

Appendix D: Westlands Water District's Water Needs Assessment

Agricultural and M&I Water Supply

WESTLANDS WD

Contractor's Water Supply Sources and Quantities (acre-feet)

Timeframe 1	Surface Water Supply							Groundwater Supply				Total Supply 13
	Reference Delivery 2	USBR Total Deliv/Max 3	SWP 4	Local 5	Local Source 6	Trsfrr/Rtrn /Recycle In 7	Trsfrr/ Out 8	District 9	Private 10	Safe Yield 11	Recharge 12	
2011	1,150,000 *	983,306	0	0		115,615	1,440	0	69,000	200,000	0	1,166,481
2050 FIA	1,150,000 *	1,150,000	0	0		45,383	0	0		0	0	1,195,383
2051 Settlement	1,150,000 *	895,000	0	0		45,383	0	0		0	0	940,383

Maximum Productive Acres for Years 2011, 2050= 560,700 Contractor's Agricultural Water Demands Possible Maximum Productive Acres for Year 2051= 460,700

Timeframe 1	Crop Water Requirement (acre-feet) 15	District Irrig. Efficiency (%) 16	Effective Precip (acre-feet) 17	Reference Effective Precip (acre-ft) 18	Calculated Net Crop Water Req (acre-feet) 19	USBR Net Crop Water Req (acre-feet) 20	Average Irrigated Acres (acres) 21	Reference Irrigated Acres (acres) 22	Calculated FDR (AF/acre) 23	USBR FDR (AF/acre) 24	Conveyance Loss (acre-feet) 25	Total Ag Demand (acre-feet) 26
2011	995,441	78	140,514	138,365	1,096,060	1,240,341	460,884	460,884	2.38	2.40	196	1,096,256
2050	1,314,025	85	168,209	168,209	1,348,019	1,397,355	560,700	560,700	2.40	2.32	193	1,348,212
2051	1,117,740	85	138,211	138,211	1,152,387	1,239,909	460,700	460,700	2.50	2.40	193	1,152,580

Contractor's M&I Water Demands

Timeframe 1	Residential Water Demand			Nonresidential Water Demand			Loss	Ref Urban Per Capita Dmd (gpcd) 35	Calc Urban Per Capita Dmd (gpcd) 36	Total M&I Demand (acre-feet) 37	Total Ag- M&I Dmd (acre-feet) 38	Unmet Demand (acre-feet) 39
	Population 28	Per Capita Demand (gpcd) 29	Total Demand (acre-feet) 30	Industrial 31	Comm/ Instit 32	Total Demand (acre-feet) 33	Unacc /Distr (acre-feet) 34					
2011	7,415	410.3	3,408	1,126	564	1,690	0	198.0	613.8	5,098	1,101,354	-65,127
2050	7,975	166.0	1,483	1,134	568	1,702	0	166.0	356.5	3,185	1,351,397	156,014
2051	0	0.0	0	1,134	568	1,702	0	0.0	0.0	1,702	1,154,282	213,899

* Represents Maximum Contract Amount

Notes: Year 2011 data is derived from the Westlands water management plan dated April 19, 2013. The acronym FIA stands for the full irrigable acreage at project build out.

Years 2050 and 2051 transfer in, column #7, amounts are from the following contract assignment no.'s:

- 14-06-200-3365A-IR14-B 4,695 acre feet (amount pursuant to the 3-way partial assignment after 20 years from date of execution [1999])
- 14-06-200-8092-IR14 27,000 acre feet
- 7-07-20-W0055-IR14-B 2,500 acre feet
- 14-06-200-3365A-IR14-C 4,198 acre feet
- 14-06-200-8018-IR14-B 2,990 acre feet
- 14-06-200-7823J 4,000 acre feet

Maximum productive acres for years 2011 and 2050 is current as of 2011 GIS mapping data.

Acreage has been reduced 65,000 acres for year 2051 due to assumed settlement; for a total of 109,106 retired acres.

The population numbers in years 2011 and 2050 solely reflect Lemoore Naval Stations active duty and civilian population.

A zero population in year 2051 reflects an assumed settlement. Year 2011 reference irrigated acres is from table 34 in the Westlands water management plan dated April 19, 2013.