Appendix F:
Documentation on Local Supplies

Table F-1

Surface Water Projections for 2010 UWMP

Member Agency	Reservoir	Annual Member Agency Planned Local Use (AF)	Basis for Yield Determination (information provided by member agencies)
Escondido, City of	Henshaw / Wholford	7,260	25-year average
Helix WD	Cuyamaca / El Capitan	4,117	This value is based on the historical median runoff value of 4,605 AF/Y reduced by the historical evaporation rate of 10.6% (or 488 AF/Y)
San Diego, City of	Barrett El Capitan Hodges Lower Otay Morena San Vicente Sutherland Sub-Total	18,318 [a]	Median yield based on Reservoir Management Plan - post-2015 supply adjusted downward to account for increase in Cal Am demands
Sweetwater Authority	Loveland Sweetwater Sub-total	7,400	The yield is based on average production from the Sweetwater River since 1945. Note: The historic production rate flow has been revised since the last UWMP
San Dieguito W.D./ Santa Fe I.D.	San Dieguito / Hodges	5,700 [b]	Per Agreement. The split is SDWD 42.67% and SFID 57.33%
Vista I.D.	Henshaw	5,411	Median for the years 1960 - 2004
	Total	48,206	

[a] Surface Water projections for San Diego: 2015 - 18,318 AF/YR, 2020 - 18,052 AF/YR, 2025 - 17,990 AF/YR, 2030 - 17,654 AF/YR, 2035 - 17,401 AF/YR

[b] Surface water projection for San Dieguito/Hodges is 7,500 AF/YR until the Hodges/Olivenhain Pipeline and Pump Station are complete in 2010.

Table F-2

Groundwater Projections for 2010 UWMP (Draft)

EXISTING GROUNDWATER [YIELD] PROJECTS AND PROPOSED EXPANSIONS (VERIFIABLE)

Member Agency	Project or Facility Name	Project Type	Groundwater Basin or Location	Existing (AF/YR)[1]	Projected Yield Verifiable Projects (Existing Project Including Planned Expansions) AF/YR					
				Based on Period 2005-2009	2010	2015	2020	2025	2030	2035
Helix WD	Groundwater Production Well 101	Pump & Blend (with raw imported water)	El Monte Basin	149	150	150	150	150	150	150
Oceanside, City of	Mission Basin Desalter Facility	Brackish Groundwater Recovery & Treatment	Mission Basin (Lower San Luis Rey River Valley)	2,228	5,227	6,720	6,720	6,720	6,720	6,720
Lakeside WD	Vine Street Groundwater Production Facility	Pump & Treat (blend with imported water)	Santee Basin (San Diego River Basin)	915	900	900	900	900	900	900
MCB Camp Pendleton	South System	Pump & Conventional Treatment	Lower Santa Margarita & Las Flores Basins	8,561	7,256	6,960	6,350	7,350	8,090	8,090
	North System		San Mateo & San Onofre Basins							
San Diego, City of	San Vicente GW Production Well	Pump & Blend	Santee/El Monte	500	500	500	500	500	500	500
Sweetwater Authority	Richard A. Reynolds Desalination Facility	Brackish Groundwater Recovery	San Diego Formation	3,344	3,600	3,600	8,800	8,800	8,800	8,800
	National City Well Field	Pump & Conventional Treatment	San Diego Formation [National City Well Field]	2,132	2,200	2,200	2,200	2,200	2,200	2,200
Yuima MWD	Mutual Water Company wells within district	Groundwater Extraction	Pauma Basin (Upper San Luis Rey River Valley)	977	1,000	1,000	1,000	1,000	1,000	1,000
			Total Verifiable	**18,806**	**20,833**	**22,030**	**26,620**	**27,620**	**28,360**	**28,360**

ADDITIONAL PLANNED PROJECTS

Member Agency	Project or Study Name	Project Type	Groundwater Basin or Location	Study / Project Status	Groundwater Additional Planned (AF/YR) for New Production					
					2010	2015	2020	2025	2030	2035
Carlsbad MWD	Mission Basin & Aqua Hedionda Groundwater	Brackish Groundwater Recovery	Mission Basin of San Luis Rey River/Aqua Hedionda	Feasibility Study	0	0	1,000	1,000	2,000	2,000
Otay WD	Rancho del Rey Groundwater Well Development (Capacity)	Groundwater Recovery	Unknown	Design contract awarded	0	500	500	500	500	500
Padre Dam MWD & Helix WD	El Monte Valley Recharge Project	Groundwater Recharge and Recovery (with Reclaimed Water)	El Monte Valley	Feasibility Study to be complete by Sept. 2010	0	0	5,000	5,000	5,000	5,000
Fallbrook PUD/ Camp Pendleton (Conjunctive-Use Project)	Santa Margarita Conjunctive-Use Project	Local Surface Water Recharge and Expansion of Camp Pendleton GW Recovery Program	Lower Santa Margarita River Basin (Upper Ysidora and Chappo Sub-basins).	Progress continues: Feasibility Study Completed & CEQA 2011	0	0	5,200	5,200	5,200	5,200
				Total Verifiable + Additional Planned Yields	**20,833**	**22,530**	**38,320**	**39,320**	**41,060**	**41,060**

PROJECT CONCEPTS and ongoing Feasibility Studies (LISA Funded and others)

Member Agency	Project or Study Name	Project Type	Groundwater Basin or Location	Study / Project Status	Groundwater Conceptual (AF/YR) for New Production					
					2010	2015	2020	2025	2030	2035
City of Oceanside	Second Expansion of Mission Basin Desalter	Seawater/Brackish Groundwater Recovery and Treatment	Mission Basin Narrows near Pacific Ocean	Pilot Study Report to be Completed by June 2010	0	0	5,600	5,600	5,600	5,600
San Diego, City of	San Paqual Brackish Groundwater Recovery Project	Brackish Groundwater Recovery and Treatment	San Pasqual Basin	Feasibility Report Complete/ CEQA 2012	0	560	1,120	2,240	3,360	3,360
San Diego, City of	Mission Valley Brackish Groundwater Recovery Project	Brackish Groundwater Recovery and Treatment	Mission Valley Basin (Alluvial Aquifer / San Diego River)	Pilot Production Well Study 2012	0	0	1,760	1,760	1,760	1,760
San Diego, City of	San Diego Formation #1	Groundwater Recovery	San Diego Formation	Hydro-geologic Studies (2012)	0	0	650	1,300	1,300	1,300
San Diego, City of	San Diego Formation - Southeastern San Diego	Groundwater Recovery	San Diego Formation	Hydro-geologic Studies (2012)	0	800	1,600	1,600	1,600	1,600
San Diego, City of	San Vicente & El Capitan Seepage Recovery	Groundwater Recovery	San Diego River/ Santee-El Monte Basin	Pilot Production Well Study 2011	0	700	1,400	1,400	1,400	1,400
Sweetwater Authority / Otay WD	Otay River Valley GW Aquifer Studies & Field Investigations	Brackish Groundwater Recovery	San Diego Formation (Otay River Basin)	Hydro-geologic Studies on-going (2012)	0	0	3,900	3,900	3,900	3,900
Olivenhain MWD	San Dieguito River Basin Brackish GW Recovery and Treatment	Brackish Groundwater Recovery	San Dieguito River Groundwater Basin	Project Concept/ Feasibility Study	0	500	500	500	500	500
Otay WD	Otay Mesa Lot 7 Groundwater Well System (Capacity)	Groundwater Recovery	Unknown	Feasibility Study	0	0	400	400	400	400
Otay WD	Middle Sweetwater River Basin Groundwater Well System (Capacity)	Groundwater Recovery	Middle Sweetwater River Basin	Advanced Planning Stage	0	0	1,000	1,000	1,000	1,000

1 5-year average 2005-2009

2010 UWMP Wastewater Treatment Table F-3

San Diego Wastewater Treatment and Water Recycling Facilities Plant Capacity (Million Gallons/Day)

Operating Agency	Treatment Facility Name	Planned Treatment Capacity						Effluent Quality for TDS (mg/L)	Disposal Method
		2015			2040				
		P	S	T	P	S	T		
Carlsbad, City of	Carlsbad WRF	-	-	4.0	-	-	11.0	1,000	Irrigation
Encina Wastewater Authority	Encina WPCF	43.3	43.3	-	43.3	43.3	-	1,031	Outfall-Reuse
Escondido, City of	Hale Avenue Regional Reclam. Fac.	18.0	18.0	9.0	27.0	27.0	20.0	1,000	Reuse-Outfall-Stream
Fairbanks Ranch Comm. Ser. D	Fairbanks Ranch WPCF	0.3	0.3	-	0.3	0.3	0.3	1,100	Percolation
Fallbrook PUD	Fallbrook Plant #1 WRF	2.7	2.7	2.7	2.7	2.7	2.7	850	Reuse-Outfall
Leucadia CWD	Forest R. Gafner WRP	1.0	1.0	1.0	1.0	1.0	1.0	1,000	Reuse-Outfall
Oceanside, City of	La Salina WWTP	5.5	5.5	-	5.5	5.5	-	897	Outfall
Oceanside, City of	San Luis Rey WWTP	13.5	13.5	1.5	17.4	17.4	7.5	874	Reuse-Outfall
Olivenhain MWD	4-S Ranch WWTP	2.0	2.0	2.0	2.0	2.0	2.0	1,000	Reuse-Outfall
Otay WD	Ralph W Chapman WRF	1.3	1.3	1.3	1.3	1.3	1.3	850	Reuse- Outfall
Padre Dam MWD	Padre Dam WRF	4.0	4.0	4.0	4.0	4.0	4.0	1,000	Reuse- Outfall
Ramona MWD	Santa Maria WRP		1.1	0.4		1.5	1.5	850	Reuse-Stream
Ramona MWD	San Vicente WRP	0.8	0.8	0.8	0.8	0.8	0.8	550	Reuse-Stream
Rancho Santa Fe Com. Service District	Santa Fe Valley WRF	-	-	0.5	-	-	0.5	1,000	Irrigation
Rancho Santa Fe Com. Service District	Rancho Santa Fe WRF	0.5	0.5	-	0.6	0.6	0.6	1,100	Percolation
San Diego, City of	North City WRP	30.0	30.0	24.0	40.0	40.0	30.0	1,000	Reuse- Outfall
San Diego, City of	Point Loma WWTP	240.0	-	-	240.0	-	-	1700-2000	Outfall
San Diego, City of	South Bay WRP	15.0	15.0	13.5	21.0	21.0	15.0	1,000	Reuse-Outfall
San Elijo Joint Powers Authority	San Elijo WRF	5.3	5.3	3.0	5.3	5.3	5.3	1,000	Reuse-Outfall
Camp Pendleton Marine Corps Base	Southern Region TTP	-	-	3.8	-	-	7.5	750	Irrigation/Outfall
Camp Pendleton Marine Corps Base	Northern Region TTP	-	-	-	-	-	3.8	750	Irrigation/Percolation
Camp Pendleton Marine Corps Base	Sewage Treatment Plant #09	-	-	0.4	-	-	0.7	890	GW-Injection
Camp Pendleton Marine Corps Base	Sewage Treatment Plant #11	-	1.4	-	-	-	-	755	Percolation
Camp Pendleton Marine Corps Base	Sewage Treatment Plant #12	-	0.4	-	-	-	-	600	Percolation
Vallecitos WD	Meadowlark WRF	5.0	5.0	5.0	5.0	5.0	5.0	1,000	Reuse
Valley Center MWD	Lower Moosa Canyon WRF	0.40	0.40	0.40	0.625	0.625	0.625	1,000	Irrigation
Valley Center MWD	North Village WRF	0.075	0.075	0.075	0.225	0.225	0.225	1,000	Irrigation
Valley Center MWD	Welk WRF	-	-	-	0.125	0.125	0.125	1,000	Irrigation (Golf Course)
Valley Center MWD	Lilac Ranch WRF	-	-	-	0.088	0.088	0.088	1,000	Irrigation
Valley Center MWD	Woods Valley Ranch WRF	0.158	0.158	0.158	0.450	0.450	0.450	1,000	Irrigation (Golf Course)
Valley Center MWD	Skyline Ranch WRF	0.025	0.025	0.025	0.025	0.025	0.025	1,000	Irrigation (Golf Course)
Whispering Palms CSD	Whispering Palms WPCF	0.5	0.5	-	0.5	0.5	0.5	963	Pasture-Percolation
		104.34	107.28	39.94	118.22	119.72	77.50		

CSD - Community Services District
MWD - Municipal Water District
RRF - Resource Recovery Facility
TTP - Tertiary Treatment Plant
WPCF - Water Pollution Control Facility
WRF - Water Reclamation/Recycling Facility
WRP - Water Reclamation Plant
WWTP - Wastewater Treatment Plant

P - Primary Treatment
S - Secondary Treatment
T - Tertiary Treatment

Table F-4 2010 Update
Recycled Water Projections

EXISTING RECYCLED PROJECTS AND PROPOSED EXPANSIONS (VERIFIABLE)

Purveyor	Supply Source Treatment Plant/Agency	Treatment Level	Type of Reuse [1]	Projected Verifiable Reuse (AF/YR) [2]					
				2010	2015	2020	2025	2030	2035
Carlsbad MWD	Carlsbad WRF/Carlsbad MWD	Tertiary	Landscape, Agriculture	1,324	2,707	3,264	3,264	3,264	3,264
	Gafner WRF/Leucadia CWD	Tertiary	Landscape, Agriculture	269	247	247	247	247	247
	Meadowlark WRF/Vallecitos WD	Tertiary	Landscape, Agriculture	2,188	2,188	2,989	2,989	2,989	2,989
	Mahr Reservoir/Vallecitos WD	N/A [3]	Landscape, Agriculture	154					
			Sub-total	**3,935**	**5,142**	**6,500**	**6,500**	**6,500**	**6,500**
Del Mar, City of	San Elijo WRF/San Elijo JPA	Tertiary	Landscape	73	90	100	125	150	150
Escondido, City of	Hale Avenue RRF/WRF/City of Escondido	Tertiary	Landscape, Agriculture, Industrial/DPR	413	1,500	3,000	4,000	4,000	4,000
Fallbrook PUD	Fallbrook Plant #1/Fallbrook PUD	Tertiary	Landscape, Agriculture	543	543	543	543	543	543
Oceanside, City of	San Luis Rey WWTP/City of Oceanside	Tertiary	Landscape	119	550	1,500	1,500	1,500	1,500
Olivenhain MWD	4S Ranch WRF/Olivenhain MWD	Tertiary	Landscape	895	900	900	900	900	900
	Connection #1-North City Water Reclamation Plant/City of San Diego	Tertiary	Golf Course Irrigation/HOAs	785	400	400	400	400	400
	Connection #2-North City Water Reclamation Plant/City of San Diego	Tertiary	Golf Course Irrigation/HOAs	1	800	800	800	800	800
	Santa Fe Valley WRF/Rancho Santa Fe CSD	Tertiary	Landscape, Golf Course Irrigation	105	100	100	100	100	100
	Northwest Quadrant /Meadowlark WRF/Vallecitos WD	Tertiary	Landscape	580	1,000	1,000	1,000	1,000	1,000
			Sub-total	**2,366**	**3,200**	**3,200**	**3,200**	**3,200**	**3,200**
Otay WD	R. W. Chapman WRF/Otay WD	Tertiary	Landscape	1,033	1,100	1,100	1,100	1,100	1,100
	South Bay WRP/City of SD	Tertiary	Landscape	2,752	3,300	3,900	4,700	5,700	6,900
			Sub-total	**3,785**	**4,400**	**5,000**	**5,800**	**6,800**	**8,000**
Padre Dam MWD	Padre Dam WRF (Existing) /Padre Dam MWD	Tertiary	Replenishment of Santee Lakes	1,120	1,120	1,120	1,120	1,120	1,120
	Padre Dam WRF (Existing) /Padre Dam MWD	Tertiary	Landscape (Existing Distribution System)	896	896	896	896	896	896
			Sub-total	**2,016**	**2,016**	**2,016**	**2,016**	**2,016**	**2,016**
Camp Pendleton Marine Corps Base	South WWTPs/USMC	Tertiary	Landscape, Golf Course, Agriculture	527	3,300	3,400	3,900	4,000	4,000
	Sewage Treatment Plants # 11 & #12/USMC	Secondary	Percolation/Seawater Intrusion Barrier	657					
	North WWTPs/USMC	Tertiary	Landscape/Seawater Intrusion Barrier		800	800	800	800	800
			Sub-total	**1,184**	**4,100**	**4,200**	**4,700**	**4,800**	**4,800**
Poway, City of	North City WRP/City of San Diego	Tertiary	Landscape, Agriculture	425	425	425	425	425	425
Ramona MWD	Santa Maria WRP/Ramona MWD	Tertiary	Landscape, Recreational Impound, Development	209	230	230	230	230	230
	San Vicente WRP/Ramona MWD	Tertiary	Landscape (Golf Course), Agriculture (Orchard)	520	585	585	585	585	585
			Sub-total	**729**	**815**	**815**	**815**	**815**	**815**
Rincon Del Diablo MWD	Hale Avenue RRF/WRF/City of Escondido	Tertiary	Landscape, Industrial	3,279	5,279	5,779	6,279	6,779	7,279
San Diego, City of	North City WRP/City of San Diego	Tertiary	Landscape, Industrial	6,394	8,353	8,353	8,353	8,353	8,353
	South Bay WRP/City of San Diego	Tertiary	Landscape, Industrial	1,539	900	900	900	900	900
			Sub-total	**7,933**	**9,253**	**9,253**	**9,253**	**9,253**	**9,253**
San Dieguito WD	San Elijo WRF/San Elijo JPA	Tertiary	Landscape	590	700	750	800	850	870
Santa Fe ID	San Elijo WRF/San Elijo JPA	Tertiary	Landscape	497	600	600	600	600	600
Valley Center MWD	Woods Valley Ranch WRF/VCMWD	Tertiary	Landscape Irrigation/Golf Course Irrigation	44	47	47	47	47	47
			Total	**27,931**	**38,660**	**43,728**	**46,603**	**48,278**	**49,998**

ADDITIONAL PLANNED PROJECTS

Purveyor	Supply Source Treatment Plant/Agency	Treatment Level	Type of Reuse [1]	2010	2015	2020	2025	2030	2035	Project Phase
Carlsbad MWD	Carlsbad WRF/Carlsbad MWD	Tertiary	Landscape, Agriculture		293	1,293	3,293	3,293	3,293	FS
	Mahr Reservoir/Vallecitos WD	N/A [3]	Landscape, Agriculture		154	154	154	154	154	FS
			Sub-total		**447**	**1,447**	**3,447**	**3,447**	**3,447**	
Fallbrook PUD	Fallbrook Plant #1/Fallbrook PUD	Tertiary	Landscape, Agriculture	-	68	96	146	196	196	FS
Olivenhain MWD	Northwest Quadrant Phase B/TBD	Tertiary	Landscape			300	300	300	300	FS
	Wanket Reservoir RW Conversion/TBD	Tertiary	Landscape			300	300	300	300	FS
	Joint RW Transmission Project with SFID and OMWD/TBD	Tertiary	Landscape, Golf Course Irrigation			500	500	500	500	Concept
			Sub-total			**1,100**	**1,100**	**1,100**	**1,100**	
Padre Dam MWD	Padre Dam WRF Ph II Expansion to 10 mgd/Padre Dam MWD	Tertiary/Adv	Landscape, Golf Course Irrig, Industrial, Dust Control - Future				1,343	1,343	1,343	FS
	Padre Dam WRF Ph 1 Expansion to 4.5 mgd /Padre Dam MWD	Tertiary/Adv.	Landscape, Golf Course Irrig, Industrial, Dust Control - Ph 1 Santee Distribution System		1,697	3,489	3,489	3,489	3,489	MND, D
			Sub-total		**1,697**	**3,489**	**4,832**	**4,832**	**4,832**	
Poway, City of	North City WRP/City of San Diego	Tertiary	Landscape, Agriculture	125	125	125	225	225	225	FS
San Diego, City of	North City WRP Advanced Water Purification Facility (AWPF)	Tertiary	Indirect Potable Reuse			15,000	15,000	15,000	15,000	FS
Santa Fe ID	Evaluating Multiple Options/TBD	Tertiary	Landscape		200	200	600	600	600	FS
									-	
Valley Center MWD	Woods Valley Ranch WRF (Phase 2)	Tertiary	Landscape Irrigation/Golf Course		-	30	59	59	59	FS
			Total	**125**	**2,537**	**21,487**	**25,409**	**25,459**	**25,459**	

PROJECT CONCEPTS

Purveyor	Supply Source Treatment Plant/Agency	Treatment Level	Type of Reuse [1]	2010	2015	2020	2025	2030	2035	Project Phase
Fallbrook PUD	Fallbrook Plant #1/Fallbrook PUD	Tertiary	Landscape, Agriculture		582	582	582	582	582	Concept
Otay WD	North District Recycled System/R.W. Chapman WRF/Otay WD	Tertiary	Landscape		4,400	4,400	4,400	4,400	4,400	Concept
Ramona MWD	Santa Maria WRP/Ramona MWD	Tertiary	Landscape, Recreational Impound, Development		3,000	3,000	3,000	3,000	3,000	Concept
Vista Irrigation District	Shadowridge WRP	Tertiary	Landscape Irrigation				4,400	4,400	4,400	Concept
Valley Center MWD	Lower Moosa Canyon WRF	Tertiary	Landscape Irrigation		370	370	460	580	700	FS
	Woods Valley Ranch WRF (Phase 3)	Tertiary					22	50	50	FS
	North Village WRF/VCMWD	Tertiary	Landscape Irrigation		15	45	90	135	150	FS
	Welk WRF/VCMWD	Tertiary	Landscape Irrigation/Golf Course			140	140	140	140	FS
	Lilac Ranch WRF/VCMWD	Tertiary	Landscape Irrigation			15	25	60	60	FS
			Sub-total		**385**	**570**	**737**	**965**	**1,100**	
			Total		**8,367**	**8,552**	**13,119**	**13,347**	**13,482**	

[1] Does not include recycled water used for environmental enhancement.

[2] Projected verifiable projects are included in the Water Authority's 2010 UWMP reliability analysis.

3 Recycled water storage reservoir.