TABLES

Inventory of Data Used to Update the Basin Model

Type	Subtype	Description of Data	FTP Folder	Source
Climate	Precipitation	Rain gage data	1_Climate/Precip/Rain Gage Data	CDEC, NOAA, CIMIS, SLO County
Climate	Precipitation	GIS - Isohyetal precipitation map from PRISM (OSU)	1_Climate/Precip/PRISM_Isohyet_Raster 1981-2010	PRISM (OSU)
Climate	ET and/or pan evaporation	CIMIS ET data	1_Climate_ET_CIMIS	CIMIS
Climate	ET and/or pan evaporation	Wine Country Alliance ET data	1_Climate_ET_Western Weather Group	SLO County
Geology	Geology and Faults	GIS - Geology and fault coverages	2_Geology_Faults	SLO County
Geology	Faults	2004 fault investigation report for Rancho Santa Ysabel, Paso Robles / geologic hydrogeologic investigations	2_Geology_Faults	SLO County
Geology[1]	Well completion reports	Driller's logs, pumping test data, geophysical surveys focused on area near Rinconada Fault separating Atascadero subbasin and Creston subarea	2_Geology_WCRs	DWR
Groundwater[1]	Groundwater levels	Groundwater levels from SLO County monitoring program	3_Groundwater/Water Levels	SLO County
Groundwater	Pumping / demand	Municipal pumping (by individual well) for City of Paso Robles, Atascadero MWC, Templeton CSD (system total), San Miguel CSD (monthly); including well screen information and locations	3_Groundwater/Municipal Pumping	Various
Groundwater	Pumping / demand	Small community water systems pumping	3_Groundwater/Small Community Pumping	SLO County
Groundwater	Pumping / demand	Commercial water systems demand	3_Groundwater/Commercial Pumping	SLO County
Groundwater	Pumping / demand	Agricultural crop water demand estimates (Master Water Plan App. D)	3_Groundwater/Agricultural Pumping	SLO County
Groundwater	Pumping / demand	Projected Agricultural crop water demand estimates	10_Predictive Runs/Water Demands	Todd Groundwater
GW Model[1]	GW Model	Calibrated MODFLOW-2000 groundwater flow model	4_Original_Model_Files	SLO County
Land Use	Agriculture	GIS - Historical agricultural crop maps (1996 through 2011) for SLO County; 2012 coverage of irrigated crops for SLO County; 2012 crop coverage for Monterey County	5_Land Use/Agriculture/SLO County and Monterey County	SLO & Monterey Counties; USDA NRCS
Land Use	Agriculture	GIS - Projected 2013, 2014 and 2017 coverages of vineyards for Paso Robles Groundwater Basin	10_Predictive Runs/Future Vineyards	SLO County
Land Use[2]	Land Use / Zoning	GIS - Assessor's parcel coverage - SLO County and southern Monterey County	5_Land Use/Zoning/on_the_ground/ Parcels	ParcelQuest
Land Use	General	Unincorporated areas - planning and assessor's (on-the-ground) land use/zoning data fields	5_Land Use/Zoning/on_the_ground/zoning	SLO County
Land Use	General	Incorporated cities - planning and assessor's (on-the-ground) land use/zoning data fields; boundaries for future demand planning and UWMP/ag updates	5_Land Use/Zoning/on_the_ground/cities	SLO County
Land Use	General	GIS - General Plan land use / zoning coverage and associated data fields	5_Land Use/Zoning/General Plan	SLO County
Land Use	Land Use	GIS - Land use coverage and associated data fields	5_Land Use/Zoning/General Plan	City of Atascadero
Land Use	Land Use	GIS - Land use coverage and associated data fields	5_Land Use/Zoning/General Plan	City of Paso Robles
Soil	Soil hydrology	GIS - USDA NRCS soil type and hydrologic properties	6_Soil/USDA NRCS	USDA NRCS

Table 1

Inventory of Data Used to Update the Basin Model

Type	Subtype	Description of Data	FTP Folder	Source
Surface Water	Stream features	CALWATER watershed boundaries	7_Surface Water/GIS/Watershed boundaries	CALWATER
Surface Water	Stream features	Stream channel location, geometry (USGS National Hydrography Dataset);	7_Surface Water/GIS/National Hydrography Dataset	USGS
Surface Water	Stream discharge	USGS stations - daily stream discharge	7_Surface Water/Discharge/USGS	USGS NWIS
Surface Water	Stream discharge	County Flood Control and Water Conservation District-operated stations - locations and daily stream discharge (1981-2011, if available)	7_Surface Water/Discharge/SLO County FC&WCD	SLO County
Surface Water	Reservoir spills and releases	San Antonio and Nacimiento reservoirs - daily operational data (1981-2011)	7_Surface Water/Reservoirs/San Antonio and Nacimiento	MCWRA
Surface Water	Reservoir spills and releases	Salinas Reservoir (Santa Margarita Lake) - daily operational data (1981-2011)	7_Surface Water/Reservoirs/Salinas Reservoir_SM Lake	SLO County
Surface Water	Groundwater Recharge	Nacimiento Water Project daily flow deliveries to turnouts at Atascadero MWC, City of Paso Robles, SLO WWTP, and Templeton CSD (2011-13)	7_Surface Water/Reservoirs/Nacimiento Water Project	SLO County
Surface Water	Groundwater Recharge	Nacimiento Water Project projected annual flow deliveries to turnouts at Atascadero MWC, City of Paso Robles, SLO WWTP, and Templeton CSD (2014-40)	10_Predictive Runs/Nacimiento Water Project	SLO County
Surface water	Recharge / percolation ponds	Locations and treated wastewater recharge volumes for percolation ponds operated by Atascadero MWC, Camp Roberts Military Reservation, City of Paso Robles, San Miguel CSD and Templeton CSD	7_Surface Water/Wastewater	AMWC, Camp Roberts, City of Paso Robles, SMCSD, TCSD
Surface Water	Stream diversions	SWRCB reports of well pumping of stream underflow	7_Surface Water/Stream Diversions	SLO County
Topography / Ground Cover	Aerial Photographs	USGS 2011 orthophotographs of study area - 1-foot and 6-inch resolution / 1999 aerials from SLO County	8_Aerials_Ground Cover/Aerials/2011 and 1998	USGS
Topography / Ground Cover	Vegetation coverage	GIS - detailed vegetation coverage, including riparian (California Department of Forestry and Fire Protection, 1994) and CALVEG mapping 2002-2003 (mapping not complete)	8_Aerials_Ground Cover/RiparianMapping	CDFFP
Wastewater	WWTP discharges	WWTP discharges by City of Paso Robles, City of Atascadero, Atascadero State Hospital, Templeton CSD, San Miguel CSD (monthly)	9_Wastewater/Municipal discharges	Various

Notes:

[1] Confidential information redacted.

[2] Proprietary information redacted.

Table 1

Precipitation Stations in the Basin Watershed Model Boundary - San Luis Obispo and Monterey Counties

Station Name	Station Number	Agency/Source	Elevation, ft amsl	Period of Record
Cholame Alley Ranch	41743	NOAA	604.1	1948-1985
Parkfield	46703	NOAA	451.1	1970-1975
Paso Robles	46730	NOAA	213.4	1976-2011
Paso Robles 5 NW	46736	NOAA	305.1	1948-1976
Valleton	49221	NOAA	289.9	1948-1971
Santa Margarita Booster	47933	NOAA	335.3	1971-2010
San Miguel Wolf Ranch	47867	NOAA	220.1	1973-2011
Valleton Wolf Ranch	49222	NOAA	249.9	1971-1974
Paso Robles Municipal Airport	46742	NOAA	246.9	1948-1951
Bradley	41034	NOAA	541	1949-1971
Nacimiento Dam	46056	NOAA	771	1957-1978
Paso Robles (PR1)	-	Western Weather Group	-	2005-2011
Tablas Creek (TAB)	-	Western Weather Group	-	2005-2011
Shandon (SDN)	-	Western Weather Group	-	2005-2011
Templeton Gap (TPG)	-	Western Weather Group	-	2005-2011
Creston (CRS)	-	Western Weather Group	-	2005-2011
Rocky Butte	703	SLO FC&WCD	3400	2005-2011
Hog Canyon	709	SLO FC&WCD	1200	2005-2011
Atascadero	711	SLO FC&WCD	955	2005-2011
Salinas Dam	719	SLO FC&WCD	1300	2005-2011
Shandon	721	SLO FC&WCD	1048	2005-2011

Table 2

Precipitation Stations in the Basin Watershed Model Boundary - San Luis Obispo and Monterey Counties

Station Name	Station Number	Agency/Source	Elevation, ft amsl	Period of Record
Santa Margarita	723	SLO FC&WCD	994.8	2005-2011
South Portal	760	SLO FC&WCD	1360	2005-2011
Templeton	762	SLO FC&WCD	-	2010-2011
Salinas Dam	94	SLO FC&WCD	1223	1985-2011
Santa Margarita Booster Station	95	SLO FC&WCD	1156	1978-2011
Black Mountain (FAA Radar Station)	186	SLO FC&WCD	3575	1972-1991
Dellaganna Ranch	139	SLO FC&WCD	1280	1976-1983
York Mountain	161.1	SLO FC&WCD	-	1976-1983
Creston	211	SLO FC&WCD	1070	1991-2011
Creston	52.1	SLO FC&WCD	1045	1983-1991
Oak Shores Wastewater Plant	201	SLO FC&WCD	850	1983-2011

Table 2

Table 3

Paso Robles Groundwater Basin Watershed Model Segmentation

Sub-Watershed	Drainage Area [acres]	Stream Length [ft]
R1	96836.27	141775.61
R2	15208.31	28428.45
R3	7012.67	20200.98
R4	9046.47	40057.34
R5	23781.35	25076.80
R6	17951.97	15646.63
R7	9383.62	34109.08
R8	7740.42	10692.26
R9	5234.96	30836.01
R10	28420.81	44785.41
R11	18403.56	21265.40
R12	4284.22	35124.03
R13	1812.41	17739.92
R14	17783.29	65508.15
R15	26367.18	109290.38
R16	10170.79	16580.99
R17	31406.33	28919.97
R18	22999.79	35547.70
R19	12601.28	36170.78
R20	20598.82	11394.02
R21	9870.17	33221.10
R22	1369.8	14049.94
R23	3004.05	12716.90
R24	6093.69	36183.51
R25	2716.43	38894.58
R26	397.9	7739.14
R27	3739.64	33991.46
R28	34005.63	60169.92
R29	30743.63	81158.94
R30	18532.28	94505.96
R31	2859.97	25666.30
R32	14114.38	62794.55
R33	1016.73	15277.07
R34	7858.03	75562.68
R35	2098.53	31859.29
R36	2052.49	23744.71
R37	7307.21	35393.88
R38	1031.35	15303.21
R39	9596.59	74931.84
R40	14403.25	67911.24

Table 3

Paso Robles Groundwater Basin Watershed Model Segmentation

Sub-Watershed	Drainage Area [acres]	Stream Length [ft]
R41	14777.51	73018.00
R42	11534.65	86254.65
R43	22052	62221.59
R44	32834.04	78770.43
R45	8685.7	46109.02
R46	2781.13	22677.57
R47	6460.29	29164.53
R48	5757.98	34125.79
R49	10850.27	22971.53
R50	26805.5	57582.60
R51	11947.74	54221.74
R52	34352.88	78079.43
R53	38129.9	45253.50
R54	3376.62	11339.87
R55	17257.62	90353.51
R56	14144.08	61707.81
R57	53762.26	83775.25
R58	14890.82	83936.07
R59	3346.01	24508.87
R60	15077.98	28893.78
R61	17780.75	62669.41
R62	1296.48	8269.89
R63	2520.88	9788.63
R64	4027.18	36332.20
R65	14101.62	42533.55
R66	15080.56	62507.13
R67	4110.47	22099.74
R68	54373.2	150047.37
R69	6427.57	29329.74
R70	26059.23	44239.83
R71	20797.83	28786.33
R72	5595.48	15369.31
R73	8121.79	38469.26
R74	3494.63	12396.75
R75	28541.09	63342.06
R76	13204.9	25398.49
R77	1053.25	5794.81
R78	14716.8	63820.81
R79	16372.64	57973.76
R80	3062.01	14941.56

Table 3

Paso Robles Groundwater Basin Watershed Model Segmentation

Sub-Watershed	Drainage Area [acres]	Stream Length [ft]
R81	3619.07	8131.22

Note: Refer to Figure 30 for locations of sub-watersheds

Table 4

Sub-Watershed Land Use Summary (1985)

Sub-Watershed	Agriculture/Parks/Golf Course [acres]							Commercial/ Industrial/ Public Facility [acres]	Open Space/ Dry Agriculture/ Water Body [acres]	Low Density Residential [acres]	Medium Density Residential [acres]	High Density Residential [acres]	Total Area [acres]
	Alfalfa	Deciduous	Nursery	Pasture	Truck	Vineyard	Total						
R1	0	0	0	0	0	0	0	0	96,836	0	0	0	96,836
R2	0	0	0	0	0	0	0	0	15,208	0	0	0	15,208
R3	0	0	0	0	0	0	0	3	7,009	0	0	0	7,013
R4	0	0	0	0	0	0	0	0	9,046	0	0	0	9,046
R5	107	2	0	59	0	1,069	1,237	0	22,545	0	0	0	23,781
R6	0	0	0	3	0	19	22	0	17,930	0	0	0	17,952
R7	123	0	0	377	80	42	622	0	8,753	9	0	0	9,384
R8	0	0	0	0	0	0	0	0	7,740	0	0	0	7,740
R9	0	0	0	0	0	0	0	0	5,235	0	0	0	5,235
R10	123	0	0	0	0	0	123	0	28,298	0	0	0	28,421
R11	741	318	0	13	0	712	1,785	3	16,614	2	0	0	18,404
R12	21	0	0	16	0	0	38	0	4,246	0	0	0	4,284
R13	480	15	0	48	0	735	1,279	3	499	31	0	0	1,812
R14	0	0	0	0	0	0	0	0	17,783	0	0	0	17,783
R15	0	0	0	0	0	0	0	0	26,367	0	0	0	26,367
R16	0	0	0	0	0	0	0	0	10,171	0	0	0	10,171
R17	0	0	0	0	0	0	0	0	31,406	0	0	0	31,406
R18	0	0	0	0	0	0	0	0	23,000	0	0	0	23,000
R19	0	0	0	0	0	0	0	0	12,601	0	0	0	12,601
R20	0	0	0	0	0	0	0	0	20,599	0	0	0	20,599
R21	658	0	0	51	0	0	709	68	9,082	11	0	0	9,870
R22	0	0	0	0	0	0	0	0	1,370	0	0	0	1,370
R23	572	37	0	90	0	533	1,231	18	1,686	69	0	0	3,004
R24	0	0	0	0	0	0	0	0	6,094	0	0	0	6,094
R25	0	0	0	0	0	0	0	0	2,716	0	0	0	2,716
R26	0	0	0	17	0	0	17	6	375	0	0	0	398
R27	38	5	0	0	0	106	150	0	3,590	0	0	0	3,740
R28	1,089	8	0	10	0	287	1,394	1	32,611	0	0	0	34,006
R29	203	0	0	39	0	0	242	6	30,495	0	0	0	30,744
R30	694	0	0	531	0	274	1,499	19	16,904	110	0	0	18,532
R31	9	0	0	0	0	0	9	0	2,851	0	0	0	2,860
R32	3	0	0	0	0	0	3	0	14,112	0	0	0	14,114
R33	0	0	0	0	0	0	0	0	1,017	0	0	0	1,017

Table 4

Sub-Watershed Land Use Summary (1985)

Sub-Watershed	Agriculture/Parks/Golf Course [acres]							Commercial/ Industrial/ Public Facility [acres]	Open Space/ Dry Agriculture/ Water Body [acres]	Low Density Residential [acres]	Medium Density Residential [acres]	High Density Residential [acres]	Total Area [acres]
	Alfalfa	Deciduous	Nursery	Pasture	Truck	Vineyard	Total						
R34	0	0	0	8	0	200	208	1	7,623	26	0	0	7,858
R35	0	0	0	0	0	0	0	0	2,099	0	0	0	2,099
R36	0	0	0	0	0	0	0	0	2,052	0	0	0	2,052
R37	0	0	0	0	0	0	0	0	7,307	0	0	0	7,307
R38	0	0	0	0	0	0	0	0	1,031	0	0	0	1,031
R39	0	0	0	0	0	0	0	0	9,597	0	0	0	9,597
R40	16	0	0	10	0	0	26	0	14,377	0	0	0	14,403
R41	161	0	0	8	0	42	211	9	14,566	0	0	0	14,787
R42	10	0	0	3	0	0	13	0	11,522	0	0	0	11,535
R43	1,405	0	0	315	9	1,031	2,760	31	19,075	185	0	0	22,052
R44	0	0	0	0	0	0	0	0	32,834	0	0	0	32,834
R45	46	0	0	3	0	0	50	0	8,623	13	0	0	8,686
R46	0	0	0	0	0	0	0	0	2,778	3	0	0	2,781
R47	0	0	0	0	0	0	0	0	6,460	0	0	0	6,460
R48	66	0	0	19	0	0	85	63	5,503	106	0	0	5,758
R49	100	0	0	221	0	0	321	0	10,464	66	0	0	10,850
R50	0	0	0	0	0	0	0	0	26,806	0	0	0	26,806
R51	0	0	0	0	0	0	0	0	11,948	0	0	0	11,948
R52	332	4	0	1,007	4	0	1,346	38	32,734	234	0	0	34,353
R53	494	39	0	771	4	213	1,521	374	34,978	1,254	0	0	38,126
R54	121	0	0	157	0	0	279	304	2,374	420	0	0	3,377
R55	26	0	0	149	6	0	180	1	17,020	57	0	0	17,258
R56	126	0	0	74	0	0	201	0	13,930	13	0	0	14,144
R57	1,797	272	0	1,189	11	75	3,344	41	50,234	145	0	0	53,764
R58	35	0	0	69	0	17	121	21	14,721	27	0	0	14,891
R59	131	20	0	274	47	83	554	103	2,668	20	0	0	3,346
R60	492	8	0	669	15	298	1,482	216	13,330	50	0	0	15,078
R61	0	0	0	23	39	104	166	9	17,589	16	0	0	17,781
R62	109	0	0	4	0	0	114	47	1,133	3	0	0	1,296
R63	82	0	0	0	0	52	133	93	2,116	178	0	0	2,521
R64	0	0	0	16	0	0	16	0	4,011	0	0	0	4,027
R65	15	0	0	33	0	0	47	0	14,054	0	0	0	14,102
R66	0	0	0	234	0	0	234	0	14,847	0	0	0	15,081

Table 4

Sub-Watershed Land Use Summary (1985)

Sub-Watershed	Agriculture/Parks/Golf Course [acres]							Commercial/ Industrial/ Public Facility [acres]	Open Space/ Dry Agriculture/ Water Body [acres]	Low Density Residential [acres]	Medium Density Residential [acres]	High Density Residential [acres]	Total Area [acres]
	Alfalfa	Deciduous	Nursery	Pasture	Truck	Vineyard	Total						
R67	103	0	0	34	0	0	137	0	3,974	0	0	0	4,110
R68	0	0	0	7	0	0	7	0	54,367	0	0	0	54,373
R69	191	0	0	103	0	0	294	486	5,446	202	0	0	6,428
R70	151	0	0	0	0	0	151	137	25,762	10	0	0	26,059
R71	0	0	0	0	0	0	0	210	20,588	0	0	0	20,798
R72	0	0	0	0	0	0	0	0	5,595	0	0	0	5,595
R73	76	0	0	0	0	0	76	14	8,032	0	0	0	8,122
R74	0	0	0	0	0	0	0	88	3,406	0	0	0	3,495
R75	0	0	0	8	0	110	118	9	28,414	0	0	0	28,541
R76	0	0	0	0	0	0	0	581	12,623	0	0	0	13,205
R77	0	0	0	0	0	0	0	160	893	0	0	0	1,053
R78	0	0	0	0	0	0	0	0	14,717	0	0	0	14,717
R79	0	0	0	0	0	0	0	0	16,373	0	0	0	16,373
R80	0	0	0	0	0	0	0	1,674	1,388	0	0	0	3,062
R81	0	0	0	0	51	28	80	607	2,932	0	0	0	3,619
TOTAL	**10,945**	**729**	**0**	**6,661**	**266**	**6,032**	**24,632**	**5,447**	**1,139,706**	**3,261**	**0**	**0**	**1,173,046**

Table 5

Sub-Watershed Land Use Summary (1997)

Sub-Watershed	Agriculture/Parks/Golf Course [acres]							Commercial/ Industrial/ Public Facility [acres]	Open Space/ Dry Agriculture/ Water Body [acres]	Low Density Residential [acres]	Medium Density Residential [acres]	High Density Residential [acres]	Total Area [acres]
	Alfalfa	Deciduous	Nursery	Pasture	Truck	Vineyard	Total						
R1	0	0	0	0	0	0	0	0	96,836	0	0	0	96,836
R2	0	0	0	0	0	0	0	0	15,208	0	0	0	15,208
R3	0	0	0	30	0	0	30	0	6,969	14	0	0	7,013
R4	0	0	0	0	0	0	0	0	9,046	0	0	0	9,046
R5	0	0	0	0	0	0	0	0	23,756	25	0	0	23,781
R6	0	0	0	0	115	0	115	0	17,837	0	0	0	17,952
R7	0	0	0	0	5	0	5	0	9,379	0	0	0	9,384
R8	0	0	0	0	12	0	12	0	7,729	0	0	0	7,740
R9	0	0	0	0	0	0	0	0	5,235	0	0	0	5,235
R10	43	0	0	0	0	32	75	0	28,346	0	0	0	28,421
R11	398	0	0	0	0	1,052	1,450	0	16,953	0	0	0	18,404
R12	0	0	0	0	0	0	0	0	4,284	0	0	0	4,284
R13	131	0	0	49	0	982	1,162	0	592	58	0	0	1,812
R14	124	0	0	337	0	137	598	0	17,185	0	0	0	17,783
R15	94	0	0	885	0	50	1,028	0	25,279	22	0	0	26,330
R16	0	0	0	119	0	0	119	0	10,052	0	0	0	10,171
R17	166	0	0	172	0	0	339	0	31,053	0	0	0	31,392
R18	0	0	0	0	0	0	0	0	22,976	0	0	0	22,976
R19	349	0	0	395	0	0	745	0	11,857	0	0	0	12,601
R20	0	0	0	0	0	0	0	0	19,103	0	0	0	19,103
R21	155	0	0	99	0	0	254	0	9,544	72	0	0	9,870
R22	0	0	0	0	0	0	0	0	1,370	0	0	0	1,370
R23	0	88	0	0	0	568	656	0	2,249	100	0	0	3,004
R24	0	0	0	0	0	0	0	0	6,094	0	0	0	6,094
R25	0	0	0	0	0	0	0	0	2,716	0	0	0	2,716
R26	0	0	0	0	0	0	0	0	398	0	0	0	398
R27	0	2	0	0	0	386	387	0	3,352	0	0	0	3,740
R28	0	0	0	25	113	303	441	0	33,542	22	0	0	34,006
R29	236	0	0	0	0	210	446	0	30,297	0	0	0	30,744
R30	253	0	0	173	0	517	942	0	17,324	266	0	0	18,532
R31	24	0	0	0	0	0	24	0	2,836	0	0	0	2,860
R32	0	0	0	0	0	0	0	0	14,114	0	0	0	14,114
R33	0	0	0	0	0	9	9	0	1,008	0	0	0	1,017

Table 5

Sub-Watershed Land Use Summary (1997)

Sub-Watershed	Agriculture/Parks/Golf Course [acres]							Commercial/ Industrial/ Public Facility [acres]	Open Space/ Dry Agriculture/ Water Body [acres]	Low Density Residential [acres]	Medium Density Residential [acres]	High Density Residential [acres]	Total Area [acres]
	Alfalfa	Deciduous	Nursery	Pasture	Truck	Vineyard	Total						
R34	0	0	0	25	0	212	237	0	7,551	70	0	0	7,858
R35	0	0	0	0	0	0	0	0	2,099	0	0	0	2,099
R36	0	0	0	0	0	0	0	0	2,052	0	0	0	2,052
R37	0	0	0	0	0	0	0	0	7,307	0	0	0	7,307
R38	0	0	0	0	0	0	0	0	1,031	0	0	0	1,031
R39	0	0	0	0	0	0	0	0	9,597	0	0	0	9,597
R40	0	0	0	0	0	39	39	0	14,364	0	0	0	14,403
R41	0	24	0	0	0	123	147	0	14,630	0	0	0	14,778
R42	2	0	0	0	11	1	15	0	11,515	5	0	0	11,535
R43	1,082	36	0	183	3	2,062	3,366	0	18,291	396	0	0	22,052
R44	0	0	9	0	122	0	131	0	32,522	181	0	0	32,834
R45	0	0	0	0	0	0	0	0	8,657	29	0	0	8,686
R46	0	0	0	0	0	0	0	0	2,682	99	0	0	2,781
R47	0	0	0	0	0	0	0	0	6,367	94	0	0	6,460
R48	0	0	0	0	0	0	0	0	5,188	570	0	0	5,758
R49	0	0	0	225	0	0	225	0	9,505	1,120	0	0	10,850
R50	0	0	0	75	43	780	897	0	25,856	53	0	0	26,806
R51	0	49	0	13	62	0	123	0	11,822	3	0	0	11,948
R52	0	9	0	349	0	67	425	0	28,205	5,722	0	0	34,353
R53	0	32	9	158	141	1,080	1,421	0	32,366	4,343	0	0	38,130
R54	0	0	0	49	0	0	49	0	2,467	861	0	0	3,377
R55	8	0	1	0	13	0	21	0	17,187	49	0	0	17,258
R56	14	0	13	0	0	34	61	0	14,066	17	0	0	14,144
R57	77	58	89	1,211	90	489	2,015	0	51,424	323	0	0	53,762
R58	0	52	0	0	0	1,040	1,092	0	13,733	66	0	0	14,891
R59	0	20	0	263	0	184	467	0	2,425	454	0	0	3,346
R60	236	36	0	787	15	1,112	2,185	0	11,725	1,167	0	0	15,078
R61	0	24	0	0	5	297	326	0	17,429	25	0	0	17,781
R62	87	0	0	0	0	0	87	0	1,148	62	0	0	1,296
R63	29	0	0	0	0	8	37	0	2,024	460	0	0	2,521
R64	18	0	0	0	0	19	37	0	3,990	0	0	0	4,027
R65	76	0	0	0	0	0	76	0	14,021	5	0	0	14,102
R66	184	0	0	60	0	0	244	0	14,837	0	0	0	15,081

Table 5

Sub-Watershed Land Use Summary (1997)

Sub-Watershed	Agriculture/Parks/Golf Course [acres]							Commercial/ Industrial/ Public Facility [acres]	Open Space/ Dry Agriculture/ Water Body [acres]	Low Density Residential [acres]	Medium Density Residential [acres]	High Density Residential [acres]	Total Area [acres]
	Alfalfa	Deciduous	Nursery	Pasture	Truck	Vineyard	Total						
R67	198	0	0	143	0	0	341	0	3,759	11	0	0	4,110
R68	0	0	0	29	0	37	66	0	54,250	29	0	0	54,345
R69	89	0	0	0	0	0	89	10	5,376	953	0	0	6,428
R70	36	0	0	25	0	0	61	0	25,878	121	0	0	26,059
R71	0	0	0	395	0	0	395	11	20,342	50	0	0	20,798
R72	85	0	0	0	0	0	85	0	5,507	3	0	0	5,595
R73	103	0	0	0	0	0	103	0	8,019	0	0	0	8,122
R74	0	0	0	0	0	0	0	0	3,464	31	0	0	3,495
R75	0	0	0	511	0	1,355	1,866	0	26,672	4	0	0	28,541
R76	0	0	0	0	0	0	0	271	12,934	0	0	0	13,205
R77	0	0	0	0	0	0	0	161	893	0	0	0	1,053
R78	0	0	0	0	0	0	0	0	14,717	0	0	0	14,717
R79	0	0	0	0	0	0	0	120	16,252	0	0	0	16,373
R80	0	0	0	0	0	0	0	1,640	1,422	0	0	0	3,062
R81	0	0	0	0	45	0	45	708	2,866	0	0	0	3,619
TOTAL	**4,298**	**430**	**121**	**6,784**	**793**	**13,184**	**25,611**	**2,921**	**1,124,954**	**17,953**	**0**	**0**	**1,171,438**

Table 6

Sub-Watershed Land Use Summary (2011)

Sub-Watershed	Agriculture/Parks/Golf Course [acres]							Commercial/ Industrial/ Public Facility [acres]	Open Space/ Dry Agriculture/ Water Body [acres]	Low Density Residential [acres]	Medium Density Residential [acres]	High Density Residential [acres]	Total Area [acres]
	Alfalfa	Deciduous	Nursery	Pasture	Truck	Vineyard	Total						
R1	35	0	0	0	202	0	237	0	94,688	1,912	0	0	96,837
R2	0	0	0	0	0	0	0	0	14,471	737	0	0	15,208
R3	39	0	0	0	0	117	156	0	6,612	244	0	0	7,013
R4	0	0	0	0	0	0	0	0	8,746	300	0	0	9,047
R5	0	0	0	0	0	1,114	1,114	0	21,340	1,328	0	0	23,781
R6	0	0	0	0	0	93	93	0	17,374	485	0	0	17,952
R7	0	0	0	0	0	561	561	0	8,795	27	0	0	9,384
R8	202	0	0	0	0	0	202	0	7,240	298	0	0	7,740
R9	35	0	0	0	0	0	35	0	4,645	554	0	0	5,235
R10	149	0	0	0	0	228	377	0	25,946	2,098	0	0	28,421
R11	0	0	0	0	255	1,274	1,530	0	15,556	1,317	0	0	18,404
R12	0	0	0	0	29	0	29	0	4,158	97	0	0	4,284
R13	100	0	44	1	72	663	881	1	363	569	0	0	1,815
R14	0	0	0	0	0	270	270	0	17,513	0	0	0	17,783
R15	0	0	0	0	0	164	164	0	26,199	5	0	0	26,367
R16	0	0	0	0	0	0	0	0	10,171	0	0	0	10,171
R17	0	0	0	0	0	0	0	0	31,399	7	0	0	31,406
R18	0	0	0	0	0	0	0	0	22,462	538	0	0	23,000
R19	0	0	0	0	0	0	0	0	12,305	296	0	0	12,601
R20	0	0	0	0	0	0	0	0	19,703	896	0	0	20,599
R21	64	0	0	15	0	0	79	8	8,317	1,465	0	1	9,870
R22	0	0	0	0	0	13	13	0	1,118	239	0	0	1,370
R23	127	0	0	0	13	909	1,049	1	1,596	358	0	0	3,004
R24	0	0	0	0	0	0	0	0	5,821	272	0	0	6,094
R25	0	0	0	13	2	3	18	0	1,940	758	0	0	2,716
R26	0	0	0	0	15	2	17	0	190	191	0	0	398
R27	0	0	0	0	0	350	350	0	2,881	509	0	0	3,740
R28	0	0	0	8	604	412	1,025	0	30,185	2,796	0	0	34,006
R29	387	20	0	0	0	214	621	0	27,778	2,346	0	0	30,745
R30	0	0	0	67	267	2,083	2,417	0	13,784	2,332	0	0	18,532
R31	0	0	0	0	0	0	0	0	2,578	282	0	0	2,860
R32	0	0	0	0	0	1	1	0	12,623	1,490	0	0	14,114
R33	0	0	0	0	0	130	130	0	886	0	0	0	1,017

Table 6

Sub-Watershed Land Use Summary (2011)

Sub-Watershed	Agriculture/Parks/Golf Course [acres]							Commercial/ Industrial/ Public Facility [acres]	Open Space/ Dry Agriculture/ Water Body [acres]	Low Density Residential [acres]	Medium Density Residential [acres]	High Density Residential [acres]	Total Area [acres]
	Alfalfa	Deciduous	Nursery	Pasture	Truck	Vineyard	Total						
R34	0	0	0	0	0	255	255	9	7,133	461	0	0	7,858
R35	0	0	0	0	0	0	0	0	2,099	0	0	0	2,099
R36	0	0	0	0	0	0	0	0	2,053	0	0	0	2,053
R37	0	0	0	0	0	0	0	0	7,307	0	0	0	7,307
R38	0	0	0	0	0	0	0	0	1,031	0	0	0	1,031
R39	0	0	0	0	0	53	53	0	9,407	136	0	0	9,597
R40	0	16	0	0	11	868	896	0	12,442	1,066	0	0	14,403
R41	0	0	0	0	0	564	564	0	12,543	1,671	0	0	14,778
R42	0	0	0	0	39	116	155	0	11,194	186	0	0	11,535
R43	677	77	0	30	19	6,695	7,498	0	10,095	4,435	0	0	22,027
R44	0	0	0	0	0	317	317	1	26,904	5,612	0	0	32,834
R45	0	0	0	0	0	388	388	0	8,011	284	0	0	8,683
R46	0	0	0	0	0	214	214	0	2,518	49	0	0	2,781
R47	0	0	0	0	0	4	4	0	5,144	1,312	0	0	6,460
R48	0	5	0	0	0	0	5	5	3,879	1,868	0	1	5,758
R49	20	0	0	34	0	43	97	738	5,112	4,580	45	148	10,719
R50	0	3	0	1	42	1,044	1,090	0	14,376	11,357	0	0	26,823
R51	0	3	0	3	0	30	36	0	5,632	6,283	0	0	11,951
R52	34	5	7	315	30	384	774	950	15,245	17,013	169	163	34,315
R53	0	6	6	43	50	3,865	3,969	1,045	16,852	14,364	1,231	516	37,977
R54	0	0	0	0	0	27	27	359	874	863	828	208	3,159
R55	49	0	0	22	0	22	94	5	13,001	4,158	0	0	17,258
R56	59	0	0	51	110	587	807	0	8,440	4,897	0	0	14,144
R57	224	96	20	472	284	5,008	6,104	221	29,490	17,814	6	1	53,636
R58	0	12	0	0	3	1,392	1,407	138	10,186	2,637	0	0	14,368
R59	15	18	0	21	0	733	787	789	878	650	17	8	3,129
R60	254	174	0	61	30	2,765	3,284	1,066	4,176	6,280	3	25	14,834
R61	0	32	0	4	105	529	669	0	12,230	4,881	0	0	17,781
R62	0	0	0	0	5	15	19	14	674	581	0	0	1,289
R63	18	0	0	24	0	282	324	14	1,637	534	10	2	2,522
R64	25	0	0	0	0	42	67	0	2,807	1,153	0	0	4,027
R65	0	0	0	0	0	0	0	0	14,102	0	0	0	14,102
R66	0	0	0	0	0	0	0	0	15,081	0	0	0	15,081

Table 6

Sub-Watershed Land Use Summary (2011)

Sub-Watershed	Agriculture/Parks/Golf Course [acres]							Commercial/ Industrial/ Public Facility [acres]	Open Space/ Dry Agriculture/ Water Body [acres]	Low Density Residential [acres]	Medium Density Residential [acres]	High Density Residential [acres]	Total Area [acres]
	Alfalfa	Deciduous	Nursery	Pasture	Truck	Vineyard	Total						
R67	26	0	0	0	0	0	26	0	3,633	451	0	0	4,111
R68	0	0	0	0	0	309	309	0	55,284	4	0	0	55,597
R69	134	0	0	6	0	55	195	0	5,158	1,045	30	0	6,428
R70	0	0	0	82	2	244	328	0	25,527	198	6	0	26,059
R71	0	0	0	0	0	0	0	0	20,628	157	13	0	20,798
R72	0	0	0	0	0	49	49	0	5,092	450	5	0	5,595
R73	0	0	0	0	0	367	367	0	7,740	15	0	0	8,122
R74	0	0	0	0	0	0	0	0	3,412	67	15	0	3,495
R75	0	0	0	0	127	1,725	1,852	0	26,672	21	5	0	28,550
R76	0	0	0	0	0	0	0	0	13,067	135	3	0	13,205
R77	0	0	0	0	0	0	0	0	996	53	4	0	1,053
R78	0	0	0	0	0	0	0	0	14,717	0	0	0	14,717
R79	0	0	0	0	0	0	0	0	16,373	0	0	0	16,373
R80	0	0	0	0	0	0	0	0	3,017	25	20	0	3,062
R81	0	0	0	0	0	0	0	0	3,373	227	19	0	3,619
TOTAL	**2,674**	**466**	**76**	**1,275**	**2,317**	**37,593**	**44,402**	**5,363**	**976,624**	**142,720**	**2,431**	**1,074**	**1,172,615**

Sub-Watershed Soil Summary

Sub-Watershed	Group A Soils		Group B Soils		Group C Soils		Group D Soils		Total Area [acres]
	[acres]	[%]	[acres]	[%]	[acres]	[%]	[acres]	[%]	
R1	0	0.0%	28,232	29.2%	15,331	15.8%	53,273	55.0%	96,836
R2	0	0.0%	11,554	76.0%	172	1.1%	3,482	22.9%	15,208
R3	0	0.0%	6,117	87.2%	771	11.0%	125	1.8%	7,013
R4	0	0.0%	6,964	77.0%	42	0.5%	2,040	22.6%	9,046
R5	0	0.0%	19,877	83.6%	3,617	15.2%	287	1.2%	23,781
R6	0	0.0%	14,618	81.4%	943	5.3%	2,391	13.3%	17,952
R7	0	0.0%	9,379	99.9%	0	0.0%	5	0.1%	9,384
R8	0	0.0%	6,063	78.3%	0	0.0%	1,677	21.7%	7,740
R9	0	0.0%	4,344	83.0%	368	7.0%	523	10.0%	5,235
R10	0	0.0%	20,425	71.9%	4,393	15.5%	3,603	12.7%	28,421
R11	15	0.1%	9,685	52.6%	3,038	16.5%	5,666	30.8%	18,404
R12	0	0.0%	492	11.5%	1,456	34.0%	2,336	54.5%	4,284
R13	13	0.7%	1,464	80.8%	299	16.5%	37	2.0%	1,812
R14	594	3.3%	3,335	18.8%	6,574	37.0%	7,280	40.9%	17,783
R15	152	0.6%	2,178	8.3%	5,139	19.5%	18,898	71.7%	26,367
R16	341	3.4%	462	4.5%	7,756	76.3%	1,612	15.8%	10,171
R17	591	1.9%	2,839	9.0%	10,634	33.9%	17,343	55.2%	31,406
R18	552	2.4%	4,696	20.4%	7,047	30.6%	10,704	46.5%	23,000
R19	525	4.2%	2,000	15.9%	7,664	60.8%	2,412	19.1%	12,601
R20	219	1.1%	4,492	21.8%	10,873	52.8%	5,014	24.3%	20,599
R21	3	0.0%	2,626	26.6%	2,422	24.5%	4,819	48.8%	9,870
R22	14	1.0%	76	5.5%	529	38.6%	751	54.9%	1,370
R23	49	1.6%	1,986	66.1%	596	19.8%	373	12.4%	3,004
R24	0	0.0%	318	5.2%	4,167	68.4%	1,609	26.4%	6,094
R25	0	0.0%	66	2.4%	2,229	82.1%	421	15.5%	2,716
R26	26	6.4%	116	29.1%	111	28.0%	145	36.5%	398
R27	0	0.0%	2,019	54.0%	1,390	37.2%	331	8.8%	3,740
R28	31	0.1%	27,249	80.1%	3,017	8.9%	3,708	10.9%	34,006
R29	764	2.5%	17,711	57.6%	5,568	18.1%	6,700	21.8%	30,744
R30	417	2.3%	8,867	47.8%	7,082	38.2%	2,167	11.7%	18,532
R31	0	0.0%	39	1.4%	1,968	68.8%	853	29.8%	2,860

Table 7

Sub-Watershed Soil Summary

Sub-Watershed	Group A Soils		Group B Soils		Group C Soils		Group D Soils		Total Area [acres]
	[acres]	[%]	[acres]	[%]	[acres]	[%]	[acres]	[%]	
R32	47	0.3%	930	6.6%	12,539	88.8%	599	4.2%	14,114
R33	0	0.0%	275	27.1%	691	67.9%	51	5.0%	1,017
R34	22	0.3%	965	12.3%	6,353	80.8%	518	6.6%	7,858
R35	4	0.2%	907	43.2%	1,171	55.8%	17	0.8%	2,099
R36	0	0.0%	148	7.2%	1,441	70.2%	463	22.6%	2,052
R37	0	0.0%	450	6.2%	5,987	81.9%	871	11.9%	7,307
R38	0	0.0%	195	18.9%	734	71.1%	103	10.0%	1,031
R39	6	0.1%	979	10.2%	8,360	87.1%	252	2.6%	9,597
R40	0	0.0%	1,863	12.9%	12,356	85.8%	184	1.3%	14,403
R41	63	0.4%	1,440	9.7%	12,154	82.2%	1,120	7.6%	14,778
R42	141	1.2%	940	8.2%	8,837	76.6%	1,616	14.0%	11,535
R43	512	2.3%	9,521	43.2%	9,602	43.5%	2,417	11.0%	22,052
R44	545	1.7%	4,233	12.9%	23,120	70.4%	4,935	15.0%	32,834
R45	125	1.4%	3,138	36.1%	2,490	28.7%	2,933	33.8%	8,686
R46	22	0.8%	1,305	46.9%	830	29.9%	624	22.5%	2,781
R47	0	0.0%	585	9.1%	866	13.4%	5,009	77.5%	6,460
R48	0	0.0%	2,461	42.7%	765	13.3%	2,532	44.0%	5,758
R49	154	1.4%	3,879	35.7%	5,027	46.3%	1,791	16.5%	10,850
R50	0	0.0%	5,245	19.6%	13,648	50.9%	7,912	29.5%	26,806
R51	0	0.0%	4,839	40.5%	2,126	17.8%	4,983	41.7%	11,948
R52	637	1.9%	10,485	30.5%	7,908	23.0%	15,323	44.6%	34,353
R53	618	1.6%	11,391	29.9%	20,650	54.2%	5,472	14.3%	38,130
R54	0	0.0%	1,295	38.4%	1,836	54.4%	245	7.3%	3,377
R55	694	4.0%	4,312	25.0%	12,122	70.2%	129	0.7%	17,258
R56	587	4.2%	5,558	39.3%	7,451	52.7%	548	3.9%	14,144
R57	1,194	2.2%	23,347	43.4%	23,733	44.1%	5,488	10.2%	53,762
R58	0	0.0%	4,326	29.1%	9,922	66.6%	643	4.3%	14,891
R59	36	1.1%	2,972	88.8%	241	7.2%	96	2.9%	3,346
R60	242	1.6%	7,661	50.8%	5,519	36.6%	1,656	11.0%	15,078
R61	60	0.3%	2,975	16.7%	10,720	60.3%	4,026	22.6%	17,781
R62	59	4.6%	392	30.2%	845	65.2%	0	0.0%	1,296

Table 7

Sub-Watershed Soil Summary

Sub-Watershed	Group A Soils		Group B Soils		Group C Soils		Group D Soils		Total Area [acres]
	[acres]	[%]	[acres]	[%]	[acres]	[%]	[acres]	[%]	
R63	111	4.4%	1,315	52.2%	739	29.3%	355	14.1%	2,521
R64	51	1.3%	483	12.0%	2,356	58.5%	1,138	28.3%	4,027
R65	711	5.0%	764	5.4%	10,680	75.7%	1,946	13.8%	14,102
R66	191	1.3%	1,307	8.7%	11,031	73.1%	2,552	16.9%	15,081
R67	123	3.0%	278	6.8%	3,273	79.6%	436	10.6%	4,110
R68	1,951	3.6%	3,980	7.3%	21,347	39.3%	27,095	49.8%	54,373
R69	787	12.2%	2,507	39.0%	2,879	44.8%	255	4.0%	6,428
R70	1,225	4.7%	8,286	31.8%	13,941	53.5%	2,608	10.0%	26,059
R71	1,244	6.0%	4,139	19.9%	15,301	73.6%	113	0.5%	20,798
R72	386	6.9%	247	4.4%	2,702	48.3%	2,260	40.4%	5,595
R73	1,099	13.5%	444	5.5%	5,917	72.9%	662	8.1%	8,122
R74	397	11.4%	189	5.4%	2,819	80.7%	89	2.6%	3,495
R75	171	0.6%	8,257	28.9%	5,606	19.6%	14,507	50.8%	28,541
R76	798	6.0%	1,913	14.5%	9,377	71.0%	1,116	8.5%	13,205
R77	182	17.3%	293	27.9%	210	19.9%	368	35.0%	1,053
R78	370	2.5%	739	5.0%	10,105	68.7%	3,504	23.8%	14,717
R79	792	4.8%	1,776	10.8%	10,701	65.4%	3,103	19.0%	16,373
R80	460	15.0%	329	10.7%	2,140	69.9%	134	4.4%	3,062
R81	591	16.3%	302	8.3%	821	22.7%	1,904	52.6%	3,619

Table 7

Table 8

Sub-Watershed Designated Precipitation Stations and Precipitation Adjustment Factors

Sub-Watershed	PRISM Designated Station	PRISM Adjustment Factor	Isohyetal Designated Station	Isohyetal Adjustment Factor
R1	201	1.01	46730	1.02
R2	47867	0.79	47867	1.27
R3	47867	0.92	46730	0.86
R4	47867	0.77	47867	1.23
R5	47867	1.09	46730	0.87
R6	47867	0.78	47867	1.27
R7	47867	0.94	47867	1.09
R8	47867	0.89	47867	1.24
R9	47867	0.99	47867	1.23
R10	47867	1.06	47867	1.17
R11	201	0.92	47867	1.06
R12	47867	1.10	47867	1.08
R13	47867	1.03	47867	1.00
R14	46730	1.12	201	0.97
R15	46730	1.32	47933	1.01
R16	201	0.96	47933	0.98
R17	201	1.01	46730	0.96
R18	47867	1.07	47867	1.12
R19	47867	1.06	46730	0.86
R20	201	0.94	47867	1.02
R21	47867	1.09	47867	1.02
R22	47867	1.05	47867	1.00
R23	47867	1.06	47867	1.00
R24	201	0.97	47867	1.14
R25	201	0.96	47867	1.16
R26	201	0.92	47867	1.00
R27	201	0.96	47867	1.00
R28	46730	1.02	47867	1.22
R29	46730	1.20	47867	1.06
R30	201	1.00	47867	1.02
R31	201	0.94	47867	1.04
R32	201	0.97	47867	1.22
R33	46730	1.10	47867	1.00
R34	46730	0.99	46730	0.83
R35	46730	0.99	47867	1.04
R36	46730	1.04	47867	1.21
R37	46730	1.05	46730	0.86
R38	201	1.01	47867	1.00
R39	46730	1.04	46730	0.85
R40	46730	1.03	46730	0.88

Table 8

Sub-Watershed Designated Precipitation Stations and Precipitation Adjustment Factors

Sub-Watershed	PRISM Designated Station	PRISM Adjustment Factor	Isohyetal Designated Station	Isohyetal Adjustment Factor
R41	46730	1.03	46730	0.85
R42	46730	1.04	47867	1.28
R43	201	0.95	47867	1.06
R44	47933	0.77	47933	0.95
R45	47933	0.84	47933	1.05
R46	47933	0.86	47933	1.05
R47	47933	1.01	47933	0.98
R48	47933	0.79	47933	1.06
R49	46730	1.54	47933	0.97
R50	47933	0.80	201	1.42
R51	47933	0.90	201	1.41
R52	47933	0.77	47933	1.03
R53	46730	1.18	47933	0.95
R54	201	1.00	46730	0.98
R55	47933	0.75	46730	0.92
R56	47933	0.75	47867	1.26
R57	46730	1.34	47867	1.28
R58	46730	1.13	47867	1.15
R59	47867	1.06	46730	0.83
R60	201	0.94	46730	0.88
R61	46730	1.06	46730	1.04
R62	47867	1.00	47867	1.07
R63	47867	1.05	47867	1.00
R64	46730	1.01	47867	1.05
R65	46730	1.12	46730	0.96
R66	46730	1.13	46730	0.87
R67	201	1.01	47867	1.05
R68	46730	1.20	46730	0.94
R69	47867	1.00	47867	1.00
R70	201	0.92	47867	1.21
R71	47867	1.09	47867	1.09
R72	201	0.96	46730	0.83
R73	47867	1.00	47867	1.06
R74	47867	0.98	47867	1.00
R75	201	0.98	47867	1.09
R76	47867	0.99	47867	1.01
R77	47867	0.94	47867	1.00
R78	46730	1.05	47867	1.20
R79	46730	1.03	47867	1.21
R80	47867	0.95	47867	1.00

Table 8

Sub-Watershed Designated Precipitation Stations and Precipitation Adjustment Factors

Sub-Watershed	PRISM Designated Station	PRISM Adjustment Factor	Isohyetal Designated Station	Isohyetal Adjustment Factor
R81	47867	0.99	47867	1.03

Regression Analysis of Evapotranspiration Data Sets

Creston

Days per month	31	28	31	30	31	30	31	31	30	31	30	31
Month	1	2	3	4	5	6	7	8	9	10	11	12
Creston (in/mo)	1.87	2.18	3.52	4.54	6.31	7.24	7.97	7.32	5.71	3.51	2.30	1.56
CIMIS Eto Zone 16 (in/mo)	1.55	2.52	4.03	5.70	7.75	8.70	9.30	8.37	6.30	4.34	2.40	1.55
RSQ r^2	**0.99**											

Paso Robles

Days per month	31	28	31	30	31	30	31	31	30	31	30	31
Month	1	2	3	4	5	6	7	8	9	10	11	12
Paso Robles (in/mo)	1.74	2.10	3.52	4.59	6.58	7.41	7.99	7.28	5.55	3.62	2.22	1.48
CIMIS Eto Zone 16 (in/mo)	1.55	2.52	4.03	5.70	7.75	8.70	9.30	8.37	6.30	4.34	2.40	1.55
RSQ r^2	**1.00**											

Shandon

Days per month	31	28	31	30	31	30	31	31	30	31	30	31
Month	1	2	3	4	5	6	7	8	9	10	11	12
Shandon (in/mo)	1.69	2.00	3.34	4.53	6.67	7.65	8.27	7.49	5.85	3.70	2.20	1.35
CIMIS Eto Zone 10 (in/mo)	0.93	1.68	3.10	4.50	5.89	7.20	8.06	7.13	5.10	3.10	1.50	0.93
RSQ r^2	**0.99**											

Tablas Creek

Days per month	31	28	31	30	31	30	31	31	30	31	30	31
Month	1	2	3	4	5	6	7	8	9	10	11	12
Tablas Creek (in/mo)	1.56	1.77	3.05	3.88	5.68	6.59	7.32	6.66	5.45	3.48	2.04	1.35
CIMIS Eto Zone 6 (in/mo)	1.86	2.24	3.41	4.80	5.58	6.30	6.51	6.20	4.80	3.72	2.40	1.86
RSQ r^2	**0.97**											

Templeton Gap

Days per month	31	28	31	30	31	30	31	31	30	31	30	31
Month	1	2	3	4	5	6	7	8	9	10	11	12
Templeton Gap (in/mo)	1.55	1.86	3.16	4.09	5.62	6.23	6.69	6.27	5.06	3.42	2.06	1.35
CIMIS Eto Zone 16 (in/mo)	1.55	2.52	4.03	5.70	7.75	8.70	9.30	8.37	6.30	4.34	2.40	1.55
RSQ r^2	**0.99**											

Table 9

Table 10

Estimated Annual Agricultural Irrigation Demand and Applied Water Rates

Water Year	Annual Precip[1] (inches)	Alfalfa		Citrus		Deciduous		Nursery		Pasture		Vegetable		Vineyard	
		Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water
1981	12.4	3.2	5.1			3.0	4.7	1.8	2.9	3.4	5.4	2.7	4.3	1.3	2.3
1982	16.3	2.9	4.7			2.8	4.4	1.6	2.5	3.1	4.9	2.7	4.2	1.3	2.2
1983	28.9	2.9	4.6			2.7	4.2	1.5	2.3	3.0	4.8	2.7	4.2	1.2	2.1
1984	7.3	3.5	5.5			3.1	4.9	1.9	3.0	3.6	5.7	2.8	4.4	1.5	2.6
1985	9.6	3.3	5.2			3.0	4.8	1.7	2.8	3.4	5.5	2.7	4.3	1.4	2.3
1986	20.5	3.2	4.9			2.9	4.4	1.7	2.6	3.4	5.2	2.7	4.1	1.1	1.9
1987	8.4	3.4	5.2			3.1	4.5	1.9	2.9	3.5	5.5	2.7	4.2	1.4	2.2
1988	12.7	3.2	4.9			2.9	4.2	1.7	2.5	3.4	5.2	2.7	4.2	1.2	2.0
1989	9.1	3.3	5.1			3.0	4.5	1.8	2.8	3.5	5.4	2.6	4.1	1.4	2.3
1990	7.3	3.3	5.1			3.0	4.4	1.9	2.8	3.5	5.3	2.7	4.1	1.6	2.6
1991	12.8	3.2	4.8			3.0	4.2	1.8	2.8	3.4	5.1	2.7	4.1	1.4	2.0
1992	12.5	3.3	4.9			3.1	4.3	1.8	2.7	3.5	5.3	2.8	4.1	1.3	1.9
1993	23.3	3.2	4.7			3.0	4.1	1.7	2.5	3.4	5.1	2.7	4.1	1.1	1.7
1994	11.3	3.2	4.7			2.9	4.1	1.5	2.3	3.4	5.1	2.6	3.9	1.3	1.9
1995	31.4	3.2	4.7			2.9	4.1	1.6	2.3	3.3	5.0	2.7	4.0	1.0	1.5
1996	15.3	3.3	4.6			3.0	4.0	1.7	2.4	3.4	4.9	2.7	3.9	1.3	1.8
1997	17.6	3.5	4.8			3.2	4.2	1.9	2.7	3.7	5.3	2.8	3.9	1.2	1.7
1998	26.8	3.0	4.2			2.7	3.6	1.4	1.9	3.1	4.5	2.6	3.6	1.0	1.4
1999	9.4	3.4	4.8			3.0	3.9	1.5	2.1	3.4	4.8	2.7	3.8	1.4	1.9
2000	13.2	3.3	4.7	1.6	2.2	3.0	4.0	1.7	2.3	3.5	4.9	2.8	3.8	1.3	1.7
2001	15.4	3.3	4.8	1.7	2.3	3.1	4.0	1.7	2.4	3.6	5.1	2.8	3.8	1.2	1.6
2002	8.3	3.4	4.9	1.8	2.4	3.1	4.1	1.7	2.3	3.6	5.1	2.7	3.8	1.2	1.7
2003	13.8	3.1	4.5	1.6	2.0	2.9	3.7	1.5	2.0	3.3	4.7	2.7	3.5	1.1	1.4
2004	9.5	3.4	4.9	1.9	2.5	3.2	4.1	1.8	2.3	3.7	5.3	2.8	3.6	1.3	1.6
2005	33.2	2.8	4.0	1.5	1.9	2.6	3.4	1.5	1.9	2.9	4.2	2.5	3.3	0.9	1.2
2006	18.3	2.9	4.2	1.6	2.1	2.8	3.6	1.6	2.1	3.0	4.3	2.7	3.6	1.0	1.4
2007	6.6	3.5	5.1	2.0	2.6	3.2	4.1	1.9	2.5	3.6	5.1	2.7	3.5	1.4	1.9
2008	13.8	3.6	5.1	2.1	2.7	3.3	4.2	2.0	2.5	3.8	5.4	2.8	3.5	1.2	1.6
2009	9.1	3.7	5.3	2.1	2.6	3.4	4.3	1.9	2.5	3.8	5.4	2.8	3.6	1.3	1.7
2010	21.0	3.0	4.2	1.6	2.0	2.7	3.5	1.6	2.0	3.2	4.6	2.6	3.4	1.0	1.3
2011	22.0	2.8	4.0	1.5	1.9	2.6	3.4	1.4	1.8	3.0	4.2	2.4	3.0	0.8	1.1
Min	6.6	2.8	4.0	1.5	1.9	2.6	3.4	1.4	1.8	2.9	4.2	2.4	3.0	0.8	1.1
Max	33.2	3.7	5.5	2.1	2.7	3.4	4.9	2.0	3.0	3.8	5.7	2.8	4.4	1.6	2.6
Ave	15.4	3.2	4.8	1.7	2.3	3.0	4.1	1.7	2.4	3.4	5.0	2.7	3.9	1.2	1.8

Notes:

All irrigation demand and applied water values in acre-feet per acre per year (or feet per year)

Vineyard consumptive use and applied water rates reflect the combined RDI and non-RDI rate weighted according to the assumed percentage of vineyards under each irrigation management method

1 – Annual Rainfall at Paso Robles rain gage (46730)

Table 11

Agricultural Irrigation Demand and Applied Water Volume (Groundwater Basin)

Water Year	Alfalfa		Citrus		Deciduous		Nursery		Pasture		Vegetable		Vineyard		TOTAL	
	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water
1981	42,154	66,912	0	0	2,517	3,996	207	328	17,724	28,133	275	436	6,022	10,474	68,898	110,278
1982	36,857	58,503	0	0	2,261	3,588	175	278	15,556	24,691	268	426	6,060	10,610	61,177	98,097
1983	34,170	54,237	0	0	2,079	3,300	164	261	14,549	23,093	270	428	6,061	10,684	57,292	92,004
1984	38,936	61,803	0	0	2,344	3,721	216	342	16,642	26,415	278	442	8,385	14,447	66,801	107,172
1985	35,123	55,751	0	0	2,168	3,441	197	313	15,336	24,342	274	436	7,998	13,907	61,096	98,190
1986	32,145	49,593	0	0	2,046	3,026	192	296	14,388	22,191	271	417	7,282	12,038	56,324	87,560
1987	31,925	49,116	0	0	2,044	3,006	210	323	14,459	22,244	277	425	9,519	15,359	58,434	90,474
1988	28,043	43,144	0	0	1,833	2,695	187	288	13,050	20,077	273	420	9,133	14,865	52,518	81,488
1989	27,490	42,293	0	0	1,837	2,701	207	319	13,028	20,044	268	412	10,987	17,666	53,817	83,433
1990	25,531	39,279	0	0	1,726	2,538	209	322	12,177	18,733	269	414	13,518	21,461	53,429	82,747
1991	22,682	33,519	0	0	1,647	2,299	207	310	11,526	17,254	1,335	1,992	11,686	17,224	49,082	72,598
1992	21,403	31,476	0	0	1,584	2,200	201	300	11,456	17,099	1,353	2,019	11,387	16,697	47,385	69,792
1993	18,530	27,250	0	0	1,454	2,020	187	280	10,716	15,994	1,349	2,013	10,679	15,752	42,916	63,309
1994	16,781	24,678	0	0	1,344	1,867	173	258	10,115	15,097	1,274	1,901	12,851	18,806	42,538	62,607
1995	14,593	21,461	0	0	1,258	1,748	176	263	9,513	14,199	1,325	1,978	10,600	15,717	37,465	55,364
1996	13,052	18,251	0	0	1,192	1,596	185	266	9,299	13,343	1,340	1,914	13,816	19,555	38,884	54,926
1997	11,708	16,261	0	0	1,169	1,559	211	301	8,226	11,752	1,353	1,933	13,292	18,793	35,959	50,599
1998	9,924	14,137	0	0	1,012	1,332	155	214	6,754	9,648	1,473	2,017	14,641	20,483	33,958	47,832
1999	11,038	15,769	0	0	1,098	1,444	174	238	7,024	10,035	1,757	2,407	24,402	33,255	45,494	63,149
2000	10,645	15,208	5	6	1,110	1,461	191	262	7,046	10,066	1,981	2,714	24,820	34,100	45,798	63,816
2001	10,645	15,206	67	88	1,129	1,485	193	264	7,024	10,034	2,182	2,989	27,239	38,095	48,478	68,161
2002	10,774	15,391	134	176	1,135	1,494	188	258	6,835	9,764	2,377	3,256	33,286	46,384	54,730	76,724
2003	9,745	13,921	172	224	1,052	1,368	166	220	6,087	8,696	2,539	3,341	30,381	39,833	50,142	67,603
2004	10,558	15,083	274	356	1,163	1,510	198	260	6,590	9,414	2,823	3,715	39,281	49,693	60,887	80,032
2005	6,901	9,859	265	344	1,096	1,424	101	133	4,951	7,073	2,759	3,631	28,316	37,361	44,390	59,824
2006	7,099	10,141	350	455	1,174	1,524	110	145	4,904	7,005	3,167	4,166	32,094	42,620	48,898	66,057
2007	8,411	12,016	501	651	1,334	1,732	131	173	5,667	8,096	7,702	10,134	44,814	58,932	68,560	91,734
2008	8,380	11,972	604	775	1,380	1,771	137	176	5,689	8,127	7,974	10,223	38,814	50,663	62,978	83,706
2009	8,544	12,205	666	854	1,414	1,813	135	173	5,535	7,907	8,122	10,413	43,757	56,340	68,173	89,704
2010	6,723	9,604	570	731	1,151	1,475	109	140	4,444	6,348	7,583	9,722	31,401	42,393	51,981	70,414
2011	6,320	9,028	580	743	1,111	1,425	99	127	3,957	5,653	6,855	8,788	26,290	34,522	45,211	60,285

Notes: All values in acre-feet per year

Table 12

Agricultural Irrigation Demand and Applied Water Volume (Watershed)

Water Year	Alfalfa		Citrus		Deciduous		Nursery		Pasture		Vegetable		Vineyard		TOTAL	
	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water
1981	42,154	66,912	0	0	2,517	3,996	207	328	17,724	28,133	275	436	6,022	10,474	68,898	110,278
1982	36,857	58,503	0	0	2,261	3,588	175	278	15,556	24,691	268	426	6,060	10,610	61,177	98,097
1983	34,170	54,237	0	0	2,079	3,300	164	261	14,549	23,093	270	428	6,061	10,684	57,292	92,004
1984	38,936	61,803	0	0	2,344	3,721	216	342	16,642	26,415	278	442	8,385	14,447	66,801	107,172
1985	35,123	55,751	0	0	2,168	3,441	197	313	15,336	24,342	274	436	7,998	13,907	61,096	98,190
1986	32,145	49,593	0	0	2,046	3,026	192	296	14,388	22,191	271	417	7,476	12,322	56,517	87,844
1987	31,925	49,116	0	0	2,044	3,006	210	323	14,459	22,244	277	425	9,936	15,973	58,851	91,087
1988	28,043	43,144	0	0	1,833	2,695	187	288	13,050	20,077	273	420	9,794	15,838	53,180	82,461
1989	27,490	42,293	0	0	1,837	2,701	207	319	13,028	20,044	268	412	11,783	18,836	54,613	84,604
1990	25,531	39,279	0	0	1,726	2,538	209	322	12,177	18,733	269	414	14,508	22,918	54,420	84,203
1991	22,682	33,519	0	0	1,647	2,299	207	310	11,526	17,254	2,938	4,385	13,486	19,738	52,485	77,506
1992	21,403	31,476	0	0	1,584	2,200	201	300	11,456	17,099	2,986	4,456	13,368	19,448	50,999	74,980
1993	18,530	27,250	0	0	1,454	2,020	187	280	10,716	15,994	2,975	4,441	12,647	18,486	46,510	68,470
1994	16,781	24,678	0	0	1,344	1,867	173	258	10,115	15,097	2,795	4,172	15,167	22,022	46,374	68,093
1995	14,593	21,461	0	0	1,258	1,748	176	263	9,513	14,199	2,916	4,352	12,645	18,558	41,102	60,580
1996	13,052	18,251	0	0	1,192	1,596	185	266	9,299	13,343	2,948	4,213	16,534	23,187	43,211	60,856
1997	11,708	16,261	0	0	1,169	1,559	211	301	8,226	11,752	2,985	4,264	16,392	22,927	40,692	57,064
1998	9,924	14,137	0	0	1,012	1,332	155	214	6,754	9,648	3,230	4,424	16,999	23,517	38,074	53,274
1999	11,038	15,769	0	0	1,098	1,444	174	238	7,024	10,035	3,866	5,296	27,902	37,742	51,102	70,524
2000	10,645	15,208	8	11	1,110	1,461	191	262	7,046	10,066	4,366	5,981	28,564	38,901	51,932	71,889
2001	10,645	15,206	115	151	1,129	1,485	193	264	7,024	10,034	4,994	6,841	30,615	42,422	54,713	76,403
2002	10,774	15,391	233	306	1,135	1,494	188	258	6,835	9,764	5,412	7,414	37,622	51,943	62,200	86,571
2003	9,745	13,921	296	384	1,052	1,368	166	220	6,087	8,696	5,708	7,511	34,971	45,515	58,025	77,615
2004	10,558	15,083	473	614	1,163	1,510	198	260	6,590	9,414	6,380	8,394	44,991	56,743	70,353	92,019
2005	8,399	11,998	449	583	1,201	1,559	108	143	5,003	7,147	5,924	7,795	32,785	42,878	53,868	72,102
2006	8,767	12,524	587	762	1,286	1,670	118	156	4,956	7,081	6,548	8,615	36,683	48,286	58,946	79,094
2007	10,407	14,867	867	1,126	1,469	1,908	142	187	5,732	8,188	7,765	10,217	51,681	67,410	78,062	103,903
2008	10,347	14,782	1,025	1,316	1,523	1,954	148	191	5,753	8,219	8,039	10,306	45,522	58,579	72,358	95,347
2009	10,568	15,097	1,135	1,455	1,558	1,998	146	187	5,597	7,996	8,189	10,498	50,289	64,025	77,483	101,257
2010	8,287	11,839	973	1,248	1,270	1,628	119	152	4,495	6,421	7,645	9,801	36,846	48,799	59,635	79,889
2011	7,781	11,115	979	1,255	1,225	1,571	107	137	4,002	5,718	6,911	8,861	30,810	39,840	51,816	68,496

Notes: All values in acre-feet per year

Table 13

Rural Residential Water Demand

Water Year	Simulated Occupied Dwelling Units		Growth Rate	Outdoor Water Demand			Indoor Water Demand		
	in Watershed	in Basin		AFY/parcel	Watershed (AFY)	Basin (AFY)	AFY/parcel	Watershed (AFY)	Basin (AFY)
1981	4,330	2,674	2.25%	0.46	1,970	1,217	0.29	1,256	775
1982	4,430	2,735	2.25%	0.46	2,016	1,245	0.29	1,285	793
1983	4,532	2,798	2.25%	0.46	2,062	1,273	0.29	1,314	812
1984	4,636	2,863	2.25%	0.46	2,110	1,303	0.29	1,345	830
1985	4,743	2,929	2.25%	0.46	2,158	1,333	0.29	1,375	849
1986	4,852	2,996	2.25%	0.46	2,208	1,363	0.29	1,407	869
1987	4,964	3,065	2.25%	0.46	2,259	1,395	0.29	1,440	889
1988	5,078	3,136	2.25%	0.46	2,311	1,427	0.29	1,473	909
1989	5,195	3,208	2.25%	0.46	2,364	1,460	0.29	1,507	930
1990	5,315	3,282	2.25%	0.46	2,418	1,493	0.29	1,541	952
1991	5,437	3,357	2.25%	0.46	2,474	1,528	0.29	1,577	974
1992	5,562	3,434	2.25%	0.46	2,531	1,563	0.29	1,613	996
1993	5,690	3,513	2.25%	0.46	2,589	1,599	0.29	1,650	1,019
1994	5,821	3,594	2.25%	0.46	2,649	1,635	0.29	1,688	1,042
1995	5,955	3,677	2.25%	0.46	2,710	1,673	0.29	1,727	1,066
1996	6,092	3,762	2.25%	0.46	2,772	1,712	0.29	1,767	1,091
1997	6,232	3,848	2.25%	0.46	2,836	1,751	0.29	1,807	1,116
1998	6,376	3,937	2.25%	0.46	2,901	1,791	0.29	1,849	1,142
1999	6,523	4,028	2.25%	0.46	2,968	1,833	0.29	1,892	1,168
2000	6,673	4,120	2.25%	0.46	3,036	1,875	0.29	1,935	1,195
2001	6,826	4,215	2.25%	0.46	3,106	1,918	0.29	1,980	1,222
2002	6,983	4,312	2.25%	0.46	3,177	1,962	0.29	2,025	1,251
2003	7,144	4,411	2.25%	0.46	3,251	2,007	0.29	2,072	1,279
2004	7,309	4,513	2.25%	0.46	3,325	2,053	0.29	2,119	1,309
2005	7,477	4,617	2.25%	0.46	3,402	2,101	0.29	2,168	1,339
2006	7,649	4,723	2.25%	0.46	3,480	2,149	0.29	2,218	1,370
2007	7,825	4,832	2.25%	0.46	3,560	2,198	0.29	2,269	1,401
2008	8,005	4,943	2.25%	0.46	3,642	2,249	0.29	2,321	1,433
2009	8,189	5,057	2.25%	0.46	3,726	2,301	0.29	2,375	1,466
2010	8,378	5,173	2.25%	0.46	3,812	2,354	0.29	2,430	1,500
2011	8,571	5,292	2.25%	0.46	3,900	2,408	0.29	2,486	1,535
2012	8,768	5,414	2.25%	0.46	3,989	2,463	0.29	2,543	1,570

Notes:

Estimated annual rural residential water demand was applied to the 2012 occupied rural residential parcel coverage for each historical year.

Occupied parcels in City of Paso Robles, City of Atascadero, and within San Miguel and Templeton CSD service areas were removed from original SLO County Planning GIS layer.

All other parcels included (e.g., parcels within Shandon CSA), as pumping for these areas and are not accounted for elsewhere in the model update.

For modeling purposes, the growth rate is applied to the water demand, not the number of parcels (see Section 3.4.3).

Table 14

Semiannual Recharge from Deep Percolation of Streambed Seepage
Water Years 1981-1990

Segment Number	Number of Model Cell	Oct/80 - Mar/81	Apr/81 - Sep/81	Oct/81 - Mar/82	Apr/82 - Sep/82	Oct/82 - Mar/83	Apr/83 - Sep/83	Oct/83 - Mar/84	Apr/84 - Sep/84	Oct/84 - Mar/85	Apr/85 - Sep/85	Oct/85 - Mar/86	Apr/86 - Sep/86	Oct/86 - Mar/87	Apr/87 - Sep/87	Oct/87 - Mar/88	Apr/88 - Sep/88	Oct/88 - Mar/89	Apr/89 - Sep/89	Oct/89 - Mar/90	Apr/90 - Sep/90
1	7	4	0	0	1	32	7	1	0	0	0	24	0	0	0	5	0	0	0	5	0
2	4	3	0	0	1	13	3	1	0	0	0	9	0	0	0	4	0	0	0	3	0
3	25	1	0	0	0	79	4	0	0	0	0	17	0	1	0	1	0	0	0	0	0
4	6	16	0	0	4	87	20	5	0	0	0	60	0	0	0	19	0	1	0	16	0
5	30	5	0	0	0	88	29	1	0	1	0	42	18	12	0	29	5	5	0	3	0
6	2	3	0	0	1	18	5	1	0	0	0	12	1	1	0	4	0	0	0	3	0
7	46	1	0	0	0	143	15	0	0	0	0	46	2	1	0	8	0	1	0	0	0
8	6	2	0	0	0	8	3	1	0	0	0	5	2	2	0	4	1	1	0	2	0
10	54	117	0	0	27	1,073	241	24	0	1	0	742	54	25	0	181	6	11	1	115	0
11	29	430	218	230	342	1,682	663	299	73	143	35	970	124	94	0	503	18	93	4	262	1
12	26	0	0	0	0	123	12	0	0	0	0	29	3	1	0	3	0	0	0	0	0
13	21	129	123	101	156	621	267	105	55	71	30	396	51	37	0	142	11	43	2	69	1
19	5	0	0	0	0	71	8	0	0	0	0	20	1	0	0	2	0	0	0	0	0
20	3	1	0	0	0	4	1	0	0	0	0	2	0	0	0	1	0	0	0	0	0
21	29	712	485	507	569	1,484	726	564	429	500	420	997	450	479	417	741	419	505	420	503	418
22	20	0	0	0	0	51	6	0	0	0	0	15	1	0	0	1	0	0	0	0	0
23	16	595	652	384	638	1,521	1,255	502	383	304	218	831	351	244	124	703	148	282	61	315	155
24	38	8	0	0	1	188	34	1	0	0	0	152	0	0	0	8	0	0	0	9	0
25	54	4	0	0	1	104	18	1	0	0	0	89	0	0	0	3	0	0	0	4	0
26	10	16	0	2	3	154	31	4	0	1	0	115	0	2	0	15	0	2	0	17	0
27	42	5	0	0	1	104	19	1	0	0	0	83	0	0	0	5	0	0	0	6	0
28	24	200	130	107	184	832	271	129	45	78	21	391	12	27	0	151	5	35	1	20	0
29	109	306	44	84	157	1,465	312	120	7	65	3	723	5	36	0	262	2	45	1	17	0
30	141	766	439	767	512	655	673	877	340	772	247	494	356	641	177	872	160	670	77	614	146
31	31	2	0	0	0	17	3	1	0	0	0	12	0	0	0	2	0	0	0	3	0
32	75	17	0	0	3	552	93	3	0	0	0	492	0	0	0	16	0	0	0	18	0
33	16	9	0	1	3	41	7	3	0	1	0	20	0	1	0	6	0	1	0	0	0
34	71	41	5	9	25	677	67	14	4	11	6	326	14	9	6	31	16	10	8	10	20
35	40	6	0	0	1	28	4	2	0	1	0	13	0	0	0	4	0	0	0	0	0
36	32	16	0	1	6	264	28	3	0	1	0	130	0	1	0	8	0	1	0	0	0
37	37	36	0	2	13	724	66	7	0	3	0	338	0	2	0	19	0	1	0	0	0
38	21	6	0	1	2	42	6	2	0	1	0	21	0	1	0	5	0	1	0	1	0
39	64	53	0	3	19	1,023	98	11	0	5	0	494	0	3	0	27	0	2	0	0	0
40	68	84	93	20	28	1,191	134	18	5	9	4	582	4	4	0	38	54	14	54	10	49
41	69	102	39	29	71	1,284	183	41	15	25	9	633	8	11	0	63	2	12	1	6	0
42	67	64	0	4	23	1,148	119	13	0	6	0	566	0	3	0	33	0	2	0	0	0
43	89	341	271	445	296	226	259	415	272	485	232	195	241	361	170	376	196	343	144	297	194
44	29	2	1	2	2	4	2	1	2	2	1	3	1	2	1	1	1	2	1	1	1

Table 14

Semiannual Recharge from Deep Percolation of Streambed Seepage
Water Years 1981-1990

Segment Number	Number of Model Cell	Oct/80 - Mar/81	Apr/81 - Sep/81	Oct/81 - Mar/82	Apr/82 - Sep/82	Oct/82 - Mar/83	Apr/83 - Sep/83	Oct/83 - Mar/84	Apr/84 - Sep/84	Oct/84 - Mar/85	Apr/85 - Sep/85	Oct/85 - Mar/86	Apr/86 - Sep/86	Oct/86 - Mar/87	Apr/87 - Sep/87	Oct/87 - Mar/88	Apr/88 - Sep/88	Oct/88 - Mar/89	Apr/89 - Sep/89	Oct/89 - Mar/90	Apr/90 - Sep/90
45	15	164	16	292	112	510	99	167	0	124	11	327	15	64	0	109	11	223	0	35	0
46	1	1	0	2	1	3	1	1	0	1	0	2	0	0	0	1	0	1	0	0	0
48	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	30	143	97	159	124	282	105	97	105	118	94	203	94	117	97	104	86	117	89	62	79
52	51	1,165	896	1,365	1,238	2,326	1,107	846	913	1,014	871	1,666	904	986	836	861	695	972	708	494	538
53	57	900	900	965	989	1,067	966	672	895	906	881	976	915	931	863	780	703	711	731	492	552
54	14	1,136	1,149	1,273	1,287	1,614	1,250	898	1,142	1,198	1,068	1,322	1,142	1,191	1,002	996	823	914	798	608	575
55	17	73	4	131	62	250	56	57	3	35	4	141	7	17	0	32	1	91	0	5	0
56	54	771	222	1,377	755	2,652	617	568	65	346	69	1,461	86	169	21	316	55	940	45	64	11
57	111	1,587	383	1,736	1,855	7,516	1,653	878	125	495	91	3,800	159	227	7	946	53	1,009	18	119	5
58	79	142	105	59	71	555	135	61	9	41	4	272	9	21	0	115	37	32	25	23	14
59	31	463	739	709	793	972	832	521	224	461	115	600	320	181	0	485	39	429	0	194	0
60	36	708	728	757	761	827	743	521	707	691	693	765	739	710	660	636	573	563	589	410	435
61	41	38	116	32	10	92	15	11	0	6	0	43	0	4	0	24	69	23	73	19	67
62	11	99	98	100	100	109	99	77	98	94	98	104	98	97	97	99	98	95	98	75	98
63	12	28	26	28	27	36	28	24	26	26	25	31	26	26	25	27	26	27	25	23	25
64	48	12	0	0	3	84	10	4	0	2	0	38	0	0	0	7	0	0	0	0	0
65	29	36	0	3	14	363	54	8	0	4	0	180	0	2	0	22	0	2	0	1	0
66	28	52	0	6	21	724	116	21	18	14	15	366	16	7	0	31	0	4	0	1	0
67	17	37	11	16	145	126	120	44	62	31	47	62	53	14	127	60	0	13	0	12	0
68	57	190	0	23	85	1,062	212	42	0	22	0	531	0	13	0	134	0	18	0	5	0
69	40	94	92	94	94	105	94	74	92	89	92	99	92	92	92	93	92	90	92	71	92
70	48	264	228	191	211	265	228	206	211	190	223	196	208	193	211	197	218	187	197	180	183
71	40	239	220	206	214	252	222	210	211	202	216	216	210	204	211	206	214	202	205	196	196
72	1	87	97	84	100	90	100	101	102	98	99	98	83	100	90	25	102	99	98	97	98
73	38	79	91	66	91	82	93	88	91	79	81	85	71	84	82	25	92	87	98	74	75
74	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	54	8	0	1	1	63	13	1	0	1	0	46	0	1	0	11	3	3	15	21	34
76	37	43	39	31	36	47	39	34	35	30	35	35	33	31	35	31	36	32	35	26	26
77	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	19	11	0	0	3	260	23	2	0	1	0	118	0	0	0	5	0	0	0	0	0
79	39	32	0	0	8	445	48	6	0	3	0	215	0	1	0	14	0	1	0	0	0
80	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	10	87	77	61	73	96	79	67	69	59	71	71	66	62	70	61	72	63	70	54	54
Total	2,601	12,789	8,836	12,470	12,376	40,693	14,851	9,479	6,831	8,867	6,130	24,161	7,047	7,543	5,424	10,750	5,142	9,034	4,784	5,689	4,144

Unit: acre-ft

Table 15

Semiannual Recharge from Deep Percolation of Streambed Seepage
Water Years 1991-2001

Segment Number	Number of Model Cell	Oct/90 - Mar/91	Apr/91 - Sep/91	Oct/91 - Mar/92	Apr/92 - Sep/92	Oct/92 - Mar/93	Apr/93 - Sep/93	Oct/93 - Mar/94	Apr/94 - Sep/94	Oct/94 - Mar/95	Apr/95 - Sep/95	Oct/95 - Mar/96	Apr/96 - Sep/96	Oct/96 - Mar/97	Apr/97 - Sep/97	Oct/97 - Mar/98	Apr/98 - Sep/98	Oct/98 - Mar/99	Apr/99 - Sep/99	Oct/99 - Mar/00	Apr/00 - Sep/00	Oct/00 - Mar/01	Apr/01 - Sep/01
1	7	14	17	0	0	46	13	0	0	48	32	21	0	50	1	61	31	0	0	19	0	17	1
2	4	5	6	0	0	16	5	0	0	16	11	8	1	18	1	22	11	0	0	7	0	6	4
3	25	0	0	1	0	180	23	0	0	36	2	0	0	0	0	40	0	0	0	0	0	1	28
4	6	36	46	1	0	111	35	0	0	115	80	59	3	127	5	154	79	0	0	52	0	44	12
5	30	3	0	25	0	108	40	0	0	55	31	0	0	0	0	74	23	0	0	0	0	16	0
6	2	7	9	1	0	23	7	0	0	24	16	12	0	26	1	32	16	0	0	10	0	9	2
7	46	28	1	0	0	275	51	0	0	81	8	0	0	0	0	98	0	0	0	0	0	2	259
8	6	6	3	3	0	9	3	0	0	9	6	5	0	10	0	12	6	0	0	4	0	4	15
10	54	420	512	60	2	1,544	423	1	0	1,550	989	566	12	1,452	27	1,859	938	0	0	510	0	461	212
11	29	365	221	171	14	449	232	15	1	455	336	231	43	495	41	582	303	5	1	197	20	187	279
12	26	0	0	4	0	13	5	0	0	7	4	0	0	0	0	9	3	0	0	0	0	2	0
13	21	216	173	78	12	604	199	12	1	593	365	154	21	484	20	617	306	5	1	127	14	140	130
19	5	0	0	2	0	139	39	0	0	44	13	0	0	0	0	67	7	0	0	0	0	3	0
20	3	1	1	1	0	5	2	0	0	5	3	1	0	5	0	5	3	0	0	1	0	1	0
21	29	760	897	957	658	1,607	1,171	490	485	1,616	1,238	48	5	122	7	136	72	1	0	38	1	42	18
22	20	0	0	1	0	102	29	0	0	34	10	0	0	0	0	51	5	0	0	0	0	2	0
23	16	177	184	169	179	199	187	123	135	189	193	136	79	154	40	153	121	26	2	63	32	77	175
24	38	82	106	0	0	316	72	0	0	327	210	92	0	323	0	315	199	0	0	70	0	79	0
25	54	45	59	0	0	192	38	0	0	199	124	40	0	180	0	181	113	0	0	30	0	39	0
26	10	75	82	0	0	227	63	0	0	232	159	94	0	246	0	274	149	0	0	85	0	71	0
27	42	46	56	0	0	176	40	0	0	182	113	57	0	178	0	184	109	0	0	46	0	47	2
28	24	236	94	121	5	813	431	5	1	809	521	17	3	752	4	634	306	3	0	9	1	187	6
29	109	178	291	616	61	1,493	926	16	0	1,504	1,028	276	6	1,493	26	1,412	790	0	0	177	1	484	133
30	141	455	705	723	553	351	790	449	275	272	794	499	429	498	406	329	732	270	45	503	235	461	577
31	31	9	9	0	0	25	7	0	0	25	18	11	0	28	0	34	16	0	0	10	0	8	0
32	75	227	290	0	0	1,110	180	0	0	1,167	649	181	0	935	0	1,038	606	0	0	138	0	179	0
33	16	6	7	16	0	41	25	0	0	43	30	2	0	47	0	38	26	1	6	5	11	18	34
34	71	29	27	29	7	933	363	2	0	752	478	10	7	425	8	513	149	1	0	4	1	49	5
35	40	4	3	6	0	29	15	0	0	30	18	0	0	30	0	24	11	0	0	0	0	7	0
36	32	12	8	15	0	358	154	0	0	265	188	0	0	208	0	241	79	0	0	0	0	28	0
37	37	27	19	35	0	921	360	0	0	740	443	1	0	453	0	543	171	0	0	0	0	62	0
38	21	6	7	8	0	48	22	0	0	47	28	6	0	39	0	42	19	0	0	5	0	10	0
39	64	42	28	50	0	1,379	570	0	0	1,013	737	1	0	709	0	850	264	0	0	0	0	96	0
40	68	71	39	63	0	1,581	692	0	0	1,187	864	1	0	940	0	1,083	368	9	25	21	26	150	35
41	69	62	41	67	0	1,633	709	0	0	1,230	852	3	0	975	0	1,124	370	0	0	5	1	136	4
42	67	51	35	62	0	1,575	670	0	0	1,150	844	2	0	872	0	1,029	330	2	5	5	7	124	9
43	89	204	350	373	370	134	330	504	278	93	332	228	289	148	217	97	278	489	259	200	402	218	345
44	29	1	2	2	1	3	2	1	2	3	3	2	2	4	2	3	3	1	2	3	2	2	2

Table 15

Semiannual Recharge from Deep Percolation of Streambed Seepage
Water Years 1991-2001

Segment Number	Number of Model Cell	Oct/90 - Mar/91	Apr/91 - Sep/91	Oct/91 - Mar/92	Apr/92 - Sep/92	Oct/92 - Mar/93	Apr/93 - Sep/93	Oct/93 - Mar/94	Apr/94 - Sep/94	Oct/94 - Mar/95	Apr/95 - Sep/95	Oct/95 - Mar/96	Apr/96 - Sep/96	Oct/96 - Mar/97	Apr/97 - Sep/97	Oct/97 - Mar/98	Apr/98 - Sep/98	Oct/98 - Mar/99	Apr/99 - Sep/99	Oct/99 - Mar/00	Apr/00 - Sep/00	Oct/00 - Mar/01	Apr/01 - Sep/01
45	15	43	94	169	61	347	169	3	1	331	228	223	114	473	70	403	281	11	1	164	115	167	57
46	1	0	1	1	0	2	1	0	0	2	1	1	1	3	0	2	2	0	0	1	1	1	0
48	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	30	62	113	122	101	199	153	91	106	218	179	159	152	257	133	230	186	105	119	161	139	140	115
52	51	608	988	1,055	889	1,670	1,274	808	897	1,798	1,483	1,327	1,225	2,114	1,099	1,881	1,549	908	954	1,306	1,149	1,148	969
53	57	519	893	736	847	867	975	798	905	927	1,006	874	988	1,046	981	1,031	967	829	877	951	976	881	908
54	14	592	1,122	994	996	1,242	1,311	950	1,097	1,327	1,383	1,204	1,322	1,548	1,307	1,501	1,335	1,086	1,140	1,280	1,296	1,158	1,165
55	17	28	36	142	11	354	128	0	0	349	206	216	49	459	26	319	245	1	0	162	35	96	3
56	54	305	339	1,335	106	3,751	1,277	5	0	3,701	2,139	2,168	451	4,748	231	3,303	2,502	9	6	1,594	322	874	58
57	111	706	1,101	2,118	399	6,342	3,299	69	15	6,416	3,810	2,317	392	6,947	286	5,650	3,792	13	7	1,602	301	1,815	485
58	79	68	50	121	1	539	265	4	1	554	299	15	0	519	1	446	220	2	0	13	1	149	26
59	31	341	434	466	251	644	605	206	0	619	549	391	80	731	49	738	456	33	0	302	178	361	323
60	36	501	748	585	706	697	758	658	700	737	774	669	752	807	747	797	761	640	670	726	744	684	742
61	41	11	9	14	0	86	43	1	0	89	48	3	0	82	0	67	31	0	0	1	0	23	1
62	11	98	99	100	98	105	101	98	98	106	102	101	99	106	98	105	102	94	95	100	99	99	99
63	12	27	27	28	26	35	29	26	26	35	31	29	27	35	26	34	31	26	26	28	26	28	26
64	48	2	0	3	0	90	38	0	0	89	43	0	0	70	0	63	24	0	0	0	0	9	0
65	29	30	36	64	9	451	231	5	2	399	252	17	0	341	1	349	168	0	0	9	0	75	6
66	28	39	59	102	26	957	423	14	4	755	463	31	1	529	2	621	234	0	0	16	0	103	10
67	17	19	103	123	109	143	150	61	22	121	117	68	7	112	7	117	58	1	0	33	2	43	17
68	57	145	183	336	22	1,154	680	0	0	1,149	681	128	0	1,145	11	1,015	616	0	0	91	0	355	55
69	40	93	94	95	93	104	96	92	92	104	98	95	93	103	93	103	98	89	90	94	93	94	93
70	48	182	207	191	208	209	220	202	210	203	206	222	214	232	213	219	203	201	210	206	211	195	213
71	40	198	211	206	210	230	222	206	210	228	220	221	214	236	213	231	217	206	210	213	212	207	213
72	1	98	99	98	99	98	98	98	103	100	98	98	101	104	101	102	100	98	101	99	100	98	100
73	38	75	80	75	80	79	75	77	95	86	76	75	88	97	87	89	82	76	85	79	83	76	84
74	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	54	20	25	0	0	86	15	0	0	88	51	28	0	88	0	100	52	0	0	29	0	34	3
76	37	27	34	30	33	40	37	31	35	40	36	36	35	43	35	40	36	31	34	34	34	32	34
77	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	19	3	1	3	0	323	105	0	0	268	128	0	0	143	0	179	41	0	0	0	0	10	0
79	39	32	2	36	0	583	213	16	2	498	249	24	1	364	0	409	120	10	1	21	3	55	1
80	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	10	56	67	62	66	80	75	62	70	81	72	72	70	87	69	80	72	62	66	67	68	63	68
Total	2,601	8,834	11,582	13,068	7,314	40,275	21,994	6,202	5,871	37,566	26,800	13,577	7,379	35,993	6,694	34,188	21,592	5,346	5,041	11,725	6,942	12,542	8,159

Unit: acre-ft

Table 16

Semiannual Recharge from Deep Percolation of Streambed Seepage
Water Years 2002-2011

Segment Number	Number of Model Cell	Oct/01 - Mar/02	Apr/02 - Sep/02	Oct/02 - Mar/03	Apr/03 - Sep/03	Oct/03 - Mar/04	Apr/04 - Sep/04	Oct/04 - Mar/05	Apr/05 - Sep/05	Oct/05 - Mar/06	Apr/06 - Sep/06	Oct/06 - Mar/07	Apr/07 - Sep/07	Oct/07 - Mar/08	Apr/08 - Sep/08	Oct/08 - Mar/09	Apr/09 - Sep/09	Oct/09 - Mar/10	Apr/10 - Sep/10	Oct/10 - Mar/11	Apr/11 - Sep/11
1	7	0	0	19	0	0	0	84	47	34	25	0	0	42	11	0	0	55	33	47	37
2	4	0	0	11	0	0	0	29	17	14	10	0	0	16	5	0	0	22	12	18	14
3	25	0	0	0	0	0	0	22	5	0	1	0	0	0	0	0	0	2	6	2	0
4	6	0	0	66	0	0	0	204	118	95	69	0	0	111	31	1	0	149	86	125	96
5	30	0	0	0	0	0	0	109	30	1	0	0	0	0	0	0	0	7	1	16	0
6	2	0	0	12	0	0	0	43	25	19	14	1	0	22	6	0	0	29	17	25	19
7	46	0	0	0	0	0	0	79	16	0	0	0	0	0	0	0	0	1	4	3	0
8	6	2	1	8	1	2	1	16	12	10	9	4	0	8	3	1	0	12	7	10	8
10	54	8	6	453	4	8	6	2,594	1,519	986	841	80	169	1,253	473	75	168	1,637	1,095	1,368	1,140
11	29	13	8	294	10	13	10	780	605	442	481	121	255	473	370	115	254	607	509	519	495
12	26	0	0	1	0	1	0	16	4	1	1	1	0	0	0	1	0	3	0	4	0
13	21	15	9	136	11	18	10	911	533	273	287	82	122	400	190	80	120	539	380	414	372
19	5	0	0	0	0	0	0	43	2	0	0	0	0	0	0	0	0	0	0	1	0
20	3	0	0	1	0	0	0	8	4	2	1	0	0	3	1	0	0	4	2	3	2
21	29	5	5	29	5	5	5	190	103	63	46	0	0	83	20	1	0	103	65	101	72
22	20	0	0	0	0	0	0	30	1	0	0	0	0	0	0	0	0	0	0	1	0
23	16	109	99	163	92	107	99	217	197	177	184	128	163	174	180	124	161	187	188	181	188
24	38	0	0	28	0	0	0	487	305	135	133	0	0	287	44	0	0	311	221	255	217
25	54	0	0	12	0	0	0	283	178	65	75	1	0	167	22	1	0	186	126	141	120
26	10	0	0	43	0	0	0	392	234	159	109	1	0	216	46	1	0	245	165	227	180
27	42	0	0	22	0	0	0	289	168	94	86	0	0	158	37	1	0	184	129	149	129
28	24	0	0	0	0	0	0	1,164	627	15	9	0	0	75	0	0	0	335	40	343	157
29	109	0	0	2	0	0	0	2,367	1,332	155	225	0	0	454	7	1	0	922	324	1,069	546
30	141	303	277	546	259	370	279	292	935	445	506	444	494	381	715	302	461	328	669	342	814
31	31	0	0	9	0	0	0	47	27	20	12	0	0	25	6	0	0	29	18	28	21
32	75	0	0	52	0	0	0	1,624	912	255	334	0	0	823	85	0	0	1,007	633	682	569
33	16	0	0	0	0	0	0	71	41	5	8	0	0	12	1	0	0	34	16	35	21
34	71	1	0	2	0	1	0	1,007	353	6	6	1	0	15	1	1	0	70	17	78	29
35	40	0	0	0	0	0	0	46	23	0	0	0	0	5	0	0	0	17	1	17	5
36	32	0	0	0	0	0	0	452	176	1	0	0	0	8	0	0	0	38	3	44	17
37	37	0	0	0	0	0	0	1,096	430	4	1	0	0	22	0	0	0	97	9	110	49
38	21	0	0	4	0	0	0	71	35	9	8	0	0	17	3	0	0	26	13	24	15
39	64	0	0	0	0	0	0	1,723	672	6	2	0	0	32	0	0	0	146	12	164	73
40	68	20	0	36	5	25	0	2,248	982	66	35	16	0	114	2	24	0	323	66	349	156
41	69	0	0	0	0	0	0	2,211	952	11	6	0	0	47	0	0	0	214	20	241	105
42	67	0	0	0	0	0	0	1,942	743	7	3	0	0	35	0	0	0	163	13	189	77
43	89	408	277	238	318	452	280	87	362	172	236	500	493	128	436	350	460	106	265	112	324
44	29	2	2	2	1	1	1	3	3	1	2	2	1	2	2	2	2	3	2	2	2

Table 16

Semiannual Recharge from Deep Percolation of Streambed Seepage
Water Years 2002-2011

Segment Number	Number of Model Cell	Oct/01 - Mar/02	Apr/02 - Sep/02	Oct/02 - Mar/03	Apr/03 - Sep/03	Oct/03 - Mar/04	Apr/04 - Sep/04	Oct/04 - Mar/05	Apr/05 - Sep/05	Oct/05 - Mar/06	Apr/06 - Sep/06	Oct/06 - Mar/07	Apr/07 - Sep/07	Oct/07 - Mar/08	Apr/08 - Sep/08	Oct/08 - Mar/09	Apr/09 - Sep/09	Oct/09 - Mar/10	Apr/10 - Sep/10	Oct/10 - Mar/11	Apr/11 - Sep/11
45	15	26	0	279	59	19	0	391	328	160	220	9	0	265	76	16	1	273	141	344	281
46	1	0	0	2	0	0	0	2	2	1	2	0	0	2	1	0	0	2	1	2	2
48	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	30	131	125	137	112	111	104	252	193	125	153	126	103	163	120	122	109	186	135	189	167
52	51	1,088	1,012	1,224	994	964	877	2,030	1,587	1,115	1,288	1,042	857	1,392	1,035	1,028	843	1,525	1,147	1,594	1,425
53	57	977	977	986	968	919	892	1,048	1,014	980	993	971	876	995	978	939	825	1,005	984	976	1,002
54	14	1,282	1,294	1,340	1,270	1,160	1,018	1,562	1,428	1,320	1,355	1,258	981	1,345	1,263	1,210	1,003	1,404	1,327	1,351	1,385
55	17	0	0	25	0	0	0	377	227	9	48	1	0	164	9	0	0	172	38	326	192
56	54	0	0	252	3	0	0	4,009	2,287	99	464	0	0	1,528	97	1	0	1,635	374	3,153	1,902
57	111	46	0	239	15	57	1	8,183	4,104	383	695	37	2	1,630	73	54	0	2,637	737	3,820	2,133
58	79	47	0	66	14	56	1	928	442	115	95	39	1	170	4	58	0	410	150	445	217
59	31	82	0	386	0	102	0	981	565	438	243	52	0	437	0	83	0	533	167	656	322
60	36	744	742	751	738	704	674	816	779	748	758	740	662	761	745	717	634	772	752	757	767
61	41	0	0	0	0	0	0	163	75	4	15	0	0	13	0	0	0	49	6	24	9
62	11	98	98	99	98	98	98	108	102	99	100	98	98	101	98	98	98	101	99	102	100
63	12	26	25	27	26	26	25	38	32	28	28	26	25	30	26	26	25	32	28	31	30
64	48	0	0	0	0	0	0	119	51	1	0	0	0	3	0	0	0	23	1	26	4
65	29	0	0	0	0	0	0	560	228	1	1	0	0	10	0	0	0	58	6	70	24
66	28	0	0	0	0	0	0	1,039	322	1	2	0	0	14	0	0	0	78	8	94	33
67	17	37	33	46	31	33	33	160	73	44	31	0	55	110	74	53	64	122	110	117	103
68	57	0	0	0	0	0	0	1,592	769	11	30	0	0	82	0	0	0	367	53	427	173
69	40	92	92	93	92	93	92	108	99	93	94	92	92	96	93	92	92	98	95	98	96
70	48	196	217	187	217	197	204	214	207	203	215	200	216	195	212	191	214	201	216	201	219
71	40	204	214	202	214	205	208	237	220	210	216	206	213	210	212	202	213	217	217	216	219
72	1	99	103	98	100	98	104	98	98	98	100	99	101	101	100	99	103	98	100	98	99
73	38	82	96	75	85	78	98	77	78	75	81	81	90	90	86	82	98	78	87	79	83
74	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76	37	31	36	30	35	31	35	42	37	33	35	32	35	35	34	31	36	36	36	35	37
77	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	19	0	0	0	0	0	0	380	110	0	0	0	0	2	0	0	0	17	1	23	4
79	39	0	0	0	0	0	0	689	278	0	0	0	0	5	0	0	0	47	2	63	10
80	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	10	62	73	58	69	61	70	84	73	64	70	63	70	70	68	60	73	71	73	70	73
Total	2,601	6,238	5,825	8,791	5,846	6,017	5,228	49,565	28,533	10,203	11,096	6,552	6,177	15,625	8,101	6,241	6,058	20,385	12,259	22,826	17,179

Unit: acre-ft

Table 17

Semiannual Recharge from Deep Percolation of Direct Precipitation and Return Flow from Applied Water
Water Years 1981-1990

Deep Percolation Zone	Number of Model Cell	Oct/80 - Mar/81	Apr/81 - Sep/81	Oct/81 - Mar/82	Apr/82 - Sep/82	Oct/82 - Mar/83	Apr/83 - Sep/83	Oct/83 - Mar/84	Apr/84 - Sep/84	Oct/84 - Mar/85	Apr/85 - Sep/85	Oct/85 - Mar/86	Apr/86 - Sep/86	Oct/86 - Mar/87	Apr/87 - Sep/87	Oct/87 - Mar/88	Apr/88 - Sep/88	Oct/88 - Mar/89	Apr/89 - Sep/89	Oct/89 - Mar/90	Apr/90 - Sep/90
1	228	7	0	1	3	92	18	1	0	0	0	88	0	1	0	6	0	1	0	5	0
2	115	0	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
3	388	1	0	0	0	40	5	0	0	0	0	12	2	1	0	3	0	1	0	0	0
4	92	0	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
5	1,139	26	51	13	54	280	112	19	72	16	73	95	88	36	77	47	85	28	87	33	108
6	18	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	969	4	4	0	3	115	25	1	2	0	2	34	11	5	2	13	3	3	2	0	1
8	87	0	0	0	0	7	1	0	0	0	0	2	0	0	0	1	0	0	0	0	0
10	1,611	12	4	1	3	324	53	1	3	1	2	95	22	13	2	28	2	6	1	2	1
11	1,560	92	210	52	266	510	328	51	231	29	208	481	211	47	205	71	189	41	200	91	235
12	192	2	0	0	0	44	7	0	0	0	0	13	3	2	0	4	0	1	0	0	0
13	167	248	806	156	907	227	937	216	1,154	185	1,144	199	1,007	315	1,139	207	1,167	293	1,301	369	1,609
19	154	1	0	0	0	34	5	0	0	0	0	10	2	1	0	3	0	1	0	0	0
20	12	0	0	0	0	4	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0
21	592	18	56	8	32	162	79	9	37	8	29	56	44	14	23	26	24	9	19	6	15
22	103	1	0	0	0	26	4	0	0	0	0	8	1	1	0	2	0	0	0	0	0
23	266	60	191	21	146	198	253	34	194	28	160	104	180	60	152	82	147	41	133	41	158
24	534	13	0	3	6	174	32	2	0	0	0	171	0	1	0	10	0	2	0	10	0
25	278	6	0	1	3	81	15	1	0	0	0	80	0	1	0	5	0	1	0	5	0
26	36	1	0	0	0	10	2	0	0	0	0	10	0	0	0	1	0	0	0	1	0
27	424	8	0	2	4	112	21	1	0	0	0	110	0	1	0	7	0	1	0	7	0
28	1,570	123	99	57	149	969	207	54	80	39	68	459	66	27	43	85	47	29	32	18	27
29	1,825	211	28	70	145	1,784	278	53	16	42	13	881	15	30	6	150	19	40	9	19	5
30	1,986	291	345	219	513	388	401	210	665	276	753	487	645	483	916	232	663	391	771	434	777
31	218	5	0	1	3	79	14	1	0	0	0	78	0	1	0	5	0	1	0	5	0
32	1,254	26	0	6	12	345	65	4	1	1	1	341	1	3	1	21	1	5	1	20	1
33	84	7	0	2	4	69	9	2	0	1	0	32	0	1	0	5	0	1	0	1	0
34	361	25	5	8	19	226	34	8	8	6	8	107	8	6	7	18	11	7	9	6	15
35	144	9	0	2	5	97	10	2	0	1	0	44	0	1	0	5	0	1	0	1	0
36	257	10	0	3	6	108	12	2	0	2	0	49	0	2	0	6	0	2	0	1	0
37	345	22	0	6	12	243	27	5	0	3	0	109	0	3	0	14	1	4	0	2	0
38	143	3	0	1	1	39	7	0	0	0	0	37	0	0	0	2	0	0	0	2	0
39	652	34	0	9	18	375	41	8	0	5	0	168	0	5	0	21	1	6	0	3	0
40	800	50	26	15	28	517	60	11	3	7	3	232	3	7	0	29	17	11	15	6	14
41	883	58	24	20	50	559	84	18	18	12	15	253	16	10	9	37	12	11	7	6	5
42	745	42	0	11	23	445	50	9	0	7	0	202	0	7	0	26	1	7	0	3	0
43	2,351	241	585	209	318	371	307	139	364	108	408	464	397	155	377	160	621	237	649	296	523
44	14	4	0	7	6	33	2	2	0	2	0	18	0	1	0	1	0	4	0	0	0

Table 17

Semiannual Recharge from Deep Percolation of Direct Precipitation and Return Flow from Applied Water
Water Years 1981-1990

Deep Percolation Zone	Number of Model Cell	Oct/80 - Mar/81	Apr/81 - Sep/81	Oct/81 - Mar/82	Apr/82 - Sep/82	Oct/82 - Mar/83	Apr/83 - Sep/83	Oct/83 - Mar/84	Apr/84 - Sep/84	Oct/84 - Mar/85	Apr/85 - Sep/85	Oct/85 - Mar/86	Apr/86 - Sep/86	Oct/86 - Mar/87	Apr/87 - Sep/87	Oct/87 - Mar/88	Apr/88 - Sep/88	Oct/88 - Mar/89	Apr/89 - Sep/89	Oct/89 - Mar/90	Apr/90 - Sep/90
45	78	391	3	665	483	2,707	190	224	0	172	0	1,527	1	80	1	126	18	372	2	32	1
46	2	2	0	3	2	13	1	1	0	1	0	7	0	0	0	1	0	2	0	0	0
48	133	217	36	366	294	1,605	116	122	3	88	4	879	6	43	3	67	27	203	21	23	16
49	241	63	3	28	47	350	62	18	2	15	2	196	3	8	1	56	6	12	1	5	0
52	638	1,230	232	2,044	1,914	9,286	889	761	211	556	201	5,072	212	287	132	419	142	1,122	93	124	52
53	2,114	281	567	143	619	1,696	722	124	483	103	437	872	351	56	220	182	120	57	41	32	32
54	284	16	15	8	23	132	53	6	9	3	7	118	22	5	7	18	9	5	6	17	9
55	114	51	1	83	79	419	30	27	2	20	2	226	3	10	1	15	2	46	1	4	0
56	810	271	77	443	555	2,186	188	147	51	106	44	1,178	47	56	129	88	57	247	48	26	42
57	4,308	988	866	500	1,297	5,747	1,616	391	627	322	581	3,103	586	198	448	800	507	263	391	148	332
58	1,385	116	41	37	77	1,024	161	28	15	22	14	487	15	17	7	76	24	25	19	13	16
59	294	10	27	3	34	110	73	7	27	5	18	35	40	11	29	25	18	5	10	4	9
60	1,217	47	67	24	85	389	166	22	48	9	36	364	70	13	28	44	29	12	21	41	29
61	755	60	174	28	95	422	178	28	137	19	128	202	116	19	61	34	119	24	117	19	111
62	118	9	45	5	34	34	44	5	35	5	29	15	31	7	24	9	21	5	17	3	14
63	240	3	3	0	2	57	16	1	2	1	2	18	8	3	3	8	4	2	2	1	2
64	429	17	0	4	8	189	21	3	0	3	0	85	0	3	0	10	1	3	0	1	0
65	275	21	0	5	11	203	27	4	0	3	0	96	0	3	0	14	0	4	0	2	0
66	362	29	2	8	16	265	48	10	11	7	10	131	10	5	0	18	1	5	1	2	0
67	229	13	12	5	72	124	37	4	9	2	7	108	10	3	49	16	5	2	2	8	3
68	1,058	104	1	29	59	882	131	22	0	19	0	439	0	13	0	72	3	18	1	8	0
69	577	9	18	3	12	111	43	4	12	3	10	37	24	9	11	18	13	5	9	4	8
70	2,017	41	33	14	44	486	111	11	26	4	20	492	24	7	15	34	14	9	11	31	11
71	1,927	16	2	0	2	446	69	1	2	1	2	134	28	16	2	37	3	8	2	3	2
72	110	2	0	0	1	25	4	0	0	0	0	25	0	0	0	1	0	0	0	1	0
73	746	4	0	0	0	107	14	0	0	0	0	33	6	4	0	8	0	2	0	1	0
74	347	2	1	0	1	46	7	0	1	0	1	14	4	2	1	5	1	1	1	1	1
75	1,134	25	0	5	9	337	61	4	0	0	0	337	0	3	1	20	5	4	8	23	13
76	1,124	7	5	1	4	153	28	2	4	1	3	49	15	9	5	17	6	5	5	3	4
77	56	1	1	0	1	7	2	0	1	0	1	2	2	1	1	1	1	0	1	0	1
78	179	8	0	2	4	85	10	2	0	1	0	39	0	1	0	5	0	1	0	1	0
79	517	25	0	6	12	267	30	5	0	3	0	120	0	4	0	15	0	4	0	2	0
80	346	8	18	3	13	45	34	5	13	4	12	21	27	10	18	18	21	8	16	7	15
81	151	2	3	1	2	24	8	1	2	1	2	9	5	2	3	4	4	2	3	1	2
Total	46,912	5,746	4,689	5,367	8,648	39,077	8,700	2,854	4,579	2,279	4,459	22,007	4,387	2,152	4,161	3,619	4,192	3,670	4,086	1,985	4,222

Unit: acre-ft

Table 18

Semiannual Recharge from Deep Percolation of Direct Precipitation and Return Flow from Applied Water
Water Years 1991-2001

Deep Percolation Zone	Number of Model Cell	Oct/90 - Mar/91	Apr/91 - Sep/91	Oct/91 - Mar/92	Apr/92 - Sep/92	Oct/92 - Mar/93	Apr/93 - Sep/93	Oct/93 - Mar/94	Apr/94 - Sep/94	Oct/94 - Mar/95	Apr/95 - Sep/95	Oct/95 - Mar/96	Apr/96 - Sep/96	Oct/96 - Mar/97	Apr/97 - Sep/97	Oct/97 - Mar/98	Apr/98 - Sep/98	Oct/98 - Mar/99	Apr/99 - Sep/99	Oct/99 - Mar/00	Apr/00 - Sep/00	Oct/00 - Mar/01	Apr/01 - Sep/01
1	228	125	0	21	0	269	0	8	0	385	0	68	0	175	0	363	24	2	0	56	2	70	0
2	115	2	0	3	0	19	0	0	0	9	0	0	0	0	0	7	0	0	0	0	0	2	0
3	388	20	0	30	0	170	0	1	0	84	0	1	0	2	0	73	4	0	0	1	0	24	10
4	92	3	0	4	0	23	0	0	0	11	0	0	0	0	0	8	0	0	0	0	0	3	0
5	1,139	116	0	171	0	784	0	5	0	420	0	6	0	9	0	413	47	0	0	9	1	135	0
6	18	1	0	1	0	6	0	0	0	3	0	0	0	0	0	2	0	0	0	0	0	1	0
7	969	53	254	76	256	422	256	3	246	206	253	5	243	5	246	185	273	7	305	8	344	62	374
8	87	4	0	5	0	32	0	0	0	16	0	0	0	0	0	13	1	0	0	0	0	4	0
10	1,611	138	4	229	5	1,072	4	7	2	550	3	10	1	12	0	547	62	1	4	11	5	180	5
11	1,560	1,021	1,658	527	1,851	1,776	1,785	345	2,332	2,323	1,889	791	2,042	1,110	2,245	2,095	277	66	175	318	214	370	428
12	192	18	0	31	0	138	0	1	0	74	0	1	0	2	0	74	9	0	0	2	0	24	0
13	167	348	1,174	337	1,346	380	1,281	221	1,718	210	1,345	344	1,484	161	1,617	231	205	68	222	78	251	87	543
19	154	15	0	24	0	113	0	1	0	57	0	1	0	1	0	58	6	0	0	1	0	19	0
20	12	6	0	1	0	13	0	0	0	20	0	3	0	8	0	17	1	0	0	2	0	3	0
21	592	148	66	143	62	796	58	24	45	787	48	87	28	347	24	496	81	8	20	66	30	158	27
22	103	11	0	19	0	91	0	1	0	47	0	1	0	1	0	46	5	0	0	1	0	15	0
23	266	127	60	98	60	275	67	22	47	171	69	26	46	19	38	149	35	1	4	5	9	48	27
24	534	253	0	40	0	556	0	15	0	821	0	130	0	358	0	752	47	4	0	105	3	133	0
25	278	121	0	19	0	266	0	7	0	397	0	61	0	170	0	359	22	2	0	49	2	62	1
26	36	16	0	2	0	37	0	1	0	56	0	7	0	23	0	49	3	0	0	6	0	8	0
27	424	163	0	27	0	365	0	11	0	528	0	86	0	235	0	501	168	51	232	119	205	133	177
28	1,570	351	10	293	7	2,127	11	24	4	2,139	12	167	6	864	6	1,250	130	4	2	129	19	356	14
29	1,825	675	30	680	32	3,440	34	71	17	3,380	26	417	12	1,570	10	2,270	300	12	3	321	48	758	28
30	1,986	525	265	248	363	542	255	325	624	594	257	440	612	473	697	578	294	476	843	453	560	457	466
31	218	121	0	18	0	273	0	6	0	415	0	59	0	171	0	368	21	2	0	48	1	60	0
32	1,254	499	1	80	1	1,101	1	30	1	1,573	1	259	1	708	1	1,491	95	8	1	211	6	266	1
33	84	33	29	32	32	154	31	10	31	152	33	24	35	70	37	93	12	1	2	13	4	29	10
34	361	85	6	74	5	535	8	8	3	528	9	44	6	218	6	311	34	1	1	32	7	86	7
35	144	34	0	30	0	238	0	2	0	236	0	17	0	94	0	136	13	0	0	13	1	37	1
36	257	39	0	35	0	247	0	3	0	244	0	20	0	102	0	148	15	0	0	16	2	43	1
37	345	82	0	75	0	513	0	6	0	494	0	43	0	215	0	313	33	1	0	34	4	91	2
38	143	54	0	9	0	115	0	3	0	170	0	29	0	75	0	155	10	1	0	23	1	29	0
39	652	130	0	116	0	829	0	9	0	834	0	66	0	340	0	495	50	2	0	52	5	143	2
40	800	182	0	159	0	1,169	0	12	0	1,183	0	90	0	473	0	689	74	4	11	74	18	202	17
41	883	190	2	168	1	1,199	3	14	1	1,183	2	95	1	493	1	716	76	2	3	77	12	208	10
42	745	160	1	144	1	1,023	1	11	1	1,028	1	81	1	420	1	610	64	2	3	65	10	178	7
43	2,351	457	320	297	354	614	265	361	463	681	257	473	310	521	320	636	336	405	493	484	443	504	253
44	14	5	0	7	0	22	0	1	0	26	0	10	1	22	0	24	4	2	0	8	1	6	1

Table 18

Semiannual Recharge from Deep Percolation of Direct Precipitation and Return Flow from Applied Water
Water Years 1991-2001

Deep Percolation Zone	Number of Model Cell	Oct/90 - Mar/91	Apr/91 - Sep/91	Oct/91 - Mar/92	Apr/92 - Sep/92	Oct/92 - Mar/93	Apr/93 - Sep/93	Oct/93 - Mar/94	Apr/94 - Sep/94	Oct/94 - Mar/95	Apr/95 - Sep/95	Oct/95 - Mar/96	Apr/96 - Sep/96	Oct/96 - Mar/97	Apr/97 - Sep/97	Oct/97 - Mar/98	Apr/98 - Sep/98	Oct/98 - Mar/99	Apr/99 - Sep/99	Oct/99 - Mar/00	Apr/00 - Sep/00	Oct/00 - Mar/01	Apr/01 - Sep/01
45	78	454	1	651	1	1,807	2	84	3	2,045	3	905	91	1,808	1	1,979	378	173	33	702	121	528	72
46	2	2	0	3	0	9	0	0	0	10	0	4	1	9	0	10	2	1	0	3	1	3	0
48	133	260	14	382	15	1,073	21	54	10	1,241	23	528	67	1,093	17	1,174	240	101	27	411	83	312	54
49	241	131	7	155	7	515	11	23	5	445	13	107	11	272	7	384	73	7	4	91	21	158	13
52	638	1,518	224	2,240	229	6,181	295	369	148	7,161	302	3,054	499	6,321	200	6,717	1,490	630	224	2,360	562	1,823	400
53	2,114	591	60	622	56	2,900	99	80	28	2,604	99	394	53	1,384	57	1,971	362	20	20	312	93	672	86
54	284	150	19	36	10	316	21	17	7	446	28	94	14	215	15	417	57	7	6	75	16	96	15
55	114	63	0	90	0	272	0	10	0	330	0	133	10	277	0	297	55	19	3	100	16	69	9
56	810	334	4	471	4	1,409	4	51	3	1,722	4	692	54	1,433	2	1,537	288	98	19	519	85	360	54
57	4,308	2,105	261	2,235	245	8,969	274	294	167	8,142	255	1,462	152	4,391	105	6,269	1,103	84	149	1,184	361	2,308	280
58	1,385	347	3	341	3	1,917	7	33	2	1,849	7	203	4	855	3	1,254	176	8	4	166	33	401	42
59	294	39	11	62	13	240	20	4	4	139	18	4	4	7	3	133	36	1	3	5	6	50	20
60	1,217	470	44	93	21	1,062	45	42	15	1,562	64	270	26	687	28	1,408	154	18	16	219	41	284	47
61	755	338	875	355	1,002	1,033	953	173	1,281	924	1,001	324	1,106	478	1,207	641	139	29	94	87	109	195	313
62	118	22	1,630	183	1,561	214	1,357	139	1,222	146	1,081	120	889	103	798	112	720	94	769	85	756	87	764
63	240	25	6	41	7	167	11	3	3	94	11	3	2	5	2	92	28	3	11	5	13	35	15
64	429	62	0	56	0	413	0	5	0	399	0	32	0	169	0	246	26	1	0	25	3	68	1
65	275	69	4	67	4	388	4	7	3	368	3	40	1	171	1	249	30	1	1	31	5	77	3
66	362	90	13	92	13	501	13	11	8	469	9	55	4	224	3	324	42	2	2	43	8	102	6
67	229	135	13	30	9	299	11	12	4	416	11	81	3	194	3	400	35	3	1	63	5	80	3
68	1,058	306	0	311	0	1,565	0	29	0	1,372	0	191	1	721	0	1,045	141	5	0	153	20	339	9
69	577	50	53	89	55	356	57	11	34	197	47	10	18	13	14	182	53	3	15	8	18	67	26
70	2,017	715	17	103	13	1,613	14	42	10	2,479	14	337	7	1,012	6	2,187	144	12	7	275	15	349	15
71	1,927	178	1	300	1	1,371	1	9	0	717	1	12	0	17	0	730	92	0	0	14	2	236	1
72	110	35	0	5	0	78	0	2	0	113	0	17	0	50	0	107	7	0	0	15	0	20	0
73	746	45	0	72	0	381	0	2	0	185	0	2	0	4	0	180	20	1	4	5	6	61	0
74	347	20	0	31	0	169	1	1	0	82	1	1	0	2	0	78	7	0	0	1	0	25	0
75	1,134	457	2	77	1	1,018	3	28	2	1,432	6	239	4	658	3	1,395	107	10	4	209	13	287	0
76	1,124	64	3	103	3	533	4	5	2	247	4	4	2	8	2	253	26	1	2	5	3	81	3
77	56	2	0	4	0	21	0	0	0	10	0	0	0	0	0	9	1	0	0	0	0	3	0
78	179	28	0	26	0	176	0	2	0	168	0	15	0	74	0	108	12	0	0	12	1	31	1
79	517	88	1	79	1	566	1	7	0	553	1	45	1	234	1	341	38	1	0	36	4	95	2
80	346	21	23	33	24	103	29	8	16	64	28	8	15	11	15	58	32	4	12	7	17	28	23
81	151	11	5	17	6	74	7	2	4	38	7	2	4	3	3	37	10	1	3	2	4	14	6
Total	46,912	15,552	7,174	13,730	7,683	59,450	7,329	3,131	8,519	60,205	7,251	13,347	7,871	32,368	7,749	49,042	8,957	2,470	3,762	10,117	4,650	14,341	4,695

Unit: acre-ft

Table 19

Semiannual Recharge from Deep Percolation of Direct Precipitation and Return Flow from Applied Water
Water Years 2002-2011

Deep Percolation Zone	Number of Model Cell	Oct/01 - Mar/02	Apr/02 - Sep/02	Oct/02 - Mar/03	Apr/03 - Sep/03	Oct/03 - Mar/04	Apr/04 - Sep/04	Oct/04 - Mar/05	Apr/05 - Sep/05	Oct/05 - Mar/06	Apr/06 - Sep/06	Oct/06 - Mar/07	Apr/07 - Sep/07	Oct/07 - Mar/08	Apr/08 - Sep/08	Oct/08 - Mar/09	Apr/09 - Sep/09	Oct/09 - Mar/10	Apr/10 - Sep/10	Oct/10 - Mar/11	Apr/11 - Sep/11
1	228	8	0	70	2	12	0	569	1	129	84	3	0	195	2	28	0	324	45	278	11
2	115	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	2	0	2	0
3	388	1	1	2	1	0	1	93	5	6	4	2	3	1	3	1	5	22	6	18	3
4	92	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	2	0	2	0
5	1,139	0	2	9	3	3	3	476	24	19	13	1	2	1	2	4	3	95	18	88	4
6	18	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	1	0
7	969	2	395	5	384	1	418	244	445	14	499	2	3	1	3	2	7	56	16	45	5
8	87	0	0	0	0	0	0	17	0	1	0	0	0	0	0	0	0	3	0	3	0
10	1,611	0	0	8	0	3	0	606	13	21	7	0	0	0	0	4	0	115	12	108	0
11	1,560	198	328	385	244	102	285	3,150	178	720	590	142	227	1,149	155	260	632	1,921	679	1,516	501
12	192	0	0	1	1	1	0	82	3	3	2	0	0	0	0	1	1	16	3	15	1
13	167	197	435	72	316	65	396	188	275	151	260	173	336	145	215	89	271	160	196	66	184
19	154	0	0	1	0	0	0	66	1	3	1	0	0	0	0	0	0	13	2	12	0
20	12	0	0	3	0	1	0	30	0	6	4	0	0	10	0	1	0	17	2	14	0
21	592	6	35	11	32	8	34	247	15	11	11	3	7	3	7	4	8	49	13	46	8
22	103	0	0	1	0	0	0	52	1	2	1	0	0	0	0	0	0	10	1	9	0
23	266	1	2	4	4	2	3	172	27	18	17	4	7	2	5	4	9	50	27	36	10
24	534	14	0	134	3	23	0	1,207	1	254	171	6	0	403	3	53	0	665	94	572	21
25	278	7	1	63	2	11	1	581	3	121	84	3	2	195	4	26	2	319	47	275	12
26	36	1	0	8	0	1	0	80	0	16	11	0	0	27	0	3	0	44	6	38	2
27	424	40	224	112	153	45	182	802	139	201	252	54	195	293	162	76	180	451	207	396	147
28	1,570	13	1	66	7	26	1	2,797	45	231	139	5	3	346	6	21	4	615	100	920	22
29	1,825	31	2	162	19	62	3	4,416	119	555	354	16	10	712	18	56	12	1,227	230	1,750	48
30	1,986	568	944	395	684	393	888	592	187	490	438	457	538	536	284	467	467	562	345	549	234
31	218	6	0	63	1	10	0	627	0	123	85	3	0	215	1	24	0	348	45	299	8
32	1,254	29	1	265	6	46	1	2,357	3	498	338	12	2	789	7	106	2	1,311	187	1,123	43
33	84	2	0	7	2	2	0	187	6	23	14	1	0	30	2	2	1	52	11	70	5
34	361	4	1	16	3	7	1	652	13	57	32	2	1	84	3	6	2	145	25	213	8
35	144	1	0	6	0	3	0	292	4	23	13	1	0	35	0	2	0	61	9	94	1
36	257	1	0	7	0	3	0	301	5	26	16	1	0	39	0	2	0	68	10	103	1
37	345	3	0	17	1	6	0	703	9	60	36	1	0	89	0	5	0	156	23	236	2
38	143	3	0	30	1	5	0	246	0	55	36	1	0	84	1	12	0	139	19	120	5
39	652	5	0	25	2	10	0	1,114	15	92	54	2	0	137	0	8	0	243	35	367	4
40	800	10	3	48	13	19	5	1,602	45	151	101	5	4	212	11	17	6	378	74	549	28
41	883	7	1	40	4	15	1	1,642	25	138	83	3	1	202	1	12	1	359	55	542	7
42	745	6	0	32	2	12	0	1,257	21	110	66	3	0	162	0	9	0	285	43	429	5
43	2,351	361	142	461	379	426	193	669	155	533	460	239	116	595	205	521	252	643	362	637	269
44	14	1	0	6	1	1	0	24	1	5	4	0	0	9	0	1	0	10	1	17	1

Table 19

Semiannual Recharge from Deep Percolation of Direct Precipitation and Return Flow from Applied Water
Water Years 2002-2011

Deep Percolation Zone	Number of Model Cell	Oct/01 - Mar/02	Apr/02 - Sep/02	Oct/02 - Mar/03	Apr/03 - Sep/03	Oct/03 - Mar/04	Apr/04 - Sep/04	Oct/04 - Mar/05	Apr/05 - Sep/05	Oct/05 - Mar/06	Apr/06 - Sep/06	Oct/06 - Mar/07	Apr/07 - Sep/07	Oct/07 - Mar/08	Apr/08 - Sep/08	Oct/08 - Mar/09	Apr/09 - Sep/09	Oct/09 - Mar/10	Apr/10 - Sep/10	Oct/10 - Mar/11	Apr/11 - Sep/11
45	78	118	2	540	86	118	2	1,976	96	454	346	33	2	776	23	121	5	886	100	1,443	79
46	2	1	0	3	0	1	0	10	1	2	2	0	0	4	0	1	0	4	1	7	0
48	133	83	14	326	74	82	15	1,197	92	265	229	27	8	468	36	82	16	538	84	863	81
49	241	21	8	69	32	34	10	560	47	133	94	11	7	134	17	28	11	212	59	246	34
52	638	603	168	1,975	602	594	181	6,776	774	1,617	1,483	233	115	2,737	372	586	201	3,210	671	4,961	719
53	2,114	57	38	199	92	93	47	3,283	217	488	373	37	37	589	74	81	49	1,003	281	1,368	143
54	284	30	24	103	45	36	29	505	60	149	134	24	31	204	49	60	42	324	91	279	71
55	114	11	0	64	8	11	0	289	14	51	44	3	0	114	2	11	0	124	12	234	9
56	810	59	1	339	42	62	1	1,506	80	279	237	19	3	599	20	64	6	662	69	1,229	55
57	4,308	154	104	637	169	266	47	10,582	522	1,823	1,165	73	30	2,040	95	220	53	3,415	805	4,612	271
58	1,385	26	8	95	31	39	11	2,266	92	293	196	14	8	369	26	33	15	648	149	891	67
59	294	1	4	5	6	3	6	137	21	12	15	3	6	2	5	4	8	36	19	31	9
60	1,217	42	11	274	40	54	15	2,100	78	501	378	28	21	758	58	126	42	1,258	228	1,064	116
61	755	123	258	71	188	48	240	1,112	156	174	210	104	193	219	126	69	181	315	147	299	124
62	118	82	760	76	704	91	743	76	2	2	1	0	0	0	0	0	0	7	1	6	0
63	240	2	9	3	3	1	2	94	11	5	7	1	5	1	1	1	2	20	7	19	2
64	429	2	0	11	1	4	0	479	8	39	23	1	0	59	0	4	0	104	16	158	2
65	275	3	0	13	1	5	0	457	9	47	29	1	0	65	0	4	0	115	20	170	3
66	362	3	0	18	1	7	0	588	12	62	39	1	0	85	0	6	0	149	26	221	3
67	229	10	13	73	14	14	13	578	1	132	86	3	22	199	24	29	22	326	66	283	31
68	1,058	13	0	69	6	27	0	1,917	45	231	146	5	0	302	1	23	0	516	99	750	16
69	577	1	3	5	4	2	4	171	23	12	17	3	11	2	10	5	12	39	19	37	10
70	2,017	34	2	325	11	55	3	3,335	16	647	467	17	8	1,133	18	128	11	1,838	257	1,581	59
71	1,927	0	0	10	0	3	0	715	17	25	9	0	0	0	0	3	0	131	14	123	0
72	110	2	0	19	1	3	0	171	0	35	28	1	0	55	1	7	0	89	12	67	3
73	746	0	0	3	0	1	0	196	5	8	3	0	0	0	0	1	0	36	5	35	0
74	347	0	0	2	0	0	0	80	2	3	1	0	0	0	0	0	0	15	2	15	0
75	1,134	31	3	276	16	42	4	2,190	15	484	376	15	10	720	21	114	16	1,173	181	896	54
76	1,124	0	0	5	0	1	0	260	4	8	3	0	0	0	0	1	0	48	4	46	0
77	56	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	2	0	2	0
78	179	1	0	5	0	2	0	202	3	18	11	0	0	26	0	2	0	47	7	70	1
79	517	3	0	15	1	6	0	658	10	55	32	1	0	81	0	5	0	145	22	220	3
80	346	0	0	1	0	0	0	62	2	2	1	0	0	0	0	0	0	12	1	11	0
81	151	0	0	1	0	0	0	42	3	2	2	0	0	0	0	0	1	9	2	8	1
Total	46,912	3,041	3,950	8,166	4,452	3,031	3,790	72,747	4,221	12,927	10,468	1,805	1,978	18,441	2,085	3,646	2,561	28,389	6,425	33,801	3,568

Unit: acre-ft

Table 20

Semiannual Recharge from Subsurface Inflow through Basin Boundary
Water Years 1981-1990

Subsurface Inflow Zone	Number of Model Cell	Oct/80 - Mar/81	Apr/81 - Sep/81	Oct/81 - Mar/82	Apr/82 - Sep/82	Oct/82 - Mar/83	Apr/83 - Sep/83	Oct/83 - Mar/84	Apr/84 - Sep/84	Oct/84 - Mar/85	Apr/85 - Sep/85	Oct/85 - Mar/86	Apr/86 - Sep/86	Oct/86 - Mar/87	Apr/87 - Sep/87	Oct/87 - Mar/88	Apr/88 - Sep/88	Oct/88 - Mar/89	Apr/89 - Sep/89	Oct/89 - Mar/90	Apr/90 - Sep/90
1	50	42	0	5	17	475	97	8	0	1	0	427	0	4	0	39	0	4	0	37	0
2	41	5	0	0	1	28	5	2	0	0	0	16	0	0	0	6	0	1	0	4	0
3	24	1	0	0	0	85	6	0	0	0	0	21	1	1	0	3	0	1	0	0	0
4	37	109	0	0	27	617	140	35	0	0	0	412	1	2	0	132	0	6	0	106	0
5	157	21	6	0	3	457	113	3	7	2	6	160	60	33	12	80	24	16	12	12	18
6	16	157	0	0	0	1,146	234	26	0	0	0	742	24	18	0	246	0	1	0	145	0
7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	18	227	0	25	82	2,383	491	53	0	5	0	2,047	20	35	0	243	8	34	0	199	0
10	74	315	2	25	102	3,395	698	65	0	4	0	2,671	60	48	0	372	4	36	0	280	0
11	13	99	65	53	94	435	177	66	31	31	19	287	44	23	9	112	13	22	9	65	13
12	15	2	0	0	0	232	26	0	0	0	0	58	7	3	0	10	0	1	0	0	0
19	46	7	0	0	0	681	86	0	0	0	0	199	22	11	0	31	0	4	0	1	0
20	6	151	0	41	75	1,166	215	55	0	29	0	907	6	19	0	151	0	43	0	61	0
21	46	251	97	77	145	988	310	124	36	72	22	511	58	60	15	281	18	76	14	73	9
24	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	85	315	224	160	325	1,765	468	179	120	114	85	832	74	52	40	231	49	62	31	36	25
29	120	290	33	84	164	1,835	327	95	6	58	1	905	4	34	0	230	4	45	0	17	0
32	38	346	49	209	185	2,051	288	125	55	97	47	1,228	49	73	49	259	46	112	43	46	37
34	5	336	49	207	182	2,341	249	123	55	97	47	1,208	49	72	49	250	46	111	43	36	37
36	8	337	49	207	182	1,847	252	123	55	97	47	1,030	49	72	49	251	46	111	43	36	37
37	14	382	49	214	202	2,596	324	133	55	102	47	1,377	49	76	49	277	46	115	43	38	37
39	23	378	49	213	199	2,508	317	132	55	102	47	1,344	49	76	49	273	46	115	43	37	37
40	18	352	49	207	201	2,800	285	126	55	97	47	1,477	49	72	49	264	46	111	43	36	37
41	22	383	49	207	182	2,761	249	123	55	97	47	1,459	49	72	49	284	46	111	43	36	37
42	20	383	49	213	202	2,544	325	133	55	102	47	1,367	49	76	49	276	46	115	43	38	37
44	30	1,619	331	2,396	2,047	9,983	980	913	402	823	317	5,549	348	629	334	654	313	1,372	267	57	42
45	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	2	190	0	336	168	1,077	69	135	0	101	0	624	0	42	0	77	0	208	0	9	0
48	57	394	0	687	262	1,903	90	239	0	220	0	1,209	0	86	0	158	0	410	0	11	0
49	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	108	1,541	0	2,723	1,238	9,266	436	1,078	0	754	0	5,229	0	281	0	573	0	1,646	0	45	0
53	95	843	6	1,187	832	5,566	533	441	0	356	0	3,145	0	148	0	367	0	667	0	20	0
54	13	145	140	162	159	222	158	113	138	151	128	182	139	150	119	126	96	114	92	76	63
55	14	1,176	0	2,079	962	6,601	555	786	0	504	0	3,609	0	223	0	409	0	1,310	0	41	0
56	111	196	21	323	310	1,612	111	104	7	74	6	870	5	35	2	55	10	177	4	13	0
57	178	3,960	1,025	4,177	4,595	19,109	4,225	2,143	380	1,232	290	9,712	458	572	57	2,414	187	2,412	73	305	28
58	32	17	10	6	10	106	20	6	2	4	1	51	2	3	0	13	4	4	3	2	2
60	32	235	242	243	258	380	278	167	229	217	221	352	246	224	208	210	180	177	183	138	136
61	42	788	313	481	409	4,372	592	274	110	210	95	2,371	99	158	98	571	219	271	220	110	197
64	9	1	0	0	0	6	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0

Table 20

Semiannual Recharge from Subsurface Inflow through Basin Boundary
Water Years 1981-1990

Subsurface Inflow Zone	Number of Model Cell	Oct/80 - Mar/81	Apr/81 - Sep/81	Oct/81 - Mar/82	Apr/82 - Sep/82	Oct/82 - Mar/83	Apr/83 - Sep/83	Oct/83 - Mar/84	Apr/84 - Sep/84	Oct/84 - Mar/85	Apr/85 - Sep/85	Oct/85 - Mar/86	Apr/86 - Sep/86	Oct/86 - Mar/87	Apr/87 - Sep/87	Oct/87 - Mar/88	Apr/88 - Sep/88	Oct/88 - Mar/89	Apr/89 - Sep/89	Oct/89 - Mar/90	Apr/90 - Sep/90
65	18	583	50	243	292	4,254	598	174	55	127	47	2,203	49	94	49	404	48	137	43	46	37
66	26	613	55	255	309	5,234	815	229	155	168	132	2,733	138	113	49	419	51	141	45	48	37
67	4	20	9	9	88	102	64	20	28	13	22	69	25	6	71	31	1	6	0	8	1
68	57	1,346	4	239	662	8,924	1,574	295	0	187	0	4,451	0	121	0	947	15	165	4	62	0
69	20	6	7	6	7	13	9	5	6	6	6	8	7	6	6	7	6	6	6	5	6
70	58	95	81	64	79	234	105	68	74	60	76	214	72	62	70	72	72	61	65	66	60
71	15	1	0	0	0	15	2	0	0	0	0	4	1	1	0	1	0	0	0	0	0
72	27	8	0	1	1	126	20	1	0	0	0	128	0	0	0	6	0	0	0	6	0
73	18	9	10	7	10	21	12	10	10	9	9	13	8	10	9	4	10	10	11	8	8
75	115	50	0	9	16	612	114	8	0	1	0	586	1	6	2	47	12	11	36	67	72
76	81	1	1	0	1	29	5	0	1	0	1	9	3	2	1	3	1	1	1	1	1
77	9	0	1	0	1	6	2	0	1	0	1	2	1	1	1	1	1	0	1	0	1
78	26	168	0	18	62	2,943	279	32	0	18	0	1,339	0	13	0	86	1	15	0	6	0
79	47	125	0	13	45	1,556	171	24	0	13	0	732	0	10	0	63	1	11	0	5	0
80	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	16	2	4	1	3	29	9	1	2	1	2	10	6	3	4	5	4	2	3	2	3
Total	**2,297**	**19,021**	**3,131**	**17,813**	**15,394**	**119,435**	**17,511**	**8,995**	**2,239**	**6,357**	**1,866**	**66,093**	**2,388**	**3,932**	**1,545**	**12,024**	**1,719**	**10,588**	**1,462**	**2,494**	**1,053**

Unit: acre-ft

Table 21

Semiannual Recharge from Subsurface Inflow through Basin Boundary
Water Years 1991-2001

Subsurface Inflow Zone	Number of Model Cell	Oct/90 - Mar/91	Apr/91 - Sep/91	Oct/91 - Mar/92	Apr/92 - Sep/92	Oct/92 - Mar/93	Apr/93 - Sep/93	Oct/93 - Mar/94	Apr/94 - Sep/94	Oct/94 - Mar/95	Apr/95 - Sep/95	Oct/95 - Mar/96	Apr/96 - Sep/96	Oct/96 - Mar/97	Apr/97 - Sep/97	Oct/97 - Mar/98	Apr/98 - Sep/98	Oct/98 - Mar/99	Apr/99 - Sep/99	Oct/99 - Mar/00	Apr/00 - Sep/00	Oct/00 - Mar/01	Apr/01 - Sep/01
1	50	532	67	82	0	1,206	49	29	0	1,656	122	340	2	858	4	1,623	212	8	0	285	6	330	0
2	41	12	11	5	0	57	8	0	0	42	18	14	1	30	1	47	19	0	0	12	0	14	6
3	24	14	0	22	0	249	16	1	0	86	1	0	0	1	0	80	2	0	0	1	0	17	19
4	37	261	308	29	0	899	235	1	0	845	536	395	17	851	34	1,073	332	0	0	279	0	269	77
5	157	133	0	248	0	1,135	49	6	0	604	37	7	0	10	0	618	63	0	0	0	0	182	0
6	16	460	21	128	0	1,743	0	3	0	1,593	446	674	0	1,516	0	1,994	414	0	0	598	0	571	0
7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	18	2,520	374	456	0	6,004	279	134	0	7,833	677	1,630	15	4,073	26	7,710	1,088	35	0	1,369	26	1,611	146
10	74	2,899	764	628	3	7,806	600	137	0	9,342	1,433	2,060	20	5,183	42	9,467	1,842	35	0	1,757	26	2,066	193
11	13	202	60	58	12	378	59	14	6	518	81	112	14	279	13	495	90	4	3	92	11	103	63
12	15	26	0	48	0	210	7	1	0	113	6	1	0	2	0	115	16	0	0	2	0	37	0
19	46	96	0	173	0	1,642	257	5	0	660	82	7	0	9	0	816	88	0	0	7	1	143	0
20	6	936	168	294	40	2,552	329	44	0	3,516	437	568	11	1,779	24	3,194	518	12	0	463	9	591	61
21	46	394	0	368	0	1,450	0	0	0	1,517	0	246	0	1,172	0	1,428	638	13	12	355	27	460	166
24	28	0	0	0	0	71	0	0	0	95	2	13	0	53	0	50	0	0	0	0	0	0	0
28	85	575	101	405	10	2,881	431	27	3	2,890	520	179	6	1,583	8	1,844	399	0	0	126	0	525	6
29	120	436	0	680	0	2,753	287	17	0	2,735	330	324	0	1,700	0	2,049	528	0	0	250	0	681	0
32	38	653	233	666	51	2,707	534	75	56	2,901	719	713	95	2,181	73	2,717	900	78	66	574	97	774	51
34	5	473	161	646	51	3,036	489	67	56	2,996	558	604	95	2,107	72	2,581	744	76	66	487	95	723	51
36	8	475	161	649	51	2,189	497	67	56	2,246	567	605	95	1,789	72	2,109	731	76	66	488	95	667	51
37	14	560	176	734	51	3,298	775	72	56	3,201	910	639	95	2,305	72	2,770	888	77	66	515	98	785	52
39	23	556	174	727	51	3,233	766	71	56	3,120	916	636	95	2,284	72	2,743	878	76	66	512	97	780	51
40	18	577	176	771	51	3,724	877	71	56	3,570	1,044	653	95	2,577	72	3,095	942	76	66	528	95	852	51
41	22	575	182	768	51	3,628	858	74	56	3,473	1,001	654	95	2,535	72	3,040	908	76	66	511	95	821	51
42	20	567	161	739	51	3,326	733	72	56	3,200	881	641	95	2,354	72	2,824	811	76	66	505	95	789	51
44	30	308	74	482	62	1,300	107	104	79	1,526	145	682	170	1,392	107	1,441	381	159	103	561	173	406	34
45	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	2	165	5	287	0	729	35	26	0	795	56	385	43	773	0	807	199	66	0	293	46	240	4
48	57	414	0	606	0	1,451	0	83	0	1,381	0	792	0	1,294	0	1,525	205	218	0	658	0	492	0
49	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	108	1,047	0	2,319	0	6,172	0	82	0	6,791	0	3,173	0	6,605	0	6,748	1,100	251	0	2,275	0	1,841	0
53	95	1,097	0	1,519	0	5,346	0	119	0	5,352	0	1,671	0	3,877	0	4,670	0	44	0	1,017	0	1,142	0
54	13	91	135	128	117	196	159	120	129	224	169	162	159	222	156	242	164	135	130	168	152	155	134
55	14	869	259	2,293	11	6,200	1,171	85	0	6,724	1,952	3,448	493	7,299	152	6,098	2,827	170	0	2,567	303	1,622	0
56	111	241	0	346	0	1,042	0	34	0	1,274	0	509	28	1,059	0	1,129	156	55	0	361	0	249	0
57	178	2,218	2,623	5,544	981	17,256	7,755	231	66	17,204	8,942	5,793	939	17,409	679	14,902	9,126	47	31	4,056	772	4,856	1,181
58	32	28	4	31	0	165	18	2	0	161	20	15	0	92	0	111	0	0	0	0	0	0	0
60	32	302	239	210	219	550	243	216	215	720	253	291	234	466	232	690	276	203	204	293	235	300	236
61	42	1,160	334	1,496	102	5,636	1,039	149	112	5,729	1,183	1,309	190	4,173	145	5,022	1,563	151	132	1,050	190	1,587	102
64	9	1	0	1	0	11	1	0	0	11	1	1	0	5	0	7	1	0	0	0	0	2	0

Table 21

Semiannual Recharge from Subsurface Inflow through Basin Boundary
Water Years 1991-2001

Subsurface Inflow Zone	Number of Model Cell	Oct/90 - Mar/91	Apr/91 - Sep/91	Oct/91 - Mar/92	Apr/92 - Sep/92	Oct/92 - Mar/93	Apr/93 - Sep/93	Oct/93 - Mar/94	Apr/94 - Sep/94	Oct/94 - Mar/95	Apr/95 - Sep/95	Oct/95 - Mar/96	Apr/96 - Sep/96	Oct/96 - Mar/97	Apr/97 - Sep/97	Oct/97 - Mar/98	Apr/98 - Sep/98	Oct/98 - Mar/99	Apr/99 - Sep/99	Oct/99 - Mar/00	Apr/00 - Sep/00	Oct/00 - Mar/01	Apr/01 - Sep/01
65	18	894	331	1,208	107	5,754	1,497	115	77	5,511	1,652	848	103	3,967	81	4,650	1,574	82	69	662	115	1,318	88
66	26	918	410	1,312	188	7,182	1,991	152	98	6,434	2,185	899	113	4,368	90	5,343	1,678	83	73	688	123	1,368	105
67	4	63	47	62	47	181	65	30	10	219	52	60	3	125	4	211	37	1	0	39	2	50	7
68	57	2,066	843	2,966	104	12,477	3,123	133	1	11,573	3,127	1,462	5	8,564	52	9,455	3,471	23	0	1,117	89	3,184	296
69	20	9	9	11	9	29	10	6	8	19	9	7	7	7	7	18	9	6	6	6	6	10	7
70	58	279	69	91	69	567	73	76	68	835	68	174	68	388	68	749	107	66	66	150	69	169	64
71	15	6	0	10	0	45	0	0	0	24	0	0	0	1	0	24	3	0	0	0	0	8	0
72	27	176	0	26	0	396	0	9	0	570	0	85	0	252	0	543	34	1	0	73	0	102	0
73	18	13	9	16	9	50	8	9	10	29	8	8	10	11	9	20	0	0	0	0	0	0	9
75	115	731	41	118	2	1,691	28	43	2	2,327	86	410	6	1,142	5	2,283	193	0	0	343	0	477	6
76	81	12	1	20	1	103	1	1	0	48	1	1	0	2	0	49	5	0	0	1	1	16	1
77	9	2	0	3	0	17	0	0	0	8	0	0	0	0	0	7	1	0	0	0	0	2	0
78	26	262	6	246	0	4,250	896	19	0	3,711	1,094	125	0	1,847	0	2,452	459	2	0	99	11	345	4
79	47	263	6	251	2	2,512	467	50	6	2,300	545	150	4	1,307	2	1,641	345	23	4	123	15	329	8
80	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	16	13	6	21	7	89	9	3	5	46	8	2	4	4	4	45	12	1	4	2	5	17	7
Total	**2,297**	**27,579**	**8,748**	**30,946**	**2,508**	**137,575**	**26,829**	**2,890**	**1,345**	**140,296**	**32,881**	**34,179**	**3,429**	**103,883**	**2,526**	**125,361**	**36,975**	**2,503**	**1,364**	**26,318**	**3,183**	**34,080**	**3,439**

Unit: acre-ft

Table 22

Semiannual Recharge from Subsurface Inflow through Basin Boundary
Water Years 2002-2011

Subsurface Inflow Zone	Number of Model Cell	Oct/01 - Mar/02	Apr/02 - Sep/02	Oct/02 - Mar/03	Apr/03 - Sep/03	Oct/03 - Mar/04	Apr/04 - Sep/04	Oct/04 - Mar/05	Apr/05 - Sep/05	Oct/05 - Mar/06	Apr/06 - Sep/06	Oct/06 - Mar/07	Apr/07 - Sep/07	Oct/07 - Mar/08	Apr/08 - Sep/08	Oct/08 - Mar/09	Apr/09 - Sep/09	Oct/09 - Mar/10	Apr/10 - Sep/10	Oct/10 - Mar/11	Apr/11 - Sep/11
1	50	29	0	340	0	44	0	2,496	153	619	383	4	0	901	1	101	0	1,447	254	1,236	137
2	41	0	0	18	0	0	0	63	27	23	17	0	0	26	7	1	0	39	20	32	22
3	24	0	0	0	0	0	0	80	0	1	0	0	0	0	0	0	0	13	0	10	0
4	37	0	0	447	0	1	0	1,450	794	638	467	0	0	744	209	7	0	1,016	577	857	644
5	157	0	0	2	0	0	0	737	14	9	0	0	0	0	0	0	0	117	0	116	0
6	16	12	0	684	0	0	0	2,697	497	1,133	0	31	0	1,308	367	9	0	1,758	1,029	1,514	1,143
7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	18	142	8	1,673	6	210	9	11,768	903	2,974	1,871	46	0	4,236	55	462	0	6,800	1,288	5,807	776
10	74	133	0	1,984	0	203	0	14,108	2,039	3,704	2,475	78	118	5,183	395	514	106	8,102	2,110	6,903	1,626
11	13	12	3	126	8	14	4	773	123	212	182	28	52	303	63	50	55	463	153	391	116
12	15	0	0	3	0	2	0	136	9	6	3	1	0	1	0	3	0	26	4	26	1
19	46	0	0	6	0	2	0	711	25	17	6	0	0	0	0	3	0	84	10	86	0
20	6	46	0	543	7	74	0	5,430	576	1,081	792	19	0	1,832	81	173	0	2,889	640	2,472	407
21	46	47	65	240	57	47	64	1,728	832	515	371	2	0	671	163	0	0	776	233	804	325
24	28	0	0	0	0	0	0	69	0	0	0	0	0	0	0	0	0	0	0	1	0
28	85	9	0	60	0	17	0	3,877	600	225	87	0	0	400	0	2	0	925	71	1,230	123
29	120	0	0	71	0	6	0	3,816	688	369	194	0	0	631	0	1	0	1,191	156	1,577	193
32	38	94	50	345	52	87	38	4,069	846	704	386	73	37	1,355	70	109	40	1,910	285	1,950	369
34	5	87	50	266	50	76	38	4,164	741	517	219	70	37	969	47	83	40	1,433	81	1,678	217
36	8	87	50	267	50	76	38	3,118	628	518	219	70	37	957	47	83	40	1,340	82	1,509	218
37	14	89	50	279	51	81	38	4,511	968	568	248	71	37	1,043	47	87	40	1,535	106	1,776	258
39	23	89	50	278	50	81	38	4,461	952	565	245	71	37	1,037	47	86	40	1,523	103	1,760	254
40	18	93	50	284	50	76	38	5,218	898	533	219	70	37	1,029	47	83	40	1,647	81	1,946	217
41	22	87	50	267	50	76	38	5,064	996	557	219	70	37	1,045	47	83	40	1,620	81	1,890	217
42	20	87	50	273	50	76	38	4,513	812	558	219	70	37	1,034	47	83	40	1,532	81	1,775	217
44	30	149	25	375	11	115	0	1,456	141	285	259	101	0	588	5	135	2	671	68	1,027	109
45	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	2	8	0	247	0	0	0	756	0	140	0	0	0	312	0	0	0	382	0	572	0
48	57	119	0	466	0	93	0	1,356	0	423	161	0	0	609	0	107	0	756	0	1,128	0
49	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	108	69	0	2,033	0	58	0	6,709	0	1,111	221	0	0	2,865	0	0	0	3,270	0	5,164	0
53	95	9	0	746	0	0	0	5,660	0	623	0	0	0	1,302	0	0	0	2,109	0	3,146	0
54	13	163	151	180	151	148	115	260	173	182	173	158	110	192	144	155	109	215	160	203	165
55	14	84	0	847	0	72	0	6,579	1,986	543	489	0	0	2,708	0	68	0	2,912	243	5,526	1,753
56	111	6	0	220	0	22	0	1,090	0	148	0	0	0	395	0	0	0	454	0	881	0
57	178	141	0	717	40	179	0	21,988	9,687	1,368	1,909	80	0	4,337	0	110	0	7,073	1,610	10,145	4,822
58	32	0	0	0	0	0	0	73	0	0	0	0	0	0	0	0	0	0	0	0	0
60	32	243	225	318	232	234	203	913	256	388	344	236	201	473	238	260	198	633	293	567	262
61	42	180	100	571	101	162	76	7,895	1,324	1,171	547	141	74	2,113	94	169	80	3,062	169	3,419	435
64	9	0	0	0	0	0	0	13	0	0	0	0	0	1	0	0	0	3	0	4	0

Table 22

Semiannual Recharge from Subsurface Inflow through Basin Boundary
Water Years 2002-2011

Subsurface Inflow Zone	Number of Model Cell	Oct/01 - Mar/02	Apr/02 - Sep/02	Oct/02 - Mar/03	Apr/03 - Sep/03	Oct/03 - Mar/04	Apr/04 - Sep/04	Oct/04 - Mar/05	Apr/05 - Sep/05	Oct/05 - Mar/06	Apr/06 - Sep/06	Oct/06 - Mar/07	Apr/07 - Sep/07	Oct/07 - Mar/08	Apr/08 - Sep/08	Oct/08 - Mar/09	Apr/09 - Sep/09	Oct/09 - Mar/10	Apr/10 - Sep/10	Oct/10 - Mar/11	Apr/11 - Sep/11
65	18	98	50	323	55	97	38	7,442	1,635	722	350	74	37	1,277	47	100	40	2,074	190	2,529	330
66	26	98	50	328	55	99	38	8,684	1,768	733	359	75	37	1,296	47	102	40	2,118	198	2,586	343
67	4	19	18	48	17	19	18	302	29	72	47	1	31	126	39	33	34	183	71	163	54
68	57	61	0	317	22	122	0	16,102	3,729	1,109	804	20	0	1,758	0	99	0	4,050	616	5,402	794
69	20	6	5	6	4	6	4	17	5	6	5	5	1	5	0	4	0	8	0	8	1
70	58	70	61	158	54	75	43	1,103	53	261	196	62	48	410	37	91	34	633	117	552	63
71	15	0	0	0	0	0	0	23	1	1	0	0	0	0	0	0	0	4	0	4	0
72	27	10	0	96	0	13	0	868	0	177	138	2	0	275	0	36	0	449	58	339	9
73	18	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	4	0	0	0
75	115	32	0	405	0	41	0	3,336	0	707	485	0	0	1,065	0	102	0	1,784	43	1,334	0
76	81	0	0	1	0	0	0	50	1	2	1	0	0	0	0	0	0	9	1	9	0
77	9	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	2	0	2	0
78	26	9	0	43	3	18	0	4,964	967	152	90	3	0	240	0	13	0	544	70	793	42
79	47	6	0	34	2	12	0	2,945	630	120	70	3	0	188	0	10	0	418	52	619	27
80	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	16	0	0	1	1	0	1	50	3	2	2	0	0	0	1	0	1	10	2	10	1
Total	**2,297**	**2,718**	**1,163**	**16,938**	**1,235**	**2,833**	**917**	**185,709**	**36,507**	**26,491**	**15,471**	**1,739**	**1,004**	**47,242**	**2,392**	**3,618**	**1,021**	**72,019**	**11,408**	**83,478**	**16,691**

Unit: acre-ft

Table 23

Semiannual Recharge from Deep Percolation of Discharged Treated Wastewater Effluent (Water Years 1981-2011)

Time Period	San Minguel CSD WWTP	City of Paso Robles WWTP	Templeton CSD WWTP	City of Atascadero WWTP	Camp Roberts WWTP*	Total
	1 model cell	1 model cell	2 model cells	3 model cells	2 model cells	7 mode cells
Oct/80 - Mar/81	98	1,091	98	685	72	**2,044**
Apr/81 - Sep/81	99	1,097	99	688	104	**2,086**
Oct/81 - Mar/82	100	1,116	100	699	72	**2,088**
Apr/82 - Sep/82	101	1,122	101	702	104	**2,130**
Oct/82 - Mar/83	103	1,141	103	713	72	**2,131**
Apr/83 - Sep/83	103	1,147	103	715	104	**2,173**
Oct/83 - Mar/84	104	1,160	104	722	72	**2,163**
Apr/84 - Sep/84	106	1,172	106	729	104	**2,216**
Oct/84 - Mar/85	107	1,192	107	740	72	**2,218**
Apr/85 - Sep/85	108	1,198	108	743	104	**2,260**
Oct/85 - Mar/86	110	1,217	110	754	72	**2,263**
Apr/86 - Sep/86	111	1,223	111	756	104	**2,304**
Oct/86 - Mar/87	112	1,242	112	768	72	**2,307**
Apr/87 - Sep/87	113	1,248	113	770	104	**2,348**
Oct/87 - Mar/88	114	1,261	114	777	72	**2,338**
Apr/88 - Sep/88	116	1,273	116	784	104	**2,393**
Oct/88 - Mar/89	118	1,293	118	795	72	**2,396**
Apr/89 - Sep/89	118	1,299	118	798	104	**2,437**
Oct/89 - Mar/90	120	1,330	120	809	72	**2,452**
Apr/90 - Sep/90	121	1,295	121	812	104	**2,453**
Oct/90 - Mar/91	123	1,411	123	823	72	**2,553**
Apr/91 - Sep/91	124	1,391	124	826	104	**2,568**
Oct/91 - Mar/92	125	1,471	125	833	72	**2,627**
Apr/92 - Sep/92	127	1,405	127	840	104	**2,602**
Oct/92 - Mar/93	129	1,500	129	852	72	**2,682**
Apr/93 - Sep/93	130	1,464	130	854	104	**2,681**
Oct/93 - Mar/94	132	1,469	132	866	72	**2,671**
Apr/94 - Sep/94	133	1,453	133	868	104	**2,690**
Oct/94 - Mar/95	135	1,590	135	880	72	**2,812**
Apr/95 - Sep/95	136	1,546	136	883	104	**2,803**
Oct/95 - Mar/96	137	1,534	137	889	72	**2,769**
Apr/96 - Sep/96	139	1,534	139	538	104	**2,453**
Oct/96 - Mar/97	141	1,608	141	976	72	**2,938**
Oct/97 - Mar/98	203	1,694	144	983	72	**3,097**
Apr/98 - Sep/98	204	1,648	145	773	104	**2,873**
Oct/98 - Mar/99	207	1,647	148	784	72	**2,857**
Apr/99 - Sep/99	207	1,665	149	696	104	**2,820**

Table 23

Semiannual Recharge from Deep Percolation of Discharged Treated Wastewater Effluent (Water Years 1981-2011)

Time Period	San Minguel CSD WWTP	City of Paso Robles WWTP	Templeton CSD WWTP	City of Atascadero WWTP	Camp Roberts WWTP*	Total
	1 model cell	1 model cell	2 model cells	3 model cells	2 model cells	7 mode cells
Oct/99 - Mar/00	209	1,716	150	721	72	**2,868**
Apr/00 - Sep/00	211	1,740	152	699	104	**2,905**
Oct/00 - Mar/01	213	1,790	155	864	72	**3,094**
Apr/01 - Sep/01	214	1,752	156	916	104	**3,141**
Oct/01 - Mar/02	217	1,782	244	931	72	**3,247**
Apr/02 - Sep/02	218	1,740	244	869	104	**3,175**
Oct/02 - Mar/03	224	1,739	247	936	72	**3,218**
Apr/03 - Sep/03	224	1,751	248	917	104	**3,244**
Oct/03 - Mar/04	228	1,798	250	931	72	**3,279**
Apr/04 - Sep/04	230	1,737	252	906	104	**3,228**
Oct/04 - Mar/05	245	1,904	255	1,072	72	**3,548**
Apr/05 - Sep/05	245	1,819	255	739	104	**3,162**
Oct/05 - Mar/06	263	1,837	259	943	72	**3,375**
Apr/06 - Sep/06	264	1,882	259	915	104	**3,424**
Oct/06 - Mar/07	252	1,869	263	863	72	**3,320**
Apr/07 - Sep/07	253	1,881	263	883	104	**3,384**
Oct/07 - Mar/08	249	2,002	265	950	72	**3,538**
Apr/08 - Sep/08	251	1,871	267	893	104	**3,385**
Oct/08 - Mar/09	254	1,863	271	883	72	**3,343**
Apr/09 - Sep/09	255	1,816	272	862	104	**3,308**
Oct/09 - Mar/10	258	1,881	275	989	72	**3,475**
Apr/10 - Sep/10	259	1,842	276	917	104	**3,398**
Oct/10 - Mar/11	263	1,863	280	1,020	72	**3,497**
Apr/11 - Sep/11	263	1,825	280	964	104	**3,437**
Average	**172**	**1,539**	**169**	**831**	**88**	**2,798**

* Recharge from Camp Roberts WWTP was not included originally and was added during model recalibration.

Table 24

Semiannual Discharge from Groundwater Pumping and Evapotranspiration by Riparian Vegetation (Water Years 1981-2011)

Time Period	Agricultural Groundwater Pumping	Municipal Groundwater Pumping	Private Domestic Well Groundwater Pumping	Small Commercial Groundwater Pumping	Evapotranspiration by Riparian Vegetation
	1,426 model cells	47 model cell	2,977 model cells	133 model cells	3,358 model cells
Oct/80 - Mar/81	12,127	2,090	723	523	948
Apr/81 - Sep/81	98,272	4,983	1,260	1,639	2,502
Oct/81 - Mar/82	9,930	2,090	740	437	948
Apr/82 - Sep/82	88,298	4,964	1,289	1,492	2,502
Oct/82 - Mar/83	8,777	2,142	757	378	948
Apr/83 - Sep/83	83,346	5,139	1,319	1,493	2,502
Oct/83 - Mar/84	11,901	2,632	770	556	943
Apr/84 - Sep/84	95,392	6,508	1,349	1,657	2,502
Oct/84 - Mar/85	9,402	2,747	792	499	948
Apr/85 - Sep/85	88,666	6,495	1,380	1,666	2,502
Oct/85 - Mar/86	8,456	3,143	811	445	948
Apr/86 - Sep/86	79,239	6,539	1,412	1,634	2,502
Oct/86 - Mar/87	10,853	3,362	829	537	948
Apr/87 - Sep/87	79,817	7,114	1,445	1,665	2,502
Oct/87 - Mar/88	7,832	3,526	844	470	943
Apr/88 - Sep/88	73,776	7,263	1,478	1,576	2,502
Oct/88 - Mar/89	10,201	3,761	868	561	948
Apr/89 - Sep/89	73,436	7,347	1,512	1,591	2,502
Oct/89 - Mar/90	9,831	3,570	888	624	948
Apr/90 - Sep/90	73,122	7,045	1,547	1,628	2,502
Oct/90 - Mar/91	11,474	3,729	908	583	948
Apr/91 - Sep/91	61,087	6,332	1,582	1,668	2,502
Oct/91 - Mar/92	8,079	3,552	924	488	943
Apr/92 - Sep/92	61,569	7,213	1,619	1,683	2,502
Oct/92 - Mar/93	7,213	3,560	951	483	948
Apr/93 - Sep/93	56,006	7,437	1,656	1,681	2,502
Oct/93 - Mar/94	7,252	3,926	973	539	948
Apr/94 - Sep/94	55,266	7,527	1,694	1,573	2,502
Oct/94 - Mar/95	5,034	3,332	995	439	948
Apr/95 - Sep/95	50,243	7,307	1,733	1,665	2,502
Oct/95 - Mar/96	8,020	3,955	1,012	546	943
Oct/96 - Mar/97	5,590	4,179	1,041	560	948
Apr/97 - Sep/97	44,936	8,736	1,814	1,689	2,502
Oct/97 - Mar/98	5,990	3,888	1,065	462	948
Apr/98 - Sep/98	41,777	7,336	1,856	1,527	2,502
Oct/98 - Mar/99	9,538	4,211	1,090	524	948

Table 24

Semiannual Discharge from Groundwater Pumping and Evapotranspiration by Riparian Vegetation (Water Years 1981-2011)

Time Period	Agricultural Groundwater Pumping	Municipal Groundwater Pumping	Private Domestic Well Groundwater Pumping	Small Commercial Groundwater Pumping	Evapotranspiration by Riparian Vegetation
	1,426 model cells	47 model cell	2,977 model cells	133 model cells	3,358 model cells
Apr/99 - Sep/99	53,534	8,430	1,898	1,605	2,502
Oct/99 - Mar/00	10,432	4,669	1,109	596	943
Apr/00 - Sep/00	53,253	9,247	1,942	1,610	2,502
Oct/00 - Mar/01	8,207	4,536	1,140	518	948
Apr/01 - Sep/01	59,859	9,484	1,987	1,658	2,502
Oct/01 - Mar/02	12,534	4,867	1,167	592	948
Apr/02 - Sep/02	64,101	10,219	2,032	1,696	2,502
Oct/02 - Mar/03	7,876	4,927	1,194	570	948
Apr/03 - Sep/03	59,631	10,201	2,079	1,601	2,502
Oct/03 - Mar/04	9,167	5,286	1,214	626	943
Apr/04 - Sep/04	70,701	10,949	2,127	1,765	2,502
Oct/04 - Mar/05	7,063	4,412	1,249	425	948
Apr/05 - Sep/05	52,677	9,437	2,176	1,686	2,502
Oct/05 - Mar/06	13,144	5,119	1,278	610	948
Apr/06 - Sep/06	52,850	10,074	2,226	1,695	2,502
Oct/06 - Mar/07	16,580	5,517	1,307	665	948
Apr/07 - Sep/07	75,057	10,623	2,277	1,755	2,502
Oct/07 - Mar/08	12,274	5,313	1,330	615	943
Apr/08 - Sep/08	71,260	10,470	2,330	1,769	2,502
Oct/08 - Mar/09	13,333	5,113	1,368	561	948
Apr/09 - Sep/09	76,261	8,910	2,383	1,709	2,502
Oct/09 - Mar/10	7,788	4,512	1,400	518	948
Apr/10 - Sep/10	62,524	8,539	2,438	1,595	2,502
Oct/10 - Mar/11	5,980	4,437	1,270	446	948
Apr/11 - Sep/11	54,215	8,417	2,494	1,657	2,502
Average	**37,739**	**5,941**	**1,415**	**1,077**	**1,712**

Unit: acre-ft

Table 25

Semiannual Groundwater Discharge to Rivers and Subsurface Outflow through Basin Boundary (Water Years 1981-2011)

Time Period	Groundwater Discharge to Salinas River	Subsurface Outflow through Basin Boundary
	2,918 model cells	16 model cells
Oct/80 - Mar/81	4,587	988
Apr/81 - Sep/81	6,473	898
Oct/81 - Mar/82	7,510	851
Apr/82 - Sep/82	7,843	834
Oct/82 - Mar/83	8,629	834
Apr/83 - Sep/83	8,989	826
Oct/83 - Mar/84	8,458	808
Apr/84 - Sep/84	7,439	797
Oct/84 - Mar/85	6,851	784
Apr/85 - Sep/85	6,450	783
Oct/85 - Mar/86	6,396	780
Apr/86 - Sep/86	6,381	779
Oct/86 - Mar/87	6,291	768
Apr/87 - Sep/87	6,129	769
Oct/87 - Mar/88	6,191	766
Apr/88 - Sep/88	6,039	764
Oct/88 - Mar/89	5,984	755
Apr/89 - Sep/89	5,828	757
Oct/89 - Mar/90	5,776	747
Apr/90 - Sep/90	5,637	748
Oct/90 - Mar/91	5,703	746
Apr/91 - Sep/91	5,285	675
Oct/91 - Mar/92	5,274	714
Apr/92 - Sep/92	4,996	666
Oct/92 - Mar/93	5,508	744
Apr/93 - Sep/93	5,728	688
Oct/93 - Mar/94	5,584	704
Apr/94 - Sep/94	5,269	664
Oct/94 - Mar/95	5,769	721
Apr/95 - Sep/95	6,164	673
Oct/95 - Mar/96	6,409	701
Apr/96 - Sep/96	6,233	659
Oct/96 - Mar/97	6,869	695
Apr/97 - Sep/97	6,878	656
Oct/97 - Mar/98	7,575	712
Apr/98 - Sep/98	7,801	666

Table 25

Semiannual Groundwater Discharge to Rivers and Subsurface Outflow through Basin Boundary (Water Years 1981-2011)

Time Period	Groundwater Discharge to Salinas River	Subsurface Outflow through Basin Boundary
	2,918 model cells	16 model cells
Oct/98 - Mar/99	7,458	688
Apr/99 - Sep/99	6,896	633
Oct/99 - Mar/00	6,998	678
Apr/00 - Sep/00	6,836	617
Oct/00 - Mar/01	7,002	673
Apr/01 - Sep/01	6,809	609
Oct/01 - Mar/02	6,787	658
Apr/02 - Sep/02	6,491	589
Oct/02 - Mar/03	6,572	649
Apr/03 - Sep/03	6,351	582
Oct/03 - Mar/04	6,325	647
Apr/04 - Sep/04	5,856	566
Oct/04 - Mar/05	7,011	666
Apr/05 - Sep/05	7,548	586
Oct/05 - Mar/06	7,250	645
Apr/06 - Sep/06	6,906	552
Oct/06 - Mar/07	6,613	628
Apr/07 - Sep/07	6,004	702
Oct/07 - Mar/08	6,124	716
Apr/08 - Sep/08	5,848	720
Oct/08 - Mar/09	5,641	717
Apr/09 - Sep/09	5,375	722
Oct/09 - Mar/10	5,510	725
Apr/10 - Sep/10	5,654	728
Oct/10 - Mar/11	5,932	726
Apr/11 - Sep/11	6,008	727
Average	**6,431**	**714**

Unit: acre-ft

Table 26

Summary of Annual Water Budgets for the Recalibrated Paso Robles Groundwater Basin Model (Water Years 1981-2011)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
Water Year	INFLOW						OUTFLOW								
	Deep Percolation of Direct Precipitation and Return Flow from Applied Irrigation Water	Deep Percolation of Streambed Seepage	Subsurface Inflow Through the Basin Boundary	Deep Percolation of Discharged Treated Wastewater Effluent	Deep Percolation of Urban Water and Sewer Pipe Leakage	Total Inflow	Agricultural Groundwater Pumping	Municipal Groundwater Pumping	Private Domestic Well Groundwater Pumping	Small Commercial Groundwater Pumping	Evapotranspiration by Riparian Vegetation	Groundwater Discharge to Rivers	Subsurface Outflow through Basin Boundary	Total Outflow	Change in Groundwater Storage
	[acre-ft]														
1981	10,435	21,625	22,151	4,047	225	58,483	110,560	7,220	1,984	2,164	3,453	11,060	1,885	138,325	-79,842
1982	14,015	24,846	33,207	4,132	227	76,426	98,375	7,201	2,030	1,930	3,453	15,353	1,685	130,026	-53,600
1983	47,777	55,544	136,946	4,217	233	244,716	92,265	7,432	2,076	1,872	3,453	17,618	1,660	126,376	118,340
1984	7,432	16,310	11,234	4,302	273	39,552	107,514	9,346	2,124	2,218	3,453	15,897	1,605	142,157	-102,605
1985	6,738	14,997	8,223	4,388	276	34,622	98,218	9,436	2,173	2,167	3,453	13,300	1,567	130,313	-95,690
1986	26,394	31,207	68,481	4,474	287	130,844	87,829	9,882	2,223	2,080	3,453	12,777	1,559	119,802	11,042
1987	6,312	12,967	5,477	4,561	305	29,622	90,797	10,692	2,274	2,204	3,453	12,419	1,537	123,377	-93,755
1988	7,811	15,892	13,743	4,648	314	42,408	81,775	11,032	2,326	2,050	3,453	12,230	1,530	114,397	-71,989
1989	7,756	13,818	12,050	4,735	321	38,681	83,752	11,336	2,380	2,153	3,453	11,812	1,512	116,397	-77,716
1990	6,208	9,833	3,547	4,806	313	24,706	83,069	10,834	2,435	2,253	3,453	11,413	1,495	114,952	-90,245
1991	22,726	20,416	36,327	5,018	306	84,792	72,647	10,267	2,491	2,252	3,453	10,989	1,422	103,520	-18,727
1992	21,412	20,382	33,454	5,136	323	80,707	69,792	11,008	2,548	2,175	3,453	10,270	1,380	100,625	-19,918
1993	66,778	62,269	164,404	5,254	330	299,035	63,309	11,224	2,607	2,166	3,453	11,236	1,432	95,426	203,609
1994	11,650	12,073	4,234	5,253	339	33,548	62,607	11,689	2,667	2,114	3,453	10,853	1,368	94,750	-61,202
1995	67,456	64,366	173,178	5,502	327	310,829	55,364	10,860	2,728	2,106	3,453	11,933	1,394	87,838	222,991
1996	21,219	20,955	37,608	5,130	351	85,263	54,926	12,420	2,791	2,186	3,453	12,642	1,361	89,778	-4,515
1997	40,117	42,687	106,409	5,647	377	195,237	50,599	13,183	2,855	2,250	3,453	13,747	1,351	87,438	107,799
1998	57,998	55,780	162,335	5,848	346	282,308	47,832	11,455	2,921	1,990	3,453	15,376	1,378	84,405	197,904
1999	6,232	10,387	3,867	5,563	369	26,418	63,149	12,901	2,988	2,131	3,453	14,354	1,321	100,296	-73,879
2000	14,767	18,667	29,501	5,671	398	69,005	63,816	14,230	3,057	2,211	3,453	13,834	1,295	101,895	-32,891
2001	19,036	20,701	37,518	6,108	408	83,772	68,161	14,310	3,127	2,177	3,453	13,810	1,282	106,320	-22,548
2002	6,991	12,063	3,881	6,291	434	29,659	76,724	15,398	3,199	2,289	3,453	13,279	1,248	115,590	-85,931
2003	12,617	14,637	18,173	6,331	435	52,195	67,603	15,441	3,273	2,172	3,453	12,922	1,231	106,094	-53,899
2004	6,822	11,246	3,750	6,393	460	28,670	80,032	16,600	3,348	2,396	3,453	12,181	1,214	119,223	-90,554
2005	76,967	78,098	222,216	6,573	414	384,269	59,824	14,137	3,425	2,112	3,453	14,558	1,252	98,762	285,507
2006	23,395	21,300	41,962	6,660	443	93,761	66,057	15,506	3,504	2,306	3,453	14,157	1,197	106,179	-12,418
2007	3,783	12,729	2,743	6,569	461	26,284	91,734	16,473	3,585	2,421	3,453	12,616	1,331	131,613	-105,328
2008	20,526	23,726	49,633	6,801	459	101,146	83,706	16,138	3,667	2,389	3,453	11,972	1,437	122,762	-21,617
2009	6,208	12,299	4,639	6,517	417	30,079	89,704	14,310	3,752	2,272	3,453	11,016	1,439	125,945	-95,866
2010	34,814	32,645	83,427	6,733	401	158,020	70,414	13,319	3,838	2,114	3,453	11,164	1,452	105,754	52,266
2011	37,368	40,005	100,169	6,793	398	184,733	60,285	13,119	3,765	2,104	3,453	11,941	1,453	96,120	88,614

Table 26

Summary of Annual Water Budgets for the Recalibrated Paso Robles Groundwater Basin Model (Water Years 1981-2011)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
Water Year	INFLOW						OUTFLOW								
	Deep Percolation of Direct Precipitation and Return Flow from Applied Irrigation Water	Deep Percolation of Streambed Seepage	Subsurface Inflow Through the Basin Boundary	Deep Percolation of Discharged Treated Wastewater Effluent	Deep Percolation of Urban Water and Sewer Pipe Leakage	Total Inflow	Agricultural Groundwater Pumping	Municipal Groundwater Pumping	Private Domestic Well Groundwater Pumping	Small Commercial Groundwater Pumping	Evapotranspiration by Riparian Vegetation	Groundwater Discharge to Rivers	Subsurface Outflow through Basin Boundary	Total Outflow	Change in Groundwater Storage
	[acre-ft]														
Average of 1981 to 1997	23,073	27,070	51,216	4,779	302	106,440	80,200	10,298	2,395	2,138	3,453	12,679	1,514	112,676	-6,237
Average of 1998 to 2011	23,395	26,020	54,558	6,347	417	110,737	70,646	14,524	3,389	2,220	3,453	13,084	1,323	108,640	2,097
Average of 1981 to 2011	23,218	26,596	52,725	5,487	354	108,380	75,885	12,206	2,844	2,175	3,453	12,862	1,428	110,853	-2,473
Average of 1982 to 2010	23,171	26,305	52,144	5,492	357	107,468	75,227	12,347	2,842	2,178	3,453	12,956	1,412	110,414	-2,946

[1] Groundwater model input: calculated based on the results of deep percolation within the Paso Robles Basin from the calibrated watershed model.

[2] Groundwater model input: Calculated based on the results of streambed seepage within the Paso Robles Basin from the calibrated watershed model.

[3] Groundwater model input: Calculated based on the results of recharge (including deep percolation and streambed seepage) from the calibrated watershed model less the agricultural and private domestic groundwater pumping for the area outside the Paso Robles Basin but within the watershed tributary to the Paso Robles Basin.

[4] Groundwater model input: Based on measured data provided by City of Atascadero Public Works Department, Camp Roberts, City of Paso Robles and San Miguel CSD. Templeton CSD provided an average daily flow rate. Wastewater discharge in septic tank by rural residences and small community was included and was assumed to be the amount of indoor use.

[5] Groundwater model input: Assumed to be 2% of urban water and sewer pipes based on Paso Robles 2010 Urban Master Plan.

[6] = [1] + [2] + [3] + [4] + [5]

[7] Groundwater model input: Based on results of crop-specific daily soil moisture water balances accounting for soil available water capacity, daily rainfall and reference evapotranspiration, crop water coefficient, bare soil evaporation, and increasing irrigation efficiency over time. Additional factors considered for vineyards include evapotranspiration of row crops, frost protection water demand and effect on soil moisture, reduced deficit irrigation (RDI) management, and increasing use of RDI management over time. Annual crop acreages estimated from 1) DWR land use maps of South Central Coast (San Luis Obispo County) and Monterey County for 1985/89 and 1996/97, 2) digital SLO crop coverage maps provided by SLO County ACO from 2000 through 2011, and 3) digital coverage of Monterey County 2012 crops based on Ranch Map Atlas (Monterey County ACO). Discussions with SLO County ACO on historical regional crop patterns used to refine interpolation of selected crop acreages over time. Vineyard acreages within groundwater basin boundaries from 2000 to 2010 were corrected/verified based on review of historical aerial photography provided in Google Earth.

[8] Groundwater model input: Based largely on monthly municipal pumping records for production wells; minor data gaps addressed with estimates from comparable months.

[9] Groundwater model input: Private domestic well groundwater pumping represents indoor demand plus outdoor consumptive use by rural residential parcels (water demand of parcels serviced by small community water systems included). Indoor demand rate of 0.29 AFY per parcel estimated based on evaluation of available production records of three small communities (Shandon, Garden Farms, and Green River). 100% return flow assumed. Net outdoor consumptive usage rate of 0.46 AFY per parcel estimated based on 1) mapping of outdoor irrigated landscaping within five selected residential communities across Study Area and 2) calibration to available production of Shandon, Garden Farms, and Green River communities. 100% outdoor irrigation efficiency assumed. Usage rate applied to occupied rural residential parcels, identified for 2012 conditions by SLO County Planning Department. Estimated 2.25% growth rate applied to estimate historical rural demand/consumptive use.

[10] Groundwater model input: Includes Atascadero State Hospital, Camp Roberts and the Youth Authority; limited monthly pumping data for each were averaged and used to represent the entire period for which each has operated. Includes winery water consumption based on an applied rate and return flow factor. Includes consumptive use of five golf courses; data were used when available, and monthly average estimates were used based on the difference between monthly ET for turf and monthly rainfall. Other small commercial (schools, rest stops) is based on application of water use rates; may include some gross pumping values (not consumption).

[11] Groundwater model input: Based on assumed constant water demand of 0.8 feet/acre per year in Paso Robles ET zone (same as assumed value in original model) and adjusted downward to 0.75 feet/acre per year in Atascadero ETo zone. Riparian coverage based on map titled "Riparian Vegetation in Hardwood Rangelands" (California Department of Forestry and fire Protection, 2009). Map is based on 1990 LANDSAT TM imagery.

[12] Calculated based on the results from the re-calibrated groundwater model.

[13] Calculated based on the results from the re-calibrated groundwater model.

[14] = [7] + [8] + [9] + [10] + [11] + [12]+[13]

[15] = [6] - [14]

Nacimiento Water Project Deliveries (Calendar Years 2011-2040)

Year	City of Paso Robles (T2)		Templeton CSD (T4)		Atascadero MWC (T6)		San Luis Obispo WTP (T11)	
	AF[1]	Delivery Type[2]	AF	Delivery Type[2]	AF	Delivery Type[2]	AF	Delivery Type[2]
2011	0	UR	97	PP	42	PP	0	TP
2012	0	UR	233	PP	1,072	PP	2,101	TP
2013	644	UR	167	PP	1,854	PP	973	TP
2014	1,618	UR	250	PP	2,000	PP	3,380	TP
2015	1105, 166[3]	TP, UR	250	PP	2,000	PP	3,380	TP
2016	1105, 166[3]	TP, UR	250	PP	2,000	PP	3,380	TP
2017	1105, 166[3]	TP, UR	250	PP	2,000	PP	3,380	TP
2018	1105, 166[3]	TP, UR	250	PP	2,000	PP	3,380	TP
2019	1105, 166[3]	TP, UR	250	PP	2,000	PP	3,380	TP
2020	1105, 166[3]	TP, UR	250	PP	2,000	PP	3,380	TP
2021	1105, 166[3]	TP, UR	250	PP	2,000	PP	3,380	TP
2022	1105, 166[3]	TP, UR	250	PP	2,000	PP	3,380	TP
2023	1105, 166[3]	TP, UR	250	PP	2,000	PP	3,380	TP
2024	1105, 166[3]	TP, UR	250	PP	2,000	PP	3,380	TP
2025	4000, 166[4]	TP, UR	250	PP	2,000	PP	3,380	TP
2026	4000, 166[4]	TP, UR	250	PP	2,000	PP	3,380	TP
2027	4000, 166[4]	TP, UR	250	PP	2,000	PP	3,380	TP
2028	4000, 166[4]	TP, UR	250	PP	2,000	PP	3,380	TP
2029	4000, 166[4]	TP, UR	250	PP	2,000	PP	3,380	TP
2030	4000, 166[4]	TP, UR	250	PP	2,000	PP	3,380	TP

Table 27

Nacimiento Water Project Deliveries (Calendar Years 2011-2040)

Year	City of Paso Robles (T2)		Templeton CSD (T4)		Atascadero MWC (T6)		San Luis Obispo WTP (T11)	
	AF[1]	Delivery Type[2]	AF	Delivery Type[2]	AF	Delivery Type[2]	AF	Delivery Type[2]
2031	4000, 166[4]	TP, UR	250	PP	2,000	PP	3,380	TP
2032	4000, 166[4]	TP, UR	250	PP	2,000	PP	3,380	TP
2033	4000, 166[4]	TP, UR	250	PP	2,000	PP	3,380	TP
2034	4000, 166[4]	TP, UR	250	PP	2,000	PP	3,380	TP
2035	5400, 166[4,5]	TP, UR	250	PP	2,000	PP	3,380	TP
2036	5400, 166[4,5]	TP, UR	250	PP	2,000	PP	3,380	TP
2037	5400, 166[4,5]	TP, UR	250	PP	2,000	PP	3,380	TP
2038	5400, 166[4,5]	TP, UR	250	PP	2,000	PP	3,380	TP
2039	5400, 166[4,5]	TP, UR	250	PP	2,000	PP	3,380	TP
2040	5400, 166[4,5]	TP, UR	250	PP	2,000	PP	3,380	TP

Notes:

[1] In years of 8 inches or less precipitation, an underflow recharge of 2,000 gpm was used for 5 months (1,326 AF).

[2] Indicates the method NWP deliveries were distributed: "PP" for percolation pond, "TP" for treatment plant, and "UR" for underflow recharge.

[3] 2015-2024: City of Paso Robles Treatment Plant Phase I: 2.4 MGD for 5 months (1,105 AF) plus average annual net Salinas River recharge/recovery of NWP (250 gpm for 5 Months [166 AF]).

[4] 2025-2041: City of Paso Robles Treatment Plant Phase II: 4,000 AFY plus average annual net Salinas River recharge/recovery of NWP (250 gpm for 5 Months [166 AF]).

[5] City of Paso Robles plans to purchase 1,400 AFY from Nacimiento unallocated supply.

Table 27

Table 28

Agricultural Irrigation Demand and Applied Water Volume (Groundwater Basin) - Model Run 1

Water Year	Alfalfa		Citrus		Deciduous		Nursery		Pasture		Vegetable		Vineyard		TOTAL	
	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water
2012	6,572	9,388	651	834	1,173	1,504	106	136	4,104	5,863	7,469	9,575	34,612	44,312	54,687	71,613
2013	6,427	9,182	591	758	1,126	1,444	98	126	3,976	5,681	7,541	9,667	29,925	38,798	49,685	65,655
2014	7,710	11,015	797	1,022	1,318	1,689	131	168	4,744	6,777	7,708	9,882	43,898	55,237	66,306	85,790
2015	7,335	10,479	722	926	1,265	1,622	120	153	4,553	6,505	7,706	9,879	38,882	49,336	60,583	78,900
2016	7,120	10,171	707	906	1,245	1,597	116	149	4,458	6,368	7,576	9,712	32,639	41,991	53,861	70,895
2017	7,514	10,734	778	998	1,297	1,663	128	164	4,682	6,689	7,740	9,924	40,979	51,803	63,119	81,974
2018	7,068	10,097	667	855	1,223	1,568	113	145	4,417	6,310	7,641	9,796	34,334	43,985	55,462	72,756
2019	7,421	10,601	764	980	1,280	1,641	126	161	4,634	6,619	7,465	9,571	40,501	51,241	62,191	80,814
2020	7,467	10,668	765	980	1,268	1,626	127	162	4,558	6,512	7,450	9,551	45,626	57,270	67,261	86,769
2021	7,129	10,185	801	1,026	1,258	1,613	131	168	4,462	6,374	7,640	9,794	41,177	52,036	62,598	81,197
2022	7,361	10,516	775	994	1,280	1,641	127	162	4,615	6,592	7,706	9,879	37,758	48,013	59,621	77,798
2023	7,044	10,063	723	926	1,246	1,597	119	153	4,508	6,439	7,684	9,851	33,886	43,458	55,210	72,489
2024	7,100	10,142	691	886	1,229	1,576	116	148	4,425	6,321	7,270	9,320	38,021	48,323	58,851	76,717
2025	6,989	9,985	685	878	1,229	1,576	113	145	4,370	6,242	7,554	9,685	30,026	38,917	50,966	67,427
2026	7,167	10,239	726	931	1,249	1,602	120	154	4,473	6,390	7,637	9,791	37,743	47,996	59,116	77,103
2027	7,605	10,864	810	1,038	1,322	1,695	132	169	4,801	6,858	7,711	9,886	36,321	46,323	58,701	76,832
2028	6,594	9,420	611	783	1,154	1,479	103	132	4,073	5,818	7,272	9,323	30,471	39,441	50,278	66,397
2029	7,450	10,643	683	876	1,257	1,611	114	146	4,363	6,233	7,670	9,833	44,512	55,960	66,048	85,301
2030	7,278	10,398	741	950	1,266	1,623	124	159	4,539	6,485	7,740	9,923	38,449	48,827	60,138	78,364
2031	7,394	10,563	751	963	1,284	1,646	125	160	4,710	6,729	7,837	10,047	37,437	47,635	59,538	77,743
2032	7,622	10,888	748	959	1,297	1,663	124	159	4,719	6,742	7,786	9,982	39,701	50,299	61,998	80,693
2033	6,935	9,908	644	826	1,200	1,539	109	139	4,306	6,151	7,597	9,740	33,488	42,990	54,279	71,292
2034	7,675	10,964	762	976	1,323	1,696	125	160	4,893	6,990	7,839	10,050	40,656	51,423	63,273	82,260
2035	6,216	8,880	584	749	1,104	1,415	98	125	3,864	5,520	6,980	8,949	28,036	36,575	46,882	62,214
2036	6,572	9,389	656	841	1,174	1,505	110	142	3,966	5,666	7,346	9,418	33,512	43,018	53,337	69,979
2037	7,911	11,301	796	1,020	1,334	1,710	131	168	4,770	6,814	7,702	9,874	45,994	57,702	68,637	88,590
2038	8,000	11,429	838	1,074	1,380	1,770	137	176	4,982	7,118	7,974	10,223	39,789	50,402	63,100	82,191
2039	8,274	11,820	822	1,054	1,414	1,813	135	173	5,046	7,208	8,122	10,413	44,086	55,458	67,899	87,939
2040	6,616	9,451	631	809	1,151	1,475	109	140	4,236	6,052	7,583	9,722	31,571	40,734	51,897	68,384

Unit: acre feet per year

Table 29

Agricultural Irrigation Demand and Applied Water Volume (Watershed) - Model Run 1

Water Year	Alfalfa		Citrus		Deciduous		Nursery		Pasture		Vegetable		Vineyard		TOTAL	
	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water
2012	8,105	11,579	1,102	1,412	1,300	1,667	116	148	4,151	5,930	7,530	9,654	40,899	51,708	62,638	81,375
2013	7,926	11,323	1,006	1,290	1,245	1,596	106	136	4,021	5,745	7,602	9,747	35,322	45,147	56,759	74,381
2014	9,527	13,611	1,364	1,748	1,459	1,871	142	182	4,798	6,855	7,771	9,963	50,591	63,110	74,827	96,281
2015	9,066	12,951	1,240	1,590	1,398	1,792	130	166	4,606	6,580	7,768	9,960	45,463	57,078	68,968	89,216
2016	8,778	12,541	1,204	1,544	1,375	1,763	126	162	4,509	6,441	7,638	9,792	38,954	49,420	61,917	80,807
2017	9,284	13,262	1,328	1,702	1,433	1,837	139	178	4,736	6,766	7,804	10,005	47,735	59,751	71,668	92,488
2018	8,715	12,450	1,139	1,461	1,349	1,729	122	157	4,468	6,383	7,703	9,876	41,231	52,099	64,125	83,381
2019	9,167	13,095	1,311	1,681	1,414	1,813	136	175	4,687	6,696	7,527	9,650	46,204	57,950	69,672	90,067
2020	9,228	13,183	1,321	1,694	1,400	1,794	137	176	4,611	6,587	7,511	9,630	51,285	63,927	74,708	95,985
2021	8,793	12,561	1,368	1,753	1,390	1,783	143	183	4,513	6,447	7,702	9,875	48,677	60,859	71,755	92,396
2022	9,078	12,968	1,321	1,694	1,415	1,814	138	176	4,668	6,668	7,769	9,960	44,773	56,266	68,376	88,541
2023	8,687	12,410	1,229	1,576	1,378	1,766	129	166	4,559	6,513	7,747	9,932	39,993	50,643	63,029	82,117
2024	8,752	12,502	1,188	1,523	1,354	1,736	125	160	4,475	6,393	7,330	9,397	44,223	55,619	66,795	86,496
2025	8,618	12,311	1,166	1,495	1,357	1,739	122	157	4,420	6,314	7,616	9,764	34,874	44,620	57,543	75,594
2026	8,837	12,624	1,240	1,590	1,378	1,767	130	167	4,524	6,463	7,700	9,872	43,839	55,168	66,945	86,748
2027	9,379	13,399	1,378	1,766	1,463	1,875	143	184	4,857	6,938	7,774	9,966	43,357	54,601	67,510	87,651
2028	8,132	11,618	1,043	1,337	1,271	1,629	111	142	4,118	5,884	7,332	9,400	35,887	45,812	57,388	75,173
2029	9,204	13,148	1,192	1,528	1,382	1,772	123	158	4,412	6,303	7,734	9,915	51,647	64,353	75,039	96,338
2030	8,976	12,822	1,269	1,627	1,397	1,791	134	172	4,592	6,559	7,803	10,004	45,109	56,661	68,547	88,698
2031	9,118	13,026	1,298	1,665	1,423	1,825	136	174	4,766	6,809	7,900	10,129	44,711	56,194	68,592	88,844
2032	9,415	13,450	1,301	1,669	1,435	1,840	135	173	4,775	6,821	7,849	10,063	46,737	58,577	70,884	91,613
2033	8,552	12,217	1,106	1,418	1,323	1,696	118	151	4,355	6,221	7,659	9,819	39,399	49,944	61,941	80,736
2034	9,478	13,541	1,315	1,686	1,468	1,882	136	175	4,952	7,074	7,903	10,132	47,584	59,573	72,059	93,066
2035	7,663	10,947	991	1,271	1,214	1,557	105	135	3,908	5,582	7,038	9,023	32,873	42,266	53,338	70,199
2036	8,106	11,580	1,099	1,409	1,286	1,649	118	152	4,009	5,727	7,408	9,497	38,619	49,027	60,083	78,319
2037	9,776	13,965	1,377	1,765	1,469	1,883	142	182	4,824	6,891	7,765	9,955	53,431	66,452	77,943	100,017
2038	9,868	14,097	1,424	1,825	1,523	1,953	148	190	5,039	7,199	8,039	10,306	46,823	58,678	71,978	93,112
2039	10,228	14,612	1,401	1,797	1,558	1,998	146	187	5,103	7,290	8,189	10,498	50,917	63,495	76,679	98,768
2040	8,153	11,646	1,077	1,381	1,270	1,628	119	152	4,285	6,122	7,645	9,801	37,212	47,371	59,220	77,409

Unit: acre feet per year

Table 30

Agricultural Irrigation Demand and Applied Water Volume (Groundwater Basin) - Model Run 2

Water Year	Alfalfa		Citrus		Deciduous		Nursery		Pasture		Vegetable		Vineyard		TOTAL	
	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water
2012	6,572	9,388	651	834	1,173	1,504	106	136	4,104	5,863	7,469	9,575	34,612	44,297	54,687	71,599
2013	6,427	9,182	591	758	1,126	1,444	98	126	3,976	5,681	7,541	9,667	30,493	39,475	50,253	66,332
2014	7,710	11,015	797	1,022	1,318	1,689	131	168	4,744	6,777	7,708	9,882	45,525	57,160	67,933	87,712
2015	7,335	10,479	722	926	1,265	1,622	120	153	4,553	6,505	7,706	9,879	38,996	49,478	60,697	79,042
2016	7,120	10,171	707	906	1,245	1,597	116	149	4,458	6,368	7,576	9,712	33,703	43,251	54,924	72,155
2017	7,514	10,734	778	998	1,297	1,663	128	164	4,682	6,689	7,740	9,924	46,032	57,849	68,171	88,020
2018	7,068	10,097	667	855	1,223	1,568	113	145	4,417	6,310	7,641	9,796	38,923	49,523	60,052	78,294
2019	7,421	10,601	764	980	1,280	1,641	126	161	4,634	6,619	7,465	9,571	47,736	59,929	69,426	89,502
2020	7,467	10,668	765	980	1,268	1,626	127	162	4,558	6,512	7,450	9,551	53,959	67,288	75,594	96,787
2021	7,129	10,185	801	1,026	1,258	1,613	131	168	4,462	6,374	7,640	9,794	49,551	62,140	70,972	91,300
2022	7,361	10,516	775	994	1,280	1,641	127	162	4,615	6,592	7,706	9,879	45,745	57,700	67,608	87,485
2023	7,044	10,063	723	926	1,246	1,597	119	153	4,508	6,439	7,684	9,851	41,775	53,069	63,099	82,100
2024	7,100	10,142	691	886	1,229	1,576	116	148	4,425	6,321	7,270	9,320	46,563	58,741	67,393	87,135
2025	6,989	9,985	685	878	1,229	1,576	113	145	4,370	6,242	7,554	9,685	38,004	48,711	58,944	77,221
2026	7,167	10,239	726	931	1,249	1,602	120	154	4,473	6,390	7,637	9,791	47,023	59,362	68,396	88,468
2027	7,605	10,864	810	1,038	1,322	1,695	132	169	4,801	6,858	7,711	9,886	46,924	59,285	69,303	89,795
2028	6,594	9,420	611	783	1,154	1,479	103	132	4,073	5,818	7,272	9,323	39,649	50,767	59,455	77,723
2029	7,450	10,643	683	876	1,257	1,611	114	146	4,363	6,233	7,670	9,833	57,188	71,443	78,724	100,784
2030	7,278	10,398	741	950	1,266	1,623	124	159	4,539	6,485	7,740	9,923	50,404	63,503	72,092	93,040
2031	7,394	10,563	751	963	1,284	1,646	125	160	4,710	6,729	7,837	10,047	49,689	62,704	71,790	92,812
2032	7,622	10,888	748	959	1,297	1,663	124	159	4,719	6,742	7,786	9,982	52,478	66,028	74,775	96,422
2033	6,935	9,908	644	826	1,200	1,539	109	139	4,306	6,151	7,597	9,740	45,118	57,412	65,909	85,714
2034	7,675	10,964	762	976	1,323	1,696	125	160	4,893	6,990	7,839	10,050	54,717	68,748	77,334	99,585
2035	6,216	8,880	584	749	1,104	1,415	98	125	3,864	5,520	6,980	8,949	39,433	50,810	58,279	76,449
2036	6,572	9,389	656	841	1,174	1,505	110	142	3,966	5,666	7,346	9,418	47,646	60,517	67,471	87,478
2037	7,911	11,301	796	1,020	1,334	1,710	131	168	4,770	6,814	7,702	9,874	64,196	80,033	86,839	110,920
2038	8,000	11,429	838	1,074	1,380	1,770	137	176	4,982	7,118	7,974	10,223	57,249	71,905	80,561	103,693
2039	8,274	11,820	822	1,054	1,414	1,813	135	173	5,046	7,208	8,122	10,413	62,953	78,661	86,766	111,142
2040	6,616	9,451	631	809	1,151	1,475	109	140	4,236	6,052	7,583	9,722	46,087	58,864	66,414	86,514

Unit: acre feet per year

Table 31

Agricultural Irrigation Demand and Applied Water Volume (Watershed) - Model Run 2

Water Year	Alfalfa		Citrus		Deciduous		Nursery		Pasture		Vegetable		Vineyard		TOTAL	
	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water	Irrigation Demand	Applied Water
2012	8,105	11,579	1,102	1,412	1,300	1,667	116	148	4,151	5,930	7,530	9,654	41,125	51,960	63,429	82,351
2013	7,926	11,323	1,006	1,290	1,245	1,596	106	136	4,021	5,745	7,602	9,747	40,772	51,568	62,679	81,404
2014	9,527	13,611	1,364	1,748	1,459	1,871	142	182	4,798	6,855	7,771	9,963	58,693	72,651	83,756	106,882
2015	9,066	12,951	1,240	1,590	1,398	1,792	130	166	4,606	6,580	7,768	9,960	51,973	64,746	76,181	97,785
2016	8,778	12,541	1,204	1,544	1,375	1,763	126	162	4,509	6,441	7,638	9,792	46,169	57,917	69,799	90,159
2017	9,284	13,262	1,328	1,702	1,433	1,837	139	178	4,736	6,766	7,804	10,005	59,349	73,517	84,072	107,267
2018	8,715	12,450	1,139	1,461	1,349	1,729	122	157	4,468	6,383	7,703	9,876	52,711	65,745	76,208	97,800
2019	9,167	13,095	1,311	1,681	1,414	1,813	136	175	4,687	6,696	7,527	9,650	59,146	73,352	83,388	106,461
2020	9,228	13,183	1,321	1,694	1,400	1,794	137	176	4,611	6,587	7,511	9,630	65,364	80,705	89,572	113,768
2021	8,793	12,561	1,368	1,753	1,390	1,783	143	183	4,513	6,447	7,702	9,875	64,914	80,213	88,822	112,815
2022	9,078	12,968	1,321	1,694	1,415	1,814	138	176	4,668	6,668	7,769	9,960	60,269	74,788	84,657	108,068
2023	8,687	12,410	1,229	1,576	1,378	1,766	129	166	4,559	6,513	7,747	9,932	54,529	68,074	78,258	100,436
2024	8,752	12,502	1,188	1,523	1,354	1,736	125	160	4,475	6,393	7,330	9,397	59,622	74,104	82,846	105,816
2025	8,618	12,311	1,166	1,495	1,357	1,739	122	157	4,420	6,314	7,616	9,764	48,286	60,808	71,585	92,589
2026	8,837	12,624	1,240	1,590	1,378	1,767	130	167	4,524	6,463	7,700	9,872	60,098	74,744	83,907	107,226
2027	9,379	13,399	1,378	1,766	1,463	1,875	143	184	4,857	6,938	7,774	9,966	62,262	77,330	87,255	111,459
2028	8,132	11,618	1,043	1,337	1,271	1,629	111	142	4,118	5,884	7,332	9,400	51,528	64,743	73,536	94,753
2029	9,204	13,148	1,192	1,528	1,382	1,772	123	158	4,412	6,303	7,734	9,915	72,979	90,020	97,026	122,845
2030	8,976	12,822	1,269	1,627	1,397	1,791	134	172	4,592	6,559	7,803	10,004	65,317	81,049	89,488	114,024
2031	9,118	13,026	1,298	1,665	1,423	1,825	136	174	4,766	6,809	7,900	10,129	66,179	82,104	90,821	115,731
2032	9,415	13,450	1,301	1,669	1,435	1,840	135	173	4,775	6,821	7,849	10,063	68,577	84,968	93,489	118,985
2033	8,552	12,217	1,106	1,418	1,323	1,696	118	151	4,355	6,221	7,659	9,819	58,769	73,472	81,881	104,994
2034	9,478	13,541	1,315	1,686	1,468	1,882	136	175	4,952	7,074	7,903	10,132	70,932	87,825	96,185	122,315
2035	7,663	10,947	991	1,271	1,214	1,557	105	135	3,908	5,582	7,038	9,023	50,790	64,172	71,709	92,687
2036	8,106	11,580	1,099	1,409	1,286	1,649	118	152	4,009	5,727	7,408	9,497	59,733	74,738	81,760	104,752
2037	9,776	13,965	1,377	1,765	1,469	1,883	142	182	4,824	6,891	7,765	9,955	82,066	101,056	107,418	135,698
2038	9,868	14,097	1,424	1,825	1,523	1,953	148	190	5,039	7,199	8,039	10,306	74,316	91,983	100,358	127,554
2039	10,228	14,612	1,401	1,797	1,558	1,998	146	187	5,103	7,290	8,189	10,498	79,666	98,324	106,292	134,705
2040	8,153	11,646	1,077	1,381	1,270	1,628	119	152	4,285	6,122	7,645	9,801	60,017	75,253	82,565	105,983

Unit: acre feet per year

Table 32

Summary of Annual Groundwater Budget for the Paso Robles Groundwater Basin - Predictive Model Run 1 (Water Years 2012 to 2040)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]
Water Year	INFLOW							OUTFLOW								
	Deep Percolation of Direct Precipitation and Return Flow from Applied Irrigation Water	Deep Percolation of Streambed Seepage	Subsurface Inflow Through the Basin Boundary	Nacimiento Water Project Supplies	Deep Percolation of Discharged Treated Wastewater Effluent	Deep Percolation of Urban Water and Sewer Pipe Leakage	Total Inflow	Agricultural Groundwater Pumping	Municipal Groundwater Pumping	Private Domestic Well Groundwater Pumping	Small Commercial Groundwater Pumping	ET by Riparian Vegetation	Groundwater Discharge to Rivers	Subsurface Outflow through Basin Boundary	Total Outflow	Change in Groundwater Storage
	[acre-ft]															
2012	13,476	24,382	29,540	139	6,789	398	74,725	71,613	13,119	3,765	2,104	3,453	11,549	1,447	107,050	-32,325
2013	47,879	53,564	123,758	139	6,789	398	232,528	65,655	13,119	3,765	2,104	3,453	12,479	1,480	102,055	130,473
2014	5,929	18,074	9,743	139	6,789	398	41,073	85,790	13,119	3,765	2,104	3,453	11,397	1,451	121,079	-80,006
2015	6,311	17,074	6,615	139	6,789	398	37,327	78,900	13,119	3,765	2,104	3,453	10,405	1,441	113,185	-75,858
2016	26,976	32,541	63,494	139	6,789	398	130,337	70,895	13,119	3,765	2,104	3,453	10,399	1,453	105,188	25,149
2017	4,967	16,259	5,054	139	6,789	398	33,606	81,974	13,119	3,765	2,104	3,453	10,001	1,441	115,857	-82,251
2018	8,087	18,571	11,588	139	6,789	398	45,573	72,756	13,119	3,765	2,104	3,453	9,563	1,440	106,199	-60,626
2019	6,676	17,397	11,461	139	6,789	398	42,860	80,814	13,119	3,765	2,104	3,453	9,139	1,436	113,831	-70,970
2020	5,439	12,972	3,919	139	6,789	398	29,657	86,769	13,119	3,765	2,104	3,453	8,610	1,432	119,251	-89,595
2021	19,848	19,380	31,557	139	6,789	398	78,111	81,197	13,119	3,765	2,104	3,453	8,266	1,436	113,339	-35,228
2022	17,281	21,738	28,268	139	6,789	398	74,614	77,798	13,119	3,765	2,104	3,453	8,298	1,446	109,982	-35,368
2023	63,008	63,304	148,515	139	6,789	398	282,154	72,489	13,119	3,765	2,104	3,453	9,519	1,521	105,969	176,184
2024	6,349	14,245	4,135	139	6,789	398	32,056	76,717	13,119	3,765	2,104	3,453	9,095	1,454	109,706	-77,650
2025	63,998	65,696	157,348	139	6,789	398	294,369	67,427	13,119	3,765	2,104	3,453	9,740	1,482	101,091	193,278
2026	16,955	23,420	35,600	139	6,789	398	83,301	77,103	13,119	3,765	2,104	3,453	9,545	1,444	110,532	-27,231
2027	36,113	45,336	97,965	139	6,789	398	186,741	76,832	13,119	3,765	2,104	3,453	10,861	1,439	111,573	75,168
2028	59,003	57,988	146,141	139	6,789	398	270,459	66,397	13,119	3,765	2,104	3,453	14,399	1,480	104,716	165,743
2029	5,834	14,296	4,283	139	6,789	398	31,740	85,301	13,119	3,765	2,104	3,453	12,300	1,435	121,476	-89,736
2030	15,737	21,106	27,445	139	6,789	398	71,615	78,364	13,119	3,765	2,104	3,453	10,730	1,426	112,961	-41,346
2031	19,372	22,117	33,803	139	6,789	398	82,619	77,743	13,119	3,765	2,104	3,453	10,327	1,435	111,946	-29,327
2032	6,037	14,511	4,331	139	6,789	398	32,205	80,693	13,119	3,765	2,104	3,453	9,459	1,426	114,019	-81,814
2033	12,957	16,619	17,764	139	6,789	398	54,666	71,292	13,119	3,765	2,104	3,453	9,024	1,419	104,175	-49,509
2034	6,370	13,676	4,437	139	6,789	398	31,810	82,260	13,119	3,765	2,104	3,453	8,455	1,417	114,572	-82,762
2035	77,255	78,942	202,397	139	6,789	398	365,921	62,214	13,119	3,765	2,104	3,453	12,278	1,465	98,399	267,522

Table 32

Summary of Annual Groundwater Budget for the Paso Robles Groundwater Basin - Predictive Model Run 1 (Water Years 2012 to 2040)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]
Water Year	INFLOW							OUTFLOW								
	Deep Percolation of Direct Precipitation and Return Flow from Applied Irrigation Water	Deep Percolation of Streambed Seepage	Subsurface Inflow Through the Basin Boundary	Nacimiento Water Project Supplies	Deep Percolation of Discharged Treated Wastewater Effluent	Deep Percolation of Urban Water and Sewer Pipe Leakage	Total Inflow	Agricultural Groundwater Pumping	Municipal Groundwater Pumping	Private Domestic Well Groundwater Pumping	Small Commercial Groundwater Pumping	ET by Riparian Vegetation	Groundwater Discharge to Rivers	Subsurface Outflow through Basin Boundary	Total Outflow	Change in Groundwater Storage
	[acre-ft]															
2036	23,916	21,924	41,130	139	6,789	398	94,297	69,979	13,119	3,765	2,104	3,453	12,072	1,434	105,925	-11,628
2037	4,872	14,013	3,419	139	6,789	398	29,630	88,590	13,119	3,765	2,104	3,453	9,914	1,421	122,365	-92,734
2038	22,641	24,369	44,970	139	6,789	398	99,307	82,191	13,119	3,765	2,104	3,453	9,109	1,419	115,159	-15,852
2039	7,539	13,365	5,491	139	6,789	398	33,722	87,939	13,119	3,765	2,104	3,453	8,263	1,416	120,058	-86,336
2040	36,190	33,310	76,566	139	6,789	398	153,392	68,384	13,119	3,765	2,104	3,453	8,664	1,431	100,919	52,473
Average	**22,311**	**27,938**	**47,612**	**139**	**6,789**	**398**	**105,187**	**76,761**	**13,119**	**3,765**	**2,104**	**3,453**	**10,133**	**1,444**	**110,779**	**-5,592**

Notes:

[1] Groundwater predictive model input: Calculated based on the results of deep percolation within the Paso Robles Basin from the calibrated watershed model.

[2] Groundwater predictive model input: Calculated based on the results of streambed seepage within the Paso Robles Basin from the calibrated watershed model.

[3] Groundwater predictive model input: Calculated based on the results of recharge (including deep percolation and streambed seepage) from the calibrated watershed model less the agricultural and private domestic groundwater pumping for the area outside the Paso Robles Basin but within the watershed tributary to the Paso Robles Basin.

[4] Groundwater predictive model input: Based on measured data for water year 2011 provided by City of Paso Robles, Atascadero Mutual Water Company and Templeton Community Services District.

[5] Groundwater predictive model input: Based on measured data for water year 2011 provided by City of Atascadero Public Works Department, Camp Roberts, City of Paso Robles and San Miguel CSD. Templeton CSD provided an average daily flow rate. Wastewater discharge in septic tank by rural residences and small community was included and was assumed to be the amount of indoor use.

[6] Groundwater predictive model input: Assumed to be 2% of urban water and sewer pipes based on Paso Robles 2010 Urban Master Plan.

[7] = [1] + [2] + [3] + [4] + [5] + [6]

[8] Groundwater predictive model input: Based on calculated water demands for water year 2012 thrgouth 2040 under scenario 1 conditions.

[9] Groundwater predictive model input: Based on calculated water demands for water year 2011.

[10] Groundwater predictive model input: Based on calculated water demands for water year 2011.

[11] Groundwater predictive model input: Based on calculated water demands for water year 2011.

[12] Groundwater predictive model input: Based on calculated water demands for water year 2011 and assumed 1% annual growth.

[13] Calculated based on the results from the ground water model Scenario Run 1.

[14] Calculated based on the results from the ground water model Scenario Run 1.

[15] = [8] + [9] + [10] + [11] + [12] + [13] + [14]

[16] = [7] - [15]

Table 33

Summary of Annual Groundwater Budget for the Paso Robles Groundwater Basin - Predictive Model Run 2 (Water Years 2012 to 2040)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]
Water Year	INFLOW							OUTFLOW								
	Deep Percolation of Direct Precipitation and Return Flow from Applied Irrigation Water	Deep Percolation of Streambed Seepage	Subsurface Inflow Through the Basin Boundary	Nacimiento Water Project Supplies	Deep Percolation of Discharged Treated Wastewater Effluent	Deep Percolation of Urban Water and Sewer Pipe Leakage	Total Inflow	Agricultural Groundwater Pumping	Municipal Groundwater Pumping	Private Domestic Well Groundwater Pumping	Small Commercial Groundwater Pumping	ET by Riparian Vegetation	Groundwater Discharge to Rivers	Subsurface Outflow through Basin Boundary	Total Outflow	Change in Groundwater Storage
	[acre-ft]															
2012	12,726	25,316	20,692	1,305	6,857	402	67,298	71,551	13,250	3,802	2,125	3,453	11,598	1,447	107,226	-39,928
2013	46,817	54,163	102,216	2,665	6,926	406	213,193	68,021	13,383	3,840	2,147	3,453	12,883	1,480	105,207	107,986
2014	7,735	17,857	4,194	3,868	6,995	410	41,058	90,417	13,516	3,879	2,168	3,453	12,329	1,451	127,213	-86,155
2015	7,245	17,142	3,282	3,521	7,065	414	38,670	83,987	13,652	3,918	2,190	3,453	11,335	1,440	119,974	-81,304
2016	26,507	32,837	51,277	3,521	7,135	418	121,695	75,604	13,788	3,957	2,212	3,453	11,475	1,453	111,942	9,753
2017	5,687	17,050	2,028	4,847	7,207	423	37,241	91,276	13,926	3,996	2,234	3,453	11,795	1,441	128,121	-90,879
2018	10,215	18,214	8,450	3,521	7,279	427	48,105	81,603	14,065	4,036	2,256	3,453	10,585	1,440	117,438	-69,333
2019	10,783	16,244	8,552	3,521	7,352	431	46,883	92,300	14,206	4,077	2,279	3,453	9,705	1,436	127,455	-80,572
2020	9,473	11,815	2,379	4,847	7,425	435	36,374	99,557	14,348	4,117	2,302	3,453	9,353	1,431	134,560	-98,186
2021	21,833	18,848	22,367	3,521	7,499	440	74,508	94,129	14,491	4,159	2,325	3,453	8,709	1,435	128,701	-54,192
2022	19,734	21,113	23,066	3,521	7,574	444	75,453	90,223	14,636	4,200	2,348	3,453	8,880	1,445	125,186	-49,733
2023	65,415	62,689	124,990	3,521	7,650	449	264,713	84,339	14,783	4,242	2,371	3,453	10,608	1,521	121,317	143,397
2024	10,216	13,553	2,266	3,521	7,727	453	37,736	90,476	14,931	4,285	2,395	3,453	9,915	1,454	126,908	-89,172
2025	66,292	65,128	131,908	6,416	7,804	458	278,006	79,023	15,080	4,327	2,419	3,453	12,826	1,482	118,610	159,396
2026	20,949	22,722	26,879	6,416	7,882	462	85,310	91,937	15,231	4,371	2,443	3,453	12,985	1,444	131,863	-46,553
2027	38,678	44,708	79,916	6,416	7,961	467	178,145	92,436	15,383	4,414	2,468	3,453	13,388	1,440	132,982	45,163
2028	61,239	57,594	118,770	6,416	8,040	472	252,531	79,757	15,537	4,459	2,492	3,453	15,895	1,480	123,072	129,459
2029	11,219	13,197	1,968	6,416	8,121	476	41,397	105,063	15,692	4,503	2,517	3,453	13,901	1,435	146,565	-105,168
2030	18,467	20,565	19,386	6,416	8,202	481	73,517	96,021	15,849	4,548	2,542	3,453	12,829	1,427	136,670	-63,153
2031	22,332	21,523	25,657	6,416	8,284	486	84,698	96,090	16,008	4,594	2,568	3,453	12,628	1,436	136,776	-52,078
2032	10,370	13,861	2,170	6,416	8,367	491	41,674	100,671	16,168	4,640	2,593	3,453	11,976	1,428	140,929	-99,254
2033	15,647	16,263	12,112	6,416	8,451	496	59,384	88,685	16,329	4,686	2,619	3,453	11,506	1,420	128,699	-69,315
2034	10,491	12,977	2,480	6,416	8,535	501	41,401	103,328	16,493	4,733	2,646	3,453	10,831	1,418	142,901	-101,500
2035	79,269	78,465	166,877	7,816	8,620	506	341,553	78,308	16,658	4,780	2,672	3,453	14,228	1,467	121,565	219,988

Table 33

Summary of Annual Groundwater Budget for the Paso Robles Groundwater Basin - Predictive Model Run 2 (Water Years 2012 to 2040)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]
Water Year	INFLOW							OUTFLOW								
	Deep Percolation of Direct Precipitation and Return Flow from Applied Irrigation Water	Deep Percolation of Streambed Seepage	Subsurface Inflow Through the Basin Boundary	Nacimiento Water Project Supplies	Deep Percolation of Discharged Treated Wastewater Effluent	Deep Percolation of Urban Water and Sewer Pipe Leakage	Total Inflow	Agricultural Groundwater Pumping	Municipal Groundwater Pumping	Private Domestic Well Groundwater Pumping	Small Commercial Groundwater Pumping	ET by Riparian Vegetation	Groundwater Discharge to Rivers	Subsurface Outflow through Basin Boundary	Total Outflow	Change in Groundwater Storage
	[acre-ft]															
2036	26,896	21,784	28,250	7,816	8,707	511	93,963	89,404	16,824	4,828	2,699	3,453	14,338	1,436	132,981	-39,019
2037	10,279	13,028	1,542	9,142	8,794	516	43,301	115,461	16,992	4,876	2,726	3,453	13,850	1,422	158,780	-115,479
2038	25,569	23,988	33,202	7,816	8,881	521	99,976	106,890	17,162	4,925	2,753	3,453	12,621	1,421	149,225	-49,249
2039	12,190	12,834	3,225	7,816	8,971	526	45,562	115,377	17,334	4,974	2,781	3,453	11,421	1,418	156,758	-111,197
2040	38,297	33,106	60,002	7,816	9,060	531	148,811	89,164	17,507	5,024	2,808	3,453	11,767	1,433	131,156	17,656
Average	**24,916**	**27,537**	**37,590**	**5,451**	**7,909**	**464**	**103,867**	**91,072**	**15,284**	**4,386**	**2,452**	**3,453**	**11,937**	**1,444**	**130,027**	**-26,159**

Notes:

[1] Groundwater predictive model input: Calculated based on the results of deep percolation within the Paso Robles Basin from the calibrated watershed model.

[2] Groundwater predictive model input: Calculated based on the results of streambed seepage within the Paso Robles Basin from the calibrated watershed model.

[3] Groundwater predictive model input: Calculated based on the results of recharge (including deep percolation and streambed seepage) from the calibrated watershed model less the agricultural and private domestic groundwater pumping for the area outside the Paso Robles Basin but within the watershed tributary to the Paso Robles Basin.

[4] Groundwater predictive model input: Based on measured and projected data provided by City of Paso Robles, Atascadero Mutual Water Company and Templeton Community Services District.

[5] Groundwater predictive model input: Based on measured data for water year 2011 and assumed 1% annual growth.

[6] Groundwater predictive model input: Assumed to be 2% of urban water and sewer pipes based on Paso Robles 2010 Urban Master Plan.

[7] = [1] + [2] + [3] + [4] + [5] + [6]

[8] Groundwater predictive model input: Based on calculated water demands for water year 2012 thrgouth 2040 under scenario 2 conditions and revised due to the limitation of model layers' bottom elevations.

[9] Groundwater predictive model input: Based on calculated water demands for water year 2011 and assumed 1% annual growth.

[10] Groundwater predictive model input: Based on calculated water demands for water year 2011 and assumed 1% annual growth.

[11] Groundwater predictive model input: Based on calculated water demands for water year 2011 and assumed 1% annual growth.

[12] Groundwater predictive model input: Based on calculated water demands for water year 2011 and assumed 1% annual growth.

[13] Calculated based on the results from the ground water model Scenario Run 2.

[14] Calculated based on the results from the ground water model Scenario Run 2.

[15] = [8] + [9] + [10] + [11] + [12] + [13] + [14]

[16] = [7] - [15]

Agricultural groundwater pumping values vary from the total applied water values presented in Table 30. The variations are primarily associated with dry model cells (when assumed pumping exceeds available water), and to a lesser degree from inherent model convergence errors.