APPENDIX J
SINGLE YEAR, NORMAL-YEAR AND MULTIPLE DRY WATER YEAR UWMP SUPPLY AND DEMAND ASSESSMENTS

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Appendix J-1
Fallbrook Public Utility Water District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan
Prepared by Fallbrook Public Utility Water District
December 2005
Pages 38-41

PROJECTED NORMAL YEAR SUPPLY AND DEMAND COMPARISON – AF/Y (TABLE 26)

	2005	2010	2015	2020	2025	2030
San Diego County Water Authority	17,400	16,149	15,773	15,625	15,189	15,241
Groundwater supplier: Santa Margarita River	0	6,000	6,000	6,000	6,000	6,000
Groundwater supplier: local wells in Fallbrook	130	100	100	100	100	100
Surface diversions: rainfall into Lake Skinner	1,260	1,000	1,000	1,000	1,000	1,000
Recycled water	317	480	530	590	600	600
Total Supply	19,107	23,729	23,403	23,315	22,889	22,941
Supply as % of year 2005	100%	124%	122%	121%	119%	119%
Total Demand	14,785	16,629	16,303	16,215	15,789	15,841
Demand as % of year 2005	100%	112%	110%	110%	107%	107%
Difference (supply minus demand)	4,322	7,100	7,100	7,100	7,100	7,100

PROJECTED SINGLE DRY-YEAR SUPPLY AND DEMAND COMPARISON – AF/Y (TABLE 27)

	2010	2015	2020	2025	2030
San Diego County Water Authority	17,279	16,877	16,719	16,252	16,308
Groundwater supplier: Santa Margarita River	3,000	3,000	3,000	3,000	3,000
Groundwater supplier: local wells in Fallbrook	0	0	0	0	0
Surface diversions: rainfall into Lake Skinner	0	0	0	0	0
Recycled water	480	530	590	600	600
Total Supply	20,759	20,407	20,309	19,852	19,908
% of Normal year	107%	107%	107%	107%	107%
Total Demand	17,793	17,444	17,350	16,894	16,950
% of Normal year	107%	107%	107%	107%	107%
Difference (supply minus demand)	2,966	2,963	2,959	2,958	2,958

PROJECTED MULTIPLE DRY-YEAR PERIOD ENDING IN 2010 – AF/Y (TABLE 28)

	2006	2007	2008	2009	2010
San Diego County Water Authority	17,150	16,900	16,650	16,400	16,149
Groundwater supplier: Santa Margarita River	2,000	2,000	2,000	2,000	2,000
Groundwater supplier: local wells in Fallbrook	0	0	0	0	0
Surface diversions: rainfall into Lake Skinner	0	0	0	0	0
Recycled water	317	317	317	317	480
Total Supply	19,467	19,217	18,967	18,717	18,629
% of Normal year	107%	107%	107%	107%	107%
Total Demand	15,155	15,524	15,893	16,212	16,629
% of Normal year	107%	107%	107%	107%	107%
Difference (supply minus demand)	4,312	3,693	3,074	2,505	2,000

PROJECTED MULTIPLE DRY-YEAR PERIOD ENDING IN 2015 – AF/Y (TABLE 29)

	2011	2012	2013	2014	2015
San Diego County Water Authority	16,074	15,999	15,924	15,849	15,773
Groundwater supplier: Santa Margarita River	2,000	2,000	2,000	2,000	2,000
Groundwater supplier: local wells in Fallbrook	0	0	0	0	0
Surface diversions: rainfall into Lake Skinner	0	0	0	0	0
Recycled water	480	480	480	480	530
Total Supply	18,554	18,479	18,404	18,329	18,303
% of Normal year	107%	107%	107%	107%	107%
Total Demand	16,564	16,499	16,434	16,369	16,303
% of Normal year	107%	107%	107%	107%	107%
Difference (supply minus demand)	1,990	1,980	1,970	1,960	2000

PROJECTED MULTIPLE DRY-YEAR PERIOD ENDING IN 2020 – AF/Y (TABLE 30)

	2016	2017	2018	2019	2020
San Diego County Water Authority	15,743	15,713	15,683	15,653	15,625
Groundwater supplier: Santa Margarita River	2,000	2,000	2,000	2,000	2,000
Groundwater supplier: local wells in Fallbrook	0	0	0	0	0
Surface diversions: rainfall into Lake Skinner	0	0	0	0	0
Recycled water	530	530	530	530	590
Total Supply	18,273	18,243	18,213	18,183	18,215
% of Normal year	107%	107%	107%	107%	107%
Total Demand	16,286	16,269	16,251	16,233	16,215
% of Normal year	107%	107%	107%	107%	107%
Difference (supply minus demand)	1,987	1,974	1,962	1,950	2,000

PROJECTED MULTIPLE DRY-YEAR PERIOD ENDING IN 2025 – AF/Y (TABLE 31)

Fiscal year	2021	2022	2023	2024	2025
San Diego County Water Authority	15,538	15,451	15,364	15,277	15,189
Groundwater supplier: Santa Margarita River	2,000	2,000	2,000	2,000	2,000
Groundwater supplier: local wells in Fallbrook	0	0	0	0	0
Surface diversions: rainfall into Lake Skinner	0	0	0	0	0
Recycled water	590	590	590	590	600
Total Supply	18,128	18,041	17,954	17,867	17,789
% of Normal year	107%	107%	107%	107%	107%
Total Demand	16,130	16,045	15,960	15,875	15,789
% of Normal year	107%	107%	107%	107%	107%
Difference (supply minus demand)	1,998	1,996	1,994	1,992	2,000

PROJECTED MULTIPLE DRY-YEAR PERIOD ENDING IN 2030 – AF/Y (TABLE 32)

Fiscal year	2026	2027	2028	2029	2030
San Diego County Water Authority	15,199	15,209	15,219	15,229	15,241
Groundwater supplier: Santa Margarita River	2,000	2,000	2,000	2,000	2,000
Groundwater supplier: local wells in Fallbrook	0	0	0	0	0
Surface diversions: rainfall into Lake Skinner	0	0	0	0	0
Recycled water	600	600	600	600	600
Total Supply	17,799	17,809	17,819	17,829	17,841
% of Normal year	107%	107%	107%	107%	107%
Total Demand	15,799	15,809	15,819	15,829	15,841
% of Normal year	107%	107%	107%	107%	107%
Difference (supply minus demand)	2,000	2,000	2,000	2,000	2,000

Appendix J-2
Helix Water District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan Update
Prepared by Helix Water District
December 2005
Pages 28-30

Table 4-6
Projected Water Supply and Demand
Normal Water Years, 2005 - 2030

Water Supply Sources	2010	2015	2020	2025	2030
Imported/SDCWA	36,889	37,125	37,332	37,465	37,832
Local Groundwater	250	250	250	250	250
Local Runoff	4,605	4,605	4,605	4,605	4,605
Future Conservation[1]	412	916	1,392	1,894	2,313
Total Projected Supplies	**42,156**	**42,896**	**43,579**	**44,214**	**45,000**
Total Projected Demand	**42,156**	**42,896**	**43,579**	**44,214**	**45,000**

[1] See Section 3 for explanation of future conservation.

Table 4-7
Projected Water Supply and Demand
Single Dry Water Years, 2005 - 2030

Water Supply Sources	2010	2015	2020	2025	2030
Imported/SDCWA	44,445	44,733	44,988	45,165	45,587
Local Groundwater	250	250	250	250	250
Local Runoff	0	0	0	0	0
Future Conservation[1]	412	916	1,392	1,894	2,313
Total Projected Supplies	**45,107**	**45,899**	**46,630**	**47,309**	**48,150**
Total Projected Demand	**45,107**	**45,899**	**46,630**	**47,309**	**48,150**

[1] See Section 3 for explanation of future conservation.

Table 4-8
Projected Water Supply and Demand
Multiple Dry Water Years, 2006 Through 2008

Water Supply Sources	2006	2007	2008
Imported/SDCWA	43,444	43,534	43,624
Local Groundwater	250	250	250
Local Runoff	640	640	640
Future Conservation	82	165	247
Total Projected Supplies	**44,416**	**44,589**	**44,761**
Total Projected Demands	**44,416**	**44,589**	**44,761**

Table 4-9
Projected Water Supply and Demand
Multiple Dry Water Years, 2011 Through 2013

Water Supply Sources	2011	2012	2013
Imported/SDCWA	43,862	43,920	43,977
Local Groundwater	250	250	250
Local Runoff	640	640	640
Future Conservation	513	614	714
Total Projected Supplies	**45,265**	**45,423**	**45,582**
Total Projected Demands	**45,265**	**45,423**	**45,582**

Table 4-10
Projected Water Supply and Demand
Multiple Dry Water Years, 2016 Through 2018

Water Supply Sources	2016	2017	2018
Imported/SDCWA	44,144	44,195	44,246
Local Groundwater	250	250	250
Local Runoff	640	640	640
Future Conservation	1,011	1,106	1,202
Total Projected Supplies	46,045	46,191	46,337
Total Projected Demands	46,045	46,191	46,337

Table 4-11
Projected Water Supply and Demand
Multiple Dry Water Years, 2021 Through 2023

Water Supply Sources	2021	2022	2023
Imported/SDCWA	44,383	44,419	44,454
Local Groundwater	250	250	250
Local Runoff	640	640	640
Future Conservation	1,492	1,593	1,693
Total Projected Supplies	**46,766**	**46,902**	**47,038**
Total Projected Demands	**46,766**	**46,902**	**47,038**

Appendix J-3
Lakeside Water District

The following water supply and demand tables are an excerpt from:

Urban Water Management Plan
Prepared by Lakeside Water District
December 2006
Page 4-6

Table 4-2
Projected Supply and Demand Comparison (AFY)

Description	Water Supplies by Year (AFY)				
	2010	2015	2020	2025	2030
Imported Water Supply	3,968	4,003	4,038	4,074	4,110
Groundwater Wells	1,468	1,481	1,494	1,507	1,520
Supply Total	5,436	5,484	5,532	5,581	5,630

Description	Water Demand by Year (AFY)				
	2010	2015	2020	2025	2030
Projected Demand	5,436	5,484	5,532	5,581	5,630
Difference (Supply - Demand)	0	0	0	0	0
Ratio of Supply/Demand	100%	100%	100%	100%	100%

Table 4-3
District Supply Reliability (AFY)

Supply Source	Normal Year (2004)[1]	Single Dry (2004)[2]	Multiple Dry Water Years (AFY)		
			2006	2007	2008
SDCWA Imported[3]	4,414	4,634	3,966	4,094	4,226
Groundwater	1,044	1,096	1,424	1,470	1,517
Total Supply	5,457	5,730	5,390	5,564	5,743
Demand	5,457	5,730	5,390	5,564	5,743

[1] 2004 water supply and demand are shown because 2005 was an unusually wet year.

[2] Demand for a single dry year assumes a 5% increase in demand; multiple dry years assume increased demand due to growth but a 10% decrease resulting from water rationing.

[3] The Water Authority's 2005 UWMP indicates that enough imported water will be available to meet multiple dry year demands.

Appendix J-4
Metropolitan Water District of Southern California

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan
Prepared by Metropolitan Water District of Southern California
November 2005
Page II-11 - II-14

Table II-4
Metropolitan Regional Water Demands
Single Dry Year
(Acre-Feet)

		2010	2015	2020	2025	2030
A.	**Total Demands[1]**	**5,519,000**	**5,743,000**	**5,992,000**	**6,218,000**	**6,430,000**
	Retail Agricultural	337,000	303,000	271,000	239,000	221,000
	Retail Municipal and Industrial	4,951,000	5,186,000	5,457,000	5,715,000	5,947,000
	Groundwater Replenishment	182,000	192,000	198,000	198,000	196,000
	Seawater Barrier	49,000	62,000	66,000	66,000	66,000
B.	**Total Conservation [2]**	**865,000**	**955,000**	**1,028,000**	**1,107,000**	**1,188,000**
	Existing Active (through 2004) [3]	94,000	92,000	92,000	91,000	91,000
	Code-based, Price-Effect, and Remaining IRP Target	521,000	613,000	686,000	766,000	847,000
	Pre-1990 Conservation	250,000	250,000	250,000	250,000	250,000
C.	**Total Local Supplies**	**2,159,000**	**2,414,000**	**2,552,000**	**2,575,000**	**2,593,000**
	Groundwater	1,375,000	1,394,000	1,399,000	1,412,000	1,430,000
	Surface Water	93,000	93,000	93,000	93,000	93,000
	Los Angeles Aqueduct	96,000	95,000	95,000	95,000	95,000
	Groundwater Recovery	87,000	115,000	115,000	115,000	115,000
	Total Recycling	310,000	387,000	408,000	408,000	408,000
	Desalination	28,000	128,000	150,000	150,000	150,000
	Other Imported Supplies	170,000	202,000	292,000	302,000	302,000
D.	**Total Metropolitan Demands (D=A-B-C)**	**2,495,000**	**2,376,000**	**2,411,000**	**2,535,000**	**2,647,000**
	Full Service (Tier I and Tier II)	2,246,000	2,132,000	2,174,000	2,317,000	2,452,000
	Replenishment Service [4]	144,000	153,000	159,000	159,000	145,000
	Interim Agricultural Water Program	105,000	91,000	78,000	59,000	50,000
	Firm Demands on Metropolitan [5]	**2,320,000**	**2,196,000**	**2,229,000**	**2,358,000**	**2,487,000**

Notes:

All units are acre-feet unless specified, rounded to the nearest hundred.

Totals may not sum due to rounding.

[1] Growth Projections: SCAG 2004 Regional Transportation Plan; SANDAG 2030 Forecast

[2] The 2030 savings target is derived from the 2003 IRP Update forecast projections for 2030; it is not an official target for 2030

[3] Includes code-based savings originated through an active implementation program

[4] Replenishment Service as defined in MWD Administrative Code Section 4114

[5] Firm demand on Metropolitan equals Full Service demands plus 70% of the Interim Agricultural Water Program demands

Table II-5
Metropolitan Regional Water Demand
Multiple Dry Year
(Acre-Feet)

	2010	2015	2020	2025	2030
A. Total Demands[1]	**5,547,000**	**5,810,000**	**6,057,000**	**6,298,000**	**6,518,000**
Retail Agricultural	337,000	306,000	274,000	243,000	222,000
Retail Municipal and Industrial	4,984,000	5,256,000	5,521,000	5,792,000	6,033,000
Groundwater Replenishment	178,000	189,000	196,000	197,000	197,000
Seawater Barrier	48,000	59,000	66,000	66,000	66,000
B. Total Conservation[2]	**865,000**	**955,000**	**1,028,000**	**1,107,000**	**1,188,000**
Existing Active (through 2004)[3]	94,000	92,000	92,000	91,000	91,000
Code-based, Price-Effect, and Remaining IRP Target		613,000	686,000	766,000	847,000
Pre-1990 Conservation	250,000	250,000	250,000	250,000	250,000
C. Total Local Supplies	**2,140,000**	**2,396,000**	**2,559,000**	**2,587,000**	**2,593,000**
Groundwater	1,378,000	1,409,000	1,412,000	1,425,000	1,431,000
Surface Water	78,000	79,000	79,000	79,000	79,000
Los Angeles Aqueduct	97,000	104,000	104,000	108,000	108,000
Groundwater Recovery	108,000	114,000	115,000	115,000	115,000
Total Recycling	300,000	375,000	407,000	408,000	408,000
Desalination	9,333	114,000	150,000	150,000	150,000
Other Imported Supplies	170,000	201,000	292,000	302,000	302,000
D. Total Metropolitan Demands (D=A-B-C)	**2,542,000**	**2,460,000**	**2,469,000**	**2,604,000**	**2,737,000**
Full Service (Tier I and Tier II)	2,318,000	2,238,000	2,254,000	2,405,000	2,549,000
Replenishment Service[4]	119,000	130,000	136,000	137,000	137,000
Interim Agricultural Water Program	105,000	92,000	79,000	62,000	51,000
Firm Demands on Metropolitan[5]	**2,392,000**	**2,302,000**	**2,309,000**	**2,448,000**	**2,585,000**

Notes:
All units are acre-feet unless specified, rounded to the nearest hundred.
Totals may not sum due to rounding.

1 Growth Projections: SCAG 2004 Regional Transportation Plan; SANDAG 2030 Forecast
2 The 2030 savings target is derived from the 2003 IRP Update forecast projections for 2030; it is not an official target for 2030
3 Includes code-based savings originated through an active implementation program
4 Replenishment Service as defined in MWD Administrative Code Section 4114
5 Firm demand on Metropolitan equals Full Service demands plus 70% of the Interim Agricultural Water Program demands

Table II-6
Metropolitan Regional Water Demand
Average Year
(Acre-Feet)

		2010	2015	2020	2025	2030
A.	**Total Demands[1]**	**5,493,000**	**5,721,000**	**5,964,000**	**6,190,000**	**6,395,000**
	Retail Agricultural	326,000	294,000	263,000	233,000	215,000
	Retail Municipal and Industrial	4,918,000	5,132,000	5,420,000	5,677,000	5,907,000
	Groundwater Replenishment	200,000	213,000	215,000	214,000	207,000
	Seawater Barrier	49,000	62,000	66,000	66,000	66,000
B.	**Total Conservation [2]**	**865,000**	**955,000**	**1,028,000**	**1,107,000**	**1,188,000**
	Existing Active (through 2004) [3]	94,000	92,000	92,000	91,000	91,000
	Code-based, Price-Effect, and Remaining IRP Target	521,000	613,000	686,000	766,000	847,000
	Pre-1990 Conservation	250,000	250,000	250,000	250,000	250,000
C.	**Total Local Supplies**	**2,393,000**	**2,614,000**	**2,748,000**	**2,771,000**	**2,770,000**
	Groundwater	1,416,000	1,430,000	1,431,000	1,444,000	1,442,000
	Surface Water	100,000	99,000	99,000	99,000	99,000
	Los Angeles Aqueduct	252,000	253,000	253,000	253,000	254,000
	Groundwater Recovery	111,000	115,000	115,000	115,000	115,000
	Total Recycling	316,000	387,000	408,000	408,000	408,000
	Desalination	28,000	128,000	150,000	150,000	150,000
	Other Imported Supplies	170,000	202,000	292,000	302,000	302,000
D.	**Total Metropolitan Demands (D=A-B-C)**	**2,235,000**	**2,153,000**	**2,188,000**	**2,310,000**	**2,437,000**
	Full Service (Tier I and Tier II)	1,967,000	1,887,000	1,931,000	2,071,000	2,213,000
	Replenishment Service [4]	169,000	180,000	183,000	183,000	177,000
	Interim Agricultural Water Program	99,000	86,000	74,000	56,000	47,000
	Firm Demands on Metropolitan [5]	**2,036,000**	**1,947,000**	**1,983,000**	**2,110,000**	**2,246,000**

Notes:
All units are acre-feet unless specified, rounded to the nearest hundred.
Totals may not sum due to rounding.

[1] Growth Projections: SCAG 2004 Regional Transportation Plan; SANDAG 2030 Forecast
[2] The 2030 savings target is derived from the 2003 IRP Update forecast projections for 2030; it is not an official target for 2030
[3] Includes code-based savings originated through an active implementation program
[4] Replenishment Service as defined in MWD Administrative Code Section 4114
[5] Firm demand on Metropolitan equals Full Service demands plus 70% of the Interim Agricultural Water Program demands

Table II-7
Single Dry-Year
Supply Capability[1] & Projected Demands
(Repeat of 1977 Hydrology)
(Acre-Feet)

	2010	2015	2020	2025	2030
Current Supplies					
In-Basin Storage	1,149,000	1,161,000	1,113,000	1,066,000	1,017,000
California Aqueduct[2]	777,000	777,000	777,000	777,000	777,000
Colorado River Aqueduct[3]	722,000	699,000	699,000	699,000	699,000
Supplies Under Development					
In-Basin Storage	78,000	103,000	103,000	103,000	103,000
California Aqueduct	330,000	259,000	350,000	350,000	350,000
Colorado River Aqueduct	95,000	460,000	400,000	400,000	400,000
Transfers to Other Agencies	0	(35,000)	(35,000)	(35,000)	(35,000)
Metropolitan Supply Capability	***3,151,000***	***3,424,000***	***3,407,000***	***3,360,000***	***3,311,000***
Metropolitan Supply Capability w/CRA Maximum of 1.25 MAF[4]	***3,151,000***	***3,356,000***	***3,309,000***	***3,252,000***	***3,203,000***
Firm Demands on Metropolitan[5,6]	***2,320,000***	***2,196,000***	***2,229,000***	***2,358,000***	***2,487,000***
Potential Reserve & Replenishment Supplies	**831,000**	**1,160,000**	**1,080,000**	**894,000**	**716,000**

[1] Represents supply capability for resource programs under listed year type

[2] California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct

[3] Colorado River Aqueduct includes water management program supplies conveyed by the aqueduct

[4] Maximum CRA deliveries limited to 1.25 MAF including SDCWA/IID Transfer supplies and Coachella and All-American Canals lining supplies.

[5] Based on SCAG 2004 RTP, SANDAG 2030 forecasts, projections of member agency existing and contracted active conservation and local supplies, remaining regional targets for active conservation, SDCWA/IID Transfer supplies and Coachella and All-American Canals lining supplies.

[6] Includes projected firm sales plus 70% of projected IAWP agricultural sales

Table II-8
Multiple Dry-Year
Supply Capability[1] & Projected Demands
(Repeat of 1990-92 Hydrology)
(Acre-Feet)

	2010	2015	2020	2025	2030
Current Supplies					
In-Basin Storage	514,000	518,000	502,000	487,000	470,000
California Aqueduct [2]	912,000	912,000	912,000	912,000	912,000
Colorado River Aqueduct [3]	722,000	699,000	699,000	699,000	699,000
Supplies Under Development					
In-Basin Storage	78,000	103,000	103,000	103,000	103,000
California Aqueduct	330,000	215,000	299,000	299,000	299,000
Colorado River Aqueduct	95,000	460,000	400,000	400,000	400,000
Transfers to Other Agencies	0	(35,000)	(35,000)	(35,000)	(35,000)
Metropolitan Supply Capability	***2,651,000***	***2,872,000***	***2,880,000***	***2,865,000***	***2,848,000***
Metropolitan Supply Capability w/CRA Maximum of 1.25 MAF [4]	***2,651,000***	***2,804,000***	***2,782,000***	***2,757,000***	***2,740,000***
Firm Demands on Metropolitan [5,6]	***2,392,000***	***2,302,000***	***2,309,000***	***2,448,000***	***2,585,000***
Potential Reserve & Replenishment Supplies	**259,000**	**502,000**	**473,000**	**309,000**	**155,000**

[1] Represents supply capability for resource programs under listed year type

[2] California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct

[3] Colorado River Aqueduct includes water management program supplies conveyed by the aqueduct

[4] Maximum CRA deliveries limited to 1.25 MAF including SDCWA/IID Transfer supplies and Coachella and All-American Canals lining supplies

[5] Based on SCAG 2004 RTP, SANDAG 2030 forecasts, projections of member agency existing and contracted active conservation and local supplies, remaining regional targets for active conservation, SDCWA/IID Transfer supplies and Coachella and All-American Canals lining supplies

[6] Includes projected firm sales plus 70% of projected IAWP agricultural sales

Table II-9
Average Year
Supply Capability[1] & Projected Demands
(Average of 1922 – 2004 Hydrologies)
(Acre-Feet)

	2010	2015	2020	2025	2030
Current Supplies					
In-Basin Storage	0	0	0	0	0
California Aqueduct[2]	1,772,000	1,772,000	1,772,000	1,772,000	1,772,000
Colorado River Aqueduct[3]	711,000	678,000	677,000	677,000	677,000
Supplies Under Development					
In-Basin Storage	0	0	0	0	0
California Aqueduct	185,000	185,000	240,000	240,000	240,000
Colorado River Aqueduct	0	0	0	0	0
Transfers to Other Agencies	0	(35,000)	(35,000)	(35,000)	(35,000)
Metropolitan Supply Capability	***2,668,000***	***2,600,000***	***2,654,000***	***2,654,000***	***2,654,000***
Metropolitan Supply Capability w/CRA Maximum of 1.25 MAF [4]	***2,668,000***	***2,600,000***	***2,654,000***	***2,654,000***	***2,654,000***
Firm Demands on Metropolitan [5,6]	***2,036,000***	***1,947,000***	***1,983,000***	***2,110,000***	***2,246,000***
Potential Reserve & Replenishment Supplies	**632,000**	**653,000**	**671,000**	**544,000**	**408,000**

[1] Represents supply capability for resource programs under listed year type

[2] California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct

[3] Colorado River Aqueduct includes water management program supplies conveyed by the aqueduct

[4] Maximum CRA deliveries limited to 1.25 MAF including SDCWA/IID Transfer supplies and Coachella and All-American Canals lining supplies

[5] Based on SCAG 2004 RTP, SANDAG 2030 forecasts, projections of member agency existing and contracted active conservation and local supplies, remaining regional targets for active conservation, SDCWA/IID Transfer supplies and Coachella and All-American Canals lining supplies

[6] Includes projected firm sales plus 70% of projected IAWP agricultural sales

Appendix J-5
Olivenhain Municipal Water District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan
Prepared by Olivenhain Municipal Water District
2005
Pages 10-11

In accordance with the Act, **Tables 8-3, 8-4, 8-5, 8-6,** and **8-7** show the multiple dry water year assessments in five-year increments. The member agencies' surface and groundwater yields shown in these tables are reflective of supplies available during the 1987-92 drought in years 1990, 1991 and 1992.

TABLE 8-2
SINGLE DRY WATER YEAR SUPPLY AND DEMAND ASSESSMENT

FIVE YEAR INCREMENTS (AF/YR)	2010	2015	2020	2025	2030
Water Authority Supplies					
Regional Seawater Desalination at Encina 0 56,000 56,000 56,000 56,000	0	56,000	56,000	56,000	56,000
IID Water Transfer	70,000	100,000	190,000	200,000	200,000
ACC and CC Lining Projects	77,700	77,700	77,700	77,700	77,700
Sub-Total	147,700	233,700	323,700	333,700	333,700
Member Agency Supplies					
Surface Water	22,284	22,284	22,284	22,284	22,284
Water Recycling	33,644	40,598	45,459	46,368	47,430
Groundwater	10,838	10,838	10,838	10,838	10,838
Groundwater Recovery	11,400	11,400	11,400	11,400	11,400
Sub-Total	78,166	85,120	89,981	90,890	91,952
Metropolitan Water District Supplies	541,784	477,150	411,879	424,020	457,378
TOTAL PROJECTED SUPPLIES	767,650	795,970	825,560	848,610	883,030
TOTAL ESTIMATED DEMANDS w/Conservation	767,650	795,970	825,560	848,610	883,030

TABLE 8-3
MULTIPLE DRY WATER YEAR SUPPLY AND DEMAND ASSESSMENT

FIVE-YEAR INCREMENTS (AF/YR)	2006	2007	2008
Water Authority Supplies	40,000	71,500	71,500
Member Agencies	58,730	61,770	81,920
Metropolitan Supplies	645,790	616,510	601,610
Total Estimated Supplies	744,520	749,780	755,030
Total Estimated Demands	744,520	749,780	755,030

TABLE 8-4

	2011	2012	2013
Water Authority Supplies	213,700	223,700	233,700
Member Agencies	81,550	80,620	86,810
Metropolitan Supplies	476,160	472,960	452,640
Total Estimated Supplies	771,410	777,280	783,150
Total Estimated Demands	771,410	777,280	793,150

TABLE 8-5

	2016	2017	2018
Water Authority Supplies	233,700	233,700	263,700
Member Agencies	88,080	86,740	102,510
Metropolitan Supplies	479,250	486,710	447,060
Total Estimated Supplies	801,030	807,150	813,270
Total Estimated Demands	801,303	807,150	813,270

TABLE 8-6

	2021	2022	2023
Water Authority Supplies	333,700	33,700	333,700
Member Agencies	92,150	90,020	105,000
Metropolitan Supplies	404,830	412,120	402,310
Total Estimated Supplies	830,680	835,840	841,010
Total Estimated Demands	830,680	835,840	841,010

TABLE 8-7

	2026	2027	2028
Water Authority Supplies	333,700	333,700	333,700
Member Agencies	93,090	90,990	106,000
Metropolitan Supplies	431,690	440,940	433,070
Total Estimated Supplies	858,480	865,630	872,770
Total Estimated Demands	858,480	865,630	872,770

Appendix J-6
Otay Water District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan
Prepared by Otay Water District
December 2005
Pages 38-40

Table 30. Projected Normal Year Supply and Demand Comparison – AF/yr

	FY 2005	FY 2010	FY 2015	FY 2020	FY 2025	FY 2030
Water Authority	37,618	45,772	52,349	59,799	66,560	75,108
Recycled	1,155	4,040	4,684	5,430	6,294	7,297
Total Supply	38,773	49,812	57,033	65,229	72,854	82,405
Supply as % of year 2005	100%	128%	147%	168%	188%	212%
Total Demand	38,773	49,812	57,033	65,229	72,854	82,405
Demand as % of year 2005	100%	128%	147%	168%	188%	212%
Difference (supply minus demand)		0	0	0	0	0

Table 31. Projected Single Dry Year Supply and Demand Comparison – AF/yr

	FY 2010	FY 2015	FY 2020	FY 2025	FY 2030
Water Authority	49,259	56,341	64,365	71,660	80,876
Recycled	4,040	4,684	5,430	6,294	7,297
Total Supply	53,299	61,025	69,795	77,954	88,173
% of Normal Year	107%	107%	107%	107%	107%
Total Demand	53,299	61,025	69,795	77,954	88,173
% of Normal Year	107%	107%	107%	107%	107%
Difference (supply minus demand)	0	0	0	0	0

Table 32. Projected Supply and Demand Comparison during Multiple Dry Year Period Ending in 2010 – AF/yr

	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Water Authority	42,619	44,982	44,534	46,896	49,259
Recycled	1,230	1,230	4,040	4,040	4,040
Total Supply	43,849	46,212	48,574	50,936	53,299
% of Normal Year	107%	107%	107%	107%	107%
Total Demand	43,849	46,212	48,574	50,936	53,299
% of Normal Year	107%	107%	107%	107%	107%
Difference (supply minus demand)	0	0	0	0	0

Table 33. Projected Supply and Demand Comparison during Multiple Dry Year Period Ending in 2015 – AF/yr

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Water Authority	50,675	52,091	53,509	54,925	56,341
Recycled	4,169	4,298	4,426	4,555	4,684
Total Supply	54,844	56,389	57,935	59,480	61,025
% of Normal Year	107%	107%	107%	107%	107%
Total Demand	54,844	56,389	57,935	59,480	61,025
% of Normal Year	107%	107%	107%	107%	107%
Difference (supply minus demand)	0	0	0	0	0

Table 34. Projected Supply and Demand Comparison during Multiple Dry Year Period Ending in 2020 – AF/yr

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Water Authority	57,946	59,551	61,156	62,760	64,365
Recycled	4,833	4,982	5,132	5,281	5,430
Total Supply	62,779	64,533	66,287	68,041	69,795
% of Normal Year	107%	107%	107%	107%	107%
Total Demand	62,779	64,533	66,287	68,041	69,795
% of Normal Year	107%	107%	107%	107%	107%
Difference (supply minus demand)	0	0	0	0	0

Table 35. Projected Supply and Demand Comparison during Multiple Dry Year Period Ending in 2025 – AF/yr

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Water Authority	65,824	67,283	68,742	70,201	71,660
Recycled	5,603	5,776	5,948	6,121	6,294
Total Supply	71,427	73,059	74,690	76,322	77,954
% of Normal Year	107%	107%	107%	107%	107%
Total Demand	71,427	73,059	74,690	76,322	77,954
% of Normal Year	107%	107%	107%	107%	107%
Difference (supply minus demand)	0	0	0	0	0

Table 36. Projected Supply and Demand Comparison during Multiple Dry Year Period Ending in 2030 – AF/yr

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Water Authority	73,503	75,346	77,190	79,033	80,876
Recycled	6,495	6,695	6,896	7,096	7,297
Total Supply	79,998	82,042	84,086	86,129	88,173
% of Normal Year	107%	107%	107%	107%	107%
Total Demand	79,998	82,042	84,086	86,129	88,173
% of Normal Year	107%	107%	107%	107%	107%
Difference (supply minus demand)	0	0	0	0	0

Appendix J-7
Padre Dam Municipal Water District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan
Prepared by Padre Dam Municipal Water District
December 2005
Pages 4-6, 5-1 – 5-3

Projected Supply and Demand Comparison (AFY)

Description	Water Supplies by Year (AFY)				
	2010	2015	2020	2025	2030
Imported Water Supply	21,663	22,939	24,087	26,053	27,888
Lakeside/Riverview Groundwater Wells[5]	0	0	0	0	0
Recycled Water	1,000	1,000	1,200	1,200	1,200
Supply Total	22,663	23,939	25,287	27,253	29,088
Projected Demand	22,663	23,939	25,287	27,253	29,088
Difference (Supply - Demand)	0	0	0	0	0
Ratio of Supply/Demand	100%	100%	100%	100%	100%

[5] Lakeside and Riverview Water Districts are expected to be detached from the District in 2006.

Table 4-4
District Supply Reliability (AFY)

Supply Source	Normal Year (2004)[1]	Single Dry (2004)[2]	Multiple Dry Water Years (AFY)		
			2006	2007	2008
SDCWA Imported[3]	20,909	22,073	21,063	21,743	22,444
Groundwater[4]	775	775	0	0	0
Recycled Water	1,600	1,600	1,600	1,600	1,600
Total Supply	23,284	24,448	22,663	23,343	24,044
Demand	23,284	24,448	22,663	23,343	24,044

[1] 2004 water supply and demand are shown because 2005 was an unusually wet year.

[2] Demand for a single dry year assuems a 5% increase in demand; multiple dry years assume increased demand due to growth but a 10% decrease resulting from water rationing.

[3] The Water Authority's 2005 UWMP indicates that enough imported water will be available to meet multiple dry year demands.

[4] Lakeside and Riverview Water Districts are included in 2004, although they are expected to be detached from the District in 2006.

Table 5-1
Projected Supply and Demand Comparison (MGD)

Description	Water Supplies by Year (MGD)				
	2010	2015	2020	2025	2030
Imported Water Supply					
No. 4 Connection[1]	15.0	15.5	18.7	18.7	18.7
No. 6 Connection[2,4]	18.0	23.0	23.0	23.0	23.0
No. 7 Connection[3,4]	12.0	12.0	12.0	12.0	12.0
Lakeside/Riverview Groundwater Wells[5]	0.0	0.0	0.0	0.0	0.0
Recycled Water (max day)	2.0	2.0	2.7	2.7	2.7
Supply Total	47.0	52.5	56.4	56.4	56.4
Projected Maximum Day Demand[6]	40.4	42.7	45.1	48.6	51.9
Difference (Supply - Demand)	6.6	9.8	11.3	7.8	4.5
Ratio of Supply/Demand	116%	123%	125%	116%	109%

[1] No. 4 Connection is filtered water with no local storage.
[2] No. 6 Connection is from local storage of imported water and runoff.

[3] No. 7 Connection is from local storage of imported water and runoff.

[4] Imported water supplies are shown by capacity (actual use shown in Chapter 4). Interim year supply scenario is based on the East County Treated Water Distribution Study prepared for SDCWA by MWH (May 2004).

[5] Lakeside and Riverview Water Districts are expected to be detached from the District in 2006.

[6] Projected max day demands to 2030 are adjusted from Integrated Facilities Plan prepared for Padre Dam Municipal Water District by PBS&J (October 2001) to correlate with SDCWA's 2005 UWMP projections.

Table 5-2
Projected Dry Year and Multiple Dry Year Supply and Demand (2006-2009)

Description	Normal Year (MGD) (2004)[1]	Single Dry Year (MGD) (2004)	Multiple Dry Water Years (MGD)		
			2006	2007	2008
Imported Water Supply[2]					
No. 4 Connection	19.4	19.4	19.4	19.4	19.4
No. 6 Connection	18.0	18.0	18.0	18.0	18.0
No. 7 Connection	0.0	0.0	0.0	0.0	0.0
Lakeside/Riverview Groundwater Wells[3]	1.2	1.2	1.2	1.2	1.2
Recycled Water (max day)	2.0	2.0	2.0	2.0	2.0
Supply Total	40.6	40.6	40.6	40.6	40.6
Projected Maximum Day Demand[4]	37.3	39.2	36.3	37.4	38.5
Difference (Supply - Demand)	3.3	1.4	4.3	3.2	2.1
Ratio of Supply/Demand	109%	104%	112%	109%	105%

[1] 2004 water supply and demand are shown because 2005 was an unusually wet year.

[2] Imported water supplies are shown by capacity. The Water Authority's 2005 UWMP indicates that enough imported water will be available to meet these multiple dry year demands. Interim year supply capacity scenario is based on the East County Treated Water Distribution Study prepared for SDCWA by MWH (May 2004).

[3] Lakeside and Riverview Water Districts are included in the supply and demand comparison, although they are expected to be detached from the District in 2006.

[4] Projected max day demands for a single dry year assumes a 5% increases in demand; multiple dry years assume increased demand due to growth but a 10% decrease resulting from water rationing.

Table 5-3
Projected Dry Year and Multiple Dry Year Supply and Demand (2010-2013)

Description	Normal Year (MGD) (2010)	Single Dry Year (MGD) (2010)	Multiple Dry Water Years (MGD)		
			2011	2012	2013
Imported Water Supply[1]					
No. 4 Connection	15.0	19.4	19.4	19.4	19.4
No. 6 Connection	18.0	18.0	18.0	18.0	18.0
No. 7 Connection	12.0	9.7	9.7	9.7	9.7
Lakeside/Riverview Groundwater Wells[2]	0.0	0.0	0.0	0.0	0.0
Recycled Water (max day)	2.0	2.0	2.0	2.0	2.0
Supply Total	47.0	49.1	49.1	49.1	49.1
Projected Maximum Day Demand[3]	40.4	42.5	43.7	45.1	46.4
Difference (Supply - Demand)	6.6	6.6	5.4	4.0	2.7
Ratio of Supply/Demand	116%	116%	112%	109%	106%

[1] Imported water supplies are shown by capacity. The Water Authority's 2005 UWMP indicates that enough imported water will be available to meet these multiple dry year demands. Interim year supply capacity scenario is based on the East County Treated Water Distribution Study prepared for SDCWA by MWH (May 2004).

[2] Lakeside and Riverview Water Districts are expected to be detached from the District in 2006.

[3] Projected max day demands for a single dry year assumes a 5% increases in demand; multiple dry years assume increased demand due to growth and no decrease resulting from water rationing.

Appendix J-8
Rainbow Municipal Water District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan
Prepared by Rainbow Municipal Water District
December 2005
Pages 22-23

Table 13- Normal Year Water Supply and Demand					
Wholesaler	2010	2015	2020	2025	2030/opt
RMWD Demand w/conservation	25,849	24,087	22,091	17,957	17,506
Supply Available to RMWD	25,849	24,087	22,091	17,957	17,506
Total SDCWA Supply & Demand w/Conservation	715,450	742,900	771,510	795,640	829,030
Data is based on SDCWA 2005 UWMP and includes near term annexation demands					

Table 14- Single Dry Year Water Supply and Demand					
Wholesaler	2010	2015	2020	2025	2030/opt
RMWD Demand w/conservation	27,735	25,808	23,639	19,152	18,646
Supply Available to RMWD	27,735	25,808	23,639	19,152	18,646
Total SDCWA Supply & Demand w/Conservation	767,650	795,970	825,560	848,610	883,030
Data is based on SDCWA 2005 UWMP					

Table 15- Multiple Dry Year Water Supply and Demand				
Multiple Dry Year Group	Years	RMWD Demand	Supply to RMWD	Total SDCWA Supply and Demand
1	2006	24,323	24,323	744,520
	2007	24,493	24,493	749,780
	2008	24,664	24,664	755,030
2	2011	27,929	27,929	771,410
	2012	28,125	28,125	777,280
	2013	28,321	28,321	783,150
3	2016	25,988	25,988	801,030
	2017	26,170	26,170	807,150
	2018	26,353	26,353	813,270
4	2021	23,804	23,804	830,680
	2022	23,971	23,971	835,840
	2023	24,139	24,139	841,010
5	2026	19,287	19,287	858,480
	2027	19,422	19,422	865,630
	2028	19,558	19,558	872,770

Appendix J-9
Ramona Municipal Water District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan
Prepared by Ramona Municipal Water District
Pages 47-49

TABLE 8-1
NORMAL WATER YEAR SUPPLY AND DEMAND ASSESSMENT (AF/YR) [1]

	2010	2015	2020	2025	2030
CWA Supplies					
Regional Seawater Desalination at Encina	0	56,000	56,000	56,000	56,000
IID Water Transfer	70,000	100,000	190,000	200,000	200,000
ACC and CC Lining Projects	77,700	77,700	77,700	77,700	77,700
Sub-Total	147,700	233,700	323,700	333,700	333,700
Member Agency Supplies					
Surface Water	57,849	57,849	57,849	57,849	57,849
Water Recycling	33,644	40,598	45,459	46,368	47,430
Groundwater	17,175	18,945	19,775	19,775	19,775
Groundwater Recovery	11,400	11,400	11,400	11,400	11,400
Sub-Total	120,068	128,792	134,483	135,392	136,454
Metropolitan Supplies	447,682	380,408	313,327	326,548	358,876
TOTAL PROJECTED SUPPLIES	715,450	742,900	771,510	795,640	829,030
TOTAL ESTIMATED DEMANDS w/ Conservation	715,450	742,900	771,510	795,640	829,030

[1] Near-term annexation demands are tentatively included in draft water demand forecast total. Final determination on including near-term annexation demands in final water demand forecast to be made by Board of Directors.

TABLE 8-2
SINGLE DRY WATER YEAR SUPPLY AND DEMAND ASSESSMENT
FIVE-YEAR INCREMENTS [1]
(AF/YR)

	2010	2015	2020	2025	2030
CWA Supplies					
Regional Seawater Desalination at Encina	0	56,000	56,000	56,000	56,000
IID Water Transfer	70,000	100,000	190,000	200,000	200,000
ACC and CC Lining Projects	77,700	77,700	77,700	77,700	77,700
Sub-Total	147,700	233,700	323,700	333,700	333,700
Member Agency Supplies					
Surface Water	22,284	22,284	22,284	22,284	22,284
Water Recycling	33,644	40,598	45,459	46,368	47,430
Groundwater	10,838	10,838	10,838	10,838	10,838
Groundwater Recovery	11,400	11,400	11,400	11,400	11,400
Sub-Total	78,166	85,120	89,981	90,890	91,952
Metropolitan Supplies	541,784	477,150	411,879	424,020	457,378
TOTAL PROJECTED SUPPLIES	767,650	795,970	825,560	848,610	883,030
TOTAL ESTIMATED DEMANDS	767,650	795,970	825,560	848,610	883,030

[1] Near-term annexation demands are tentatively included in draft water demand forecast total. Final determination on including near-term annexation demands in final water demand forecast to be made by Board of Directors.

MULTIPLE DRY WATER YEAR SUPPLY AND DEMAND ASSESSMENT
FIVE-YEAR INCREMENTS [1]
(AF/YR)

TABLE 8-3

	2006	**2007**	**2008**
CWA Supplies	40,000	71,500	71,500
Member Agencies	58,730	61,770	81,920
Metropolitan Supplies	645,790	616,510	601,610
Total Estimated Supplies	744,520	749,780	755,030
Total Estimated Demands	744,520	749,780	755,030

TABLE 8-4

	2011	2012	2013
CWA Supplies	213,700	223,700	233,700
Member Agencies	81,550	80,620	96,810
Metropolitan Supplies	476,160	472,960	452,640
Total Estimated Supplies	771,410	777,280	783,150
Total Estimated Demands	771,410	777,280	783,150

TABLE 8-5

	2016	2017	2018
CWA Supplies	233,700	233,700	263,700
Member Agencies	88,080	86,740	102,510
Metropolitan Supplies	479,250	486,710	447,060
Total Estimated Supplies	801,030	807,150	813,270
Total Estimated Demands	801,030	807,150	813,270

TABLE 8-6

	2021	2022	2023
CWA Supplies	333,700	333,700	333,700
Member Agencies	92,150	90,020	105,000
Metropolitan Supplies	404,830	412,120	402,310
Total Estimated Supplies	830,680	835,840	841,010
Total Estimated Demands	830,680	835,840	841,010

TABLE 8-7

	2026	2027	2028
CWA Supplies	333,700	333,700	333,700
Member Agencies	93,090	90,990	106,000
Metropolitan Supplies	431,690	440,940	433,070
Total Estimated Supplies	858,480	865,630	872,770
Total Estimated Demands	858,480	865,630	872,770

[1] Near-term annexation demands are tentatively included in draft water demand forecast total. Final determination on including near-term annexation demands in final water demand forecast to be made by Board of Directors.

Appendix J-10
Rincon del Diablo Municipal Water District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan
Prepared by Rincon del Diablo Municipal Water District
December 2005
Pages 15-18

Table 7.
Projected NORMAL Year Supply and Demand Comparison

	2005	2010	2015	2020	2025	2030
Supply Total	**8,707**	**13,867**	**14,463**	**15,003**	**15,551**	**16,121**
Imported Water	7,300	9,801	10,262	10,635	11,046	11,512
Recycled Water	52	4,074	4,074	4,074	4,074	4,074
Demand Total	**7,352**	**13,875**	**14,336**	**14,709**	**15,120**	**15,586**
Difference	**1,355**	**8**	**127**	**294**	**431**	**535**
Difference as % of Supplies	16%	0%	1%	2%	3%	3%
Difference as % of Demand	18%	0%	1%	2%	3%	3%

Table 8.
Projected SINGLE DRY Year Supply and Demand Comparison

	2005	2010	2015	2020	2025	2030
Supply Total	**8,707**	**13,867**	**14,463**	**15,003**	**15,551**	**16,121**
Imported Water	7,811	10,488	10,980	11,380	11,819	12,318
Recycled Water	52	4,074	4,074	4,074	4,074	4,074
Demand Total	**7,863**	**14,562**	**15,054**	**15,454**	**15,893**	**16,392**
Difference	**844**	**695**	**591**	**451**	**342**	**271**
Difference as % of Supplies	10%	5%	4%	3%	2%	2%
Difference as % of Demand	11%	5%	4%	3%	2%	2%

Table 9-A.
Supply and Demand Comparison
Projected Consecutive MULTIPLE DRY Year
Occuring Between 2006 - 2010

	2006	2007	2008
Supply Total	**12,743**	**14,359**	**14,425**
Imported Water	9,068	10,285	10,351
Recycled Water	3,675	4,074	4,074
Demand Total	**12,743**	**14,359**	**14,425**

Table 9-B.
Supply and Demand Comparison
Projected Consecutive MULTIPLE DRY Year
Occuring Between 2011 - 2015

	2011	2012	2013
Supply Total	**13,937**	**14,835**	**14,907**
Imported Water	9,863	10,761	10,833
Recycled Water	4,074	4,074	4,074
Demand Total	**13,937**	**14,835**	**14,907**

Table 9-C.
Supply and Demand Comparison
Projected Consecutive MULTIPLE DRY Year
Occuring Between 2016 - 2020

	2016	2017	2018
Supply Total	**14,408**	**15,093**	**15,289**
Imported Water	10,334	11,019	11,215
Recycled Water	4,074	4,074	4,074
Demand Total	**14,408**	**15,093**	**15,289**

Table 9-D.
Supply and Demand Comparison
Projected Consecutive MULTIPLE DRY Year
Occuring Between 2021 - 2025

	2021	2022	2023
Supply Total	**14,788**	**15,624**	**15,712**
Imported Water	10,714	11,550	11,638
Recycled Water	4,074	4,074	4,074
Demand Total	**14,788**	**15,624**	**15,712**

Table 9-E.
Supply and Demand Comparison
Projected Consecutive MULTIPLE DRY Year
Occuring Between 2026 - 2030

	2026	2027	2028
Supply Total	**15,207**	**16,082**	**16,179**
Imported Water	11,133	12,008	12,105
Recycled Water	4,074	4,074	4,074
Demand Total	**15,207**	**16,082**	**16,179**

Appendix J-11
San Diego County Water Authority

The following water supply and demand tables are an excerpt from:

Updated 2005 Urban Water Management Plan
Prepared by San Diego County Water Authority
April 2007
Pages 8-2 – 8-4

TABLE 8-1
NORMAL WATER YEAR SUPPLY AND DEMAND ASSESSMENT (AF/YR) [1]

	2010	2015	2020	2025	2030
Water Authority Supplies					
IID Water Transfer	70,000	100,000	190,000	200,000	200,000
ACC and CC Lining Projects	77,700	77,700	77,700	77,700	77,700
Sub-Total	147,700	177,700	267,700	277,700	277,700
Member Agency Supplies					
Surface Water	59,649	59,649	59,649	59,649	59,649
Water Recycling	33,668	40,662	45,548	46,492	47,584
Groundwater	17,175	18,945	19,775	19,775	19,775
Groundwater Recovery	11,400	11,400	11,400	11,400	11,400
Seawater Desalination	0	34,689	36,064	37,754	40,000
Sub-Total	121,892	165,345	172,436	175,070	178,408
Metropolitan Water District Supplies	445,858	399,855	331,374	342,870	372,922
TOTAL PROJECTED SUPPLIES	715,450	742,900	771,510	795,640	829,030
TOTAL ESTIMATED DEMANDS w/ Conservation	715,450	742,900	771,510	795,640	829,030

[1] Normal water year demands based on 1960 – 2002 hydrology.

TABLE 8-2
SINGLE DRY WATER YEAR SUPPLY AND DEMAND ASSESSMENT
FIVE YEAR INCREMENTS
(AF/YR)

	2010	2015	2020	2025	2030
Water Authority Supplies					
IID Water Transfer	70,000	100,000	190,000	200,000	200,000
ACC and CC Lining Projects	77,700	77,700	77,700	77,700	77,700
Sub-Total	147,700	177,700	267,700	277,700	277,700
Member Agency Supplies					
Surface Water	22,284	22,284	22,284	22,284	22,284
Water Recycling	33,668	40,662	45,548	46,492	47,584
Groundwater	10,838	10,838	10,838	10,838	10,838
Groundwater Recovery	11,400	11,400	11,400	11,400	11,400
Seawater Desalination	0	34,698	36,064	37,754	40,000
Sub-Total	78,190	119,882	126,134	128,768	132,106
Metropolitan Water District Supplies	541,760	498,388	431,726	442,142	473,224
TOTAL PROJECTED SUPPLIES	767,650	795,970	825,560	848,610	883,030
TOTAL ESTIMATED DEMANDS w/ Conservation	767,650	795,970	825,560	848,610	883,030

MULTIPLE DRY WATER YEAR SUPPLY AND DEMAND ASSESSMENT
FIVE-YEAR INCREMENTS
(AF/YR)

TABLE 8-3

	2006	**2007**	**2008**
Water Authority Supplies	40,000	71,500	71,500
Member Agencies	56,670	60,230	80,900
Metropolitan Supplies	647,850	618,050	602,630
Total Estimated Supplies	744,520	749,780	755,030
Total Estimated Demands	744,520	749,780	755,030

TABLE 8-4

	2011	2012	2013
Water Authority Supplies	157,700	167,700	177,700
Member Agencies	101,012	100,431	116,970
Metropolitan Supplies	512,698	500,149	488,480
Total Estimated Supplies	771,410	777,280	783,150
Total Estimated Demands	771,410	777,280	783,150

TABLE 8-5

	2016	2017	2018
Water Authority Supplies	177,700	177,700	207,700
Member Agencies	109,214	108,149	124,194
Metropolitan Supplies	514,116	521,301	481,376
Total Estimated Supplies	801,030	807,150	813,270
Total Estimated Demands	801,030	807,150	813,270

TABLE 8-6

	2021	2022	2023
Water Authority Supplies	277,700	277,700	277,700
Member Agencies	114,752	112,960	128,288
Metropolitan Supplies	438,228	445,180	435,022
Total Estimated Supplies	830,680	835,840	841,010
Total Estimated Demands	830,680	835,840	841,010

TABLE 8-7

	2026	2027	2028
Water Authority Supplies	277,700	277,700	277,700
Member Agencies	117,524	115,873	131,343
Metropolitan Supplies	463,256	472,057	463,727
Total Estimated Supplies	858,480	865,630	872,770
Total Estimated Demands	858,480	865,630	872,770

Appendix J-12
Santa Fe Irrigation District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan
Prepared by Santa Fe Irrigation District
December 2005
Pages 5-1 – 5-2

Table 5-1
Projected Normal Year Supply and Demand (AFY)

	2005	2010	2015	2020	2025	2030
Demand	12,606	15,541	15,705	15,996	16,308	16,471
Supply						
San Diego County Water Authority	8,844	11,473	11,437	11,703	12,000	12,103
Lake Hodges	3,268	3,268	3,268	3,268	3,268	3,268
Recycled	494	800	1,000	1,025	1,040	1,100
SUBTOTAL	12,606	15,541	15,705	15,996	16,308	16,471
Difference (Supply-Demand)	0	0	0	0	0	0
% Supply Shortage	0%	0%	0%	0%	0%	0%

[1] Projections are based on District data, and adjusted to correspond with Water Authority projections.

Table 5-2
Projected Multiple Dry Year Supply and Demand (AFY)

	Normal Year (2005)	Single Dry[1] (2005)	Multiple Dry Water Years[2]			
			Year 1 2006	Year 2 2007	Year 3 2008	Year 4 2009
Demand	12,606	13,236	13,853	14,469	15,085	15,702
Supply						
San Diego County Water Authority	8,844	9,474	10,091	11,975	13,591	15,208
Lake Hodges	3,268	3,268	3,268	2,000	1,000	0
Recycled	494	494	494	494	494	494
SUBTOTAL	12,606	13,236	13,853	14,469	15,085	15,702
Difference (Supply-Demand)	0	0	0	0	0	0
% Supply Shortage	0%	0%	0%	0%	0%	0%

[1] The single dry year assumes a 5% increase in demand.

[2] Multiple dry years are increased based on increased forecasted demand. Note that forecasted demand is conservatively high as noted in Chapter 2, so dry year demands are also conservatively high.

Appendix J-13
Sweetwater Authority/ South Bay Irrigation District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan
Prepared by Sweetwater Authority
December 2005
Pages 48-49

Table 5 - Projected Normal Year Water Demands

Water Use Sector	Fiscal Year Ending				
	2010	2015	2020	2025	2030
Residential	17,126	18,211	19,362	19,878	21,205
Commercial	4,583	4,691	4,805	4,856	4987
Industrial	456	607	768	840	1,025
Public Authority	2,130	2,192	2,258	2,287	2,364
Irrigation/Agricultural	49	44	39	36	30
Other	39	40	41	41	42
Unaccounted for Water	1,041	1,101	1,165	1,193	1,266
Estimated Conservation Savings	1,212	1,590	1,952	2,320	2,659
Total	24,213	25,296	26,485	26,813	28,260

Table 6.1- Projected Water Demand during Single and Multiple Dry-Year Periods (2006 through 2008)

	Normal Water Year (2005)	Single Dry Water Year (2005)	Multiple Dry Water Years		
			Year 1 (2006)	Year 2 (2007)	Year 3 (2008)
Total Demand (acre-feet)	23,570	25,220	25,357	25,495	25,632

Table 6.2- Projected Water Demand during Single and Multiple Dry-Year Periods (2011 through 2013)

	Normal Water Year (2010)	Single Dry Water Year (2010)	Multiple Dry Water Years		
			Year 1 (2011)	Year 2 (2012)	Year 3 (2013)
Total Demand (acre-feet)	24,213	25,907	26,139	26,371	26,603

Table 6.3- Projected Water Demand during Single and Multiple Dry-Year Periods (2016 through 2018)

	Normal Water Year (2015)	Single Dry Water Year (2015)	Multiple Dry Water Years		
			Year 1 (2016)	Year 2 (2017)	Year 3 (2018)
Total Demand (acre-feet)	25,296	27,067	27,321	27,576	27,830

Table 6.4- Projected Water Demand during Single and Multiple Dry-Year Periods (2021 through 2023)

	Normal Water Year (2020)	Single Dry Water Year (2020)	Multiple Dry Water Years		
			Year 1 (2021)	Year 2 (2022)	Year 3 (2023)
Total Demand (acre-feet)	26,485	28,339	28,409	28,480	28,550

Table 6.5- Projected Water Demand during Single and Multiple Dry-Year Periods (2026 through 2028)

	Normal Water Year (2025)	Single Dry Water Year (2025)	Multiple Dry Water Years		
			Year 1 (2026)	Year 2 (2027)	Year 3 (2028)
Total Demand (acre-feet)	26,813	28,690	28,999	29,309	29,619

Appendix J-14
Vallecitos Water District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan
Prepared by Vallecitos Water District
December 2005
Pages 3-6, 3-7 – 3-8

Table 3-1 Vallecitos Water District's Projected Supplies and Demand

Projected Supplies and Demand (Normal Year - AF/YR)

	2010	2015	2020	2025	2030
Projected Supplies from SDCWA[1]	19,409	19,741	20,365	21,317	22,903
Estimated Demand[2]	20,110	22,279	24,444	26,613	28,781
Estimated Conservation Savings[3]	701	2,538	4,079	5,296	5,878
Total Estimated Demand w/conservation	19,409	19,741	20,365	21,317	22,903
DIFFERENCE	0	0	0	0	0

1) *Source - SDCWA-MAIN PMCL Baseline Point Projections model forecast for Vallecitos Water District (November 2005)*

2) *Source for baseline demand - Vallecitos Water District's 2002 Water, Wastewater, and Water Reclamation Master* Plan Update - August 2005

3) *Source for conservation savings estimates in 2010 & 2015 from SDCWA - starting in the year 2020 through 2030 the savings* estimates are from both SDCWA & VWD and include potential BMPs, efficiency standards & other VWD programs

Table 3-2 VWD Single Dry-Year Water Supply and Demand Forecast

Single Dry-Year Water Demand Forecast - Five Year Increments (AF/YR)

	2010	2015	2020	2025	2030
Estimated Supplies from SDCWA [1]	20,826	21,152	21,791	22,739	24,413
Total Estimated Supplies [2]	20,826	21,152	21,791	22,739	24,413
Estimated Demand [3]	21,578	23,872	26,155	28,388	30,652
Estimated Conservation Savings [4]	752	2,720	4,364	5,649	6,239
Total Estimated Demand (with conservation)	20,826	21,152	21,791	22,739	24,413
Difference	0	0	0	0	0

1) As stated in the SDCWA's 2005 Urban Water Management Plan (VWD's wholesaler), no water supply shortages are anticipated during single and multiple dry year events (demand will increase during these events, however, so is the projected supply)

2) *Source for supply estimates - SDCWA-MAIN PMCL Baseline Point Projections model forecast for Vallecitos* Water District (November 2005) & from SDCWA 2005 UWMP supply projections for single dry-year assessments

3) *Source for demand estimates - Vallecitos Water District's 2002 Water, Wastewater, and Water Reclamation Master* Plan Update - August 2005, adjusted for dry weather year demands

4) *Source for conservation savings estimates from SDCWA & VWD - starting with the year 2015 assessments include potential BMPs, efficiency standards, and other VWD programs*

Multiple Dry-Year Water Supply and Demand Assessment Five Year Increments [1,2,3]

Table 3-3

Multiple Dry-Year Total Water Demand Forecast (AF/YR)

	2006	2007	2008
Estimated Supplies from SDCWA[1]	19,745	20,015	20,285
Total Estimated Supplies [2]	19,745	20,015	20,285
Total Estimated Demands [3]	19,745	20,015	20,285
Difference	0	0	0

Table 3-4

Multiple Dry-Year Total Water Demand Forecast (AF/YR)

	2011	2012	2013
Estimated Supplies from SDCWA[1]	20,891	20,957	21,022
Total Estimated Supplies [2]	20,891	20,957	21,022
Total Estimated Demands [3]	20,891	20,957	21,022
Difference	0	0	0

Table 3-5

Multiple Dry-Year Total Water Demand Forecast (AF/YR)

	2016	2017	2018
Estimated Supplies from SDCWA[1]	21,280	21,408	21,535
Total Estimated Supplies [2]	21,280	21,408	21,535
Total Estimated Demands [3]	21,280	21,408	21,535
Difference	0	0	0

Table 3-6

Multiple Dry-Year Total Water Demand Forecast (AF/YR)

	2021	2022	2023
Estimated Supplies from SDCWA[1]	21,980	22,170	22,360
Total Estimated Supplies [2]	21,980	22,170	22,360
Total Estimated Demands [3]	21,980	22,170	22,360
Difference	0	0	0

Table 3-7

Multiple Dry-Year Total Water Demand Forecast (AF/YR)

	2026	2027	2028
Estimated Supplies from SDCWA[1]	23,048	23,394	23,739
Total Estimated Supplies [2]	23,048	23,394	23,739
Total Estimated Demands [3]	23,048	23,394	23,739
Difference	0	0	0

1) As stated in the SDCWA's 2005 Urban Water Management Plan (VWD's wholesaler), no water supply shortages are anticipated during single and multiple dry year events (demand will increase during these events, however, so is the projected supply)

2) *Source for supply estimates - SDCWA-MAIN PMCL Baseline Point Projections model forecast for Vallecitos* Water District (November 2005) & from SDCWA 2005 UWMP supply projections for multiple dry-years

3) *Source for baseline demand - Vallecitos Water District's 2002 Water, Wastewater, and Water Reclamation* Master Plan Update, August 2005 - demand figures have been adjusted for estimated conservation savings

Appendix J-15
Valley Center Municipal Water District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan
Prepared by Valley Center Municipal Water District
February 2006
Pages 7-1 – 7-3

Table 7-1. Normal Year Water Supply and Demand Comparison, ac-ft/yr (DWR Table 42)

	2010	2015	2020	2025
Supply totals	43,736	43,029	38,462	36,287
Demand totals	43,736	43,029	38,462	36,287
Difference (supply minus demand)	0	0	0	0
Difference as a percent of supply	0%	0%	0%	0%
Difference as a percent of demand	0%	0%	0%	0%

Units of Measure: ac-ft/yr

Source: SDCWA

Table 7-2. Single-Dry Year Water Supply and Demand Comparison, ac-ft/yr (DWR Table 45)

	2005	2010	2015	2020	2025
Supply totals	48,107	47,487	49,710	41,731	39,350
Demand totals	48,107	47,487	49,710	41,731	39,350
Difference (supply minus demand)	0	0	0	0	0
Difference as a percent of supply	0%	0%	0%	0%	0%
Difference as a percent of demand	0%	0%	0%	0%	0%

Units of Measure: ac-ft/yr

Table 7-3. Multiple-Dry Year Water Supply and Demand Comparison, ac-ft/yr, Period Ending in 2010 (DWR Table 48)

	2006	2007	2008	2009	2010
Supply totals	51,576	47,859	47,739	47,611	47,487
Demand totals	51,576	47,859	47,739	47,611	47,487
Difference (supply minus demand)	0	0	0	0	0
Difference as a percent of supply	0%	0%	0%	0%	0%
Difference as a percent of demand	0%	0%	0%	0%	0%

Units of Measure: ac-ft/yr

Table 7-4. Multiple-Dry Year Water Supply and Demand Comparison, ac-ft/yr, Period Ending in 2015 (DWR Table 51)

	2011	2012	2013	2014	2015
Supply totals	47,932	48,376	48,821	49,265	49,710
Demand totals	47,932	48,376	48,821	49,265	49,710
Difference (supply minus demand)	0	0	0	0	0
Difference as a percent of supply	0%	0%	0%	0%	0%
Difference as a percent of demand	0%	0%	0%	0%	0%

Units of Measure: ac-ft/yr

Table 7-5. Multiple-Dry Year Water Supply and Demand Comparison, ac-ft/yr, Period Ending in 2020 (DWR Table 54)

	2016	2017	2018	2019	2020
Supply totals	48,114	46,518	44,922	43,327	41,731
Demand totals	48,114	46,518	44,922	43,327	41,731
Difference (supply minus demand)	0	0	0	0	0
Difference as a percent of supply	0%	0%	0%	0%	0%
Difference as a percent of demand	0%	0%	0%	0%	0%

Units of Measure: ac-ft/yr

Table 7-6. Multiple-Dry Year Water Supply and Demand Comparison, ac-ft/yr, Period Ending in 2025 (DWR Table 57)

	2021	2022	2023	2024	2025
Supply totals	41,255	40,778	40,302	39,826	39,350
Demand totals	41,255	40,778	40,302	39,826	39,350
Difference (supply minus demand)	0	0	0	0	0
Difference as a percent of supply	0%	0%	0%	0%	0%
Difference as a percent of demand	0%	0%	0%	0%	0%

Units of Measure: ac-ft/yr

Appendix J-16
Vista Irrigation District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan
Prepared by Vista Irrigation District
December 2005
Pages 52-54

TABLE 6-1: NORMAL WATER SUPPLY AND DEMAND ASSESSMENT (AF/YR)

	2010	2015	2020	2025	2030
CWA Supplies (Regional and Imported)	17,417	18,389	19,617	21,413	23,197
Local Supply (Surface Water and Groundwater)	5,850	5,850	5,850	5,850	5,850
Total Projected Supply	**23,267**	**24,239**	**25,467**	**27,263**	**29,047**
Total Projected Demand	**23,267**	**24,239**	**25,467**	**27,263**	**29,047**
Difference	**0**	**0**	**0**	**0**	**0**

TABLE 6-2: SINGLE-DRY WATER SUPPLY AND DEMAND ASSESSMENT (AF/YR)

	2010	2015	2020	2025	2030
CWA Supplies (Regional and Imported)	23,866	24,933	26,247	28,168	30,077
Local Supply (Surface Water and Groundwater	1,003	1,003	1,003	1,003	1,003
Total Projected Supply	**24,896**	**25,936**	**27,250**	**29,171**	**31,080**
Total Projected Demand	**24,896**	**25,936**	**27,250**	**29,171**	**31,080**
Difference	**0**	**0**	**0**	**0**	**0**

MULTIPLE-DRY WATER YEAR SUPPLY AND DEMAND ASSESSMENT (AF/YR)

TABLE 6-3

	2006	2007	2008
CWA Supplies (Regional and Imported)	22,575	23,336	23,355
Local Supply (Surface Water and Groundwater)	1,578	1,003	1,170
Total Projected Supply	**24,153**	**24,339**	**24,525**
Total Projected Demand	**24,153**	**24,339**	**24,525**
Difference	**0**	**0**	**0**

TABLE 6-4

	2011	2012	2013
CWA Supplies (Regional and Imported)	23,526	24,309	24,350
Local Supply (Surface Water and Groundwater)	1,578	1,003	1,170
Total Projected Supply	**25,104**	**25,312**	**25,520**
Total Projected Demand	**25,104**	**25,312**	**25,520**
Difference	**0**	**0**	**0**

TABLE 6-5

	2016	2017	2018
CWA Supplies (Regional and Imported)	24,621	25,459	25,555
Local Supply (Surface Water and Groundwater)	1,578	1,003	1,170
Total Projected Supply	**26,199**	**26,462**	**26,725**
Total Projected Demand	**26,199**	**26,462**	**26,725**
Difference	**0**	**0**	**0**

TABLE 6-6

	2021	2022	2023
CWA Supplies (Regional and Imported)	26,056	27,015	27,232
Local Supply (Surface Water and Groundwater)	1,578	1,003	1,170
Total Projected Supply	**27,634**	**28,018**	**28,402**
Total Projected Demand	**27,634**	**28,018**	**28,402**
Difference	**0**	**0**	**0**

TABLE 6-7

	2026	2027	2028
CWA Supplies (Regional and Imported)	27,975	28,932	29,148
Local Supply (Surface Water and Groundwater)	1,578	1,003	1,170
Total Projected Supply	**29,533**	**29,935**	**30,318**
Total Projected Demand	**29,533**	**29,935**	**30,318**
Difference	**0**	**0**	**0**

Appendix J-17
Yuima Municipal Water District

The following water supply and demand tables are an excerpt from:

2005 Urban Water Management Plan Update
Prepared by Yuima Municipal Water District
January 2005
Exhibit D- Demand Sources

Exhibit D

Yuima Municipal Water District
POTENTIAL SOURCES OF INCREASED DEMAND

WITHIN EXISTING DISTRICT BOUNDARIES:

Source of Demand	Current Peak Local Production (cfs)	Current Peak Demand (cfs)	Potential Peak Demand (cfs)	Potential Increase in Demand (cfs)
Lazy H Mutual Water Company	0.25	0.30	0.55	0.25
Rancho Estates Mutual Water Company	0.75	1.00	1.75	0.75
Rancho Pauma Mutual Water Co.	5.30	0.00	5.30	5.30
Pauma Ridge Mutual Water Co.	0.40	1.70	2.10	0.40
Private Wells in Yuima	3.00	0.00	3.00	3.00
Private Wells in IDA	2.00	0.00	2.00	2.00
YMWD Standby Meters - 15 total	0.00	0.00	4.00	4.00
Shuttleworth/Liszt Property (700 acres)	0.00	0.00	2.00	2.00
Developed Agricultural Lands	0.00	10.00	12.00	2.00
Totals (cfs):	**11.70**	**13.00**	**32.70**	**19.70**

OUTSIDE EXISTING DISTRICT BOUNDARIES:

Agua Tibia Ranch	0.00	0.00	0.00	3.00
Schoepe Enterprises (292 acres)	0.00	0.00	0.00	1.50
Pauma Municipal Water District	0.00	0.00	0.00	0.00
Pauma Valley Water Company	0.00	0.00	0.00	4.50
Mootamai Municipal Water District	0.00	0.00	0.00	2.00
Totals (cfs):	**0.00**	**0.00**	**0.00**	**11.00**

Total Potential Additional Demand (cfs): 30.70