State of California | The Resources Agency

Memorandum

Date : November 8, 1995

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Water Resources Evaluation

From : **Department of Water Resources**

Subject: 1992 Annual Water Use - Water Supply Budgets

This report is the fifth in a series that provides field information on population, land use, water use, surface water supply, and ground water. The data reported are based on precipitation, temperature, runoff, water supply and water use measurements for 1992 rather than normalized conditions as assumed in a base year for Bulletin 160. Provided are 1992 data by PSA and by county; water use and supplies by PSA; and ground water changes from 1991 to 1992.

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Overview

This report is the fifth in a series that provides actual field information on annual population, land use, water use, surface water supply, and ground water. Data is based on actual precipitation, temperature, etc., rather than on normal conditions as assumed in a base year for Bulletin 160. These reports provide timely information on changes in population, land use, ground water, and water use in California. Totals shown in the tables will not always add exactly because of rounding.

Water year 1992 was the sixth consecutive year of below normal rainfall and runoff in California. Statewide, precipitation averaged 87 percent, runoff averaged 43 percent, and reservoir storage decreased 1.1 million acre-feet to 12.7 maf or 56 percent of normal at the end of the year. Ground water elevations continued to decline as the ground water reservoirs played a major role in meeting the demands for water. The urban and agricultural sectors used more ground water to make up for reductions in surface supplies, although small coastal urban areas imposed rationing programs on their customers. The environmental sector saw refuges receiving slightly below normal supplies, but instream flows, Delta outflow, and the Wild and Scenic Rivers natural flows were at drought levels.

The current 6-year drought, 1987-92, is very similar in magnitude to the 6-year drought of the 1930s (1929-1934), which was used as the design period for many water resources projects built in California. For the Sacramento River Index, the annual runoff for the recent drought averaged 9.96 maf compared to the 1930s drought average of 9.78 maf.

Table 1. Reservoir Storage as of September 30
(1,000 acre-feet)

Region	Number of Reservoirs	Historic Average	1977	1987	1988	1989	1990	1991	1992
North Coast	7	2,112	294	2,064	1,748	1,684	1,479	1,004	1,187
San Francisco Bay	18	397	285	282	320	348	310	333	355
Central Coast	6	551	228	534	330	120	93	164	288
South Coast	29	1,117	838	1,281	1,247	1,140	1,201	1,342	1,322
Sacramento River	43	10,305	4,219	8,738	6,994	8,871	6,659	6,664	6,210
San Joaquin River	33	6,454	1,525	4,884	3,645	3,894	3,348	3,660	2,798
Tulare Lake	6	699	200	429	239	243	170	291	198
North Lahontan	5	585	36	448	89	221	106	98	90
South Lahontan	8	298	153	260	215	200	206	228	224
California Total	**155**	**22,518**	**7,778**	**18,920**	**14,827**	**16,721**	**13,572**	**13,784**	**12,672**
Percent of Average			**35**	**84**	**66**	**74**	**60**	**61**	**56**

Figure 1. Hydrologic Regions in California

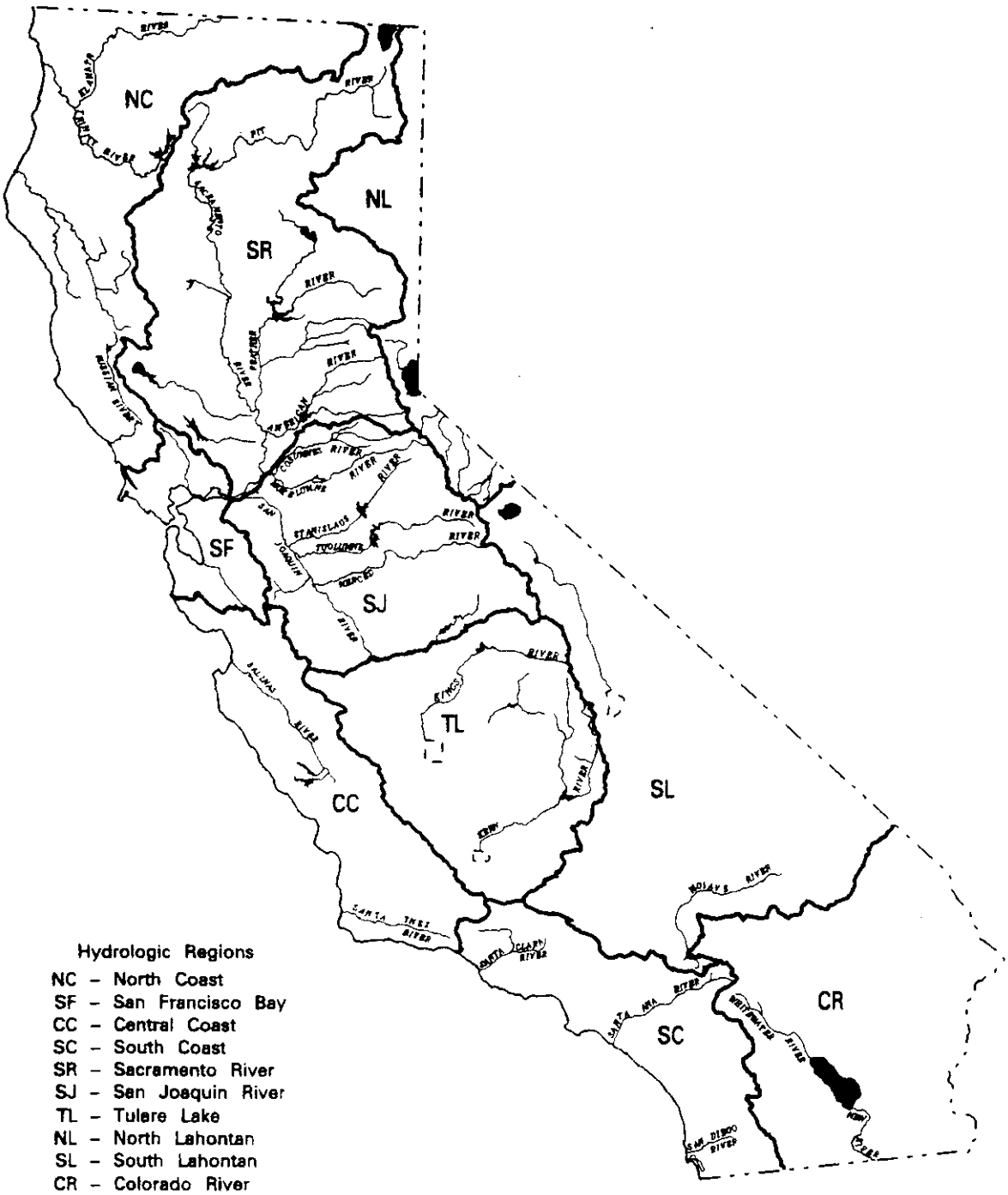


Figure 2. Water Year Precipitation in Percent of Average
1987 to 1992
by Hydrologic Region

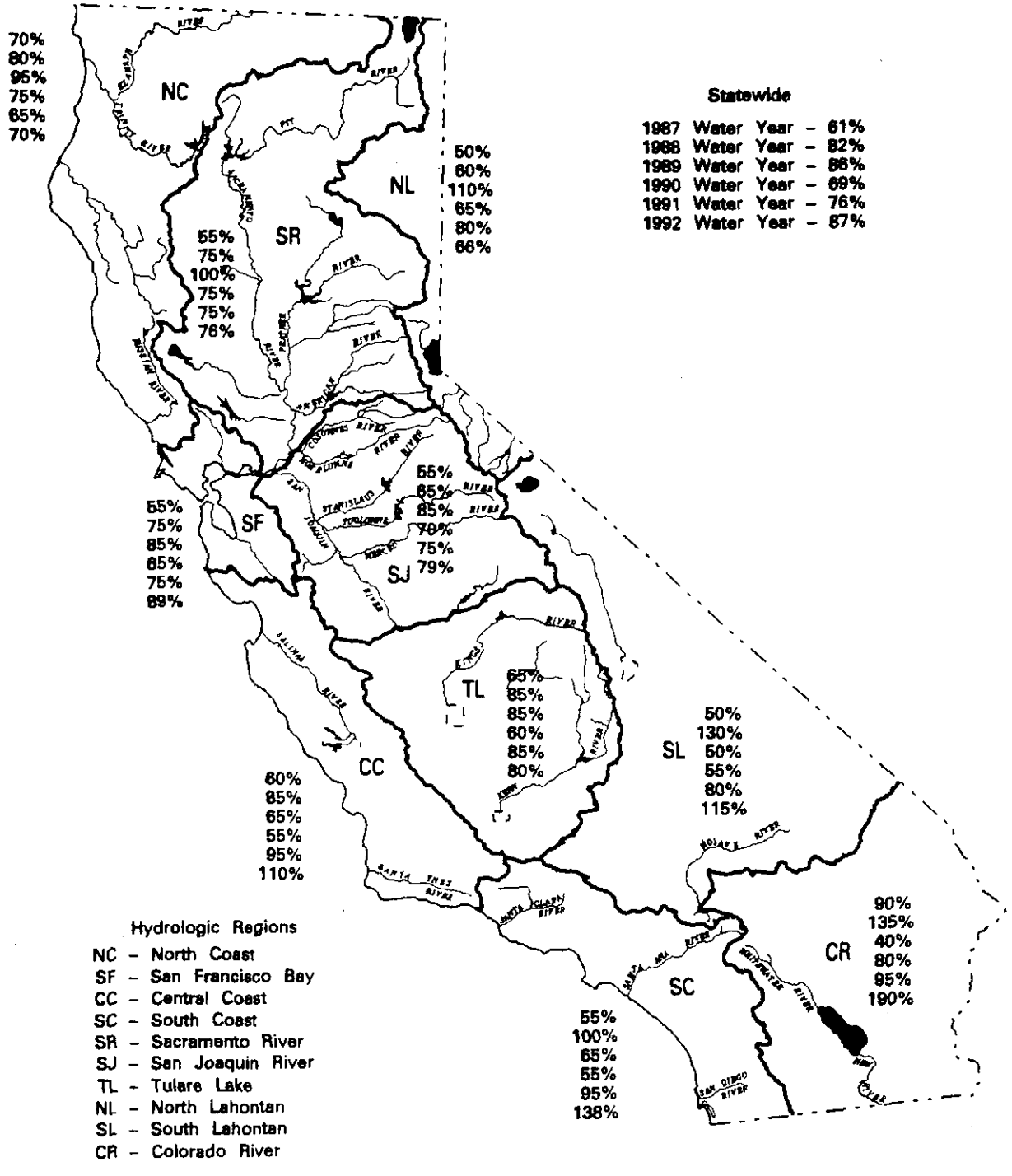
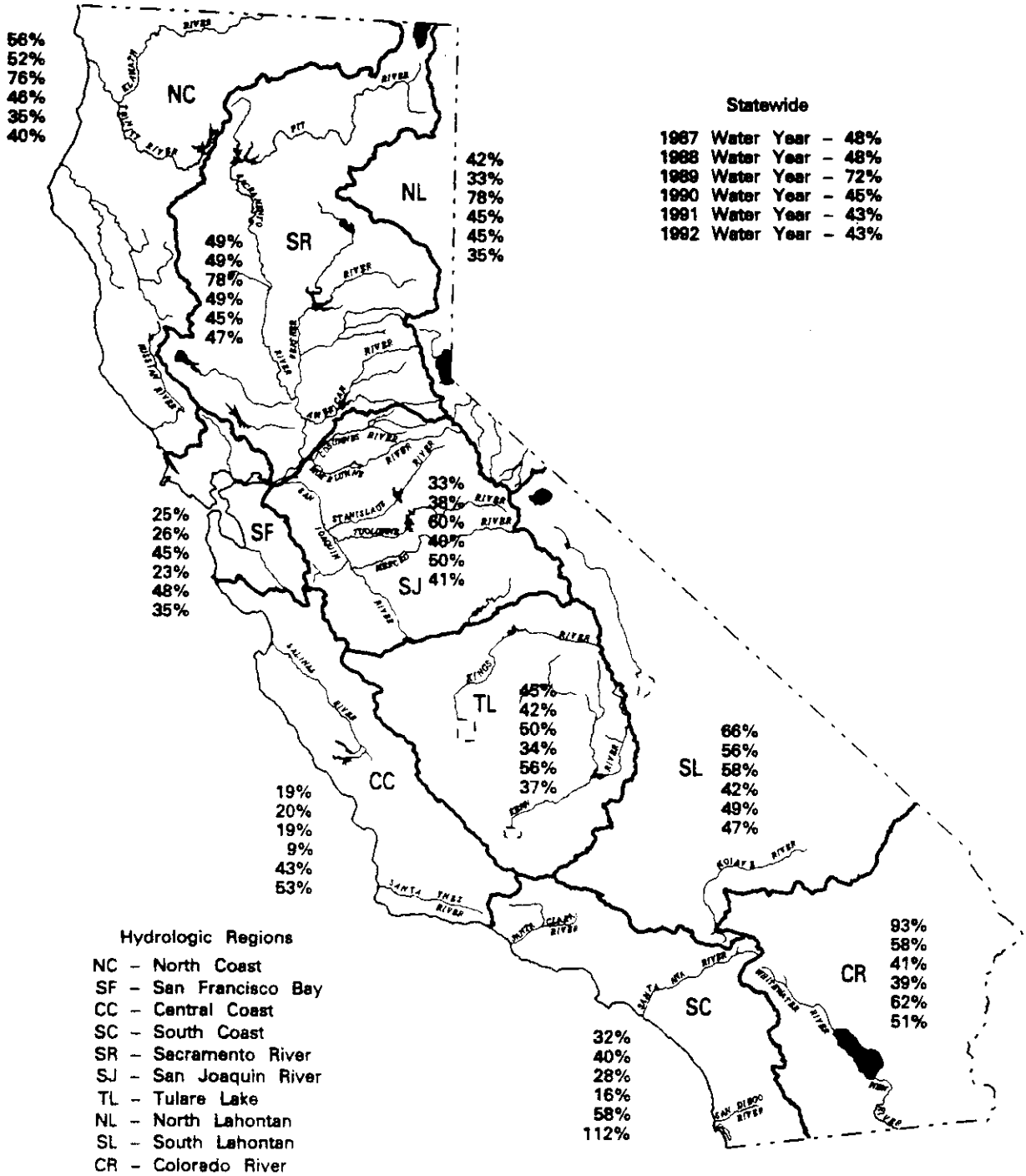


Figure 3. Water Year Runoff in Percent of Average
1987 to 1992
by Hydrologic Region



Population

The California Department of Finance (DOF) estimated California's population at 31,300,000 on July 1, 1992. This is an increase of 654,000 from July 1, 1991, or 2.1 percent over this period. The State showed less growth during this year than in the previous year. The total population change was the lowest since 1985-86. Foreign net migration was up 22 percent (303,000), while net domestic migration was negative (−41,000). The number of births was over 600,000 for the second year in a row with little change in the number of deaths (212,000). The fastest growing area in the State was the Gold Country counties at 3.8 percent.

DOF population estimates are made between the U.S. Census using data from school enrollments, auto registrations, voter registrations, drivers licenses, Medicare data, and birth and death data. See Tables 2, 3, and 4 for regional, county, and PSA population data.

Table 2. July 1992 California Population by Region

Region	Population	Percent
NC	598,810	1.9
SF	5,680,855	18.1
CC	1,339,555	4.3
SC	16,888,800	54.0
SR	2,340,660	7.5
SJ	1,531,680	4.9
TL	1,669,810	5.3
NL	80,955	0.3
SL	661,845	2.1
CR	507,030	1.6
CA Total	**31,300,000**	**100.0**

Table 3. Population by County, Ranked by 1991-92 Change
Department of Finance Data

	July 1991	July 1992	1991-92 Change	1991-92 % Increase
Los Angeles	9,016,100	9,128,200	112,100	1.2
Orange	2,474,200	2,531,200	57,000	2.3
San Diego	2,576,300	2,632,000	55,700	2.2
Riverside	1,255,800	1,307,000	51,200	4.1
San Bernardino	1,488,200	1,538,700	50,500	3.4
Santa Clara	1,524,300	1,550,900	26,600	1.7
Sacramento	1,086,800	1,111,900	25,100	2.3
Fresno	699,100	723,000	23,900	3.4
Alameda	1,306,400	1,329,700	23,300	1.8
Kern	574,600	595,200	20,600	3.6
Contra Costa	826,900	846,400	19,500	2.4
Stanislaus	388,000	401,100	13,100	3.4
San Mateo	663,400	676,100	12,700	1.9
San Joaquin	497,500	509,600	12,100	2.4
Ventura	683,700	695,600	11,900	1.7
San Francisco	733,400	744,500	11,100	1.5
Sonoma	400,900	411,700	10,800	2.7
Solano	357,800	366,800	9,000	2.5
Tulare	326,300	335,200	8,900	2.7
Imperial	115,700	124,300	8,600	7.4
Placer	183,200	191,100	7,900	4.3
Monterey	365,600	373,500	7,900	2.2
Santa Barbara	380,400	386,400	6,000	1.6
Madera	94,900	100,400	5,500	5.8
El Dorado	133,500	138,900	5,400	4.0
Butte	189,400	194,600	5,200	2.7
Shasta	155,100	159,600	4,500	2.9
San Luis Obispo	222,200	226,600	4,400	2.0
Marin	235,000	239,300	4,300	1.8
Merced	186,600	189,900	3,300	1.8
Humboldt	122,300	125,400	3,100	2.5
Santa Cruz	233,200	236,200	3,000	1.3
Yolo	146,000	149,000	3,000	2.1
Napa	113,000	115,800	2,800	2.5
Kings	106,200	108,900	2,700	2.5

Table 3. (continued) Population by County, Ranked by 1991-92 Change
Department of Finance Data

	July 1991	July 1992	1991-92 Change	1991-92 % Increase
Sutter	67,400	70,100	2,700	4.0
Calaveras	34,200	36,300	2,100	6.1
Nevada	82,700	84,800	2,100	2.5
San Benito	37,400	39,300	1,900	5.1
Lake	53,200	55,000	1,800	3.4
Yuba	60,400	61,900	1,500	2.5
Del Norte	26,000	27,300	1,300	5.0
Tehama	51,800	53,100	1,300	2.5
Mendocino	82,200	83,400	1,200	1.5
Amador	31,500	32,400	900	2.9
Tuolumne	50,900	51,800	900	1.8
Mariposa	15,000	15,800	800	5.3
Plumas	20,200	20,900	700	3.5
Siskiyou	44,400	44,900	500	1.1
Glenn	25,600	26,100	500	2.0
Modoc	9,800	10,200	400	4.1
Colusa	16,900	17,300	400	2.4
Trinity	13,200	13,400	200	1.5
Lassen	28,400	28,600	200	0.7
Mono	9,800	9,900	100	1.0
Alpine	1,200	1,200	0	0.0
Sierra	3,300	3,300	0	0.0
Inyo	18,500	18,300	(200)	−1.1
State Total	**30,646,000**	**31,300,000**	**654,000**	**2.1**

Table 4. Population by Planning Subarea

	July 1991	July 1992
North Coast Region		
Upper Klamath PSA	29,585	30,010
Lower Klamath-Smith PSA	47,785	49,325
Coastal PSA	162,835	166,540
Russian River PSA	344,155	352,935
Regional Total	584,360	598,810
San Francisco Bay Region		
North Bay PSA	695,235	710,400
South Bay PSA	4,882,955	4,970,455
Regional Total	5,578,190	5,680,855
Central Coast Region		
Northern PSA	712,330	726,330
Southern PSA	602,825	613,225
Regional Total	1,315,155	1,339,555
South Coast Region		
Santa Clara PSA	851,875	869,875
Metropolitan PSA	8,596,900	8,689,900
Santa Ana PSA	4,132,400	4,243,600
San Diego PSA	3,008,125	3,085,425
Regional Total	16,589,300	16,888,800
Sacramento River Region		
Shasta Lake- Pit River PSA	31,525	32,120
Northwest Valley PSA	113,175	115,340
Northeast Valley PSA	194,560	201,175
Southeast PSA	256,845	264,450
Central Basin West PSA	249,300	255,880
Central Basin East PSA	1,312,240	1,345,820
Southwest PSA	54,815	56,650
Delta Service Area PSA	67,725	69,225
Regional Total	2,280,185	2,340,660
San Joaquin River Region		
Sierra Foothills PSA	149,725	155,875
Eastern Valley Floor PSA	322,235	330,385
Delta Service Area PSA	161,450	167,575
Western Uplands PSA	66,135	69,020
East Side Uplands PSA	45,025	47,235
Valley East Side PSA	675,215	695,790
Valley West Side PSA	63,605	65,765
West Side Uplands PSA	35	35
Regional Total	1,483,425	1,531,680

Table 4. (continued) Population by Planning Subarea

	July 1991	July 1992
Tulare Lake Region		
Upland PSA	56,540	58,060
Kings-Kaweah-Tule Rivers PSA	1,060,200	1,093,140
San Luis West Side PSA	40,095	41,820
Western Uplands PSA	7,420	7,680
Kern Valley Floor PSA	451,985	469,110
Regional Total	1,616,240	1,669,810
North Lahontan Region		
Lassen Group PSA	25,220	25,430
Alpine Group PSA	54,450	55,525
Regional Total	79,670	80,955
South Lahontan Region		
Mono-Owens Area PSA	25,280	25,155
Death Valley PSA	1,065	1,070
Indian Wells Area PSA	50,740	52,295
Antelope Valley PSA	276,450	289,925
Mojave River PSA	279,700	293,400
Regional Total	633,235	661,845
Colorado River Region		
Twentynine Palms-Lanfair PSA	63,175	65,275
Chuckwalla PSA	2,795	2,895
Colorado River PSA	29,085	30,235
Coachella PSA	275,455	284,350
Borrego PSA	6,355	6,500
Imperial Valley PSA	109,375	117,775
Regional Total	**486,240**	**507,030**
California Total	**30,646,000**	**31,300,000**

Land Use

California's total irrigated acreage in 1992 was 8.7 million acres, about 55,000 acres more than 1991. The most significant crop changes from 1991 were an increase in grains by about 95,000 acres and a decrease in tomatoes by 80,000 acres. Since water year 1992 was the sixth straight year of below normal rainfall, surface water supplies were deficient in many areas. However, ground water supplies made up for surface water deficiencies in most agricultural areas.

There were no surveys conducted in 1992.

Agricultural price support programs, conservation reserve programs, marketing orders, and international trade restrictions by the federal government impact the irrigated acreage in California but the impact is difficult to determine. Price support programs that require farmers to idle irrigated acreage may tend to reduce California's planted acreage. On the other hand, subsidy programs that make crops profitable that otherwise might not have been planted may tend to increase acreage. Tabulated below are the government payments to California farmers and to all U.S. farmers for the last 11 years. California ranked number one in gross agricultural receipts (9.6 percent of U.S.) but received only 4.7 percent of federal payments to farmers.

Table 5. Government Payments to California Farmers (1,000 Dollars)

Year	Feed Grains	Wheat	Rice	Cotton	Wool Act	Conservation	Miscellaneous	Total
1982	4,280	9,524	23,679	86,731	4,190	4,869	1,210	134,483
1983	4,787	12,433	52,281	71,729	6,730	4,371	200,275	352,606
1984	2,688	19,040	29,016	27,023	9,717	7,717	240,058	335,259
1985	5,295	21,711	121,362	99,972	8,091	5,325	39,131	300,887
1986	17,324	43,441	82,272	119,602	9,476	4,990	110,756	387,861
1987	36,397	60,250	87,589	168,103	8,295	10,866	90,511	462,011
1988	28,464	40,237	87,435	118,600	6,949	12,879	40,514	335,078
1989	10,331	10,426	124,811	148,324	3,203	13,684	61,311	372,090
1990	6,340	27,752	92,150	57,995	4,463	14,452	49,181	252,333
1991	8,942	32,741	102,428	48,991	8,968	13,212	45,537	260,825
1992	10,643	23,134	103,570	91,232	10,794	13,479	177,530	430,382

Table 6. Government Payments to U.S. Farmers (1,000 Dollars)

Year	Feed Grains	Wheat	Rice	Cotton	Wool Act	Conservation	Miscellaneous	Total
1982	713,315	652,268	155,910	800,211	46,042	176,668	945,551	3,489,965
1983	1,346,033	864,179	277,627	662,289	83,550	187,532	5,873,889	9,295,099
1984	366,739	1,795,151	191,783	274,658	117,578	191,458	5,493,003	8,430,370
1985	2,860,552	1,949,621	577,234	1,106,244	97,596	188,830	924,077	7,704,154
1986	5,158,038	3,499,721	422,769	1,042,392	119,922	253,697	1,324,812	11,821,351
1987	8,489,993	2,931,266	474,853	1,204,298	143,724	1,530,927	1,971,671	16,746,732
1988	7,219,460	1,841,883	464,548	923,863	116,777	1,607,379	2,305,898	14,479,808
1989	3,140,796	602,997	670,982	1,183,316	81,403	1,770,664	3,436,044	10,886,202
1990	2,701,173	2,311,300	464,880	440,757	96,195	1,898,141	1,385,584	9,298,030
1991	2,648,653	2,165,672	550,029	406,903	153,519	1,858,183	431,440	8,214,399
1992	2,499,273	1,402,688	512,300	751,177	188,082	1,899,421	1,915,979	9,168,920

Source: *Economic Indicators of the Farm Sector, State Financial Summary*, U.S. Dept of Agriculture, Economic Research Unit.

Table 7. 1992 Crop Acreages by Planning Subarea (1,000 Acres)

North Coast Region

Crop	Upper Klamath	Lower Klamath	Coastal	Russian River	Total
Grain	61.7	0.3	0.5	0.0	62.5
Rice	0.0	0.0	0.0	0.0	0.0
Cotton	0.0	0.0	0.0	0.0	0.0
Sugar Beets	4.7	0.0	0.0	0.0	4.7
Corn	0.3	0.0	0.1	0.2	0.6
Other Field	0.4	0.1	0.5	2.0	3.0
Alfalfa	38.2	0.6	0.3	0.0	39.1
Pasture	66.0	10.5	24.0	10.8	111.3
Tomatoes	0.0	0.0	0.0	0.0	0.0
Other Truck	18.4	0.7	1.5	0.7	21.3
Almond-Pistachio	0.0	0.0	0.0	0.0	0.0
Other Deciduous	0.0	0.0	1.2	5.7	6.9
Citrus-Olive	0.0	0.0	0.0	0.0	0.0
Grapes	0.0	0.0	1.0	35.2	36.2
Total Crop Acres	**189.7**	**12.2**	**29.1**	**54.6**	**285.6**
Double Crop	0.0	0.0	0.0	0.0	0.0
Total Land Acres	**189.7**	**12.2**	**29.1**	**54.6**	**285.6**

San Francisco Bay Region

Crop	North Bay	South Bay	Total
Grain	0.5	1.4	1.9
Rice	0.0	0.0	0.0
Cotton	0.0	0.0	0.0
Sugar Beets	0.2	0.0	0.2
Corn	0.3	0.2	0.5
Other Field	0.4	1.3	1.7
Alfalfa	0.0	0.1	0.1
Pasture	4.1	0.6	4.7
Tomatoes	0.3	0.0	0.3
Other Truck	1.1	7.0	8.1
Almond-Pistachio	0.0	0.0	0.0
Other Deciduous	4.0	2.1	6.1
Citrus-Olive	0.0	0.0	0.0
Grapes	36.4	1.7	38.1
Total Crop Acres	**47.3**	**14.4**	**61.7**
Double Crop	0.0	0.2	0.2
Total Land Acres	**47.3**	**14.2**	**61.5**

Table 7. (continued) 1992 Crop Acreages by Planning Subarea (1,000 Acres)

Central Coast Region

Crop	Southern	Northern	Total
Grain	5.3	16.7	22.0
Rice	0.0	0.0	0.0
Cotton	0.0	0.0	0.0
Sugar Beets	0.0	3.2	3.2
Corn	1.4	1.1	2.5
Other Field	7.7	10.6	18.2
Alfalfa	17.6	4.8	22.4
Pasture	12.8	7.4	20.2
Tomatoes	0.4	9.1	9.5
Other Truck	100.9	267.6	368.5
Almond-Pistachio	0.0	0.0	0.0
Other Deciduous	2.6	16.1	18.7
Citrus-Olive	16.8	0.7	17.5
Grapes	20.6	35.4	56.0
Total Crop Acres	**186.1**	**372.7**	**558.8**
Double Crop	40.4	92.5	132.9
Total Land Acres	**145.7**	**280.2**	**425.9**

South Coast Region

Crop	Santa Clara	Metro LA	Santa Ana	San Diego	Total
Grain	0.1	0.1	3.6	6.9	10.6
Rice	0.0	0.0	0.0	0.0	0.0
Cotton	0.0	0.0	0.0	0.0	0.0
Sugar Beets	0.0	0.0	0.0	0.0	0.0
Corn	0.9	0.2	2.6	0.4	4.1
Other Field	0.4	0.0	3.8	0.1	4.3
Alfalfa	0.2	0.0	8.8	0.5	9.6
Pasture	2.3	0.2	12.4	5.2	20.2
Tomatoes	2.2	0.0	1.2	3.2	6.6
Other Truck	49.6	4.0	19.9	15.5	89.0
Almond-Pistachio	0.0	0.0	0.0	0.0	0.0
Other Deciduous	0.3	0.0	1.1	1.9	3.3
Citrus-Olive	59.0	2.0	25.2	75.2	161.4
Grapes	0.0	0.0	3.8	2.3	6.1
Total Crop Acres	**115.0**	**6.6**	**82.5**	**111.2**	**315.4**
Double Crop	21.7	0.0	5.9	3.1	30.7
Total Land Acres	**93.3**	**6.6**	**76.6**	**108.1**	**284.6**

Table 7. (continued) 1992 Crop Acreages by Planning Subarea (1,000 Acres)

Sacramento River Region

Crop	Shasta Pit	North-west Valley	North-east Valley	Southeast	Central Basin W	Central Basin E	South-west	Delta Serv Area	Total
Grain	10.4	11.3	4.7	2.1	155.0	56.8	0.5	39.8	280.6
Rice	2.6	1.6	0.0	0.7	154.5	256.3	1.0	0.8	417.5
Cotton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sugar Beets	0.0	1.4	1.6	0.0	25.0	7.0	0.0	8.5	43.5
Corn	0.0	3.4	2.1	0.0	30.5	10.1	0.0	32.6	78.7
Other Field	0.2	7.1	3.0	0.0	65.9	42.2	0.2	27.0	145.6
Alfalfa	39.0	7.3	1.4	6.2	67.1	12.3	0.4	14.9	148.6
Pasture	86.8	43.1	18.5	82.4	28.2	48.4	3.4	16.1	326.9
Tomatoes	0.0	0.0	0.0	0.2	77.3	28.1	0.0	15.4	121.0
Other Truck	1.3	1.5	0.9	0.6	33.6	21.8	0.1	3.4	63.2
Almond-Pistachio	0.0	13.7	19.2	0.0	36.8	30.5	0.1	0.0	100.3
Other Deciduous	0.1	17.9	24.8	2.9	33.0	113.0	8.3	7.2	207.2
Citrus-Olive	0.0	15.9	0.7	2.0	1.5	4.1	0.0	0.0	24.2
Grapes	0.0	0.1	0.3	0.8	4.6	0.4	5.0	4.3	15.5
Total Crop Acres	**140.4**	**124.3**	**77.2**	**97.9**	**713.0**	**631.0**	**19.0**	**170.0**	**1,972.8**
Double Crop	0.0	0.6	0.0	0.0	25.5	11.5	0.0	4.7	42.3
Total Land Acres	**140.4**	**123.7**	**77.2**	**97.9**	**687.5**	**619.5**	**19.0**	**165.3**	**1,930.5**

San Joaquin River Region

Crop	Sierra Foot	E Vly Floor	Delta	West Uplands	E Side Uplands	Vly E Side	Vly W Side	W Side Uplands	Total
Grain	0.0	30.7	43.6	0.7	0.0	98.2	20.9		194.1
Rice	0.0	4.6	0.0	0.0	0.0	4.7	5.9		15.2
Cotton	0.0	0.0	0.0	0.0	0.0	76.4	112.2		188.6
Sugar Beets	0.0	10.2	12.3	0.1	0.0	3.9	13.0		39.5
Corn	0.0	23.5	53.0	0.1	0.0	100.8	16.3		193.7
Other Field	0.0	11.9	27.2	1.5	0.7	20.3	37.2		98.8
Alfalfa	0.0	15.5	45.7	3.8	0.0	105.7	62.0		232.7
Pasture	3.9	48.4	12.7	0.8	1.1	136.6	21.3		224.8
Tomatoes	0.0	8.0	16.5	0.1	0.0	9.3	33.8		67.7
Other Truck	0.0	10.7	27.2	0.3	0.0	30.6	72.6		141.4
Almond-Pistachio	0.0	3.0	2.7	1.7	0.0	217.9	13.2		238.5
Other Deciduous	3.0	41.1	11.1	2.2	0.4	71.5	23.5		152.8
Citrus-Olive	0.0	0.0	0.0	0.0	0.0	8.3	0.0		8.3
Grapes	1.9	56.8	1.5	0.7	0.1	118.7	0.6		180.3
Total Crop Acres	**8.8**	**264.4**	**253.5**	**12.0**	**2.3**	**1,002.9**	**432.5**	**0.0**	**1,976.4**
Double Crop	0.0	4.4	5.6	0.0	0.0	37.5	5.1		52.6
Total Land Acres	**8.8**	**260.0**	**247.9**	**12.0**	**2.3**	**965.4**	**427.4**	**0.0**	**1,923.8**

Table 7. (continued) 1992 Crop Acreages by Planning Subarea (1,000 acres)

Tulare Lake Region

Crop	Kern Valley	KKT	San Luis W Side	Uplands	Total
Grain	34.1	146.5	51.6	0.0	232.2
Rice	0.0	0.2	0.0	0.0	0.2
Cotton	277.9	465.9	241.0	0.0	984.8
Sugar Beets	8.9	10.3	5.0	0.0	24.2
Corn	5.0	101.9	0.0	0.0	106.9
Other Field	27.0	57.0	28.3	0.1	112.4
Alfalfa	84.7	190.2	12.2	1.0	288.1
Pasture	4.7	48.5	1.8	3.8	58.8
Tomatoes	3.2	1.6	78.7	0.0	83.5
Other Truck	99.5	29.8	66.3	0.1	195.7
Almond-Pistachio	98.1	43.0	20.0	0.0	161.1
Other Deciduous	22.6	165.6	3.6	1.5	193.3
Citrus-Olive	52.0	145.6	1.0	1.7	200.3
Grapes	82.8	289.5	5.4	0.0	377.7
Total Crop Acres	**800.5**	**1,695.6**	**514.9**	**8.2**	**3,019.2**
Double Crop	22.0	27.2	5.1	0.0	54.3
Total Land Acres	**778.5**	**1,668.4**	**509.8**	**8.2**	**2,964.9**

North Lahontan Region

Crop	Lassen Group	Alpine Group	Total
Grain	6.4	0.0	6.4
Rice	0.7	0.0	0.7
Cotton	0.0	0.0	0.0
Sugar Beets	0.0	0.0	0.0
Corn	0.3	0.0	0.3
Other Field	0.0	0.0	0.0
Alfalfa	36.8	3.4	40.2
Pasture	63.6	37.4	101.0
Tomatoes	0.0	0.0	0.0
Other Truck	1.0	0.0	1.0
Almond-Pistachio	0.0	0.0	0.0
Other Deciduous	0.0	0.0	0.0
Citrus-Olive	0.0	0.0	0.0
Grapes	0.0	0.0	0.0
Total Crop Acres	**108.8**	**40.8**	**149.6**
Double Crop	0.0	0.0	0.0
Total Land Acres	**108.8**	**40.8**	**149.6**

Table 7. (continued) 1992 Crop Acreages by Planning Subarea (1,000 acres)

South Lahontan Region

Crop	Mono Owens	Death Valley	Indian Wells	Antelope Valley	Mojave River	Total
Grain	0.0	0.0	0.0	1.2	0.2	1.5
Rice	0.0	0.0	0.0	0.0	0.0	0.0
Cotton	0.0	0.0	0.0	0.0	0.0	0.0
Sugar Beets	0.0	0.0	0.0	0.0	0.0	0.0
Corn	0.0	0.0	0.0	0.1	0.0	0.1
Other Field	0.0	0.0	0.0	0.2	0.7	0.9
Alfalfa	11.6	1.7	2.3	6.5	12.9	34.9
Pasture	15.7	0.2	0.1	0.3	1.1	17.4
Tomatoes	0.0	0.0	0.0	0.0	0.0	0.0
Other Truck	1.3	0.0	0.0	2.1	0.1	3.6
Almond-Pistachio	0.0	0.0	0.0	0.0	0.0	0.0
Other Deciduous	0.0	0.1	0.6	1.9	0.4	3.0
Citrus-Olive	0.0	0.0	0.0	0.0	0.0	0.0
Grapes	0.0	0.0	0.0	0.0	0.0	0.0
Total Crop Acres	**28.6**	**2.0**	**3.1**	**12.3**	**15.4**	**61.5**
Double Crop	0.0	0.0	0.0	0.0	0.0	0.0
Total Land Acres	**28.6**	**2.0**	**3.1**	**12.3**	**15.4**	**61.5**

Colorado River Region

Crop	29 Palms	Chuckwalla	Colorado River	Coachella	Borrego	Imperial	Total
Grain	0.0	0.0	11.1	0.8	0.3	70.7	82.9
Rice	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cotton	0.0	0.0	14.2	0.4	0.0	4.8	19.3
Sugar Beets	0.0	0.0	0.0	0.0	0.0	40.9	40.9
Corn	0.0	0.0	0.4	4.8	0.3	4.0	9.4
Other Field	0.1	4.0	7.7	1.8	0.0	56.5	70.2
Alfalfa	3.1	0.0	58.9	3.3	2.3	191.1	258.7
Pasture	0.0	0.0	4.6	1.6	0.1	41.6	47.8
Tomatoes	0.0	0.0	1.0	0.1	0.3	3.5	4.8
Other Truck	0.0	1.1	22.6	20.8	4.5	97.8	146.8
Almond-Pistachio	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Deciduous	0.1	0.0	0.0	0.5	0.1	0.6	1.2
Citrus-Olive	0.1	0.0	3.9	21.2	2.0	2.2	29.4
Grapes	0.8	0.0	0.0	18.7	0.0	0.0	19.5
Total Crop Acres	**4.2**	**5.1**	**124.3**	**73.9**	**9.8**	**513.6**	**730.9**
Double Crop	0.0	0.0	19.2	14.7	1.4	55.7	91.1
Total Land Acres	**4.2**	**5.1**	**105.0**	**59.2**	**8.4**	**457.9**	**639.8**

Table 8. 1992 Crop Acreages by Region (1,000 acres)

Crop	NC	SF	CC	SC	SR	SJ	TL	NL	SL	CR	CA Total
Grain	62.5	1.9	22.0	10.6	280.6	194.1	232.2	6.4	1.5	82.9	894.8
Rice	0.0	0.0	0.0	0.0	417.5	15.2	0.2	0.7	0.0	0.0	433.6
Cotton	0.0	0.0	0.0	0.0	0.0	188.6	984.8	0.0	0.0	19.3	1,192.7
Sugar Beets	4.7	0.2	3.2	0.0	43.5	39.5	24.2	0.0	0.0	40.9	156.2
Corn	0.6	0.5	2.5	4.1	78.7	193.7	106.9	0.3	0.1	9.4	396.8
Other Field	3.0	1.7	18.2	4.3	145.6	98.8	112.4	0.0	0.9	70.2	455.2
Alfalfa	39.1	0.1	22.4	9.6	148.6	232.7	288.1	40.2	34.9	258.7	1,074.5
Pasture	111.3	4.7	20.2	20.2	326.9	224.8	58.8	101.0	17.4	47.8	933.0
Tomatoes	0.0	0.3	9.5	6.6	121.0	67.7	83.5	0.0	0.0	4.8	293.4
Other Truck	21.3	8.1	368.5	89.0	63.2	141.4	195.7	1.0	3.6	146.8	1,038.6
Almond-Pistachio	0.0	0.0	0.0	0.0	100.3	238.5	161.1	0.0	0.0	0.0	499.9
Other Deciduous	6.9	6.1	18.7	3.3	207.2	152.8	193.3	0.0	3.0	1.2	592.6
Citrus-Olive	0.0	0.0	17.5	161.4	24.2	8.3	200.3	0.0	0.0	29.4	441.2
Grapes	36.2	38.1	56.0	6.1	15.5	180.3	377.7	0.0	0.0	19.5	729.4
Total Crop Acres	**285.6**	**61.7**	**558.8**	**315.4**	**1,972.8**	**1,976.4**	**3,019.2**	**149.6**	**61.5**	**730.9**	**9,131.8**
Double Crop	0.0	0.2	132.9	30.7	42.3	52.6	54.3	0.0	0.0	91.1	404.1
Total Land Acres	**285.6**	**61.5**	**425.9**	**284.6**	**1,930.5**	**1,923.8**	**2,964.9**	**149.6**	**61.5**	**639.8**	**8,727.7**

Table 9. 1992 Crop Acreages by County (1,000 acres)

County	Grain	Rice	Cotton	Beets	Corn	Other Field	Alfalfa	Pas-ture	Toma-to	Other Truck	Al-Pist	Other Decid	Citrus Olive	Vine	Total
Alameda	0.8	0.0	0.0	0.0	0.0	0.6	1.8	0.2	0.0	0.8	0.0	0.1	0.0	1.6	5.9
Alpine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	6.3
Amador	0.5	0.0	0.0	0.0	0.3	0.6	0.2	1.6	0.0	0.1	0.0	0.5	0.0	1.6	5.4
Butte	11.4	79.7	0.0	2.8	1.7	6.4	5.6	10.6	0.0	1.1	39.1	35.1	6.8	0.1	200.4
Calaveras	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.6	0.0	0.0	0.0	0.7	0.0	0.2	1.6
Colusa	42.1	95.5	0.0	7.2	1.6	22.0	14.5	4.5	20.1	20.5	19.6	9.8	0.3	1.6	259.3
Contra Costa	6.9	0.0	0.0	0.0	8.0	3.3	3.3	6.6	4.5	3.0	0.0	5.1	0.0	0.8	41.5
Del Norte	0.2	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.7	0.0	0.0	0.0	0.0	6.8
El Dorado	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.2	0.0	2.4	0.0	0.7	5.7
Fresno	62.5	5.7	345.6	14.5	19.2	40.0	93.9	30.1	89.0	97.7	36.0	64.9	26.7	215.8	1,141.6
Glenn	33.0	65.8	0.0	7.5	9.9	11.9	14.7	27.6	0.0	4.6	16.7	14.9	4.9	1.4	212.9
Humboldt	0.1	0.0	0.0	0.0	0.1	0.2	0.1	20.3	0.0	1.1	0.0	0.1	0.0	0.0	22.0
Imperial	73.7	0.0	6.6	40.9	4.3	60.4	199.4	43.1	4.1	111.7	0.0	0.7	5.2	0.0	550.2
Inyo	0.0	0.0	0.0	0.0	0.0	0.0	4.7	6.9	0.0	0.1	0.0	0.0	0.0	0.0	11.8
Kern	31.7	0.0	279.7	8.9	5.0	27.1	90.6	6.4	3.2	100.3	97.7	24.3	46.2	82.8	804.0
Kings	53.8	0.0	276.1	5.1	21.5	38.8	38.8	9.7	3.1	5.4	9.8	14.6	0.9	3.7	481.3
Lake	0.4	1.0	0.0	0.0	0.0	0.2	0.4	3.0	0.0	0.1	0.1	8.2	0.0	2.8	16.2
Lassen	7.9	0.9	0.0	0.0	0.3	0.0	34.2	65.8	0.0	1.3	0.0	0.0	0.0	0.0	110.4
Los Angeles	0.7	0.0	0.0	0.0	0.3	0.2	4.1	0.5	0.0	5.6	0.0	1.7	2.0	0.0	15.2
Madera	35.0	0.0	48.1	0.6	16.4	2.8	31.0	13.2	0.1	5.9	58.7	16.2	8.1	83.1	319.2
Marin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.2	0.0	0.0	0.0	0.0	1.0
Mariposa	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.7	0.0	0.0	0.0	0.2	0.0	0.1	1.7
Mendocino	0.4	0.0	0.0	0.0	0.0	0.4	0.2	6.9	0.0	0.4	0.0	4.4	0.0	12.5	25.2
Merced	46.0	2.5	80.5	7.0	49.6	13.3	78.7	59.3	16.6	34.9	65.3	22.8	0.1	13.9	490.5
Modoc	25.9	1.1	0.0	3.3	0.0	0.0	41.9	80.6	0.0	10.8	0.0	0.0	0.0	0.0	163.6
Mono	0.0	0.0	0.0	0.0	0.0	0.0	10.8	39.5	0.0	1.2	0.0	0.0	0.0	0.0	51.5
Monterey	5.8	0.0	0.0	1.9	0.0	5.6	3.4	3.6	4.5	230.0	0.0	0.8	0.6	32.4	288.6
Napa	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.3	0.0	0.3	0.0	31.2	33.0
Nevada	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	0.2	0.0	0.0	0.3	0.0	0.2	7.9
Orange	0.0	0.0	0.0	0.0	0.7	0.5	0.0	0.4	1.2	10.0	0.0	0.0	4.5	0.0	17.4
Placer	1.6	15.2	0.0	0.0	0.0	1.2	0.0	26.9	0.0	0.0	0.0	3.7	0.0	0.2	48.8
Plumas	1.6	0.0	0.0	0.0	0.0	0.0	5.3	31.8	0.0	0.3	0.0	0.0	0.0	0.0	39.0
Riverside	17.0	0.0	12.3	0.0	6.1	11.1	62.6	14.1	0.7	44.3	0.0	1.2	49.5	21.3	240.3
Sacramento	26.7	8.8	0.0	5.3	33.5	8.1	8.6	31.9	6.2	3.0	0.0	7.6	0.0	6.4	146.1
San Benito	7.1	0.0	0.0	1.1	0.2	4.2	1.3	1.9	2.0	15.6	0.0	7.5	0.0	2.0	42.9
San Bernardino	2.9	0.0	0.4	0.0	1.0	2.6	19.7	5.8	0.0	1.8	0.0	1.1	6.0	4.0	45.1
San Diego	0.2	0.0	0.0	0.0	0.4	0.1	0.3	3.3	3.2	14.5	0.0	1.7	64.6	0.2	88.5
San Joaquin	65.0	5.0	0.0	22.0	67.4	36.9	64.0	50.9	19.9	37.8	42.0	55.4	0.0	59.2	525.5
San Luis Obispo	1.5	0.0	0.0	0.0	0.1	1.4	12.2	6.1	0.2	35.3	0.0	1.4	2.3	10.1	70.7
San Mateo	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.0	4.7	0.0	0.0	0.0	0.0	5.2
Santa Barbara	3.8	0.0	0.0	0.0	1.3	6.2	4.8	6.6	0.2	65.6	0.0	1.2	13.2	10.6	113.4

Table 9. (continued) 1992 Crop Acreages by County (1,000 acres)

County	Grain	Rice	Cotton	Beets	Corn	Other Field	Alfalfa	Pas-ture	Toma-to	Other Truck	Al-Pist	Other Decid	Citrus Olive	Vine	Total
Santa Clara	4.7	0.0	0.0	0.2	1.1	1.6	0.2	1.1	2.6	8.2	0.0	5.1	0.0	1.0	25.8
Santa Cruz	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.9	0.0	15.3	0.0	4.7	0.1	0.1	21.2
Shasta	4.0	1.3	0.0	0.0	0.1	4.4	8.2	34.9	0.0	1.6	0.2	1.9	0.8	0.2	57.6
Sierra	0.3	0.0	0.0	0.0	0.0	0.0	0.9	14.1	0.0	0.1	0.0	0.0	0.0	0.0	15.4
Siskiyou	41.7	0.0	0.0	1.4	0.3	0.5	30.7	61.8	0.0	7.6	0.0	0.0	0.0	0.0	144.0
Solano	43.5	0.0	0.0	13.5	15.7	21.0	20.7	20.4	18.6	2.6	1.6	10.0	0.0	1.9	169.5
Sonoma	0.0	0.0	0.0	0.0	0.5	1.9	0.0	9.0	0.0	1.0	0.0	2.5	0.0	30.0	44.9
Stanislaus	28.0	0.1	0.0	1.9	40.2	33.4	40.4	68.6	13.4	40.0	72.2	48.2	0.1	16.8	403.3
Sutter	29.3	93.9	0.0	1.9	1.6	27.7	3.9	8.2	27.1	16.1	4.5	53.0	0.0	0.1	267.3
Tehama	7.6	1.3	0.0	0.5	2.5	1.9	3.8	24.5	0.0	0.7	8.1	23.8	11.4	0.1	86.2
Trinity	0.1	0.0	0.0	0.0	0.0	0.0	0.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Tulare	92.9	0.0	143.4	2.3	64.7	12.4	80.4	15.2	0.2	12.1	17.9	90.9	126.5	75.5	734.4
Tuolumne	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.1	0.0	0.1	2.9
Ventura	0.1	0.0	0.0	0.0	0.9	0.4	0.7	2.2	2.2	49.3	0.0	0.2	60.3	0.0	116.2
Yolo	74.4	21.0	0.0	6.4	19.3	41.7	32.2	8.9	50.3	13.0	8.6	15.0	0.0	2.7	293.5
Yuba	2.0	34.8	0.0	0.0	1.1	1.0	0.9	14.3	0.0	0.0	1.8	28.2	0.0	0.4	84.5
Totals	**894.8**	**433.6**	**1,192.7**	**156.2**	**396.8**	**455.2**	**1,074.5**	**933.0**	**293.4**	**1,038.6**	**499.9**	**592.6**	**441.2**	**729.4**	**9,131.8**

Table 10. 1992 Irrigated Crops Compared to 1991 (1,000 acres)

Crop	1992	1991	Change	Percentage
Grain	894.8	799.9	95	12
Rice	433.6	392.2	41	11
Cotton	1,192.7	1,119.2	74	7
Sugar Beets	156.2	175.7	(20)	(11)
Corn	396.8	369.1	28	7
Other Field	455.2	425.8	29	7
Alfalfa	1,074.5	1,141.2	(67)	(6)
Pasture	933.0	994.0	(61)	(6)
Tomatoes	293.4	373.9	(80)	(22)
Other Truck	1,038.6	1,016.7	22	2
Almond-Pistachio	499.9	507.1	(7)	(1)
Other Deciduous	592.6	584.9	8	1
Citrus-Olive	441.2	427.4	14	3
Grapes	729.4	738.4	(9)	(1)
Total Crop Acres	**9,131.8**	**9,065.5**	**66**	**1**
Double Crop	404.1	393.2	11	3
Total Irrigated Acres	**8,727.7**	**8,672.3**	**55**	**1**

Water Use and Supplies

Urban water use is water produced for all urban needs including residential, commercial, industrial, and landscape uses. It is primarily measured at the intake of the water supplier's system and is equivalent to the amount of water delivered to customers plus losses from the delivery system. Urban water use data were analyzed on a per capita basis. For a defined service area, applied water is divided by the population to compute per capita use. Figure 4 compares monthly per capita use for 1992 to the 1980-89 average by hydrologic region. Per capita use during 1992 averaged 19 percent less than the 1980-89 average. This was due largely to the effects of drought mitigation programs designed to cope with reduced surface supplies. However, the 1992 per capita values generally reflect an increase over 1991 use owing to wetter hydrologic conditions and relaxed water use restrictions in some areas of the State. The most significant increase occurred in the Central Coast Region, where per capita use increased by more than 11 percent, a result of above normal local supplies in the Central Coast during 1992. In general, per capita use shows a seasonal peak during the hot, dry summer months. In the North Lahontan Region, a secondary peak occurs during the winter tourist season.

Environmental water use consists of: 1) instream fish flows, 2) Wild and Scenic rivers flows, 3) required Delta outflow (D1485), and 4) wetlands water use. Instream fish flows for 1992 consist of the actual flows released by project operators to meet the requirements of existing water rights permits, court decisions, congressional directives, and laws or agreements between government agencies. Instream flow requirements generally vary by year type; hence, since 1992 was a very dry year, actual instream flows were at the lowest required levels (see Table 11). Wild and Scenic flows for the North Coast rivers were estimated from Bulletin 120 data at 6,856,000 acre-feet (see Table 12). The 1992 Delta outflow required under D1485 was estimated using DAYFLOW daily data, operational data for the Delta condition of balance or surplus, and the D1485 criteria for a critical year in the Delta (Table 13). Table 14 shows wetlands use for 1992.

Water use for 1992 by urban, agricultural, environmental, and other sectors is tabulated in Tables 15, 16, and 17. Urban and agricultural use were both affected by surface water shortages. For the State Water Project, agricultural and urban contracts were cut 45 percent, and agricultural water rights contractors received a full supply. For the Central Valley Project, Sacramento River water rights contracts were cut 25 percent, Sacramento River agricultural contracts were cut 75 percent, and San Joaquin River exchange contracts were cut 25 percent. Friant Kern Class 1 contractors received an 83 percent supply. Colorado River supplies to California were 4.5 million acre-feet. Small coastal urban areas such as the Santa Barbara area, the Santa Cruz-Monterey area, and the Marin County area implemented rationing programs.

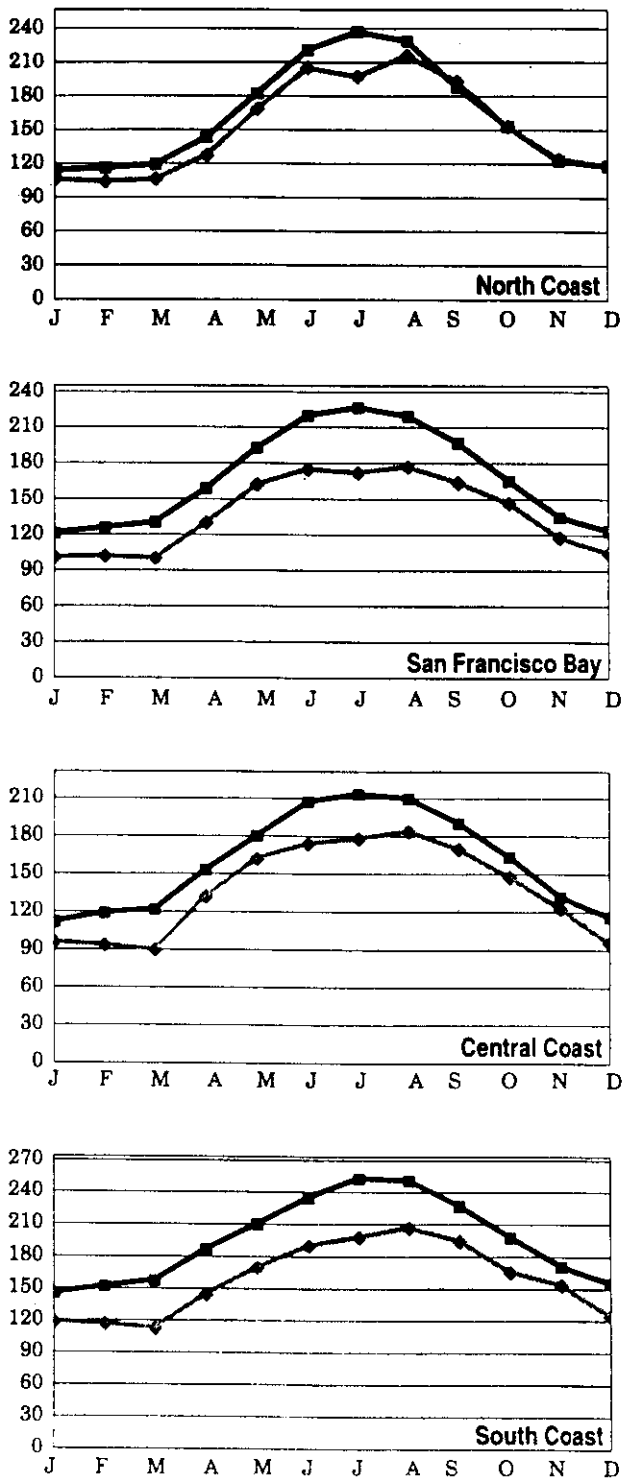
Table 11. 1992 Instream Fish Flows (1,000 acre–feet)

River	Applied Water	Net Water	Depletion
Klamath	411	411	411
Trinity	330	330	330
Sacramento	2,121	2,121	0
Feather	715	715	0
Clear Creek	39	39	0
Cache Creek	7	0	0
Yuba	280	174	0
Bear	10	10	0
American	635	635	0
Putah Creek	7	0	0
Mokelumne	57	57	0
Stanislaus	97	97	0
Tuolumne	53	53	0
Merced	67	67	0
Carmel	2	0	0
Mono	65	65	65
Owens	20	20	0
Totals	**4,915**	**4,794**	**806**

Figure 4. Per Capita Water Use by Hydrologic Region*

—◆—1992 —■—1980-89

gallons per capita daily by month

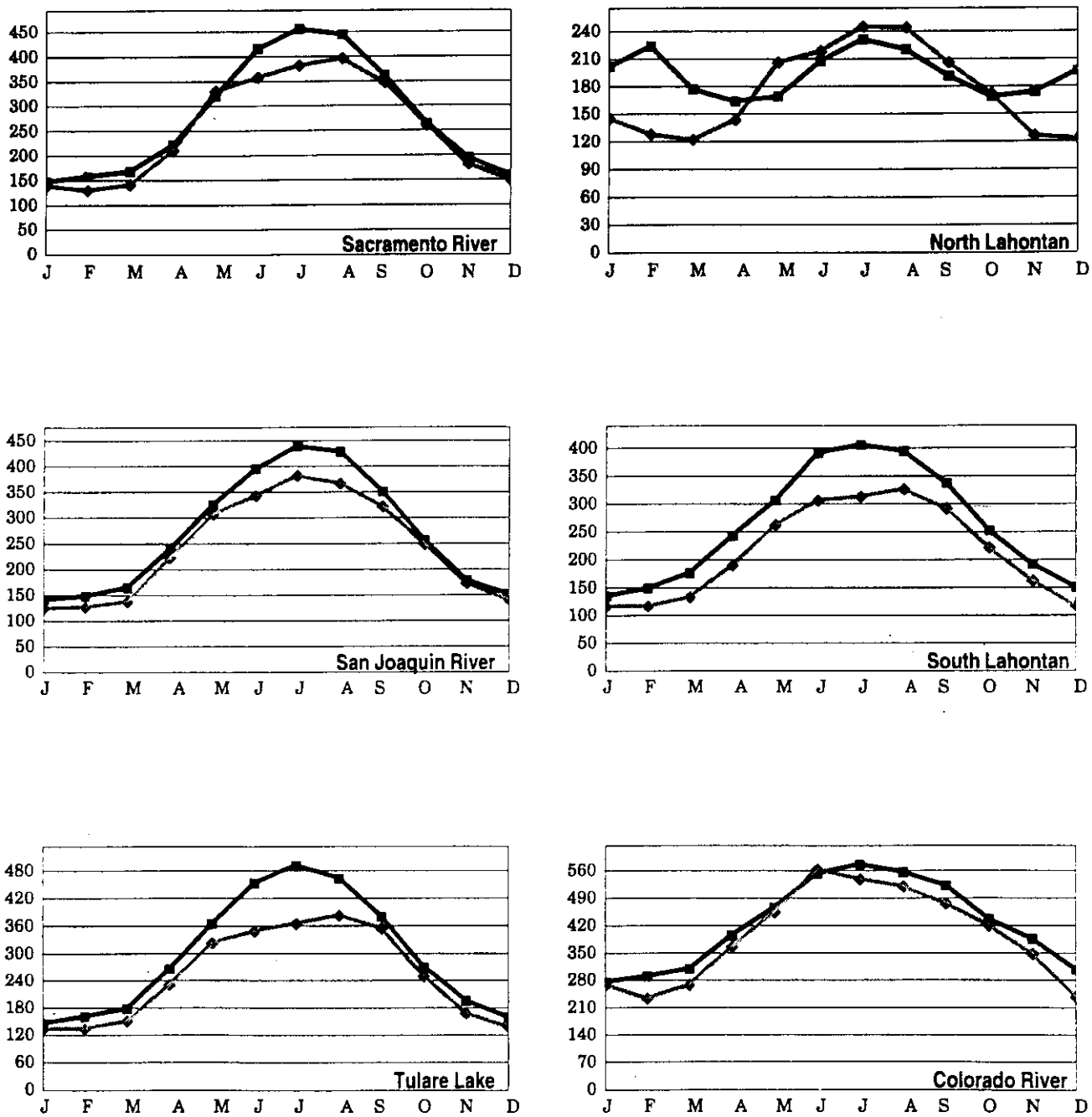


*Based on data from 297 urban water suppliers. Data does not include self-produced ground water supplies.

Figure. 4 (continued) Per Capita Water Use by Hydrologic Region*

—◆—1992 —■—1980-89

gallons per capita daily by month



*Based on data from 297 urban water suppliers. Data does not include self-produced ground water supplies.

Table 12. Wild and Scenic Rivers Flow
(1,000 acre-feet)

	Average TAF	1992	
		%	TAF
Eel River at Mouth	6,273		
Less Van Arsdale	465		
Subtotal	**5,808**	**38**	**2,207**
Klamath River at Mouth	12,982		
Less Copco	2,008		
Less Lewiston	1,273		
Less Scott R	417		
Less Shasta R	201		
Subtotal	**9,083**	**37**	**3,361**
Smith River at Mouth	2,927	44	1,288
Total	**17,818**		**6,856**

Table 13. Delta Outflow (1,000 acre−feet)

	Total	D1485
Oct	245	245
Nov	235	235
Dec	471	471
Jan	397	363
Feb	1,657	597
Mar	819	272
Apr	379	247
May	212	212
Jun	216	216
Jul	193	193
Aug	183	183
Sep	207	207
Water Year	**5,215**	**3,440**

NOTE: Total Delta outflow is the computed Delta outflow from DAYFLOW. D1485 is the estimated component of total Delta outflow used to meet D1485 standards using DAYFLOW values when the Delta is in balance and the D1485 required flow when the Delta is not in balance.

Table 14. Wetlands Water Use (1,000 acre–feet)

Wetland	Applied Water	Net Water	Depletion
Lower Klamath NWR	26.3	26.3	20.2
Clear Lake NWR	49.5	49.5	40.5
Tule Lake NWR	83.1	83.1	41.5
Butte Valley WA	10.2	10.2	10.2
Arcata Marsh	2.0	2.0	2.0
Modoc NWR	19.5	17.2	15.2
Ash Creek	12.9	12.3	12.2
Sacramento NWR	25.8	22.7	9.9
Colusa NWR	12.6	11.0	4.9
Delevan NWR	16.0	14.1	6.3
Colusa Basin Private	82.0	68.9	30.1
Gray Lodge WA	44.0	40.0	21.3
Upper Butte Basin	56.3	52.5	28.0
Butte Basin Private	107.0	74.5	38.2
Honey Lake WA	14.3	14.3	14.3
Willow Creek WA	2.5	2.5	2.5
Butte Sink NWR	2.2	0.5	0.5
Sutter NWR	9.1	4.3	4.3
American Basin	30.7	30.7	7.4
Sutter Basin	15.8	15.8	4.4
Yolo Basin	20.9	20.9	5.4
Sherman Island	9.3	9.3	1.9
Suisun Marsh	150.0	150.0	150.0
Hayward Marsh	10.0	10.0	10.0
Delta	40.0	40.0	7.4
San Luis NWR	16.6	8.0	8.0
Volta WA	7.0	6.0	6.0
Los Banos WA	13.2	11.0	11.0
Kesterson NWR	7.6	5.0	5.0
Grassland RCD	75.5	25.0	25.0
North Grasslands WA	1.6	1.0	1.0
Merced NWR	8.5	2.0	2.0
Kern NWR	6.5	3.0	3.0
Tulare Basin Private	5.2	4.0	4.0
Mendota WA	20.2	16.0	16.0
San Jacinto WA	0.8	0.8	0.8
Coastal Estuaries	1.0	1.0	1.0
Sepulvada Pond	5.3	5.3	5.3
Lake Balboa	10.0	10.0	10.0
Elsinore Valley	0.8	0.8	0.8
Salton Sea	5.0	5.0	5.0
Imperial WA	29.0	29.0	29.0
Private	5.0	5.0	5.0
Total	**1,070.8**	**920.5**	**626.5**

Table 15. Water Use by Planning Subarea (1,000 acre–feet)

North Coast	Upper Klamath	Lower Klamath	Coastal	Russian River	Total
Urban					
AW	10	11	79	70	170
NWU	10	11	79	70	170
Depletion	5	6	71	21	103
Agricultural					
AW	496	32	64	104	696
NWU	370	30	64	90	554
Depletion	370	24	49	77	521
Environmental					
AW	169	5,390	2,209	0	7,768
NWU	169	5,390	2,209	0	7,768
Depletion	112	5,390	2,209	0	7,711
Other					
AW	0	0	0	0	0
NWU	21	0	0	0	21
Depletion	8	0	0	0	8
Totals					
AW	675	5,433	2,353	174	8,634
NWU	570	5,431	2,352	160	8,512
Depletion	495	5,420	2,329	98	8,343

San Francisco	North Bay	South Bay	Total
Urban			
AW	134	773	907
NWU	138	773	911
Depletion	131	734	865
Agricultural			
AW	68	32	100
NWU	66	32	98
Depletion	63	30	93
Environmental			
AW	3,590	10	3,600
NWU	3,590	10	3,600
Depletion	3,590	10	3,600
Other			
AW	0	0	0
NWU	2	14	16
Depletion	2	13	15
Totals			
AW	3,792	815	4,607
NWU	3,796	829	4,625
Depletion	3,786	787	4,573

Table 15. (continued) Water Use by Planning Subarea
(1,000 acre–feet)

Central Coast	Northern	Southern	Total
Urban			
AW	153	96	249
NWU	131	77	208
Depletion	120	60	180
Agricultural			
AW	776	399	1,175
NWU	594	313	907
Depletion	585	313	898
Environmental			
AW	2	0	2
NWU	0	0	0
Depletion	0	0	0
Other			
AW	2	16	18
NWU	2	16	18
Depletion	2	16	18
Totals			
AW	933	511	1,443
NWU	727	406	1,132
Depletion	707	389	1,096

South Coast	Santa Clara	Metro LA	Santa Ana	San Diego	Total
Urban					
AW	146	1,533	959	544	3,182
NWU	123	1,472	765	536	2,896
Depletion	119	1,415	652	521	2,707
Agricultural					
AW	231	13	230	229	703
NWU	205	12	193	222	632
Depletion	205	12	193	222	632
Environmental					
AW	0	15	2	1	18
NWU	0	15	2	1	18
Depletion	0	15	2	1	18
Other					
AW	9	21	13	4	47
NWU	19	85	63	41	208
Depletion	19	85	63	41	208
Totals					
AW	386	1,582	1,204	778	3,950
NWU	347	1,584	1,023	800	3,754
Depletion	343	1,527	910	785	3,565

Table 15. (continued) Water Use by Planning Subarea
(1,000 acre–feet)

Sacramento River	Shasta Pit	NW Valley	NE Valley	C Basin W	C Basin E	S.E.	S.W.	Delta Serv Area	Total
Urban									
AW	12	58	64	67	439	68	10	17	734
NWU	12	58	64	67	446	76	10	19	751
Depletion	6	22	32	24	160	22	5	6	276
Agricultural									
AW	345	439	235	2,538	2,848	352	67	500	7,323
NWU	304	425	237	1,975	2,496	383	65	457	6,343
Depletion	278	332	196	1,657	1,793	250	55	335	4,897
Environmental									
AW	2,153	39	0	164	1,190	715	7	9	4,278
NWU	2,151	39	0	138	1,037	715	0	9	4,089
Depletion	27	0	0	57	104	0	0	2	190
Other									
AW	0	0	0	0	0	0	0	1	1
NWU	0	50	15	147	176	9	0	57	454
Depletion	0	5	1	22	23	1	0	6	59
Totals									
AW	2,510	535	298	2,770	4,477	1,135	84	527	12,337
NWU	2,466	572	315	2,327	4,155	1,184	75	542	11,638
Depletion	311	359	229	1,760	2,080	273	60	349	5,422

San Joaquin River	Sierra Foothill	E Vly Floor	Delta Srv Area	Western Uplands	E Side Uplands	Valley E Side	Valley W Side	Total
Urban								
AW	40	73	33	37	0	295	19	497
NWU	40	73	34	38	0	156	9	350
Depletion	11	21	9	4	0	139	9	194
Agricultural								
AW	31	1,029	800	46	0	3,186	1,405	6,497
NWU	35	999	741	47	0	3,047	1,303	6,172
Depletion	22	741	595	34	0	2,334	1,080	4,806
Environmental								
AW	53	193	0	0	0	76	122	443
NWU	53	193	0	0	0	69	56	371
Depletion	0	7	0	0	0	2	56	65
Other								
AW	0	16	0	0	0	0	4	20
NWU	0	21	0	0	0	26	97	144
Depletion	0	0	0	0	0	10	95	105
Totals								
AW	124	1,311	833	83	0	3,556	1,549	7,456
NWU	128	1,286	775	85	0	3,298	1,465	7,038
Depletion	33	770	604	38	0	2,485	1,240	5,170

Table 15. (continued) Water Use by Planning Subarea
(1,000 acre–feet)

Tulare Lake	Uplands	KKT	San Luis Westside	Western Uplands	Kern Vly Floor	Total
Urban						
AW	13	341	10	2	196	563
NWU	5	144	4	1	76	230
Depletion	5	144	4	1	76	230
Agricultural						
AW	29	5,145	1,427	0	2,427	9,028
NWU	20	4,026	1,287	0	1,980	7,314
Depletion	20	4,005	1,287	0	1,959	7,271
Environmental						
AW	0	20	0	0	12	32
NWU	0	16	0	0	7	23
Depletion	0	16	0	0	7	23
Other						
AW	6	1	6	0	54	67
NWU	6	29	9	0	92	136
Depletion	6	29	9	0	92	136
Totals						
AW	48	5,507	1,444	2	2,688	9,690
NWU	31	4,214	1,300	1	2,155	7,702
Depletion	31	4,193	1,300	1	2,134	7,660

North Lahontan	Lassen Group	Alpine Group	Total
Urban			
AW	17	21	38
NWU	17	22	39
Depletion	7	7	14
Agricultural			
AW	261	207	468
NWU	243	206	449
Depletion	218	114	332
Environmental			
AW	17	0	17
NWU	17	0	17
Depletion	17	0	17
Other			
AW	0	0	0
NWU	0	0	0
Depletion	0	0	0
Totals			
AW	294	228	522
NWU	277	228	505
Depletion	242	121	363

Table 15. (continued) Water Use by Planning Subarea
(1,000 acre–feet)

South Lahontan	Mono Owens	Death Valley	Indian Wells	Antelope Valley	Mojave River	Total
Urban						
AW	13	0	12	63	77	165
NWU	7	0	7	43	49	106
Depletion	7	0	7	43	49	106
Agricultural						
AW	150	11	16	51	80	308
NWU	138	10	14	48	71	281
Depletion	138	10	14	48	71	281
Environmental						
AW	85	0	0	0	0	85
NWU	85	0	0	0	0	85
Depletion	65	0	0	0	0	65
Other						
AW	0	3	1	1	4	9
NWU	0	3	1	6	5	15
Depletion	0	3	1	6	5	15
Totals						
AW	248	14	29	115	161	567
NWU	230	13	22	97	125	487
Depletion	210	13	22	97	125	467

Colorado River	29 Palms Lanfair	Chuck Walla	Colorado River	Coach	Borrego	Imperial Valley	Total
Urban							
AW	10	0	7	131	2	29	179
NWU	6	0	4	86	1	29	126
Depletion	6	0	4	86	1	29	126
Agricultural							
AW	25	15	546	395	38	2,074	3,093
NWU	23	14	453	316	38	2,074	2,918
Depletion	23	14	453	316	38	2,074	2,918
Environmental							
AW	0	0	0	0	0	39	39
NWU	0	0	0	0	0	39	39
Depletion	0	0	0	0	0	39	39
Other							
AW	1	0	3	2	0	76	82
NWU	1	0	3	42	0	397	443
Depletion	1	0	3	42	0	397	443
Totals							
AW	36	15	556	528	40	2,218	3,393
NWU	30	14	460	444	39	2,539	3,526
Depletion	30	14	460	444	39	2,539	3,526

Table 16. Water Use In California by Region (1,000 acre–feet)

	NC	SF	CC	SC	SR	SJ	TL	NL	SL	CR	CA
Urban											
AW	170	907	249	3,182	734	497	563	38	165	179	6,684
NWU	170	911	208	2,896	751	350	230	39	106	126	5,787
Depletion	103	865	180	2,707	276	194	230	14	106	126	4,800
Agricultural											
AW	696	100	1,175	703	7,323	6,497	9,028	468	308	3,093	29,391
NWU	554	98	907	632	6,343	6,172	7,314	449	281	2,918	25,668
Depletion	521	93	898	632	4,897	4,806	7,271	332	281	2,918	22,649
Environmental											
AW	7,768	3,600	2	18	4,278	443	32	17	85	39	16,282
NWU	7,768	3,600	0	18	4,089	371	23	17	85	39	16,010
Depletion	7,711	3,600	0	18	190	65	23	17	65	39	11,729
Other											
AW	0	0	18	47	1	20	67	0	9	82	243
NWU	21	16	18	208	454	144	136	0	15	443	1,454
Depletion	8	15	18	208	59	105	136	0	15	443	1,006
Totals											
AW	8,634	4,607	1,443	3,950	12,337	7,456	9,690	522	567	3,393	52,600
NWU	8,512	4,625	1,132	3,754	11,638	7,038	7,702	505	487	3,526	48,919
Depletion	8,343	4,573	1,096	3,565	5,422	5,170	7,660	363	467	3,526	40,184

Table 17. Environmental Water Use in California by Region (1,000 acre–feet)

Environmental	NC	SF	CC	SC	SR	SJ	TL	NL	SL	CR	CA
Instream											
AW	741	0	2	0	3,814	273	0	0	85	0	4,915
NWU	741	0	0	0	3,694	273	0	0	85	0	4,794
Depletion	741	0	0	0	0	0	0	0	65	0	806
Wild & Scenic											
AW	6,856	0	0	0	0	0	0	0	0	0	6,856
NWU	6,856	0	0	0	0	0	0	0	0	0	6,856
Depletion	6,856	0	0	0	0	0	0	0	0	0	6,856
Refuges											
AW	171	160	0	18	464	170	32	17	0	39	1,071
NWU	171	160	0	18	395	98	23	17	0	39	920
Depletion	114	160	0	18	190	65	23	17	0	39	626
D1485											
AW	0	3,440	0	0	0	0	0	0	0	0	3,440
NWU	0	3,440	0	0	0	0	0	0	0	0	3,440
Depletion	0	3,440	0	0	0	0	0	0	0	0	3,440
Totals											
AW	7,768	3,600	2	18	4,278	443	32	17	85	39	16,282
NWU	7,768	3,600	0	18	4,089	371	23	17	85	39	16,010
Depletion	7,711	3,600	0	18	190	65	23	17	65	39	11,729

Table 18. 1992 State Water Project Delivery Summary (1,000 acre–feet)

	Region	SWP	Non–SWP	Total	Region Total
Napa Co FC&WCD	SF	5,157	237	5,394	121,615
Solano Co WA		14,773	11,275	26,048	
Alameda Co FC&WCD		14,669	8,415	23,084	
Alameda Co WD		19,153	5,097	24,250	
Santa Clara Valley WD		42,839	0	42,839	
San Luis Obispo Co FC&WCD	CC	0	0	0	0
Santa Barbara Co FC&WCD		0	0	0	
San Bernardino Valley MWD	SC	3,358	0	3,358	746,391
San Gabriel Valley MWD		11,971	0	11,971	
San Gorgonio Pass WA		0	0	0	
Ventura Co FCD		0	0	0	
Castaic Lake WA		14,812	0	14,812	
Metropolitan WD		706,250	10,000	716,250	
City of Yuba City	SR	642	0	642	1,244
County of Butte		117	0	117	
Plumas Co FC&WCD		485	0	485	
Oak Flat WD	SJ	2,239	0	2,239	2,239
Empire West Side ID	TL	1,354	0	1,354	513,875
Tulare Lake Basin WSD		47,008	31,550	78,558	
Dudley Ridge WD		12,667	830	13,497	
Kern Co WA		404,615	14,045	418,660	
Devil's Den WD		0	0	0	
County of Kings		1,806	0	1,806	
Littlerock Creek ID	SL	251	0	251	45,501
Crestline Lake Arrowhead WA		264	0	264	
Antelope Valley East Kern WA		31,575	0	31,575	
Mojave WA		9,376	0	9,376	
Palmdale WD		4,035	0	4,035	
Coachella Valley WD	CR	10,427	0	10,427	27,624
Desert WA		17,197	0	17,197	
Recreation/F&W Water		2,605	0	2,605	2,605
Total		**1,379,645**	**81,449**	**1,461,094**	**1,461,094**

Table 19. U.S. Bureau of Reclamation Delivery Summary
(1,000 acre–feet)

	AG	M&I	Waterfowl	Total
Black Butte Unit	1,266	389		1,655
Cachuma Dam	11,816	8,841		20,657
Clear Creek South	3,849	2,795		6,644
Colusa Basin Drain	16,852			16,852
Contra Costa Canal	2,837	99,949		102,786
Corning Canal	13,187			13,187
Cow Creek unit	7,510	3,615		11,125
Cross Valley Canal	23,631	192		23,823
Delta	0	141		141
Delta Mendota Canal	112,599	7,080		119,679
Exchange Contractors	628,448		9,500	637,948
Folsom Lake	9,428	69,870		79,298
Folsom South Canal	0	46,384		46,384
Friant–Kern Canal	566,448	44,663		611,111
Lake Berryessa		232		232
Lower American		43,462		43,462
Madera Canal	125,286	0		125,286
Mendota Pool	39,847			39,847
Millerton Lake		256		256
New Melones Unit	0	131		131
Putah South Canal	133,234	50,446		183,680
Sacramento River	1,395,837	68,581	30,048	1,494,466
San Felipe Div	18,602	69,530		88,132
San Joaquin Valley	6,200			6,200
San Luis Canal	667,103	15,994	212	683,309
Shasta Lake	0	996		996
Sly Park Unit	12,068	2,095		14,163
Spring Creek Conduit		671		671
Tehama Colusa Canal	91,220			91,220
Toyon Pipeline		2,200		2,200
Tulelake–P–Canal	2,625			2,625
Upper American River	0	999		999
Waterfowl Conservation	0		87,238	87,238
Waterfowl Dist			43,702	43,702
Total	**3,889,893**	**539,512**	**170,700**	**4,600,105**

Source: USBR Repayments Section, 2800 Cottage Way, Sacramento, Water Deliveries and Revenues, Oct 1, 1991, Thru Sep 30, 1992, RunDate 11/17/92.

Table 20. Water Budgets by Planning Subarea (1,000 acre–feet)

North Coast Region					
Net Use	**Upper Klamath**	**Lower Klamath**	**Coastal**	**Russian River**	**NC Total**
Urban	10	11	79	70	170
Ag	370	30	64	90	554
Environmental	169	5,390	2,209	0	7,768
Other	21	0	0	0	21
Total Net Use	**570**	**5,431**	**2,352**	**160**	**8,512**
Supplies					
Local	164	28	85	97	374
Imported by Local	0	0	0	0	0
Ground Water	129	13	58	63	263
Reclaimed	0	0	2	0	2
Colorado River	0	0	0	0	0
CVP	0	0	0	0	0
Other Federal	276	0	0	0	276
SWP	0	0	0	0	0
Dedicated Natural Flow	0	5,390	2,207	0	7,597
Total Supplies	**570**	**5,431**	**2,352**	**160**	**8,512**

San Francisco Bay Region

Net Use	**North Bay**	**South Bay**	**SF Total**
Urban	138	773	911
Ag	66	32	98
Environmental	3,590	10	3,600
Other	2	14	16
Total Net Use	**3,796**	**829**	**4,625**
Supplies			
Local	211	123	334
Imported by Local	39	396	435
Ground Water	32	55	87
Reclaimed	3	27	30
Colorado River	0	0	0
CVP	0	149	149
Other Federal	51	0	51
SWP	20	79	99
Dedicated Natural Flow	3,440	0	3,440
Total Supplies	**3,796**	**829**	**4,625**

Table 20. Water Budgets by Planning Subarea (1,000 acre–feet)

Central Coast Region			
Net Use	**Northern**	**Southern**	**Total**
Urban	131	77	208
Ag	594	313	907
Environmental	0	0	0
Other	2	16	18
Total Net Use	**727**	**406**	**1,132**
Supplies			
Local	22	14	36
Imported by Local	0	0	0
Ground Water	693	333	1,026
Reclaimed	1	17	18
Colorado River	0	0	0
CVP	11	0	11
Other Federal	0	42	42
SWP	0	0	0
Dedicated Natural Flow	0	0	0
Total Supplies	**727**	**406**	**1,132**

South Coast Region

Net Use	**Santa Clara**	**Metro LA**	**Santa Ana**	**San Diego**	**SC Total**
Urban	123	1,472	765	536	2,896
Ag	205	12	193	222	632
Environmental	0	15	2	1	18
Other	19	85	63	41	208
Total Net Use	**347**	**1,584**	**1,023**	**800**	**3,754**
Supplies					
Local	90	19	66	43	218
Imported by Local	0	106	0	0	106
Ground Water	131	582	654	97	1,464
Reclaimed	4	57	62	15	138
Colorado River	0	490	183	521	1,194
CVP	0	0	0	0	0
Other Federal	12	0	0	0	12
SWP	110	330	58	124	622
Dedicated Natural Flow	0	0	0	0	0
Total Supplies	**347**	**1,584**	**1,023**	**800**	**3,754**

Table 20. (continued) Water Budgets by Planning Subarea (1,000 acre–feet)

Sacramento River Region

Net Use	Shasta Pit	NW Valley	NE Valley	S.E.	C Basin W	C Basin E	S.W.	Delta Srv Area	Total
Urban	12	58	64	76	67	446	10	19	751
Ag	304	425	237	383	1,975	2,496	65	457	6,343
Environmental	2,150	39	0	715	138	1,037	0	9	4,089
Other	0	50	15	9	147	176	0	57	454
Total Net Use	**2,466**	**572**	**315**	**1,184**	**2,327**	**4,155**	**75**	**542**	**11,638**
Supplies									
Local	264	18	79	387	293	1,496	14	383	2,934
Imported by Local	0	0	0	7	0	0	0	0	7
Ground Water	81	268	188	66	886	1,162	61	78	2,791
Reclaimed	0	0	0	0	0	0	0	0	0
Colorado River	0	0	0	0	0	0	0	0	0
CVP	0	93	48	2	1,022	677	0	81	1,923
Other Federal	0	154	0	7	125	0	0	0	286
SWP	0	0	0	0	1	2	0	0	3
Dedicated Natural Flow	2,121	39	0	715	0	819	0	0	3,694
Total Supplies	**2,466**	**572**	**315**	**1,184**	**2,327**	**4,155**	**75**	**542**	**11,638**

San Joaquin River Region

Net Use	Sierra Foothill	E Vly Flr	Delta Srv Area	Western Uplands	E Side Uplands	Vly E Side	Vly W Side	Total
Urban	40	73	34	38	0	156	9	350
Ag	35	999	741	47	0	3,047	1,303	6,172
Environmental	53	193	0	0	0	69	56	371
Other	0	21	0	0	0	26	97	144
Total Net Use	**128**	**1,286**	**775**	**85**	**0**	**3,298**	**1,465**	**7,038**
Supplies								
Local	63	271	709	22	0	1,764	125	2,954
Imported by Local	0	0	0	0	0	0	0	0
Ground Water	10	806	48	3	0	1,286	283	2,435
Reclaimed	0	0	0	0	0	0	0	0
Colorado River	0	0	0	0	0	0	0	0
CVP	0	16	18	60	0	181	1,055	1,331
Other Federal	2	40	0	0	0	0	0	42
SWP	0	0	0	0	0	0	2	2
Dedicated Natural Flow	53	153	0	0	0	67	0	273
Total Supplies	**128**	**1,286**	**775**	**85**	**0**	**3,298**	**1,465**	**7,038**

Table 20. (continued) Water Budgets by Planning Subarea (1,000 acre–feet)

Tulare Lake Region

Net Use	Uplands	KKT	San Luis Westside	Western Uplands	Kern Vly Floor	Total
Urban	5	144	4	1	76	230
Ag	20	4,026	1,287	0	1,980	7,314
Environmental	0	16	0	0	7	23
Other	6	29	9	0	92	136
Total Net Use	**31**	**4,214**	**1,300**	**1**	**2,155**	**7,702**
Supplies						
Local	16	880	0	0	261	1,157
Imported by Local	0	0	0	0	0	0
Ground Water	12	2,824	906	1	1,197	4,939
Reclaimed	0	0	0	0	0	0
Colorado River	0	0	0	0	0	0
CVP	0	423	360	0	232	1,015
Other Federal	0	0	0	0	0	0
SWP	4	87	34	0	466	590
Dedicated Natural Flow	0	0	0	0	0	0
Total Supplies	**31**	**4,214**	**1,300**	**1**	**2,155**	**7,702**

North Lahontan Region

Net Use	Lassen Group	Alpine Group	Total
Urban	17	22	39
Ag	243	206	449
Environmental	17	0	17
Other	0	0	0
Total Net Use	**277**	**228**	**505**
Supplies			
Local	112	158	270
Imported by Local	0	0	0
Ground Water	162	65	227
Reclaimed	3	5	8
Colorado River	0	0	0
CVP	0	0	0
Other Federal	0	0	0
SWP	0	0	0
Dedicated Natural Flow	0	0	0
Total Supplies	**277**	**228**	**505**

Table 20. (continued) Water Budgets by Planning Subarea (1,000 acre–feet)

South Lahontan Region

Net Use	Mono Owens	Death Valley	Indian Wells	Antelope Valley	Mojave River	Total
Urban	7	0	7	43	49	106
Ag	138	10	14	48	71	281
Environmental	85	0	0	0	0	85
Other	0	3	1	6	5	15
Total Net Use	**230**	**13**	**22**	**97**	**125**	**487**
Supplies						
Local	52	0	0	4	0	56
Imported by Local	0	0	0	0	0	0
Ground Water	92	13	21	49	109	284
Reclaimed	1	0	1	6	5	13
Colorado River	0	0	0	0	0	0
CVP	0	0	0	0	0	0
Other Federal	0	0	0	0	0	0
SWP	0	0	0	38	11	49
Dedicated Natural Flow	85	0	0	0	0	85
Total Supplies	**230**	**13**	**22**	**97**	**125**	**487**

Colorado River Region

Net Use	29 Palms Lanfair	Chuck Walla	Colo River	Coach	Borrego	Imperial Valley	Total
Urban	6	0	4	86	1	29	126
Ag	23	14	453	316	38	2,074	2,918
Environmental	0	0	0	0	0	39	39
Other	1	0	3	42	0	397	443
Total Net Use	**30**	**14**	**460**	**444**	**39**	**2,539**	**3,526**
Supplies							
Local	0	0	0	4	0	0	4
Imported by Local	0	0	0	0	0	0	0
Ground Water	28	14	9	101	6	0	158
Reclaimed	2	0	0	6	0	0	8
Colorado River	0	0	451	305	33	2,539	3,328
CVP	0	0	0	0	0	0	0
Other Federal	0	0	0	0	0	0	0
SWP	0	0	0	28	0	0	28
Dedicated Natural Flow	0	0	0	0	0	0	0
Total Supplies	**30**	**14**	**460**	**444**	**39**	**2,539**	**3,526**

Table 21. Water Budgets by Region (1,000 acre–feet)

Net Use	NC	SF	CC	SC	SR	SJ	TL	NL	SL	CR	CA
Urban	170	911	208	2,896	751	350	230	39	106	126	5,787
Ag	554	98	907	632	6,343	6,172	7,314	449	281	2,918	25,668
Environmental	7,768	3,600	0	18	4,089	371	23	17	85	39	16,010
Other	21	16	18	208	454	144	136	0	15	443	1,454
Total Net Use	**8,512**	**4,625**	**1,132**	**3,754**	**11,638**	**7,038**	**7,702**	**505**	**487**	**3,526**	**48,919**
Supplies											
Local	374	334	36	218	2,934	2,954	1,157	270	56	4	8,337
Imported by Local	0	435	0	106	7	0	0	0	0	0	548
Ground Water	263	87	1,026	1,464	2,791	2,435	4,939	227	284	158	13,674
Reclaimed	2	30	18	138	0	0	0	8	13	8	217
Colorado River	0	0	0	1,194	0	0	0	0	0	3,328	4,522
CVP	0	149	11	0	1,923	1,331	1,015	0	0	0	4,428
Other Federal	276	51	42	12	286	42	0	0	0	0	710
SWP	0	99	0	622	3	2	590	0	49	28	1,393
Dedicated Natural Flow	7,597	3,440	0	0	3,694	273	0	0	85	0	15,089
Total Supplies	**8,512**	**4,625**	**1,132**	**3,754**	**11,638**	**7,038**	**7,702**	**505**	**487**	**3,526**	**48,919**

Table 22. Ground Water Changes

Northern District, Fall 1991 to Fall 1992

PSA	DAU	County	Basin	Elev Change
Upper Klamath	Lost River	Modoc	Klamath River Valley	(2.7)
		Siskiyou	Klamath River Valley	(4.7)
	Butte Valley	Siskiyou	Siskiyou Butte Valley	(1.5)
	Scott Valley	Siskiyou	Scott River Valley	(1.0)
	Shasta Valley	Siskiyou	Shasta Valley	(3.0)
Lower Klamath	Trinity	Humboldt	Hoopa Valley	0.4
	Lower Klamath	Del Norte	Klamath River Mouth	3.0
		Humboldt	Prairie Creek	0.4
	Smith River	Del Norte	Smith River Plain	(1.2)
Coastal	Lower Eel	Humboldt	Eel River	(0.3)
	Van Duzen	Humboldt	Eel River	(0.3)
	S.F. Eel	Mendocino	Laytonville	(0.2)
	Upper Eel	Mendocino	Covelo Round Valley	(1.8)
		Mendocino	Little Lake Valley	0.7
	Redwood Creek	Humboldt	Prairie Creek	(1.2)
		Humboldt	Redwood Creek	(0.3)
	Mad–Trinidad	Humboldt	Humboldt Big Lagoon	0.4
		Humboldt	Mad River Valley	(1.3)
	Eureka Plain	Humboldt	Eureka Plain	(2.6)
		Humboldt	Mad River Valley	(1.5)
Shasta Lake	Goose Lake	Lassen	Alturas	(4.5)
		Modoc	Alturas	(4.5)
	Alturas	Modoc	Goose Lake	(2.6)
	Big Valley	Lassen	Big Valley	(5.2)
		Modoc	Big Valley	(5.6)
		Modoc	Round Valley	(1.3)
	MacArthur	Lassen	Fall River Valley	(3.9)
	Hat Creek	Shasta	Fall River Valley	(3.5)
Northwest Valley	Redding West	Shasta	Redding	(0.2)
		Tehama	Redding	0.8
	Red Bluff–Orland	Glenn	Sacramento Valley	(1.6)
		Tehama	Sacramento Valley	2.2
Northeast Valley	Redding East	Shasta	Redding	0.9
		Tehama	Redding	0.9
	Los Molinos	Butte	Sacramento Valley	(1.2)
		Tehama	Sacramento Valley	(1.8)
Southeast Valley	Feather River	Plumas	Almanor	0.8
		Plumas	Mohawk Valley	(7.7)
		Plumas	Sierra Valley	(3.0)

Table 22. (continued) Ground Water Changes

Northern District, Fall 1991 to Fall 1992

PSA	DAU	County	Basin	Elev Change
		Sierra	Sierra Valley	(2.0)
Central Basin West	Willows–Arbuckle	Colusa	Sacramento Valley	(1.7)
		Glenn	Sacramento Valley	(3.0)
	Glenn–Knights Ld	Colusa	Sacramento Valley	0.3
Central Basin East	Durham–Sutter	Butte	Sacramento Valley	(2.0)
		Glenn	Sacramento Valley	0.7
	Butte City	Butte	Sacramento Valley	0.6
		Colusa	Sacramento Valley	0.8
		Glenn	Sacramento Valley	1.1
	Yuba City–Gridley	Butte	Sacramento Valley	0.8
	Honcut Valley	Butte	Sacramento Valley	(1.6)
Southwest Valley	Cache Creek	Lake	Burns Valley	0.3
		Lake	High Valley	(4.7)
		Lake	Kelseyville Valley	(2.4)
		Lake	Scotts Valley	(2.9)
		Lake	Upper Lake	2.9
	Putah Creek	Lake	Coyote Valley	(1.9)
		Lake	Middletown–Collayomi Vall	(0.1)
Lassen Group	Surprise Valley	Lassen	Surprise Valley	(12.0)
		Modoc	Surprise Valley	(12.0)
	Madeline Plains	Lassen	Termo–Madeline Plains	(0.9)
	Susanville	Lassen	Honey Lake	(0.5)
	Herlong	Lassen	Honey Lake	(0.1)
		Lassen	Long Valley	(1.1)
		Sierra	Long Valley	(1.7)
	Upper Honey Lake	Lassen	Secret Valley	5.6
		Lassen	Willow Creek Valley	0.6

Table 22. (continued) Ground Water Changes

Central District, Fall 1991 to Fall 1992

PSA	DAU	County	Basin	Elev Change (ft)
Central Basin E	Meridian–Robbins,	Sutter	Sacramento Valley	(0.9)
	Durham–Sutter,			
	Yuba City–Gridley & Placer			
	Yuba	Yuba	Sacramento Valley	12.0
	Placer	Placer	Sacramento Valley	(1.4)
	Placer, Sacto	Sacramento	Sacramento Valley	(0.8)
Eastern Valley Floor	Elk Grove	Sacramento	Sacramento Valley	(1.0)
Central Basin W	Vacaville	Solano	Sacramento Valley	1.3
	Lower Cache, Willows–Arbuckle, & Glenn–Knights Landing	Yolo		(1.9)
	Lower Cache	Yolo	Capay Valley	1.8
Eastern Valley Floor	Lodi, S San Joaquin, & Modesto Oakdale	San Joaquin	San Joaquin Valley	(1.0)
Alpine Group	Truckee–Tahoe	El Dorado	S Lake Tahoe Vly	N/A
Western Upland	Antioch–Coral Hollow	Contra costa	E Contra Costa	0.0
Russian R– Marin	Coyote	Mendocino	Potter Valley	2.6
	Forsythe & Upper Russian	Mendocino	Ukiah Valley	8.9
	Upper Russian	Mendocino	Sanel Valley	7.3
	Middle Russian	Sonoma	Alexander Valley	5.4
	Middle Russian & Dry Creek	Sonoma	Healdsburg	0.6
	Santa Rosa	Sonoma	Santa Rosa	(0.4)
	South Marin	Sonoma	Petaluma Valley	(1.7)
	South Sonoma	Sonoma	Sonoma Valley	(2.3)
Napa–Solano	Napa	Napa	Napa Valley	2.6
	Solano	Solano	Suisun–Fairfield	0.6
South Bay	Walnut Creek	Contra Costa	Pittsburg	0.3
	Walnut Creek	Contra Costa	Clayton Valley	(0.3)
	Walnut Creek	Contra Costa	Ygnacio Valley	1.4
	San Mateo Coast	San Mateo	Half Moon Bay	(1.4)
			San Gregario Valley	0.3
			Pescadero Valley	(0.4)
	San Jose	Santa Clara	Santa Clara Valley	0.0
	S Santa Clara Vly		Coyote	5.0
			Llagas	(5.0)

Table 22. (continued) Ground Water Changes

San Joaquin District, Spring 1991 to Spring 1992		
PSA/DAU	**Change Elev (Feet)**	**Storage (1000 AF)**
Valley East Side	(0.7)	(90)
206 Modesto–Oakdale	1.5	46
207 Modesto Reservoir	(2.4)	(13)
208 Turlock	1.1	28
209 Turlock Lake	1.3	10
210 Merced	(0.8)	(16)
211 Merced Stream Group	0.0	0
212 El Nido–Stevinson	(0.8)	(13)
213 Madera–Chowchilla	(2.3)	(44)
214 Adobe	(2.9)	(45)
215 Gravelly Ford	(2.5)	(44)
Valley West Side	(1.7)	(107)
216 West Side	(1.7)	(107)
Kings–Kaweah–Tule	(2.2)	(470)
233 Fresno	(1.4)	(46)
234 Academy	(2.4)	(6)
235 Raisin	(4.3)	(102)
236 Consolidated	(2.3)	(67)
237 Lower Kings River	(5.4)	(101)
238 Hanford–Lemoore	0.0	0
239 Alta	(0.6)	(9)
240 Orange Cove	(0.4)	0
241 Tulare Lake	(7.0)	(44)
242 Kaweah Delta	(2.5)	(128)
243 Tule Delta	1.5	34
San Luis West Side	0.0	(15)
244 Westlands	(0.2)	(15.0)
245 Kettleman Plain	0.0	0.0
246 South Tulare Lake	1.2	0.0
Kern Valley Floor	(3.1)	(663)
254 Kern Delta	(7.5)	(367)
255 Semitropic	(3.5)	(99)
256 North Kern	(7.9)	(167)
257 Northeastern Kern	4.5	0
258 Arvin–Edison	(0.8)	0
259 Antelope Plain	(3.6)	(25)
260 Buena Vista Valley	2.1	1
261 Wheeler Ridge–Maricopa	(1.0)	(2)
Central Coast North		
48 Pressure	0.3	N/A
49 East Side	0.7	N/A
50 Forebay	5.4	N/A
51 Upper Valley	2.6	N/A

NOTE: Based on water levels in unconfined aquifers between 0 and 300 foot depth. PSA water level change is based on areal weighting of DAU data.

Table 22. (continued) Ground Water Changes

Southern District, Fall 1991 to Fall 1992		
County	**Basin**	**Elev Change (ft)**
Los Angeles	Central	3
	West Coast	4
	Main San Gabriel	28
	San Gabriel Canyon	−18
	Pomona	−3
	Raymond	6
	San Fernando	−2
Los Angeles−Kern	Antelope Valley	−1
Los Angeles−San Bernardino	Chino	2
San Bernardino	Bunker Hill	0
	Colton−Riverside	9
Riverside	Yucaipa	13
	Temecula	−3
San Diego	City of San Diego	NA
Orange	Orange Co WD	−20 to +50
Ventura	Oxnard Plain	
	Pressure Area	18
	Non Pressure Area	10
San Luis Obispo	Arroyo Grande	2
	Nipomo	−1
Santa Barbara	Carpinteria	NA
	Santa Barbara	NA
	Santa Ynez	NA
	Santa Maria	−2

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