

Appendix I

IEUA Water Supply Data Detail

IEUA 2005 UWMP

Section 2

Step Four: Supply Reliability (Page 15 of UWMP Guidelines)

	cells are for input
	cells are calculated
	cells to be hidden

Supply Reliability - Percentage of Normal Water Year Basis (modified Table 8)

	Normal Water Year	Single Dry Water Year	Multiple Dry Water Years ⁽²⁾			
			Year 1	Year 2	Year 3	Year 4 ⁽³⁾
Groundwater	100%	116%	117%	116%	116%	
Recycled Water	100%	100%	100%	105%	110%	
Surface Water ⁽¹⁾	100%	31%	49%	84%	77%	
Imported Water	100%	64%	63%	63%	63%	

Notes:

(1) Estimated decrease in surface water availability per Prado region 1970-2003 rainfall data. Surface water does not constitute a significant portion of the water supply.

(2) Chino Basin Dry-Year Yield (DYY) Program facilities provide for 100,000 AF of storage and 33,000 AFY of additional groundwater production for use in-lieu of Imported Water during dry years. The DYY Program is in effect during dry years between 2008 and 2025. Percentages reflect decrease in imported water and associated increase in groundwater production. From *Report on Metropolitan's Water Supplies, A Blueprint for Water Reliability*, March 25, 2003, Metropolitan has documented the capability to reliably meet 100 percent of projected supplemental water demands through 2030. Per the Fiscal Year 2004/2005 Chino Basin Watermaster Assessment Package, agencies have approximately 150,000 AF in storage.

(3) Metropolitan's *Report on Metropolitan's Water Supplies, A Blueprint for Water Reliability*, March 25, 2003, provides information for three consecutive dry years.

Basis of Water Year Data (Table 9)

Water Year Type	Base Year(s)	Hist. Sequence
Normal Water Year	FY 2004	1922 - 2004 ⁽²⁾
Single-Dry Water Year ⁽¹⁾	1977 ⁽²⁾	
Multiple Dry-Water Years ⁽¹⁾	1990-1992 ⁽²⁾	

Notes:

(1) Rainfall data from Prado region (1970-2003) used as basis for surface water reliability.

(2) From *Report on Metropolitan's Water Supplies, A Blueprint for Water Reliability*, March 25, 2003, page 10.

Describe the Factors Resulting in Inconsistency of Supply (Table 10)

Name of Supply	Legal	Environmental	Water Quality	Climatic
Imported Water	Table A Entitlement	Total Interruption Due to Natural Disaster	Bromate, TOCs, DBP Formation	El Nino, Droughts
Groundwater	Adjudicated Basin	Subsidence	Nitrate, Perchlorate, DBCP, Arsenic	
Recycled Water	Compliance with Santa Ana River Judgment		DHS and Regional Board Permit	
Surface Water	Downstream Water Rights	Fires, Floods, Droughts	Turbidity spikes	Droughts

DYY Program Shift Obligations by Agency

Agency	Shift Obligation
City of Chino	1,159
City of Chino Hills	1,448
CVWD	11,353
Fontana Water Company ⁽¹⁾	0
JCSD ⁽²⁾	2,000
MVWD	3,963
City of Ontario	8,076
City of Pomona ⁽²⁾	2,000
City of Upland	3,001
Total	33,000

Notes:

(1) Fontana Water Company is no longer a participant in the DYY Program. CVWD has picked up Fontana's share of the DYY Shift Obligation.

(2) Not within IEUA's service area. San Antonio Water Company is not a participant of the DYY Program.

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 Step One: Projected Normal Water Year Supply and Demand (Page 71 of UWMP Guidelines)

Projected Normal Water Year Supply - AFY (Table 40)

	'03/'04	2005	2006	2007	2008	2009	2010	2015	2020	2025
Supply										
Groundwater⁽¹⁾	149,919	133,332	140,474	147,616	154,759	161,901	169,043	179,543	191,268	204,549
City of Chino	9,083	12,808	13,166	13,524	13,883	14,241	14,599	15,874	16,959	18,200
City of Chino Hills	15,475	6,110	6,450	6,790	7,130	7,470	7,810	7,810	7,810	7,810
Cucamonga Valley Water District	16,673	18,670	22,102	25,534	28,966	32,398	35,830	41,830	44,830	49,330
Fontana Water Company	44,322	42,400	42,500	42,600	42,700	42,800	42,900	42,900	42,900	42,900
Monte Vista Water District	13,048	13,048	13,648	14,249	14,849	15,450	16,050	17,290	17,745	18,200
City of Ontario	29,214	27,600	29,460	31,320	33,180	35,040	36,900	38,800	40,700	42,600
San Antonio Water Company	8,524	7,725	7,742	7,759	7,776	7,793	7,810	7,895	7,980	8,065
City of Upland	13,580	4,971	5,406	5,840	6,275	6,709	7,144	7,144	7,144	7,144
Recycled Water	1,058	7,400	13,720	20,040	26,360	32,680	39,000	49,000	58,000	69,000
City of Chino	0	0	0	0	0	0	0	0	0	0
City of Chino Hills	1,058	0	0	0	0	0	0	0	0	0
Cucamonga Valley Water District	0	0	0	0	0	0	0	0	0	0
Fontana Water Company	0	0	0	0	0	0	0	0	0	0
Monte Vista Water District	0	0	0	0	0	0	0	0	0	0
City of Ontario	0	0	0	0	0	0	0	0	0	0
San Antonio Water Company	0	0	0	0	0	0	0	0	0	0
City of Upland	0	0	0	0	0	0	0	0	0	0
Surface Water	10,745	13,470								
City of Chino	0	0	0	0	0	0	0	0	0	0
City of Chino Hills	0	0	0	0	0	0	0	0	0	0
Cucamonga Valley Water District	7,785	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Fontana Water Company	0	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Monte Vista Water District	0	0	0	0	0	0	0	0	0	0
City of Ontario	0	0	0	0	0	0	0	0	0	0
San Antonio Water Company	2,960	3,470	3,470	3,470	3,470	3,470	3,470	3,470	3,470	3,470
City of Upland	0	0	0	0	0	0	0	0	0	0
Imported Water	78,959	60,000	67,159	67,744	69,328	71,913	70,000	84,208	83,985	84,118
City of Chino	6,866	5,435	5,260	5,085	4,911	4,736	4,561	5,332	5,375	5,375
City of Chino Hills	1,869	1,992	2,069	2,156	2,243	2,330	2,417	1,786	1,520	1,653
Cucamonga Valley Water District	36,457	27,426	32,000	30,000	29,000	29,000	24,502	29,000	29,000	29,000
Fontana Water Company	0	0	3,042	6,083	9,125	12,167	15,208	18,000	18,000	18,000
Monte Vista Water District	9,515	7,456	6,810	6,163	5,517	4,871	4,225	5,000	5,000	5,000
City of Ontario	15,938	11,754	11,938	12,122	12,306	12,490	12,674	17,500	17,500	17,500
San Antonio Water Company	0	0	0	0	0	0	0	0	0	0
City of Upland	8,314	5,947	6,041	6,134	6,227	6,320	6,413	7,590	7,590	7,590
% of Normal Year⁽²⁾										
Groundwater		89%					113%	120%	128%	136%
Recycled Water		699%					3686%	4631%	5482%	6522%
Surface Water		125%					125%	125%	125%	125%
Imported Water		76%					89%	107%	106%	107%
Total	03/'04	2005	2006	2007	2008	2009	2010	2015	2020	2025
City of Chino	15,949	18,243	18,426	18,610	18,793	18,976	19,160	21,206	22,334	23,575
City of Chino Hills	18,402	8,092	8,519	8,946	9,373	9,800	10,227	9,596	9,330	9,463
Cucamonga Valley Water District	60,915	49,096	57,102	58,534	60,966	64,398	63,332	73,830	76,830	81,330
Fontana Water Company	44,322	49,400	52,542	55,683	58,825	61,967	65,108	67,900	67,900	67,900
Monte Vista Water District	22,563	20,504	20,458	20,412	20,366	20,320	20,275	22,745	22,745	23,200
City of Ontario	45,152	39,354	41,398	43,442	45,486	47,530	49,574	56,300	63,400	70,400
San Antonio Water Company	11,484	11,195	11,212	11,229	11,246	11,263	11,280	11,365	11,450	11,535

City of Upland	21,894	10,918	11,446	11,974	12,502	13,029	13,557	14,734	14,734	14,734
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Notes:

- (1) Includes groundwater from Chino Basin (inc. CDA supply) and other basins.
- (2) From Table 9. Base year for Normal Water Year.
- (3) Assumes zero conservation.

Projected Normal Water Year Demand - AFY (Table 41)

	03/04	2005	2006	2007	2008	2009	2010	2015	2020	2025
Demand	240,681	214,200	228,066	241,933	255,799	269,666	283,532	302,461	322,433	343,537
City of Chino	15,949	18,230	19,503	20,777	22,050	23,324	24,597	27,506	29,834	31,875
City of Chino Hills	18,402	16,901	15,859	14,817	13,775	12,733	11,691	11,411	11,940	12,463
Cucamonga Valley Water District	60,915	50,113	54,657	59,200	63,743	68,287	72,830	81,330	87,330	95,130
Fontana Water Company	44,322	43,416	48,833	54,250	59,667	65,083	70,500	71,300	71,900	72,200
Monte Vista Water District	22,563	19,830	20,184	20,538	20,892	21,246	21,600	23,115	23,845	24,600
City of Ontario	45,152	38,758	42,267	45,775	49,283	52,792	56,300	61,700	71,400	81,000
San Antonio Water Company	11,484	9,839	10,127	10,415	10,704	10,992	11,280	11,365	11,450	11,535
City of Upland	21,894	17,113	16,637	16,161	15,685	15,210	14,734	14,734	14,734	14,734
% of Year 2005							132%	141%	151%	160%
Supply/Demand Balance Check										
City of Chino	0	13	(1,077)	(2,167)	(3,257)	(4,347)	(5,437)	(6,300)	(7,500)	(8,300)
City of Chino Hills	0	(8,809)	(7,340)	(5,871)	(4,402)	(2,933)	(1,464)	(1,815)	(2,610)	(3,000)
Cucamonga Valley Water District	0	(1,017)	2,445	(666)	(2,777)	(3,889)	(9,498)	(7,500)	(10,500)	(13,800)
Fontana Water Company	0	5,984	3,709	1,434	(842)	(3,117)	(5,392)	(3,400)	(4,000)	(4,300)
Monte Vista Water District	0	674	274	(126)	(526)	(926)	(1,325)	(825)	(1,100)	(1,400)
City of Ontario	0	598	(869)	(2,333)	(3,798)	(5,262)	(6,726)	(5,400)	(8,000)	(10,600)
San Antonio Water Company	0	1,356	1,085	814	542	271	0	0	0	0
City of Upland	0	(6,194)	(5,191)	(4,187)	(3,184)	(2,181)	(1,177)	0	0	0

Projected Normal Water Year Supply and Demand Comparison - AFY (Table 42)

	2005	2006	2007	2008	2009	2010	2015	2020	2025
Supply Totals						291,513	326,221	346,723	371,137
Demand Totals						283,532	302,461	322,433	343,537
Difference (supply minus demand)						7,981	23,760	24,290	27,600
Difference as % of Supply						3%	7%	7%	7%
Difference as % of Demand						3%	8%	8%	8%

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Step Two: Projected Single-Dry-Year Supply and Demand Comparison (Page 73 of UWMP Guidelines)

Projected Single Dry Year Water Supply - AF/Y (Table 43)

Supply	2010	2015	2020	2025
Groundwater	199,306	209,797	221,514	234,786
City of Chino	15,758	17,033	18,118	19,359
City of Chino Hills	9,258	9,258	9,258	9,258
Cucamonga Valley Water District	47,183	53,183	56,183	60,683
Fontana Water Company	42,900	42,900	42,900	42,900
Monte Vista Water District	20,013	21,253	21,708	22,163
City of Ontario	44,976	46,876	53,976	60,976
San Antonio Water Company	9,073	9,149	9,226	9,302
City of Upland	10,145	10,145	10,145	10,145
Recycled Water	39,000	49,000	58,000	69,000
City of Chino	0	0	0	0
City of Chino Hills	0	0	0	0
Cucamonga Valley Water District	0	0	0	0
Fontana Water Company	0	0	0	0
Monte Vista Water District	0	0	0	0
City of Ontario	0	0	0	0
San Antonio Water Company	0	0	0	0
City of Upland	0	0	0	0
Surface Water	4,190	4,190	4,190	4,190
City of Chino	0	0	0	0
City of Chino Hills	0	0	0	0
Cucamonga Valley Water District	933	933	933	933
Fontana Water Company	2,178	2,178	2,178	2,178
Monte Vista Water District	0	0	0	0
City of Ontario	0	0	0	0
San Antonio Water Company	1,079	1,079	1,079	1,079
City of Upland	0	0	0	0
Imported Water	41,000	55,208	54,985	55,118
City of Chino	3,402	4,173	4,216	4,216
City of Chino Hills	969	338	72	205
Cucamonga Valley Water District	13,149	17,647	17,647	17,647
Fontana Water Company	15,208	18,000	18,000	18,000
Monte Vista Water District	262	1,037	1,037	1,037
City of Ontario	4,598	9,424	9,424	9,424
San Antonio Water Company	0	0	0	0
City of Upland	3,412	4,589	4,589	4,589
% of Projected Normal⁽¹⁾				
Groundwater	118%	117%	116%	115%
Recycled Water	100%	100%	100%	100%
Surface Water	31%	31%	31%	31%
Imported Water	59%	66%	65%	66%
Total				
City of Chino	19,160	21,206	22,334	23,575
City of Chino Hills	10,227	9,596	9,330	9,463
Cucamonga Valley Water District	61,266	71,763	74,763	79,263
Fontana Water Company	60,286	63,078	63,078	63,078
Monte Vista Water District	20,275	22,290	22,745	23,200
City of Ontario	49,574	56,300	63,400	70,400
San Antonio Water Company	10,152	10,228	10,305	10,381
City of Upland	13,557	14,734	14,734	14,734

Notes:

(1) Projected normal use from Table 40.

Projected Single Dry Year Water Demand - AF/Y (Table 44)

	2010	2015	2020	2025
Demand	283,532	302,461	322,433	343,537
City of Chino	24,597	27,506	29,834	31,875
City of Chino Hills	11,691	11,411	11,940	12,463
Cucamonga Valley Water District	72,830	81,330	87,330	95,130
Fontana Water Company	70,500	71,300	71,900	72,200
Monte Vista Water District	21,600	23,115	23,845	24,600
City of Ontario	56,300	61,700	71,400	81,000
San Antonio Water Company	11,280	11,365	11,450	11,535
City of Upland	14,734	14,734	14,734	14,734
Conservation⁽¹⁾	(28,353)	(30,246)	(32,243)	(34,354)
Adjusted Demand	255,179	272,215	290,190	309,183
% of Projected Normal⁽²⁾	90%	90%	90%	90%
Supply/Demand Balance Check				
City of Chino	(2,977)	(3,549)	(4,517)	(5,113)
City of Chino Hills	(295)	(674)	(1,416)	(1,754)
Cucamonga Valley Water District	(4,281)	(1,434)	(3,834)	(6,354)
Fontana Water Company	(3,164)	(1,092)	(1,632)	(1,902)
Monte Vista Water District	835	1,487	1,285	1,060
City of Ontario	(1,096)	770	(860)	(2,500)
San Antonio Water Company	0	0	0	0
City of Upland	296	1,473	1,473	1,473

Notes:

(1) Assumed 10% conservation of demand for single dry year. Refer to Chapter 4, Water Conservation Program.

(2) Projected normal use from Table 41.

Projected Single Dry Year Water Year Supply and Demand Comparison - AF/Y (Table 45)

	2010	2015	2020	2025
Supply Totals	283,496	318,195	338,689	363,094
Demand Totals	255,179	272,215	290,190	309,183
Difference (supply minus demand)	28,317	45,980	48,500	53,911
Difference as % of Supply	10%	14%	14%	15%
Difference as % of Demand	11%	17%	17%	17%

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Section 7 - Water Service Reliability 2006-2010
Step Three: Projected Multiple-Dry-Year Supply and Demand Comparison (Page 75 of UWMP Guidelines)

Projected Supply During Multiple Dry Year Period Ending in 2010 - AF/Y (Table 46)

	(normal)	(normal)	(dry)	(dry)	(dry)
Supply ⁽¹⁾	2006	2007	2008 ⁽²⁾	2009 ⁽²⁾	2010 ⁽²⁾
Groundwater	140,474	147,616	184,387	190,901	198,043
City of Chino	13,166	13,524	15,042	15,400	15,758
City of Chino Hills	6,450	6,790	8,578	8,918	9,258
Cucamonga Valley Water District	22,102	25,534	40,319	43,751	47,183
Fontana Water Company	42,500	42,600	42,700	42,800	42,900
Monte Vista Water District	13,648	14,249	18,812	19,413	20,013
City of Ontario	29,460	31,320	41,256	43,116	44,976
San Antonio Water Company	7,742	7,759	8,404	7,793	7,810
City of Upland	5,406	5,840	9,276	9,710	10,145
Recycled Water	13,720	20,040	26,360	34,314	42,900
City of Chino	0	0	0	0	0
City of Chino Hills	0	0	0	0	0
Cucamonga Valley Water District	0	0	0	0	0
Fontana Water Company	0	0	0	0	0
Monte Vista Water District	0	0	0	0	0
City of Ontario	0	0	0	0	0
San Antonio Water Company	0	0	0	0	0
City of Upland	0	0	0	0	0
Surface Water	13,470	13,470	6,665	11,366	10,426
City of Chino	0	0	0	0	0
City of Chino Hills	0	0	0	0	0
Cucamonga Valley Water District	3,000	3,000	1,484	2,531	2,322
Fontana Water Company	7,000	7,000	3,463	5,907	5,418
Monte Vista Water District	0	0	0	0	0
City of Ontario	0	0	0	0	0
San Antonio Water Company	3,470	3,470	1,717	2,928	2,686
City of Upland	0	0	0	0	0
Imported Water	67,159	67,744	40,328	42,913	41,000
City of Chino	5,260	5,085	3,752	3,577	3,402
City of Chino Hills	2,069	2,156	795	882	969
Cucamonga Valley Water District	32,000	30,000	17,647	17,647	13,149
Fontana Water Company	3,042	6,083	9,125	12,167	15,208
Monte Vista Water District	6,810	6,163	1,554	908	262
City of Ontario	11,938	12,122	4,230	4,414	4,598
San Antonio Water Company	0	0	0	0	0
City of Upland	6,041	6,134	3,226	3,319	3,412
% of Projected Normal⁽³⁾					
Groundwater	100%	100%	119%	118%	117%
Recycled Water	100%	100%	100%	105%	110%
Surface Water	100%	100%	49%	84%	77%
Imported Water	100%	100%	58%	60%	59%
Total					
City of Chino	18,426	18,610	18,793	18,976	19,160
City of Chino Hills	8,519	8,946	9,373	9,800	10,227
Cucamonga Valley Water District	57,102	58,534	59,450	63,929	62,654
Fontana Water Company	52,542	55,683	55,289	60,874	63,527
Monte Vista Water District	20,458	20,412	20,366	20,320	20,275
City of Ontario	41,398	43,442	45,486	47,530	49,574
San Antonio Water Company	11,212	11,229	10,121	10,721	10,496
City of Upland	11,446	11,974	12,502	13,029	13,557

Notes:

(1) Supply values extrapolated from 2005 and 2010 data.

(2) DYY Program assumed to begin in year 2008 according to the Master Agreement. DYY Program in effect during multiple dry years.

(3) Projected normal use from Table 40.

Projected Demand Multiple Dry-Year Period ending in 2010 - AF/Y (Table 47)

	(normal) 2006	(normal) 2007	(dry) 2008	(dry) 2009	(dry) 2010
Demand	228,066	241,933	255,799	269,666	283,532
City of Chino	19,503	20,777	22,050	23,324	24,597
City of Chino Hills	15,859	14,817	13,775	12,733	11,691
Cucamonga Valley Water District	54,657	59,200	63,743	68,287	72,830
Fontana Water Company	48,833	54,250	59,667	65,083	70,500
Monte Vista Water District	20,184	20,538	20,892	21,246	21,600
City of Ontario	42,267	45,775	49,283	52,792	56,300
San Antonio Water Company	10,127	10,415	10,704	10,992	11,280
City of Upland	16,637	16,161	15,685	15,210	14,734
Conservation⁽¹⁾	0	0	(25,580)	(26,967)	(28,353)
Adjusted Demand	228,066	241,933	230,219	242,699	255,179
% of Projected Normal	100%	100%	90%	90%	90%
Supply/Demand Balance Check					
City of Chino	(1,077)	(2,167)	(1,052)	(2,015)	(2,977)
City of Chino Hills	(7,340)	(5,871)	(3,024)	(1,659)	(295)
Cucamonga Valley Water District	2,445	(666)	2,081	2,471	(2,893)
Fontana Water Company	3,709	1,434	1,589	2,299	77
Monte Vista Water District	274	(126)	1,563	1,199	835
City of Ontario	(869)	(2,333)	1,131	17	(1,096)
San Antonio Water Company	1,085	814	488	828	344
City of Upland	(5,191)	(4,187)	(1,615)	(660)	296

(1) Assumed 10% conservation of demand for each of three consecutive dry years. Refer to Chapter 4, Water Conservation Program.

Projected Supply & Demand Comparison During Multiple Dry-Year Period Ending in 2010 - AF/Y (Table 48)

	2006	2007	2008	2009	2010
Supply Totals	234,823	248,870	257,740	279,494	292,369
Demand Totals	228,066	241,933	230,219	242,699	255,179
Difference (supply minus demand)	6,757	6,937	27,520	36,795	37,190
Difference as % of Supply	3%	3%	11%	13%	13%
Difference as % of Demand	3%	3%	12%	15%	15%

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Section 7 - Water Service Reliability 2011-2015

Step Three: Projected Multiple-Dry-Year Supply and Demand Comparison (Page 75 of UWMP Guidelines)

Projected Supply During Multiple Dry Year Period Ending in 2015 - AF/Y (Table 49)

	(normal)	(dry)	(dry)	(dry)	(normal)
Supply ⁽¹⁾	2011	2012	2013	2014	2015
Groundwater	171,143	202,865	204,343	206,443	179,543
City of Chino	14,854	16,268	16,523	16,778	15,874
City of Chino Hills	7,810	9,258	9,258	9,258	7,810
Cucamonga Valley Water District	37,030	49,583	50,783	51,983	41,830
Fontana Water Company	42,900	42,900	42,900	42,900	42,900
Monte Vista Water District	16,298	20,509	20,757	21,005	17,290
City of Ontario	37,280	45,736	46,116	46,496	38,800
San Antonio Water Company	7,827	8,466	7,861	7,878	7,895
City of Upland	7,144	10,145	10,145	10,145	7,144
Recycled Water	41,000	43,000	47,250	51,700	49,000
City of Chino	0	0	0	0	0
City of Chino Hills	0	0	0	0	0
Cucamonga Valley Water District	0	0	0	0	0
Fontana Water Company	0	0	0	0	0
Monte Vista Water District	0	0	0	0	0
City of Ontario	0	0	0	0	0
San Antonio Water Company	0	0	0	0	0
City of Upland	0	0	0	0	0
Surface Water	13,470	6,665	11,366	10,426	13,470
City of Chino	0	0	0	0	0
City of Chino Hills	0	0	0	0	0
Cucamonga Valley Water District	3,000	1,484	2,531	2,322	3,000
Fontana Water Company	7,000	3,463	5,907	5,418	7,000
Monte Vista Water District	0	0	0	0	0
City of Ontario	0	0	0	0	0
San Antonio Water Company	3,470	1,717	2,928	2,686	3,470
City of Upland	0	0	0	0	0
Imported Water	72,842	46,683	49,525	52,366	84,208
City of Chino	4,715	3,710	3,865	4,019	5,332
City of Chino Hills	2,291	717	591	464	1,786
Cucamonga Valley Water District	25,402	14,948	15,848	16,747	29,000
Fontana Water Company	15,767	16,325	16,883	17,442	18,000
Monte Vista Water District	4,380	572	727	882	5,000
City of Ontario	13,639	6,528	7,493	8,459	17,500
San Antonio Water Company	0	0	0	0	0
City of Upland	6,648	3,883	4,118	4,354	7,590
% of Projected Normal⁽³⁾					
Groundwater	100%	117%	117%	116%	100%
Recycled Water	100%	100%	105%	110%	100%
Surface Water	100%	49%	84%	77%	100%
Imported Water	100%	62%	63%	64%	100%
Total					
City of Chino	19,569	19,978	20,388	20,797	21,206
City of Chino Hills	10,101	9,975	9,849	9,722	9,596
Cucamonga Valley Water District	65,432	66,016	69,162	71,053	73,830
Fontana Water Company	65,667	62,689	65,690	65,760	67,900
Monte Vista Water District	20,678	21,081	21,484	21,887	22,290
City of Ontario	50,919	52,264	53,609	54,955	56,300
San Antonio Water Company	11,297	10,183	10,789	10,564	11,365
City of Upland	13,792	14,028	14,263	14,499	14,734

Notes:

(1) Supply values extrapolated from 2005 and 2010 data.

(2) Projected normal use from Table 40.

Projected Demand Multiple Dry-Year Period ending in 2015 - AF/Y (Table 50)

	(normal)	(dry)	(dry)	(dry)	(normal)
	2011	2012	2013	2014	2015
Demand	287,318	291,104	294,889	298,675	302,461
City of Chino	25,179	25,761	26,342	26,924	27,506
City of Chino Hills	11,635	11,579	11,523	11,467	11,411
Cucamonga Valley Water District	74,530	76,230	77,930	79,630	81,330
Fontana Water Company	70,660	70,820	70,980	71,140	71,300
Monte Vista Water District	21,903	22,206	22,509	22,812	23,115
City of Ontario	57,380	58,460	59,540	60,620	61,700
San Antonio Water Company	11,297	11,314	11,331	11,348	11,365
City of Upland	14,734	14,734	14,734	14,734	14,734
Conservation⁽¹⁾	0	(29,110)	(29,489)	(29,868)	0
Adjusted Demand	287,318	261,993	265,400	268,808	302,461
% of Projected Normal	100%	90%	90%	90%	100%
Supply/Demand Balance Check					
City of Chino	(5,610)	(3,206)	(3,321)	(3,435)	(6,300)
City of Chino Hills	(1,534)	(446)	(522)	(598)	(1,815)
Cucamonga Valley Water District	(9,098)	(2,591)	(975)	(614)	(7,500)
Fontana Water Company	(4,993)	(1,049)	1,808	1,734	(3,400)
Monte Vista Water District	(1,225)	1,095	1,226	1,356	(825)
City of Ontario	(6,461)	(350)	23	397	(5,400)
San Antonio Water Company	0	0	591	351	0
City of Upland	(942)	767	1,003	1,238	0

(1) Assumed 10% conservation of demand for each of three consecutive dry years. Refer to Chapter 4, Water Conservation Program.

Projected Supply & Demand Comparison During Multiple Dry-Year Period Ending in 2015 - AF/Y (Table 51)

	2011	2012	2013	2014	2015
Supply Totals	298,455	299,213	312,484	320,935	326,221
Demand Totals	287,318	261,993	265,400	268,808	302,461
Difference (supply minus demand)	11,137	37,220	47,084	52,128	23,760
Difference as % of Supply	4%	12%	15%	16%	7%
Difference as % of Demand	4%	14%	18%	19%	8%

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Projected Supply During Multiple Dry Year Period Ending in 2020 - AF/Y (Table 52)

	(normal)	(dry)	(dry)	(dry)	(normal)
Supply ⁽¹⁾	2016	2017	2018	2019	2020
Groundwater	181,888	213,846	215,578	217,923	191,268
City of Chino	16,091	17,467	17,684	17,901	16,959
City of Chino Hills	7,810	9,258	9,258	9,258	7,810
Cucamonga Valley Water District	42,430	54,383	54,983	55,583	44,830
Fontana Water Company	42,900	42,900	42,900	42,900	42,900
Monte Vista Water District	17,381	21,435	21,526	21,617	17,745
City of Ontario	40,220	49,716	51,136	52,556	45,900
San Antonio Water Company	7,912	8,542	7,946	7,963	7,980
City of Upland	7,144	10,145	10,145	10,145	7,144
Recycled Water	50,800	52,600	57,120	61,820	58,000
City of Chino	0	0	0	0	0
City of Chino Hills	0	0	0	0	0
Cucamonga Valley Water District	0	0	0	0	0
Fontana Water Company	0	0	0	0	0
Monte Vista Water District	0	0	0	0	0
City of Ontario	0	0	0	0	0
San Antonio Water Company	0	0	0	0	0
City of Upland	0	0	0	0	0
Surface Water	13,470	6,665	11,366	10,426	13,470
City of Chino	0	0	0	0	0
City of Chino Hills	0	0	0	0	0
Cucamonga Valley Water District	3,000	1,484	2,531	2,322	3,000
Fontana Water Company	7,000	3,463	5,907	5,418	7,000
Monte Vista Water District	0	0	0	0	0
City of Ontario	0	0	0	0	0
San Antonio Water Company	3,470	1,717	2,928	2,686	3,470
City of Upland	0	0	0	0	0
Imported Water	84,163	55,119	55,074	55,030	83,985
City of Chino	5,341	4,190	4,199	4,207	5,375
City of Chino Hills	1,733	232	178	125	1,520
Cucamonga Valley Water District	29,000	17,647	17,647	17,647	29,000
Fontana Water Company	18,000	18,000	18,000	18,000	18,000
Monte Vista Water District	5,000	1,037	1,037	1,037	5,000
City of Ontario	17,500	9,424	9,424	9,424	17,500
San Antonio Water Company	0	0	0	0	0
City of Upland	7,590	4,589	4,589	4,589	7,590
% of Projected Normal⁽³⁾					
Groundwater	100%	116%	116%	115%	100%
Recycled Water	100%	100%	105%	110%	100%
Surface Water	100%	49%	84%	77%	100%
Imported Water	100%	66%	66%	65%	100%
Total					
City of Chino	21,432	21,657	21,883	22,108	22,334
City of Chino Hills	9,543	9,490	9,436	9,383	9,330
Cucamonga Valley Water District	74,430	73,514	75,161	75,552	76,830
Fontana Water Company	67,900	64,363	66,807	66,318	67,900
Monte Vista Water District	22,381	22,472	22,563	22,654	22,745
City of Ontario	57,720	59,140	60,560	61,980	63,400
San Antonio Water Company	11,382	10,259	10,874	10,649	11,450
City of Upland	14,734	14,734	14,734	14,734	14,734

Notes:

- (1) Supply values extrapolated from 2015 and 2020 data.
- (2) Projected normal use from Table 40.

Projected Demand Multiple Dry-Year Period ending in 2020 - AF/Y (Table 53)

	(normal)	(dry)	(dry)	(dry)	(normal)
Demand	2016	2017	2018	2019	2020
Imported Water	306,455	310,450	314,444	318,439	322,433
City of Chino	27,972	28,437	28,903	29,368	29,834
City of Chino Hills	11,517	11,623	11,728	11,834	11,940
Cucamonga Valley Water District	82,530	83,730	84,930	86,130	87,330
Fontana Water Company	71,420	71,540	71,660	71,780	71,900
Monte Vista Water District	23,261	23,407	23,553	23,699	23,845
City of Ontario	63,640	65,580	67,520	69,460	71,400
San Antonio Water Company	11,382	11,399	11,416	11,433	11,450
City of Upland	14,734	14,734	14,734	14,734	14,734
Conservation⁽¹⁾	0	(31,045)	(31,444)	(31,844)	0
Adjusted Demand	306,455	279,405	283,000	286,595	322,433
% of Projected Normal	100%	90%	90%	90%	100%
Supply/Demand Balance Check					
City of Chino	(6,540)	(3,936)	(4,130)	(4,323)	(7,500)
City of Chino Hills	(1,974)	(971)	(1,119)	(1,268)	(2,610)
Cucamonga Valley Water District	(8,100)	(1,843)	(1,276)	(1,965)	(10,500)
Fontana Water Company	(3,520)	(23)	2,313	1,716	(4,000)
Monte Vista Water District	(880)	1,406	1,365	1,325	(1,100)
City of Ontario	(5,920)	118	(208)	(534)	(8,000)
San Antonio Water Company	0	0	600	359	0
City of Upland	0	1,473	1,473	1,473	0

(1) Assumed 10% conservation of demand for each of three consecutive dry years. Refer to Chapter 4, Water Conservation Program.

Projected Supply & Demand Comparison During Multiple Dry-Year Period Ending in 2020 - AF/Y (Table 54)

	2016	2017	2018	2019	2020
Supply Totals	330,321	328,230	339,139	345,199	346,723
Demand Totals	306,455	279,405	283,000	286,595	322,433
Difference (supply minus demand)	23,866	48,825	56,139	58,604	24,290
Difference as % of Supply	7%	15%	17%	17%	7%
Difference as % of Demand	8%	17%	20%	20%	8%

IEUA 2005 UWMP
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Projected Supply During Multiple Dry Year Period Ending in 2025 - AF/Y (Table 55)

	(normal)	(dry)	(dry)	(dry)	(normal)
Supply ⁽¹⁾	2021	2022	2023	2024	2025
Groundwater	193,924	226,185	228,237	230,893	204,549
City of Chino	17,207	18,614	18,863	19,111	18,200
City of Chino Hills	7,810	9,258	9,258	9,258	7,810
Cucamonga Valley Water District	45,730	57,983	58,883	59,783	49,330
Fontana Water Company	42,900	42,900	42,900	42,900	42,900
Monte Vista Water District	17,836	21,890	21,981	22,072	18,200
City of Ontario	47,300	56,776	58,176	59,576	52,900
San Antonio Water Company	7,997	8,619	8,031	8,048	8,065
City of Upland	7,144	10,145	10,145	10,145	7,144
Recycled Water	60,200	62,400	67,830	73,480	69,000
City of Chino	0	0	0	0	0
City of Chino Hills	0	0	0	0	0
Cucamonga Valley Water District	0	0	0	0	0
Fontana Water Company	0	0	0	0	0
Monte Vista Water District	0	0	0	0	0
City of Ontario	0	0	0	0	0
San Antonio Water Company	0	0	0	0	0
City of Upland	0	0	0	0	0
Surface Water	13,470	6,665	11,366	10,426	13,470
City of Chino	0	0	0	0	0
City of Chino Hills	0	0	0	0	0
Cucamonga Valley Water District	3,000	1,484	2,531	2,322	3,000
Fontana Water Company	7,000	3,463	5,907	5,418	7,000
Monte Vista Water District	0	0	0	0	0
City of Ontario	0	0	0	0	0
San Antonio Water Company	3,470	1,717	2,928	2,686	3,470
City of Upland	0	0	0	0	0
Imported Water	84,012	55,038	55,065	55,091	84,118
City of Chino	5,375	4,216	4,216	4,216	5,375
City of Chino Hills	1,547	125	152	178	1,653
Cucamonga Valley Water District	29,000	17,647	17,647	17,647	29,000
Fontana Water Company	18,000	18,000	18,000	18,000	18,000
Monte Vista Water District	5,000	1,037	1,037	1,037	5,000
City of Ontario	17,500	9,424	9,424	9,424	17,500
San Antonio Water Company	0	0	0	0	0
City of Upland	7,590	4,589	4,589	4,589	7,590
% of Projected Normal⁽³⁾					
Groundwater	100%	115%	115%	114%	100%
Recycled Water	100%	100%	105%	110%	100%
Surface Water	100%	49%	84%	77%	100%
Imported Water	100%	65%	66%	66%	100%
Total					
City of Chino	22,582	22,830	23,079	23,327	23,575
City of Chino Hills	9,357	9,383	9,410	9,436	9,463
Cucamonga Valley Water District	77,730	77,114	79,061	79,752	81,330
Fontana Water Company	67,900	64,363	66,807	66,318	67,900
Monte Vista Water District	22,836	22,927	23,018	23,109	23,200
City of Ontario	64,800	66,200	67,600	69,000	70,400
San Antonio Water Company	11,467	10,336	10,959	10,734	11,535
City of Upland	14,734	14,734	14,734	14,734	14,734

Notes:

(1) Supply values extrapolated from 2020 and 2025 data.

(2) Projected normal use from Table 40.

Projected Demand Multiple Dry-Year Period ending in 2025 - AF/Y (Table 56)

	(normal)	(dry)	(dry)	(dry)	(normal)
Demand	2021	2022	2023	2024	2025
Imported Water	326,654	330,875	335,095	339,316	343,537
City of Chino	30,242	30,650	31,059	31,467	31,875
City of Chino Hills	12,045	12,149	12,254	12,358	12,463
Cucamonga Valley Water District	88,890	90,450	92,010	93,570	95,130
Fontana Water Company	71,960	72,020	72,080	72,140	72,200
Monte Vista Water District	23,996	24,147	24,298	24,449	24,600
City of Ontario	73,320	75,240	77,160	79,080	81,000
San Antonio Water Company	11,467	11,484	11,501	11,518	11,535
City of Upland	14,734	14,734	14,734	14,734	14,734
Conservation⁽¹⁾	0	(33,087)	(33,510)	(33,932)	0
Adjusted Demand	326,654	297,787	301,586	305,385	343,537
% of Projected Normal	100%	90%	90%	90%	100%
Supply/Demand Balance Check					
City of Chino	(7,660)	(4,755)	(4,874)	(4,993)	(8,300)
City of Chino Hills	(2,688)	(1,551)	(1,619)	(1,686)	(3,000)
Cucamonga Valley Water District	(11,160)	(4,291)	(3,748)	(4,461)	(13,800)
Fontana Water Company	(4,060)	(455)	1,935	1,392	(4,300)
Monte Vista Water District	(1,160)	1,195	1,150	1,105	(1,400)
City of Ontario	(8,520)	(1,516)	(1,844)	(2,172)	(10,600)
San Antonio Water Company	0	0	608	368	0
City of Upland	0	1,473	1,473	1,473	0

(1) Assumed 10% conservation of demand for each of three consecutive dry years. Refer to Chapter 4, Water Conservation Program.

Projected Supply & Demand Comparison During Multiple Dry-Year Period Ending in 2025 - AF/Y (Table 57)

	2021	2022	2023	2024	2025
Supply Totals	351,606	350,288	362,498	369,890	371,137
Demand Totals	326,654	297,787	301,586	305,385	343,537
Difference (supply minus demand)	24,952	52,501	60,912	64,506	27,600
Difference as % of Supply	7%	15%	17%	17%	7%
Difference as % of Demand	8%	18%	20%	21%	8%

Rainfall Data

Summary of Findings at Prado (data provided by Ben Pak at IEUA)

	Water Year	Rainfall (in)
1	1970-71	11.97
2	1971-72	9.62
3	1972-73	18.46
4	1973-74	12.72
5	1974-75	13.49
6	1975-76	15.86
7	1976-77	11.95
8	1977-78	30.47
9	1978-79	17.51
10	1979-80	30.93
11	1980-81	10.45
12	1981-82	18.34
13	1982-83	32.36
14	1983-84	10.81
15	1984-85	12.86
16	1985-86	17.86
17	1986-87	8.08
18	1987-88	13.78
19	1988-89	12.64
20	1989-90	8.53
21	1990-91	15.48
22	1991-92	16.54
23	1992-93	30.92
24	1993-94	11.62
25	1994-95	25.14
26	1995-96	11.92
27	1996-97	18.64
28	1997-98	33.41
29	1998-99	8.02
30	1999-00	11.09
31	2000-01	16.13
32	2001-02	5.08
33	2002-03	16.22
	average	16.33

Surface Water Reliability During Drought

Percentage during period of lowest rainfall (single years)	31%
Percentage during period of lowest rainfall (multiple years)	49%
	84%
	77%

2001-02
1986-87
1987-88
1988-89