS (COBURN-BOYD)
5. ADJOURNMENT

BOARD MEMBERS ATTENDING:

Jose Lopez, Chair
Mitch Thompson

AGENDA ITEM 3



STAFF REPORT

TYPE MEETING:	Regular Board	MEETING DATE:	May 6, 2015		
SUBMITTED BY:	Lisa Coburn-Boyd Environmental Compliance Specialist	CIP./G.F. NO:	P2451- 001102	DIV. NO.	ALL
	Bob Kennedy Engineering Manager				
APPROVED BY:	<input checked="" type="checkbox"/> Rod Posada, Chief, Engineering				
	<input checked="" type="checkbox"/> German Alvarez, Assistant General Manager				
	<input checked="" type="checkbox"/> Mark Watton, General Manager				
SUBJECT:	Amendment No. 3 to the Contract with AECOM Technical Services, Inc. for the Otay Mesa Desalination Conveyance and Disinfection System Project				

GENERAL MANAGER'S RECOMMENDATION:

That the Otay Water District (District) Board approve Amendment No. 3 to the existing contract with AECOM Technical Services, Inc. (AECOM) for design of the Otay Mesa Desalination Conveyance and Disinfection System Project, increasing the contract by \$96,506, resulting in a higher contract amount with AECOM of an amount not-to-exceed \$3,778,438 (see Exhibit A for Project location).

COMMITTEE ACTION:

Please see Attachment A.

PURPOSE:

To obtain Board authorization for the General Manager to execute Amendment No. 3 with AECOM (see Exhibit B) for the Otay Mesa Desalination Conveyance and Disinfection System Project (Project), increasing the contract by \$96,506, resulting in a

higher contract amount with AECOM of an amount not-to-exceed \$3,778,438.

ANALYSIS:

At the November 3, 2010 Board Meeting, AECOM was awarded a professional engineering services contract for the Otay Mesa Desalination Conveyance and Disinfection System Project. The contract amount approved by the Board was for an amount not-to-exceed \$3,910,297, to be completed by the end of Fiscal Year 2016. The District restricted AECOM's work to miscellaneous studies until January 24, 2013, when AECOM was authorized to initiate work on the preliminary design of a large diameter pipeline 3.5 miles long, a pump station, and a disinfection facility, along with the environmental surveys and studies for CEQA/NEPA compliance.

At the April 8, 2014 Board Meeting, Amendment No. 1 was approved by the Board increasing the contract amount \$136,409 for additional environmental surveys and project management. The new contract amount, after approval of the amendment, was \$4,046,706 and the completion date of the Project was extended to June 30, 2018.

At the October 1, 2014 Board Meeting, Amendment No. 2 was approved by the Board to decrease the contract by \$364,774 to eliminate construction services from AECOM's contract and to remove any suggestion of AECOM's financial interest in the construction of the Project by the firm that is completing the environmental work. This reduced the AECOM contract amount to \$3,681,932.

The Project has been making steady progress towards the completion of its environmental document (EIR/EIS) which is required to be completed for the Presidential Permit process. However, there have been challenges encountered during the environmental process that have affected the pace of the Project. Additional work that could not have been foreseen, such as the resolution of Conflict of Interest documents for the Department of State (DOS), changes in the alignment alternatives based on pipeline alignment information from Mexico, and the analysis of an outfall for out of specification water discharge have impacted AECOM's budget and schedule.

The \$96,506 budget increase has several components, as detailed in the letter from AECOM, Exhibit C. In the Contract Amendment No. 1 to the Agreement with AECOM, the project management budget

was extended for six (6) months to September 2014. Since September 2014, staff was aware that the project management budget needed additional funding, but rather than issuing a Contract Amendment under the General Manager's authority and due to the project's visibility, it was decided to negotiate for all the additional tasks and to continue the Project until the end of October 2015, when it is expected that the EIR/EIS will be complete. There is also a component of the requested budget increase that is due to additional work required by Project modifications and DOS coordination beginning in January 2014 through the present. Going forward, as the environmental process moves towards completion, District staff will be handling more of the project management and all of the coordination with the DOS in order to control costs.

Staff will bring another update during the September/October 2015 timeframe with further recommendations.

FISCAL IMPACT: Joe Beachem, Chief Financial Officer

The total budget for CIP P2451, as approved in the FY 2015 budget, is \$30,000,000. Expenditures to date are \$3,414,499.09. Total expenditures, plus outstanding commitments, including this contract, totals \$6,217,223.15.

Based on a review of the financial budget, the Project Manager anticipates that the budget is sufficient to support this Project (see Attachment B).

The Finance Department has determined that, under the current rate model, 40% of the funding will be available from the Expansion Fund and 60% of the funding will be available from the Betterment Fund.

STRATEGIC GOAL:

This Project supports the District's Mission statement, "To provide high value water and wastewater services to the customers of the Otay Water District in a professional, effective, and efficient manner" and the General Manager's Vision, "A District that is at the forefront in innovations to provide water services at affordable rates, with a reputation for outstanding customer service."

LEGAL IMPACT:

None

LCB/BK/RP:jf

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Staff Report, AECOM CO No-3 (LCB-BK).doc

Attachments: Attachment A - Committee Action
 Attachment B - Budget Detail
 Exhibit A - Location Map
 Exhibit B - Contract Amendment No. 3
 Exhibit C - Letter from AECOM, March 17, 2015



ATTACHMENT A

SUBJECT/PROJECT: P2451-001102	Amendment No. 3 to the Contract with AECOM Technical Services, Inc. for the Otay Mesa Desalination Conveyance and Disinfection System Project
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COMMITTEE ACTION:

This item was presented to the Desalination Committee (Committee) at a meeting held on April 8, 2015. The Committee supported presentation to the full Board.

NOTE:

The "Committee Action" is written in anticipation of the Committee moving the item forward for Board approval. This report will be sent to the Board as a Committee approved item, or modified to reflect any discussion or changes as directed from the Committee prior to presentation to the full Board.

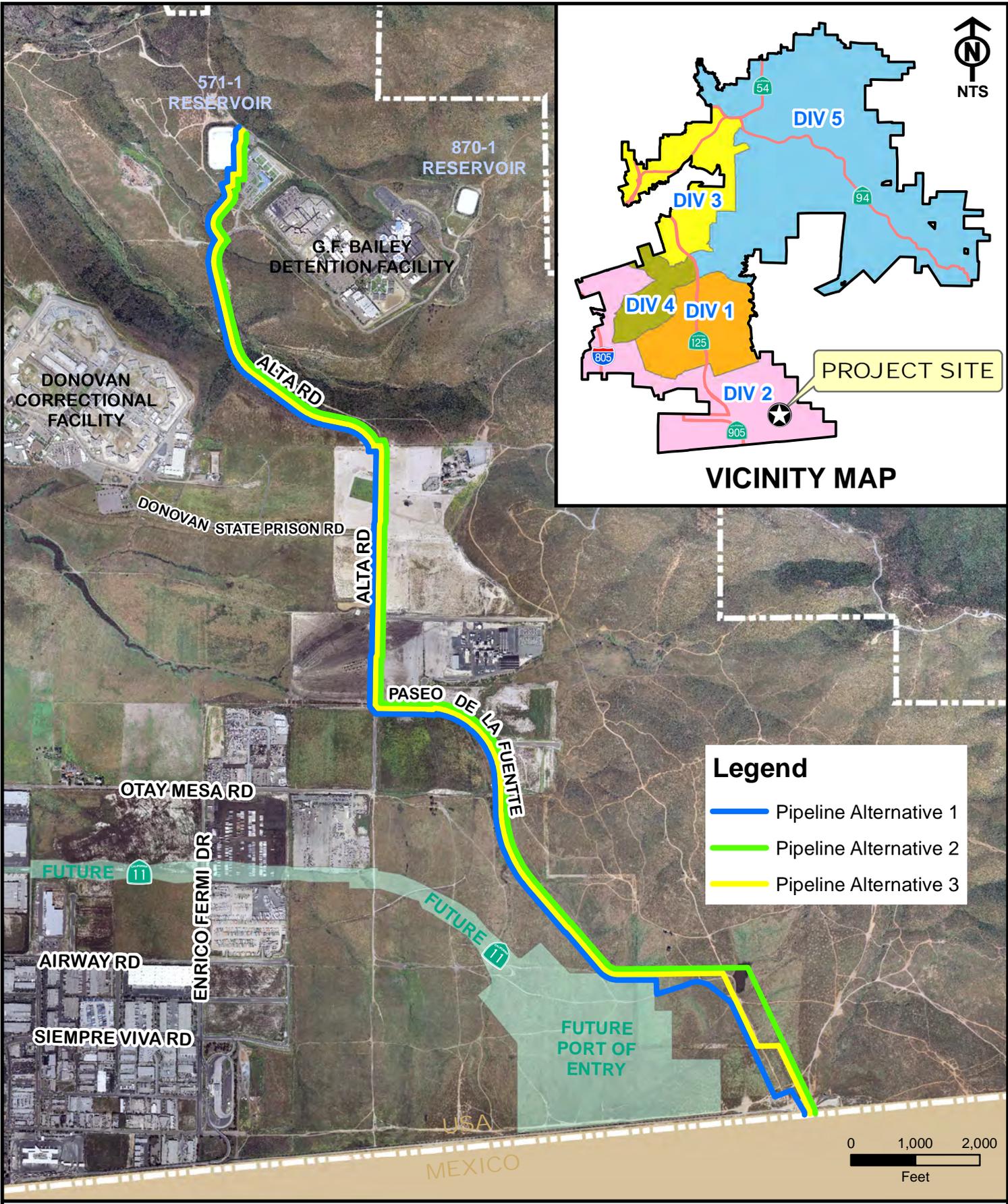


ATTACHMENT B – Budget Detail

SUBJECT/PROJECT:	Amendment No. 3 to the Contract with AECOM Technical Services, Inc. for the Otay Mesa Desalination Conveyance and Disinfection System Project
P2451-001102	

Level	Title	Committed	Expenditures	Outstanding Commitment	Projected Final Cost	Vendor
Planning	Consultant Contracts	\$98,577.34	\$98,577.34	\$0.00	\$98,577.34	CAMP DRESSER & MCKEE
		\$13,311.19	\$13,311.19	\$0.00	\$13,311.19	CPM PARTNERS INC
		\$380,200.00	\$380,200.00	\$0.00	\$380,200.00	HECTOR I MARES-COSSIO
		\$71,530.09	\$71,530.09	\$0.00	\$71,530.09	MARSTON+MARSTON INC
		\$4,172.90	\$4,172.90	\$0.00	\$4,172.90	SALVADOR LOPEZ-CORDOVA
		\$267,066.00	\$188,355.05	\$78,710.95	\$267,066.00	SILVA SILVA INTL
		\$26,700.00	\$26,700.00	\$0.00	\$26,700.00	REA & PARKER RESEARCH
	Meals/Travel/ Incidentals	\$20,121.05	\$20,121.05	\$0.00	\$20,121.05	STAFF
	Printing	\$60.59	\$60.59	\$0.00	\$60.59	MAIL MANAGEMENT GROUP
	Professional Legal Fees	\$162,041.07	\$162,041.07	\$0.00	\$162,041.07	GARCIA CALDERON & RUIZ
		\$12,155.04	\$6,534.50	\$5,620.54	\$12,155.04	BROWNSTEIN HYATT FARBER
		\$43,174.50	\$43,174.50	\$0.00	\$43,174.50	SOLORZANO CARVAJAL GONZALEZ Y
		\$25,312.31	\$25,312.31	\$0.00	\$25,312.31	STUTZ ARTIANO SHINOFF
	Service Contracts	\$290.30	\$290.30	\$0.00	\$290.30	S.D. DAILY TRANSCRIPT
		\$685.20	\$685.20	\$0.00	\$685.20	SAN DIEGO UNION-TRIBUNE
		\$49,000.00	\$29,213.02	\$19,786.98	\$49,000.00	(W)RIGHT-ON COMMUNICATIONS INC
		\$39,500.00	\$39,500.00	\$0.00	\$39,500.00	BUSTAMANTE & ASSOCIATES
		\$875.00	\$875.00	\$0.00	\$875.00	LEONARD VILLARREAL
		\$500.00	\$500.00	\$0.00	\$500.00	REBECA SOTURA NICKERSON (Interpreter)
	Standard Salaries	\$1,009,853.63	\$1,009,853.63	\$0.00	\$1,009,853.63	
	Total	\$2,225,126.21	\$2,121,007.74	\$104,118.47	\$2,225,126.21	
Design	Consultant Contracts	\$5,108.75	\$5,108.75	\$0.00	\$5,108.75	MARSTON+MARSTON INC
		\$28,770.00	\$28,770.00	\$0.00	\$28,770.00	MICHAEL R WELCH PHD
		\$5,000.00	\$5,000.00	\$0.00	\$5,000.00	ATKINS
		\$8,818.00	\$8,818.00	\$0.00	\$8,818.00	CPM PARTNERS INC
		\$3,681,932.00	\$1,079,832.41	\$2,602,099.59	\$3,681,932.00	AECOM TECHNICAL SERVICES
		\$96,506.00		\$96,506.00	\$96,506.00	AECOM TECHNICAL SERVICES AMENDMENT NO. 3
	\$3,952.00	\$3,952.00	\$0.00	\$3,952.00	AIRX UTILITY SURVEYORS	
	Professional Legal Fees	\$7,761.19	\$7,761.19	\$0.00	\$7,761.19	STUTZ ARTIANO SHINOFF
	Meals/Travel/ Incidentals	\$3,174.39	\$3,174.39	\$0.00	\$3,174.39	STAFF
	Service Contracts	\$114.08	\$114.08	\$0.00	\$114.08	REPROHAUS CORP
		\$342.80	\$342.80	\$0.00	\$342.80	SAN DIEGO UNION-TRIBUNE
	Standard Salaries	\$150,288.25	\$150,288.25	\$0.00	\$150,288.25	
	Total	\$3,991,767.46	\$1,293,161.87	\$2,698,605.59	\$3,991,767.46	
Construction	Standard Salaries	\$329.48	\$329.48	\$0.00	\$329.48	
	Total	\$329.48	\$329.48	\$0.00	\$329.48	
Budget	\$30,000,000.00					
TOTAL		\$6,217,223.15	\$3,414,499.09	\$2,802,724.06	\$6,217,223.15	

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OTAY WATER DISTRICT
 OTAY MESA DESALINATION CONVEYANCE
 AND DISINFECTION SYSTEM PROJECT



EXHIBIT A

EXHIBIT B

THIRD AMENDMENT TO AGREEMENT
BETWEEN OTAY WATER DISTRICT AND
AECOM TECHNICAL SERVICES, INC. RELATIVE TO
THE PROFESSIONAL ENGINEERING SERVICES FOR
THE OTAY MESA CONVEYANCE AND DISINFECTION SYSTEM

This Third Amendment ("Amendment") to the original Agreement for Professional Engineering Services is made and entered into as of the ____ day of _____, 2015, by and between the OTAY WATER DISTRICT ("District"), and AECOM TECHNICAL SERVICES, INC. ("Consultant").

RECITALS

A. District and Consultant entered into that certain Professional Services Agreement dated January 3, 2011 (the "Original Agreement"), under which Consultant agreed to provide the services therein described in connection with the District's Otay Mesa Conveyance and Disinfection System (the "Services"). The Original Agreement was amended on June 16, 2014 (the "Amended Original Agreement") and on October 21, 2014 (the "Second Amended Original Agreement").

B. The Second Amended Original Agreement is due to expire on June 30, 2018 and the Services are 31% complete.

C. District and Consultant desire to enter into this Agreement to amend certain specific terms and conditions of the Amended Original Agreement as indicated below.

NOW, THEREFORE, in consideration of the foregoing and the mutual promises and covenants hereinafter contained, the parties agree as follows:

1. Exhibit A to the Amended Original Agreement, setting forth the Services to be provided by Consultant, is hereby amended and supplemented by the attached Exhibit A, Revised and Supplemented Scope of Work, attached to this Second Amendment and incorporated herein by reference. This revision increases Task 1, Project Management by an

amount not to exceed Thirty Nine Thousand Four Hundred Ninety Eight Dollars (\$39,498) and Task 7, Environmental Documentation for an amount not to exceed Fifty Seven Thousand Eight Dollars (\$57,008).

2. The parties agree that the aggregate amount paid by the District to the Consultant for the Professional Engineering Design Services rendered by Consultant in excess of the original Agreement shall be increased by an amount not to exceed Ninety Six Thousand Five Hundred Six Dollars (\$96,506). Therefore, the total compensation paid by the District for Services described in the amended original contract and this third amendment shall not exceed Three Million Seven Hundred Seventy Eight Thousand Four Hundred Thirty Eight Dollars (\$3,778,438).

3. The parties agree that all terms and conditions of the Amended Original Agreement not modified or amended by this Third Amendment, including without limitation all indemnity and insurance requirements, are and shall remain in full force and effect.

4. This Third Amendment is subject to the venue, choice of law and interpretation provisions of the Original Agreement.

IN WITNESS WHEREOF, the parties have caused this Third Amendment to be executed as of the day and year first above written.

<p>OTAY WATER DISTRICT</p> <p>By: _____ Mark Watton Its: General Manager Date: _____</p>	<p>CONSULTANT:</p> <p>AECOM TECHNICAL SERVICES, INC.</p> <p>By: _____ Name: _____ Its: _____ Date: _____</p>
<p>Approved as to form:</p> <p>By: _____ General Counsel</p>	<p>Approved as to form:</p> <p>By: _____ Its: _____</p>

Exhibit A

REVISED AND SUPPLEMENTED SCOPE OF WORK					
Task No.	Description	Labor	Subconsultant	Other Direct Costs	Fee
1	Project Management and Administration	\$ 187,578.00	-	\$ 5,216.00	\$ 192,794.00
7	Environmental Documentation	-	\$ 815,387.00	-	\$ 815,387.00
*	Tasks 2-6, 8-22				\$ 2,770,267.00
				Total	\$ 3,778,448.00

Previous Fee	Difference
\$ 153,296.00	\$ 39,498.00
\$ 758,379.00	\$ 57,008.00
Total	\$ 96,506.00

* Tasks 2-6 and 8-22 are not modified or amended by the Third Amendment. The Consultant's fee for these tasks are provided for reference.



AECOM
401 West A Street
Suite 1200
San Diego, CA 92101
www.aecom.com

EXHIBIT C

619 610 7600 tel
619 610 7601 fax

March 17, 2015

Rod Posada, PE and Lisa Coburn-Boyd
Chief of Engineering and Environmental Compliance Specialist
2554 Sweetwater Springs Road
Spring Valley, CA 91978-2004

Otay Mesa Conveyance and Disinfection System Project CIP P2451
**Scope of Work Augmentations: Project Management, Environmental Documentation,
Schedule**

Dear Otay Water District:

We appreciate your consideration to process a third amendment to the Agreement allowing the AECOM team to continue efforts and support of the Project until October 31, 2015, including the Scope of Work augmentations, consisting of project management, environmental documentation, and specifically, coordination efforts and expenses during 2014 and projected expenses into fall 2015.

The Otay Mesa Conveyance and Disinfection System Project's (Project) original schedule anticipated the preliminary design reports (PDRs) and Environmental Impact Report/Environmental Impact Statement (EIR/EIS) would be completed in 2011. It is currently anticipated that the draft EIR/EIS will be complete in mid-2015. It is also anticipated that the Final EIR/EIS will be complete by October 31, 2015, pending any unforeseen reasons outside of our or the District's control.

The Project start was delayed by nearly two (2) years as the District waited for key information and progress in Mexico. Calendar year 2013 was productive with significant progress made on the Pipeline PDR and the draft EIR/EIS, including the individual field and technical studies that support the draft EIR/EIS. During calendar year 2014, Project progress slowed as the District again waited for information and progress in Mexico. The AECOM team worked with the District, resource agencies, and extensively with the Department of State on the both the Presidential Permit, and the approach and format for the draft EIR/EIS. The District approved Amendment No. 1 to the Existing Agreement, which included \$30,000 for Project Management during the period from April 2014 through September 2014. We were able to slightly underrun the \$5,000 per month budget, but have been out of project management budget for several months now (elapsed time now at the sixth month). Amendment No. 2 to the Existing Agreement was also processed; which was a removal of the construction support services (\$364,774) and executed in October 2014. Our request for Amendment No. 3 includes augmentations to three (3) Scope of Work tasks:



Task 1 – Project Management and Administration

Project Management and Administration work will continue until October 31, 2015 and will consist of DLM Engineering and AECOM's time to provide general support for the Project and the District as the work progresses. It also includes the time commitment for Project/District meetings, agendas and minutes, scheduling, monthly progress reporting and status updates, project controls, and coordination associated with executing the Project. Continuation of Project Management and Administration is limited to \$39,498. Also, a similar continuation of the EIR/EIS and environmental documentation is discussed and is accounted for below.

Task 7 – Environmental Documentation [Delay, Coordination, and Continuation]

The Agreement listed a schedule of completion following the Notice to Proceed (NTP) for the Administrative Draft Environmental Impact Report / Environmental Impact Statement (EIR/EIS) in 240 days (September 22nd, 2013). For various reasons outside of our or the District's control, this deliverable date was unachievable. We are now nearly 24 months into the Project and yet have managed to coordinate the environmental documentation and progress the Project without additional compensation. However, an authorization is needed to continue to coordinate this effort until its completion. It will consist of AECOM and Atkins' time previously expended, as well as through completion of the EIR/EIS work. It also includes the time commitment for Project/Client environmental meetings, coordination efforts with Department of State, and management of environmental activities. See our previous discussion of this matter in letter dated February 2014. The collective amount for this work is \$57,008.

Significant Tasks That Have Impacted Work

Over the course of the Project as it's developed, mostly in the Environmental Documentation task thus far, there have been a number of specific issues that have required Project support. Below is a brief list of such quantitative and qualitative support efforts:

Federal Lead Agency for NEPA determined to be the U.S. Department of State

- U.S. Department of State's Organizational Conflict of Interest (OCI) Statement and On-Going Obligations Forms for:
 - AECOM Technical Services, Atkins North America, Brand New Box, Geocon, and VRPA
- Additional Support for the Presidential Permit and Supplemental Documentation
- Additional Coordination for the Public Scoping Meeting and Presentation(s)
- U.S. Department of State directed certain efforts for federal agency coordination:
 - Weekly Telephone Conference Calls, Meeting Minutes, and Action Items



- Multiple Site Visits and Project Meetings

Consultation with Mexico

- Deletion of the Western Delivery Point, Removal of the Alta Road Alignment Alternative
- Addition and Introduction of New Alignment Alternative to Environmental Documentation and necessary updates to the following technical reports:
 - Biological
 - Cultural
 - Geotechnical
 - Hazardous Materials
 - Water Quality
 - Noise and Vibration
 - Traffic
 - Air Quality and Climate Change
 - Transboundary Impacts
- Mexican Environmental Documentation Translation into English from Spanish

Outfall Structure for Non-Spec Potable Water

- Addition and Introduction of New 'Additional Project Infrastructure' and necessary updates to the following:
 - EIR/EIS Document
 - Biological Technical Report
 - Cultural Report
 - Water Quality Evaluation

Amended Budget Request Associated with Scope of Work Augmentations

Task Number and Description	Current Authorized Budget	Amended Budget	Revised Authorized Budget
Task 1 – Project Management (Continuation)	\$105,807	+\$39,498 ¹	\$145,305
Task 7 – Environmental Documentation	\$758,379	+\$57,008 ²	\$815,387
Current Authorized Tasks (Total)	\$1,773,374	\$96,506	\$1,869,880

Amended Budget Amount Breakdown:

¹ – Task 1 *Project Management and Administration* requires an additional \$39,498 and the amount consists of the following:



- \$3,750 for DLM Engineering for October 2014 thru February 2015.
- \$9,750 for DLM Engineering for March 2015 thru October 2015; limited to 50 hours.
- \$8,406 for AECOM for overages through January 2015.
- \$3,154 for AECOM for February 2015.
- \$14,438 for AECOM for March 2015 thru October 2015; limited to 2.5 hours per week.

² – Task 7 *Environmental Documentation* requires an additional \$57,008 and the amount consists of the following:

- \$32,240 for AECOM for 12 months additional support (2014); estimated 4 hours per week.
- \$17,888 for Atkins for 12 months of additional support (2014); estimated 2 hours per week.
- \$6,880 for Atkins for March 2015 thru October 2015; limited to 40 hours.

Please note that this Amendment request does increase the current authorized budget for Task 1 *Project Management and Administration* and Task 7 *Environmental Documentation*, as well as the overall budget due to Scope of Work augmentations.

Thank you for your consideration. Please let us know if you have any questions or comments and look forward to continuing support of the District and this Project.

Sincerely,

Don MacFarlane, PE
Project Manager

Jason Caprio, PE
AECOM Project Manager

Alberto Vela
Vice President

AGENDA ITEM 4



STAFF REPORT

TYPE MEETING:	Desalination Committee	MEETING DATE:	April 8, 2015		
SUBMITTED BY:	Bob Kennedy Engineering Manager	CIP./G.F. NO:	P2451- 001101	DIV. NO.	ALL
APPROVED BY:	<input checked="" type="checkbox"/> Rod Posada, Chief, Engineering <input checked="" type="checkbox"/> German Alvarez, Assistant General Manager <input checked="" type="checkbox"/> Mark Watton, General Manager				
SUBJECT:	Informational Update for the Rosarito Desalination Plant and the Otay Mesa Conveyance and Disinfection System Projects				

GENERAL MANAGER'S RECOMMENDATION:

No recommendation. This is an informational item only.

COMMITTEE ACTION:

Please see Attachment A.

PURPOSE:

To update the Otay Water District (District) Board of Directors (Board) on the progress of the Rosarito Desalination Plant and the Otay Mesa Conveyance and Disinfection System Projects (Project) (see Exhibit A for Project location).

ANALYSIS:

This item was last presented to the Desalination Committee (Committee) at a meeting held on October 9, 2014. The updates or significant milestones that have been reached since the last update to the Committee include:

Project Direction

Since the last update, the project has taken a new direction. In early November 2014, the State of Baja California approached NSC Agua (NSCA) with a proposal to purchase the plant's entire production. The State would then sell directly to the District the requested amount of desalinated water.

The State of Baja California is also interested in indirect water transfer of Colorado River Water. Mexico's water from the Colorado River that is delivered to Tijuana and Rosarito would remain in Lake Mead. The Mexican water that is not delivered would be monetized and a portion of that revenue would offset the cost of desalinated water.

The State of Baja California has also appointed Rodney T. Smith, Ph.D., as the point of contact between the State of Baja California and any interested party in the United States who may wish to purchase desalinated water from the Rosarito Plant. Dr. Smith is the President/CEO of Baja Norte Water Resources, LLC (BNWR). The District is in receipt of a letter from Dr. Smith, dated November 4, 2014, exploring how BNWR can work with the District in acquiring desalinated seawater from Mexico (see Exhibit B).

District staff met on November 14, 2014 with Dr. Smith, State of Baja California officials, representatives from Metropolitan Water District, and representatives from Southern Nevada who are direct stakeholders on many related Colorado River matters. Staff also met with Dr. Smith and his team on April 7, 2015, to discuss the new path of negotiations.

The State of Baja California recently passed legislation to approve Public-Private Partnerships (PPPs) or (APPs in Spanish). These PPPs allow for the direct negotiations of the State with private companies such as NSCA.

In conformance with the PPP requirements, NSCA submitted a Letter of Interest to the State of Baja California and on March 27, 2015 submitted a formal proposal. NSCA expects a response before the 180 days allowed by the law.

Public vs. Private Project Proposal staff is still waiting for an official pronouncement from CILA and CONAGUA about what project they will support. Expectations are that CILA/CONAGUA will support the Private Project Proposal (NSCA's proposal).

Staff is recommending to continue the Presidential Permit/CEQA/NEPA process and curtail any other activity until the State of Baja California process becomes more definite and a pronouncement is made in support of NSCA project from CILA/CONAGUA. Staff anticipates that it would take up to one (1) year for the negotiations between the State of Baja California and NSCA to be concluded. Staff will be following negotiations of the State of Baja California with federal agencies on both sides of the border and with the Colorado River stakeholders.

Rosarito Beach Desal Project in the News

The drought has been a constant topic in the national, state, and local news. Projects that provide a new supply of water have been mentioned including the Rosarito Beach Desalination project. The March 30, 2015 publication of the Water Desalination Report mentioned this project under the heading "Mexico - SWRO Project Progress Acknowledged" (Exhibit C).

Public Outreach Efforts

On January 20, 2015, the General Manager met with Carlo Bonfante, Secretary of Economic Development, and the point person for the Governor of Baja California on the desalination project. Also, on January 21, 2015, the General Manager met with Diputado Juan Gastelum, who represents Tijuana in the Federal Legislature, to discuss the project.

The General Manager also attended the Colorado River Users Conference in December 2014 and met with various Federal and State representatives from the United States and Mexico.

NSCA Environmental Report

NSCA received MIA approval for the Desalination Plant on January 29, 2015. This is a significant achievement. NSCA expects that the MIA for the pipelines will be approved by the beginning of spring 2015.

Division of Drinking Water (DDW) Permitting (formerly CDPH)

NSC Agua continues the source water testing at the power plant intake and outlet structures that began on September 18, 2014. The results continue to be transmitted to DDW.

On October 24, 2014, DDW responded to the White Paper, "Permit Approval Road Map," submitted in January 2014. This letter (see Exhibit D) is in response to the District's request for feedback regarding DDW's project requirements and concerns with the project strategy. One positive comment was DDW stated they intend to directly conduct inspections without the use of third parties and with the cooperation of District staff.

Subsequent to DDW's letter, a meeting was held on October 28, 2014 between DDW, NSCA, and District representatives to review comments on the "White Paper" and to review testing results of the source water testing.

Presidential Permit

The State Department requires that there be coordination with a Mexican Federal Agency for the Presidential Permit Process and to review the associated environmental documents. It was initially suggested that SEMARNAT be that agency. The State Department has indicated that they would not be opposed to having CILA instead of SEMARNAT as the project sponsor in Mexico.

The first step in the preparation of the EIR/EIS document in support of the Presidential Permit process was the District and State Department publication of the Notice of Preparation/Notice of Intent on November 14, 2014. This document is available for viewing on the project web site address www.owd-desalconveyance.com. On December 2, 2014, the scoping meeting for the CEQA/NEPA document was held in the District's Board Room.

The next step is the preparation of the draft EIR/EIS. All of the technical studies in support of the document have been prepared and the EIR/EIS chapters describing the impacts of the project are being written. The document must be reviewed and approved by the District and the State Department before going out for a 45 day public review period. The draft EIR/EIS is tentatively scheduled to be ready for public review by May/June 2015. After public review, comments received during that review must be responded to and changes made to the EIR/EIS, as necessary. Once the final EIR/EIS is complete, the State Department will use the findings of the environmental document and a range of other factors that include energy security, cultural, and economic impacts, foreign policy, and compliance with relevant federal regulations in order to determine whether the project would serve the national interest. The State Department will then issue the Presidential Permit if it determines that the project would serve the national interest. Based on the current schedule, the Presidential Permit determination could occur in early 2016.

FISCAL IMPACT: Joe Beachem, Chief Financial Officer

No fiscal impact as this is an informational item only. See Attachment B - Budget Detail.

STRATEGIC GOAL:

This Project supports the District's Mission statement, "To provide high value water and wastewater services to the customers of the Otay Water District in a professional, effective, and efficient manner" and the General Manager's

Vision, "A District that is at the forefront in innovations to provide water services at affordable rates, with a reputation for outstanding customer service."

LEGAL IMPACT:

None.

BK/RP:jf

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Attachments: Attachment A - Committee Action
 Attachment B - Budget Detail
 Exhibit A - Location Map
 Exhibit B - Letter from Baja Norte Water
 Resources, November 4, 2014
 Exhibit C - "Mexico - SWRO Project Progress
 Acknowledged" Water Desalination
 Report, March 30, 2015
 Exhibit D - DDW Response to Otay Water District
 Rosarito Desalination White Paper,
 October 24, 2014



ATTACHMENT A

SUBJECT/PROJECT: P2451-001101	Informational Update for the Rosarito Desalination Plant and the Otay Mesa Conveyance and Disinfection System Projects
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COMMITTEE ACTION:

This item was presented to the Desalination Committee (Committee) at a meeting held on April 8, 2015.

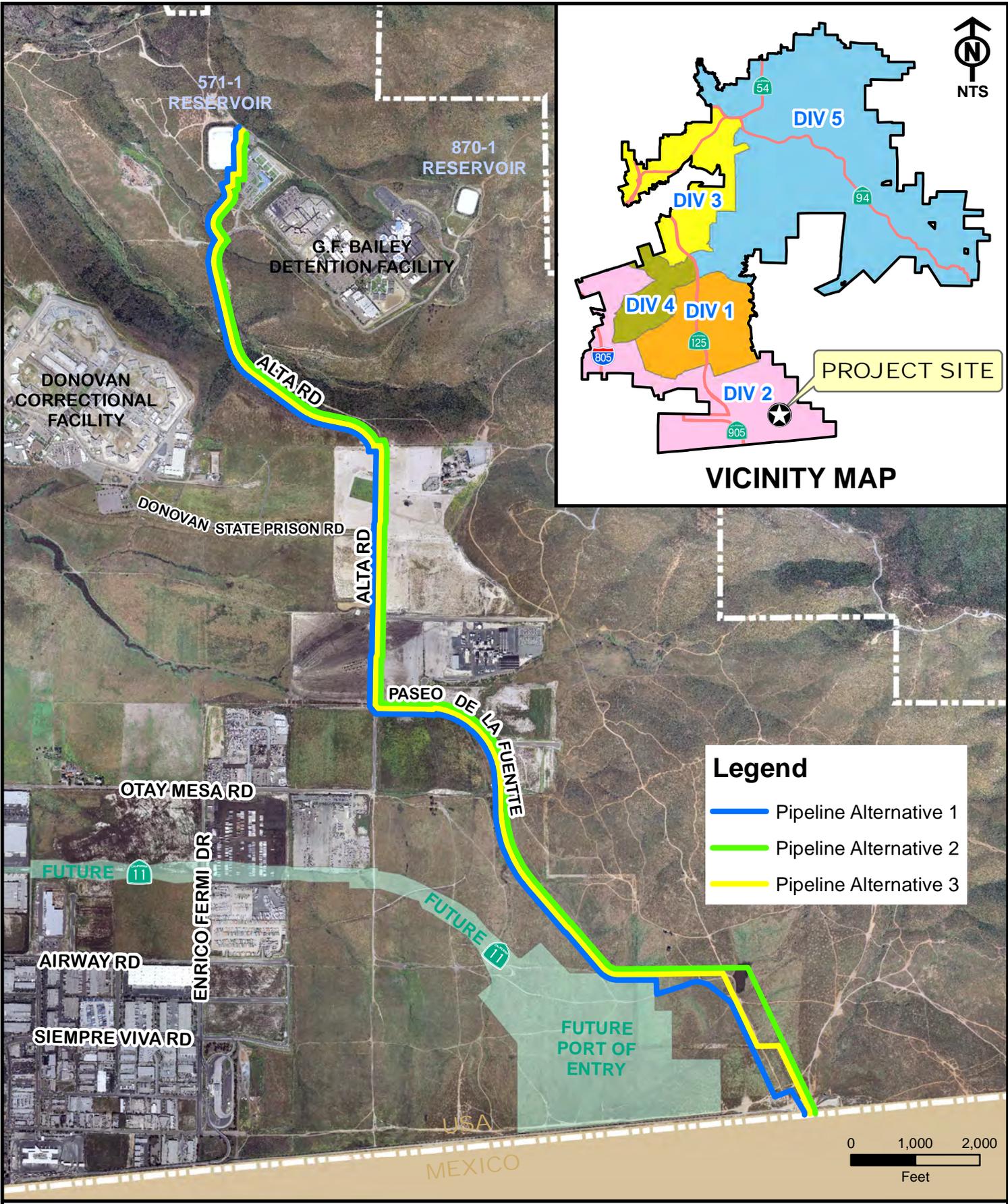


ATTACHMENT B – Budget Detail

SUBJECT/PROJECT:	Informational Update for the Rosarito Desalination Plant and the Otay Mesa Conveyance and Disinfection System Projects
P2451-001101	

Level	Title	Committed	Expenditures	Outstanding Commitment	Projected Final Cost	Vendor	
Planning	Consultant Contracts	\$98,577.34	\$98,577.34	\$0.00	\$98,577.34	CAMP DRESSER & MCKEE	
		\$13,311.19	\$13,311.19	\$0.00	\$13,311.19	CPM PARTNERS INC	
		\$380,200.00	\$380,200.00	\$0.00	\$380,200.00	HECTOR I MARES-COSSIO	
		\$71,530.09	\$71,530.09	\$0.00	\$71,530.09	MARSTON+MARSTON INC	
		\$4,172.90	\$4,172.90	\$0.00	\$4,172.90	SALVADOR LOPEZ-CORDOVA	
		\$267,066.00	\$188,355.05	\$78,710.95	\$267,066.00	SILVA SILVA INTL	
		\$26,700.00	\$26,700.00	\$0.00	\$26,700.00	REA & PARKER RESEARCH	
		Meals/Travel/ Incidentals	\$20,121.05	\$20,121.05	\$0.00	\$20,121.05	STAFF
		Printing	\$60.59	\$60.59	\$0.00	\$60.59	MAIL MANAGEMENT GROUP
		Professional Legal Fees	\$162,041.07	\$162,041.07	\$0.00	\$162,041.07	GARCIA CALDERON & RUIZ
			\$12,155.04	\$6,534.50	\$5,620.54	\$12,155.04	BROWNSTEIN HYATT FARBER
			\$43,174.50	\$43,174.50	\$0.00	\$43,174.50	SOLORZANO CARVAJAL GONZALEZ Y
			\$25,312.31	\$25,312.31	\$0.00	\$25,312.31	STUTZ ARTIANO SHINOFF
		Service Contracts	\$290.30	\$290.30	\$0.00	\$290.30	S.D. DAILY TRANSCRIPT
			\$685.20	\$685.20	\$0.00	\$685.20	SAN DIEGO UNION-TRIBUNE
			\$49,000.00	\$29,213.02	\$19,786.98	\$49,000.00	(W)RIGHT-ON COMMUNICATIONS INC
			\$39,500.00	\$39,500.00	\$0.00	\$39,500.00	BUSTAMANTE & ASSOCIATES
			\$875.00	\$875.00	\$0.00	\$875.00	LEONARD VILLARREAL
			\$500.00	\$500.00	\$0.00	\$500.00	REBECA SOTURA NICKERSON (Interpreter)
		Standard Salaries	\$1,009,853.63	\$1,009,853.63	\$0.00	\$1,009,853.63	
		Total	\$2,225,126.21	\$2,121,007.74	\$104,118.47	\$2,225,126.21	
	Design	Consultant Contracts	\$5,108.75	\$5,108.75	\$0.00	\$5,108.75	MARSTON+MARSTON INC
			\$28,770.00	\$28,770.00	\$0.00	\$28,770.00	MICHAEL R WELCH PHD
\$5,000.00			\$5,000.00	\$0.00	\$5,000.00	ATKINS	
\$8,818.00			\$8,818.00	\$0.00	\$8,818.00	CPM PARTNERS INC	
\$3,681,932.00			\$1,079,832.41	\$2,602,099.59	\$3,681,932.00	AECOM TECHNICAL SERVICES	
\$96,506.00				\$96,506.00	\$96,506.00	AECOM TECHNICAL SERVICES AMENDMENT NO. 3	
		\$3,952.00	\$3,952.00	\$0.00	\$3,952.00	AIRX UTILITY SURVEYORS	
		Professional Legal Fees	\$7,761.19	\$7,761.19	\$0.00	\$7,761.19	STUTZ ARTIANO SHINOFF
		Meals/Travel/ Incidentals	\$3,174.39	\$3,174.39	\$0.00	\$3,174.39	STAFF
		Service Contracts	\$114.08	\$114.08	\$0.00	\$114.08	REPROHAUS CORP
			\$342.80	\$342.80	\$0.00	\$342.80	SAN DIEGO UNION-TRIBUNE
		Standard Salaries	\$150,288.25	\$150,288.25	\$0.00	\$150,288.25	
		Total	\$3,991,767.46	\$1,293,161.87	\$2,698,605.59	\$3,991,767.46	
Construction	Standard Salaries	\$329.48	\$329.48	\$0.00	\$329.48		
	Total	\$329.48	\$329.48	\$0.00	\$329.48		
Budget	\$30,000,000.00						
TOTAL		\$6,217,223.15	\$3,414,499.09	\$2,802,724.06	\$6,217,223.15		

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OTAY WATER DISTRICT
 OTAY MESA DESALINATION CONVEYANCE
 AND DISINFECTION SYSTEM PROJECT



EXHIBIT A



Baja Norte Water Resources

November 4, 2014

VIA EMAIL

Mark Watton
General Manager
Otay Water District
2554 Sweetwater Springs Blvd.
Spring Valley, CA 91978

RE: Acquiring Desalinated Seawater from Mexico

Dear Mr. Watton:

I'm President/CEO of *Baja Norte Water Resources, LLC* ("BNWR") and an affiliated Mexican entity *Baja Infrastructure Resources S. de R.L. de C.V.* ("BIR"). My purpose in contacting you is to explore how BNWR can work with Otay to achieve its objective of acquiring desalinated seawater from Mexico. To provide you context for my request, let me share some background.

State of Baja Plans for Desalination Plant at Rosarito Beach

Mexican plans are proceeding to construct a 100,000 acre-foot per year desalination plant at Rosarito Beach. This project has become a high priority for the State of Baja. To that end, the State of Baja is assembling interested parties into a project consortium that would build, operate and finance the desalination plant. The State of Baja plans to enter into a contract with a desalination consortium and purchase the plant's entire water production. A portion of the plant's output will be used in Mexico. The balance would be assigned to BIR to market the water to U.S. water users. The State of Baja anticipates that the project could start operations by 2018.

MOU between BIR and the State of Baja

The State of Baja has entered into a Memorandum of Understanding with BIR. Under the MOU, the State of Baja would assign up to 50,000 acre-feet per year of desalinated seawater to BIR for delivery to U.S. water users. The State of Baja consents to assignment of the water available to BIR to BNWR to enter into agreements with U.S. water users. The final determination of the quantity of desalinated seawater is anticipated to be made by October 2015.

BNWR is interested in commencing discussions and entering into negotiations with U.S. water users desiring to include desalinated seawater from Mexico in their water supply portfolios. The State of Baja wants BNWR to assemble the group of interested U.S. water users as it finalizes its negotiations with the desalination consortium at Rosarito Beach.

I'm confirming our meeting for Friday, November 14 at 10:00 am at your offices. At this meeting, I can share the MOU signed by *COMISIÓN ESTATAL DEL AGUA DEL ESTADO DE BAJA CALIFORNIA* ("CEA") and *SECRETARÍA DE DESARROLLO ECONÓMICO* ("SEDECO") and the structure of a potential transaction that could provide Otay with assurances of contractual performance mostly under U.S. law. My objective is that we sit down and determine how BNWR, in its role recently conferred by the State of Baja, can assist Otay in the completion of their plans.

To this end, I suggest that we develop a schedule of follow-on meetings and subject matter to implement this opportunity in an expeditious and diligent manner. Our objective is to use the next 12 months in a cooperative effort to definitely define related infrastructure and operations, conditions from necessary regulatory approvals, a defined pathway for securing those approvals and financial terms of a long-term agreement that Otay can reasonably rely to provide a reliable water supply for many decades. With these and any other matters specified in an agreement between Otay and BNWR by October 2015, the State of Baja will have the information required to finalize its agreement with BIR that will set the final quantity of desalinated water available to U.S. water users and finalize its agreement with the desalination consortium.

I'm generally aware of Otay's impressive commitment to acquire desalinated seawater from Mexico. I'm confident that we can build upon the many years you and I worked together on Colorado River matters to successfully make the use in the United States of seawater desalinated in Mexico a reality.

Sincerely,

A handwritten signature in black ink, appearing to read "R. T. Smith". The signature is fluid and cursive, with a large initial "R" and a long horizontal stroke at the end.

Rodney T. Smith, Ph.D.
President
Baja Norte Water Resources, LLC
Baja Infrastructure Resources S. de R.L. de C.V.

WATER DESALINATION REPORT

The international weekly for desalination and advanced water treatment since 1965

Volume 51, Number 14

30 March 2015

Mexico

SWRO PROJECT PROGRESS ACKNOWLEDGED

In Consolidated Water's (CWCO) recently released 2014 earnings report, CEO Rick McTaggart said that it had made its final \$17.4 million payment on the land on which its proposed 100 MGD (378,500 m³/d) Rosarito SWRO plant would be constructed in northern Baja California, Mexico. The 20ha (49.5-acre) site is adjacent to Comisión Federal de Electricidad's (CFE) Rosarito Power Station.

He also said that the local government has officially accepted CWCO's initial expression of interest under the new Public-Private Associations Law to build the plant and conveyance pipeline, and has asked the company to develop and submit a detailed proposal. Meanwhile, the Mexican regulatory authority approved the environmental permit for the plant and the Municipality of Playas de Rosarito confirmed the rezoning of the project site, which was necessary for the project to move ahead.

"To enhance our chances of successfully completing the development of the Rosarito Project, we partnered with a group of companies with substantial resources and a history of successful capital project investments in Mexico," added McTaggart.

The plant has an estimated cost of \$550 million, plus \$150 million in conveyance costs, depending on the final capacity, schedule and delivery points.

Research

CL2 TOLERANT MEMBRANE SHOWS PROMISE

Researchers at Australia's University of Melbourne have published a paper in the 16 March online issue of *Advanced Materials* that describes their work in developing chlorine tolerant NF and RO membranes. The paper is titled "Chlorine Resistant Glutaraldehyde (GA) Crosslinked Polyelectrolyte Multilayer (PEM) Membranes for Desalination," and describes their layer-by-layer assembly technique and the imine crosslinking systems employed to maintain increased salt rejection, even during extended exposure to elevated levels of sodium hypochlorite solutions.

The authors note that their membranes exhibited much greater chlorine resistance than commercial aromatic polyamide membranes and are a promising and versatile platform with

readily changeable chemistries. They predict that further optimization with other polyelectrolytes and additives could offer significantly increased flux, better salt rejection and further increases in both chemical and biofouling resistance.

Professor Sandra Kentish told *WDR* that they are now looking for commercial partners to assist in getting this membrane to market.

The World's Largest MF/UF Installations

Location	Application	Membrane Supplier	Approximate Capacity	Install Date
Sulaibiya, Kuwait	Reuse, RO pretreat	X-Flow, GE Water	600,000 m ³ /d (158.5 MGD)	2004 2015
Lakeview 1& 2, Canada	Potable surface water	GE Water	800,000 m ³ /d (211.4 MGD)	2007 2014
Twin Oaks, California	Potable surface water	GE Water	387,500 m ³ /d (102.4 MGD)	2008
Souk Tleta, Algeria	SWRO pretreatment	Hyflux Kristal	450,000 m ³ /d (119 MGD)	2011
Lorne Park, Canada	Potable surface water	GE Water	500,000 m ³ /d (132 MGD)	2011
Tuaspring, Singapore	SWRO pretreatment	Hyflux Kristal	760,000 m ³ /d (201 MGD)	2011
SSDP Perth, Australia	SWRO pretreatment	Evoqua Memcor	720,000 m ³ /d (190.2 MGD)	2011 2012
Adelaide, Australia	SWRO pretreatment	Evoqua Memcor	650,000 m ³ /d (171.7 MGD)	2012
Magtaa, Algeria	SWRO pretreatment	Hyflux Kristal	1,200,000 m ³ /d (317 MGD)	2014
Reliance Refinery, India	SWRO pretreatment	BASF-inge	450,000 m ³ /d (119 MGD)	2015*
Ashdod, Israel	SWRO pretreatment	Pentair X-Flow	930,000 m ³ /d (245.7 MGD)	2015*
Baku, Azerbaijan	Potable surface water	Dow IntegraPac	520,000 m ³ /d (137.4 MGD)	**

* Scheduled

** When Dow announced that it was furnishing its UF modules and skids for the project, it said that the plant was slated for completion in 2013. At press time, Dow was unable to confirm when HidroLotus, the contractor, would complete the project.



State Water Resources Control Board

Division of Drinking Water

October 24, 2014

Mr. Mark Watton
General Manager
Otay Water District
2554 Sweetwater Springs Blvd
Spring Valley, CA 91978

Dear Mr. Watton:

**OTAY WATER DISTRICT – SYSTEM NUMBER 3710034
ROSARITO DESALINATION PLANT & OTAY MESA CONVEYANCE AND
DISINFECTION PROJECT WHITE PAPER**

The State Water Resources Control Board, Division of Drinking Water (Division) met with Otay Water District (Otay), NSC Agua, AECOM, GHD, and other project consultants on March 8, 2013 and March 19, 2014, to discuss Otay's proposal to participate in the development of an international drinking water supply for the purpose of providing potable water to customers within Otay's service area. On February 18, 2014, Otay submitted a draft White Paper "Permit Approval Road Map" dated January 2014 for review and comment. Otay also provided an overview presentation of the project and the White Paper and a number of project challenges unique to this international water source were discussed. This letter is in response to Otay's request for feedback regarding Division project requirements and concerns with the project strategy.

Project Concept:

The Division understands the basic project concept consists of the following:

- Utilize ocean intake and cooling water from existing adjacent Rosarito power plant located in Baja California, Mexico as a new international raw water source;
- Construct a 100 Million Gallons per Day (MGD) Rosarito Desalination Plant located in Baja California, Mexico that includes pretreatment, Reverse Osmosis (RO) membrane filtration, water stabilization, and free chlorine for disinfection. The intended use of water produced by the plant is 50 MGD for Tijuana/Rosarito and the remainder of capacity for Otay;
- Construct approximately 25 miles of conveyance pipeline from the Rosarito Desalination Plant to the US-Mexico international border;

- Construct approximately 4 miles of conveyance pipeline from the US-Mexico international border to Otay's existing 37-Million Gallon (MG) Roll Reservoir (treated water distribution system reservoir);
- Improvements to Otay Roll Reservoir site to include monitoring stations and disinfection facilities.

The Division has the following comments on the White Paper and proposed project:

1. **Water Purchase Agreement:** The Division understands that Otay is in the process of developing a Water Purchase Agreement with NSC Agua and recommends that Otay submit it to the Division for review prior to executing the agreement. The Division recommends that the agreement contain language regarding the Division's and Otay's authority to inspect the desalination plant.
2. **Inspections:** The Division intends on directly conducting inspections without the use of third parties to ensure the facilities are designed, constructed, maintained and operated in accordance with all Division regulatory requirements and drinking water standards. This includes construction phase and on-going inspection of the NSC Agua Rosarito Desalination Plant and the Otay Roll Reservoir facilities. The Division will need cooperation from the Otay Water District to assist Division staff and provide access to these facilities.
3. **Water Rights:** The legal authority to ensure or guarantee future treated water deliveries to Otay along with a drinking water supply contingency plan and emergency response plan for natural disasters, etc. should be addressed. Otay should maintain its ability to have SDCWA provide 50 MGD treated water in the event that the Rosarito Desalination Plant is out of service, has a treatment technique violation, or the agreement is dissolved. The commitment to maintain and provide 50 MGD treated water capacity from the SDCWA should be memorialized in a legally binding document.
4. **Pilot Study:** The Division understands that a 9-month pilot study was conducted in 2013. All available data for the pilot study should be submitted to the Division. Please note that data and reports submitted to the Division marked "CONFIDENTIAL" are exempt from Public Record Act Requests.
5. **Watershed Sanitary Survey (WSS):** Otay will be required to submit a WSS in conformance with Section 64665, Title 22 of the California Code of Regulations (CCR). The WSS should be conducted by a qualified registered engineer experienced with WSS's who does not have an investment interest in the Rosarito Desalination Plant. A key WSS element of concern is the description and inventory of activities and sources of contamination within the watershed. A focused effort should be made to thoroughly inventory and quantify sources of contamination. An assessment of the quality and availability of information should be included as well. The Division provided comments on Otay's proposed 12-month source monitoring

program in a separate letter dated April 14, 2014. The Division understands that sampling began in July 2014.

- a. White Paper, Table 3-1: Recreational activities should be included in the list of PCAs.
- b. Monitoring and/or modeling may be required to determine whether the nearby rivers and creeks that drain into the ocean could affect the Rosarito intake.
- c. The description of the activities and sources of contamination should include an evaluation for both Title 22 CCR chemicals and contaminants regulated by Mexico.

6. Power Plant Operations:

- a. Impacts to desalination plant operations from power plant cooling water operations should be evaluated. Maintenance activities, any chemical cleans or discharges to the cooling water, or anything in general that may result in a disruption of desalination plant operations should be considered. A plan to address these issues to prevent any contaminated water from entering the desalination plant, including the notification process to ensure reliable desalination plant operation should be developed.
- b. Potential and actual cross connections of the power plant's cooling water system to be used for RO plant source water must be evaluated. A cross connection control survey should be conducted. In lieu of or in conjunction with a survey, inspection reports or documentation from other regulatory agencies may be submitted to the Division for consideration.

7. Water Quality Regulatory Requirements:

- a. The Division understands that "regional water standards" will be developed for the project. The Division recommends that the plant be designed to meet whichever regulation in California or Mexico is more stringent for each parameter. As Mexico has standards for aldrin, dieldrin, phenols and DDT, the Division recommends that the source water be sampled for these constituents on the same frequency at which Otay is monitoring for Title 22 synthetic organic chemicals.
- b. In order to meet the surface water treatment rule requirements, the project must use turbidimeters that meet EPA Method 180.1 or another approved method.

8. Degraded Source Water: Criteria and triggers for degraded source water quality that would require additional treatment, plant shutdown, or diversion should be

evaluated and proposed to the Division. Example triggers for other projects include a high turbidity limit, rainfall exceeding a number of inches in a time period, elevated E. Coli, etc. It should be noted that additional treatment up to 5-log Giardia and 6-log virus reduction may be needed for degraded source water, and the overall treatment system needs to be designed to achieve this.

9. Off-spec Water: Ability for automatic desalination plant shutdown based on critical water quality parameters, and ability to divert inadequately treated water from reaching Otay's distribution system will be required. Diversion points were not included in Figure ES-1 in the White Paper. The Division understands from the March 19, 2014 meeting that a diversion point is proposed between the border and Roll Reservoir. Details of this have not yet been designed; however, if possible, the Division recommends that multiple online water quality monitoring stations be located upstream of the Roll Reservoir so that water can be automatically diverted prior to reaching the reservoir, e.g. monitoring facility at the international border, etc.
10. Pretreatment and RO Filtration Process Monitoring: Strategies for process control and meeting the Interim and Long Term 2 Enhanced Surface Water Treatment Rules' (IESWTR and LT2ESWTR) monitoring requirements for pretreatment and RO membrane systems need to be proposed. For dissolved air floatation (DAF)/media filtration pretreatment, conventional filtration plant credit can be granted and IESWTR and LT2ESWTR criteria for conventional filtration plants would apply. For membrane filtration pretreatment and RO membrane filtration, the US EPA Membrane Filtration Guidance Manual (MFGM) would apply. At RO plants in California, RO pathogen removal credit is currently based on total dissolved solids (TDS) reduction. For example, 2-log (99%) reduction of TDS through RO receives 2-log removal credit of Cryptosporidium, Giardia, and viruses. An RO integrity monitoring plan to demonstrate how these criteria can be met must be developed.
 - a. Slide 20-Figure 6 from March 19, 2014 meeting: A DAF unit was proposed to be used intermittently ahead of the granular media filtration (if chosen). However, at a minimum, a rapid mix and flocculation process must be used ahead of granular media filtration in order to receive direct filtration credit (2-log Cryptosporidium, 2-log Giardia and 1-log virus removal) per the Surface Water Treatment Rule. In order to receive conventional filtration credit, a sedimentation or clarification process must be operated at all times and a clarified effluent of 2 NTU must be produced prior to filtration. If the DAF process is used without the injection of air, the Division may be able to consider this design and mode of operation as direct filtration. Tapered energy and floc formation would be the key design parameters in the Division's determination. Piloting of this design/mode of operation would likely be necessary. Membrane micro/ultra filtration, provided the selected membrane has received conditional acceptance as an Alternative Filtration Technology from the Division, does not require these steps and an intermittent DAF unit ahead of membrane filtration would be acceptable.

- b. Pretreatment Turbidity: White Paper, page 25, "Pretreatment and RO Systems" states that source water, pretreated water and final product water turbidity will be measured and filter water turbidity after each pretreatment train will be measured. In order for the pretreatment to receive pathogen removal credit, each filter, or "membrane unit" if using membrane filtration, must be continuously monitored by a turbidimeter and the combined filter effluent must be continuously measured by a turbidimeter. The requirements for IFE and CFE turbidity limits in Title 22, or as specified by the Division for alternative filtration technologies such as membrane micro/ultra filtration, must be met.
- c. RO Turbidity and Conductivity: White Paper, page 25, Pretreatment and RO Systems" states that only RO feed and concentrate conductivity will be monitored. If the plant uses the RO to meet pathogen removal requirements, additional turbidity and conductivity monitoring will be required. A combined filter effluent continuous turbidimeter and conductivity meter will be required on the combined RO permeate. The project has the option to use either turbidity or conductivity on each RO membrane unit to demonstrate continuous indirect monitoring per the MFGM. Direct integrity testing is also required per the MFGM. A "membrane unit" must be proposed that to meets MFGM requirements for sensitivity and resolution. Please note that the membrane unit will likely be a small subunit of vessels within a train in order to meet this requirement.

11. Disinfection Credits:

- a. A summary of theoretical hydraulic retention time for the desal plant clearwells, transmission line and Roll Reservoir should be provided at maximum design flow.
- b. White Paper, Table 4-2 states that up to 5-log Giardia may be granted for free chlorine. However, the Giardia inactivation tables are only for 0.5 to 3.0 logs of Giardia inactivation. The Division may allow the project to use multiple disinfection contact time segments to achieve more than 3-log Giardia inactivation if the required parameters (flow, pH, temperature, chlorine residual, etc.) are measured at the end of each segment.

12. Rosarito Desalination Facility & Conveyance Pipeline Security: Potential terrorist acts and cross connections that could introduce contamination should be evaluated. The Division will require redundancy in the methods and monitoring used for the conveyance pipe security.

- a. Section 6.0 of the White Paper proposes a fiber optic acoustic monitoring system for the pipeline and proposes online water quality monitoring for flow, turbidity, chlorine residual, pH, conductivity, temperature, oxidation reduction potential and pressure at the El Florido turnout and international border turnout. The Division recommends that total organic carbon (TOC) also be

measured continuously at the international border at a minimum. The responsibility for the operation and maintenance of the acoustic monitoring system and determination of who will respond needs to be included in the evaluation and provided to the Division. The plans and specifications for the conveyance pipeline and associated facilities must be submitted to the Division for review and approval.

- b. White Paper, page 28, Table 6-1, "8. Separation from Sewer and Non-Potable Water Lines". As plans may not be available for existing utilities, a protocol must be developed for dealing with how to involve the Division in the review and approval of unidentified crossings and separation issues that are found during construction.
- c. Estimates and locations for minimum conveyance pipeline pressure for the alignments under consideration should be provided.

13. Plans & Specifications: The Division understands that the project will be similar to design build operate (DBO). In similar projects, all plans and specifications were uploaded to a file sharing website, where the Division could review them as they became available. At a minimum the 30%, 60%, 90% and approved for construction plans and specifications were reviewed. The Division also attended design meetings at a frequency of approximately twice per month. The Division is concerned with language on page 18 of the White Paper that states "AECOM recommends the District include terms in the Agreement obligating NSC Agua to participate in a review and approval process through [the Division] and to incorporate the Division's reasonable comments and requests." As "reasonable" is subject to interpretation by all parties involved in the project, and the Division has the authority to establish design and operational requirements and permit provisions for the issuance of a domestic water supply permit, it is not appropriate to include such a qualifier on the Division's comments and requests.

14. National Sanitation Foundation (NSF) Standards 60 & 61: The Rosarito Desalination Plant and Roll Reservoir Disinfection Facilities will be required to be constructed of materials that are certified to meet NSF 61 and only use NSF 60 certified chemicals in the treatment process. A plan should be developed to ensure compliance with NSF Standard 60 requirements under Section 64590 - Direct Additives. The Division does not anticipate approving any waivers for uncertified chemicals. With large scale RO facilities, it is anticipated that some of the equipment in contact with water may not have NSF Standard 61 certification. A plan should be developed for meeting the requirements of Section 64591 - Indirect Additives and Section 64593 - Use of Uncertified Chemicals, Materials, or Products.

- a. White Paper page 19, "5. Chemicals": If NSF 60 certified calcite is not available, Otay must submit a waiver and have the alternative product be approved by the Division prior to use.

- b. White Paper page 19, "6. Materials": For any material used in the construction of the plant that does not meet NSF 61, Otay must submit a waiver and have the alternative product approved by the Division prior to construction. Please note, materials may be required to undergo leach testing in order to receive approval.
15. Certified Operators: White Paper page 22, "2. Operator Certification" states that the Rosarito Desalination Plant will be staffed "with operators who have experience in operating large RO plants and who have qualifications similar to those required by the Division for a plant located in California." Detailed staffing requirements for both Rosarito Desalination Plant and Otay Roll Reservoir must be developed and submitted in a staffing plan to the Division. A discussion should be provided regarding how the Division's operator certification requirements will be met for both facilities including initial training and ongoing training for operators to obtain Continuing Education Units (CEUs) and maintain Division operator certification. By way of comparison, the 50 MGD desalination plant being constructed by Poseidon has an estimated staffing plan for approximately 36 staff with 3 operators per shift and 2 shifts per day.
16. Ongoing Inspections: Contractual agreements between Otay and the Rosarito Desalination Plant owner/operator should include water quality specifications, and water treatment plant operation and maintenance requirements. Qualified Otay staff should inspect the Rosarito Desalination Plant regularly to verify water treatment plant operations are consistent with the facility's Operations Plan, water quality specifications, and operations & maintenance requirements.
17. UV Off Spec Water Disposal: White Paper, page 31, Table 7-1, "2. UV Disinfection Facility": An automatic off spec water diversion for the UV system will be required and monitoring will be required in accordance with the EPA's UV Disinfection Guidance Manual. In lieu of automatic diversion, recirculation through the UV unit with the ability to dispose of off spec water can be considered.
18. SCADA and Monitoring: All process control, compliance monitoring, plant alarms, and other critical water quality plant SCADA information should be directly transmitted in real time to Otay's facilities. This is included in the White Paper, page 24, "7. SCADA Links". Automatic alarms for diverting off spec water from being delivered to Otay from the Rosarito Desalination Plant must be proposed.
19. Fluoridation: The water served to Otay's distribution system must be adjusted to meet the optimal fluoride level required per regulation. If fluoride addition is not included at the Rosarito Desalination Plant, it must be included at or before the Roll Reservoir Disinfection Facilities.
20. Corrosion: White Paper, page 24, Table 5-1, "8. District Lead and Copper Rule Monitoring": A corrosion study must be conducted to determine the effect of the Rosarito Desalination Facility water on Otay's existing distribution system.

21. In order to receive a water supply permit for the water produced by the Rosarito Desalination Plant, Otay is required to demonstrate that NSC Agua meets the Technical, Managerial and Financial (TMF) Capacity requirements (Consolidation Feasibility, System Description, Certified Operators, Source Capacity, Operations Plan, Training, Ownership, Water Rights, Organization, Emergency Response Plan, Policies, Budget/Capital Improvement Plan and Budget Control.)

Please keep in mind that the Division evaluates water treatment plant design, operational, monitoring and reporting requirements throughout the permitting process based on reviews of the project's preliminary engineering report, technical memorandums, plans and specifications, operations plans, and field inspections. These comments are not intended to be comprehensive; rather, known project specific issues to be addressed for permitting this proposed international water source are presented.

The Division expects there may be a need for issue-specific meetings and technical memorandums in addition to the project's preliminary engineering report. Please be aware that draft operations plans for both the Rosarito Desalination Plant and Otay Roll Reservoir facilities should be submitted at least six months prior to commissioning the plants. It is not uncommon for design changes or additional monitoring and reporting requirements to be placed on a project after the operations plan is reviewed. A thorough preliminary design report will help minimize the likelihood of this occurring.

Thank you for the opportunity to discuss this exciting and challenging project. We look forward to working with you. If you have any questions regarding this letter, please contact me at (619) 525-4159.

Sincerely,



Sean Sterchi, P.E.
District Engineer

cc: Mark McPherson, Chief of Land & Water Quality Division, County of San Diego,
Department of Environmental Health