OTAY WATER DISTRICT
ENGINEERING, OPERATIONS & WATER RESOURCES COMMITTEE MEETING
and
SPECIAL MEETING OF THE BOARD OF DIRECTORS

2554 SWEETWATER SPRINGS BOULEVARD
SPRING VALLEY, CALIFORNIA
Board Room

Tuesday
November 20, 2007
4:00 P.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

INFORMATION / ACTION ITEMS

3. FIRST QUARTER FISCAL YEAR 2008 CAPITAL IMPROVEMENT PROGRAM REPORT (RIPPERGER/JUYBARI) [10 minutes]

4. AUTHORIZATION OF AGREEMENT NO. 08-MU-35-0002 FOR PHASE 1 OF THE REGIONAL BRINE MANAGEMENT STUDY BETWEEN THE UNITED STATES DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION AND COOPERATING AGENCIES (POSADA/PEASLEY) [5 minutes]

5. APPROVAL OF THE PROPOSED GROUND LEASE AND JOINT USE AGREEMENT WITH THE SAN MIGUEL CONSOLIDATED FIRE PROTECTION DISTRICT FOR THE REGIONAL TRAINING CENTER AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE AGREEMENT (RIPPER-GER/JUYBARI) [10 minutes]

6. APPROVE WATER SUPPLY ASSESSMENT REPORT FOR THE JUDD COM-PANY OTAY CROSSINGS COMMERCE PARK AS REQUIRED BY SENATE BILL 610 (POSADA/PEASLEY) [10 minutes]

7. ADJOURNMENT

BOARD MEMBERS ATTENDING:
Jose Lopez, Chair
Gary Croucher

All items appearing on this agenda, whether or not expressly listed for action, may be deliberated and may be subject to action by the Board.

If you have any disability that would require accommodation in order to enable you to participate in this meeting, please call the District Secretary at 670-2280 at least 24 hours prior to the meeting.

Certification of Posting

I certify that on November 16, 2007 I posted a copy of the foregoing agenda near the regular meeting place of the Board of Directors of Otay Water District, said time being at least 24 hours in advance of the meeting of the Board of Directors (Government Code Section §54954.2).

Executed at Spring Valley, California on November 16, 2007.

Connie Rathbone

Connie Rathbone, Assistant District Secretary

AGENDA ITEM 3

STAFF REPORT

TYPE MEETING:	Regular Board	MEETING DATE:	December 5, 2007
SUBMITTED BY:	Hossein Juybari Sr. Civil Engineer Ron Ripperger Engineering Manager	PROJECT:	P2210 DIV. NO. ALL
APPROVED BY: (Chief)	Rod Posada Chief, Engineering		
APPROVED BY: (Asst GM)	Manny Magaña Assistant General Manager, Engineering and Operations		
SUBJECT:	Informational Item - First Quarter FY 2008 Capital Improvement Program (CIP) Report		

GENERAL MANAGER'S RECOMMENDATION:

That the Otay Water District's (District) Board of Directors accept the First Quarter FY 2008 CIP Report for review and receive a summary via PowerPoint presentation.

COMMITTEE ACTION:

Please see Attachment A.

PURPOSE:

To update the Board about the status of all CIP project expenditure highlights, significant issues, progress, and milestones on major projects.

ANALYSIS:

To keep up with growth and to meet our ratepayers' expectations to adequately deliver safe, reliable, cost-effective, and quality water, each year the District Staff prepares a six-year CIP Plan that identifies the District infrastructure needs. The CIP is comprised of four categories consisting of backbone capital facilities, maintenance projects, developer's reimbursement projects, and capital purchases.

The First Quarter update is intended to provide a detailed analysis of progress in completing these projects within the allotted time and budget. Expenditures for the First Quarter FY 2008 totaled approximately $6.4 Million. Approximately 18% of the FY 2008 expenditure budget was spent.

FISCAL IMPACT:

None.

STRATEGIC GOAL:

The CIP supports the mission of providing the best quality of water, recycled, and wastewater service to the customers of the District in a professional, effective, efficient, and sensitive manner, in all aspects of operation, so that public health, environment, and quality of life are enhanced.

LEGAL IMPACT:

None.

General Manager

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HJ/RR:jf

Attachments: Attachment A
Presentation

ATTACHMENT A

SUBJECT/PROJECT: P2210	Informational Item - First Quarter FY2008 Capital Improvement Program (CIP) Report

COMMITTEE ACTION:

The Engineering, Operations, and Water Resources Committee reviewed this item at a meeting held on November 20, 2007. The Committee supported Staff's recommendation.

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.

CAPITAL IMPROVEMENT PROGRAM

640-1 Reservoir

Olive Vista Drive Utility Relocations

Fiscal Year 2008

First Quarter

(through September 30, 2007)

Background

The approved CIP budget for FY08 consists of 75 projects that total $34.5 million. These projects are broken down into four categories:

1.	Capital Facilities:	$ 24.9 million
2.	Replacement/Renewal:	$ 6.7 million
3.	Capital Purchases:	$ 1.4 million
4.	Developer Reimbursement:	$ 1.5 million

Overall expenditures through the first quarter of Fiscal Year 2008 totaled approximately $6.4 million, which is 18% of our target expenditures through the first quarter.

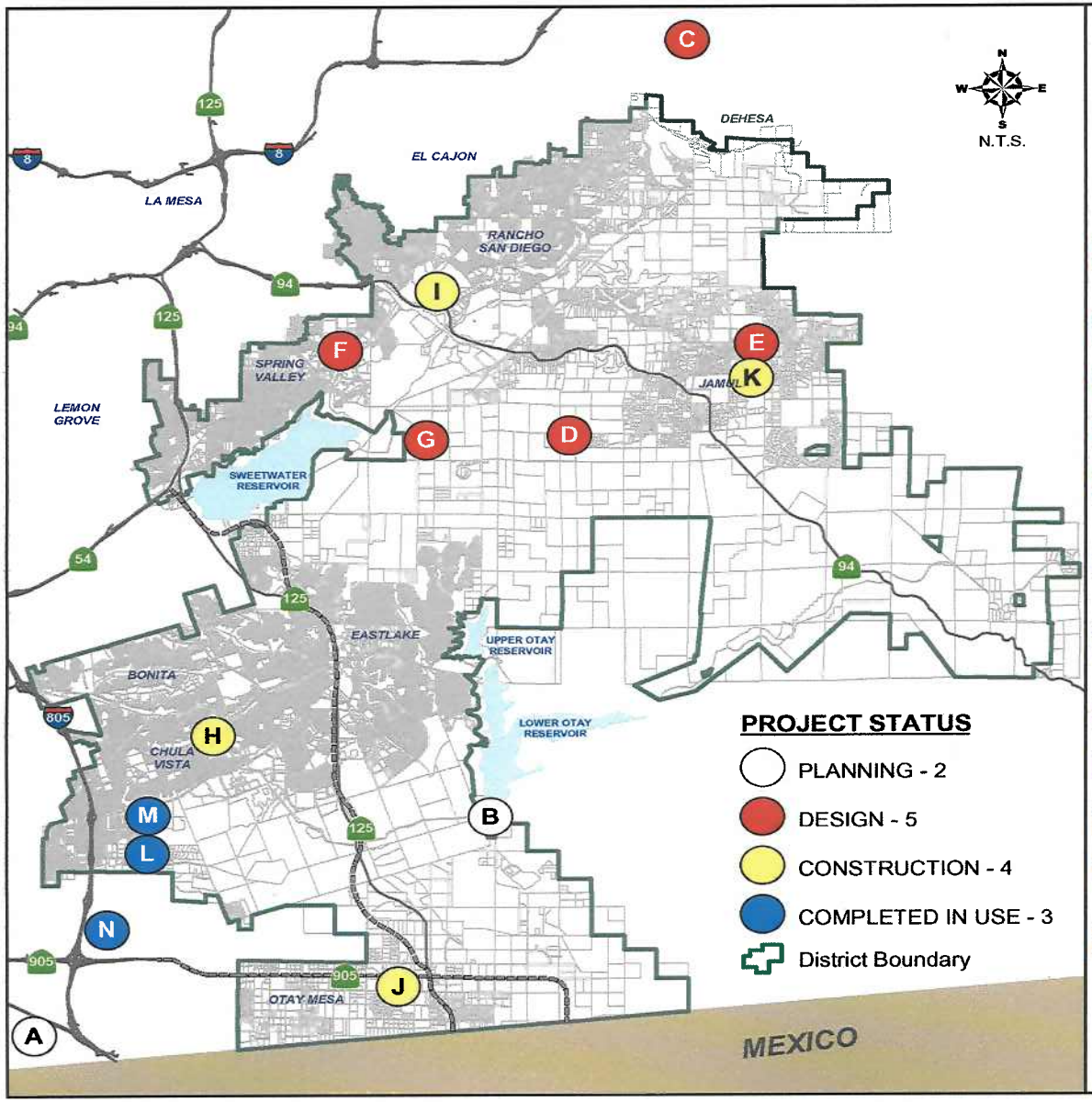
Construction change orders are at -0.22%.

FY08 First Quarter Report

(through September 30, 2007)

CIP Cat	Description	FY08 Budget	FY08 Expenditures	% FY08 Budget Spent	Total LTD Budget	Total LTD Expenditures	% Budget Spent
1	Capital Facilities	$24,901,000	$4,653,000	19%	$175,113,000	$42,396,000	24%
2	Replacement/Renewal	$6,645,000	$602,000	9%	$33,327,000	$8,373,000	25%
3	Capital Purchases	$1,406,000	$234,000	17%	$16,762,000	$12,549,000	75%
4	Developer Reimbursement	$1,511,000	$884,000	59%	$15,584,000	$3,103,000	20%
	Total:	$34,463,000	$6,373,000	18%	$240,786,000	$66,421,000	28%

Major CIP Projects



MAJOR CIP PROJECTS

OTAY

- (A) P2129 Ground Water Exploration Program
- (B) P2425 City of S.D. Otay Water Treatment Plant 26 MGD Capacity
- (C) P2009 PL-36" SDCWA Otay FCF No. 14 to OWD Regulatory Site
- (D) P2143 Res - 1296-3 Reservoir 2.0 MG
- (E) P2172 1485-1 Pump Station Replacement
- (F) P2191 Res - 850-4 Reservoir 2.2 MG
- (G) R2086 RWCWRF Force Main Air Vac Replacements
- (H) P1270 Telegraph Canyon Road Pavement Repair
- (I) P2185 Res - 640-1 & 640-2 Reservoirs 20.0 MG
- (J) P2440 SR905 Utility Relocations
- (K) P2459 Olive Vista Utility Relocations
- (L) R2001 RecRes - 450-1 Reservoir 12.0 MG
- (M) R2004 RecPS - 680-1 Pump Station (11,500 GPM)
- (N) R2022 RecPL - 30-Inch, 450 Zone, Dairy Mart Road to 450-1 Reservoir

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Flagship CIP Projects in Construction

SR-905 UTILITY RELOCATIONS

Project started on September 7, 2006 and is expected to be completed in the Spring of 2008. This project includes the relocation of three pipelines crossing under SR-905 and the reconditioning of two seismic valve vaults.

OLIVE VISTA DRIVE UTILITY RELOCATIONS

Project started on June 2007 and is expected to be completed in early 2008. The project includes the utility relocations on Olive Vista Drive between Jefferson Road and Ma Lou Drive.

Flagship CIP Project in Construction

640-1 RESERVOIR
Concrete placement
on roof of Tank #1

640-1 RESERVOIR
Concrete placement on roof

640-1 & 640-2 RESERVOIRS
42" Inlet Pipelines

This project was awarded to Pacific Hydrotech and was started in January 2007. Expected completion is late 2008. Project consists of two 10 million gallon circular pre-stressed concrete reservoirs, 11,000 feet of large diameter pipe, several valve and control vaults and demolition of the 520-1 Concrete Reservoir.

Flagship CIP Project in Construction

- ***640-1 and 640-2 Reservoirs Project (20.0 MG):***

Key Component:	**Construction of two (2) 10-MG prestressed circular reservoirs and associated piping.**
Schedule:	**Notice to Proceed was issued in January 2007. Project completion expected November 2008.**
Cost:	**The construction project budget is $24.8 million, of which $11.7 million, or 47%, has been spent.**
Significant Issues:	**640-1 Reservoir: Half of the roof has been poured.** **640-2 Reservoir: Completed construction of walls and columns.**

Flagship CIP Project in Design

- ***36-Inch Pipeline From FCF No. 14 to Regulatory Site Project:***

Key Component:	**Approximately 5 miles of 36-inch pipeline for potable water from Otay's FCF No. 14 to the Regulatory Site.**
Schedule:	**Preparing 60% design drawings**
Cost:	**The project budget is $18.5 million.**
Significant Issues:	**District reviewed 30% design drawings and the project is on schedule.**

Progress on Major Project

- ***City of San Diego's Water Treatment Plant, Capacity:***

Key Component:	**Acquire at least 30 MGD and up to 50 MGD of local treatment capacity from City of San Diego (City).**
Schedule:	**Otay Board approved the SD17 POU with the City, SDCWA, and Otay. Draft SD17 Agreement under negotiation.**
Cost:	**Only staff time has been budgeted; project cost is dependent upon negotiations outcome.**
Significant Issues:	**The City will supply "Surplus Water" from Otay WTP to Otay per the current 1999 Agreement.**
	The City has an opportunity to obtain a $6,500,000 Matching Proposition 50 Grant for SD17 consisting of a pump station at the Alvarado WTP to pump up to 60 MGD into SDCWA Pipeline No. 4. SD17 is estimated to cost $20,000,000. The District desires to acquire 50 MGD capacity. This project will provide an opportunity to the City to generate revenue from surplus capacity. For the District, this is an opportunity to reduce water treatment costs to below the prevailing SDCWA rate while providing an additional alternative source of water supply.

Consultant Contract Status

(through September 30, 2007)

CIP NO.	PROJECT TITLE	CONSULTANT	OPENED DATE	ORIGINAL CONTRACT AMOUNT	TOTAL CHANGE ORDERS	REVISED CONTRACT AMOUNT	APPROVED PAYMENT TO DATE	% CHANGE ORDERS	% CONTRACT COMPLETE	EST. COMP. DATE
	PLANNING									
P1210	WRMP Update and Program EIR	PBS&J	9/4/2007	$499,748	$0	$499,748	$12,593	0%	3%	05/07/09
	PLANNING TOTALS			*$499,748*	*$0*	*$499,748*	*$12,593*	*0%*	3%	
	DESIGN									
P2009	36-inch Pipeline, SDCWA Otay FCF No. 14 to Reg Site	Infrastructure Engineering Corp	10/19/2006	$1,333,808	$0	$1,333,808	$504,511	0%	38%	12/09/09
P2037	980-3 Reservoir - Structural	Simon Wong	11/29/2005	$49,700	$0	$49,700	$33,713	0%	68%	03/31/08
P2037	980-3 Reservoir - Electrical Services	Engineering Partners Inc	3/13/2006	$13,220	$0	$13,220	$6,325	0%	48%	03/31/08
P2053	RWCWRF- R.O. Building Remodel	Awbrey, Cook, McGill Architects	1/4/2006	$12,250	$0	$12,250	$7,158	0%	58%	06/30/08
P2185	640-1 and 2 Reservoirs Project	Infrastructure Engineering Corp	9/14/2004	$722,000	$120,000	$842,000	$819,330	17%	97%	02/28/08
P2191	850-4 Reservoir - Structural	Nolte	12/7/2005	$15,695	$0	$15,695	$5,470	0%	35%	10/30/07
N/A	As-Needed Drafting Services	RBF	12/6/2006	$45,000	$0	$45,000	$34,310	0%	76%	10/30/07
N/A	As-Needed Design Services	Lee & Ro	4/27/2007	$175,000	$0	$175,000	$64,901	0%	37%	01/30/08
N/A	As-Needed Drafting Services	J.C. Heden & Assoc	12/6/2006	$45,000	$0	$45,000	$43,188	0%	96%	10/30/07
	DESIGN TOTALS			*$2,411,673*	*$120,000*	*$2,531,673*	*$1,518,906*	*5%*	60%	

(Consultant Contract Status continued)

CIP NO.	PROJECT TITLE	CONSULTANT	OPENED DATE	ORIGINAL CONTRACT AMOUNT	TOTAL CHANGE ORDERS	REVISED CONTRACT AMOUNT	APPROVED PAYMENT TO DATE	% CHANGE ORDERS	% CONTRACT COMPLETE	EST. COMP. DATE
	PUBLIC SERVICES									
P2258	Recycled Water Irrigation Plancheck & Inspection (Ph. 2)	Boyle Eng	9/4/2007	$300,000	$0	$300,000	$15,389	0%	5%	06/31/08
P2258	Recycled Water Irrigation Plancheck and Inspection, Ph. 1	Boyle Eng	7/26/2006	$250,000	$30,000	$280,000	$126,694	12%	45%	12/31/07
	PUBLIC SERVICES TOTALS			*$550,000*	*$30,000*	*$580,000*	*$142,083*	*5%*	24%	
	CONSTRUCTION / INSPECTION									
P1043	Las Presa 36" Pipeline	Southern California Soil	6/30/2007	$150,000	$0	$150,000	$22,590	0%	15%	01/28/09
P2185	640-1 & 640-2 Reservoirs Project	RBF	3/29/2007	$1,196,735	$0	$1,196,735	$481,200	0%	40%	09/30/08
P1043	La Presa 36" Pipeline Inspection	Schiff Assoc	3/6/2007	$110,000	$0	$110,000	$31,745	0%	29%	12/31/07
	CONSTRUCTION/INSP. TOTALS			*$1,456,735*	*$0*	*$1,456,735*	*$535,535*	*0%*	37%	
	ENVIRONMENTAL									
Various	On-Call Environmental Services	Jones & Stokes	9/5/2007	$300,000	$0	$300,000	$11,156	0%	4%	06/30/11
P1253	HMA & Associated Mitigation Projects	Jones & Stokes	4/20/2006	$566,444	$0	$566,444	$351,645	0%	62%	03/01/08
P2143	1296-3 Reservoir	BRG	5/8/2006	$125,000	$0	$125,000	$59,144	0%	47%	12/11/07
	ENVIRONMENTAL TOTALS			*$991,444*	*$0*	*$991,444*	*$421,945*	0%	43%	
	GRAND TOTAL			***$5,909,600***	***$150,000***	***$6,059,600***	***$2,631,062***	***3%***	**43%**	

Construction Contract Status

(through September 30, 2007)

CIP NO.	PROJECT TITLE	CONSTRUCTION CONTRACTOR	ORIGINAL CONTRACT AMOUNT	TOTAL CHANGE ORDERS	REVISED CONTRACT AMOUNT	TOTAL EARNED TO DATE	% OF CHANGE ORDERS *	% CONTRACT COMPLETE	EST. COMP. DATE
P1270	Telegraph Canyon Road Pavement Repair	M&M General Engineering Contractor, Inc.	$128,650	$5,100	$133,750	$115,785	3.96%	87%	November 2007
P2459	Olive Vista Drive Utility Relocations	Ortiz Corp	$831,000	$0	$831,000	$0	0.00%	0%	February 2008
P2440	SR905 Utility Relocations	Zondiros	$930,316	($58,623)	$871,693	$708,764	-6.30%	75%	March 2008
P2185	640-1 & 640-2 Reservoirs	Pacific Hydrotech Corp	$24,894,000	($5,550)	$24,888,450	$11,662,583	-0.02%	47%	November 2008
	TOTALS:		*$26,783,966*	*($59,073)*	*$26,724,893*	*$12,487,132*	-0.22%	*47%*	

*** Change orders for projects this fiscal year are below the industry average of 5-12%.**

Expenditures

(through September 30, 2007)

($000)

Current CIP No.	Description	Project Manager	FY 08 Budget	FY 08 Expenditures Through 09/30/07	FY 08 Percent Budget Spent Through 09/30/07	Total Project Budget	Total Remaining Balance	Comments
	CAPITAL FACILITY PROJECTS							
P2009	PL - 36-Inch, SDCWA Otay FCF No. 14 to Regulatory Site	Juybari	1,150	193	17%	18,490	17,564	30% design completed.
P2033	PL - 16-Inch, 1296 Zone, Melody Road - Campo/Presilla	Ripperger	5	0	0%	1,826	1,822	Project deferred to future years.
P2037	Res - 980-3 Reservoir 15 MG	Ripperger	200	0	0%	14,205	13,663	Project deferred to future years.
P2038	PL - 12-Inch, 978 Zone, Jamacha, Hidden Mesa, and Chase Upsize and Replacements	Kay	980	36	4%	1,600	1,464	60% design completed.
P2040	Res - 1655-1 Reservoir 0.5 MG	Ripperger	1	0	0%	2,055	1,580	Developer driven.
P2129	Groundwater Exploration Program	Peasley	10	0	0%	2,530	1,974	Groundwater development planning efforts focused on the Otay River Demineralization Feasibility Study (P2462) and San Diego Foundation Groundwater Feasibility Study (P2467) in conjunction with SWA.
P2143	Res - 1296-3 Reservoir 2 MG	Kay	1,200	39	3%	3,340	3,039	60% design completed.
P2172	PS - 1485-1 Pump Station Replacement	Kay	200	24	12%	2,225	1,950	60% design in process.
P2185	Res - 640-1 Reservoir 20.0 MG	Ripperger	15,000	4,021	27%	29,500	15,946	Concrete is being placed for 640-1 & 640-2. Piping is being installed.
P2190	PL - 10-Inch, 1485 Zone, Jamul Highlands Road to Presilla Drive	Ripperger	5	1	20%	228	225	Developer driven.
P2191	Res - 850-4 Reservoir 2.2 MG	Kay	750	53	7%	3,285	2,607	90% design is completed.
P2235	Res - 624-4 Emergency Reservoir 40.0 MG	Ripperger	0	0	0%	15,750	15,750	Low priority.
P2258	PS - Lower Otay Pump Station Phase 1 (9,000 GPM)	Ripperger	50	0	0%	7,805	5,728	Project complete.
P2267	36-Inch Main Pumpouts and Air/Vacuum Ventilation Installations	Henderson	150	33	22%	345	120	Inspection and air vac upgrades to begin November.
P2295	624-1 Reservoir Disinfection Facility, Inlet/Outlet/Bypass and 613-1 Reservoir Demolition	Ripperger	550	91	17%	4,500	177	Litigation complete.
P2318	PL - 20-Inch, 657 Zone, Summit Cross-Tie and 36-Inch Main Connections	Juybari	0	0	0%	601	545	On-hold. Lower priority.
P2357	PS - 657-1/850-1 Pump Station Demolition	Juybari	0	0	0%	300	300	On-hold. Lower priority.
P2370	Res - Dorchester Reservoir and Pump Station Demolition	Juybari	0	0	0%	150	137	On-hold. Lower priority.
P2387	PL - 12-Inch, 832 Zone, Steele Canyon Road - Via Caliente/Campo	Kay	270	12	4%	525	463	60% design completed.

(Expenditures continued)

Current CIP No.	Description	Project Manager	FY 08 Budget	FY 08 Expenditures Through 09/30/07	FY 08 Percent Budget Spent Through 09/30/07	Total Project Budget	Total Remaining Balance	Comments
P2450	Otay River Groundwater Well Demineralization/Development	Peasley	115	1	1%	5,000	4,999	Pending the outcome of the joint SWA/Otay study (P2462), environmental and planning work may occur late FY 08.
P2451	Rosarito Desalination Facility Conveyance System	Peasley	5	0	0%	1,000	1,000	Proposition 50 grant proposal for feasibility study effort in FY 07 and Otay was not awarded a grant hence no expenditures for FY 08 are contemplated.
P2457	Otay Mountain Groundwater Well Development	Peasley	10	0	0%	6,500	6,500	The outcome of the Otay Mountain Well exploration efforts per terms of an existing agreement may result in expenditures in FY 2008.
P2460	I.D. 7 Trestle and Pipeline Demolition	Ripperger	20	0	0%	375	375	Low priority.
P2462	Otay River Demineralization Feasibility Study	Peasley	200	0	0%	200	200	Joint SWA/Otay Proposition 50 grant awarded and consultant contract to be awarded to MWH in the fall of 2007.
P2463	South Bay Regional Concentrate Conveyance Feasibility Study	Peasley	25	0	0%	125	125	The project is being jointly funded by SDCWA, SWA, the City of San Diego and Otay. Proposition 50 funding for 50% of the cost has been secured by the SDCWA. A consultant contract was awarded to CDM. SDCWA has stated that they will pay 100% of the cost, thus no expenditures of Otay may be required.
P2464	San Diego 17 Pump Station and Flow Control Facility	Peasley	750	1	0%	16,250	16,249	SD-17 pump station agreement negotiations were temporarily suspended by the City and have restarted in the first quarter of FY 08.
P2465	Regulatory Site Material Storage Bins	Juybari	30	1	3%	250	249	Pre-design is in process.
P2466	Regional Training Facility	Juybari	100	5	5%	200	195	Lease agreement will be completed during the 2nd quarter.
P2467	San Diego Formation Groundwater Feasibility Study	Peasley	800	0	0%	1,600	1,600	This project is jointly funded by SWA and Otay. The SDCWA awarded a LISA grant
R2001	RecRes - 450-1 Reservoir 12 MG	Ripperger	50	38	76%	9,967	373	Accepted by the District.
R2004	RecPS - 680-1 Pump Station (11,500 GPM)	Ripperger	50	27	54%	8,333	171	Accepted by the District.
R2034	RecRes - 860-1 Reservoir 4 MG	Ripperger	0	0	0%	3,800	3,799	Pre-design will begin in 2nd quarter.
R2053	RWCWRF - R.O. Building Remodel and Office Furniture	Juybari	305	3	1%	495	377	Obtained zoning clearance from the County. In the process to obtain a building permit.

(Expenditures continued)

Current CIP No.	Description	Project Manager	FY 08 Budget	FY 08 Expenditures Through 09/30/07	FY 08 Percent Budget Spent Through 09/30/07	Total Project Budget	Total Remaining Balance	Comments
R2077	RecPL - 24-Inch, 860 Zone, Alta Road - Alta Gate/Airway	Juybari	50	1	2%	3,000	2,978	In the process of hiring a consultant to work on PDR.
R2081	RecPL - 20-Inch, 944 Zone, Lane Avenue - Proctor Valley/Pond No. 1	Kay	900	16	2%	1,290	1,124	90% design completed
R2087	RecPL - 20-Inch, 944 Zone, Wueste Road - Olympic/Otay WTP	Juybari	50	0	0%	3,598	3,586	In the process of hiring a consultant to work on PDR.
R2088	RecPL - 20-Inch, 860 Zone, County Jail - Roll Reservoir/860-1 Reservoir	Juybari	50	1	2%	1,500	1,499	In the process of hiring a consultant to work on PDR.
R2089	North District Recycled Water Regulatory Compliance	Peasley	195	9	5%	200	191	Consultant contract awarded to PBS&J to be brought before the Board for approval in the 2nd quarter of FY 08. Prepared in FY 07, a project application for the SDIRWMP effort for potential future grant opportunities.
R2090	MBR Water Recycling Facility Feasibility Study	Juybari	40	28	70%	100	37	The last MBR workshop will be held on 10/18/07.
R2091	RecPS - 944-1 Pump Station Upgrade	Ripperger	325	0	0%	325	325	Dependent on completion of R2081.
R2092	Dis - 450-1 Reservoir Disinfection Facility	Juybari	300	19	6%	1,100	1,081	The PDR will be completed during the 2nd quarter.
S2016	Solar Panel Installation Phase I	Juybari	10	0	0%	645	630	Solar will be integrated into all CIP projects if it is feasible.
	Total Capital Facilities Projects	Total:	24,901	4,653	19%	175,113	132,717	
	MAINTENANCE (RENEWAL/REPLACEMENT)							
P2356	PL - 12-Inch, 803 Zone, Jamul Drive Permastran Pipeline Replacement	Kay	420	17	4%	765	681	60% design completed.
P2366	APCD Engine Replacements and Retrofits	Rahders	160	0	0%	2,438	1,026	Anticipate spending in second quarter of FY08.
P2382	Safety and Security Improvements	Sarno	90	0	0%	1,317	359	On schedule.
P2416	SR-125 Utility Relocations	Kay	190	35	18%	809	163	In construction.
P2422	Agency Interconnections	Gonzalez	300	10	3%	2,050	1,907	Working on Cal-AM and Helix WD.
P2440	I-905 Utility Relocations	Gonzalez	360	21	6%	1,660	556	Project re-design mandated by outside agencies. Design and construction to be completed by January 30, 2008.
P2441	NG/RAMAR Meter Replacements	Henderson	100	-109	-109%	1,932	40	Pending litigation.
P2447	Information Technology Meter Routing	Stevens	80	0	0%	130	108	On track.
P2453	SR-11 Utility Relocations	Gonzalez	5	0	0%	2,300	2,300	CalTrans is the lead agency. The District is awaiting project notification.
P2455	Data Cleansing Project	Stevens	160	38	24%	350	123	On track.

(Expenditures continued)

Current CIP No.	Description	Project Manager	FY 08 Budget	FY 08 Expenditures Through 09/30/07	FY 08 Percent Budget Spent Through 09/30/07	Total Project Budget	Total Remaining Balance	Comments
P2456	Air and Vacuum Valve Upgrades	Henderson	520	94	18%	3,744	3,284	On schedule.
P2458	AMR Manual Meter Replacement	Henderson	1,250	295	24%	9,368	8,824	On schedule.
P2459	Olive Vista Drive Utility Relocations	Kay	1,100	130	12%	1,242	960	In construction.
P2468	Finance Department Office Remodel	Ripperger	50	0	0%	50	50	Study in process.
R2086	RWCWRF Force Main AirVac Replacements and Road Improvements	Kay	670	36	5%	875	657	On-hold due to environmental constraints.
S2012	SVSD Outfall and RSD Replacement and OM Reimbursement	Peasley	605	0	0%	3,571	3,341	Expenditure typically is billed by SVSD in the 3rd quarter of the fiscal year.
S2015	Calavo Lift Station Replacement	Kay	585	35	6%	726	575	60% design completed.
	Total Maintenance	Total:	6,645	602	9%	33,327	24,954	
	CAPITAL PURCHASE PROJECTS							
P2282	Vehicle Capital Purchases	Porras	210	0	0%	2,451	1,080	Vehicle purchases anticipated early 2008.
P2286	Field Equipment Capital Purchases	Porras	91	64	70%	1,202	586	21.5K breaker placed on-hold.
P2353	Information Technology System Enhancements and Replacements	Stevens	365	41	11%	3,762	752	On track.
P2361	Information Technology GIS Enhancements	Stevens	150	11	7%	1,945	552	On track.
P2363	Information Technology Utility Billing, Data Management, and Financial System	Stevens	200	98	49%	6,600	852	On track.
P2443	Information Technology Mobile Services	Stevens	240	18	8%	652	243	On track.
P2461	Records Management System Upgrade	Jenkins	150	2	1%	150	148	The Records Management project will be in full implementation by January 2008 and should be completed by June 30, 2008. Anticipation is that all allocated money will be used.
	Total Capital Purchase Projects	Total:	1,406	234	17%	16,762	4,213	

(Expenditures continued)

Current CIP No.	Description	Project Manager	FY 08 Budget	FY 08 Expenditures Through 09/30/07	FY 08 Percent Budget Spent Through 09/30/07	Total Project Budget	Total Remaining Balance	Comments
	DEVELOPER REIMBURSEMENT PROJECTS							
P2070	PL - 16-Inch, 980 Zone, Pacific Bay Homes Road-Proctor Valley/Rolling Hills Hydro PS	Ripperger	550	393	71%	550	157	The project is accepted.
P2104	PL - 12-Inch, 711 Zone, La Media Road - Birch/Rock Mountain	Ripperger	0	0	0%	833	833	Future project.
P2107	PL - 12-Inch, 711 Zone, Rock Mountain Road - La Media/SR 125	Ripperger	0	0	0%	722	722	Future project.
P2121	PL - 16-Inch, 711 Zone, Hunte Parkway - Olympic/EastLake	Ripperger	1	0	0%	551	6	The project is completed.
P2133	PL - 16-Inch, 711 Zone, EastLake Parkway - Olympic/Birch	Ripperger	1	0	0%	151	5	The project is completed.
P2134	PL - 16-Inch, 711 Zone, Birch Road - SR 125/EastLake	Ripperger	0	0	0%	412	412	This project is operationally complete, but not yet accepted.
P2164	PL - 20-Inch, 980 Zone, EastLake Parkway - Olympic/Birch	Ripperger	1	0	0%	211	5	The project is completed and reimbursement has been processed.
P2169	PL - 20-Inch, 980 Zone, EastLake Parkway - Birch/Rock Mountain	Ripperger	325	280	86%	325	45	The project is completed.
P2325	PL - 10" to 12" Oversize, 1296 Zone, PB Road - Rolling Hills Hydro PS/PB Bndy	Ripperger	130	0	0%	130	130	This project is operationally complete, but not yet accepted.
P2367	PL - 16-Inch, 980 Zone, Olympic Parkway - East Palomar/EastLake	Ripperger	0	0	0%	1,500	1,265	Three projects with this CIP. All complete and accepted, waiting for reimbursement request.
P2397	PL - 12-Inch, 711 Zone, EastLake Parkway - Birch/Rock Mountain	Ripperger	175	157	90%	175	18	The project is completed.
P2402	PL - 12-Inch, 624 Zone, La Media Road - Village 7/Otay Valley	Ripperger	0	0	0%	444	444	Future project.
P2403	PL - 12-Inch, 624 Zone, Heritage Road - Olympic/Otay Valley	Ripperger	0	0	0%	975	975	Future project.
P2414	PL - 12" to 16" Oversize, 803 Zone, Dehesa Road - Dehesa Meadow/OWD Bndy	Ripperger	10	0	0%	152	10	Project accepted. Potential litigation of claims.
P2435	PL - 16-Inch, 711 Zone, Birch Road - La Media/SR-125	Ripperger	30	0	0%	280	280	To be reimbursed during the 2nd quarter.
R2028	RecPL - 8-Inch, 680 Zone, Heritage Road - Santa Victoria/Otay Valley	Ripperger	0	0	0%	600	600	The project is under construction.

(Expenditures continued)

Current CIP No.	Description	Project Manager	FY 08 Budget	FY 08 Expenditures Through 09/30/07	FY 08 Percent Budget Spent Through 09/30/07	Total Project Budget	Total Remaining Balance	Comments
R2031	RecPL - 12-Inch, 944 Zone, EastLake Parkway - Olympic/Birch	Ripperger	1	1	100%	125	15	The project is completed.
R2033	RecPL - 12-Inch, 944 Zone, Birch Road - La Media/EastLake	Ripperger	50	0	0%	300	300	The project is completed. Reimbursement will be processed in FY 09.
R2040	RecPL - 12-Inch, 680 Zone, Hunte Parkway - Olympic/EastLake	Ripperger	1	0	0%	450	39	The project is completed and reimbursed.
R2041	RecPL - 8-Inch, 944 Zone, EastLake Parkway - Birch/Rock Mountain	Ripperger	1	0	0%	125	20	The project is completed and reimbursed.
R2042	RecPL - 8-Inch, 944 Zone, Rock Mountain Road - SR-125/EastLake	Ripperger	0	0	0%	141	141	Future project.
R2043	RecPL - 8-Inch, 944 Zone, Rock Mountain Road - La Media/SR-125	Ripperger	235	53	23%	235	182	Multiple projects within this CIP. One complete and accepted, the others have not yet started.
R2047	RecPL - 12-Inch, 680 Zone, La Media Road - Birch/Rock Mountain	Ripperger	0	0	0%	450	450	Future project.
R2058	RecPL - 16-Inch, 860 Zone, Airway Road - Otay Mesa/Alta	Ripperger	0	0	0%	2,000	1,681	Multiple projects within this CIP. Two of many are complete, accepted and reimbursed.
R2082	RecPL - 24-Inch, 680 Zone, Olympic Parkway - Village 2/Heritage	Ripperger	0	0	0%	1,747	1,747	Project is started.
R2083	RecPL - 20-Inch, 680 Zone, Heritage Road - Village 2/Olympic	Ripperger	0	0	0%	400	400	Project is started.
R2084	RecPL - 20-Inch, 680 Zone, Village 2 - Heritage/La Media	Ripperger	0	0	0%	1,100	1,099	Project is started.
R2085	RecPL - 20-Inch, 680 Zone, La Media - State/Olympic	Ripperger	0	0	0%	500	500	The project is accepted.
	Total Developer Reimbursement Projects	Total:	1,511	884	59%	15,584	12,481	
	GRAND TOTAL		**$34,463**	**$6,373**	**18%**	**$240,786**	**$174,365**	

AGENDA ITEM 4

STAFF REPORT

TYPE MEETING:	Regular Board	MEETING DATE:	December 5, 2007
SUBMITTED BY:	Jim Peasley Engineering Manager	PROJECT NO:	P1210-017000 DIV. NO. N/A
REVIEWED BY: (Chief)	Rod Posada Chief, Engineering		
APPROVED BY: (Asst. GM):	Manny Magaña Assistant General Manager of Engineering and Operations		
SUBJECT:	Execution Authorization of Agreement No. 08-MU-35-0002 for Phase 1 of the Regional Brine Management Study between the United States Department of the Interior, Bureau of Reclamation and Cooperating Agencies		

GENERAL MANAGER'S RECOMMENDATION:

1. That the Otay Water District's (District) Board of Directors approve the execution of the Agreement No. 08-MU-35-0002 for Phase 1 of the Regional Brine Management Study (Study Agreement) and to authorize the General Manager to execute the Study Agreement between the United States Department of the Interior, Bureau of Reclamation (Reclamation) and Cooperating Agencies, including the District.

2. That the District's Board of Directors increase the Operating Budget in the amount of $17,500 to cover the District's share of the Phase 1 Regional Brine Management Study.

COMMITTEE ACTION:

Please see Attachment A.

PURPOSE:

That the Board authorizes the General Manager to enter into an agreement (see Attachment B) between Reclamation and Cooperating Agencies in the amount not to exceed $17,500 for Phase 1 of the Regional Brine Management Study (see Exhibit A for Study area).

ANALYSIS:

Southern California's continued economic and population growth is contingent upon developing and maximizing reliable sources of local water. Recycled water, ocean desalination, and brackish groundwater desalination represent three reliable local water supplies. However, all three share a significant issue: the removal and disposal of brine-concentrates.

Phase 1 of the Regional Brine Management Study is being led by a Brine Executive Management Team (BEMT) that intends to include the Inland Empire Utilities Agency, Coachella Valley Water District, County Sanitation District No. 2 of Los Angeles County, Sweetwater Authority, California Department of Water Resources, San Diego County Water Authority, Orange County Sanitation District, Central Basin Municipal Water District, Municipal Water District of Orange County, National Water Resources Institute, Santa Ana Watershed Project Authority, Otay Water District, Los Angeles Department of Water and Power, City of San Diego Water Department, Rancho California Water District, Metropolitan Water District of Southern California, City of San Bernardino Water Department, Irvine Ranch Water District, Western Municipal Water District, West Basin Municipal Water District, referred to as the Cooperating Agencies, and Reclamation, all of which are collectively referred to as Parties. Project management will be coordinated by the BEMT. The goals of Phase 1 are to assess the current brine-concentrate research, treatment projects, and regulatory requirements. Brine production, treatment, and management strategies including secondary brine use, brine minimization, and disposal methods will be synthesized to identify information gaps and regulatory steps for the selection of a Phase 2 Study Project.

The Study Agreement commits the Cooperating Agencies to a maximum payment of $17,500 per participate for the Phase 1 work effort. There is no obiligation on any agency to participate in Phase 2. Phase 1 shall include those activities generally described in the plan of work for the Federal fiscal years of 2007, 2008, and 2009. The term of the Study Agreement shall be from the date of execution by all Partners and remain in effect until completion of the Phase 1 Study.

See Exhibit B for further analysis.

FISCAL IMPACT:

As a Cooperating Agency participating in the Regional Brine Management Study, the District is obligated to pay a total share of $17,500. The $17,500 expense was not included in the Fiscal Year 2008 Operating Budget for this Regional Brine Management Study participation because it became known after budget approval.

The Engineering Department expects to have budget savings due to vacancies that will more than offset the unplanned expenditure.

LEGAL IMPACT:

None.

General Manager

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JP:mlc

Attachments: Attachment A
Attachment B
Exhibit A
Exhibit B

ATTACHMENT A

SUBJECT/PROJECT: **P1210-017000**	Execution Authorization of Agreement No. 08-MU-35-0002 for Phase 1 of the Regional Brine Management Study between the United States Department of the Interior, Bureau of Reclamation and Cooperating Agencies

COMMITTEE ACTION:

The Engineering, Operations, and Water Resources Committee reviewed this item at a meeting held on November 20, 2007. The Committee supported Staff's recommendation.

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

AGREEMENT NO. 08-MU-35-0002
BETWEEN THE
UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION
AND
INLAND EMPIRE UTILITIES AGENCY
COACHELLA VALLEY WATER DISTRICT
COUNTY SANITATION DISTRICT NO. 2 OF LOS ANGELES COUNTY
SWEETWATER AUTHORITY
CALIFORNIA DEPARTMENT OF WATER RESOURCES
SAN DIEGO COUNTY WATER AUTHORITY
ORANGE COUNTY SANITATION DISTRICT
CENTRAL BASIN MUNICIPAL WATER DISTRICT
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY
SOUTHERN CALIFORNIA SALINITY COALITION
SANTA ANA WATERSHED PROJECT AUTHORITY
OTAY WATER DISTRICT
LOS ANGELES DEPARTMENT OF WATER AND POWER
CITY OF SAN DIEGO WATER DEPARTMENT
RANCHO CALIFORNIA WATER DISTRICT
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
CITY OF SAN BERNARDINO WATER DEPARTMENT
IRVINE RANCH WATER DISTRICT
WESTERN MUNICIPAL WATER DISTRICT
WEST BASIN MUNICIPAL WATER DISTRICT

TO PROVIDE FUNDS TO SUPPLEMENT AVAILABLE APPROPRIATED
FEDERAL FUNDS FOR PHASE ONE OF
THE ***REGIONAL BRINE MANAGEMENT STUDY***

1 **This Memorandum of Understanding** (MOU) for the Regional Brine Management Study is made and entered into this _____ day of _____ 2007, by and among the Inland Empire Utilities Agency, Coachella Valley Water District, County Sanitation District No. 2 of Los Angeles County, Sweetwater Authority, California Department of Water Resources, San Diego County Water Authority, Orange County Sanitation District, Central Basin Municipal Water District, Municipal Water District of Orange County, National Water Resources Institute, Santa Ana Watershed Project Authority, Otay Water District, Los Angeles Department of Water and Power, City of San Diego Water Department, Rancho California Water District, Metropolitan Water District of Southern California, City of San Bernardino Water Department, Irvine Ranch Water District, Western Municipal Water District, West Basin Municipal Water District, hereinafter referred to as the "**Cooperating Agencies**", and The United States Department of the Interior, Bureau of Reclamation, hereinafter referred to as "**Reclamation**", all of which are at times

collectively referred to as "**Parties**". This agreement is made pursuant to the Act of Congress approved June 17, 1902, (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as Reclamation Law, the Act of March 4, 1921 and the Fiscal Year 2007 Energy and Water Development Appropriations Act, February 15, 2007, which authorized the expenditure of funds to conduct the Regional Brine Management Study (**Study**).

WITNESSETH

2 EXPLANATORY RECITALS

2.1 WHEREAS, **Reclamation** has been authorized by Congress to fund and conduct the Study; and

2.2 WHEREAS, the **Parties** desire that the **Study** activities be executed in Phases initiated by a cost-sharing agreement for Phase 1; and

2.3 WHEREAS, the **Study** Phase 1 shall include those activities generally described in the Services to be Performed for Federal Fiscal Years 2007, 2008 and 2009, which appears herein as Section 3; and

2.4 WHEREAS, **Reclamation** has programmed funds under the Lower Colorado Regional Investigations Program-Southern California Brine Program to conduct the **Study**; and

2.5 WHEREAS, the **Parties** have established a schedule of the **Study** Phase 1 work including all planning work to be accomplished; and

2.6 WHEREAS, the **Parties** desire to form a Brine Executive Management Team (**BEMT**) to provide direction in the development of Phase 1 of the **Study**, manage the Scope of Work, as well as identification of an overall Plan of Study for future Phase(s) under Reclamation's authority to participate in the Regional Brine Management Study; and

2.7 WHEREAS, **Reclamation** requires a fifty percent (50%) match-of-study costs by the **Cooperating Agencies** through direct funding; and

2.8 WHEREAS, the **Cooperating Agencies** desire to support and participate in Phase 1 of the **Study**; and

2.9 WHEREAS, this MOU applies solely to Phase I of the **Study** and execution of this MOU does not commit or imply commitment to any additional or future phases of this **Study**; and

NOW, THEREFORE, in consideration of the mutual covenants herein contained, the Partners agree as follows:

3 SERVICES TO BE PERFORMED

3.1 Background Information

Recycled water, ocean desalination and brackish groundwater desalination represent three largely untapped water supplies. These supplies are affected by three key issues: the technology and cost to create a potable water source, public acceptance and support for ocean desalination and recycled water reuse, and disposal of the brine-concentrate. This latter issue is a potential limiting factor to fully utilizing these water supplies. Regulations and basin plan objectives governing receiving waters will drive the need for advanced treatment processes that create brine-concentrates suitable for disposal. The **Study** will consist of two phases. Phase I involves the review and update of existing brine management information (e.g. Southern California Comprehensive Reclamation and Reuse Study [SCCWRRS] and Southern California Water Recycling Projects Initiative [Initiative]) with current brine management project information and research. Goals of Phase I include: selecting one or more project(s) as a full scale demonstration pilot study; developing analytical models and research project(s) addressing information gaps and model scenarios; developing general design plans to construct a pilot brine-concentrate facility; and/or developing models/program plans to address socio-political issues surrounding brine management and disposal. Phase II will be the implementation of one or more of these end goals.

3.2 To the extent that funds are advanced by the **Cooperating Agencies**, **Reclamation** shall combine those funds with matching Federal funds authorized by Fiscal Year 2007 Energy and Water Development Appropriations Act, February 15, 2007, and use said funds to complete the work program as generally described in Exhibit A.

3.3 Upon completion of Phase 1 of the **Study**, **Reclamation** shall transmit to the **Cooperating Agencies** and **BEMT**, a copy of the Regional Brine Study, Phase 1 final report.

4 TERM OF AGREEMENT

This Agreement shall become effective upon the date of approval by all the **Parties** and shall remain in effect until the completion of Phase I of the **Study**, unless otherwise terminated pursuant to Section 15 herein. The **Parties** anticipate that Phase 1 of the **Study** will be completed by December 31, 2009.

5 BRINE EXECUTIVE MANAGEMENT TEAM (BEMT)

5.1 As a means of guiding the performance of the Chairperson (defined in Section 7 herein), securing effective cooperation and interchange of information, and providing consultation on a prompt and orderly basis among the **Cooperating Agencies** in connection with various administrative and technical matters which may arise from time to time in connection with this MOU, a **BEMT** consisting of one representative from each of the **Parties** is hereby established. The **BEMT** shall act in accordance with the following provisions, as long as such provisions are consistent with the terms of this MOU.

5.2 Each member of the **BEMT** shall be vested with authority to make requisite decisions on behalf of the entity he or she represents within the scope of this MOU. Each of the **Parties** may have an alternate(s) to act as a temporary representative on the **BEMT** in the absence of the regular member. Such alternate(s) shall have all the authority granted to the authorized representative. The authorized representative and alternate(s) named in Exhibit B, which is attached hereto and by reference made a part hereof, can be changed with a written notice from the **Cooperating Agency** to the Chairperson of the BEMT. The Chairperson will make the necessary changes to Exhibit B of this MOU.

5.3 Each of the **Cooperating Agencies** and **Reclamation** may invite representatives from related agencies to attend **BEMT** meetings to facilitate constructive input and to exchange information. However, invited representatives shall not participate in the **BEMT** decision-making process.

5.4 Every reasonable attempt will be made to obtain consensus among all **BEMT** representatives on issues that come before the **BEMT** for a vote. Each **BEMT** representative receives one vote. However, in the event that consensus is in a tie, the Chairperson shall make the final result determination and simple majority rules.

5.5 Any decision may be made by the **BEMT** in an assembled meeting or, upon consent of all **BEMT** representatives, after the representatives have had an opportunity to consult with one by telephone, facsimile, telegraph, telex, email, letter, or by any combination thereof.

5.6 Neither the **BEMT** nor individual members thereof have any authority to authorize expenditures of funds over and above the amount specified in Section 9.4 and in Exhibit B.

6 DUTIES OF THE BRINE EXECUTIVE MANAGEMENT TEAM

The **BEMT** shall have the following duties and responsibilities, as well as other duties that it may from time to time agree to undertake, as long as such duties are consistent with the terms of this MOU. The **BEMT** shall:

6.1 Monitor the progress of the development and completion of the **Study's** Phase 1 activities as defined in the Scope of Work, establish additional Phases of work to follow within the Plan of Study, and identify other appropriate management policies and procedures for the **Study**, as long as such duties are consistent with the terms of this MOU.

6.2 Act as a liaison between the **Cooperating Agencies** and the Chairperson with respect to development of the **Study** reports.

6.3 Review, discuss and attempt to resolve any disputes among the **Cooperating Agencies** arising under the MOU.

6.4 Provide direction to the Chairperson with respect to the development of Phase 1 of the **Study**.

6.5 Nominate a member of the **BEMT** to act as Vice-Chairperson. The Vice-Chairperson shall perform the duties of the Chairperson in the absence of the Chairperson.

6.6 Review and comment on drafts of documents developed for the **Study**. The Chairperson shall consider incorporating, as directed by the **BEMT**, all comments in preparing the final documents. Drafts of documents shall be released to the public only after review by the **BEMT**, or as required by law.

7 BRINE EXECUTIVE MANAGEMENT TEAM CHAIRPERSON

7.1 The **Parties** hereby agree that **Reclamation** shall provide the Chairperson who shall perform and carry out the duties and responsibilities required under this MOU. **Reclamation's** Chairperson shall pursue the work diligently, to meet the **Study's** Phase 1 completion date of December 31, 2009. The Chairperson shall attend **BEMT** meetings and support the **BEMT** as described in Sections 5 and 6 herein.

7.2 The Chairperson of the **BEMT** shall be **Reclamation's** representative. The Chairperson shall be responsible for scheduling and presiding over meetings of the **BEMT**. The Chairperson shall promptly call a meeting of the **BEMT** at the request of any **Cooperating Agency** representative, but shall provide reasonable advance notice of the time and place of the meeting. The Chairperson shall transmit in advance an agenda of each

upcoming meeting to all **BEMT** representatives and subsequently prepare written meeting notes of all meetings and distribute them to each **BEMT** representative within a reasonable time after each meeting.

7.3 Subject only to the express limitation of this MOU, the Chairperson is authorized to incur costs, liabilities, and obligations up to the amounts approved and funded by the **Parties** to this MOU and to perform or arrange for the performance of Phase 1 of the **Study** outlined in Exhibit A.

7.4 The Chairperson shall organize multi-disciplinary planning teams as may be required to conduct Phase 1 of the **Study** as described in Exhibit A.

7.5 The Chairperson acts as the liaison between the **BEMT** and the multi-disciplinary planning teams.

8 COORDINATION AND PROGRESS REPORTS

8.1 At the conclusion of Phase 1 of the **Study**, **Reclamation** shall submit to the **BEMT** and **Cooperating Agencies** a report of actual expenditures on the **Study** activities. A separate account showing expended and available resources shall be maintained by **Reclamation** for all work performed on the **Study**, with costs identifiable by **Study** task. This account and related records shall be available for inspection, audit, and reproduction by the **Cooperating Agencies** without charge during normal business hours. During the progress of the work, all operations of either **Reclamation** or the **Cooperating Agencies**, pertaining to this **Study**, shall be open to inspection by authorized representatives of the **Cooperating Agencies** or **Reclamation**, and if work is not being done in a mutually satisfactory manner, the **BEMT** may take appropriate action or terminate the MOU as specified in Section 15 herein.

8.2 Work performed under this MOU is subject to examination and audit by the State Auditor General, the Federal Inspector General, and each **Cooperating Agency** for a period of three years after final payment of funds under this MOU.

9 STUDY FUNDING

9.1 The **Cooperating Agencies** will provide to **Reclamation**, fifty percent (50%) of the estimated costs and expenses of the work performed under this MOU in the form of cash, as provided in Section 9 herein. **Reclamation** will fund the balance of the **Study** costs, except as discussed in Article 9.2 herein.

9.2 **Reclamation** funding is subject to annual appropriation by the Congress of the United States, as described in Section 13 herein. If funds available

to **Reclamation** are interrupted, or if the **Cooperating Agencies** wish to accelerate the pace of the **Study** where feasible, the **Cooperating Agencies** may advance additional funds for **Study** purposes. Such additional funds may, at the option of the **Cooperating Agencies**, be counted as an increase in the **Cooperating Agencies** share of **Study** costs.

9.3 The California Department of Water Resources' participation in the **Study** is subject to availability of funds through the State's normal budget process. The other **Cooperating Agencies** funding is subject to annual approval of their respective boards. If funds available to any **Cooperating Agency** are interrupted, the remaining **Cooperating Agencies** and **Reclamation** may agree to either defer **Study** activities, conclude the **Study** activities, redefine the Scope of Work to reflect the decreased funding, or the remaining **Parties** may choose to increase their funding level to maintain the **Study** scope and schedule. Each **Party's** share of the costs is defined and listed in Exhibit B.

9.4 The total cost of Phase 1 of the **Study** is estimated at three-hundred fifty thousand dollars ($350,000). This estimate is based on ten (10) **Cooperating Agencies**. **Reclamation's** share of the total cost is one-hundred seventy-five thousand dollars ($175,000). The total costs are outlined Exhibit B.

10 ADVANCEMENT OF FUNDS

10.1 After the MOU has been executed by all participating **Parties**, **Reclamation** will provide notice to each **Cooperating Agency** of its respective share of the funds necessary to accommodate Phase I of the **Study** as listed in Exhibit B. Each **Cooperating Agency** shall advance to **Reclamation** its share of the fund necessary to accommodate Phase 1 of the **Study** expenditures for the work defined in Exhibit A. Payment of a **Cooperating Agency's** share can be made in one lump sum, in payments as work is performed, or other methods as best conforms to the **Cooperating Agency's** budgetary processes and fiscal year. The cost for Phase 1 of the **Study** is included in Exhibit B and may be modified by the **BEMT** subject to conditions defined in Section 11.1.

10.2 After Phase 1 of the **Study** has begun, if projections of project expenses indicate that the combined available funds of the **Parties** will be exceeded, the **Cooperating Agencies** will be notified and the **BEMT** would be convened to address the problem and recommend alternative solutions. If the recommended alternative is outside the authority of the **BEMT**, the Chairperson will prepare the necessary documents and procedures to amend the MOU at the direction of the **BEMT**, pursuant to Section 9.3.

11 CHANGES AND DISPUTES

11.1 It is recognized that the schedule of activities and costs of conducting the **Study** are estimates based on anticipated requirements prior to initiation, and that changes may occur. It is also anticipated that the Plan of Study and Scope of Work may be revised from time to time as changes occur to the project plan and alternatives thereto, the technical effort needed to complete the **Study**, and the cost of the **Study** tasks. If and when the **Parties** agree that a change in the activities or costs described in the Plan of Study and Scope of Work is necessary and feasible, the Plan of Study and Scope of Work may be modified. Modifications shall be in writing, approved, and signed by the representatives on the **BEMT**, provided that the change does not constitute an increase in the financial obligation of any **Party**.

11.1 Should disputes arise over the provisions of, or performance under this MOU, the **Parties** will attempt to resolve the dispute. Should the situation not be resolvable, this MOU may be terminated pursuant to the provisions of Section 15 herein.

11.2 In the event that an additional agency desires to participate in the **Study**, this MOU may be modified. All modifications shall be in writing. The added **Cooperating Agency** shall agree to the terms set forth in this MOU and shall have all rights on the **BEMT**. The terms of the new membership including financial contributions shall be agreed upon unanimously by the existing **BEMT** membership.

12 LIABILITY

12.1 **Reclamation** shall perform its obligations under this MOU in the capacity of a Federal agency. The **Cooperating Agencies** shall perform their obligations under this MOU in their respective capacities as public entities of the State of California. The **Cooperating Agencies** assume no liability for claims or actions arising solely out of the performance of such work by **Reclamation's** employees or agents.

12.2 Liability of the United States resulting from the negligence of its employees shall be governed by the Federal Tort Claims Act (28 U.S.C. 2671, et seq.). The **Cooperating Agencies** recognize that the Federal Tort Claims Act operates to provide liability coverage for the United States Government and its employees in lieu of ordinary insurance coverage.

13 CONTINGENT ON APPROPRIATION OR ALLOTMENT OF FUNDS

13.1 The expenditure or advance of any money or the performance of any obligation by the United States under this MOU shall be contingent upon appropriation or allotment of funds by Congress. Phase 1 **Study** funds have already been appropriated. Interruption of funds available to **Reclamation** shall relieve the **Cooperating Agencies** from any obligation under this MOU. No liability shall accrue to the United States in the case that funds are interrupted.

14 UNUSED FUNDS

14.1 In the event that any funds advanced to **Reclamation** by the **Cooperating Agencies** are not required to complete the work under Phase 1 of the **Study**, such excess funds shall be returned by **Reclamation** to the **Cooperating Agencies** without interest, upon completion of the work program defined by Phase 1 of the **Study**; provided, however, that in the event the authorized representatives agree on additional work consistent with the direction of this MOU, such excess funds may be retained by **Reclamation** with approval of all the **Cooperating** Agencies identified in this MOU.

15 TERMINATION

15.1 This MOU shall terminate upon completion of Phase 1 deliverables and may be terminated at anytime with a 2/3 or more vote of the **BEMT** representatives, where each **BEMT** representative receives one vote.

15.2 In the event of termination, **Reclamation** shall return to the **Cooperating Agencies** any unused funds provided by the **Cooperating Agencies** under this MOU; provided, however, that in the event the MOU is terminated by any **Cooperating Agency** before the work has been completed, adequate funds will be retained to terminate contract obligations and prepare a concluding report. A concluding report summarizing work program accomplishments at the time of termination will be prepared by **Reclamation** and made available to the **Cooperating Agencies** and other interested Federal and State agencies.

16 AVAILABILITY OF INFORMATION

16.1 All information and data obtained or developed by **Reclamation**, in connection with development of the Phase 1 **Study** (exclusive of intra-governmental communications) shall be available upon request, except where prohibited by law, to the **Cooperating Agencies** without further charge. However, use of said reports, data, and information shall

appropriately reference Reclamation and the **Cooperating Parties** as the source.

16.2 Data compiled, and the results of studies performed, under this MOU will become public domain upon the completion of the investigation and project report, or upon completion of a concluding report under the provisions of Paragraph 15 herein.

17 DELAYS

17.1 To the extent that performance of an obligation under this MOU is prevented or delayed by any cause that is beyond the reasonable control of any **Party**, the non-performing **Party** shall not be deemed to be in default.

17.2 Should the non-performing **Party** be deemed to be in default, the **Parties** in good standing would follow the procedures described under Sections 11 and 15 herein. A non-performing **Party** shall not have rights on the **BEMT**.

18 SEVERABILITY

The unenforceability, invalidity, or illegality of any provision of this MOU shall not render the other provisions unenforceable, invalid or illegal.

19 JURISDICTION

Federal law and California law governs this MOU. In case of conflict between Federal law and California law, Federal law controls.

20 JUDICIAL REMEDIES NOT FORECLOSED

Nothing herein shall be construed as either:

20.1 Depriving any **Party** from pursuing and prosecuting any remedy in any appropriate court of the United States or appropriate State which would otherwise be available to such **Parties** even though provisions herein may declare that determinations or decisions of **Reclamation's** authorized representative or other persons are conclusive, or

20.2 Depriving any **Party** of any defense thereto which would otherwise be available.

21 INTEGRATIONS

No representations or promises are binding on any **Party**, except those representations and promises contained in this MOU or in some future written representations or promises signed by all **Parties**.

22 OFFICIALS NOT TO BENEFIT

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this MOU, or to any benefit arising from it.

23 EXHIBITS MADE PART OF THE AGREEMENT

Inasmuch as the Phase 1 **Study** Scope of Work may change during the term of this MOU, they will be set forth in the exhibits as formulated or modified from time to time. The initial Exhibit A and B are attached hereto, and each are incorporated into this MOU in accordance with its respective provisions until superseded by a subsequent exhibit by the Chairperson of the **BEMT** and an executed amended agreement as provided in Section 5.2.

24 COUNTERPARTS

This Agreement may be executed in original counterparts that together shall constitute a single agreement.

IN WITNESS WHEREOF, the **Partners** have executed this MOU on the date and the year written above.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
LOWER COLORADO REGION
SOUTHERN CALIFORNIA AREA OFFICE

By: _____
William J. Steele, Area Manager

Date: _____

By: _____
Richard Atwater
Inland Empire Utilities Agency

Date: _____

By: _____
Coachella Valley Water District

Date: _____

By: _____
County Sanitation District No. 2 of Los Angeles County

Date: _____

By: _____
Sweetwater Authority

Date: _____

By: _____
California Department of Water Resources

Date: _____

By: _____
San Diego County Water Authority

Date: _____

By: _____
Orange County Sanitation District

Date: _____

By: _____
Central Basin Municipal Water District

Date: _____

By: _____
Municipal Water District of Orange County

Date: _____

By: _____
Richard Atwater
National Water Resources Institute

Date: _____

By: _____
Santa Ana Watershed Project Authority

Date: _____

By: _____
Otay Water District

Date: _____

By: _____
Los Angeles Department of Water and Power

Date: _____

By: _____
City of San Diego Water Department

Date: _____

By: _____
Brian Brady – General Manager
Rancho California Water District

Date: _____

By: _____
Metropolitan Water District of Southern California

Date: _____

By: _____
City of San Bernardino Water Department

Date: _____

By: _____
Irvine Ranch Water District

Date: _____

By: _____
West Basin Municipal Water District

Date: _____

By: _____
John Rossi – General Manager
Western Municipal Water District

Date: _____

RECLAMATION

Managing Water in the West

Exhibit A

Regional Brine-Concentrate Management Study

Plan of Study

U.S. Department of the Interior
Bureau of Reclamation
Southern California Area Office
Temecula, CA

August 2007

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

1 Introduction

1.1 Background

Southern California's expanding population, commercial and residential landscape irrigation needs, and continued importance as an agricultural region of the state is, and will, place more demands on the local and regional water resources. These increasing water demands and typical semi-arid environment of southern California will strain the existing water supply, which is heavily dependent on imported water from the Owens Valley, State Water Project (SWP) and Colorado River. Reductions in imported water from the Colorado River and SWP to meet other state's water rights and environmental needs in the Bay-Delta watersheds will require diversification of the southern California water supplies.

Recycled water and desalination of ocean saltwater and brackish groundwater represent three largely untapped water supplies. These resources are potentially limited by three issues: the technology and cost to treat the incoming flow, treatment and disposal of the resulting brine-concentrate, and public outreach regarding ocean desalination impacts and recycled water use. The Bureau of Reclamation's (Reclamation) Southern California Area Office (SCAO) has been involved in efforts to coordinate regional solutions to recycled water and brine-concentrate management issues for many years. Two recent studies addressing these issues included the Southern California Water Reclamation and Reuse Study (SCCWRRS), which identified short and long-term water reclamation projects, and the Southern California Water Recycling Projects Initiative (Initiative), which built upon the partnerships cultivated through SCCWRRS to develop more focused regional and local approaches to solving water recycling issues. Many local study efforts concentrated on developing tools, funding, and review of the best methods to implement water recycling projects. One of the primary barriers to water recycling identified in the Initiative was how to manage brine-concentrate in Southern California.

Brine-concentrate management is an evolving and growing necessity as recycled and discharge water quality regulations, and groundwater recharge and Basin Plan objectives change. In addition, as new constituents of concern (COC) are identified, the need for advanced treatment processes that generate brine-concentrates for potable/industrial water supplies and receiving waters will increase. The Initiative and associated technical memorandums evaluated the knowledge database for brine-concentrate management and limitations on the existing Southern California facilities, and included an economic impact analysis for various brine-concentrate management strategies. Multiple pilot and bench scale projects testing various brine-concentrate minimization and management strategies have been implemented to date. These projects typically involve production of brine-concentrates from desalting wastewater, brackish groundwater or seawater. The Brine-concentrate Management Study will review the current projects with several possible end goals: developing one or more project(s) as a full scale demonstration pilot study; developing analytical models and research project(s) to address information gaps and model scenarios; develop general design plans for constructing a brine-concentrate facility; and/or developing models/program plans to address socio-political issues surrounding brine management

1.2 Specific Local and Regional Brine-concentrate Issues

On May 3, 2006, Reclamation in conjunction with the National Water Research Institute (NWRI) hosted a Brine-concentrate Management Workshop to identify opportunities and issues for managing concentrate in coastal and inland regions of southern California. The workshop brought together technical experts, water utility managers, and state agencies responsible for water management and regulation. Workshop attendees participated in a presentation session and group discussions to characterize coastal and inland brine-concentrate management issues. Based on the workshop conversations, the following issues were identified:

1.2.1 Inland Brine-Concentrate Issues

- Without access to a designated brine outfall such as the Santa Ana Regional Interceptor (SARI), inland areas face multiple regulatory and geographical hurdles for disposal of brine. What options exist for inland brine disposal?
- The SARI is a system designed to dispose of non-reclaimable wastewaters from the Santa Ana Watershed. The SARI's current flow is approximately 12 mgd (including 4 mgd of domestic wastewater) with an expected maximum capacity of 30 mgd around 2030. The remaining 18 mgd flow has already been allocated. Investigations are necessary to develop and promote feasible means to reduce brine-concentrate flows through secondary recovery or other technology.
- Should a regional incentive program be devised that would make it advantageous to incorporate RO system recovery enhancement technology into the existing desalination facilities?
- If zero liquid discharge (ZLD) processes are used at inland desalination facilities, what are the requirements for solids waste handling? What will it cost per ton? How many tons are expected? Where can unmarketable salts be disposed?
- Quality of water to inland desalination facilities varies widely over the year. The treatment process must be instrumented and programmed to make process changes when water quality changes. This is critical to the success and economic viability of many of the ZLD processes.

1.2.2 Coastal Brine-Concentrate Issues:

- Ocean salinity is approximately 35,000 parts per million (ppm). Ocean desalination brine-concentrate discharge is 1½ to 2 times as concentrated (43,000 to 70,000 ppm) as the surrounding ocean water. The higher concentration will create a "zone of dilution" with potential impacts to marine habitats and species. Additional research is required to analyze the potential impact of desalination and brine-concentrate discharge.
- Reducing ocean desalination discharge concentrates may involve mixing the brine-concentrate with "hot" cooling water at co-located desalination and power

plant facilities, or with treated effluent. There are potential benefits and costs associated with each option that need further exploration and research.

- What are the pros and cons / cost and benefits of centralized versus multiple small desalination facilities?
- What are some of the implications of choosing a recovery rate for seawater desalination? Maximizing product water recovery versus energy efficiency has different costs and benefits.

1.2.3 Joint Coastal-Inland Issues

- Who owns the discharge water in brine and wastewater outfalls?
- Who is responsible for the discharge water's quality and potential beneficial uses?
- How much capacity for transporting brine-concentrate to the ocean is needed in the foreseeable future? Where is the demand located? How much will it cost to install this capacity?
- Can existing wastewater outfalls be used for direct brine-concentrate discharge? If not, what other options or back-up plans exist?
- Brine production includes the concentration of existing and emerging constituents of concern (e.g. metals, perchlorate, nitrate). What are the current research and management applications for secondary treatment of brine concentrate to remove the COC's and their disposal?
- Permitting of new ocean discharge-outfall lines for brine-concentrate, brine/wastewater or wastewater is costly, time consuming and unpredictable.
- Regulatory agencies and public interest groups must be involved in brine-concentrate management to increase the likelihood of regulatory acceptance of any solution.
- The State Water Resources Control Board is in the process of amending the Ocean Plan. What impact will the proposed changes have on existing and future ocean discharges?

1.3 Goals and Objectives of the Brine-concentrate Management Demonstration: Phase I

1.3.1 Study Authorization

The Brine-concentrate Management Study is a multiyear planning study commencing in Federal Fiscal Year 2007. The Study is funded as part of the Lower Colorado River Investigations Program and will be managed by Reclamation's Southern California Area Office. This Study is authorized by Section 1603, Title XVI of Public Law 102-575, as amended, Reclamation Wastewater and Groundwater Study and Facilities Act.

1.3.2 Study Objective(s)

The goal of the study is for Reclamation and interested stakeholders to continue to facilitate regional partnerships, evaluate existing research, and pilot and bench scale projects including treatment of brine for removal of contaminants, assess existing and potential regulatory trends, and use the information to participate in the recommendation and selection of the next project phase: developing one or more project(s) as a full scale demonstration pilot study; developing analytical models and research project(s) to address information gaps and model scenarios; and/or develop general design plans for constructing a brine-concentrate facility. Additional goals of the study are to identify opportunities to build a consensus on brine-concentrate management between government, industry, and the public in an environmentally and economically sound manner. This will be completed through meetings and workshops with stakeholders, the gathering and synthesis of information on brine production, treatment, and strategies for management, which may include secondary uses of the brine, minimization by enhancing recovery from the desalination system, and methods of disposal.

2.0 Plan of Study

2.1 Introduction

The study will collect and synthesize data from a series of existing pilot and bench scale projects, review the current facility capacities, assess current brine-concentrate management trends, etc. This analysis will be used to identify the project(s) to be used in a later phase. The work will include:

- Establishment of a Brine Project Advisory Committee (PAC)
- Public Outreach
- Coastal Versus Inland Brine-concentrate Issues
- Institutional Issues
- Review and Synthesis of Current Research in Concentrate Management
- Develop Estimate of Brine-concentrate Management Capacity
- Evaluate Existing Capacity of Brine-concentrate Pipeline Capacities
- Assess Existing and Current Regulatory Issues and Trends
- Appraise a "No Action Alternative"
- Report Preparation and Summary Review
- Selection of project(s) for the next plan of study

The following sections provide scopes of work for each of these tasks as part of the Plan of Study. The study is funded for a specific Federal budget year only. Budget allocations cannot be explicitly identified until Reclamation's budget has been approved for the fiscal year.

2.1.1 Study Area

The study will cover Reclamation's Southern California Area Office Region (SCAO) including the Coachella Valley (figure 1). Stakeholders throughout the study area will be encouraged to participate.

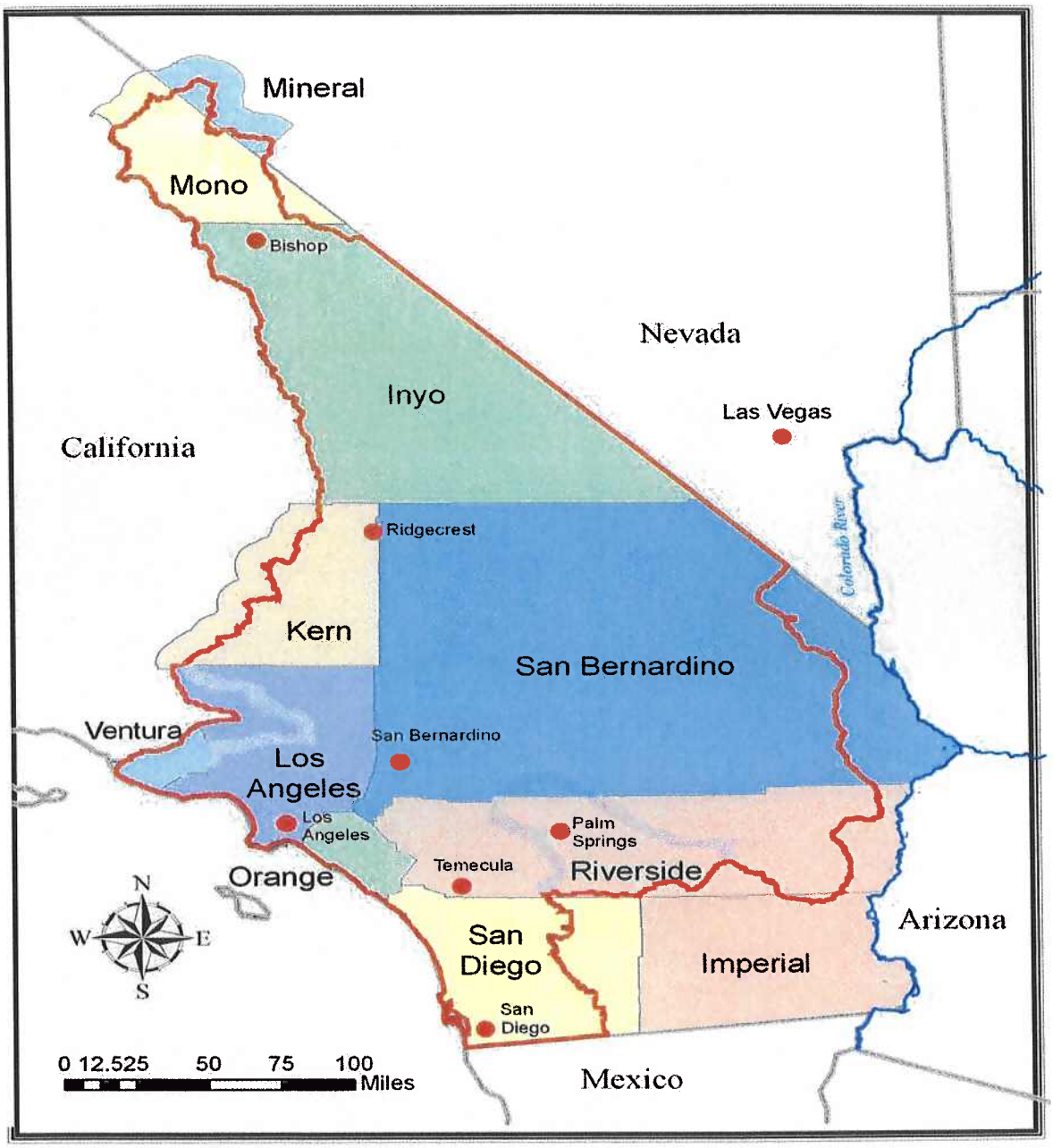


Figure 1. Brine Management Study Area.

2.2 Implementation of Project-Specific Work

The project specific work involves developing the PAC, collection and analysis of pilot project data, completion of a summary report and recommendation for the next plan of study. In addition, the budget allocation procedures may need to be revisited if agencies are not capable of meeting the deadline for obligation of Reclamation funds within a specific fiscal year or if additional Federal funds are obtained.

Task 1: Stakeholder and Project Advisory Committee

This task consists of identifying potential stakeholders, development of the PAC, and finalizing a Memorandum of Understanding (MOU) with the PAC and stakeholders. The stakeholders should include local and regional representatives from water, irrigation and wastewater districts, non-governmental organizations, the energy industry, regulatory agencies, other governmental jurisdictions (e.g. cities, counties) and the general public. The PAC will be comprised of stakeholders that become sponsoring agencies during the course of project development. The PAC and stakeholders will be involved in data supply and analysis, regulatory review, report generation and selection of the next project elements. Reclamation's development of the MOU will include a project schedule as well as additional mechanisms to track the progress and status of the project. Verifiable documentation of the project sponsor's funding commitment to the project must be supplied. The MOU will be a contractually binding document between Reclamation and the local agencies whose projects have been allocated funding as part of Phase I.

Task 2: Public Outreach

This task consists of developing a comprehensive plan to involve the public through meetings, workshops, PR events, news releases, etc. The PAC and stakeholders will be major partners in developing a consistent public message regarding the socio-economic, political, and environmental issues surrounding brine-concentrate discharge. Active engagement on a policy level and public awareness by involving a broad range of constituents in the stakeholder process is a first step.

Task 3: Identify Coastal and Inland Brine-concentrate Management Issues

This task consists of identifying the issues and constraints for brine-concentrate management in coastal and inland settings. An initial start under Sections 1.2.1 – 1.2.3 has been made and needs to be completed by the stakeholders and PAC. The major components of this task may also involve a summary of the specific issues developed from Tasks 2 and 3, and how the issues relate to coastal versus inland brine-concentrate management. Additional work should include development of different strategies to manage region specific concerns.

Task 4: Institutional Issues

This task is regarding issues about ownership and responsibility for brine-concentrate discharges once they enter a common or shared discharge facility such as SARI. The PAC and stakeholders will play key roles in identifying who owns the wastewater and brine-concentrate flows. Is it the outfall owner, the wastewater producer, the brine-concentrate discharger, or some combination of these three? Ownership also extends to who is the responsible party in transboundary issues, regulatory permitting, or meeting water quality objectives for discharges to water bodies with TMDL's? Additional institutional issues may be added as the PAC and stakeholders form.

Task 5: Estimate Need for Brine-concentrate Capacity, Treatement and Evaluate Existing Facility Capacity

This task consists of a quantitative approach to evaluate the existing brine-concentrate capacity and future needs. Information developed through SCCWRS and the Initiative will be used to accelerate this process. Several sub-tasks identify the key areas of consideration:

Capacity

Develop figures on existing brine-concentrate production capacity, location, and quality, estimates and locations of capacity needs, and planned management strategies and the potential cost for the identified strategy on planned projects. In addition, develop an estimate of the expected or forecasted regional capacity needs through 2030. If a management strategy has not been defined for a planned project(s), develop reasonable assumptions to estimate data for this study.

Data Collection

Update the information collected in the Initiative study with data on current and planned concentrate outfall capacity and location with established estimates for planned construction. The initial data collection should be made in conjunction with water districts planning such construction or in construction such as Calleguas MWD and other outfall operators.

Salt Mass and Other Constituent(s) Distribution

Estimate the mass and distribution of salt in existing and planned brine production capacity. Develop or work with existing list(s) of known constituents of concern to identify estimates of their mass and distribution in existing and planned production capacity.

Existing Facilities

Identify disposal facilities capable of accepting such waste and brine-concentrate, and find out what the cost of disposal would be per ton of salt including the shipping cost per appropriate unit of distance.

Brine Treatment

Identify treatment methods and trends for removal of COC's to create a brine suitable for discharge.

New Feasible Alternatives

Use the information from the preceding subtasks to determine if there are any feasible routes for new joint interceptor lines and develop a map of planned new facilities. This may include proposed locations for production facilities or routes for new distribution lines.

Task 6: Review and Synthesis of Brine-Concentrate Research

This task consists of evaluating past and current projects and research in brine-concentrate minimization, treatment and management. As reports are finalized on the projects, the methods, processes, results, and findings from each study will be evaluated by the PAC and stakeholders. Workshops and/or a mini-conference may be held to provide a better forum for discussion. The information will be summarized and used to guide the selection process for the next project(s). In addition, PAC and stakeholders will be encouraged to provide knowledge and data on brine-concentrate

projects initiated or completed by them or their agency to further the regional scope of this project.

Task 7: Assess Existing and Current Regulatory Issues and Trends

This task consists of reviewing and summarizing the current regulations and foreseeable future regulations controlling concentrate disposal. Additional issues include potential categorization of different brine-concentrates, offices and/or agencies involved in permitting, monitoring and enforcement, and the timeframe to obtain permits. Stakeholder involvement by current regulatory agencies should be promoted from the outset.

Task 8: No Action Alternative

This task consists of evaluating the ramifications of taking no action to address local and/or regional brine-concentrate management issues. The assumption(s) would be that each new facility would provide its own brine-concentrate disposal system or process.

Task 9: Report Preparation and Summary Review

This task consists of preparing the information collected in Tasks 1-7 into a formal report to be presented to the PAC and stakeholders. Drafts would be provided for an initial review and comment period. The report would be used as part of the selection vehicle for the next project phase(s).

3.0 Project Approach

The PAC is responsible for establishing responsibilities for study components. They may decide to contract all or parts of the study to outside entities. Study partners will share monetary and data sources to complete study components. Workshops and open meetings will be used to gather input from partners and interested parties.

4.0 Project Management

Reclamation SCAO will coordinate the study with technical representation from Reclamation's Technical Service Center (TSC). If it is determined that a contract is necessary for any portion of the study, then SCAO will serve as the contracting entity. SCAO will serve as the financial secretary for the study, keeping track of matching

contributions of cash and/or in-kind services. Distribution of funding will be carried out in a fiscally responsible manner. The PAC will elect a coordinator to directly work with Reclamation and be responsible for assigning meeting and organizational tasks to its members. This is to include organizing workshops, gathering, and compiling information, and preparation of reports in conjunction with Reclamation. The PAC will share monetary and other resources to complete the study objectives.

5.0 Project Participants

This study shall be carried out with the assistance of the PAC and other interested organizations. It is anticipated that the members of the PAC will participate on a cost sharing basis with Reclamation to fund this study and will provide cash or in-kind contributions to support any workshops and meetings that will be required.

6.0 Project Deliverables

A report of data, assumptions, findings, and conclusions generated through accomplishment of the study will be submitted for review. The Reclamation SCAO website – http://www.usbr.gov/lc/socal/ will host the final reports for work funded through the study. Reports on other research will be available from the funding organization and/or the authors. All previous reports on the SCCWRRS and Initiative are available from Reclamation's SCAO.

7.0 Planning: Next Steps

Based on the results of the Phase I study, the PAC and stakeholders will prioritize the next phase of the Brine-Concentrate Management Study. Some initial discussion for the next project phase(s) should consider demonstration project(s), analytical modeling and research project(s), general design plans for constructing a brine-concentrate facility, and/or developing models/program plans to address socio-political issues surrounding brine management. The following sections outline potential features of continuing projects in coastal versus inland areas:

Inland

Concepts for an inland project have two aspects: technical and economic. Technical features include:

- Outreach: The demonstration unit must be designed to be a technological showcase and to be entirely reliable. It will be a showcase for other water districts looking into brine-concentrate minimization and ZLD options.
- Monitoring: During the demonstration, all regulated and emerging contaminants will be monitored in the feed, product, and waste products to determine their fate.
- Process Instrumentation: The process should be fully instrumented and automated to anticipate changes in water composition from inlet sources. For well water, changes in chemistry are driven by the combination of wells that are on line and somewhat by increased precipitation. The project must determine the best point in the process for monitoring to predict concentrate composition changes that may impact the precipitation process.

Economic aspects of inland brine management may include:

- Transportation or Evaporation: Options for inland brine are to pipe it to the coast in a brine line, or evaporate it using some combination of processes. Both alternatives are expensive. It is necessary to document the estimated cost of both options to facilitate a choice of one over the other.
- Water Banking: See Task 4. Additional details for inland issues may include providing "credits" for each existing desalination facility coupled with their current capacity in the SARI line. Construction of another desalination facility would require the owner to purchase "credits" from existing users on the SARI line. The purchase price for capacity would need to pay for installation of recovery enhancement technology to reduce existing SARI line demand.

Coastal

Current project proposals in coastal areas revolve around seawater desalination. The goal(s) for this study would be to develop recommendations for a brine-concentrate management strategy for seawater desalination facilities. The environmental impacts of outfalls are a key issue that need addressed:

- Review and compare the environmental effects of wastewater versus desalination outfall operations. Specific issues should include volume of outfall, and outfall types (e.g. subsurface and above surface)
- Develop recommendations and use situations for acceptable outfalls types

- Establish cost estimates for each outfall method

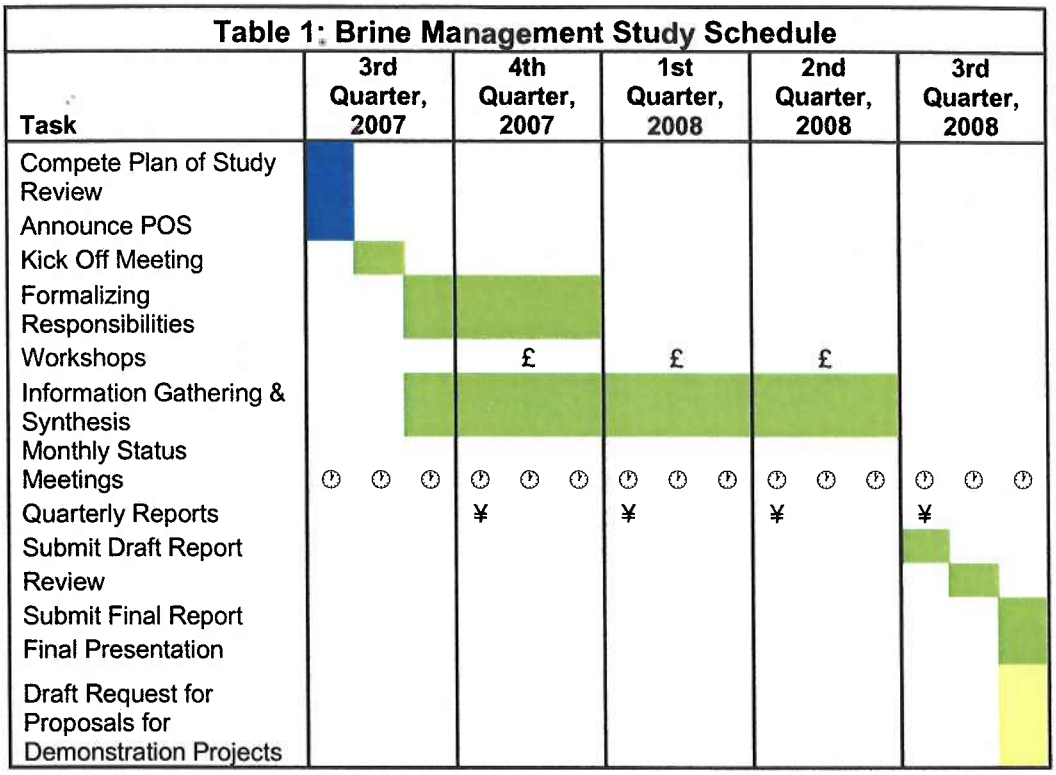
Brine-concentrate Credit Program

Consider the efficacy and perceived benefit of developing a cost-sharing scheme to encourage brine-concentrate producers to incorporate brine volume minimization and/or ZLD technology into their processes. The cost-sharing may be similar in type (but not scale initially) as the carbon trading program used to control the output of greenhouse gases. The carbon trading program is a "credit" driven concept that could be a model for creating a system to calculate and trade brine-concentrate credits related to minimizing or eliminating the output of brine-concentrate. The value of credits would be tied to such issues as the cost of constructing processing facilities, pipelines, volume of discharge, distance from the coast, etc. Other items to address may include program marketing, enforcement, and management.

8.0 Project Schedule

The anticipated timeframe for project study completion is shown in Table 1. The start date is the initial stakeholder meeting scheduled for June 13, 2007. Stakeholder meetings, workshops and report deliverables are shown with a study deliverable date of the third quarter of 2008. A detailed schedule will be discussed and established during the first 2-3 meetings of the stakeholders and PAC.

Table 1. Estimated Project Timeline



9.0 Budget

The budget for the first phase of this study (Table 2) will be determined by the PAC depending on the availability of financial resources. Tasks to be covered by the budget include:

- Form the Project Advisory Committee, recruit partners
- Initiate contractual arrangements
- Plan and coordinate workshops
- Information gathering & synthesis
- Quarterly Reports/Status Meetings
- Draft Reports & Review
- Final Report & Review
- Final Presentation
- Draft Request for Proposals for Phase II Projects

Table 2. Estimated Project Budget

Estimated Budget Allocation					
Federal Budget Year	Regional Work				
	Total Budget	USBR Share	PAC Share		Phase
			Total	Per Agency[1]	
2007	$100,000	$50,000	$50,000	$5,000	
2008	$250,000	$125,000	$125,000	$12,500	I
2009	$1,000,000	$500,000	$500,000	$50,000	
2010	$1,000,000	$500,000	$500,000	$50,000	
2011	$100,000	$50,000	$50,000	$5,000	II
Total	**$2,450,000**	**$1,225,000**	**$1,225,000**	**$122,500**	

Note:

[1] PAC agency share based on 10 PAC members

EXHIBIT B

Brine Executive Management Team	Representative	Alternate
Inland Empire Utilities Agency	Rich Atwater	
Coachella Valley Water District	Dan Charlton	
County Sanitation Districts of Los Angeles County	Erika DeHollan	
Sweetwater Authority	Michael Garrod	
California Department of Water Resources	Fawzi Karajeh	Jennifer Wong
San Diego County Water Authority	Cesar Lopez	
Orange County Sanitation District	Jim Burror	
Central Basin Municipal Water District	Art Aguilar	
Municipal Water District of Orange County	Richard Bell	
Southern California Salinity Coalition	Jim Mosher	
Santa Ana Watershed Project Authority	Mark Norton	
Otay Water District	Jim Peasley	
Los Angeles Department of Water and Power	Bob Prendergast	
City of San Diego Water Department	Surraya Rashid	
Rancho California Water District	Perry Louck	
The Metropolitan Water District of Southern California	Warren Teitz	
City of San Bernardino Water Department	Andy Coady	
Irvine Ranch Water District	John Hills	
Western Municipal Water District	Fakhri Manghi	
West Basin Municipal Water District	Uzi Daniel	

STUDY BUDGET AND SCHEDULE:

Table 1: Brine Management Study Schedule (FFY)

Task	2007	2008				2009			
Kick Off Meeting	*								
Draft Plan of Study									
Complete Plan of Study									
Formalizing Responsibilities									
Workshops			□	□	□	□	□		
Information Gathering & Synthesis									
Monthly Status Meetings	🕐 🕐 🕐	🕐 🕐 🕐	🕐 🕐 🕐	🕐 🕐 🕐	🕐 🕐 🕐	🕐 🕐 🕐	🕐 🕐 🕐	🕐 🕐 🕐	🕐 🕐 🕐	🕐 🕐 🕐
Quarterly Reports			□	□	□	□	□		
Submit Draft Report									
Review Draft Report									
Submit Final Report									
Final Presentation									
Draft RFP for Phase II Projects									

Table 2: Estimated Budget Allocation

Federal Budget Year(s)	Regional Work				
	Total Budget	USBR Share	Cooperating Agency Share		Phase
			Total	Per Agency[1]	
2007	$100,000	$50,000	$50,000	$5,000	I
2008 & 2009	$250,000	$125,000	$125,000	$12,500	
Total	**$350,000**	**$175,000**	**$175,000**	**$17,500**	

[1] Cooperating agency share based on 10 cooperating agency members

EXHIBIT A

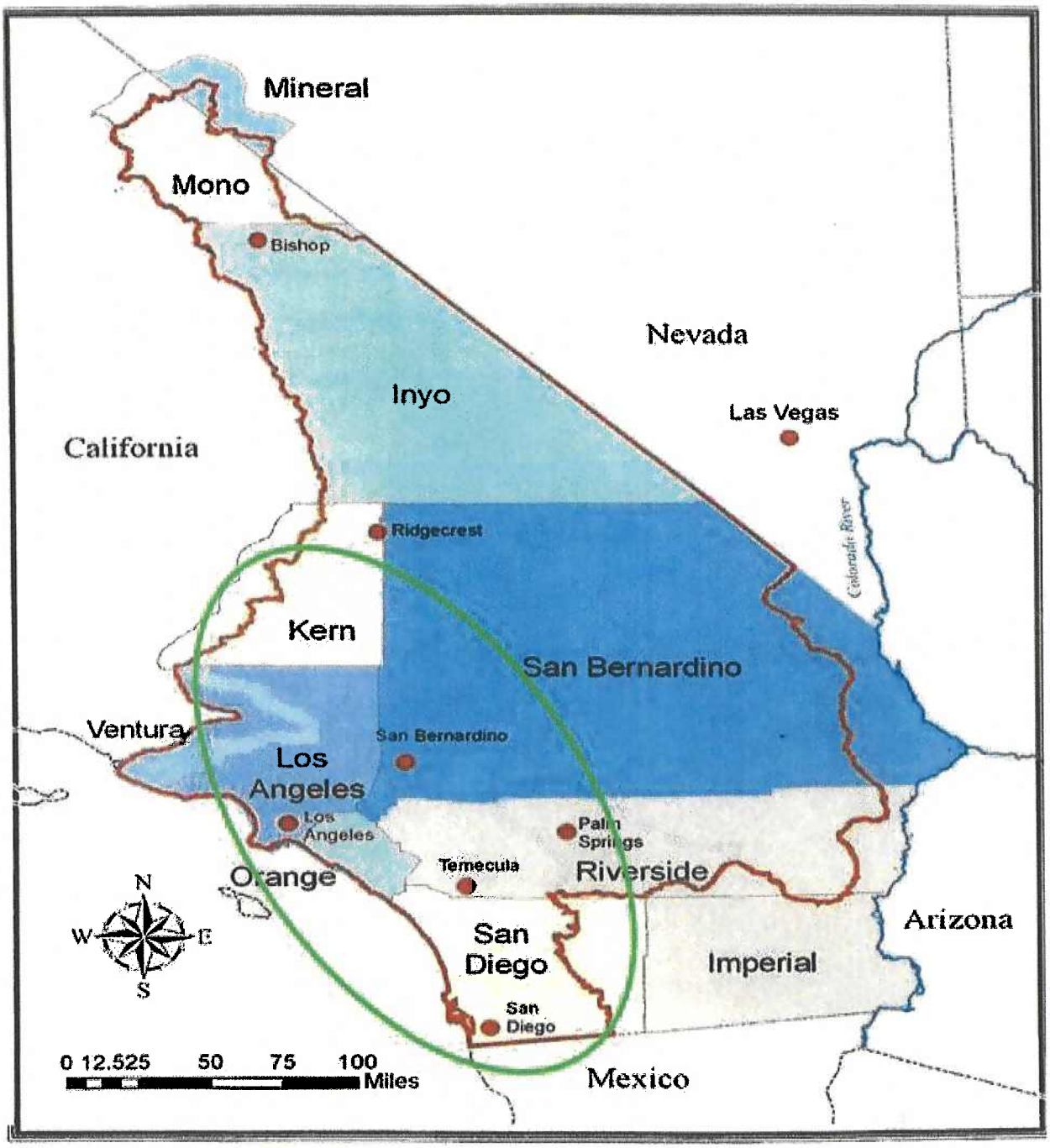


Figure 1. Brine Management Study Area.

EXHIBIT B

ANALYSIS continued:

- Imported water accounts for the majority of Southern California's water consumption. The reliability of imported water is decreasing for a variety of reasons, such as an increase in population growth and development of water rights for areas outside of our region, environmental impact concerns, and long-term drought forecasts in California and southwestern United States, leading to overall reductions in available water quantity and storage.

- Recycled water, ocean desalination and brackish groundwater desalination are affected by three key issues: (1) the technology and cost to create a potable water source, (2) public acceptance and support for ocean desalination and recycled water reuse, and (3) disposal of the brine-concentrate. This latter issue is a potential limiting factor to fully utilize these water supplies. Regulations and basin plan objectives governing receiving waters will drive the need for advanced treatment processes that create brine-concentrates suitable for disposal. The Study Agreement will be accomplished in two phases.

- Phase 2 will implement the Phase 1 project recommendation(s) of developing one or more full scale demonstration pilot projects, developing analytical models or research project(s) to address information gaps and model scenarios, and/or develop general design plans for constructing a brine-concentrate facility. Additional project meetings and workshops will be used to identify future Phase 2 partners and opportunities to build a consensus on brine-concentrate management between government, industry, and the public in an environmentally and economically sound manner.

AGENDA ITEM 5

STAFF REPORT

TYPE MEETING:	Regular Board	MEETING DATE:	December 5, 2007
SUBMITTED BY:	Hossein Juybari Senior Civil Engineer	PROJECT/ SUBPROJECT:	P2466 01102 DIV. NO. 5
	Ron Ripperger Engineering Manager		
APPROVED BY: (Chief)	Rod Posada for Chief, Engineering		
APPROVED BY: (Asst. GM):	Manny Magaña Assistant General Manager of Engineering and Operations		
SUBJECT:	Ground Lease and Joint Use Agreement with the San Miguel Consolidated Fire Protection District for the Regional Training Center		

GENERAL MANAGER'S RECOMMENDATION:

That the Otay Water District's (District) Board of Directors approve the proposed Ground Lease and Joint Use Agreement with the San Miguel Consolidated Fire Protection District (San Miguel Fire District) for the Regional Training Center and authorize the General Manager to execute the agreement (see Exhibit A for project location).

COMMITTEE ACTION:

Please see Attachment A.

PURPOSE:

That the Board authorizes the General Manager to enter into a Ground Lease and Joint Use Agreement (see Attachment B) with the San Miguel Fire District for the lease and joint use of the Regional Training Center.

ANALYSIS:

During calendar year 2006, the District Staff and the San Miguel Fire District Staff had several discussions on the creation of a Regional Training Facility. Preliminary discussions indicated that both agencies would benefit and could share resources and build a training facility at the District's Regulatory Site, located at 11880 Campo Road, Spring Valley, California. During calendar year 2007, Staff from both agencies reached a mutual agreement for the Training

Facility. This training facility will be used by the District and the San Miguel Fire District for personnel training purposes. The District is also planning to use a portion of the proposed facility as a permanent fully equipped Emergency Operations Center (EOC) in the future.

The San Miguel Fire District is developing the training center and desires to lease a 2.7 acre site to construct, develop, and operate a regional training center. The proposed 2.7 acre training facility site is located within the District's 70 acre Regulatory Site. The Training Center will be comprised of separate training areas to include confined space training, trench and shoring training, and a fire department training facility (burn building).

The project is located in an area of the Regulatory Site that was surveyed during the environmental review for the 640 Reservoirs project. This area was designated as "disturbed," which means that building the facility in this area will have a minimal effect on the environment. A Mitigated Negative Declaration (MND) will be prepared for the project and will use some of the information obtained for the 640 Reservoirs MND. Some environmental concerns that may have to be addressed and mitigated for are traffic, noise, cultural resources, and biological resources. The biological resources are of concern because of an area of Coastal Sage Scrub (critical habitat for the endangered coastal California gnatcatcher) that lines the access road to the site. The intent of the design for the new access road is to have no impact on this area, but a general biological survey will be conducted to assess any potential impacts.

Jones and Stokes, the District's on-call environmental consultant, has been given a Notice to Proceed to provide the environmental services and documentation for the project.

FISCAL IMPACT:

A CIP budget was established during the FY 2008 budget process so that Otay staff can charge their time to the project. The current approved total budget for the Regional Training Center (P2466) is $200,000.00. Based on the financial budget, the Project Manager has determined that the budget is sufficient to support the project. San Miguel Fire District is responsible for the costs associated with the design and construction of the training center.

Finance has determined that funding is available from the Expansion and Betterment Funds.

STRATEGIC GOAL:

This project supports the District's Mission statement, "To provide the best quality of water and wastewater services to the customers of Otay Water District, in a professional, effective, efficient, and sensitive manner...". This project fulfills the District's strategic goals to "Train and Develop at all levels."

LEGAL IMPACT:

None.

for M. Hatton,
General Manager

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HJ/RP:jf

Attachments: Attachment A
Attachment B
Exhibit A

ATTACHMENT A

SUBJECT/PROJECT:	Ground Lease and Joint Use Agreement with the San Miguel Consolidated Fire Protection District for the Regional Training Center
P2466-01102	

COMMITTEE ACTION:

The Engineering, Operations, and Water Resources Committee reviewed this item at a meeting held on November 20, 2007. The Committee supported Staff's recommendation.

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

GROUND LEASE
AND JOINT USE AGREEMENT
(REGIONAL TRAINING CENTER – SAN DIEGO COUNTY)

This GROUND LEASE AND JOINT USE AGREEMENT (this **"Lease"**) is made as of _____, 2007 (**"Effective Date"**) by and between the OTAY WATER DISTRICT, a municipal water district organized and existing pursuant to the provisions of the Municipal Water District Law of 1911, commencing with Section 71000 of the California Water Code (**"OWD"**), and SAN MIGUEL CONSOLIDATED FIRE PROTECTION DISTRICT, a consolidated fire protection district established pursuant to Section 13812 of the Health and Safety Code and the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, commencing with Section 56000 of Title 5 of the Government Code (**"San Miguel"**) with respect to the following facts:

RECITALS

A. OWD is the owner in fee simple of that certain real property located at 11880 Campo Road, within the County of San Diego, State of California, which real property is commonly known and referred to by the Parties as the Regulatory Site (the **"Real Property"**).

B. San Miguel desires to lease a portion of the Real Property, as depicted and more particularly described on **Exhibit A and B**, attached hereto and incorporated herein by this reference (the **"Premises"**), from OWD.

C. San Miguel desires to lease the Premises to construct, develop and operate thereon a state-of-the-art regional training center that will include the Improvements (as defined below) and offer the Training Programs (as defined below) and services more particularly described in this Lease (collectively, the **"Project"**), all pursuant to the terms and conditions set forth herein.

D. OWD believes that it is in the best interest of the District and the community to lease the Premises to San Miguel for the purposes and under the conditions specified herein.

AGREEMENT

NOW, THEREFORE, in consideration of the terms and conditions of this Lease, OWD and San Miguel agree as follows:

1. LEASE OF THE PROPERTY.

For and in consideration of the rents, covenants, and agreements hereinafter set forth to be paid, kept, performed and observed by San Miguel, OWD hereby leases to San Miguel, and San Miguel hereby hires and leases from OWD the Premises.

2. LEASE TERM AND TERMINATION.

2.1 **Initial Term.** Subject to the terms and conditions of this Lease, San Miguel hereby leases from OWD and OWD hereby leases to San Miguel the Premises for an initial term (the **"Initial Term"**) commencing on the Effective Date and ending on the calendar date that is thirty (30) calendar years later, unless this Lease is sooner terminated as provided herein.

2.2 **Optional Term.** At the end of the Initial Term, San Miguel is granted the option to extend this Lease for an additional twenty (20) calendar years (the **"Optional Term"**) provided that, during the Initial Term, the following conditions are met: (i) San Miguel has completed the Improvements (as defined below) with due diligence and within a reasonable time; (ii) San Miguel is in actual occupancy of the Premises and is maintaining and operating the Improvements for the Training Programs in accordance with the terms hereof; (iii) San Miguel has timely paid any loan payments, rent and other financial obligations relating to the Improvements, as they become due; and (iv) San Miguel is not in default of any of the terms, covenants and conditions of this Lease.

2.3 **Termination.** This Lease may be terminated as follows:

a. By OWD, upon ninety (90) days written notice to San Miguel, in the event that the Premises becomes subject to any law or regulation that prohibits, or makes impracticable, the continued operation of the Improvements in the manner contemplated hereunder.

b. By either San Miguel or OWD, upon sixty (60) days written notice to other party, if San Miguel decides to abandon the Premises or not to continue using the Premises for the purposes specified herein or if San Miguel attempts to sell or transfer the operation of the Improvements to another entity without OWD's prior written consent.

It is understood and agreed that, upon termination of this Lease, for any reason, San Miguel shall surrender the Premises and Improvements to OWD in substantially their condition on the date construction is completed; reasonable wear and tear and any other conditions acceptable to OWD are exempted.

3. IMPROVEMENTS AND PROJECT.

3.1 **Construction of Improvements**. San Miguel shall, at its sole cost and expense, cause the construction of the following improvements, facilities and related amenities, as depicted and further described on **Exhibit C** attached hereto and incorporated herein by reference (the **"Improvements"**), on or prior to the Completion Date (as defined below):

Brief Description	**Approximate Area (Sq. Ft.)**
Administration and Social Area	4,400
Burn Building	1,550
Confined Space Training Area	2,700
Trench Training Area	600
Helicopter Pad Area	350

	SUBTOTAL:	9,550
Landscaping		As needed
Parking facilities		About 30 spaces
Access Road Improvements		

3.2 **Pre-Construction Requirements**. Prior to commencing any construction work in connection with the Improvements, San Miguel shall: (i) obtain all permits required by law in connection with the construction of the Improvements; (ii) obtain the approval of the Board of Directors of OWD in connection with any Shared Use Facilities (as defined herein); (iii) make payment to OWD for any and all expenditures incurred by OWD in connection with any required environmental studies, permits or approvals, including but not limited to costs incurred by OWD in connection with requirements of the California Environmental Quality Act, commencing with Section 21000 of the Public Resources Code, as hereafter amended (**"CEQA"**); (iv) make payment to OWD for any other costs or expenses incurred by District in connection with the Improvements for which San Miguel has agreed in writing, after the Effective Date of this Agreement, to reimburse OWD; and (v) provide copies to OWD of any final approvals required for the Improvements.

3.3 **Completion Date**. The Improvements, in substantially the form of the design drawings and specifications derived from the conceptual site and floor plans approved by OWD prior to the commencement of construction, shall be completed, ready for occupancy and operational on or prior to _____, 2009 (the **"Completion Date"**).

3.4 **As Builts**. On or prior to the date that is sixty (60) calendar days from the Completion Date, San Miguel will provide copies of the final "as-built" drawings of any water facilities to OWD.

3.5 **Cost**. The cost of planning, permitting, designing and constructing all Improvements, and all public infrastructure facilities relating to the Project or required by any federal, state or local unit of government having jurisdiction over, or providing services to, the Project shall be borne solely by San Miguel.

3.6 **Notice of Construction Meetings**. Except only for emergency meetings, if any, San Miguel agrees to give not less than two weeks notice to OWD of the date, time and place of each construction-related meeting. San Miguel agrees to provide notice of emergency meetings as soon as one such meeting is called. OWD may choose to attend any construction-related meeting at its sole discretion.

4. USE OF, AND ACCESS TO, THE PREMISES AND IMPROVEMENTS.

4.1 **Use of the Premises**. San Miguel covenants and agrees for itself, its successors and assigns, that during the Term, unless otherwise consented to by OWD in writing, the Premises shall be devoted to and used for the construction and development of the Improvements and the operation of the Training Programs as further set forth herein. San Miguel shall be responsible for using, and causing its guest to use, the Premises and Improvements in a manner that does not adversely affect OWD's facilities or operations.

4.2 **Access Easement**. OWD hereby grants San Miguel permission to access the Premises from an agreed upon location at the Property line and following an agreed upon path to the Premises. San Miguel shall be solely responsible, including all costs in connection therewith, for obtaining any access easement or permission from the owners of adjacent real property to the Property line.

In addition, San Miguel understands that the owner of certain commercial real property through which the Property is currently accessed plans certain renovations to its property that may result in damages to or the relocation of OWD's current access. San Miguel agrees to work with OWD and to the extent necessary the owner of said property to ensure continuous and satisfactory access by OWD to the Property. It is further understood and agreed that San Miguel will be responsible for obtaining any additional easements or permissions it requires from the owner of the commercial property to access the Premises and utilize the Improvements and will be responsible for all costs associated with such easements or permissions.

4.3 **Purpose and Use of the Improvements**. The Improvements shall be used primarily for training programs and services intended to benefit San Miguel, OWD and the region and for any other uses appropriate for the Improvements, a representative list of such programs is attached hereto as **Exhibit D** (collectively, the **"Training Programs"**). Posting of commercial signage, in such form and size and for such time period as mutually agreed to by San Miguel and OWD, by or on behalf of sponsors providing construction funding to San Miguel for the costs of the Improvements is expressly permitted as a use appropriate for the Improvements. OWD reserves the right to, on an annual basis, on or prior to the anniversary date of the Effective Date of this Lease, review and comment upon and/or veto any other services authorized or provided by San Miguel at the Premises.

4.4 **OWD Use – Shared Use Facilities**. OWD and San Miguel agree that OWD shall be allowed to make use of the Premises and the Improvements in the following manner:

a. Reserved Use. OWD staff, volunteers, employees, agents or invitees may reserve the use of any Improvements, other than private offices of San Miguel personnel, during hours of non-operation by San Miguel, at no charge, upon the conditions agreed upon by San Miguel and OWD.

b. Shared Use. OWD staff, volunteers, employees, agents or invitees shall have access to and be able to use the Improvements at any time upon reasonable notice of not less than 24 hours to San Miguel and may participate in the Training Programs pursuant to any conditions agreed upon by OWD and San Miguel. OWD is planning to use one of the administration buildings conference rooms or class rooms as an Emergency Operation Center (EOC).

c. Other Use. Nothing in this Agreement shall be construed to prohibit or prevent the use of the Premises or Improvements by OWD's staff, volunteers, employees, agents or invitees in any manner and on the conditions normally applicable to any person in the community.

4.5 **Accessibility of the Premises**. Once completed, the Improvements and Premises shall be accessible to OWD from the Real Property, but OWD may require San Miguel to fence

all or a portion of the Premises to prevent San Miguel's employees, guest or invitees from accessing District facilities on the Real Property. In such case access can be through one or more gates satisfactory to both parties. Keys to the gate(s) shall only be provided to OWD and San Miguel personnel designated by the parties.

4.6 **Operation in Compliance with Requirements**. San Miguel's use and operation of the Improvements and the Premises shall also be subject to any requirements or conditions governing the use and operation of OWD property. If a conflict arises in connection with any such requirement and any other obligation of San Miguel, San Miguel shall inform OWD and the parties shall determine which obligations San Miguel must fulfill.

5. RENT.

5.1 **Net Lease**. Except as otherwise provided in this Lease, it is the intent of the parties that San Miguel shall pay all costs, taxes, charges, and expenses of every kind and nature against the Premises and the Improvements which may arise or become due during the Term.

5.2 **Rent.** During the Initial Term of this Lease, San Miguel shall pay to OWD as rent (**"Rent"**) the amount of Ten dollars ($10.00) per year. The Three Hundred dollars ($300.00) due for the Initial Term shall be due and payable in full on the Effective Date. Prior to the commencement of the Optional Term, if any, San Miguel shall pay to OWD as Rent an amount agreed upon by OWD and San Miguel.

6. UTILITIES AND OTHER OPERATIONAL EXPENSES.

6.1 **Charges and Expenses**. San Miguel shall pay or cause to be paid, all charges for gas, electricity, water, sewer, garbage collection, telephone, internet, cable television, and any other services or utilities furnished to the Premises in connection with the Improvements and/or Training Programs and/or any use thereof. To the extent any sewer use charges, tap-in fees, capacity fees, permit fees, hookup or similar charges or assessments for utilities concerning the Premises or the Improvements are levied against the Real Property during the Term, San Miguel agrees to pay OWD for such charges promptly upon request. San Miguel shall provide for separate utility connections for all utilities used on the Premises, to the extent required by law, OWD or the service provider.

6.2 **Taxes**. San Miguel covenants and agrees to pay before delinquency any real or personal property taxes, assessments and liens of any kind and nature assessed during the Term against any real or personal property within the Premises.

7. OWNERSHIP OF IMPROVEMENTS, FIXTURES AND FURNISHINGS.

7.1 **Ownership During Term**. All Improvements constructed on the Premises by San Miguel, as permitted by this Lease, shall, during the Term, be and remain the property of San Miguel; provided, however, that: (i) San Miguel shall have no right to waste the Improvements, or to destroy, demolish or remove any Improvements except as otherwise permitted pursuant to this Lease or approved by OWD pursuant to a written amendment to this Lease; and, (ii) San Miguel's rights and powers with respect to the Improvements are subject to the terms and limitations of this Lease.

7.2 **Ownership at Termination**. Upon termination of this Lease for any reason whatsoever, title to all Improvements, fixtures and furnishings on the Premises and/or any other portion of the Real Property shall, without compensation to San Miguel, automatically vest in OWD free and clear of all liens, encumbrances, and claims to or against them by San Miguel or any third person, firm, or entity, including but not limited to any mortgagee or lender. San Miguel agrees to execute a quitclaim deed and do all things necessary to transfer clean title to the Premises and Improvements to OWD. San Miguel shall transfer the Premises and Improvements in good, clean, and safe working condition to OWD.

8. INDEMNIFICATION: FAITHFUL PERFORMANCE.

8.1 San Miguel shall not suffer or permit any liens to be enforced against the fee simple estate in reversion of OWD as to the Premises and the Improvements, nor against San Miguel's leasehold interest, for any reason, including but not limited to by reason of work, labor, services, or materials supplied or claimed to have been supplied to the Premises, or any part thereof, through or under San Miguel. San Miguel agrees to defend, indemnify, and hold OWD and City and their respective trustees, officers, officials, employees, agents, and representatives, harmless against such liens, claims, or actions, including attorney's fees and costs. If any such lien shall at any time be filed against the Real Property, Premises and/or Improvements, San Miguel shall, within thirty (30) days after notice to San Miguel of the filing thereof, cause the same to be discharged of record; provided, however, that San Miguel shall have the right to contest the amount or validity, in whole or in part, of any such lien by appropriate proceedings but in such event, San Miguel shall notify OWD and promptly bond such lien in the manner authorized by law with a responsible surety company qualified to do business in the State of California or provide other security acceptable to OWD. San Miguel shall prosecute such proceedings with due diligence.

8.2 Nothing in this Lease shall be deemed to be, nor shall be construed in any way to constitute, the consent or request of OWD, express or implied, by inference or otherwise, to any person, firm or corporation for the performance of any labor or the furnishing of any materials for any construction, rebuilding, alteration or repair of or to the Improvements, or any part thereof.

8.3 Prior to commencement of construction of the Improvements, or any repair or alteration thereto (other than emergency repair or alteration), San Miguel shall give OWD not less than thirty (30) days advance notice in writing of intention to begin said activity in order that nonresponsibility notices may be posted and recorded as provided by state and local laws. It is agreed that San Miguel may provide reasonable notice of not less than twenty-four (24) hours in case of an emergency repair or alteration.

9. MAINTENANCE AND REPAIR; CAPITAL REPLACEMENT RESERVE.

9.1 **Maintenance and Repair**. OWD places prime importance on quality maintenance to ensure the safety and well being of its staff, visitors and volunteers and any other person using the Improvements and/or participating in any Training Programs. Except as otherwise provided in this Lease, San Miguel assumes full responsibility for the construction, operation and maintenance of the Improvements, without any expense to OWD, and agrees to perform all repairs and replacements necessary to maintain and preserve the Improvements and

the Premises in a clean and safe condition reasonably satisfactory to OWD and in compliance with all applicable laws. Normal wear and tear of the Improvements will be acceptable to OWD assuming San Miguel regularly constructs and performs all necessary repairs to maintain the Improvements in first-class condition, similar to their condition on the date the Improvements are accepted from the contractor. In addition, San Miguel shall keep the Premises and the Improvements free from all graffiti and any accumulation of debris or waste material.

9.2 San Miguel hereby waives all rights to make repairs or to cause any work to be performed at the expense of OWD as provided for in Section 1941 and 1942 of the California Civil Code.

10. ENVIRONMENTAL MATTERS.

10.1 **Definitions**. For the purposes of this Lease, unless the context otherwise specifies or requires, the following terms shall have the meanings herein specified:

a. The term "Hazardous Materials" shall mean any substance, material, or waste which is or becomes regulated by any local governmental authority, the County of San Diego, the State of California, regional governmental authority or the United States Government, including, but not limited to, any material or substance which is (i) defined as a "hazardous waste," "extremely hazardous waste," or "restricted hazardous waste" under Section 25115, 25117 or 25122.7, or listed pursuant to Section 25140 of the California Health and Safety Code, Division 20, Chapter 6.5 (Hazardous Waste Control Law)), (ii) defined as a "hazardous substance" under Section 25316 of the California Health and Safety Code, Division 20, Chapter 6.8 (Carpenter-Presley-Tanner Hazardous Substance Account Act), (iii) defined as a "hazardous material," "hazardous substance," or "hazardous waste" under Section 25501 of the California Health and Safety Code, Division 20, Chapter 6.95 (Hazardous Materials Release Response Plans and Inventory), (iv) defined as a "hazardous substance" under Section 25281 of the California Health and Safety Code, Division 20, Chapter 6.7 (Underground Storage of Hazardous Substances), (v) petroleum, (vi) friable asbestos, (vii) polychlorinated byphenyls, (viii) listed under Article 9 or defined as "hazardous" or "extremely hazardous" pursuant to Article 11 of Title 22 of the California Administrative Code, Division 4, Chapter 20, (ix) designated as "hazardous substances" pursuant to Section 311 of the Clean Water Act (33 U.S.C. '13-17), (x) defined as a "hazardous waste" pursuant to Section 1004 of the Resource Conservation and Recovery Act, 42 U.S.C. '6901 *et seq.* (42 U.S.C. '6903) or (xi) defined as "hazardous substances" pursuant to Section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. '9601 *et seq.*

b. The term "Hazardous Materials Contamination" shall mean the contamination (whether presently existing or hereafter occurring) of the Improvements, facilities, soil, groundwater, air or other elements on, in or

of the Real Property or the Premises by Hazardous Materials, or the contamination of the buildings, facilities, soil, groundwater, air or other elements on, in or of any other property as a result of Hazardous Materials at any time (whether before or after the Date of Lease) emanating from the Premises.

c. The term "Governmental Requirements" shall mean all past, present and future laws, ordinances, statutes, codes, rules, regulations, orders and decrees of the United States, the state, the county, the city, or any other political subdivision in which the Premises are located, and any other state, county city, political subdivision, OWD, instrumentality or other entity exercising jurisdiction over OWD, San Miguel or the Premises.

10.2 **San Miguel's Environmental Indemnity**. San Miguel shall save, protect, defend, indemnify and hold harmless OWD, its, trustees, officers, officials, employees, volunteers, assigns, successors in interest and agents from and against any and all liabilities, suits, actions, claims, demands, penalties, damages (including, without limitation, penalties, fines and monetary sanctions), losses, costs or expenses (including, without limitation, consultants' fees, investigation fees, reasonable attorneys fees and costs and remedial and response costs) (the foregoing are collectively referred to as "Liabilities" in this paragraph) which may now or in the future be incurred or suffered by OWD and its, trustees, officers, officials, employees, or agents by reason of, resulting from, in connection with, or existing in any manner whatsoever as a direct or indirect result of (1) San Miguel's use, generation, discharge, emission or release from the Premises of any Hazardous Materials or Hazardous Materials Contamination prior to or after the commencement of this Lease, including any Liabilities incurred under any Governmental Requirements relating to such Hazardous Materials or Hazardous Materials Contamination, (2) the performance by San Miguel of any acts or omissions with respect to use or operation of the Premises, the Improvements or the Training Programs, including, but not limited to, the performance of any act required by this Lease, and (3) the performance by OWD of any act required to be performed by San Miguel under this Lease. San Miguel's obligations under this Section 10.2 shall survive the expiration or early termination of this Lease and shall not merge with any grant deed.

10.3 **OWD's Covenant Regarding Hazardous Materials.** OWD covenants and represents that, as of the Effective Date of this Lease, there are no Hazardous Materials or Hazardous Materials Contamination at the premises. San Miguel may, at its sole cost and expense, conduct a Phase I Environmental Site Assessment ("ESA") and, if so recommended in the Phase I ESA, a Phase II ESA. OWD agrees to remediate any Hazardous Materials Contamination uncovered by the Phase II ESA, at OWD's sole cost and expense.

10.4 **Duty to Prevent Hazardous Material Contamination**. San Miguel shall take all necessary precautions to prevent the release of any Hazardous Materials into the environment. Such precautions shall include compliance with all Governmental Requirements with respect to Hazardous Materials. In addition, San Miguel shall install and utilize such equipment and implement and adhere to such procedures as are consistent with the standards generally applied by similar projects in San Diego County, California as respects the disclosure, storage, use, removal, and disposal of Hazardous Materials.

10.5 **Obligation of San Miguel to Remediate Premises**. In the event of contamination of the Premises arising directly or indirectly from San Miguel's use, generation, discharge, emission or release upon, about or beneath the Premises of any Hazardous Materials occurring during the Term, San Miguel shall, subject to OWD's rights herein, at its sole cost and expense, promptly take (i) all actions properly required by any federal, state, regional, or local governmental or political subdivision requirements and (ii) all actions necessary to make full economic use of the Premises for the purposes contemplated by this Lease. Such actions shall include, but not be limited to, the investigation of the environmental condition of the Premises, the preparation of any feasibility studies or reports and the performance of any cleanup, remedial, removal or restoration work. San Miguel shall take all actions necessary to promptly restore the Premises to an environmentally sound condition for the uses contemplated by this Lease notwithstanding any lesser standard of remediation allowable under applicable Governmental Requirements.

10.6 **Right of Entry**. Notwithstanding any other term or provision of this Lease, San Miguel shall permit OWD or its agents or employees to enter the Premises at any time during normal business hours, without prior notice in the event of an emergency, and with not less than twenty-four (24) hours advance notice if no emergency is involved, to inspect, monitor and/or take emergency or long-term remedial action with respect to Hazardous Materials and Hazardous Materials Contamination on or affecting the Premises or Improvements, or to discharge San Miguel's obligations hereunder with respect to such Hazardous Materials and Hazardous Materials Contamination when San Miguel has failed to do so after written notice from OWD and expiration of a reasonable opportunity to cure such deficiency, not exceeding seven (7) days, unless such cure reasonably requires a greater period of time in which case San Miguel shall be in compliance herewith if San Miguel commences such cure within the same seven (7) day period. All costs and expenses incurred by OWD in connection with performing San Miguel's obligations hereunder shall be reimbursed by San Miguel to OWD within thirty (30) days of San Miguel's receipt of written request therefor.

10.7 **Storage or Handling of Hazardous Materials**. Subject to the provisions of this Lease, San Miguel, at its sole cost and expense, shall comply with all Governmental Requirements for the storage, use, transportation, handling and disposal of Hazardous Materials on or about the Premises. In the event San Miguel does store, use, transport, handle or dispose of any Hazardous Materials, San Miguel shall notify OWD in writing at least ten (10) days prior to their first appearance on the Premises and San Miguel's failure to do so shall constitute a material default under this Lease. San Miguel shall conduct all monitoring activities required or prescribed by applicable Governmental Requirements.

11. DAMAGE OR DESTRUCTION.

11.1 **Obligation to Repair and Restore Damage Due to Casualty Covered by Insurance**. Subject to Section 11.3 below, if the Improvements are totally or partially destroyed or rendered wholly or partly uninhabitable by fire or other casualty, San Miguel shall take all steps necessary to promptly and diligently commence the repair or replacement of the Improvements (and any parts of the Premises and the Real Property collaterally damaged by said fire or casualty) to substantially the same condition as existed immediately prior to the casualty, whether or not any insurance proceeds are sufficient to cover the actual cost of repair,

replacement, or restoration. San Miguel shall be solely responsible for any costs exceeding any insurance proceeds. San Miguel shall complete the same as soon as possible thereafter so that the Improvements and Training Programs can continue to be operated and occupied in accordance with the Lease. OWD shall cooperate with San Miguel, at no expense to OWD, in obtaining any governmental permits required for the repair, replacement, or restoration. If, however, the then-existing laws of any other governmental agencies with jurisdiction over the Real Property and Premises do not permit the repair, replacement, or restoration, San Miguel may elect not to repair, replace, or restore the Improvements by giving notice to OWD (in which event San Miguel will be entitled to all insurance proceeds but San Miguel shall be required to remove all debris from the Real Property and the Premises and to restore the Real Property and Premises to approximately their original condition on the date of this Lease) or San Miguel may reconstruct such other Improvements as are consistent with applicable land use regulations and approved by OWD and any other governmental agencies with jurisdiction. In the event San Miguel elects not to repair, replace, or restore, and gives OWD notice of such election as provided herein, this Lease shall terminate.

11.2 **Damage or Destruction Due to Cause Not Required to be Covered by Insurance**. If any Improvements are completely destroyed or substantially damaged by a casualty against which San Miguel is not required to (and has not) insured, then San Miguel may elect not to repair, replace, or restore such Improvements by providing OWD with written notice within ninety (90) days after such substantial damage or destruction. In such event, San Miguel shall remove all debris from the Real Property and Premises. As used in this Section 11.3, "substantial damage" caused by a casualty not required to be (and not) covered by insurance shall mean damage or destruction which is ten (10%) or more of the replacement cost of the Improvements, to the extent constructed at the time of the casualty.

12. SALE, ASSIGNMENT, SUBLEASE OR OTHER TRANSFER.

12.1 **No Assignment**. San Miguel shall not sell, assign, sublease, mortgage, pledge, hypothecate or otherwise transfer this Lease or any right therein, nor make any total or partial sale, assignment, sublease, mortgage, pledge, hypothecation or transfer in any other mode or form of the whole or any part of the Premises or Improvements (each of which events is referred to in this Lease as an "assignment"), without prior written approval of OWD, which approval may be given or withheld in OWD's sole and absolute discretion. In the event such approval is granted, the assignment shall not be effective unless and until the assignor and assignee have signed an assignment and assumption agreement in a form and with content approved by OWD's Board of Directors. Any purported assignment without the prior written consent of OWD shall render this Lease absolutely null and void and shall confer no rights whatsoever upon any purported assignee or transferee.

12.2 **No Subordination**. OWD and San Miguel acknowledge and agree that neither OWD's interest or fee ownership of the Premises (including its reversionary interest therein and in the Improvements) nor OWD's right to receive rent hereunder shall be subordinate to any permitted encumbrance or any other lien, mortgage, deed of trust, pledge or other encumbrance of San Miguel's leasehold interest hereunder.

13. INDEMNITY.

13.1 **San Miguel Indemnity**. Pursuant to this Section 13.1 and Section 10.2 of this Lease, San Miguel agrees to indemnify, defend and save free and harmless OWD, its agents, officers, representatives and employees from and against any claims, liabilities, penalties, fines and for any damage to the goods, properties or effects of San Miguel, its board, representatives, agents, employees, guests, licensees, invitees or of any other person whomsoever, and for injuries to or deaths of any persons, whether caused by or resulting from any act or omission of San Miguel or its subcontractors or any other person on or about the Premises and Improvements, or in connection with the operation thereof, or from any defect in the Premises or the Improvements (collectively, the "Claims"). Upon demand from OWD, San Miguel shall appear and defend OWD against any such Claims. San Miguel also agrees to indemnify, defend, and save free and harmless OWD and its officers, officials, employees, agents, and representatives against any costs and expenses incurred by OWD (including but not limited to attorney's fees and costs and expert witness fees) on account of any Claims. San Miguel shall not be responsible for (and such indemnity shall not apply to) any such Claims due to or arising solely out of any acts, errors or omissions of OWD or its officers, officials, employees, agents, and representatives. This provision shall survive the termination of this Lease.

13.2 **OWD Indemnity**. In connection with the use of any Improvements by OWD, as described above in Section 4.4, OWD agrees to defend and indemnify and hold harmless San Miguel and its officers, directors, agents and employees from and against any claims, liabilities, penalties, fines or damage arising out of the negligent acts or omissions of OWD's officers, employees or agents; provided that no violation of any duty of care owed by San Miguel has contributed to the damage, injury or other incident for which relief is being sought.

14. INSURANCE BY SAN MIGUEL.

14.1 **Insurance to be Provided by San Miguel**. During the Term, San Miguel, at its sole cost and expense, shall maintain or cause to be maintained all policies of insurance equivalent to those typically maintained for the premises and improvements owned by San Miguel and, at a minimum, shall maintain a policy or policies of insurance against loss or damage to the Premises and the Improvements, resulting from fire, lightning, vandalism, malicious mischief, and such other perils ordinarily included in extended coverage fire insurance and casualty loss policies. Such insurance shall be maintained in an amount not less than one hundred percent (100%) of the "Full Replacement Cost" of the Improvements, as defined below. San Miguel also agrees to maintain or cause to be maintained such policies of insurance, in such amounts and with such terms and conditions that are set forth in any loan documents concerning the Improvements.

14.2 **Definition of "Full Replacement Cost"**. The term "Full Replacement Cost" as used in this Article 14 shall mean the actual replacement cost of the Improvements, including the cost of construction, architectural and engineering fees, and inspection and supervision. To ascertain the amount of coverage required, San Miguel shall cause the Full Replacement Cost to be determined from time to time by appraisal by the insurer or, if no such appraisal is available, by an appraiser mutually acceptable to OWD and San Miguel, not less often than once every twelve (12) months.

14.3 **General Insurance Provisions**. All policies of insurance covering the Improvements shall name San Miguel as the insured and OWD as additional insured. San Miguel agrees to timely pay all premiums for such insurance and, at its sole cost and expense, to comply and secure compliance with all insurance requirements necessary for the maintenance of such insurance. San Miguel agrees to submit certificates evidencing the existence of such insurance, to OWD on or before the effective date of this Lease, indicating full coverage of the contractual liability imposed by this Lease. At least thirty (30) days prior to expiration of any such policy, copies of renewal policies, or certificates evidencing the existence thereof shall be submitted to OWD. All policies or certificates of insurance shall also: (i) provide that such policies shall not be canceled or limited in any manner without at least thirty (30) days prior written notice to OWD; and (ii) provide that such coverage is primary and not contributing with any insurance as may be obtained by OWD and shall contain a waiver of subrogation for the benefit of OWD.

14.4 **Self-Insurance**. San Miguel may self-insure for all requirements of this Article and agrees to provide a statement of self-insurance in form and content satisfactory to OWD.

14.5 **Failure to Maintain Insurance**. If San Miguel fails or refuses to procure or maintain insurance as required by this Lease, OWD shall have the right, but not the obligation, upon ten (10) days prior notice to San Miguel, to procure and maintain such insurance and charge San Miguel for the same. OWD shall give prompt notice of the payment of such premiums, stating the amounts paid and the name of the insured(s).

14.6 **Insurance Proceeds Resulting from Loss or Damage to the Improvements**. All proceeds of insurance with respect to loss or damage to the Improvements and the Premises during the Term of this Lease shall be payable, under the provisions of the policy of insurance, to San Miguel, and said proceeds shall constitute a trust fund to be used for the restoration and repair of the Improvements and the Premises. To the extent that such proceeds exceed the cost of such restoration, repair or rebuilding, then such proceeds shall be apportioned between San Miguel and OWD as their interests may appear. The value of each interest for the purpose of apportioning excess proceeds under this Section shall be the fair market value of such interests immediately prior to the occurrence of the damage or destruction.

15. INSURANCE BY OWD. OWD shall maintain in effect adequate insurance, as required by law, in connection with any activities of OWD to be performed or carried out at the Premises or the Improvements. In the event that OWD does not maintain insurance for those activities, OWD will provide a statement of self-insurance in form and content satisfactory to San Miguel.

16. OBLIGATION TO REFRAIN FROM DISCRIMINATION.

There shall be no discrimination against or segregation of any person or group of persons, on account of race, color, creed, religion, sex, marital status, national origin or ancestry in the leasing, subleasing, transferring, use, occupancy, tenure or enjoyment of the Premises or the Improvements or participation in the Training Programs, and San Miguel itself or any person claiming under or through it shall not establish or permit any such practice or practices of discrimination or segregation.

17. NONDISCRIMINATION IN EMPLOYMENT.

San Miguel, for itself and its successors and assigns, agrees that during the operation of Training Programs and the Improvements, and during any work of repair or replacement, San Miguel shall not discriminate against any employee or applicant for employment on the basis of any category or status not permitted by law.

18. LABOR STANDARDS.

San Miguel shall comply, and require all contractors and subcontractors employed pursuant to this Lease to comply with all applicable labor standards provisions of the California Labor Code and federal law, including payment of prevailing wage if applicable.

19. COMPLIANCE WITH LAWS; NO NUISANCE.

San Miguel agrees, at its sole cost and expense, to comply and secure compliance with all applicable requirements now in force, or which may hereafter be in force, of all municipal, county, state and federal and any other regulatory authorities, to the Real Property, the Premises and the Improvements, as well as the Training Programs.

Furthermore, San Miguel agrees to make use of the Real Property, Premises, Improvements and any and all easements in such a manner that will not constitute a nuisance and will not interfere with the owner's or other person's use and enjoyment of any neighboring properties or facilities, including but not limited to OWD's use of its property and facilities.

20. ENTRY AND INSPECTION.

OWD reserves and shall have the right during reasonable business hours (except in cases of emergency), upon twenty-four (24) hours prior notice (except in cases of emergency) to San Miguel by OWD, to enter the Premises for the purpose of viewing and ascertaining the condition of the same, or to protect its interests in the Premises and the Improvements or to inspect the operations conducted thereon.

21. DEFAULT AND REMEDIES.

21.1 **Default by San Miguel**. It shall be a default hereunder for San Miguel to abandon or surrender the Premises or the Improvements or to use them in a manner other than as contemplated hereunder without OWD's prior written consent or to attempt to transfer any part of the Premises or the Improvements to any third party without prior written consent from OWD.

21.2 **Remedies of OWD**. In the event of any such Default by San Miguel, OWD may, at its option, immediately terminate this Lease by written notice to San Miguel and determine what the proper disposition of the Improvements might be. If OWD terminates this Lease and disposes of the Improvements, OWD will not be obligated to share any portion of any amounts paid to OWD for the Improvements have no further liability to San Miguel under this Lease or in connection with the disposition of the Improvements.

21.3 **Rights and Remedies are Cumulative**. The rights and remedies of OWD and San Miguel under this Lease are cumulative to all other rights and remedies possessed by OWD under this Lease or at law or equity. The exercise by OWD of one or more such rights or

remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by San Miguel.

22. MISCELLANEOUS.

22.1 **Governing Law**. The laws of the State of California shall govern the interpretation and enforcement of this Lease.

22.2 **Legal Actions and Venue**. If negotiation efforts to reach a satisfactory solution to a dispute under this Lease fail, proper venue for the resolution of any dispute under this Lease shall be the Superior Court of San Diego County.

22.3 **Incorporation of Recitals.** The Recitals set forth above and all Exhibits attached to this Lease, as those exhibits may be amended from time to time, are incorporated herein by reference.

22.4 **Notices**. All notices, statements, demands, requests, consents, approvals, authorizations, offers, agreements, appointments or designations hereunder by either party to the other shall be in writing and shall be given either by (i) personal service, (ii) delivery by reputable document delivery service that provides a receipt showing date and time of delivery, or (iii) mailing in the United States mail, certified or registered mail, return receipt requested, postage prepaid, and addressed as follows:

OWD: Otay Water District
2554 Sweetwater Springs Boulevard
Spring Valley, California 91978-2096
Fax: (619) 660-0829
Attention: General Manager

San Miguel: San Miguel Consolidated Fire Protection District
2850 Via Orange Way
Spring Valley, California 91978-1746
Fax: (619) 670-5331
Attention: _____

Any such notice shall also be sent via facsimile or electronic mail. Either party may later designate a different address for service of notice by providing written notice to the other party. Notices personally delivered or delivered by document delivery service shall be effective upon receipt; provided, however that refusal to accept delivery shall constitute receipt. Mailed notices shall be effective as of Noon on the third business day following deposit with the United States Postal Service. Any notices attempted to be delivered to an address from which the receiving party has moved without providing notice to the delivering party shall be effective as of Noon on the third day after the attempted delivery or deposit in the United States mail.

22.5 **Time is of the Essence**. Time is of the essence in the performance of the terms and conditions of this Lease.

22.6 **Holding Over**. The occupancy of the Premises after the expiration of the Term of this Lease shall be construed to be a tenancy from month to month, and all other terms and conditions of this Lease shall continue in full force and effect.

22.7 **Waivers and Amendments**. All waivers of the provisions of this Lease must be in writing and signed by the appropriate authorities of OWD or San Miguel. A waiver of any breach of any term, covenant, or condition herein contained shall not be deemed to be a waiver of such term, covenant or condition, or any subsequent breach of the same or any other term, covenant or condition herein contained.

22.8 **Entire Agreement**. This Lease sets forth the entire understanding of the parties with respect to the Improvements.

22.9 **Counterparts**. This Lease may be executed in counterparts, each of which, when this Lease has been signed by all the parties hereto, shall be deemed an original.

22.10 **Severability**. If any provision of this Lease or the application thereof to any person or circumstances shall be invalid or unenforceable to any extent, the remainder of this Lease and the application of such provisions to other persons or circumstances shall not be affected thereby and shall be enforceable to the greatest extent permitted by law.

22.11 **Terminology**. All personal pronouns used in this Lease, whether used in the masculine, feminine, or neuter gender, shall include all other genders; the singular shall include the plural, and vice versa. Titles of sections are for convenience only, and neither limits nor amplifies the provisions of the Lease itself.

22.12 **Binding Effect**. This Lease, and the terms, provisions, promises, covenants and conditions hereof, shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, legal representatives, successors and assigns.

22.13 **Force Majeure**. The time within which OWD or San Miguel is obligated herein to perform any obligation hereunder, other than an obligation that may be performed by the payment of money, shall be extended and the performance excused when the delay is caused by fire, earthquake or other acts of God, strike, lockout, acts of public enemy, acts of terrorism, riot, insurrection or other cause beyond the reasonable control of the applicable party.

22.14 **Quiet Enjoyment**. OWD does hereby covenant, promise and agree to and with San Miguel that San Miguel, for so long as San Miguel is not in default hereunder, shall and may at all times peaceably and quietly have, hold, use, occupy and possess the Premises throughout the Term.

22.15 **Due Authority of Signatories**. Each person signing this Lease represents and warrants that he or she has been duly authorized, by appropriate action of the Party that he or she represents, to act on behalf of that Party and to bind that Party to the terms and conditions of this Lease.

[The remainder of this page is intentionally left blank – the signature page follows]

IN WITNESS WHEREOF, the parties hereto have caused this Lease to be executed by their lawfully authorized officers.

Otay Water District

By: _____
Mark Watton
General Manager

Attest:

_____
Susan Cruz
District Secretary

APPROVED AS TO FORM:

Garcia Calderón Ruíz LLP

By: _____
General Counsel

San Miguel Consolidated Fire Protection District

By: _____
_____
_____

Attest:

By: _____

Name: _____

Title: _____

APPROVED AS TO FORM:

_____

By: _____
General Counsel

EXHIBIT A

TO GROUND LEASE AND DEVELOPMENT AGREEMENT

LEGAL DESCRIPTION AND DEPICTION

OF THE REAL PROPERTY AND THE PREMISES

[To be attached]

EXHIBIT B

TO GROUND LEASE AND DEVELOPMENT AGREEMENT

CONCEPTUAL SITE PLAN

See attached.

EXHIBIT D

TO GROUND LEASE AND DEVELOPMENT AGREEMENT

SAN MIGUEL TRAINING PROGRAMS

1. Confined Space Rescue Training
2. Trench Rescue Training
3. Vehicle Rescue (Auto Extrication) Training
4. Low Angle Rescue Training
5. Heavy Rescue Training
6. High Angle (Tower) Rescue (Rappelling)
7. Search and Rescue Training
8. Firefighter Survival Training (Self Survival Prop)
9. Roof Ventilation Firefighting Operations Training (Prop)
10. Ladder Evolution Training
11. Hazardous Materials Training including:
    a. Propane Leak
    b. Chlorine Leak (One Ton)
    c. Cylinder/Valve Leak
12. Gas and Electric Training (Power Poles and Electrical Panel)
13. Wires Down Simulations
14. Emergency Vehicle Operations
15. Master Stream Operations into backstop
16. Sewer and Storm Drain Maintenance Training
17. Numerous classroom training sessions
18. Structure Collapse Training
19. Live Fire Training including
    a. Attic Fire
    b. Kitchen Fire
    c. Flashover
    d. Propane Tank
    e. Simulated Flammable Liquid
    f. Loading Dock
    g. Burn Building inside Tower
    h. "Christmas Tree"
    i. Fire Extinguisher Training

Exhibit A
TO GROUND LEASE AND DEVELOPMENT AGREEMENT

LEGAL DESCRIPTION AND DEPICTION

OF THE REAL PROPERTY AND PREMISES

A portion of that land granted to Otay Water District per deed recorded January 28, 1964 as File No. 16556 and depicted as "NOT A PART OF THIS SURVEY" on Record of Survey Map No. 6666 recorded March 10, 1966 as File No. 41585 in the Office of the County Recorder, County of San Diego, State of California described as follows:

Beginning at the southerly end of that course described in said deed and depicted on said map as South 10°18'55" East 882.13 feet; thence the following courses:

1. North 10°18'55" West 486.76 feet;
2. South 79°41'05 West 254.80 feet to the True Point of Beginning;
3. South 54°28'07" West 284.49 feet;
4. North 35°31'53" West 400.06 feet;
5. North 09°21'13" East 63.42 feet;
6. North 54°28'07" East 208.87 feet;
7. South 39°29'59" East 446.07 feet to the True Point of Beginning.

As shown on the plat attached hereto and by this reference made a part hereof.

The above described parcel of land contains 2.73 acres, more or less.

Assessor's parcel number 502-030-051

This legal description has been prepared by me, or under my direction, in accordance with the Professional Land Surveyor's Act.

Gary C. Rush 10-25-07

Gary C. ~~Rush~~ LS 6983

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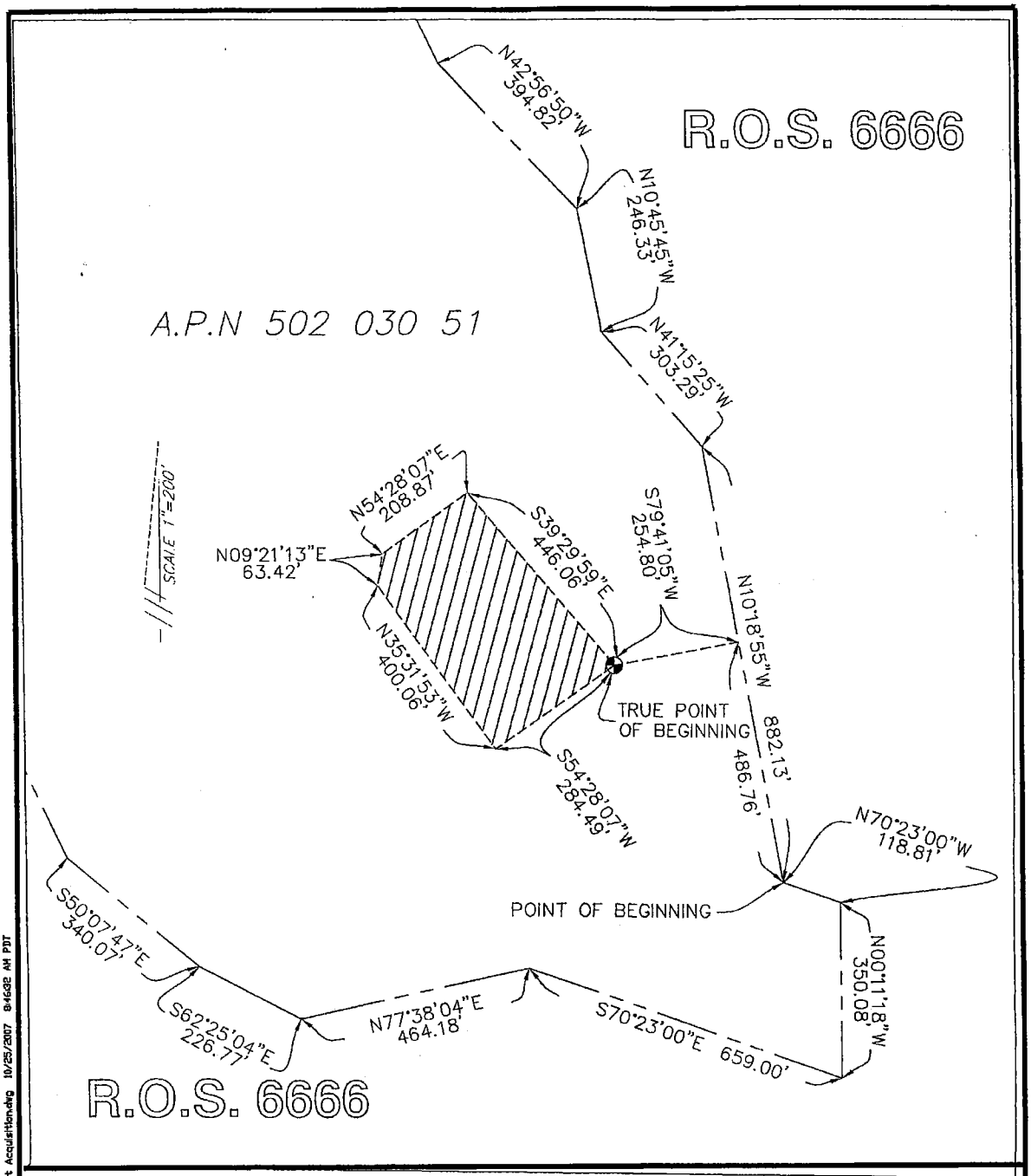
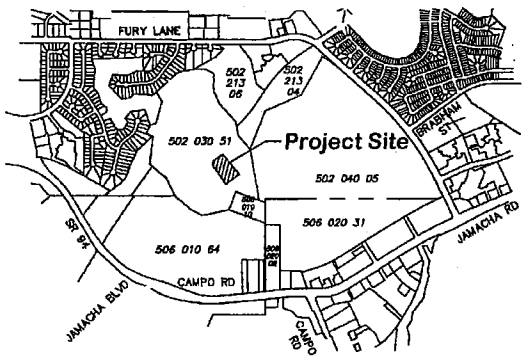
10/25/2007 1:35 PM

EXHIBIT "B"



PROFESSIONAL LAND SURVEYOR
GARY CRAIG RUSH
Exp. 09/30/09
No. 6983
STATE OF CALIFORNIA



OTAY WATER DISTRICT
JOINT TRAINING FACILITY

ESTABLISHED 1956 OTAY WATER DISTRICT

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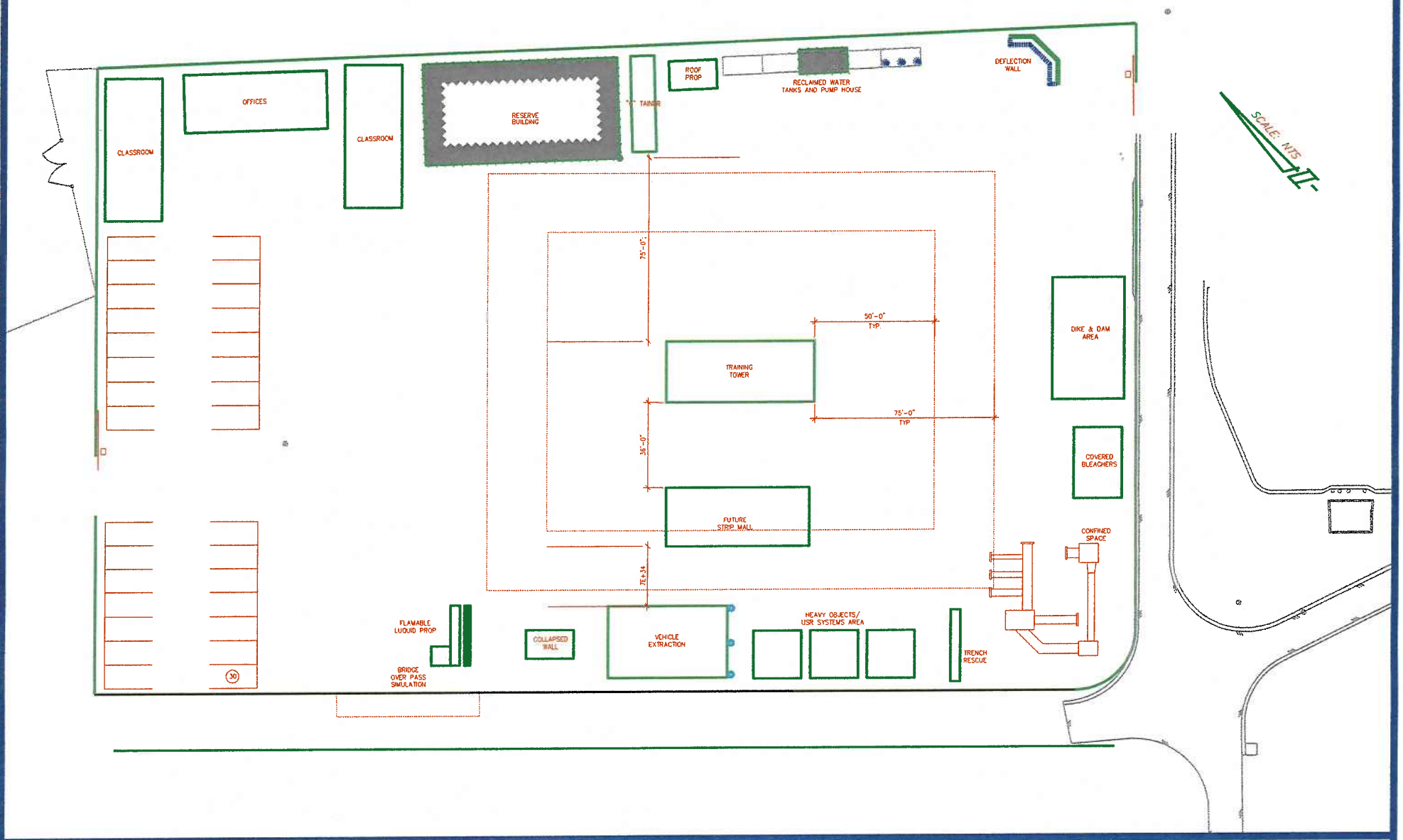


OTAY WATER DISTRICT

TO GROUND LEASE AND DEVELOPMENT AGREEMENT

CONCEPTUAL PLAN

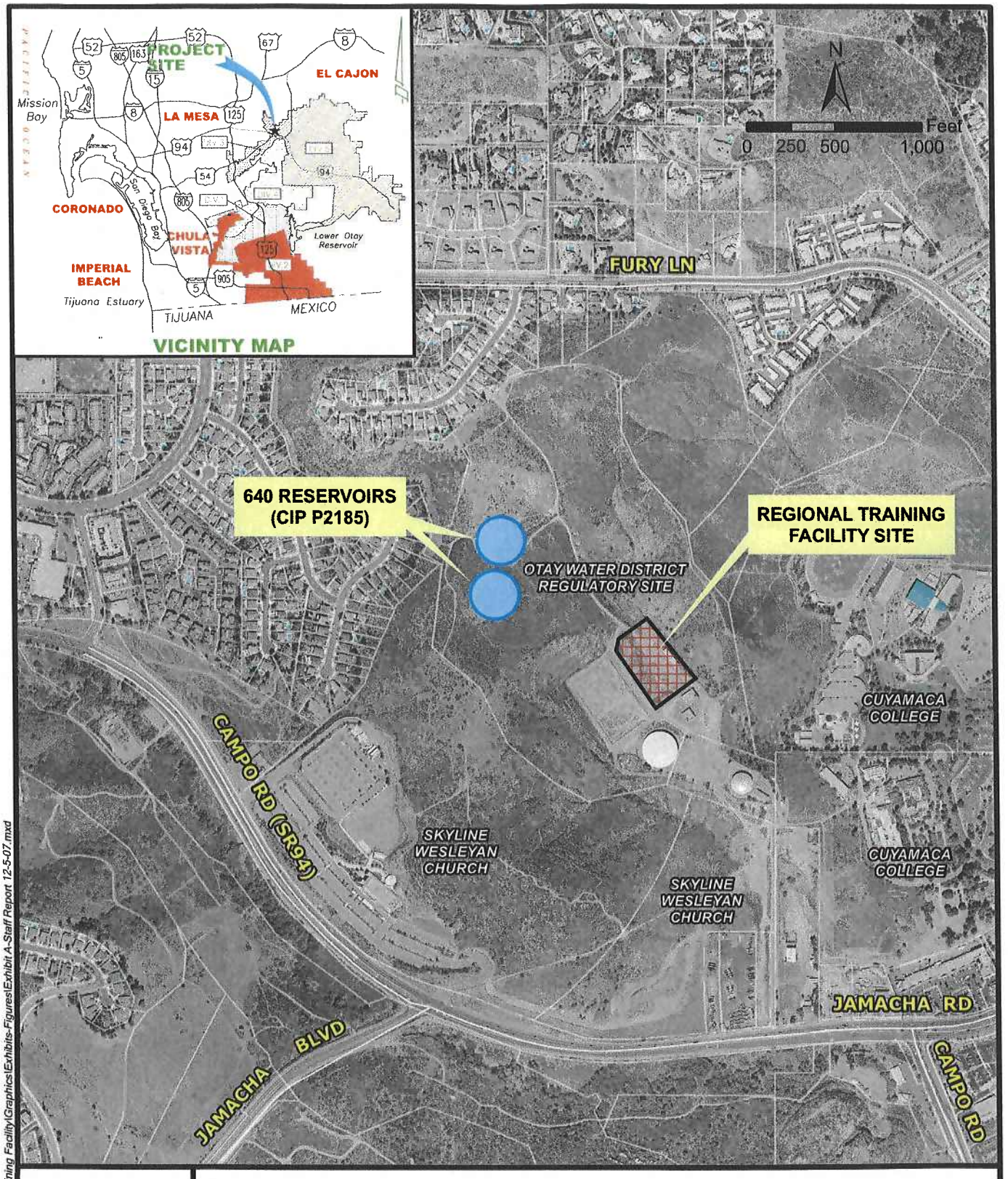
EXHIBIT C

EXHIBIT D

TO GROUND LEASE AND DEVELOPMENT AGREEMENT

SAN MIGUEL TRAINING PROGRAMS

1. Confined Space Rescue Training
2. Trench Rescue Training
3. Vehicle Rescue (Auto Extrication) Training
4. Low Angle Rescue Training
5. Heavy Rescue Training
6. High Angle (Tower) Rescue (Rappelling)
7. Search and Rescue Training
8. Firefighter Survival Training (Self Survival Prop)
9. Roof Ventilation Firefighting Operations Training (Prop)
10. Ladder Evolution Training
11. Hazardous Materials Training including:
    a. Propane Leak
    b. Chlorine Leak (One Ton)
    c. Cylinder/Valve Leak
12. Gas and Electric Training (Power Poles and Electrical Panel)
13. Wires Down Simulations
14. Emergency Vehicle Operations
15. Master Stream Operations into backstop
16. Sewer and Storm Drain Maintenance Training
17. Numerous classroom training sessions
18. Structure Collapse Training
19. Live Fire Training including
    a. Attic Fire
    b. Kitchen Fire
    c. Flashover
    d. Propane Tank
    e. Simulated Flammable Liquid
    f. Loading Dock
    g. Burn Building inside Tower
    h. "Christmas Tree"
    i. Fire Extinguisher Training



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OTAY WATER DISTRICT

SAN DIEGO COUNTY
REGIONAL TRAINING FACILITY SITE

SITE PLAN

EXHIBIT A

AGENDA ITEM 6

STAFF REPORT

TYPE MEETING:	Regular Board	MEETING DATE:	December 5, 2007
SUBMITTED BY:	Jim Peasley for JP Engineering Manager	PROJECT NO.:	D0569-010213 DIV. NO.: 2
REVIEWED BY: (Chief)	Rod Posada for RP Chief, Engineering		
APPROVED BY: (Asst. GM):	Manny Magaña Assistant General Manager of Engineering and Operations		
SUBJECT:	Approval of Water Supply Assessment Report (November 2007) for The Judd Company Otay Crossings Commerce Park		

GENERAL MANAGER'S RECOMMENDATION:

That the Board of Directors of the Otay Water District (District) approve the Water Supply Assessment Report (WSA Report) dated November 2007 prepared in connection with The Judd Company Otay Crossings Commerce Park (Crossings) development proposal, as required by Senate Bill 610 (SB 610).

COMMITTEE ACTION:

Please see Attachment A.

PURPOSE:

To obtain Board approval of the WSA Report for the Crossings project, as required by SB 610.

ANALYSIS:

SB 610 requires that the water purveyor of the public water system prepare a water supply assessment to be included in the California Environmental Quality Act (CEQA) environmental documentation and approval process of certain proposed projects. The requirements of SB 610 are addressed by the WSA Report for the Crossings project. Prior to transmittal to the County of San Diego (County), the WSA Report must be approved by the Board of Directors. An additional explanation of the intent of SB 610 is provided in Exhibit A and the Crossings project WSA Report is provided as Exhibit B.

For the Crossings project, the County is the responsible land use agency that requested the SB 610 water supply assessment from the District, as the water purveyor for the proposed Crossing project. The request for a WSA report in compliance with SB 610 requirements was made by the County because the Crossing project meets or exceeds one or both of the following SB 610 criteria:

- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

The District, as the proposed water purveyor for the Crossings project, does not have to comply with the requirements of Senate Bill 221 because the project is an industrial subdivision. SB 221 requires affirmative written verification from the water purveyor of the public water system that sufficient water supplies are planned to be available for certain residential subdivisions of property prior to approval of a tentative map.

As allowed under SB 610, the WSA Report incorporates by reference the current Urban Water Management Plans and other water resources planning documents of the District, the San Diego County Water Authority (Water Authority), and the Metropolitan Water District of Southern California (Metropolitan). The District prepared the WSA Report, which demonstrates and documents that sufficient water supplies are planned for and are intended to be made available over a 20-year planning horizon under normal supply conditions and in single- and multiple-dry years to meet the projected demand of the proposed Crossings project and the existing and other planned development projects within the District.

Metropolitan's Integrated Resources Plan (IRP) identifies a mix of resources (imported and local) that, when implemented, will provide 100 percent reliability for full-service demands through the attainment of regional targets set for conservation, local supplies, State Water Project supplies, Colorado River supplies, groundwater banking, and water transfers. Metropolitan's 2004 update to the IRP (2004 IRP Update) includes a planning buffer supply to mitigate against the risks associated with implementation of local and imported supply programs. The planning buffer identifies an additional increment of water that could potentially be developed if other supplies are not implemented as planned. As part of implementation of the planning buffer, Metropolitan periodically evaluates supply

development to ensure that the region is not under or over-developing supplies. If managed properly, the planning buffer along with other alternative supplies will help ensure that the southern California region, including San Diego County, will have adequate supplies to meet future demands.

The County Water Authority Act, Section 5 subdivision 11, states that the Water Authority "as far as practicable, shall provide each of its member agencies with adequate supplies of water to meet their expanding and increasing needs."

The intent of the SB 610 legislation is that the land use agencies and the water agencies are coordinating their efforts in planning for new development and thus planning for sufficient water supplies to meet the needs.

As per the requirements of SB 610, if the water supply assessment finds that the supply is sufficient, then the governing body of the water supplier (District) must approve the water supply assessment and deliver it to the lead agency (County) within 120 days (i.e., 90 days, plus the 30-day County granted time extension). In the case of the Crossings project, the deadline for the District to provide the WSA Report to the County is December 21, 2007.

As per the requirements of SB 610, if the water supply assessment finds overall supplies are insufficient - the water supplier shall provide to the lead agency "its plans for acquiring additional water supplies, setting forth measures that are being undertaken to acquire and develop those water supplies," and the water supplier governing body must approve the assessment and deliver it to the lead agency within the 120 days. If the water supplier does conclude that additional water supplies are required, the water supplier should indicate the status or stage of development of the actions identified in the plans it provides. Identification of a potential future action in such plans does not by itself indicate that a decision to approve or to proceed with the action has been made.

Once either of the two actions listed above are accomplished the District's SB 610 water supply assessment responsibilities are complete.

SB 610 provides that if the SB 610 water supply assessment is not received by the lead agency from the water supplier within the prescribed 90-day period, and any requested time extension (the County granted the District a 30-day extension), the lead agency may seek legal relief, such as a writ of mandamus.

Water supply agencies throughout California continue to face climatological, environmental, legal, and other challenges that impact water source supply conditions, such as the recent court ruling regarding the Sacramento-San Joaquin Delta issues. Challenges such as these essentially always will be present. The regional water supply agencies, the Water Authority and Metropolitan, along with the District nevertheless fully intend to have sufficient, reliable supplies to serve the Crossings project.

An October 22, 2007 letter from Metropolitan to their member agencies, including the Water Authority, provided notice of a 30 percent reduction in Interim Agricultural Water Program (IAWP) deliveries effective January 1, 2008. A 30 percent water use reduction of the sixteen IAWP District water accounts represents 26.0 acre feet (ac ft) based on fiscal year (FY) 2007 or 0.09 percent of the total Otay 28,353 ac ft annual purchase from the Water Authority in FY 2007.

With the initiation of the South Bay Water Reclamation Plant (SBWRP) recycled water supply on May 18, 2007 the District will reduce the annual take of potable water from the Water Authority, once used to supplement the recycled water supply shortfall, in excess of 3,000 ac ft per year. The Crossings project demand for potable water is estimated to be 296 ac ft per year and the recycled water demand is estimated to be 38 ac ft per year. The total Crossings project demand is about 10 percent of the 3,000 ac ft of potable water saved with the SBWRP supply start up. To provide some perspective, the Crossings project estimate potable water demand is equivalent to about 528 typical single family homes.

The County could be requested to condition the Crossing project to use waterless urinals and ultra low flush toilets. The estimated potable water demand reduction would be on the order of maybe 2 to 5 percent. The City of Chula Vista estimates a savings of 4,000 gallons per year per residential unit for dual flush toilets, which would be about a 2 percent reduction of the total estimated water demand.

The irrigation water demands were calculated assuming recycled water use of 2.5 ac ft per acre per year. The City of Chula Vista's Landscape Design Manual estimates that water savings due to using water efficient landscaping can reduce irrigation demands by 30 to 50 percent.

FISCAL IMPACT:

The District has been reimbursed $6,524 for all costs associated with the preparation of the Crossings project WSA Report. The reimbursement was accomplished via a $9,000 deposit which the project proponents placed with the District.

STRATEGIC GOAL:

The preparation and approval of the Crossings project WSA Report supports the District Mission Statement, "To provide the best quality of water and wastewater service to the customers of the Otay Water District, in a professional, effective, efficient, and sensitive manner, in all aspects of operation, so that public health, environment and quality of life are enhanced" and the District's Strategic Goal, in planning for infrastructure and supply to meet current and future potable water demands.

LEGAL IMPACT:

Adoption of a water supply assessment in form and content satisfactory to the Board of Directors on or prior to December 21, 2007 would allow the District to comply with the requirements of Senate Bill 610.

M. Watton

General Manager

P:\ENGRSEC\Jim Peasley\Staff Report SB 610 Otay Crossings Commerce Park Approval 12-5-07.doc

JP/RP:jf

Attachments: Attachment A
Exhibit A
Exhibit B

ATTACHMENT A

SUBJECT/PROJECT:	Approval of Water Supply Assessment Report (November 2007) for The Judd Company Otay Crossings Commerce Park
D0569-010213	

COMMITTEE ACTION:

The Engineering, Operations, and Water Resources Committee reviewed this item at a meeting held on November 20, 2007. The Committee supported Staff's recommendation.

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.

EXHIBIT A

Background Information

The Otay Water District (District) prepared the Water Supply Assessment Report (WSA Report) for The Judd Company Otay Crossings Commerce Park (Crossings) development proposal at the request of the County of San Diego (County). The District received the County's written request on August 9, 2007 and also received on October 22, 2007 a 30-day extension of time to complete and obtain the District Board of Directors approval of the Crossings WSA Report. The Judd Company submitted an entitlement application to the County for the development of the Crossings project.

The Crossings project is within the unincorporated area of the County of San Diego, California and is located generally south of Otay Mesa Road and east of Alta Road on Otay Mesa. The southern boundary of the Crossing project abuts the United States/Mexico international border. The Crossings project is located within the jurisdictions of the District, San Diego County Water Authority (Water Authority), and Metropolitan Water District of Southern California (Metropolitan).

The WSA Report for the Crossings project has been prepared by the District in consultation with PBS&J, the Water Authority, and the County pursuant to Public Resources Code Section 21151.9 and California Water Code Sections 10631, 10656, 10657, 10910, 10911, 10912, and 10915 referred to as Senate Bill (SB) 610. SB 610 amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 requires that the water purveyor of the public water system prepare a water supply assessment to be included in the California Environmental Quality Act (CEQA) environmental documentation and approval process of certain proposed projects. The requirements of SB 610 are addressed within the Crossings WSA Report.

The Crossings project proposed land uses are generally consistent with the zoning and densities contained in the East Otay Mesa Specific Plan Area and the County's preferred draft of its General Plan 2020 Update process. The San Diego County Board of Supervisors adopted the East Otay Mesa Specific Plan Area on July 27, 1994. The East Otay Mesa Specific Plan Area classifies land use for the majority, approximately 98 percent, of the Crossings project site as mixed industrial and the remainder as rural residential. The proposed Crossing project Specific Plan Amendment is intended to change the rural residential classification area to mixed industrial and the County deemed this change significant enough to initiate the CEQA process.

The approximately 311.5 acre Crossings project consists of the future State Route 11 (SR 11) to be constructed through the site to provide accessibility to the planned future third border crossing facility, 31 mixed use industrial lots, circulation elements, and open space. The U.S. Department of Homeland Security has requested 40 to 80 acres of the Crossings project site for construction of the future third border crossing facility. Of the total 212.0 acres for mixed industrial use about 51 acres would be for the SR 11 right-of-way and 20.9 acres is proposed as natural open space. The Crossings project is currently planned to be constructed in two phases over several years.

The District depends on the Water Authority and the Metropolitan for all of its potable water supplies and regional water resource planning.

The District's Urban Water Management Plan (UWMP) relies heavily on the UWMP's and Integrated Resources Plans (IRPs) of the Water Authority and Metropolitan for documentation of supplies available to meet projected demands. These plans are developed to manage the uncertainties and variability of multiple supply sources and demands over the long term through preferred water resources strategy adoption and resource development target approvals for implementation.

New uncertainties that could significantly affect California's water resources have come to light in the past year.

- A Federal Court ruling that sets operational limits on Sacramento-San Joaquin Delta pumping from December to June to protect the Delta smelt. Based on initial estimates, Metropolitan could see as much as a 22% reduction in State Water Project supplies in 2008 and beyond. Actual supply curtailments for Metropolitan are contingent upon fish distribution, behavioral patterns, weather, Delta flow conditions, and how water supply reductions are divided between state and federal projects.
- Climate changes due to global warming (extended drought conditions).

These uncertainties have rightly caused concern among Southern California water supply agencies regarding the validity of the current water supply documentation.

Metropolitan's October 9, 2007 IRP Implementation Report acknowledges that significant challenges in some resource areas will likely require changes in strategies and implementation approaches in order to reach long-term IRP water supply targets. Significant progress in program implementation is being realized in most resource areas. However, a further examination of the uncertainty of State Water Project supplies, among other uncertainties, will be required to assess the ability of achieving the long-term IRP targets.

Metropolitan is currently involved in several proceedings concerning Delta operations to evaluate and address environmental concerns. In addition, at the State level, the Delta Vision and Bay-Delta Conservation Plan processes are defining long-term

solutions for the Delta. Metropolitan is actively engaged in these processes and in January 2008 will initiate the next update of their IRP. An approved implementation strategy update may not be forthcoming for a year or more.

The State Water Project (SWP) represents approximately 9% of Metropolitan's 2025 Dry Resources Mix with the supply buffer included. A 22% cutback in SWP supply represents an overall 2% (22% of 9% is 2%) cutback in Metropolitan supplies in 2025.

In Fiscal Year 2005, the Water Authority purchased 518,625 acre feet of water from Metropolitan, or approximately 25% of Metropolitan's water sales. Using the 2% cutback of 25% represents a net 0.5% impact on Water Authority supplies in Fiscal Year 2005. Neither the Water Authority nor Metropolitan have stated that there is insufficient water for future planning in Southern California. Each agency is in the process of reassessing and reallocating their water resources.

Under preferential rights, Metropolitan can allocate water without regard to historic water purchases or dependence on Metropolitan. Therefore, the Water Authority and its member agencies are taking measures to reduce dependence on Metropolitan through development of additional supplies and a water supply portfolio that would not be jeopardized by a preferential rights allocation.

For Fiscal Year 2006 the Water Authority's preferential right was 16.46% of Metropolitan's supply. So Metropolitan could theoretically take an 8.5% cut out of the Water Authority's supply and theoretically, the Water Authority should have alternative water supply sources to make up for the difference.

In the Water Authority's 2005 UWMP, they had already planned to reduce reliance on Metropolitan supplies to 372,922 acre feet per year by 2030, which is a 28% reduction from the Fiscal Year 2005 Water Authority purchase from Metropolitan. This reduction is planned to be achieved through diversification of their water supply portfolio. This reduction would more than compensate for the Metropolitan predicted 22% reduction in water supply available from the State Water Project, which could be an overall 2% cutback in Metropolitan total supplies in 2025.

The Water Authority's Drought Management Plan (May 2006) provides the Water Authority and its member agencies with a series of potential actions to engage when faced with a shortage of imported water supplies due to prolonged drought conditions. Such actions help avoid or minimize impacts of shortages and ensure an equitable allocation of supplies throughout the San Diego County region.

The District Board of Directors should acknowledge the ever-present challenge of balancing water supply with demand and the inherent need to possess a flexible and adaptable water supply implementation strategy that can be relied upon during normal and dry weather conditions. The responsible regional water supply agencies have and will continue to adapt their resource plans and strategies to meet

climatological, environmental, and legal challenges so that they may continue to provide water supplies to their service areas. The regional water suppliers (i.e., the Water Authority and Metropolitan), along with the District, fully intend to maintain sufficient reliable supplies through the 20-year planning horizon under normal, single, and multiple dry year conditions to meet projected demand of the Crossings project, along with existing and other planned development projects within the District's service area.

If the regional water suppliers determine additional water supplies will be required or in this case, that water supply portfolios need to be reassessed and redistributed with the intent to serve the existing and future water needs throughout Southern California, the agencies must indicate the status or stage of development of actions identified in the plans they provide. Metropolitan's plans to update its IRP which will then cause the Water Authority to update its IRP and UWMP, that will then provide the District with the necessary water supply documentation. Identification of a potential future action in such plans does not by itself indicate that a decision to approve or to proceed with the action has been made. The District's Board approval of the Crossings WSA Report does not in any way guarantee water supply to the Crossings project.

Alternatively, if the WSA is written to state that water supply is or will be unavailable, the District must include, in the assessment, a plan to acquire additional water supplies. At this time, the District should not state there is insufficient water supply.

So the best the District can do right now is to state the current water supply situation clearly, indicating intent to provide supply through reassessment and reallocation by the regional, as well as, the local water suppliers. In doing so, it is believed that the Board has met the intent of the SB 610 statute, that the land use agencies and the water agencies are coordinating their efforts in planning water supplies for new development.

With District Board approval of the Crossings project WSA the project proponents can proceed with the draft EIR CEQA review process and water supply issues will be addressed in the EIR, consistent with the WSA Report.

The District, as well as others, can comment on the draft EIR with recommendations that water conservation measures and actions be employed on the Crossings project.

Some recent actions regarding water supply assessments and verification reports by entities within Southern California are as follows:

- City of San Diego approved water supply assessment reports for both the La Jolla Crossings Project and the Quarry Falls Project in September 2007.
- The District unanimously approved in July 2007 the Eastern Urban Center Water Supply and Assessment Report.
- Padre Dam Municipal Water District approved a water supply assessment report for the City of Santee's Fanita Ranch development project in April 2006.

In October 2007 a follow-up letter was prepared stating the current uncertainties associated with the regional water supply situation. However, the letter concludes that sufficient water exists over the long run in reliance upon the assurances, plans, and projections of the regional water suppliers (Metropolitan and Water Authority).

The WSA Report identifies that the water demand projections for the proposed Crossings project are included in the water demand and supply forecasts within the Urban Water Management Plans and other water resources planning documents of the District, the Water Authority, and Metropolitan. Water supplies necessary to serve the demands of the proposed Crossings project, along with existing and other projected future users, as well as the actions necessary to develop these supplies, have been identified in the water supply planning documents of the District, the Water Authority, and Metropolitan.

The WSA Report includes, among other information, an identification of existing water supply entitlements, water rights, water service contracts, or agreements relevant to the identified water supply needs for the proposed Crossings project. The WSA Report demonstrates and documents that sufficient water supplies are planned and are intended to be available over a 20-year planning horizon, under normal conditions and in single- and multiple-dry years to meet the projected demand of the proposed Crossings project and the existing and other planned development projects within the District.

Accordingly, after approval of a WSA Report for the Crossings project by the District's Board of Directors, the WSA Report may be used to comply with the requirements of the legislation enacted by Senate Bills 610 as follows:

Senate Bill (SB) 610 Water Supply Assessment: The District's Board of Directors approved WSA Report may be incorporated into the California Environmental Quality Act (CEQA) Environmental Impact Report (EIR) compliance process for the Crossings project as a water supply assessment report consistent with the requirements of the legislation enacted by SB 610. The County, as lead agency under the CEQA for the Crossings project EIR, may cite the approved WSA Report as evidence that a sufficient water supply is planned and intended to be available to serve the Crossings project.

EXHIBIT B

OTAY WATER DISTRICT

WATER SUPPLY ASSESSMENT REPORT

Otay Crossings Commerce Park

Prepared by:

James F. Peasley, P.E.
Water Resources Engineering Manager
Otay Water District
in consultation with
PBS&J
and
San Diego County Water Authority

November 2007
Otay Water District

Water Supply Assessment Report
November 2007
Otay Crossings Commerce Park

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Otay Water District
Water Supply Assessment Report
November 2007

Otay Crossings Commerce Park

Executive Summary

The Otay Water District (WD) prepared this Water Supply Assessment Report (WSA Report) at the request of the County of San Diego (County) for the Otay Crossings Commerce Park (Crossings) project. The Judd Company has submitted an entitlement application to the County for the development of the Crossings project.

The Crossings project is currently located within the jurisdictions of the Otay WD, the San Diego County Water Authority (Water Authority), and the Metropolitan Water District of Southern California (Metropolitan). To obtain permanent imported water supply service, land areas are required to be within the jurisdictions of the Otay WD, Water Authority, and Metropolitan to utilize imported water supply.

The Crossings project proposed land uses are generally consistent with the zoning and densities contained in the East Otay Mesa Specific Plan Area and the County's preferred draft of its General Plan 2020 Update process. The San Diego County Board of Supervisors adopted the East Otay Mesa Specific Plan Area on July 27, 1994. The East Otay Mesa Specific Plan Area classifies the land use for the majority, approximately 98 percent, of the Crossings project site as mixed industrial and the remainder as rural residential. The proposed Crossing project Specific Plan Amendment is intended to change the rural residential classification area to mixed industrial.

The Judd Company proposed development concept for the approximately 311.5 acre Crossings project is planned as mixed industrial and business park land uses. The Crossings project consists of State Route 11 (SR 11) to be constructed through the site to provide accessibility to the planned future border crossing facility, 31 mixed use industrial lots, circulation elements, and open space. The U.S. Department of Homeland Security has requested 40 to 80 acres of the Crossings project site for construction of the future third border crossing facility. Of the total 212.0 acres for mixed industrial use about 51 acres would be for the SR 11 future right-of-way and 20.9 acres is proposed as natural open space. The Crossings project is currently planned to be constructed in two phases over several years.

Using the land use demand projection criteria as established in the Otay WD 2002 Water Resources Master Plan (WRMP), the projected potable water demand for the proposed

Crossings project totals 0.264 million gallons per day (mgd) or about 296 acre feet per year (ac-ft/yr). The projected recycled water demand for the proposed Crossings project is 0.034 mgd or about 38 ac-ft/yr, representing about 11% of total Crossings project demand.

The Crossings project development proponents are required to use recycled water for irrigation. The primary benefit of using recycled water is that it will offset the potable water demands by an estimated 38 ac-ft/yr. The Otay WD 2002 WRMP and 2005 Urban Water Management Plan (UWMP) anticipated that the Crossings project would use both potable and recycled water.

The Water Authority and Metropolitan have an established process that ensures supplies are being planned to meet future growth. Any annexations and revisions to established land use plans are captured in San Diego Association of Governments (SANDAG) updated forecasts for land use planning, demographics, and economic projections. SANDAG serves as the regional, intergovernmental planning agency that develops and provides forecast information. The Water Authority and Metropolitan update their demand forecasts and supply needs based on the most recent SANDAG forecast approximately every five years to coincide with preparation of their urban water management plans. Prior to the next forecast update, local jurisdictions may require water supply assessment and/or verification reports for proposed land developments that are not within the Water Authority nor Metropolitan jurisdictions (i.e. pending or proposed annexations) or that have revised land use plans than reflected in the existing growth forecasts. Proposed land areas with pending annexations or revised land use plans typically result in creating higher demand and supply requirements than anticipated. The Otay WD, Water Authority, and Metropolitan next demand forecast and supply requirements and associated planning documents would then capture any increase or decrease in demands caused by annexations or revised land use planning decisions.

Metropolitan's Integrated Resources Plan (IRP) identifies a mix of resources (imported and local) that, when implemented, will provide 100 percent reliability for full-service demands through the attainment of regional targets set for conservation, local supplies, State Water Project supplies, Colorado River supplies, groundwater banking, and water transfers. The 2004 update to the IRP (2004 IRP Update) includes a planning buffer supply to mitigate against the risks associated with implementation of local and imported supply programs. The planning buffer identifies an additional increment of water that could potentially be developed if other supplies are not implemented as planned. As part of implementation of the planning buffer, Metropolitan periodically evaluates supply development to ensure that the region is not under or over developing supplies. If managed properly, the planning buffer will help ensure that the southern California region, including San Diego County, will have adequate supplies to meet future demands.

Water supply agencies throughout California continue to face climatological, environmental, legal, and other challenges that impact water source supply conditions, such as the recent court ruling regarding the Sacramento-San Joaquin Delta issues. Challenges such as these essentially always will be present. The regional water supply agencies, the Water Authority

and Metropolitan, along with Otay WD nevertheless fully intend to have sufficient, reliable supplies to serve demands.

In Section II.4 of their 2005 Regional Urban Water Management Plan (RUWMP), Metropolitan states that through effective management of its water supply, they fully expect to be 100 percent reliable in meeting all non-discounted non-interruptible demands throughout the next twenty-five years. Metropolitan's 2005 RUWMP identifies potential reserve supplies in the supply capability analysis (Tables II-7, II-8, and II-9), which could be available to meet the unanticipated demands. Also, in evaluating the availability of supply, a Water Authority member agency could determine if "offset" supplies are available as a result of other land use decisions, which lowered water use within their service area.

The County Water Authority Act, Section 5 subdivision 11, states that the Water Authority "as far as practicable, shall provide each of its member agencies with adequate supplies of water to meet their expanding and increasing needs."

As part of preparation of a written assessment report, an agency's shortage contingency analysis should be considered in determining sufficiency of supply. Section 9 of the Water Authority's 2005 Updated UWMP contains a detailed shortage contingency analysis that addresses a regional catastrophic shortage situation and drought management. The analysis demonstrates that the Water Authority and its member agencies, through the Emergency Response Plan, Emergency Storage Project, and Drought Management Plan (DMP) are taking actions to prepare for and appropriately handle an interruption of water supplies. The DMP, completed in May 2006, provides the Water Authority and its member agencies with a series of potential actions to take when faced with a shortage of imported water supplies from Metropolitan due to prolonged drought or other supply shortfall conditions. The actions will help the region avoid or minimize the impacts of shortages and ensure an equitable allocation of supplies.

This WSA Report identifies that the water demand projections for the proposed Crossings project are included in the water demand and supply forecasts within the water resources planning documents of the Otay WD, the Water Authority, and Metropolitan. Water supplies necessary to serve the demands of the proposed Crossings project, along with existing and other projected future users, as well as the actions necessary to develop these supplies, are and will be identified in the water supply planning documents of the Otay WD, the Water Authority, and Metropolitan.

This WSA Report includes, among other information, an identification of existing water supply entitlements, water rights, water service contracts, or agreements relevant to the identified water supply needs for the proposed Crossings project. This WSA Report demonstrates that sufficient water supplies are planned for and are intended to be made available over a 20-year planning horizon in normal years and in single and multiple dry years to meet the projected demand of the proposed Crossings project and the existing and other planned development projects within the Otay WD.

Accordingly, after approval of a WSA Report for the Crossings project by the Otay WD Board of Directors (Board), the WSA Report may be used to comply with the requirements of the legislation enacted by Senate Bill 610 as follows:

> Senate Bill (SB) 610 Water Supply Assessment: The Otay WD Board approved WSA Report may be incorporated into the California Environmental Quality Act (CEQA) Environmental Impact Report (EIR) compliance process for the Crossings project as a water supply assessment report consistent with the requirements of the legislation enacted by SB 610. The County as lead agency under CEQA for the Crossings project EIR may cite the approved WSA Report as evidence that a sufficient water supply is planned to be made available to serve the Crossings project.

Section 1 - Purpose

The Judd Company submitted an entitlement application to the County of San Diego (County) for the development of the Otay Crossings Commerce Park (Crossings) project. The County requested that Otay Water District (WD) prepare a Water Supply Assessment Report (WSA Report) for the Crossings project. The Crossings project description is provided in Section 3 of this WSA Report.

This WSA Report for the Crossings project has been prepared by the Otay WD in consultation with PBS&J, the San Diego County Water Authority (Water Authority), and the County pursuant to Public Resources Code Section 21151.9 and California Water Code Sections 10631, 10656, 10657, 10910, 10911, 10912, and 10915 referred to as Senate Bill (SB) 610. SB 610 amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 requires that the water purveyor of the public water system prepare a water supply assessment to be included in the California Environmental Quality Act (CEQA) environmental documentation and approval process of certain proposed projects. The County requested that Otay WD prepare a water supply assessment as per the requirements of SB 610. The requirements of SB 610 are being addressed by this WSA Report.

This WSA Report evaluates water supplies that are and planned to be available during normal, single dry year, and multiple dry water years during a 20-year planning horizon to meet existing demands, expected demands of the Crossings project, and reasonably foreseeable planned future water demands served by Otay WD. The Otay WD Board of Directors approved WSA Report is planned to be used by the County in its evaluation of the Crossings project under the CEQA and Tentative Map approval processes.

Section 2 - Findings

The Otay WD prepared this WSA Report at the request of the County for the Otay Crossings Commerce Park project. The Judd Company submitted an entitlement application to the County for the development of the Crossing project.

The Crossing project is currently located within the jurisdictions of the Otay WD, the Water Authority, and the Metropolitan Water District of Southern California (Metropolitan). To obtain permanent imported water supply service, land areas are required to be within the jurisdictions of the Otay WD, Water Authority, and Metropolitan to utilize imported water supply.

The Water Authority and Metropolitan have an established process that ensures supplies are being planned to meet future growth. Existing land use plans, any revisions to these land use plans, and annexations are captured in San Diego Association of Governments (SANDAG) updated forecasts for land use planning, demographics, and economic projections. SANDAG serves as the regional, intergovernmental planning agency that develops and provides forecast information. The Water Authority and Metropolitan update their demand forecasts and supply needs based on the most recent SANDAG forecast approximately every five years to coincide with preparation of their urban water management plans. Prior to the next forecast update, local jurisdictions may require water supply assessment and/or verification reports for proposed land use developments that are not within the Water Authority nor Metropolitan jurisdictions or that have revised land uses than reflected in the existing growth forecasts. Proposed land areas to be annexed or revised land use plans typically result in creating higher demand and supply requirements than anticipated. The Water Authority and Metropolitan next demand and supply forecasts would then capture any increase or decrease in demands and resulting supplies as a result revised land use plans and annexations. Therefore the most current water demand and supply planning information will be a permanent part of and incorporated within the Water Authority and Metropolitan updated water resources planning processes and documents.

This process is utilized by the Water Authority and Metropolitan to document the water supplies necessary to serve the demands of any proposed development project, along with existing and other projected future users, as well as the actions necessary to develop these supplies. Through this process the necessary demand and supply information is thus assured to be identified and incorporated within the water supply planning documents of the Water Authority and Metropolitan.

Water supplies necessary to serve the demands of the proposed Crossings project, along with existing and other reasonably foreseeable projected future users, as well as the actions necessary to develop these supplies, are identified and included within the water supply planning documents of the Otay WD, Water Authority, and Metropolitan. This WSA Report demonstrates and documents that with development of the resources currently identified and

those that may be additional acquired, that there is intended to be sufficient water supplies for the Crossings project and that sufficient water supplies is planned for by the Otay WD, Water Authority, and Metropolitan for over the next 20-year planning horizon to meet the projected demand of the proposed Crossings project and the existing and other reasonably foreseeable planned development projects within the Otay WD.

This WSA Report includes, among other information, an identification of existing water supply entitlements, water rights, water service contracts, or agreements relevant to the identified water supply needs for the proposed Crossings project. This WSA Report incorporates by reference the current Urban Water Management Plans and other water resources planning documents of the Otay WD, the Water Authority, and Metropolitan. The Otay WD prepared this WSA to document that sufficient water supplies are planned for to meet projected water demands of the Crossings project and the existing and other reasonably foreseeable planned development projects within the Otay WD for a 20-year planning horizon, in normal supply years and in single dry and multiple dry years.

Based on a normal water supply year, the five-year increments for a 20-year projection indicate projected water supply is planned for to meet the estimated water demand of the Otay WD (38,774 acre-feet (ac-ft) in 2005 to 72,853 ac-ft in 2025 per the Otay WD 2005 Urban Water Management Plan). Based on dry year forecasts, the estimated water supply is also planned for to meet the projected water demand, during single dry and multiple dry year scenarios. On average, the dry year demands are about 7% higher than the normal demands. Using this model, the projected single dry year necessary supply requirement for 2010 is 53,299 ac-ft and for multiple dry years beginning in 2007 46,212 ac-ft, 48,574 ac-ft, and 50,936 ac-ft, respectively, is necessary to meet demand. The Otay WD recycled water supply is assumed to be drought-proof and not subject to reduction during dry periods.

Together, these findings demonstrate that sufficient water supplies are planned for as well as the actions necessary to develop these supplies are documented, to serve the proposed Crossings project and the existing and other reasonably foreseeable planned projects within the Otay WD in both normal and single and multiple dry year forecasts over a 20-year planning horizon.

Section 3 - Project Description

The Otay Crossings Commerce Park project is within the unincorporated area of the County of San Diego, California and is located generally south of Otay Mesa Road and east of Alta Road on Otay Mesa. The southern boundary of the Crossing project abuts the United States/Mexico international border. Refer to Appendix A for the location and vicinity map of the proposed Crossings project. The Crossings project is currently within the jurisdictions of the Otay WD, the Water Authority, and Metropolitan.

The Crossings project proposed land uses are generally consistent with the zoning and densities contained in the East Otay Mesa Specific Plan Area and the County's preferred draft of its General Plan 2020 Update process. The San Diego County Board of Supervisors adopted the East Otay Mesa Specific Plan Area on July 27, 1994. The East Otay Mesa Specific Plan Area classifies land use for the majority, approximately 98 percent, of the Crossings project site as mixed industrial and the remainder as rural residential. The proposed Crossing project Specific Plan Amendment is intended to change the rural residential classification area to mixed industrial.

The East Otay Mesa Specific Plan Area is bordered on the west by the City of San Diego, on the south by the international border with Mexico, and on the east by the San Ysidro Mountains. To the immediate north are the existing 773.5 acre site of the Richard J. Donovan State Correctional Facility and the 519.0 acre site of the County's George F. Bailey and East Mesa Detention Facilities.

The East Otay Mesa Specific Plan Area encompasses approximately 3,300 gross acres and designates approximately 2,372 acres as mixed industrial land use. The planned mixed industrial land uses are intended primarily for accommodating wholesale storage and distribution, warehousing, research services, and general industrial uses. The land use plan includes very low-density rural residential development in the hillside areas, state route right-of-way and a transit station, a fire station, a sheriff station, and commercial purposes.

The Judd Company proposed development concept for the approximately 311.5 acre Crossings project is planned as mixed industrial and business park land uses as shown in Table 1.

Table 1
Otay Crossings Commerce Park Proposed Land Uses[1]

Location	Land Use Description	Area	Dwelling Units
Otay Crossings Commerce Park	Mixed Industrial	212.0 acres	0
Otay Crossings Commerce Park	Border Crossing	73.9 acres	0
Otay Crossings Commerce Park	Local Circulation	25.6 acres	0
Totals		**311.5 acres**	**0 units**

[1] Source: PBS&J, "Otay Crossings Commerce Park Conceptual Water Study," December 2006.

The approximately 311.5 acre Crossings project consists of State Route 11 (SR 11) to be constructed through the site to provide accessibility to the planned future border crossing facility, 31 mixed use industrial lots, circulation elements, and open space. The U.S. Department of Homeland Security has requested 40 to 80 acres of the Crossings project site for construction of the future third border crossing facility. Of the total 212.0 acres for mixed industrial use about 51 acres would be for the SR 11 right-of-way and 20.9 acres is proposed as natural open space. The Crossings project is currently planned to be constructed in two

phases over several years. Refer to Appendix B for the Crossings project phasing map and refer to Appendix C for the Tentative Map of the Crossings project.

The County of San Diego has identified discretionary actions and/or permit approval requirements for the Crossings project. The projected potable and recycled water demands associated with the Crossings project have considered the discretionary actions and/or permit approvals and are incorporated into and used in this WSA Report. The water demands for the proposed Crossings project are provided in Section 5 – Historical and Projected Water Demands.

Section 4 – Otay Water District

The Otay WD is a municipal water district formed in 1956 pursuant to the Municipal Water District Act of 1911 (Water Code §§ 71000 et seq.). The Otay WD joined the Water Authority as a member agency in 1956 to acquire the right to purchase and distribute imported water throughout its service area. The Water Authority is an agency responsible for the wholesale supply of water to its 24 public agency members in San Diego County.

The Otay WD relies on the Water Authority for 100 percent of its domestic water supply. The Water Authority is the agency responsible for the supply of imported water into San Diego County through its membership in Metropolitan. The Water Authority currently obtains the vast majority of its imported supply from Metropolitan, but is in the process of diversifying its available supplies.

The Otay WD provides water service to residential, commercial, industrial, and agricultural customers, and for environmental and fire protection uses. In addition to providing water throughout its service area, Otay WD also provides sewage collection and treatment services to a portion of its service area known as the Jamacha Basin. The Otay WD also owns and operates the Ralph W. Chapman Water Recycling Facility (RWCWRF) which has an effective treatment capacity of 1.2 million gallons per day (mgd) or about 1,300 acre feet per year (ac-ft/yr) to produce recycled water. On May 18, 2007 an additional source of recycled water supply, at least 6 mgd or about 6,720 ac-ft/yr, became available to Otay WD from the City of San Diego's South Bay Water Reclamation Plant (SBWRP).

The Otay WD jurisdictional area is generally located within the south central portion of San Diego County and includes approximately 125 square miles. The Otay WD serves portions of the unincorporated communities of southern El Cajon, La Mesa, Rancho San Diego, Jamul, Spring Valley, Bonita, and Otay Mesa, the eastern portion of the City of Chula Vista and a portion of the City of San Diego on Otay Mesa. The Otay WD jurisdiction boundaries are roughly bounded on the north by the Padre Dam Municipal Water District, on the northwest by the Helix Water District, and on the west by the South Bay Irrigation District (Sweetwater

Authority) and the City of San Diego. The southern boundary of Otay WD is the international border with Mexico.

The planning area addressed in the Otay WD 2002 Water Resources Master Plan (WRMP) and the 2005 Urban Water Management Plan (UWMP) includes the land within the jurisdictional boundary of the Otay WD and those areas outside of the present Otay WD boundaries considered to be in the Area of Influence of the Otay WD. Figure 3-1 contained within the 2002 WRMP shows the jurisdictional boundary of the Otay WD and the Area of Influence. The planning area is approximately 143 square miles, of which approximately 125 square miles are within the Otay WD current boundaries and approximately 18 square miles are in the Area of Influence. The area east of Otay WD is rural and currently not within any water purveyor jurisdiction and potentially could be served by the Otay WD in the future if the need for imported water becomes necessary, as is the case for the Area of Influence.

The City of Chula Vista, the City of San Diego, and the County of San Diego are the three land use planning agencies within the Otay WD jurisdiction. Data on forecasts for land use planning, demographics, economic projections, population, and the future rate of growth within Otay WD were obtained from the San Diego Association of Governments (SANDAG). SANDAG serves as the regional, intergovernmental planning agency that develops and provides forecast information through the year 2030. Population growth within the Otay WD service area is expected to increase from the 2005 figure of approximately 179,000 to an estimated 268,000 by 2025, and is estimated to be 277,000 at ultimate build out. Land use information used to develop water demand projections are based upon Specific or Sectional Planning Areas, the Otay Ranch General Development Plan/Sub-regional Plan (Otay Ranch GDP), East Otay Mesa Specific Plan Area, San Diego County Community Plans, and City of San Diego, City of Chula Vista, and County of San Diego General Plans.

The Otay WD long-term historic growth rate has been approximately 3% per year. In recent years, growth has occurred at a faster rate due to accelerated residential development in the eastern portion of the City of Chula Vista. The SANDAG forecast predicts this accelerated growth to continue for another five to ten years. The growth rate is expected to slow as the inventory of developable land is diminished.

Climatic conditions within the Otay WD service area are characteristically Mediterranean near the coast, with mild temperatures year round. Inland areas are both hotter in summer and cooler in winter, with summer temperatures often exceeding 90 degrees and winter temperatures occasionally dipping to below freezing. Most of the region's rainfall occurs during the months of December through March. Average annual rainfall is approximately 9.4 inches per year.

Historic climate data were obtained from the Western Regional Climate Center for Station 042706 (El Cajon). This station was selected because its annual temperature variation is representative of most of the Otay WD service area. While there is a station in the City of

Chula Vista, the temperature variation at the City of Chula Vista station is more typical of a coastal environment than the conditions in most of the Otay WD service area.

4.1 Urban Water Management Plan

In accordance with the California Urban Water Management Planning Act, the Otay WD Board of Directors adopted an Urban Water Management Plan in December 2005 and it was subsequently submitted to the California Department of Water Resources (DWR). DWR required Otay WD to make revisions to the submitted plan. The Otay WD Board of Directors adopted the revised 2005 UWMP in July 2007. As required by law, the Otay WD revised 2005 UWMP includes projected water supplies required to meet future demands through 2030. In accordance with Water Code Section 10910 (c)(2) and Government Code Section 66473.7 (c)(3), information from the Otay WD revised 2005 UWMP along with supplemental information from the Otay WD 2002 WRMP have been utilized to prepare this WSA Report and are incorporated herein by reference.

Section 5 – Historical and Projected Water Demands

The projected demands for Otay WD are based on Specific or Sectional Planning Areas, the Otay Ranch General Development Plan/Sub-regional Plan, the East Otay Mesa Specific Plan Area, San Diego County Community Plans, and City of San Diego, City of Chula Vista, and County of San Diego General Plans. This land use information is also used by SANDAG as the basis for its most recent forecast data. This land use information is utilized in the preparation of the Otay WD 2002 WRMP and revised 2005 UWMP to develop the forecasted demands and supply requirements.

In 1994, the Water Authority selected the Institute for Water Resources-Municipal and Industrial Needs (MAIN) computer model to forecast municipal and industrial water use for the San Diego region. The MAIN model uses demographic and economic data to project sector-level water demands (i.e. residential and non-residential demands). This econometric model has over a quarter of a century of practical application and is used by many cities and water agencies throughout the United States. The Water Authority's version of the MAIN model was modified to reflect the San Diego region's unique parameters and is known as CWA-MAIN.

The foundation of the water demand forecast is the underlying demographic and economic projections. This was a primary reason, why, in 1992 the Water Authority and SANDAG entered into a Memorandum of Agreement (MOA), in which the Water Authority agreed to use the SANDAG current regional growth forecast for water supply planning purposes. In addition, the MOA recognizes that water supply reliability must be a component of San Diego County's regional growth management strategy required by Proposition C, as passed by the San Diego County voters in 1988. The MOA ensures a strong linkage between local general

plan land use forecasts and water demand projections and resulting supply needs for the San Diego region.

Consistent with the previous CWA-MAIN modeling efforts, the 2005 water demand forecast update utilized the latest official SANDAG demographic projections. The new SANDAG 2030 Forecast, released in December 2003, extended the projection horizon an additional ten years to 2030. Member agency-level demographic and economic projections were compiled from this SANDAG forecast and incorporated into the CWA-MAIN model.

The municipal and industrial forecast also included an updated accounting of projected conservation savings based on projected regional implementation of the California Urban Water Conservation Council (CUWCC) Best Management Practices and SANDAG demographic information for the period 2005 through 2030. These savings estimates were then factored into the baseline municipal and industrial demand forecast.

A separate agricultural model, also used in prior modeling efforts, was used to forecast agricultural water demands within the Water Authority service area. This model estimates agricultural demand to be met by the Water Authority's member agencies based on agricultural acreage projections provided by SANDAG, crop distribution data derived from the Department of Water Resources and the California Avocado Commission, and average crop-type watering requirements based on California Irrigation Management Information System data.

The Water Authority and Metropolitan update their water demand and supply projections within their jurisdictions utilizing the SANDAG most recent growth forecast to project future water demands. This provides for the important strong link between demand and supply projections to the land use plans of the cities and the county. This provides for consistency between the retail and wholesale agencies water demand projections, thereby ensuring that adequate supplies are and will be planned for the Otay WD existing and future water users. Existing land use plans, any revisions to land use plans, and annexations are captured in the SANDAG updated forecasts. The Water Authority and Metropolitan will update their demand forecasts based on the SANDAG most recent forecast approximately every five years to coincide with preparation of their urban water management plans. Prior to the next forecast update, local jurisdictions may require water supply assessment and/or verification reports consistent with Senate Bills 610 and 221 for proposed land use developments that either have pending annexations into the Otay WD, Water Authority, and Metropolitan or have revised land use plans than originally anticipated.

The state of California Business and Professions Code Section 11010 and Government Code Sections 65867.5, 66455.3, and 66473.7, are referred to as SB 221, requires affirmative written verification from the water purveyor of the public water system that sufficient water supplies are to be available for certain residential subdivisions of property prior to approval of a tentative map. SB 221 compliance does not apply to the Crossings project as it is an industrial subdivision.

In evaluating the availability of supply, the Water Authority member agency can determine if "offset" supplies are available as a result of other land use decisions, which lowered water use within their service area. In addition, Metropolitan's 2005 Regional Urban Water Management Plan identified potential reserve supplies in the supply capability analysis (Tables II-7, II-8, and II-9), which could be available to meet the unanticipated demands. The Water Authority and Metropolitan next forecast and supply planning documents would then capture any increase or decrease in demands caused by annexations or revised land use plans.

To fully quantify probable demands served by the Water Authority, lands with impending applications for annexation to the Otay WD, Water Authority, and Metropolitan service areas are identified in the Water Authority 2005 Updated UWMP. Working with its member agencies, the Water Authority identified potential near-term annexations as being parcels that may be annexed to the Otay WD, Water Authority, and Metropolitan within the next five years. Estimated water demands for those parcels, were provided to the Water Authority by the member agency or project proponent and then added to the Water Authority forecast. The Water Authority included the potential near-term annexations land areas projected potable water demands within their 2005 Updated UWMP to provide for more comprehensive supply planning and assist member agencies such as Otay WD in complying with SB 610 and/or SB 221. Tables 2-2 and 2-9 within the Water Authority 2005 Updated UWMP provides projected demand information for the anticipated pending annexations.

The historical and projected potable water demands for Otay WD are shown in Table 2.

Table 2
Historical and Projected Potable Water Fiscal Year Demands (acre-feet)
Incorporating Water Conservation BMP Efforts[1]

Water Use Sectors	1995	2000	2005	2010	2015	2020	2025	2030
Single Family Residential	10,604	15,331	19,850	25,442	29,130	33,316	37,211	42,089
Multi-Family Residential	1,880	1,986	2,893	3,708	4,245	4,855	5,423	6,134
Commercial & Industrial	1,650	3,043	1,549	1,986	2,274	2,600	2,904	3,285
Institutional & Governmental	1,680	2,089	2,115	2,711	3,104	3,550	3,965	4,485
Landscape	3,983	6,256	8,512	10,910	12,491	14,286	15,956	18,048
Agricultural	487	171	2,268	2,907	3,328	3,806	4,251	4,809
Known Losses	*	*	511	655	749	857	957	1,083
System Losses	*	1,733	1,076	1,494	1,711	1,957	2,186	2,472
Totals	**20,284**	**30,609**	**38,774**	**49,813**	**57,032**	**65,227**	**72,853**	**82,405**

[1] Source: The Otay WD 2005 UWMP.
* Known losses (i.e. unaccounted for water in UWMP) and system losses unavailable.

The historical and projected recycled water demands for Otay WD are shown in Table 3.

Table 3
Historical and Projected Recycled Water Fiscal Year Demands (acre-feet) Incorporating Water Conservation BMP Efforts[1]

Water Use Sector	1995	2000	2005	2010	2015	2020	2025	2030
Landscape	614	1,274	1,155	4,040	4,684	5,430	6,294	7,297
Totals	**614**	**1,274**	**1,155**	**4,040**	**4,684**	**5,430**	**6,294**	**7,297**

[1] Source: The Otay WD 2005 UWMP.

The Otay WD water demand projection methodology utilizes a component land use approach. This is done by applying representative values of water use to the acreage of each land use type and then aggregating these individual land use demand projections into an overall total demand for the Otay WD. This is called the water duty method, and the water duty is the amount of water used in acre-feet per acre per year. This approach is used for all the land use types except residential development where a demand per dwelling unit was applied. In addition, commercial and industrial water use categories are further subdivided by type including separate categories for golf courses, schools, jails, prisons, hospitals, etc. where specific water demands are allocated.

To determine water duties for the various types of land use, the entire water meter database of the Otay WD is utilized and sorted by the appropriate land use types. The metered consumption records are then examined for each of the land uses, and water duties are determined for the various types of residential, commercial, industrial, and institutional land uses. For example the water duty factors for commercial and industrial land uses are estimated using 1,785 and 893 gallons per day per acre respectively. Residential water demand is established based on the same data but computed on a per-dwelling unit basis. The focus is to ensure that for each of the residential land use categories (very low, low, medium, and high densities), the demand criteria used is adequately represented based upon actual data. This method is used because residential land uses constitute a substantial percentage of the total developable planning area of the Otay WD.

By applying the established water duties to the proposed land uses, the projected water demand for the entire Otay WD planning area at ultimate development is determined. Projected water demands for the intervening years were determined using growth rate projections consistent with data obtained from SANDAG and the experience of the Otay WD.

Using the land use demand projection criteria as established in the Otay WD 2002 WRMP, the projected potable water demand for the proposed Crossings project is shown in Table 4, which totals 0.264 mgd or about 296 ac-ft/yr. The projected recycled water demand for the proposed Crossings project is provided in Table 5, which totals 0.034 mgd or about 38 ac-ft/yr, representing about 11% of total Crossings project demand.

Table 4
Otay Crossings Commerce Park Projected Potable Water Annual Average Demands[1]

Location	Land Use Description	Net Acreage	Demand (gpd)
Otay Crossings Commerce Park	Mixed Industrial	212.0 acres	195,924
Otay Crossings Commerce Park	Border Crossing	73.9 acres	68,312
Otay Crossings Commerce Park	Right-of-Way	25.6 acres	0.0
Totals		**311.5 acres**	**264,236**

[1] Source: PBS&J, "Otay Crossings Commerce Park Conceptual Water Study," December 2006.

Table 5
Otay Crossings Commerce Park Projected Recycled Water Annual Average Demands[1]

Location	Land Use Description	Irrigated Area	Demand (gpd)
Otay Crossings Commerce Park	Mixed Industrial	11.5 acres	24,885
Otay Crossings Commerce Park	Border Crossing	4.0 acres	8,676
Otay Crossings Commerce Park	Right-of-Way	0.0 acres	0.0
Totals		**15.5 acres**	**33,561**

[1] Source: PBS&J, "Otay Crossings Commerce Park Conceptual Water Study," December 2006.

The Crossings project proponents are required to use recycled water for irrigation. The primary benefit of using recycled water is that it will offset the potable water demands by an estimated 38 ac-ft/yr. The Otay WD 2002 WRMP and 2005 UWMP anticipated that the Crossings project would use both potable and recycled water.

5.1 Demand Management (Water Conservation)

Demand management, or water conservation is a critical part of the Otay WD 2005 UWMP and its long term strategy for meeting water supply needs of the Otay WD customers. Water conservation, is frequently the lowest-cost resource available to any water agency. The goals of the Otay WD water conservation programs are to:

- Reduce the demand for more expensive, imported water
- Demonstrate continued commitment to the Best Management Practices (BMP)
- Ensure a reliable water supply

The Otay WD is signatory to the Memorandum of Understanding (MOU) Regarding Urban Water Conservation in California, which created the California Urban Water Conservation

Council in 1991 in an effort to reduce California's long-term water demands. Water conservation programs are developed and implemented on the premise that water conservation increases the water supply by reducing the demand on available supply, which is vital to the optimal utilization of a region's water supply resources. The Otay WD participates in many water conservation programs designed and typically operated on a shared-cost participation program basis among the Water Authority, Metropolitan, and their member agencies. The demands shown in Tables 2, 3, 4, and 5 take into account implementation of water conservation measures within Otay WD.

As one of the first signatories to the MOU Regarding Urban Water Conservation in California, the Otay WD has made BMP implementation for water conservation the cornerstone of its conservation programs and a key element in its water resource management strategy. As a member of the Water Authority, Otay WD also benefits from regional programs performed on behalf of its member agencies. The BMP programs implemented by Otay WD and regional BMP programs implemented by the Water Authority that benefit all their member agencies are addressed in the Otay WD 2005 UWMP. In partnership with the Water Authority, the County of San Diego, City of San Diego, City of Chula Vista, and developers, the Otay WD water conservation efforts are expected to grow and expand. The resulting savings directly relate to additional available water in the San Diego County region for beneficial use within the Water Authority service area, including the Otay WD.

Additional conservation or water use efficiency measures or programs practiced by the Otay WD include the following:

- Supervisory Control and Data Acquisition System

The Otay WD implemented and has operated for many years a Supervisor Control and Data Acquisition (SCADA) system to control, monitor, and collect data regarding the operation of the water system. The major facilities that have SCADA capabilities are the water flow control supply sources, transmission network, pumping stations, and water storage reservoirs. The SCADA system allows for many and varied useful functions. Some of these functions provide for operating personnel to monitor the water supply source flow rates, reservoir levels, turn on or off pumping units, etc. The SCADA system aids in the prevention of water reservoir overflow events and increases energy efficiency.

- Water Conservation Ordinance

California Water Code Sections 375 et seq. permit public entities which supply water at retail to adopt and enforce a water conservation program to reduce the quantity of water used by the people therein for the purpose of conserving water supplies of such public entity. The Otay WD Board of Directors established a comprehensive water conservation program pursuant to California Water Code Sections 375 et seq., based upon the need to conserve water supplies and to avoid or minimize the effects of any future shortage. A

water shortage could exist based upon the occurrence of one or more of the following conditions:

1. A general water supply shortage due to increased demand or limited supplies.
2. Distribution or storage facilities of the Water Authority or other agencies become inadequate.
3. A major failure of the supply, storage, and distribution facilities of Metropolitan, Water Authority, and/or Otay WD.

The Otay WD water conservation ordinance finds and determines that the conditions prevailing in the San Diego County area require that the available water resources be put to maximum beneficial use to the extent to which they are capable, and that the waste or unreasonable use, or unreasonable method of use, of water be prevented and that the conservation of such water be encouraged with a view to the maximum reasonable and beneficial use thereof in the interests of the people of the Otay WD and for the public welfare.

As a signatory to the MOU Regarding Urban Water Conservation in California, the Otay WD is required to submit biannual reports that detail the implementation of current water conservation practices. The Otay WD voluntarily agreed to implement the fourteen water conservation Best Management Practices beginning in 1992. The Otay WD submits its report to the CUWCC every two years. The Otay WD BMP Reports for 2001 to 2004, as well as the BMP Coverage Report for 2003-04, are included in the 2005 UWMP.

The Crossings project will implement the CUWCC Best Management Practices for water conservation such as installation of ultra low flow toilets, development of a water conversation plan, and beneficial use of recycled water, all of which are typical requirements of development projects within the County of San Diego.

Section 6 - Existing and Projected Supplies

The Otay WD currently does not have an independent raw or potable water supply source. The Otay WD is a member public agency of the Water Authority. The Water Authority is a member public agency of Metropolitan. The statutory relationships between the Water Authority and its member agencies, and Metropolitan and its member agencies, respectively, establish the scope of the Otay WD entitlement to water from these two agencies.

The Water Authority through two delivery pipelines, referred to as Pipeline No. 4 and the La Mesa Sweetwater Extension Pipeline, currently supply the Otay WD with 100 percent of its potable water. The Water Authority in turn, currently purchases the majority of its water from Metropolitan. Due to the Otay WD reliance on these two agencies, this WSA Report includes referenced documents that contain information on the existing and projected supplies, supply programs, and related projects of the Water Authority and Metropolitan. The Water Authority

and Metropolitan are actively pursuing programs and projects to diversify their water supply resources.

The description of local recycled water supplies available to the Otay WD is also discussed below.

6.1 Metropolitan Water District of Southern California 2005 Regional Urban Water Management Plan

In November 2005, Metropolitan adopted its 2005 Regional Urban Water Management Plan (RUWMP). The 2005 RUWMP provides Metropolitan's member agencies, retail water utilities, cities, and counties within its service area with, among other things, a detailed evaluation of the supplies necessary to meet future demands, and an evaluation of reasonable and practical efficient water uses, recycling, and conservation activities. During the preparation of the 2005 RUWMP, Metropolitan also utilized the current SANDAG regional growth forecast in calculating regional water demands for the Water Authority service area.

6.1.1 Availability of Sufficient Supplies and Plans for Acquiring Additional Supplies

Metropolitan is a wholesale supplier of water to its member public agencies and obtains its supplies from two primary sources: the Colorado River, via the Colorado River Aqueduct (CRA), which it owns and operates, and Northern California, via the State Water Project (SWP). The 2005 RUWMP documents the availability of these existing supplies and additional supplies necessary to meet future demands.

6.1.1.1 Metropolitan Supplies

Metropolitan's Integrated Resources Plan (IRP) identifies a mix of resources (imported and local) that, when implemented, will provide 100 percent reliability for full-service demands through the attainment of regional targets set for conservation, local supplies, State Water Project supplies, Colorado River supplies, groundwater banking, and water transfers. The 2004 update to the IRP (2004 IRP Update) includes a planning buffer supply to mitigate against the risks associated with implementation of local and imported supply programs. The planning buffer identifies an additional increment of water that could potentially be developed if other supplies are not implemented as planned. As part of implementation of the planning buffer, Metropolitan periodically evaluates supply development to ensure that the region is not under or over-developing supplies. If managed properly, the planning buffer will help ensure that the southern California region, including San Diego County, will have adequate supplies to meet future demands.

In November 2005, Metropolitan adopted its 2005 RUWMP in accordance with state law. The resource targets included in the 2004 IRP Update serve as the foundation for the planning assumptions used in the 2005 RUWMP. Metropolitan's 2005 RUWMP contains a water supply reliability assessment that includes a detailed evaluation of the supplies necessary to

meet demands over a 25-year period in average, single dry year and multiple dry year periods. As part of this process, Metropolitan also uses the current SANDAG regional growth forecast in calculating regional water demands for the Water Authority's service area.

As stated in Metropolitan's 2005 RUWMP, that plan may be used as a source document for meeting the requirements of SB 610 and SB 221 until the next scheduled update is completed in 2010. The 2005 RUWMP includes a "Justifications for Supply Projections" in Appendix A.3, that provides detailed documentation of the planning, legal, financial, and regulatory basis for including each source of supply in the plan. A copy of Metropolitan's 2005 RUWMP can be found on the World Wide Web at the following address: www.mwdh2o.com/mwdh2o/pages/yourwater/RUWMP/RUWMP_2005.pdf.

Water supply agencies throughout California continue to face climatological, environmental, legal, and other challenges that impact water source supply conditions, such as the recent court ruling regarding the Sacramento-San Joaquin Delta issues. Challenges such as these essentially always will be present. The regional water supply agencies, the Water Authority and Metropolitan, along with the Otay WD nevertheless fully intend to have sufficient, reliable supplies to serve water demands.

6.1.1.2 Pipeline 6

Metropolitan completed its System Overview Study (SOS) in fall 2005. The SOS determines if Metropolitan's current system is capable of delivering the supplies to meet the demands shown in its 2004 IRP Update.

Pipeline 6 is included in the SOS as an untreated water pipeline to deliver additional Metropolitan supplies to the San Diego region. The addition of Pipeline 6 would allow the Water Authority and Metropolitan to convert one of the existing untreated water pipelines to a treated water pipeline. With the conversion, the capacity to import both treated and untreated water would increase significantly, thereby enabling Metropolitan to increase both treated and untreated imported water delivery capacity to the San Diego region.

Based on current planning assumptions of the Water Authority and Metropolitan, new imported supplies delivered though Pipeline 6 would be required no earlier than 2018, absent development of new supplies from seawater desalination or some combination of new local supplies, totaling 56,000 ac-ft/yr (see Section 6.2.1 below). With development of 56,000 ac-ft/yr, Pipeline 6 would not be needed until 2023. Based on a nine-year lead time requested by Metropolitan, a decision to proceed with Pipeline 6 would need to be communicated to Metropolitan by 2009. Activities associated with implementation of Pipeline 6 include the following:

- Coordination between Metropolitan and the Water Authority regarding planning and design of the pipeline is ongoing.

- An alignment for the entire approximately 30-mile pipeline was identified in the original 1993 Environmental Impact Report. Metropolitan is conducting a feasibility study to re-visit the 1993 alignment and evaluate alternative alignments north of the San Luis Rey River in light of changed conditions since 1993. The Water Authority plans to conduct a similar feasibility study of Pipeline 6 alignments south of the San Luis Rey River. Based on these updated feasibility studies, an updated environmental analysis for the project is also planned.

6.1.2 Metropolitan Capital Investment Plan

As part of Metropolitan's annual budget approval process, a Capital Investment Plan is prepared. The cost, purpose, justification, status, progress, etc. of Metropolitan's infrastructure projects to deliver existing and future supplies are documented in the Capital Investment Plan. The financing of these projects is addressed as part of the annual budget approval process.

Metropolitan's Capital Investment Plan includes a series of projects identified from Metropolitan studies of projected water needs, which, when considered along with operational demands on aging facilities and new water quality regulations, identify the capital projects needed to maintain infrastructure reliability and water quality standards, improve efficiency, and provide future cost savings. All projects within the Capital Investment Plan are evaluated against an objective set of criteria to ensure they are aligned with the Metropolitan's goals of supply reliability and quality.

6.2 San Diego County Water Authority Regional Water Supplies

The Water Authority has adopted plans and is taking specific actions to develop adequate water supplies to help meet existing and future water demands within the San Diego region. This section contains details on the supplies being developed by the Water Authority. A summary of recent actions pertaining to development of these supplies includes:

- In accordance with the Urban Water Management Planning Act, the Water Authority adopted an Urban Water Management Plan (UWMP) in November 2005 and updated the 2005 UWMP in April 2007 that identifies a diverse mix of local and imported water supplies to meet future demands. A copy of the Water Authority's 2005 Updated UWMP can be found on the World Wide Web at www.sdcwa.org.

- Deliveries of conserved agricultural water from the Imperial Irrigation District (IID) to San Diego County have increased annually since 2003, with 35,000 ac-ft of deliveries in FY 2006.

- As part of the October 2003 Quantification Settlement Agreement (QSA), the Water Authority was assigned Metropolitan's rights to 77,700 ac-ft/yr of conserved water from

the All-American Canal (AAC) and Coachella Canal (CC) lining projects. The Water Authority has begun implementation of these projects, with the CC project now complete and deliveries being made to the San Diego region.

Through implementation of the Water Authority and member agency planned supply projects, along with reliable imported water supplies from Metropolitan, the region anticipates having adequate supplies to meet existing and future water demands.

To ensure sufficient supplies to meet projected growth in the San Diego region, the Water Authority uses the SANDAG most recent regional growth forecast in calculating regional water demands. The SANDAG regional growth forecast is based on the plans and policies of the land-use jurisdictions with San Diego County. The existing and future demands of the member agencies are included in the Water Authority's projections.

6.2.1 Availability of Sufficient Supplies and Plans for Acquiring Additional Supplies

The Water Authority currently obtains imported supplies from Metropolitan, conserved water from the CC lining project, and an increasing amount of conserved agricultural water from IID. Of the twenty-seven member agencies that purchase water supplies from Metropolitan, the Water Authority is Metropolitan's largest customer. In FY 2006, the Water Authority purchased 577,944 ac-ft from Metropolitan, an increase of approximately 4,000 ac-ft over the FY 2005 amount.

Section 135 of Metropolitan's Act defines the preferential right to water for each of its member agencies. As calculated by Metropolitan, the Water Authority's FY 2006 preferential right is 16.46% of Metropolitan's supply, while the Water Authority accounted for approximately 25% of Metropolitan's water sales. Under preferential rights, Metropolitan could allocate water without regard to historic water purchases or dependence on Metropolitan. The Water Authority and its member agencies are taking measures to reduce dependence on Metropolitan through development of additional supplies and a water supply portfolio that would not be jeopardized by a preferential rights allocation. Metropolitan has stated, consistent with Section 4202 of its Administrative Code that it is prepared to provide the Water Authority's service area with adequate supplies of water to meet expanding and increasing needs in the years ahead. When and as additional water resources are required to meet increasing needs, Metropolitan stated it will be prepared to deliver such supplies. In Section II.4 of their 2005 RUWMP, Metropolitan states that through effective management of its water supply, they fully expect to be 100 percent reliable in meeting all non-discounted non-interruptible demands throughout the next twenty-five years.

The Water Authority has made large investments in Metropolitan's facilities and will continue to include imported supplies from Metropolitan in the future resource mix. As discussed in the Water Authority's 2005 Updated UWMP, the Water Authority and its member agencies are planning to diversify the San Diego regions supply portfolio and reduce purchases from Metropolitan.

As part of the Water Authority's diversification efforts, the Water Authority is now taking delivery of conserved agricultural water from IID and water saved from the CC lining project. The Water Authority is currently implementing the AAC lining projects. Table 6 summarizes the planned yields from these supply projects, with detailed information included in the sections to follow. Deliveries from Metropolitan are also included in Table 6, which is further discussed in Section 6.1 above. The Water Authority's member agencies provided the verifiable local supply targets for groundwater, groundwater recovery, recycled water, and surface water, which are discussed in more detail in Section 5 of the Water Authority's 2005 Updated UWMP.

Table 6
Projected Verifiable Water Supplies – Water Authority Service Area
Normal Year (acre feet)

Water Supply Sources	2010	2015	2020	2025	2030
Water Authority Supplies					
Metropolitan Supplies	445,858	399,855	331,374	342,870	372,922
Water Authority/IID Transfer	70,000	100,000	190,000	200,000	200,000
AAC and CC Lining Projects	77,700	77,700	77,700	77,700	77,700
Member Agency Supplies					
Local Surface Water	59,649	59,649	59,649	59,649	59,649
Recycled Water	33,668	40,662	45,548	46,492	47,584
Seawater Desalination	0	34,689	36,064	37,754	40,000
Groundwater	17,175	18,945	19,775	19,775	19,775
Groundwater Recovery	11,400	11,400	11,400	11,400	11,400
Total Projected Supplies	715,450	742,900	771,510	795,640	829,030

Source: The Water Authority 2005 Updated Urban Water Management Plan.

Section 5 of the Water Authority's 2005 Updated UWMP also includes a discussion on the local supply target for seawater desalination. Seawater desalination supplies represent a significant future local resource in the Water Authority's service area. Poseidon Resources is pursuing the development of a local, privately-owned desalination project located adjacent to the Encina Power Station. As of June 2007, Poseidon has contracted with the Carlsbad Municipal Water District (MWD) (up to 28,000 ac-ft/yr depending on demands), Valley Center MWD (7,500 ac-ft/yr), Rincon Del Diablo MWD (4,000 ac-ft/yr), and Sweetwater Authority (2,400 ac-ft/yr) to supply up to 41,900 ac-ft/yr of desalinated seawater. The verifiable seawater desalination figure is based on the contract amounts and projected seawater desalination deliveries to Carlsbad MWD. As shown in Table 6, the verifiable projected local seawater desalination supplies vary each year based on the Carlsbad MWD demands (which are less than their desalinated seawater contract amount of 28,000 ac-ft/yr). There are several contingencies related to Poseidon's agreements with these member agencies that must be satisfied before implementation of the project and its ultimate yield can be determined. These contingencies include obtaining legal entitlements for construction of the

project, determination of a mutually acceptable delivery interconnection points and delivery charge, and engagement of a third party exchange agency partner where physical delivery to the contracting agency is not practical.

No large-scale seawater desalination facility has ever been permitted and constructed in California. Perhaps the most significant issue facing this desalination project as well as others proposed along the California coastline is the ability to permit the facility, including obtaining a Coastal Development Permit from the California Coastal Commission. This project must also secure arrangements for the delivery of product water from the facility to the local water agencies. These arrangements are currently in the planning stage.

The Water Authority's existing and planned supplies from the IID transfer and canal lining projects are considered "drought-proof" supplies and should be available at the yields shown in Table 6 in normal, single dry, and multi dry year scenarios. For dry year yields from Metropolitan supplies, refer to Metropolitan's 2005 RUWMP, and are discussed in Section 6.1 above.

As part of preparation of a written water supply assessment, an agency's shortage contingency analysis should be considered in determining sufficiency of supply. Section 9 of the Water Authority's 2005 Updated UWMP contains a detailed shortage contingency analysis that addresses a regional catastrophic shortage situation and drought management. The analysis demonstrates that the Water Authority and its member agencies, through the Emergency Response Plan, Emergency Storage Project, and Drought Management Plan (DMP) are taking actions to prepare for and appropriately handle an interruption of water supplies. The DMP, completed in May 2006, provides the Water Authority and its member agencies with a series of potential actions to take when faced with a shortage of imported water supplies from Metropolitan due to prolonged drought or other supply shortfall conditions. The actions will help the region avoid or minimize the impacts of shortages and ensure an equitable allocation of supplies.

6.2.1.1 Water Authority-Imperial Irrigation District Water Conservation and Transfer Agreement

The QSA was signed in October 2003, and resolves long-standing disputes regarding priority and use of Colorado River water and creates a baseline for implementing water transfers. With approval of the QSA, the Water Authority and IID were able to implement their Water Conservation and Transfer Agreement. This agreement not only provides reliability for the San Diego region, but also assists California in reducing its use of Colorado River water to its legal allocation.

On April 29, 1998, the Water Authority signed a historic agreement with IID for the long-term transfer of conserved Colorado River water to San Diego County. The Water Authority-IID Water Conservation and Transfer Agreement (Transfer Agreement) is the largest agriculture-to-urban water transfer in United States history. Colorado River water will be conserved by

Imperial Valley farmers who voluntarily participate in the program and then transferred to the Water Authority for use in San Diego County.

Implementation Status

On October 10, 2003, the Water Authority and IID executed an amendment to the original 1998 Transfer Agreement. This amendment modified certain aspects of the 1998 Agreement to be consistent with the terms and conditions of the QSA and related agreements. It also modified other aspects of the agreement to lessen the environmental impacts of the transfer of conserved water. The amendment was expressly contingent on the approval and implementation of the QSA, which was also executed on October 10, 2003.

On November 5, 2003, IID filed a complaint in Imperial County Superior Court seeking validation of 13 contracts associated with the Transfer Agreement and the QSA. Imperial County and various private parties filed additional suits in Superior Court, alleging violations of the California Environmental Quality Act (CEQA), the California Water Code, and other laws related to the approval of the QSA, the water transfer, and related agreements. The lawsuits have been coordinated for trial. The IID, Coachella Valley Water District, Metropolitan, the Water Authority, and State are defending these suits and coordinating to seek validation of the contracts. Implementation of the transfer provisions is proceeding during litigation. For further information regarding the litigation, contact the Water Authority's General Counsel.

Expected Supply

Deliveries into San Diego County from the transfer began in 2003 with an initial transfer of 10,000 ac-ft. The Water Authority received 20,000 ac-ft in 2004, 30,000 in 2005, and 40,000 in 2006. The quantities will increase annually to 200,000 ac-ft by 2021 then remain fixed for the duration of the Transfer Agreement. The initial term of the Transfer Agreement is 45 years, with a provision that either agency may extend the agreement for an additional 30-year term.

During dry years, when water availability is low, the conserved water will be transferred under the IID Colorado River rights, which are among the most senior in the Lower Colorado River Basin. Without the protection of these rights, the Water Authority could suffer delivery cutbacks. In recognition for the value of such reliability, the 1998 contract required the Water Authority to pay a premium on transfer water under defined regional shortage circumstances. The shortage premium period duration is the period of consecutive days during which any of the following exist: 1) a Water Authority shortage; 2) a shortage condition for the Lower Colorado River as declared by the Secretary; and 3) a Critical Year. Under terms of the October 2003 amendment, the shortage premium will not be included in the cost formula until Agreement Year 16.

Transportation

The Water Authority entered into a water exchange agreement with Metropolitan on October 10, 2003, to transport the Water Authority-IID transfer water from the Colorado River to San Diego County. Under the exchange agreement, Metropolitan will take delivery of the transfer water through its Colorado River Aqueduct. In exchange, Metropolitan will deliver to the Water Authority a like quantity and quality of water. The Water Authority will pay Metropolitan's applicable wheeling rate for each acre-foot of exchange water delivered. According to the water exchange agreement, Metropolitan will make delivery of the transfer water for 35 years, unless the Water Authority elects to extend the agreement another 10 years for a total of 45 years.

Cost/Financing

The costs associated with the transfer are proposed to be financed through the Water Authority's rates and charges. In the agreement between the Water Authority and IID, the price for the transfer water started at $258 per acre-foot and increases by a set amount for the first five years. The 2005 price for transfer water is $276 per acre-foot. Procedures are in place to evaluate and determine market-based rates following the first five-year period.

In accordance with the October 2003 amended exchange agreement between Metropolitan and the Water Authority, the initial cost to transport the conserved water was $253 per acre-foot. Thereafter, the price would be equal to the charge or charges set by Metropolitan's Board of Directors pursuant to applicable laws and regulation, and generally applicable to the conveyance of water by Metropolitan on behalf of its member agencies. The transportation charge in 2005 is $258 per acre-foot.

The Water Authority is providing $10 million to help offset potential socioeconomic impacts associated with temporary land fallowing. IID will credit the Water Authority for these funds during years 16 through 45. At the end of the fifth year of the transfer agreement (2007), the Water Authority will prepay IID an additional $10 million for future deliveries of water. IID will credit the Water Authority for this up-front payment during years 16 through 30.

As part of implementation of the QSA and water transfer, the Water Authority also entered into an environmental cost sharing agreement. The agreement specifies that the Water Authority will contribute $64 million for the purpose of funding environmental mitigation costs and contributing to the Salton Sea Restoration Fund.

Written Contracts or Other Proof

The supply and costs associated with the transfer are based primarily on the following documents:

Agreement for Transfer of Conserved Water by and between IID and the Water Authority (April 29, 1998). This Agreement provides for a market-based transaction in which the Water

Authority would pay IID a unit price for agricultural water conserved by IID and transferred to the Water Authority.

Revised Fourth Amendment to Agreement between IID and the Water Authority for Transfer of Conserved Water (October 10, 2003). Consistent with the executed Quantification Settlement Agreement (QSA) and related agreements, the amendments restructure the agreement and modify it to minimize the environmental impacts of the transfer of conserved water to the Water Authority.

Amended and Restated Agreement between Metropolitan and Water Authority for the Exchange of Water (October 10, 2003). This agreement was executed pursuant to the QSA and provides for delivery of the transfer water to the Water Authority.

Environmental Cost Sharing, Funding, and Habitat Conservation Plan Development Agreement among IID, Coachella Valley Water District (CVWD), and Water Authority (October 10, 2003). This Agreement provides for the specified allocation of QSA-related environmental review, mitigation, and litigation costs for the term of the QSA, and for development of a Habitat Conservation Plan.

Quantification Settlement Agreement Joint Powers Authority Creation and Funding Agreement (October 10, 2003). The purpose of this agreement is to create and fund the QSA Joint Powers Authority and to establish the limits of the funding obligation of CVWD, IID, and Water Authority for environmental mitigation and Salton Sea restoration pursuant to SB 654 (Machado).

Federal, State, and Local Permits/Approvals

Federal Endangered Species Act Permit. The U.S. Fish and Wildlife Service (USFWS) issued a Biological Opinion on January 12, 2001, that provides incidental take authorization and certain measures required to offset species impacts on the Colorado River regarding such actions.

State Water Resources Control Board (SWRCB) Petition. SWRCB adopted Water Rights Order 2002-0016 concerning IID and Water Authority's amended joint petition for approval of a long-term transfer of conserved water from IID to the Water Authority and to change the point of diversion, place of use, and purpose of use under Permit 7643.

Environmental Impact Report (EIR) for Conservation and Transfer Agreement. As lead agency, IID certified the Final EIR for the Conservation and Transfer Agreement on June 28, 2002.

U. S. Fish and Wildlife Service Draft Biological Opinion and Incidental Take Statement on the Bureau of Reclamation's Voluntary Fish and Wildlife Conservation Measures and Associated Conservation Agreements with the California Water Agencies (12/18/02). The U. S. Fish and Wildlife Service issued the biological opinion/incidental take statement for water transfer activities involving the Bureau of Reclamation and associated with IID/other California water

agencies' actions on listed species in the Imperial Valley and Salton Sea (per the June 28, 2002 EIR).

Addendum to EIR for Conservation and Transfer Agreement. IID as lead agency and Water Authority as responsible agency approved addendum to EIR in October 2003.

Environmental Impact Statement (EIS) for Conservation and Transfer Agreement. Bureau of Reclamation issued a Record of Decision on the EIS in October 2003.

CA Department of Fish and Game California Endangered Species Act Incidental Take Permit #2081-2003-024-006). The California Department of Fish and Game issued this permit (10/22/04) for potential take effects on state-listed/fully protected species associated with IID/other California water agencies' actions on listed species in the Imperial Valley and Salton Sea (per the June 28, 2002 EIR).

California Endangered Species Act (CESA) Permit. A CESA permit was issued by California Department of Fish and Game (CDFG) on April 4, 2005, providing incidental take authorization for potential species impacts on the Colorado River.

6.2.1.2 All-American Canal and Coachella Canal Lining Projects

As part of the QSA and related contracts, the Water Authority was assigned Metropolitan's rights to 77,700 ac-ft/yr of conserved water from projects that will line the All-American Canal (AAC) and Coachella Canal (CC). The projects will reduce the loss of water that currently occurs through seepage, and the conserved water will be delivered to the Water Authority. This conserved water will provide the San Diego region with an additional 8.5 million acre-feet over the 110-year life of the agreement.

Implementation Status

Earthwork for the Coachella Canal lining project began in November 2004 and involved approximately 37 miles of canal. National Environmental Policy Act (NEPA) and CEQA documentation is complete, including an amended Record of Decision by the U.S. Bureau of Reclamation (USBR). The amendment was required after revising the project design: instead of lining the canal in place, the project entailed the construction of a parallel canal. The project was completed in 2006, and deliveries of conserved water started in 2007.

Preliminary design-related activities have begun on the AAC lining project, including ground and aerial surveying, mapping cultural resources, and geotechnical investigations. The lining project consists of constructing a concrete-lined canal parallel to 24 miles of the existing AAC from Pilot Knob to Drop 3. NEPA and CEQA documentation is complete, environmental mitigation measures have been identified, and Endangered Species Act consultations are pending. Construction of the project has begun and construction is expected to be complete in 2010.

In July 2005, a lawsuit (*CDEM v United States,* Case No. CV-S-05-0870-KJD-PAL) was filed in the U. S. District Court for the District of Nevada on behalf of U.S. and Mexican groups challenging the lining of the AAC. The lawsuit, which names the Secretary of the Interior as a defendant, claims that seepage water from the canal belongs to water users in Mexico. California water agencies note that the seepage water is actually part of California's Colorado River allocation and not part of Mexico's allocation. The plaintiffs also allege a failure by the United States to comply with environmental laws. Federal officials have stated that they intend to vigorously defend the case.

Expected Supply

The AAC lining project will yield 67,700 acre-feet per year of Colorado River water for allocation upon completion of construction. The CC lining project will yield 26,000 acre-feet of Colorado River water each year available for allocation upon completion of construction. The October 10, 2003, Allocation Agreement states that 16,000 acre-feet per year of conserved canal lining water will be allocated to the San Luis Rey Indian Water Rights Settlement Parties. The remaining amount, 77,700 acre-feet per year, will be available to the Water Authority. According to the Allocation Agreement, IID has call rights to a portion (5,000 acre-feet per year) of the conserved water upon termination of the QSA for the remainder of the 110 years of the Allocation Agreement and upon satisfying certain conditions. The term of the QSA is for up to 75 years.

Transportation

The October 10, 2003, Exchange Agreement between the Water Authority and Metropolitan also provides for the delivery of the conserved water from the canal lining projects. The Water Authority will pay Metropolitan's applicable wheeling rate for each acre-foot of exchange water delivered. In the Agreement, Metropolitan will deliver the canal lining water for the term of the Allocation Agreement (110 years).

Cost/Financing

Under California Water Code Section 12560 et seq., the Water Authority will receive $200 million in state funds for construction of the projects. In addition, under California Water Code Section 79567, $20 million from Proposition 50 is also available for the lining projects. Additionally, the Water Authority will receive $35 million for groundwater conjunctive use projects as part of the agreement. The Water Authority would be responsible for additional expenses above the funds provided by the state.

The rate to be paid to transport the canal lining water will be equal to the charge or charges set by Metropolitan's Board of Directors pursuant to applicable law and regulation and generally applicable to the conveyance of water by Metropolitan on behalf of its member agencies.

In accordance with the Allocation Agreement, the Water Authority will also be responsible for a portion of the net additional Operation, Maintenance, and Repair (OM&R) costs for the lined canals. Any costs associated with the lining projects as proposed, are to be financed through the Water Authority's rates and charges.

Written Contracts or Other Proof

The expected supply and costs associated with the lining projects are based primarily on the following documents:

U.S. Public Law 100-675 (1988). Authorized the Department of the Interior to reduce seepage from the existing earthen AAC and CC. The law provides that conserved water will be made available to specified California contracting water agencies according to established priorities.

California Department of Water Resources - Metropolitan Funding Agreement (2001). Reimburse Metropolitan for project work necessary to construct the lining of the CC in an amount not to exceed $74 million. Modified by First Amendment (2004) to replace Metropolitan with the Authority. Modified by Second Amendment (2004) to increase funding amount to $83.65 million, with addition of funds from Proposition 50.

California Department of Water Resources - IID Funding Agreement (2001). Reimburse IID for project work necessary to construct a lined AAC in an amount not to exceed $126 million.

Metropolitan - CVWD Assignment and Delegation of Design Obligations Agreement (2002). Assigns design of the CC lining project to CVWD.

Metropolitan - CVWD Financial Arrangements Agreement for Design Obligations (2002). Obligates Metropolitan to advance funds to CVWD to cover costs for CC lining project design and CVWD to invoice Metropolitan to permit the Department of Water Resources to be billed for work completed.

Allocation Agreement among the United States of America, The Metropolitan Water District of Southern California, Coachella Valley Water District, Imperial Irrigation District, San Diego County Water Authority, the La Jolla, Pala, Pauma, Rincon, and San Pasqual Bands of Mission Indians, the San Luis Rey River Indian Water Authority, the City of Escondido, and Vista Irrigation District (October 10, 2003). This agreement includes assignment of Metropolitan's rights and interest in delivery of 77,700 acre-feet of Colorado River water previously intended to be delivered to Metropolitan to the Water Authority. Allocates water from the AAC and CC lining projects for at least 110 years to the Water Authority, the San Luis Rey Indian Water Rights Settlement Parties, and IID, if it exercises its call rights.

Amended and Restated Agreement between Metropolitan and Water Authority for the Exchange of Water (October 10, 2003). This agreement was executed pursuant to the QSA and provides for delivery of the conserved canal lining water to the Water Authority.

Agreement between Metropolitan and Water Authority regarding Assignment of Agreements related to the AAC and CC Lining Projects. This agreement was executed in April 2004 and assigns Metropolitan's rights to the Water Authority for agreements that had been executed to facilitate funding and construction of the AAC and CC lining projects:

Assignment and Delegation of Construction Obligations for the Coachella Canal Lining Project under the Department of Water Resources Funding Agreement No. 4600001474 from the San Diego County Water Authority to the Coachella Valley Water District, dated September 8, 2004.

Agreement Regarding the Financial Arrangements between the San Diego County Water Authority and Coachella Valley Water District for the Construction Obligations for the Coachella Canal Lining Project, dated September 8, 2004.

Agreement No. 04-XX-30-W0429 Among the United States Bureau of Reclamation, the Coachella Valley Water District, and the San Diego County Water Authority for the Construction of the Coachella Canal Lining Project Pursuant to Title II of Public Law 100-675, dated October 19, 2004.

California Water Code Section 12560 et seq. This Water Code Section provides for $200 million to be appropriated to the Department of Water Resources to help fund the canal lining projects in furtherance of implementing California's Colorado River Water Use Plan.

California Water Code Section 79567. This Water Code Section identifies $20 million as available for appropriation by the California Legislature from the Water Security, Clean Drinking Water, Coastal, and Beach Protection Fund of 2002 (Proposition 50) to DWR for grants for canal lining and related projects necessary to reduce Colorado River water use. According to the Allocation Agreement, it is the intention of the agencies that those funds will be available for use by the Water Authority, IID, or CVWD for the AAC and CC lining projects.

California Public Resources Code Section 75050(b)(1). This section identifies up to $36 million as available for water conservation projects that implement the Allocation Agreement as defined in the Quantification Settlement Agreement.

Federal, State, and Local Permits/Approvals

AAC Lining Project Final EIS/EIR (March 1994). A final EIR/EIS analyzing the potential impacts of lining the AAC was completed by the Bureau of Reclamation (Reclamation) in March 1994. A Record of Decision was signed by Reclamation in July 1994, implementing the preferred alternative for lining the AAC. A re-examination and analysis of these environmental compliance documents by Reclamation in November 1999 determined that these documents continued to meet the requirements of the NEPA and the CEQA and would be valid in the future.

CC Lining Project Final EIS/EIR (April 2001). The final EIR/EIS for the CC lining project was completed in 2001. Reclamation signed the Record of Decision in April 2002. An amended Record of Decision has also been signed to take into account revisions to the project description.

Mitigation, Monitoring, and Reporting Program for Coachella Canal Lining Project, SCH #1990020408; prepared by Coachella Valley Water District, May 16, 2001.

Environmental Commitment Plan for the Coachella Canal Lining Project, approved by the US Bureau of Reclamation (Boulder City, NV) on March 4, 2003.

Environmental Commitment Plan and Addendum to the All-American Canal Lining Project EIS/EIR California State Clearinghouse Number SCH 90010472 (June 2004, prepared by IID).

Addendum to Final EIS/EIR and Amendment to Environmental Commitment Plan for the All-American Canal Lining Project (approved June 27, 2006, by IID Board of Directors).

6.2.2 Water Authority Capital Improvement Program and Financial Information

The Water Authority's capital improvement program (CIP) budget document includes a description of each of the projects and programs being implemented to ensure existing and future facilities are adequate to deliver water supplies throughout the region. The project costs, along with information on the activities that need to be completed, are included in the CIP document. The Water Authority's Master Plan identifies future facilities and other improvements to the Water Authority's system that are necessary to maintain reliability throughout the region. A programmatic environmental impact report was certified by the Water Authority Board of Directors for the Master Plan in November 2003. Projects identified in the Master Plan will be included in the CIP based on Water Authority Board of Directors' approval. Information on the Water Authority's most recent CIP can be found on the World Wide Web at www.sdcwa.org/infra/cip.phtml.

One of the highest priority projects identified in the Master Plan is the development of additional treatment capacity within the region. During recent summers, the Water Authority experienced peak-demand conditions that have exceeded the region's rated treatment capacity. The Master Plan recommended development of an additional 50 mgd of treatment capacity immediately and another 50 mgd capacity by 2010. In response to this recommendation, the Water Authority Board of Directors in September 2005, approved construction of a 100 mgd water treatment plant. The water treatment plant is scheduled to be completed in April 2008. For the near-term, the Water Authority and its member agencies implemented short-term conservation programs and operational procedures to ensure adequate supplies during peak summer periods.

The Master Plan also identified carryover storage as a way to improve water supply reliability for the region. The Water Authority identified the three main benefits of carryover storage as:

1) enhance water supply reliability by providing a reliable and readily available source of water during periods of potential shortage, such as during dry years; 2) increase system efficiency by providing operational flexibility to serve above normal demands, such as those occurring in dry years, from storage rather than by the over-sizing of the Water Authority's imported water transmission facilities; and 3) better management of water supplies to allow the Water Authority to accept additional imported deliveries during periods of availability, such as during wet years, to ensure water availability during dry years. The Water Authority is currently preparing an EIR/EIS for a carryover storage project, with the preferred alternative being an expansion of the San Vicente Reservoir.

The Water Authority Board of Directors is provided a semi-annual and annual report on the status of development of the CIP projects. As described in the Water Authority's biennial budget, a combination of long- and short-term debt and cash (pay-as-you-go) will provide funding for capital improvements. Additional information is included in the Water Authority's biennial budget, which also contains selected financial information and summarizes the Water Authority's investment policy.

6.3 Otay Water District

The Otay WD 2002 Water Resources Master Plan and revised 2005 Urban Water Management Plan contain comparisons of projected supply and demands through the year 2030. Projected potable water resources to meet planned demands are currently planned to be supplied entirely with imported water received from the Water Authority. Recycled water resources to meet projected demands are planned to be supplied from local wastewater treatment plants. The Otay WD currently has no local supply of raw water, potable water, or groundwater resources. The development of potential groundwater supplies is a possibility for consideration in the future to allow for less reliance upon imported water. The supply forecasts contained within this WSA Report do not consider local groundwater development by the Otay WD as a supply resource.

6.3.1 Availability of Sufficient Supplies and Plans for Acquiring Additional Supplies

The availability of sufficient potable water supplies and plans for acquiring additional potable water supplies to serve existing and future demands of the Otay WD is based on the preceding discussions regarding Metropolitan's and the Water Authority's water supply resources. Historic imported water deliveries from the Water Authority to Otay WD and recycled water deliveries from the Otay WD Ralph W. Chapman Water Recycling Facility (RWCWRF) are shown in Table 7. Since the year 2000 through mid May 2007, recycled water demand has exceeded the supply capability typically in the summer months. The RWCWRF is limited to a maximum production of about 1,300 ac-ft/yr. This recycled water supply shortfall has been met by supplementing with potable water into the recycled water storage system as needed by adding potable water supplied by the Water Authority. On May 18, 2007 an additional source of recycled water supply from the City of San Diego's South Bay Water Reclamation Plant (SBWRP) became available. The supply of recycled water from the SBWRP is a result of

essentially completing construction and commencement of operations of the transmission, storage, and pump station systems necessary to link the SBWRP recycled water supply source to the existing Otay WD recycled water system.

Table 7
Historic Imported and Local Water Supplies
Otay Water District

Calendar Year	Imported Water (acre-feet)	Recycled Water (acre-feet)	Total (acre-feet)
1980	12,558	0	12,558
1985	14,529	0	14,529
1990	23,200	0	23,200
1995	20,922	614	21,536
2000	30,936	948	31,884
2005	40,322	1,227	41,549

Source: Otay WD operational records.

6.3.1.1 Imported and Regional Supplies

The availability of sufficient imported and regional potable water supplies to serve existing and planned uses within Otay WD is demonstrated in the above discussion on Metropolitan and the Water Authority's water supply reliability. The County Water Authority Act, Section 5 subdivision 11, states that the Water Authority "as far as practicable, shall provide each of its member agencies with adequate supplies of water to meet their expanding and increasing needs." The Water Authority provides between 75 to 95 percent of the total supplies used by its 24 member agencies, depending on local weather and supply conditions. In calendar year 2006 the Otay WD received delivery of about 41,700 ac-ft of supply from the Water Authority, which includes the potable water supplement for the recycled water system supply needs. The demand for potable water within the Otay WD is expected to increase to about 72,900 ac-ft by 2025 as per the Otay WD revised 2005 UWMP. These figures take into account the amount of local supply (i.e. conservation and recycling) that is expected to meet demands within Otay WD service area.

Potable Water System Facilities

The Otay WD continues to pursue diversification of its water supply resources to increase reliability and flexibility. The Otay WD also continues to plan, design, and construct potable water system facilities to obtain these supplies and to distribute potable water to meet customer demands. The Otay WD has successfully negotiated two water supply diversification agreements that enhance reliability and flexibility, which are briefly described as follows.

- The Otay WD entered into an agreement with the City of San Diego, known as the Otay Water Treatment Plant (WTP) Agreement. The Otay WTP Agreement provides for raw water purchase from the Water Authority and treatment by the City of San Diego at their Otay WTP for delivery to Otay WD. The supply system link to implement the Otay WTP Agreement to access the regions raw water supply system and the local water treatment plant became fully operational in August 2005. This supply link consists of the typical storage, transmission, pumping, flow measurement, and appurtenances to receive and transport the treated water to the Otay WD system. The City of San Diego obligation to supply 10 mgd of treated water under the Otay WTP Agreement is contingent upon there being available 10 mgd of surplus treated water in the Otay WTP until such time as Otay WD pays the City of San Diego to expand the Otay WTP to meet the Otay WD future needs. In the event that the City of San Diego's surplus is projected to be less than 10 mgd the City of San Diego will consider and not unreasonably refuse the expansion of the Otay WTP to meet the Otay WD future needs. The Otay WTP existing rated capacity is 40 mgd with an actual effective capacity of approximately 34 mgd. The City of San Diego's typical demand for treated water from the Otay WTP is approximately 20 mgd. It is at the City of San Diego's discretion to utilize either imported raw water delivered by the Water Authority Pipeline No. 3 or local water stored in Lower Otay Reservoir for treatment to supply the Otay WD demand.

- The Otay WD entered into an agreement with the Water Authority, known as the East County Regional Treated Water Improvement Program (ECRTWIP Agreement). The ECRTWIP Agreement provides for transmission of raw water to the Helix WD R. M. Levy WTP for treatment and delivery to Otay WD. The supply system link to implement the ECRTWIP Agreement is currently under development to access the regions raw water supply system and the local water treatment plant. This supply link consists of the typical transmission, pumping, storage, flow control, and appurtenances to receive and transport the potable water from the R. M. Levy WTP to Otay WD. The necessary supply link facilities are in various stages of development from design to facilities that are currently under construction. The required supply link facilities are scheduled to be fully operational by March 2010. The planned operational testing and startup of the supply link is planned to occur in December 2009. The Otay WD is required to take a minimum of 10,000 ac-ft/yr of treated water from the R.M. Levy WTP supplied from the regions raw water system.

Cost and Financing

The capital improvement costs associated with water supply and delivery are financed through the Otay WD water meter capacity fee and user rate structures. The Otay WD potable water sales revenue are used to pay for the wholesale cost of the treated water supply and the operating and maintenance expenses of the potable water system facilities.

Written Agreements, Contracts, or Other Proof

The supply and cost associated with deliveries of treated water from the Otay WTP and the R.M. Levy WTP is based on the following documents.

Agreement for the Purchase of Treated Water from the Otay Water Treatment Plant between the City of San Diego and the Otay Water District. The Otay WD entered into an agreement dated January 11, 1999 with the City of San Diego that provides for 10 mgd of surplus treated water to the Otay WD from the existing Otay WTP capacity. The agreement allows for the purchase of treated water on an as available basis from the Otay WTP. The Otay WD pays the Water Authority at the prevailing raw water rate for raw water and pays the City of San Diego at a rate equal to the actual cost of treatment to potable water standards.

Agreement between the San Diego County Authority and Otay Water District Regarding Implementation of the East County Regional Treated Water Improvement Program. The ECRTWIP Agreement requires the purchase of at least 10,000 ac-ft per year of potable water from the Helix WD R.M. Levy WTP at the prevailing Water Authority treated water rate. The ECRTWIP Agreement is dated April 27, 2006.

Agreement between the San Diego County Water Authority and Otay Water District for Design, Construction, Operation, and Maintenance of the Otay 14 Flow Control Facility Modification. The Otay WD entered into the Otay 14 Flow Control Facility Modification Agreement dated January 24, 2007 with the Water Authority to increase the Otay 14 Flow Control Facility physical capacity. The Water Authority and Otay WD to 50% share the capital cost to expand its capacity from 8 mgd to 16 mgd.

Federal, State, and Local Permits/Approvals

The Otay WD has acquired all the permits for the construction of the pipeline and pump station associated with the Otay WTP supply source and for the 640-1 and 640-2 water storage reservoirs project associated with the ECRTWIP Agreement through the typical planning, environmental approval, design, and construction processes.

Preliminary design-related activities have begun on the transmission main and Otay 14 Flow Control Facility associated with the ECRTWIP Agreement, including ground and aerial surveying, mapping cultural resources, and other environmental documentation investigations. The transmission main project consists of constructing about 26,000 feet of a 36-inch diameter steel pipeline from the Otay 14 Flow Control Facility to the 640-1 and 640-2 Reservoirs project. The Otay 14 Flow Control Facility modification consists of increasing the capacity of the existing systems from 8 mgd to 16 mgd. CEQA documentation is under preparation and is nearing completion for both projects. Construction of both of these projects is expected to be complete prior to January 2010.

The City of San Diego and the Helix Water District are required to meet all applicable federal, state, and local health and water quality requirements for the potable water produced at the Otay WTP and the R.M. Levy WTP respectively.

6.3.1.2 Recycled Water Supplies

Wastewater collection, treatment, and disposal services provided by the Otay WD is limited to a relatively small area within what is known as the Jamacha Basin, located within the Middle Sweetwater River watershed upstream of the Sweetwater Reservoir and downstream of Loveland Reservoir. Water recycling is defined as the treatment and disinfection of municipal wastewater to provide a water supply suitable for non-potable reuse. The Otay WD owns and operates the Ralph W. Chapman Water Recycling Facility, which produces recycled water treated to a tertiary level for landscape irrigation purposes. The recycled water market area of the Otay WD is located primarily within the eastern area of the City of Chula Vista and on the Otay Mesa. The Otay WD distributes recycled water to a substantial market area that includes but is not limited to the U.S. Olympic Training Center, the EastLake Golf Course, and other development projects.

The Otay WD projects that annual average demands for recycled water will to increase to about 6,294 ac-ft/yr by 2025 and are estimated to approach 10,000 ac-ft/yr at ultimate build out. About 1,300 ac-ft/yr is generated by the RWCWRF, with the remainder planned to be supplied to Otay WD by the City of San Diego's SBWRP.

Recycled Water System Facilities

The Otay WD has and continues to construct recycled water storage, pumping, transmission, and distribution facilities to meet projected recycled water market demands. For nearly 20 years, millions of dollars of capital improvements have been constructed. The supply link consisting of a transmission main, storage reservoir, and a pump station to receive and transport the recycled water from the City of San Diego's SBWRP are substantially complete and recycled water deliveries began on May 18, 2007.

Cost and Financing

The capital improvement costs associated with the recycled water supply and distribution systems are financed through the Otay WD water meter capacity fee and user rate structures. The Otay WD recycled water sales revenue, along with Metropolitan and the Water Authority's recycled water sales incentive programs are used to help offset the costs for the wholesale purchase and production of the recycled water supply, the operating and maintenance expenses, and the capital costs of the recycled water system facilities.

Written Agreements, Contracts, or Other Proof

The supply and cost associated with deliveries of recycled water from the SBWRP is based on the following document.

Agreement between the Otay Water District and the City of San Diego for Purchase of Reclaimed Water from the South Bay Water Reclamation Plant. The agreement provides for the purchase of at least 6,721 ac-ft per year of recycled water from the SBWRP at an initial price of $350 per acre-foot. The Otay WD Board of Directors approved the final agreement on June 4, 2003 and the San Diego City Council approved the final agreement on October 20, 2003.

Federal, State, and Local Permits/Approvals

The Otay WD has in place an agreement with Metropolitan for their recycled water sales incentive program for supplies from the RWCWRF and the SBWRP. Also, the Otay WD has in place an agreement with the Water Authority for their recycled water sales incentive program for supplies from the RWCWRF and the SBWRP. The Water Authority sales incentive agreement was approved by Water Authority on July 26, 2007 and by Otay WD on August 1, 2007. All permits for the construction of the recycled water facilities to receive, store, and pump the SBWRP supply have been acquired through the typical planning, environmental approval, design, and construction processes.

The California Regional Water Quality Control Board San Diego Region (RWQCB) "Master Reclamation Permit for Otay Water District Ralph W. Chapman Reclamation Facility" was adopted on May 9, 2007 (Order No. R9-2007-0038). This order establishes master reclamation requirements for the production, distribution, and use of recycled water in the Otay WD service area. The order includes the use of tertiary treated water produced and received from the City of San Diego's SBWRP. Recycled water received from and produced by the SBWRP is regulated by Regional Board Order No. 2000-203 and addenda. The City of San Diego is required to meet all applicable federal, state, and local health and water quality requirements for the recycled water produced at the SBWRP and delivered to Otay WD in conformance with Order No. 2000-203.

6.3.1.3 Potential Groundwater Supplies

The Otay WD 2005 UWMP contains a brief description of the development of potential groundwater supplies. Over the past several years, Otay WD has studied numerous potential groundwater supply options that have shown, through groundwater monitoring well activities, poor quality water and/or insufficient yield from the basins. The Otay WD has a few capital improvement program projects to continue the quest to develop potential groundwater resources. These groundwater supply efforts are not currently considered as a viable water supply resource to meet projected demands.

6.3.2 Otay WD Capital Improvement Program

The Otay WD plans, designs, constructs, and operates water system facilities to acquire sufficient supplies and to meet projected ultimate demands placed upon the potable and recycled water systems. In addition, the Otay WD forecasts needs and plans for water supply requirements to meet projected demands at ultimate build out. The necessary water facilities are constructed when development activities proceed and require service to achieve adequate cost effective water service.

New water facilities that are required to accommodate the forecasted growth within the entire Otay WD service area are defined and described within the Otay WD 2002 WRMP. These facilities are incorporated into the annual Otay WD Six Year Capital Improvement Program (CIP) for implementation when required to support development activities. As major development plans are formulated and proceed through the land use jurisdictional agency approval processes, Otay WD prepares water system requirements specifically for the proposed development project consistent with the 2002 WRMP. These requirements document, define, and describe all the potable water and recycled water system facilities to be constructed to provide an acceptable and adequate level of service to the proposed land uses, as well as the financial responsibility of the facilities required for service. The Otay WD funds the facilities identified as CIP projects. Established water meter capacity fees and user rates are collected to fund the CIP project facilities. The developer funds all other required water system facilities to provide water service to their project.

Section 7 – Conclusion: Availability of Sufficient Supplies

The Crossings project is currently located within the jurisdictions of the Otay WD, the Water Authority, and Metropolitan. To obtain permanent imported water supply service, land areas are required to be within the jurisdictions of the Otay WD, Water Authority, and Metropolitan to utilize imported water supply.

The Water Authority and Metropolitan have an established process that ensures supplies are being planned for and documented to meet future growth. Any revisions to land use plans and annexations are captured in updated SANDAG forecasts for land use planning, demographics, and economic projections. The Water Authority and Metropolitan will update their demand forecasts and supply needs based on the most recent SANDAG forecast approximately every five years to coincide with preparation of their urban water management plans. Prior to the next forecast update, local jurisdictions may require water supply assessment and/or verification reports for proposed land use developments that are not within the Water Authority nor Metropolitan jurisdictions or that have revised land use plans than reflected in the existing growth forecast. Proposed land areas to be annexed or revised land uses typically result in creating higher demand and supply requirements than originally anticipated. The Water Authority and Metropolitan next demand and supply forecast would then capture the

revised demands and resulting supplies which will become a permanent part of and incorporated within the Water Authority and Metropolitan water resources planning documents.

Metropolitan's Integrated Resources Plan (IRP) identifies a mix of resources (imported and local) that, when implemented, will provide 100 percent reliability for full-service demands through the attainment of regional targets set for conservation, local supplies, State Water Project supplies, Colorado River supplies, groundwater banking, and water transfers. The 2004 update to the IRP (2004 IRP Update) includes a planning buffer supply to mitigate against the risks associated with implementation of local and imported supply programs. The planning buffer identifies an additional increment of water that could potentially be developed if other supplies are not implemented as planned. As part of implementation of the planning buffer, Metropolitan periodically evaluates supply development to ensure that the region is not under or over developing supplies. If managed properly, the planning buffer will help ensure that the southern California region, including San Diego County, will have adequate supplies to meet future demands.

In Section II.4 of their 2005 Regional Urban Water Management Plan (2005 RUWMP), Metropolitan states that through effective management of its water supply, they fully expect to be 100 percent reliable in meeting all non-discounted non-interruptible demands throughout the next twenty-five years. Metropolitan's 2005 RUWMP identifies potential reserve supplies in the supply capability analysis (Tables II-7, II-8, and II-9), which could be available to meet the unanticipated demands.

The County Water Authority Act, Section 5 subdivision 11, states that the Water Authority "as far as practicable, shall provide each of its member agencies with adequate supplies of water to meet their expanding and increasing needs."

As part of preparation of a written water supply assessment report, an agency's shortage contingency analysis should be considered in determining sufficiency of supply. Section 9 of the Water Authority's 2005 Updated UWMP contains a detailed shortage contingency analysis that addresses a regional catastrophic shortage situation and drought management. The analysis demonstrates that the Water Authority and its member agencies, through the Emergency Response Plan, Emergency Storage Project, and Drought Management Plan (DMP) are taking actions to prepare for and appropriately handle an interruption of water supplies. The DMP, completed in May 2006, provides the Water Authority and its member agencies with a series of potential actions to take when faced with a shortage of imported water supplies from Metropolitan due to prolonged drought or other supply shortfall conditions. The actions will help the region avoid or minimize the impacts of shortages and ensure an equitable allocation of supplies.

This WSA Report identifies that the water demand projections for the proposed Crossings project are included in the water demand and supply forecasts within the water resources planning documents of the Otay WD, the Water Authority, and Metropolitan. Water supplies

necessary to serve the demands of the proposed Crossings project, along with existing and other projected future users, as well as the actions necessary to develop these supplies, are also identified in the water supply planning documents of the Otay WD, the Water Authority, and Metropolitan. The potable water demand projections and supply requirements for the proposed Crossings project are currently within the water resources planning documents of the Otay WD, Water Authority, and Metropolitan.

This WSA Report includes, among other information, an identification of existing water supply entitlements, water rights, water service contracts, or agreements relevant to the identified water supply needs for the proposed Crossings project. This WSA Report demonstrates and documents that sufficient water supplies are and will be planned for and are planned to be made available over a 20-year planning horizon for normal and in single dry and multiple dry years to meet the projected demand of the proposed Crossings project and the existing and other planned development projects within the Otay WD.

Table 8 presents the forecasted balance of water demands and required supplies for the Otay WD service area under average or normal year conditions. Table 9 presents the forecasted balance of water demands and supplies for the Otay WD service area under single dry year conditions. Table 10 presents the forecasted balance of water demands and supplies for the Otay WD service area under multiple dry year conditions for the five year period ending in 2015. Multiple dry year conditions for periods ending 2020, 2025, and 2030 are provided in the Otay WD 2005 UWMP. The projected potable demand and supply requirements shown the Tables 8, 9, and 10 are from the Otay WD 2005 UWMP and include those of the Crossings project. Hot, dry weather may generate urban water demands that are about 7 percent greater than normal. This percentage was utilized to generate the dry year demands shown in Tables 9 and 10. The recycled water supplies are assumed to experience no reduction in a dry year.

Table 8
Projected Balance of Water Supplies and Demands
Normal Year Conditions (acre feet)

Description	FY 2010	FY 2015	FY 2020	FY 2025	FY 2030
Water Authority Supply	45,772	52,349	59,799	66,560	75,108
Recycled Water Supply	4,040	4,684	5,430	6,294	7,297
Groundwater Supply	0	0	0	0	0
Total Required Supply	**49,812**	**57,033**	**65,229**	**72,854**	**82,405**
Total Projected Demand	**49,812**	**57,033**	**65,229**	**72,854**	**82,405**
Supply Deficit	**0**	**0**	**0**	**0**	**0**

Table 9
Projected Balance of Water Supplies and Demands
Single Dry Year Conditions (acre feet)

Description	FY 2010	FY 2015	FY 2020	FY 2025	FY 2030
Water Authority Supply	49,259	56,341	64,365	71,660	80,876
Recycled Water Supply	4,040	4,684	5,430	6,294	7,297
Groundwater Supply	0	0	0	0	0
Total Required Supply	**53,299**	**61,025**	**69,795**	**77,954**	**88,173**
Total Projected Demand	**53,299**	**61,025**	**69,795**	**77,954**	**88,173**
Supply Deficit	**0**	**0**	**0**	**0**	**0**

Dry year demands assumed to generate a 7% increase in demand over normal conditions for each year in addition to new demand growth.

Table 10
Projected Balance of Water Supplies and Demands
Multiple Dry Year Conditions (acre feet)

Description	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Water Authority Supply	50,675	52,091	53,509	54,925	56,341
Recycled Water Supply	4,169	4,298	4,426	4,555	4,684
Groundwater Supply	0	0	0	0	0
Total Required Supply	**54,844**	**56,389**	**57,935**	**59,480**	**61,025**
Total Projected Demand	**54,844**	**56,389**	**57,935**	**59,480**	**61,025**
Supply Deficit	**0**	**0**	**0**	**0**	**0**

Dry year demands assumed to generate a 7% increase in demand over normal conditions for each year in addition to new demand growth.

This WSA Report demonstrates that sufficient water supplies are planned for as well as the actions necessary to develop these supplies are documented to meet projected water demands of the Crossing project and the existing and other reasonably foreseeable planned development projects within the Otay WD for a 20-year planning horizon, in normal and in single and multiple dry years.

Source Documents

County of San Diego, August 7, 2007, Otay Crossings Commerce Park SB 610 and SB 221 Compliance request letter received August 9, 2007.

County of San Diego, October 19, 2007, Otay Crossings Commerce Park SB 610 Compliance request time extension letter received October 22, 2007.

County of San Diego, "East Otay Mesa Specific Plan Area," adopted July 27, 1994.

Otay Water District, "2002 Water Resources Master Plan," August 2002.

PBS&J, "Otay Crossings Commerce Park Conceptual Water Study," December 2006.

MWH Americas, Inc. and Otay Water District, "Otay Water District 2005 Urban Water Management Plan," December 2005 amended July 2007.

San Diego County Water Authority, "Urban Water Management Plan 2005 Update," November 2005 amended May 2007.

Metropolitan Water District of Southern California, "Regional Urban Water Management Plan," November 2005.

Agreement for the Purchase of Treated Water from the Otay Water Treatment Plant between the City of San Diego and the Otay Water District.

Agreement between the San Diego County Water Authority and Otay Water District regarding Implementation of the East County Regional Treated Water Improvement Program.

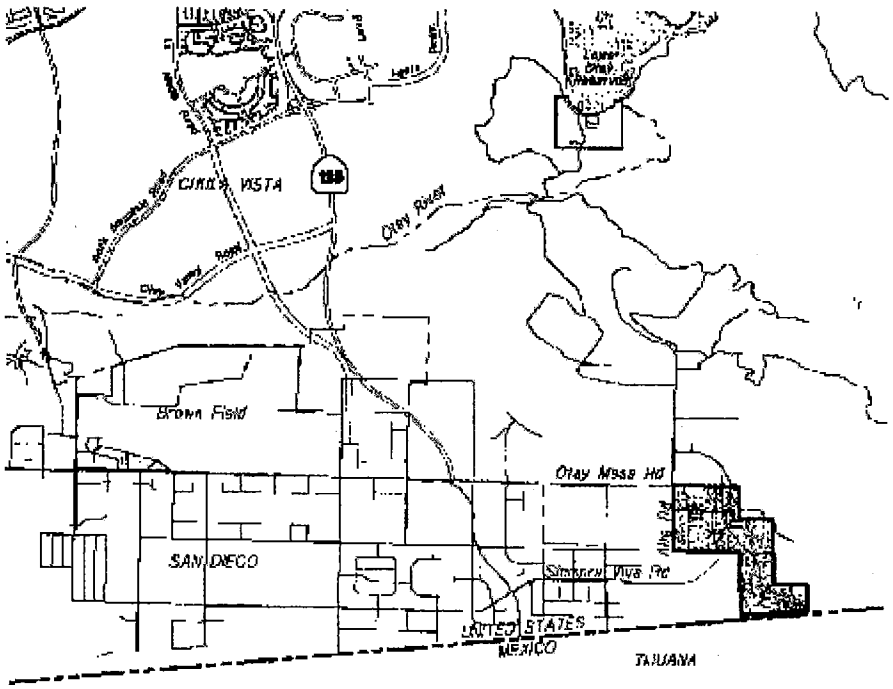
Agreement between the San Diego County Water Authority and Otay Water District for Design, Construction, Operation, and Maintenance of the Otay 14 Flow Control Facility Modification.

Agreement between the Otay Water District and the City of San Diego for Purchase of Reclaimed Water from the South Bay Water Reclamation Plant.

Appendix A

Otay Crossings Commerce Park Project Location and Vicinity Map

Water Supply Assessment Report
Otay Crossings Commerce Park Project

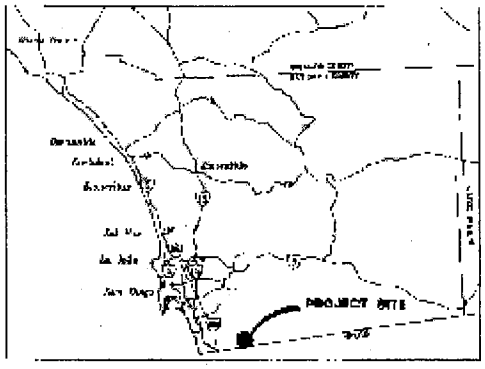


VICINITY MAP

LEGEND
PROJECT SITE

N

0 6000
SCALE IN FEET



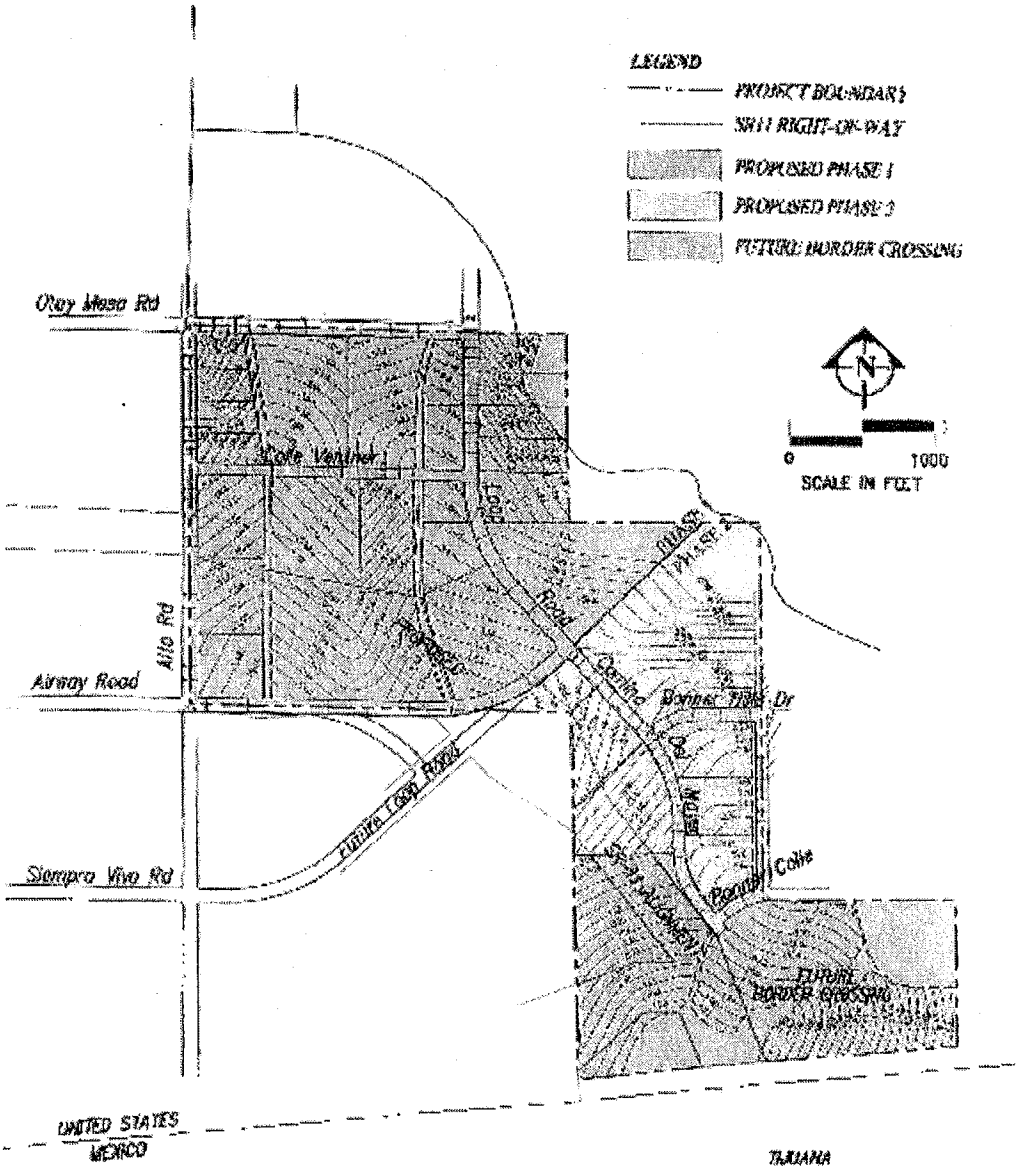
LOCATION MAP

PROJECT LOCATION
FIGURE 1

December 06, 2006

Appendix B

Otay Crossings Commerce Park Project Phasing Map



PROJECT PHASING

FIGURE 2

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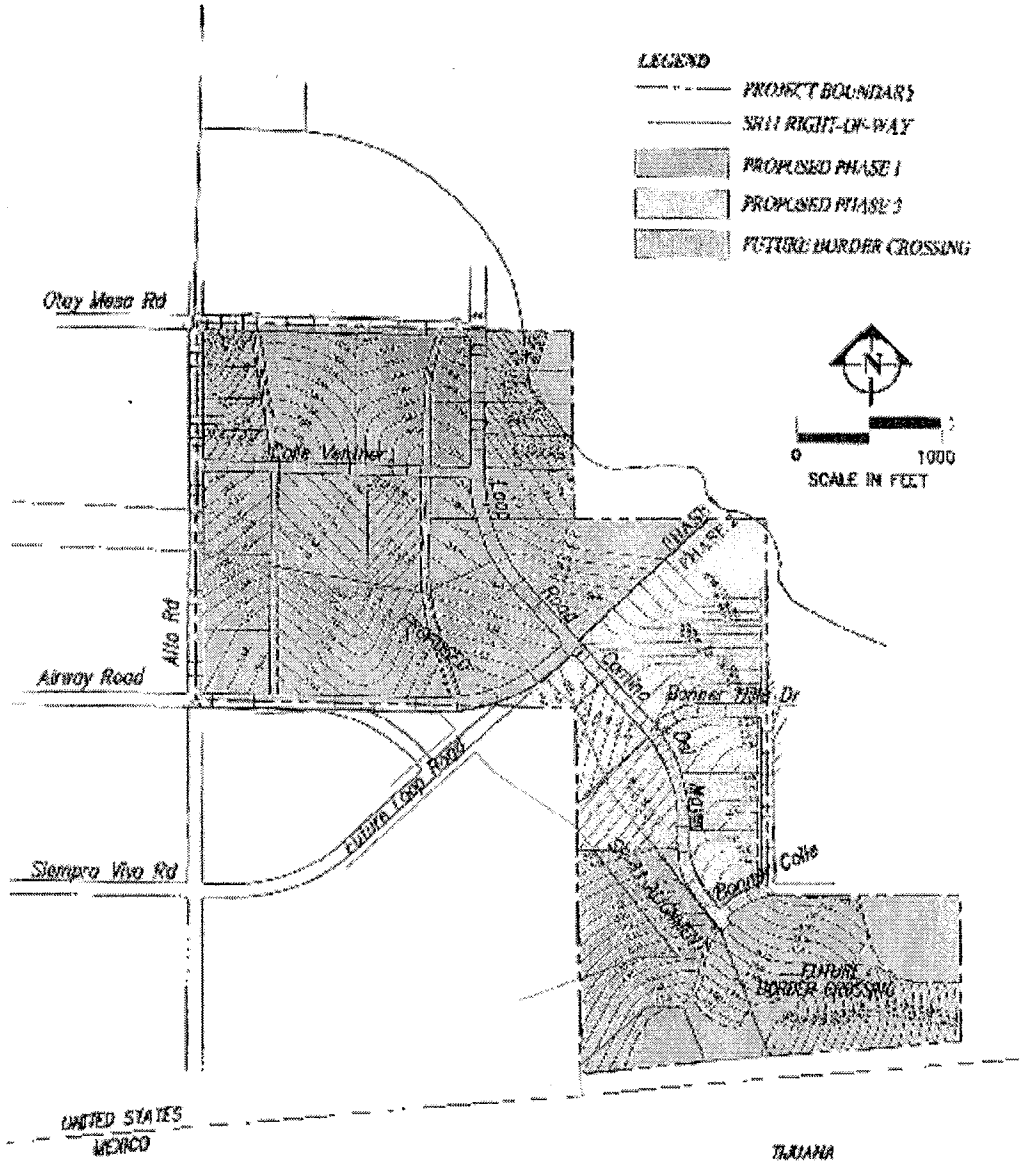
PBSJ

Otay Crossings Conceptual Water Study
December 2006



PROJECT PHASING

FIGURE 2

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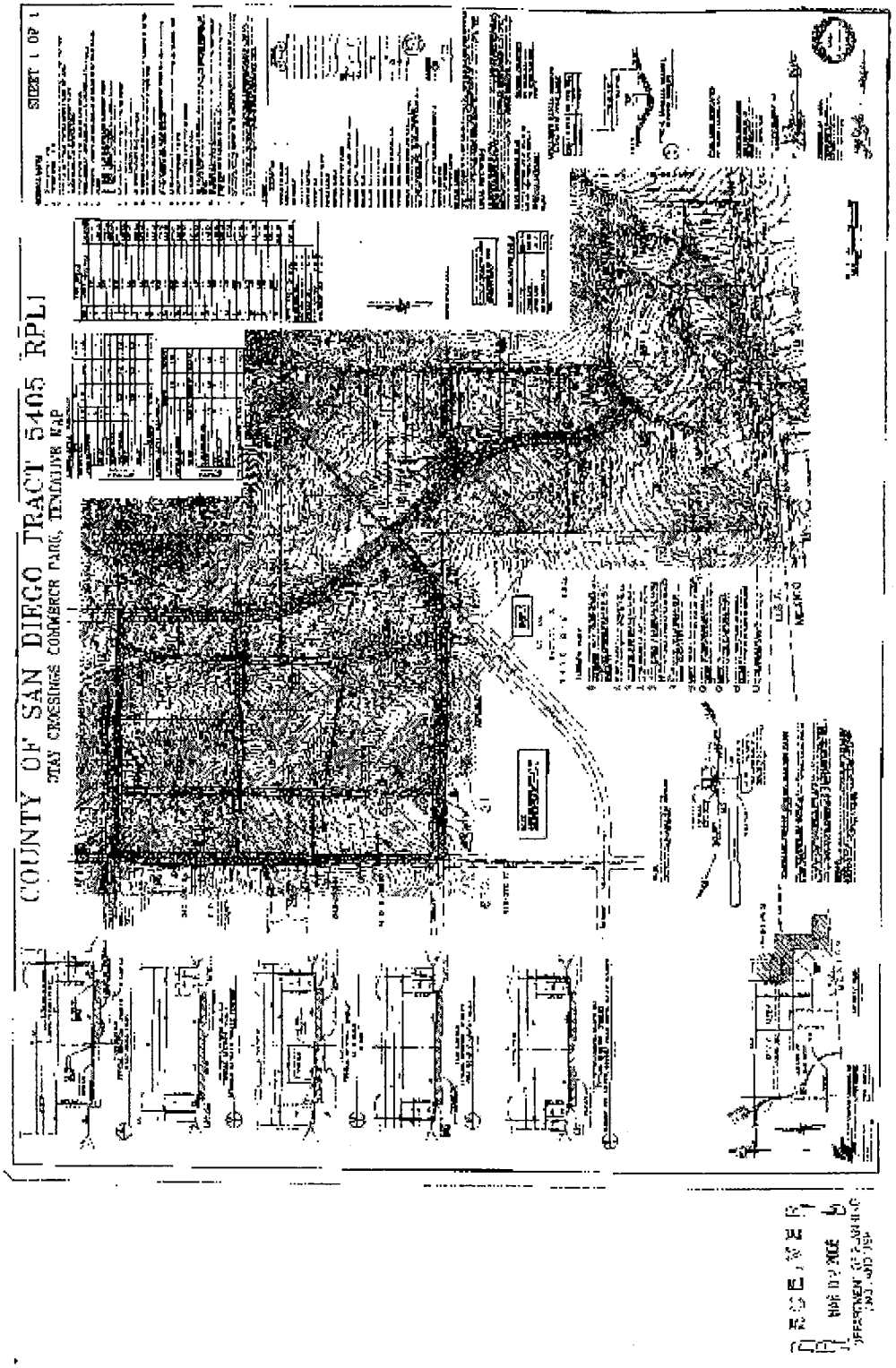
PBSJ

Otay Crossings Conceptual Water Study
December 2006

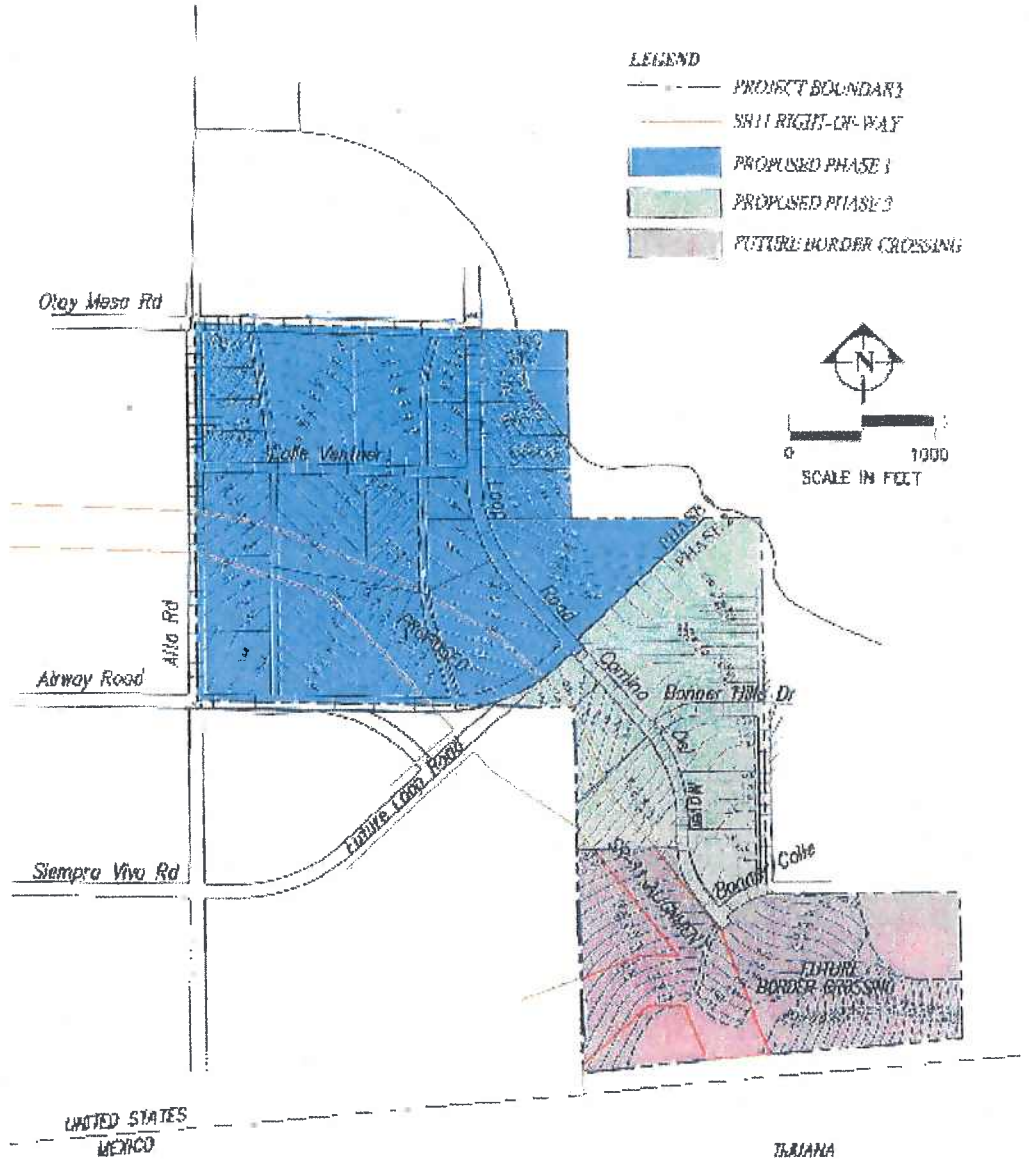
Appendix C

Otay Crossings Commerce Park Tentative Map


COUNTY OF SAN DIEGO TRACT 5405 RPL1
OTAY CROSSINGS COMMERCE PARK, TENTATIVE MAP

Appendix B

Otay Crossings Commerce Park Project Phasing Map



PROJECT PHASING
FIGURE 2

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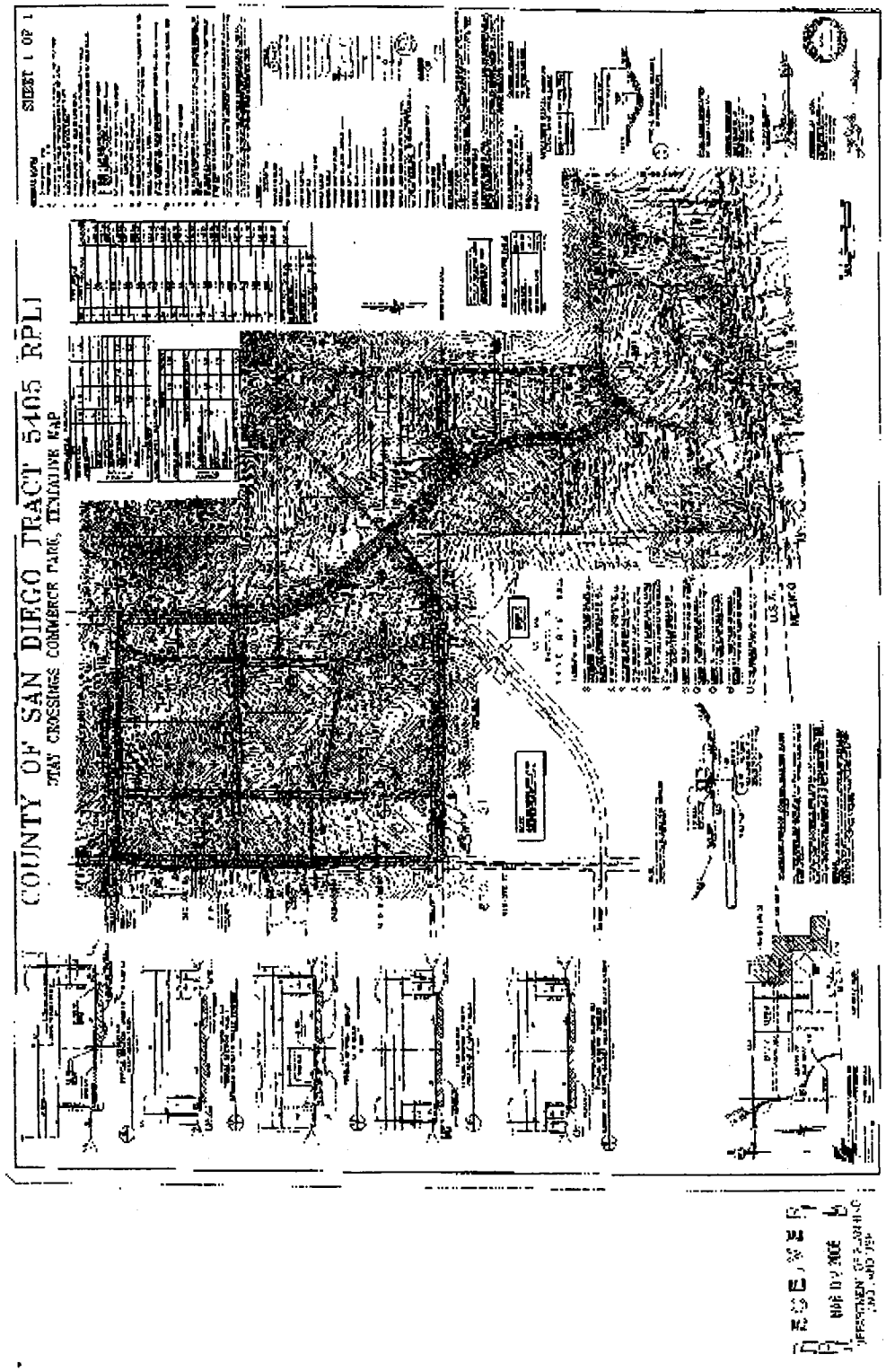
PBS&J

Appendix C

Otay Crossings Commerce Park Tentative Map


COUNTY OF SAN DIEGO TRACT 5405 RPL1
OTAY CROSSINGS COMMERCE PARK, TENTATIVE MAP
SHEET 1 OF 1