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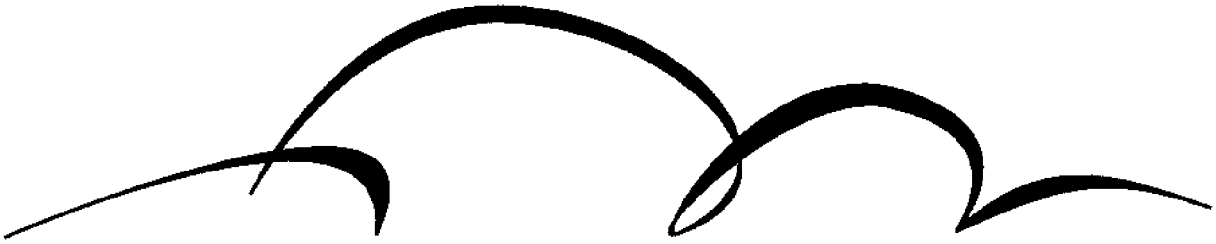

A CALIFORNIA CLOUDBURST!

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INTRODUCTION

During January and March of 1995, much of California was struck by extremely heavy precipitation, causing extensive property damage and loss of life. Estimates now show over $3 billion in damages and 27 lives claimed by the flooding. The American Red Cross estimates that over 10,000 homes were damaged or destroyed. This report provides a brief review of the storms which caused the flooding, details of some of the damage, and precipitation statistics and maps for the events.

SYNOPTIC SITUATION

A much stronger than normal Pacific jet stream was displaced well south of its normal position during much of the winter and early spring of 1995. This 'funneled' moisture and major storm systems directly into California. In fact, the jet core and average storm track were displaced 15-20 degrees latitude south of their normal locations during January. During January and March, the state was struck repeatedly by very strong storm systems laden with Pacific moisture.

Much has been written about the Tropical/Northern Hemisphere (TNH) teleconnection pattern as it relates to El Nino. Therefore, this report will not venture into this aspect in great detail. However, numerous studies have noted that a moderate to strong El Nino event, such as occurred this past winter, usually results in a stronger than normal Pacific subtropical jet stream, and a very active storm track along its path. This, in turn, creates above normal precipitation in areas along the path of the major storm systems. However, the 'mean' location of this jet stream and resulting storm track varies considerably when comparing historical El Nino events.

During January and March of this year (but not during February), this storm track was a major influence in steering strong storm systems into California. In previous El Nino events, this has not always been the case, as some 'El Nino winters' have produced below normal California precipitation. Therefore, El Nino certainly does not guarantee above normal precipitation for California, but it does seem to increase the likelihood of an extended period of unusually heavy precipitation (and potential flooding) as occurred this year.

DISCUSSION

The January storms resulted in 42 California counties being declared federal disaster areas. Then, the March storms caused a total of 57 counties to be declared disaster areas (all but one of the counties in the state). Pacific Gas & Electric (PG&E) reported electrical outages for 1.4 million customers during January, and for 1.2 million customers during March. Thunderstorms, sometimes severe, accompanied many of the storm systems, and even produced a few tornadoes. In both months, flooding on many of the smaller streams was caused by very heavy precipitation during short time intervals, with amounts that sometimes exceeded 100-year 24-hour event records. Then, flooding on larger rivers ensued as they were fed by their overwhelmed tributaries.

For example, the Salinas River at Chular reached a peak flow of about 96,000 cubic feet per second (cfs)--nearly double its prior record established in 1983. Other record flows included:

- Del Puerto Creek near Patterson--6000 cfs vs previous record of 1800 cfs in 1959.

- Cache Creek near Yolo--41,800 cfs vs previous record of 41,400 cfs in 1958.

- The Guadalupe River near San Jose--10,500 cfs vs previous record of 9150 cfs in 1958.

- The Carmel River near Carmel--12,200 cfs vs previous record of 9560 cfs in 1983.

The January storms more severely affected northern California, while the March storms concentrated more of their impact on central California. However, both months showed much above normal precipitation over most of the state. Since most of the storms occurred within relatively cool, unstable air masses, much of the precipitation above 5000 feet elevation fell and accumulated as snow. Although this somewhat lessened the immediate impact of the storms in terms of flooding, it heightened fears of later flooding due to melting and runoff. Water content of snowpack exceeded 150% of normal in much of the Sacramento Basin and Sierra Nevada mountains at the end of March. During one storm (Jan 8-10), up to 12 feet of snow fell on parts of the Sierra Nevada range. Some locations reported snow depths exceeding 40 feet by late March.

One of the obvious impacts of the unusually heavy precipitation was to agriculture. The inability to either harvest or plant severely affected crops such as lettuce,

spinach, artichokes, almonds, oranges, cabbage, cauliflower, cherries, and plums. Thousands of acres of Monterey County farmland were flooded. More than 3000 people, mostly farm workers, had to be evacuated from the town of Pajaro, which was almost entirely flooded due to a levee break.

The state's roads also suffered extensive damage from the deluge. A bridge collapse on Interstate 5 in Fresno County killed 6 people. A 150-mile stretch of I-5 remained closed for over a week. Other severely affected areas included:

- San Jose--portions of downtown flooded by Guadalupe River.

- Castroville--Salinas River forced thousands to evacuate.

- Monterey--Salinas River forced the closure of highways leading to the peninsula.

- Watsonville--more than 2700 people evacuated.

- Malibu--Mudslides destroyed homes and blocked the Pacific Coast Highway.

SIGNIFICANT EVENTS AND STATISTICS

Following are some of the more interesting statistics concerning the unusually heavy precipitation:

JANUARY 1995:

- Brandy Creek: 17.36 inches for 48-hour period ending Jan 9.

- Mount Shasta: 5.76 inches for 24-hour period ending Jan 9.
  22.81 inches for Jan 1-16.

- Blue Canyon: 5.05 inches for 24-hour period ending Jan 10.
  20.64 inches for week of Jan 8-14.
  28.16 inches for Jan 1-16.

- Santa Maria: 7.52 inches for 24-hour period ending Jan 10.

- Sacramento: 4.45 inches for 24-hour period ending Jan 10.
  9.39 inches for Jan 1-16.

- Los Angeles: 9.36 inches for Jan 1-15.

- Santa Barbara: 16.89 inches for Jan 1-15.

- Marin Civic Center: 18.08 inches for Jan 1-16.

- Redding: 14.87 inches for Jan 1-16.

- Eel River at Fernbridge: Crested 5 feet above flood stage.

- Sacramento River at Tehama: Crested 5 feet above flood stage.

- Russian River at Guerneville Bridge: Crested 16 feet above flood stage.

- Wettest month on record for:

Santa Maria	- 11.78
Los Angeles Intl.	- 12.71
Lompoc	- 15.37
Santa Barbara	- 24.20
Gibraltar Dam	- 34.52

MARCH 1995:

- Mt. Palomar: 8.57 inches for 24-hour period ending Mar 5.
  14.58 inches for 48-hour period ending Mar 6.

- Mt. Wilson: 4.07 inches for 24-hour period ending Mar 5.

- Idyllwild: 6.00 inches for 24-hour period ending Mar 5.
  10.34 inches for 48-hour period ending Mar 6.

- Marin Civic Center: 8.27 inches for Mar 7-11.

- Santa Rosa: 6.21 inches for Mar 7-11.

- Blue Canyon: 10.72 inches for Mar 7-11.
  7.59 inches for Mar 19-23.

- Mt. Shasta: 8.31 inches for Mar 7-11.

- Wrightwood: 7.73 inches for 48-hour period ending Mar 11.

- Napa River at Napa: Crested 6 feet above flood stage.

- Salinas River at Bradley: Crested 11 feet above flood stage.

- Russian River at Hacienda Bridge: Rose 32 feet in 24 hours on Mar 8-9.

TABLES AND FIGURES

Table 1 provides precipitation statistics for all available reporting stations in California for January 1995, March 1995, and the cumulative totals for October 1994 through March 1995. These statistics are then presented in the form of maps (plotted and contoured) in Figures 1-9. Precipitation amounts are rounded

to the nearest inch. Values for percent of normal precipitation are based on the 1961-1990 normals. Precipitation amounts for January exceeded 40 inches for four locations: De Sabla, Juncal Dam, Strawberry Valley, and Whiskeytown Reservoir. Also, four stations reported over 100 inches for October through March: Bowman Dam, Bucks Creek, Lake Spaulding, and Strawberry Valley.

Figure 10 provides contours of the reporting stations' elevations (i.e., not an actual terrain map). This illustrates the orographic effects of the California mountains, as higher elevation sites generally received greater precipitation amounts. For lower elevation areas, the heavier amounts generally fell closer to the coast. Figures 7 and 8 show nine rather distinct maximas for October through March precipitation--five in the north and four in the south. Three are over inland mountainous areas, with the remainder generally in coastal highland areas. The desert areas are also quite apparent, as some locations there received less than 10 inches for the 6-month period. However, these areas were still far above the seasonal normal.

REFERENCES

NCDC obtained some of the information for this report from the California Department of Water Resources, the Climate Prediction Center, and the National Weather Service. We greatly appreciate their contributions. Readers can obtain additional information and data directly from NCDC (phone: 704-271-4800, fax: 704-271-4876, email: orders@ncdc.noaa.gov, www homepage: http://www.ncdc.noaa.gov).

Table 1. California Precipitation, October 1994-March 1995.

Station	Lat. (deg)	Lon. (deg)	Elev (ft)	Jan. prcp	Jan. %norm	Mar. prcp	Mar. %norm	6-mon total	6-mon %norm
ACTON ESCONDIDO FC261	34 30	118 16	2960	8.50	450%	4.80	242%	16.10	177%
ADIN RANGER STN	41 12	120 57	4195	3.82	177%	3.37	201%	14.18	131%
ALPINE	32 50	116 46	1735	9.55	344%	8.68	271%	N/A	N/A
ALTADENA	34 11	118 8	1127	17.65	418%	9.09	246%	32.63	177%
ALTURAS	41 30	120 33	4400	2.19	158%	3.18	250%	11.08	145%
ANAHEIM	33 54	117 52	335	10.49	N/A	5.94	N/A	19.56	N/A
ANGWIN PAC UNION COL	38 34	122 26	1815	28.29	315%	16.61	298%	59.86	162%
ANTIOCH PUMPING PLANT	37 59	121 44	60	6.70	262%	5.74	291%	17.66	158%
ANZA	33 33	116 40	3915	6.09	266%	1.40	60%	11.13	102%
ASH MOUNTAIN	36 29	118 50	1708	9.29	197%	13.15	302%	32.76	153%
AUBERRY 1 NW	37 5	119 30	2140	13.35	293%	14.19	340%	38.61	185%
AUBURN	38 55	121 5	1292	18.42	300%	16.37	291%	52.01	172%
BAKERSFIELD WSO APRT	35 25	119 3	495	2.29	266%	3.39	326%	8.93	195%
BALCH POWER HOUSE	36 55	119 5	1720	13.93	236%	15.43	323%	41.21	162%
BARRETT *	32 35	116 42	1625	11.28	354%	8.61	297%	26.29	182%
BARSTOW FIRE STATION	34 54	117 1	2320	2.45	N/A	1.04	N/A	4.47	N/A
BEAUMONT 1 E	33 56	116 58	2600	12.14	394%	9.38	294%	28.03	197%
BEN LOMOND 4	37 5	122 5	450	26.51	N/A	15.88	N/A	61.03	N/A
BENTON INSPECTION STN	37 51	118 29	5461	4.28	342%	5.27	775%	10.80	213%
BERKELEY	37 52	122 16	299	10.37	206%	9.28	250%	32.51	151%
BIG BAR RANGER STATION	40 45	123 15	1260	17.97	262%	13.90	279%	46.77	141%
BIG BEAR LAKE	34 15	116 53	6790	13.63	340%	8.11	230%	29.87	166%
BIG PINE PH 3 *	37 8	118 18	4680	6.19	328%	5.84	679%	14.10	186%
BIG PINES PARK FC83B	34 23	117 41	6845	15.00	321%	10.30	248%	34.90	162%
BIG SUR STATE PARK	36 15	121 47	340	26.47	333%	15.84	243%	58.72	162%
BIG TUJUNGA DAM FC46DE	34 18	118 11	2317	18.10	366%	12.50	264%	39.57	174%
BISHOP CREEK INTAKE 2	37 15	118 35	8154	5.11	227%	6.60	504%	15.22	170%
BISHOP WSO AIRPORT	37 22	118 22	4108	3.08	277%	2.28	585%	6.50	163%
BLACK MOUNTAIN 2 WSW	37 19	122 10	2120	22.28	326%	18.51	371%	53.41	174%
BLUE CANYON	39 17	120 42	5280	32.01	258%	29.78	350%	95.49	181%
BLYTHE	33 37	114 36	268	1.81	441%	0.00	N/A	3.89	N/A
BLYTHE FCWOS	33 37	114 43	390	2.29	603%	0.49	148%	N/A	N/A
BOCA	39 23	120 6	5575	8.19	214%	8.54	308%	24.15	138%
BODIE	38 13	119 1	8370	2.49	N/A	3.70	N/A	10.39	N/A
BORREGO DESERT PARK	33 15	116 24	805	3.32	319%	1.61	199%	5.58	118%
BOWMAN DAM	39 27	120 39	5385	35.73	312%	33.22	356%	102.81	183%
BRAWLEY 2 SW	32 57	115 33	-100	1.37	370%	0.08	25%	2.69	137%
BRIDGEPORT	38 15	119 14	6470	0.66	42%	2.86	267%	5.41	N/A
BRIDGEVILLE 4 NNW	40 32	123 49	2100	30.35	280%	22.90	245%	81.91	145%
BRUSH CREEK R S *	39 39	121 20	3560	35.67	247%	32.50	348%	97.21	162%
BUCKHORN	40 52	121 51	3800	21.92	214%	21.02	242%	63.30	119%
BUCKS CREEK P H	39 55	121 20	1760	39.94	331%	36.29	367%	101.74	177%
BURBANK VALLEY PUMP PL	34 11	118 21	655	15.92	529%	8.39	279%	29.78	215%
BUTTONWILLOW	35 24	119 28	269	3.37	355%	4.37	470%	10.25	229%
CACHUMA LAKE	34 35	119 59	781	25.13	702%	12.34	349%	42.86	258%
CALAVERAS BIG TREES	38 17	120 19	4695	25.07	256%	25.31	297%	71.68	155%
CALEXICO 2 NE	32 41	115 28	12	1.69	528%	0.05	23%	2.90	163%
CALISTOGA	38 34	122 35	370	30.23	393%	17.85	341%	62.70	185%
CALLAHAN	41 19	122 48	3185	11.88	353%	6.44	280%	24.03	143%
CAMP PARDEE	38 15	120 51	658	10.51	284%	9.06	253%	28.17	153%
CAMPO	32 37	116 28	2630	10.12	405%	6.63	259%	21.87	182%
CAMPTONVILLE R S *	39 27	121 3	2755	25.54	218%	24.17	308%	69.24	140%
CANBY RANGER STN	41 27	120 52	4310	4.62	247%	7.26	420%	17.93	168%
CANOGA PARK PIERCE COL	34 11	118 34	790	16.80	508%	7.43	258%	28.32	193%
CANYON DAM	40 10	121 5	4560	20.95	296%	16.27	293%	53.33	164%
CAPAY 4 W *	38 44	122 8	300	17.33	353%	12.81	427%	38.59	194%
CARIBOU PH *	40 0	121 12	2986	24.61	308%	19.51	355%	62.97	184%
CECILVILLE 1 SE	41 8	123 8	2960	15.99	260%	12.70	293%	42.72	139%

CEDARVILLE	41	32	120	10	4670	2.94	178%	2.84	203%	10.17	115%
CHALLENGE R S	39	29	121	13	2570	35.57	285%	26.79	269%	89.10	155%
CHERRY VALLEY DAM	37	58	119	55	4765	21.59	269%	20.30	303%	60.16	155%
CHESTER	40	18	121	14	4525	23.41	399%	19.43	448%	58.14	216%
CHICO UNIVERSITY FARM	39	42	121	49	185	16.97	325%	11.67	281%	41.47	181%
CHINA LAKE ARMITAGE	35	41	117	41	2220	4.98	682%	1.18	203%	6.39	202%
CHULA VISTA	32	36	117	6	56	5.75	371%	3.01	171%	11.98	150%
CLEARLAKE 4 SE	38	54	122	36	1349	25.96	476%	15.71	436%	51.57	221%
CLOVERDALE	38	49	123	0	333	31.25	348%	20.14	332%	65.68	169%
COALINGA	36	9	120	21	670	6.07	402%	6.33	603%	14.89	225%
COARSEGOLD 1 SW	37	15	119	42	2230	14.61	N/A	14.15	N/A	39.18	N/A
COFFEE CREEK RS *	41	5	122	42	2500	22.00	251%	17.00	321%	58.10	132%
COLEMAN FISHERIES STN	40	24	122	8	420	18.26	364%	8.94	242%	39.40	174%
COLFAX	39	6	120	57	2409	22.50	259%	19.63	275%	65.37	159%
COLGATE POWER HOUSE	39	20	121	11	595	17.70	241%	17.23	295%	54.74	159%
COLUSA 2 SSW	39	12	122	1	50	13.57	420%	7.91	353%	30.11	215%
CONCORD WASTEWATER PLA	37	59	122	4	40	10.16	N/A	8.10	N/A	26.27	N/A
COPCO NO 1 DAM	41	59	122	20	2703	5.40	194%	4.43	212%	16.98	114%
CORCORAN IRRIG DIST	36	6	119	34	200	4.17	321%	4.52	422%	11.65	197%
COVELO	39	47	123	15	1430	24.35	292%	15.62	264%	53.69	143%
COVINA NIGG FC193B	34	5	117	52	575	14.06	406%	8.54	279%	27.28	180%
CRESCENT CITY 1 N	41	46	124	12	40	19.67	199%	15.04	168%	61.02	115%
CRESCENT CITY 7 ENE	41	48	124	5	120	27.12	207%	19.77	171%	84.93	124%
CRYSTAL LAKE FC 283 C	34	19	117	51	5370	30.00	464%	16.10	280%	N/A	N/A
CULVER CITY	34	1	118	24	55	12.64	470%	6.37	271%	23.24	196%
CUYAMACA	32	59	116	35	4640	17.86	336%	16.57	268%	49.29	176%
DAGGETT FCWOS	34	51	116	47	1922	2.04	416%	0.74	168%	4.14	182%
DAVIS 2 WSW EXP FARM	38	32	121	46	60	12.48	317%	8.13	307%	28.26	174%
DE SABLA	39	52	121	37	2710	40.06	338%	27.60	292%	91.18	165%
DEATH VALLEY	36	28	116	52	-194	2.59	1079%	0.31	100%	3.10	205%
DEEP CANYON LABORATORY	33	39	116	23	1200	3.72	471%	0.89	159%	5.53	158%
DEEP SPRINGS COLLEGE	37	22	117	59	5225	N/A	N/A	1.49	287%	N/A	N/A
DEER CREEK FOREBAY	39	18	120	50	4455	33.00	267%	N/A	N/A	N/A	N/A
DELANO	35	47	119	15	323	2.67	223%	4.57	381%	10.47	183%
DESCANSO RANGER STN	32	51	116	37	3500	13.98	361%	11.44	260%	35.76	186%
DOBBINS 1 S	39	22	121	12	1640	21.14	175%	23.45	344%	66.90	148%
DONNER MEMORIAL ST PK	39	19	120	14	5937	12.39	182%	20.89	379%	46.57	143%
DOWNEY FIRE STN FC107D	33	56	118	9	110	15.96	576%	6.56	270%	25.41	203%
DOWNIEVILLE	39	34	120	50	2915	32.84	307%	27.79	309%	87.70	168%
DOYLE	40	2	120	6	4240	6.72	348%	6.54	574%	18.25	213%
DOYLE 4 SSE	39	58	120	5	4390	7.60	269%	9.49	524%	22.69	167%
DRY CANYON RESERVOIR *	34	29	118	32	1455	12.87	484%	3.38	163%	21.01	183%
DUNSMUIR TREATMENT PLA	41	12	122	16	2170	39.20	351%	25.73	331%	81.30	169%
EAGLE MOUNTAIN	33	48	115	27	973	1.77	443%	0.24	75%	4.02	205%
EAST PARK RESERVOIR	39	22	122	31	1205	19.61	451%	10.13	402%	36.82	207%
EL CAJON	32	49	116	58	405	7.35	N/A	7.46	N/A	18.73	N/A
EL CAPITAN DAM	32	53	116	49	600	9.51	380%	9.56	322%	25.13	190%
EL CENTRO 2 SSW	32	46	115	34	-30	1.66	449%	0.22	105%	2.91	156%
EL MIRAGE FIELD	34	36	117	36	2910	2.52	214%	1.40	126%	5.16	118%
ELECTRA POWER HOUSE	38	20	120	40	715	13.57	260%	11.94	239%	39.82	158%
ELLERY LAKE	37	56	119	14	9645	7.04	163%	7.00	231%	25.92	133%
ELSINORE	33	40	117	20	1285	10.13	440%	2.91	139%	15.87	155%
ESCONDIDO 2	33	7	117	5	600	9.47	N/A	8.81	N/A	21.78	N/A
EUREKA WSO CITY	40	48	124	10	43	12.74	212%	11.18	210%	41.07	132%
EXCHEQUER RESERVOIR	37	35	120	16	442	11.28	377%	7.04	215%	24.29	152%
FAIRFIELD	38	17	122	4	40	12.47	258%	9.21	292%	31.89	166%
FAIRMONT	34	42	118	26	3060	15.07	491%	6.21	252%	26.52	197%
FIDDLETOWN DEXTER RANC	38	32	120	42	2160	17.54	283%	17.75	314%	51.40	169%
FIVE POINTS 5 SSW	36	21	120	9	285	6.11	466%	5.02	474%	N/A	N/A
FLORENCE LAKE *	37	16	118	58	7325	14.40	352%	15.00	476%	37.60	201%
FOLSOM DAM	38	42	121	10	350	15.62	330%	9.78	284%	36.13	179%
FORESTHILL RANGER STN	39	1	120	51	3015	25.76	288%	24.55	344%	75.11	176%
FORT BIDWELL	41	51	120	8	4500	4.36	186%	4.14	225%	16.27	133%
FORT BRAGG 5 N	39	30	123	47	120	20.67	286%	14.40	281%	49.63	151%

FORT JONES RANGER STN	41	36	122	51	2725	9.03	241%	6.97	324%	25.06	144%
FORT ROSS	38	31	123	15	112	18.93	263%	12.85	242%	46.75	144%
FRESNO WSO AP	36	47	119	43	336	5.42	277%	5.88	311%	15.90	177%
FRIANT GOVERNMENT CAMP	36	59	119	43	410	6.48	284%	7.69	311%	21.37	184%
GASQUET RANGER STN	41	52	123	58	384	29.27	197%	22.63	175%	92.27	120%
GEM LAKE	37	45	119	8	8970	11.50	339%	8.51	304%	27.76	177%
GEORGETOWN RANGER STN	38	55	120	47	3001	20.29	212%	20.62	264%	63.02	139%
GIBRALTAR DAM 2	34	31	119	41	1550	34.52	663%	13.97	325%	56.90	259%
GILROY	37	0	121	34	194	11.17	277%	8.96	277%	26.05	149%
GLENDORA WEST FC 185	34	8	117	52	822	17.69	441%	11.26	317%	35.79	204%
GLENNVILLE	35	43	118	42	3140	8.46	250%	7.70	234%	24.55	160%
GOLD ROCK RANCH	32	53	114	52	485	3.65	N/A	0.30	N/A	8.70	N/A
GOLD RUN 2 SW	39	9	120	52	3320	23.49	232%	22.33	267%	70.98	147%
GOLDSTONE ECHO 2	35	17	116	47	2950	3.24	N/A	0.99	N/A	6.38	N/A
GRANT GROVE	36	44	118	58	6600	21.39	266%	22.23	332%	59.21	171%
GRASS VALLEY NO 2	39	13	121	4	2400	25.22	235%	23.45	301%	71.86	156%
GRATON	38	26	122	52	200	23.58	263%	16.33	292%	56.86	155%
GREENVIEW	41	33	122	54	2820	11.00	266%	8.13	417%	27.08	143%
GREENVILLE RANGER STN	40	8	120	56	3560	24.83	341%	19.66	350%	57.55	171%
GRIZZLY CREEK STATE PA	40	29	123	54	410	23.49	N/A	18.40	N/A	63.96	N/A
GROVELAND RANGER STN	37	49	120	6	3145	20.26	305%	18.85	328%	53.06	170%
HAIWEE	36	8	117	57	3825	7.32	678%	2.40	222%	10.86	203%
HALF MOON BAY	37	28	122	27	36	11.38	227%	8.71	210%	29.70	130%
HANFORD 1 S	36	18	119	39	245	4.70	326%	4.77	356%	12.20	183%
HAPPY CAMP RANGER STN	41	48	123	22	1120	20.76	220%	15.45	227%	57.76	126%
HARRISON GULCH R S	40	22	122	58	2750	24.17	377%	15.38	294%	50.19	159%
HARRY ENGLEBRIGHT DAM	39	14	121	16	580	15.43	241%	16.60	308%	46.85	156%
HAT CREEK PH 1	40	56	121	33	3015	7.17	241%	7.68	287%	23.54	157%
HAYFIELD PUMPING PLANT	33	42	115	38	1370	2.09	418%	0.39	93%	4.20	180%
HAYFORK RANGER STN	40	33	123	10	2340	18.52	288%	13.18	290%	43.34	144%
HEALDSBURG	38	37	122	52	108	29.90	329%	20.01	349%	66.15	172%
HEALDSBURG NO 2	38	38	122	52	150	31.62	366%	21.29	360%	68.39	182%
HEMET	33	45	116	57	1655	7.44	353%	4.64	230%	15.71	171%
HENSHAW DAM	33	14	116	46	2700	16.32	352%	13.78	282%	38.95	180%
HETCH HETCHY	37	57	119	47	3870	14.84	262%	16.89	324%	47.33	166%
HOLLISTER 2	36	51	121	25	275	7.68	298%	6.54	346%	18.72	167%
HOOPA *	41	3	123	40	333	15.98	154%	11.20	159%	54.29	110%
HUNTINGTON LAKE	37	14	119	13	7020	22.80	351%	21.00	353%	63.19	208%
IDYLLWILD FIRE DEPT	33	45	116	43	5380	15.07	342%	16.82	393%	40.63	199%
IMPERIAL	32	51	115	34	-64	1.50	429%	0.07	26%	2.82	151%
INDEPENDENCE	36	48	118	12	3950	4.15	340%	3.08	700%	8.26	192%
INDIO FIRE STATION	33	44	116	16	-21	3.66	631%	0.40	95%	4.75	189%
INYOKERN	35	39	117	49	2440	4.55	650%	1.16	176%	6.31	188%
IOWA HILL	39	4	120	50	3100	28.03	311%	23.47	322%	78.13	183%
IRON MOUNTAIN	34	8	115	8	922	2.21	502%	0.27	87%	4.67	218%
ISABELLA *	35	37	118	26	2605	9.16	372%	3.83	276%	16.02	178%
JESS VALLEY	41	16	120	18	5300	3.84	210%	3.05	158%	16.26	151%
JULIAN	33	5	116	36	4215	17.68	359%	13.76	299%	41.27	186%
JUNCAL DAM	34	29	119	30	2075	41.49	701%	20.06	437%	71.60	282%
KENTFIELD	37	57	122	33	128	22.88	220%	15.16	219%	61.58	140%
KERN RIVER PH 3	35	47	118	26	2703	8.84	316%	5.28	242%	18.31	162%
KETTLEMAN STATION	36	4	120	5	508	4.84	361%	4.73	459%	11.56	210%
KING CITY	36	12	121	8	320	6.12	266%	7.65	386%	17.33	172%
KLAMATH	41	31	124	4	25	24.42	199%	18.55	171%	77.29	119%
LA MESA	32	46	117	1	530	7.83	335%	5.53	221%	17.85	165%
LAGUNA BEACH	33	33	117	47	35	8.20	363%	4.57	211%	17.10	166%
LAKE ARROWHEAD	34	15	117	11	5205	29.62	393%	19.27	284%	70.31	204%
LAKE SABRINA	37	13	118	37	9065	6.83	231%	7.63	378%	18.65	152%
LAKE SOLANO	38	29	122	0	190	18.64	N/A	13.91	N/A	41.88	N/A
LAKE SPAULDING	39	19	120	38	5156	34.42	278%	34.38	334%	101.03	169%
LAKEPORT	39	2	122	55	1315	22.60	338%	15.08	350%	48.98	174%
LAKESIDE 2 E	32	51	116	53	690	8.24	N/A	7.62	N/A	21.97	N/A
LANCASTER FSS	34	44	118	13	2339	5.06	347%	1.72	147%	8.09	122%
LAVA BEDS NAT MONUMENT	41	44	121	31	4770	6.71	407%	8.67	519%	17.99	181%

LEBEC	34	50	118	52	3585	12.53	666%	5.85	245%	20.55	194%
LECHUZA PTRL ST FC352B	34	5	118	53	1600	22.62	492%	9.50	294%	37.67	199%
LEE VINING	37	57	119	7	6797	8.08	345%	9.85	821%	23.80	236%
LEMON COVE	36	23	119	2	513	6.43	260%	7.87	328%	20.11	175%
LINDSAY	36	12	119	3	420	5.41	256%	6.40	308%	16.67	167%
LIVERMORE	37	40	121	46	480	6.64	245%	6.66	297%	N/A	N/A
LODGEPOLE	36	36	118	44	6735	17.92	206%	17.74	264%	50.70	137%
LODI	38	7	121	17	40	9.71	305%	7.65	278%	22.87	154%
LOMPOC	34	39	120	27	95	15.37	582%	8.87	344%	29.95	244%
LONG BEACH WSCMO	33	49	118	9	25	12.76	517%	5.15	263%	19.52	186%
LOS ALAMOS	34	45	120	17	565	14.92	557%	6.74	225%	27.17	207%
LOS ANGELES CIVIC CENT	34	3	118	14	270	12.56	430%	6.98	267%	22.99	178%
LOS ANGELES WSO ARPT	33	56	118	24	100	12.71	530%	5.67	286%	20.85	196%
LOS BANOS	37	3	120	52	120	5.77	370%	3.79	277%	12.24	156%
LOS BANOS ARBURUA RANC	36	53	120	56	860	4.48	311%	4.43	369%	11.12	163%
LOS BANOS DET RESV	37	1	120	56	407	4.26	N/A	3.59	N/A	10.26	N/A
LOS GATOS	37	14	121	58	365	15.60	307%	12.52	345%	34.89	169%
LOS PRIETOS RANGER STN	34	33	119	47	1024	26.43	602%	14.44	387%	47.44	246%
LYTLE CREEK R S	34	14	117	29	2730	34.74	475%	19.22	293%	67.43	221%
MAD RIVER RS *	40	34	123	28	2675	31.31	304%	23.38	296%	77.52	152%
MADERA	36	57	120	2	270	5.18	285%	4.82	262%	15.09	161%
MAMMOTH LAKES RANGER S	37	38	118	57	7555	10.40	N/A	10.77	N/A	30.38	N/A
MANZANITA LAKE	40	32	121	34	5750	15.54	272%	13.04	239%	44.83	146%
MARIPOSA R S	37	30	119	59	2100	17.16	317%	18.60	427%	47.60	188%
MARKLEEVILLE	38	42	119	47	5530	7.99	214%	12.50	668%	28.50	191%
MARKLEY COVE	38	30	122	7	480	21.33	N/A	15.13	N/A	45.58	N/A
MARTINEZ WATER PLANT	38	1	122	7	40	10.38	N/A	10.00	N/A	30.57	N/A
MARYSVILLE	39	9	121	36	57	11.98	293%	10.03	330%	30.98	168%
MATHER	37	53	119	51	4510	17.12	308%	N/A	N/A	N/A	N/A
MC CLOUD	41	15	122	8	3280	32.57	384%	20.22	284%	64.45	156%
MECCA FIRE STATION	33	34	116	4	-180	2.95	686%	0.35	135%	4.03	192%
MERCED MUNICIPAL AP FS	37	17	120	31	153	6.71	324%	4.31	216%	14.49	140%
MIDDLETOWN	38	45	122	37	1130	35.47	360%	21.36	350%	71.98	181%
MINERAL	40	21	121	36	4875	28.76	313%	19.83	262%	65.28	145%
MITCHELL CAVERNS	34	56	115	32	4350	5.75	500%	2.39	193%	13.13	215%
MODESTO	37	39	121	0	91	7.27	335%	5.83	275%	16.77	161%
MOJAVE	35	3	118	10	2735	6.46	587%	2.72	299%	10.75	215%
MONTEBELLO	34	2	118	6	240	12.40	N/A	9.38	N/A	25.00	N/A
MONTEREY	36	36	121	54	385	10.61	304%	7.26	225%	24.14	151%
MORRO BAY FIRE DEPT	35	22	120	51	115	11.78	395%	18.29	670%	35.34	260%
MOUNT DIABLO JUNCTION	37	52	121	56	2170	11.63	258%	9.57	281%	33.18	166%
MOUNT HAMILTON	37	20	121	39	4206	6.86	204%	12.05	361%	24.53	139%
MOUNT HEBRON RNG STN	41	47	122	2	4250	3.20	227%	5.02	448%	13.48	159%
MOUNT SHASTA	41	19	122	19	3590	27.48	435%	18.86	368%	56.18	185%
MOUNTAIN PASS	35	28	115	32	4730	3.53	397%	1.43	166%	8.78	192%
MT WILSON NO 2	34	14	118	4	5708	28.22	402%	16.36	245%	57.97	179%
MUIR WOODS	37	54	122	34	220	17.63	242%	12.82	240%	50.77	155%
NAPA STATE HOSPITAL	38	17	122	16	35	13.66	254%	11.97	327%	37.49	167%
NEEDLES FCWOS	34	46	114	37	914	2.34	488%	0.44	96%	5.36	204%
NEVADA CITY	39	15	121	1	2781	30.25	295%	26.12	311%	84.12	174%
NEW CUYAMA FIRE STN	34	57	119	41	2160	5.94	479%	4.19	255%	13.34	219%
NEW MELONES DAM HQ	38	0	120	30	960	15.31	N/A	12.02	N/A	39.28	N/A
NEWARK	37	31	122	2	10	8.36	313%	6.25	295%	19.52	163%
NEWHALL	34	22	118	34	1400	18.45	N/A	7.73	N/A	30.02	N/A
NEWHALL S FC32CE	34	23	118	32	1243	18.40	521%	6.50	220%	28.14	178%
NEWMAN	37	18	121	2	90	7.94	356%	6.14	399%	17.11	186%
NEWPORT BEACH HARBOR	33	36	117	53	10	11.07	532%	4.79	260%	18.77	202%
NICOLAUS 2	38	55	121	33	43	10.04	272%	8.14	287%	27.98	168%
NILAND	33	17	115	31	-60	1.63	479%	0.31	91%	4.06	215%
NORTH FORK R S	37	14	119	30	2630	16.52	277%	17.45	318%	47.92	173%
OAK GROVE R S	33	23	116	48	2750	9.79	N/A	5.80	N/A	19.87	N/A
OAK KNOLL R S NO 2	41	51	122	53	1700	7.69	N/A	5.75	N/A	24.54	N/A
OAKLAND MUSEUM	37	48	122	16	30	9.77	242%	7.60	328%	30.58	195%
OCCIDENTAL	38	25	122	58	960	36.62	321%	23.64	325%	83.47	173%

OCEANSIDE MARINA	33	13	117	24	10	4.96	244%	4.72	246%	10.56	115%
OCOTILLO 2	32	45	116	0	410	1.54	N/A	0.05	N/A	2.79	N/A
OJAI	34	27	119	14	750	24.53	576%	10.50	303%	39.65	214%
ORICK PRAIRIE CREEK PK	41	22	124	1	160	20.84	206%	17.20	185%	66.45	122%
ORLAND	39	45	122	12	254	17.37	452%	8.84	303%	33.92	195%
ORLEANS	41	18	123	32	410	19.37	219%	14.29	203%	53.69	117%
OROVILLE	39	31	121	33	171	16.29	264%	12.83	259%	42.83	152%
OXNARD	34	12	119	11	49	15.24	513%	7.65	316%	26.71	208%
PACIFIC HOUSE	38	45	120	30	3440	22.99	274%	22.75	306%	68.96	166%
PACIFICA 4 SSE	37	35	122	28	475	13.52	N/A	10.48	N/A	37.72	N/A
PACOIMA DAM FC 33 A-E	34	20	118	24	1500	16.20	454%	9.60	272%	33.13	202%
PAICINES 4 W	36	43	121	21	905	8.97	N/A	7.97	N/A	21.82	N/A
PALM SPRINGS	33	50	116	30	425	4.43	452%	1.49	292%	7.23	179%
PALMDALE	34	35	118	6	2596	5.35	435%	2.25	199%	9.01	154%
PALO ALTO	37	27	122	8	25	7.91	260%	7.34	311%	20.76	156%
PALOMA	36	21	121	30	1775	21.13	461%	13.92	355%	41.47	199%
PALOMAR MOUNTAIN OBSER	33	21	116	52	5550	20.29	419%	19.22	395%	50.30	216%
PALOS VERDES EST FC43D	33	48	118	23	216	15.39	621%	6.12	334%	24.06	233%
PANOCHE 2 W	36	36	120	52	1320	7.99	490%	7.75	550%	19.78	256%
PARADISE	39	45	121	37	1750	32.29	324%	27.14	344%	83.58	183%
PARKER RESERVOIR	34	17	114	10	738	3.58	465%	0.85	147%	7.72	216%
PASADENA	34	9	118	9	864	18.46	488%	9.89	280%	32.88	196%
PASKENTA RANGER STN	39	53	122	32	755	21.32	472%	10.92	313%	39.93	199%
PASO ROBLES	35	38	120	41	700	11.51	382%	12.31	592%	29.19	237%
PASO ROBLES FCWOS	35	40	120	38	800	10.31	397%	11.53	568%	26.14	238%
PEARBLOSSOM	34	30	117	53	3050	5.03	N/A	3.44	N/A	N/A	N/A
PETALUMA FIRE STA 2	38	16	122	39	31	16.31	N/A	11.98	N/A	40.92	N/A
PINE FLAT DAM	36	49	119	20	610	9.69	256%	11.28	345%	28.85	178%
PINECREST STRAWBERRY	38	10	120	1	5620	20.44	271%	15.38	266%	53.26	156%
PINNACLES NATL MONUMEN	36	29	121	11	1307	10.16	353%	9.39	308%	23.63	167%
PIRU 2 ESE	34	24	118	45	730	17.46	521%	7.30	264%	28.81	193%
PISMO BEACH	35	8	120	38	80	10.80	331%	7.44	284%	24.77	173%
PIT RIVER P H 1	41	0	121	30	2880	3.13	73%	N/A	N/A	N/A	N/A
PIT RIVER P H 5	40	59	121	59	1458	37.52	287%	32.73	301%	89.69	143%
PLACERVILLE	38	43	120	49	1850	16.53	247%	15.17	275%	51.91	166%
PLUMAS EUREKA PARK *	39	45	120	42	5165	32.38	261%	30.07	338%	85.83	154%
POMONA CAL POLY	34	4	117	49	740	13.79	408%	7.06	241%	24.94	170%
PORTERVILLE	36	4	119	1	393	4.60	242%	5.21	285%	15.15	167%
PORTOLA	39	48	120	28	4850	10.96	279%	13.22	429%	31.58	172%
POTTER VALLEY P H	39	22	123	8	1015	23.34	263%	18.04	286%	57.18	144%
PRIEST VALLEY	36	11	120	42	2300	14.70	381%	12.92	386%	33.69	193%
QUINCY	39	58	120	57	3408	19.04	248%	17.87	327%	50.53	145%
RAMONA FIRE DEPT	33	3	116	55	1470	8.24	N/A	9.65	N/A	23.80	N/A
RANDSBURG	35	22	117	39	3570	6.21	554%	2.31	236%	10.34	208%
RED BLUFF FSS	40	9	122	15	349	21.47	520%	10.23	333%	41.94	223%
REDDING WSO	40	30	122	18	502	22.93	378%	14.78	337%	49.86	176%
REDLANDS	34	3	117	11	1318	9.20	390%	6.59	308%	19.32	184%
REDWOOD CITY	37	29	122	14	31	8.55	205%	8.45	272%	25.35	142%
REPRESA	38	42	121	10	295	12.71	334%	10.35	302%	30.56	166%
RICHARDSON GROVE ST PK	40	2	123	47	500	38.65	308%	28.73	303%	91.18	152%
RICHMOND	37	56	122	21	55	10.67	232%	11.31	342%	32.36	163%
RIVERSIDE CITRUS EXP S	33	58	117	21	986	8.71	466%	4.97	267%	16.49	199%
RIVERSIDE FIRE STN 3	33	57	117	23	840	8.35	464%	4.31	246%	14.97	186%
ROUND MOUNTAIN PG & E	40	48	121	56	2100	N/A	N/A	26.02	298%	N/A	N/A
SACRAMENTO FAA ARPT	38	31	121	30	18	8.81	236%	N/A	N/A	N/A	N/A
SACRAMENTO WSO CITY	38	35	121	30	25	12.35	N/A	7.84	281%	28.33	N/A
SAGEHEN CREEK	39	26	120	14	6337	13.00	221%	18.62	401%	44.08	156%
SAINT HELENA	38	30	122	28	225	23.30	293%	16.83	357%	53.11	165%
SALINAS 3 E	36	40	121	36	85	5.71	216%	5.53	230%	16.39	133%
SALINAS DAM	35	20	120	30	1245	17.50	410%	14.16	373%	37.95	199%
SALINAS FAA AIRPORT	36	40	121	36	69	7.81	335%	5.31	252%	18.44	171%
SALSIPUEDES GAGING STN	34	35	120	24	250	19.34	572%	9.77	311%	34.16	223%
SALT SPRINGS PWR HOUSE	38	30	120	13	3700	19.09	246%	22.76	336%	59.67	159%
SAN BERNARDINO CO HOSP	34	8	117	16	1125	11.35	397%	5.98	218%	22.08	171%

SAN CLEMENTE DAM	36	26	121	42	600	16.05	391%	10.88	295%	32.15	176%
SAN DIEGO WSO AIRPORT	32	44	117	10	13	8.06	448%	3.81	215%	15.07	178%
SAN DIMAS FIRE FC95	34	6	117	48	955	12.23	350%	8.25	257%	25.51	163%
SAN FRANCISCO MISSION	37	46	122	26	75	8.97	211%	7.88	245%	30.60	166%
SAN FRANCISCO OCEANSID	37	44	122	30	70	9.06	N/A	6.87	N/A	24.49	N/A
SAN FRANCISCO WSO AP	37	37	122	23	8	8.89	204%	8.75	286%	26.57	150%
SAN GABRIEL CANYON P H	34	9	117	54	744	19.23	424%	12.58	320%	39.88	207%
SAN GABRIEL DAM FC425B	34	12	117	52	1481	23.70	400%	13.38	281%	47.64	192%
SAN GABRIEL FIRE DEPT	34	6	118	6	450	15.52	425%	9.16	283%	26.69	170%
SAN GREGORIO 2 SE	37	8	122	22	275	13.72	255%	9.84	220%	36.49	149%
SAN JACINTO R S	33	47	116	58	1560	8.44	N/A	4.38	N/A	19.12	N/A
SAN JOSE	37	21	121	54	67	8.66	312%	6.85	266%	20.44	163%
SAN LUIS DAM	37	3	121	4	277	5.74	314%	5.07	365%	13.37	160%
SAN LUIS OBISPO POLYTE	35	18	120	40	315	16.09	321%	16.48	438%	39.37	188%
SAN PASQUAL ANIMAL PAR	33	5	117	0	420	9.04	N/A	7.47	N/A	19.99	N/A
SAN RAFAEL CIVIC CENTE	38	0	122	31	120	24.11	306%	13.36	270%	55.96	171%
SANDBERG WSMO	34	45	118	44	4517	N/A	N/A	5.01	262%	N/A	N/A
SANTA ANA FIRE STN	33	45	117	52	135	13.48	544%	6.96	312%	23.74	221%
SANTA ANITA DAM *	33	45	117	52	1400	24.68	501%	N/A	N/A	N/A	N/A
SANTA BARBARA	34	25	119	41	5	24.20	678%	8.59	312%	38.28	254%
SANTA BARBARA FCWOS	34	26	119	50	9	12.99	405%	9.70	342%	26.22	182%
SANTA CRUZ	36	59	122	1	130	17.56	310%	8.49	183%	35.00	137%
SANTA MARGARITA BOOST	35	22	120	38	1100	23.76	372%	21.39	426%	54.02	197%
SANTA MARIA WSO ARPT	34	54	120	27	254	11.78	545%	7.72	340%	24.70	229%
SANTA MONICA PIER	34	0	118	30	14	17.82	670%	3.96	174%	25.03	212%
SANTA PAULA	34	19	119	9	237	18.26	491%	9.44	324%	32.42	207%
SANTA ROSA	38	27	122	42	167	17.08	265%	11.52	275%	41.74	154%
SAUGUS POWER PLANT 1	34	35	118	27	2105	14.17	450%	6.46	210%	25.02	167%
SCOTIA	40	29	124	6	139	26.41	320%	16.07	226%	59.69	144%
SHASTA DAM	40	43	122	25	1075	38.21	342%	28.87	319%	82.41	160%
SHELTER COVE AVIATION	40	2	124	4	460	28.76	N/A	16.13	N/A	66.68	N/A
SHOSHONE	35	58	116	16	1570	3.36	N/A	0.45	N/A	N/A	N/A
SIERRA CITY	39	34	120	38	4310	31.91	272%	N/A	N/A	N/A	N/A
SIERRAVILLE RANGER STN	39	35	120	22	4975	11.86	255%	15.16	458%	36.62	164%
SNOW CREEK UPPER	33	52	116	41	1940	9.63	422%	3.60	177%	17.06	156%
SODA SPRINGS 1 E *	39	19	120	22	6885	26.82	226%	32.28	366%	87.16	166%
SONOMA	38	18	122	28	97	20.29	315%	13.29	323%	45.39	172%
SONORA RS	37	59	120	23	1749	17.13	308%	14.59	277%	45.15	167%
SOUTH ENTR YOSEMITE NP	37	30	119	38	5119	20.50	254%	24.03	369%	61.85	173%
SOUTH ENTRANCE YOSEMITE	37	31	119	35	5120	23.65	261%	23.93	394%	64.70	177%
SOUTH LAKE	37	11	118	34	9580	7.67	249%	9.82	457%	22.37	165%
SPRINGVILLE 7 ENE *	36	8	118	47	2470	12.01	238%	12.41	261%	35.29	150%
STANDISH HICKEY ST PK	39	53	123	44	850	39.38	303%	23.07	232%	87.14	140%
STOCKTON FIRE STN # 4	38	0	121	19	12	8.44	289%	6.87	290%	20.14	153%
STOCKTON WSO	37	54	121	15	22	6.88	242%	4.90	226%	15.78	131%
STONY GORGE RESERVOIR	39	35	122	32	800	20.21	488%	9.66	360%	37.10	214%
STONYFORD RANGER STN	39	23	122	33	1168	23.50	515%	12.15	432%	41.63	221%
STRAWBERRY VALLEY	39	34	121	6	3808	42.49	284%	35.98	309%	110.92	162%
SUN CITY	33	43	117	12	1420	8.55	N/A	3.96	N/A	15.92	N/A
SUSANVILLE AP	40	23	120	34	4146	11.48	456%	10.50	N/A	29.58	N/A
TAFT	35	8	119	29	N/A	3.38	N/A	3.90	N/A	11.91	N/A
TAHOE CITY	39	10	120	8	6230	16.18	289%	19.58	482%	50.76	191%
TEHACHAPI	35	8	118	27	4017	9.09	568%	6.23	315%	18.92	219%
TEJON RANCHO	35	2	118	45	1425	4.68	282%	6.01	285%	17.51	201%
TERMO 1 E	40	52	120	26	5300	2.92	241%	3.18	289%	9.67	138%
THERMAL FAA AIRPORT	33	38	116	10	-112	2.27	483%	0.39	122%	3.22	155%
THREE RIVERS EDISON PH	36	28	118	52	1140	9.25	194%	11.63	269%	29.63	140%
TIGER CREEK PH	38	27	120	29	2355	21.36	263%	18.64	266%	61.48	160%
TOPANGA PATRON STN FC6	34	5	118	36	745	28.80	520%	10.10	255%	45.20	207%
TORRANCE	33	48	118	20	110	16.92	568%	7.31	346%	26.90	224%
TRACY CARBONA	37	42	121	25	140	4.65	257%	3.71	241%	11.15	135%
TRACY PUMPING PLANT	37	48	121	35	61	5.13	216%	5.19	304%	14.03	136%
TRINITY RIVER HATCHERY	40	43	122	48	1860	18.20	N/A	9.78	N/A	40.08	N/A
TRONA	35	46	117	23	1695	5.01	659%	0.82	167%	5.83	192%

TRUCKEE RANGER STN	39	20	120	11	6020	12.67	228%	14.05	331%	38.73	151%
TULELAKE	41	58	121	28	4035	2.64	226%	3.68	332%	9.51	134%
TURLOCK #2	37	29	120	51	115	7.22	347%	6.46	347%	16.93	171%
TUSTIN IRVINE RANCH	33	44	117	47	118	11.27	510%	6.72	322%	21.92	216%
TWENTYNINE PALMS	34	8	116	2	1975	2.13	561%	0.29	73%	4.32	208%
TWIN LAKES	38	42	120	2	8000	17.19	208%	18.79	282%	55.86	142%
U C L A	34	4	118	27	430	20.11	590%	8.39	290%	33.43	220%
UKIAH	39	9	123	12	633	24.76	313%	18.64	356%	55.72	164%
UKIAH 4 WSW	39	8	123	16	1900	28.89	307%	17.47	254%	63.14	148%
UPPER SAN LEANDRO FLTR	37	46	122	10	394	11.17	231%	8.41	214%	32.48	147%
VACAVILLE	38	24	121	57	110	16.69	297%	9.67	294%	N/A	N/A
VAN NUYS FC15A	34	11	118	27	695	17.67	559%	8.86	331%	31.45	227%
VENTURA *	34	16	119	21	135	16.08	589%	9.14	349%	30.50	238%
VICTORVILLE PUMP PLANT	34	32	117	18	2858	2.91	355%	2.63	309%	7.07	173%
VINCENT FIRE STN FC120	34	29	118	8	3135	7.48	546%	3.71	258%	13.73	203%
VINTON	39	49	120	11	4950	6.82	322%	6.44	429%	17.71	174%
VISALIA	36	20	119	18	325	4.99	282%	6.47	397%	16.05	188%
VISTA 2 NNE	33	14	117	14	510	9.29	372%	8.41	352%	20.53	185%
VOLTA POWER HOUSE	40	28	121	52	2220	15.87	291%	10.14	221%	41.84	155%
WALNUT NI FC102C	34	0	117	52	488	14.06	434%	8.37	288%	26.01	184%
WARM SPRINGS DAM	38	43	123	0	224	35.56	390%	22.18	368%	72.28	188%
WASCO	35	36	119	20	345	3.02	270%	4.26	352%	10.47	194%
WATSONVILLE WATERWORKS	36	56	121	46	95	11.61	280%	7.71	214%	28.90	152%
WEAVERVILLE RANGER STN	40	44	122	56	2050	20.82	293%	14.51	302%	48.56	147%
WEST POINT	38	24	120	32	2820	16.02	226%	14.23	260%	46.76	152%
WESTHAVEN	36	13	119	59	285	4.59	345%	4.84	428%	12.15	209%
WHISKEYTOWN RESERVOIR	40	37	122	32	1295	48.05	443%	29.49	314%	91.38	179%
WHITTIER CITY YD FC106	33	59	118	3	260	10.61	379%	4.79	191%	19.02	152%
WILDROSE R S	36	16	117	11	4100	4.04	N/A	2.28	N/A	7.84	N/A
WILLITS 1 NE	39	25	123	20	1350	28.36	292%	18.93	269%	64.68	147%
WILLOW CREEK 1 NW	40	57	123	38	461	23.37	N/A	15.04	N/A	64.28	N/A
WILLOWS 6 W	39	31	122	18	233	15.46	447%	8.63	363%	31.28	205%
WINTERS	38	32	121	58	135	17.21	339%	11.75	385%	37.90	192%
WOODLAND 1 NNW	38	41	121	48	69	13.28	322%	8.44	296%	29.67	172%
WOODSIDE FIRE STN 1	37	26	122	15	380	12.47	N/A	11.50	N/A	36.03	N/A
YOSEMITE PARK HDQTRS	37	45	119	35	3966	14.51	236%	18.29	350%	48.69	159%
YREKA	41	43	122	38	2625	5.65	190%	4.94	263%	16.86	113%

* Indicates data obtained entirely from California Department of Water Resources, not an official NWS cooperative station.

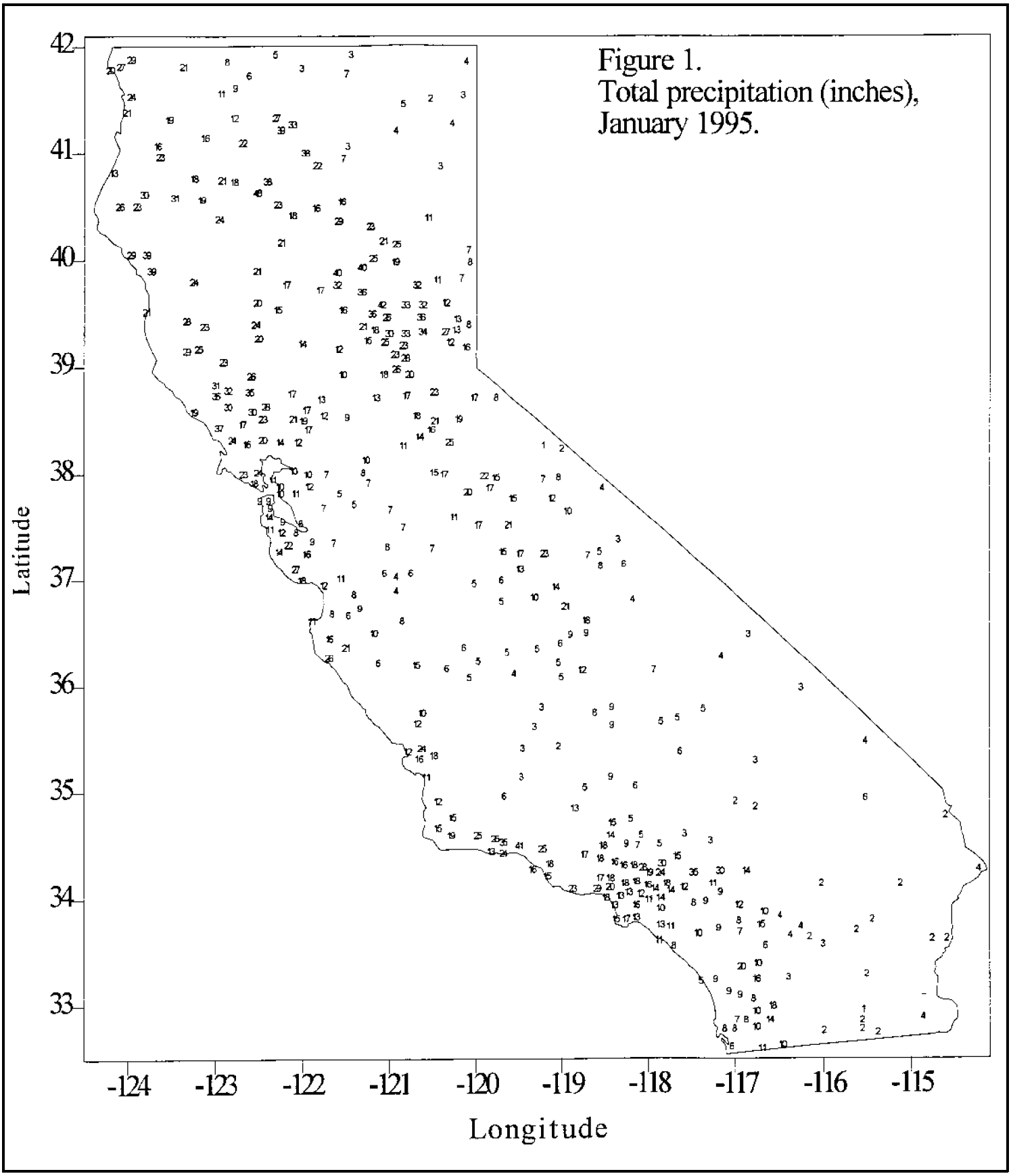

Figure 1.
Total precipitation (inches),
January 1995.

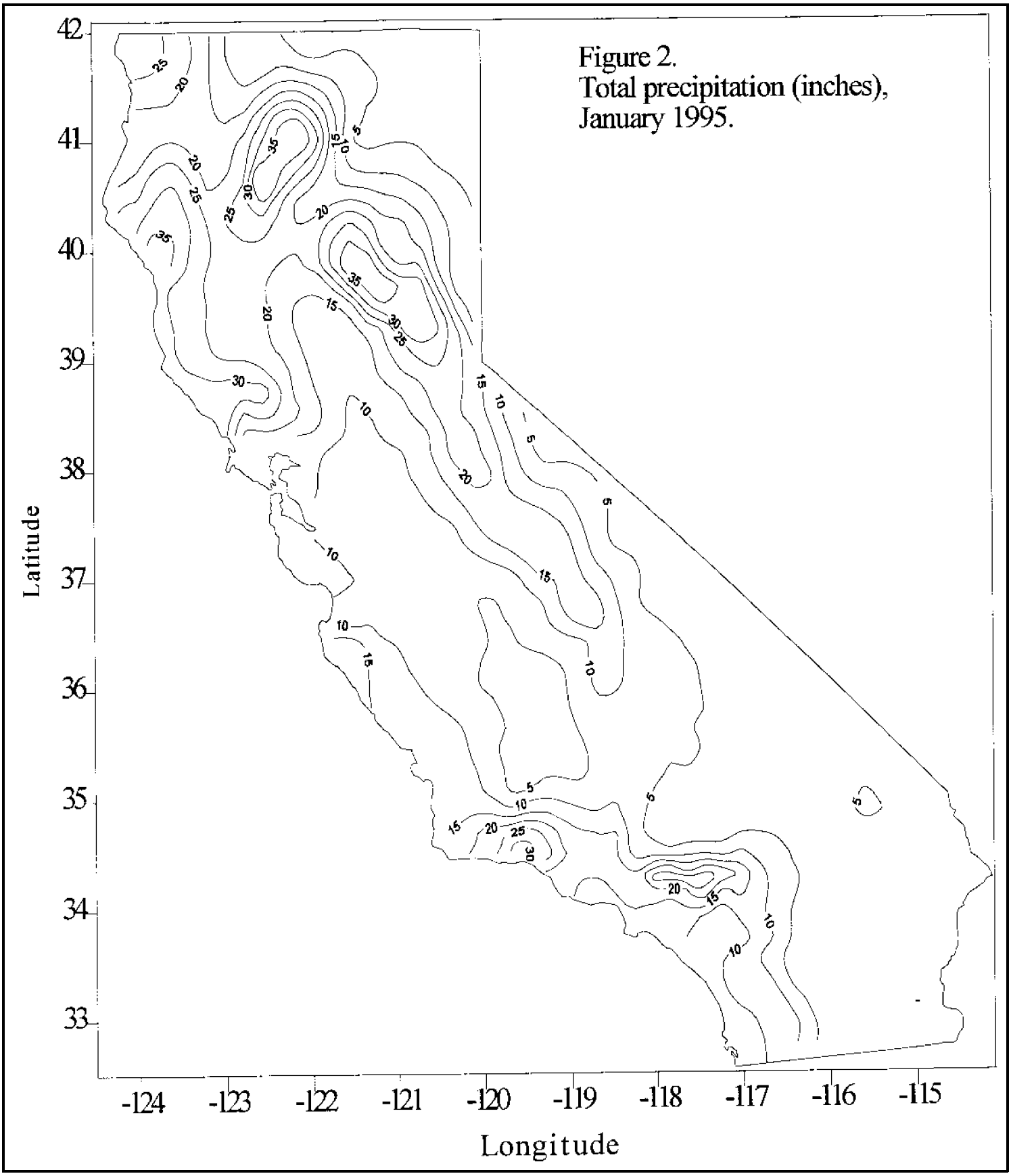

Figure 2.
Total precipitation (inches),
January 1995.

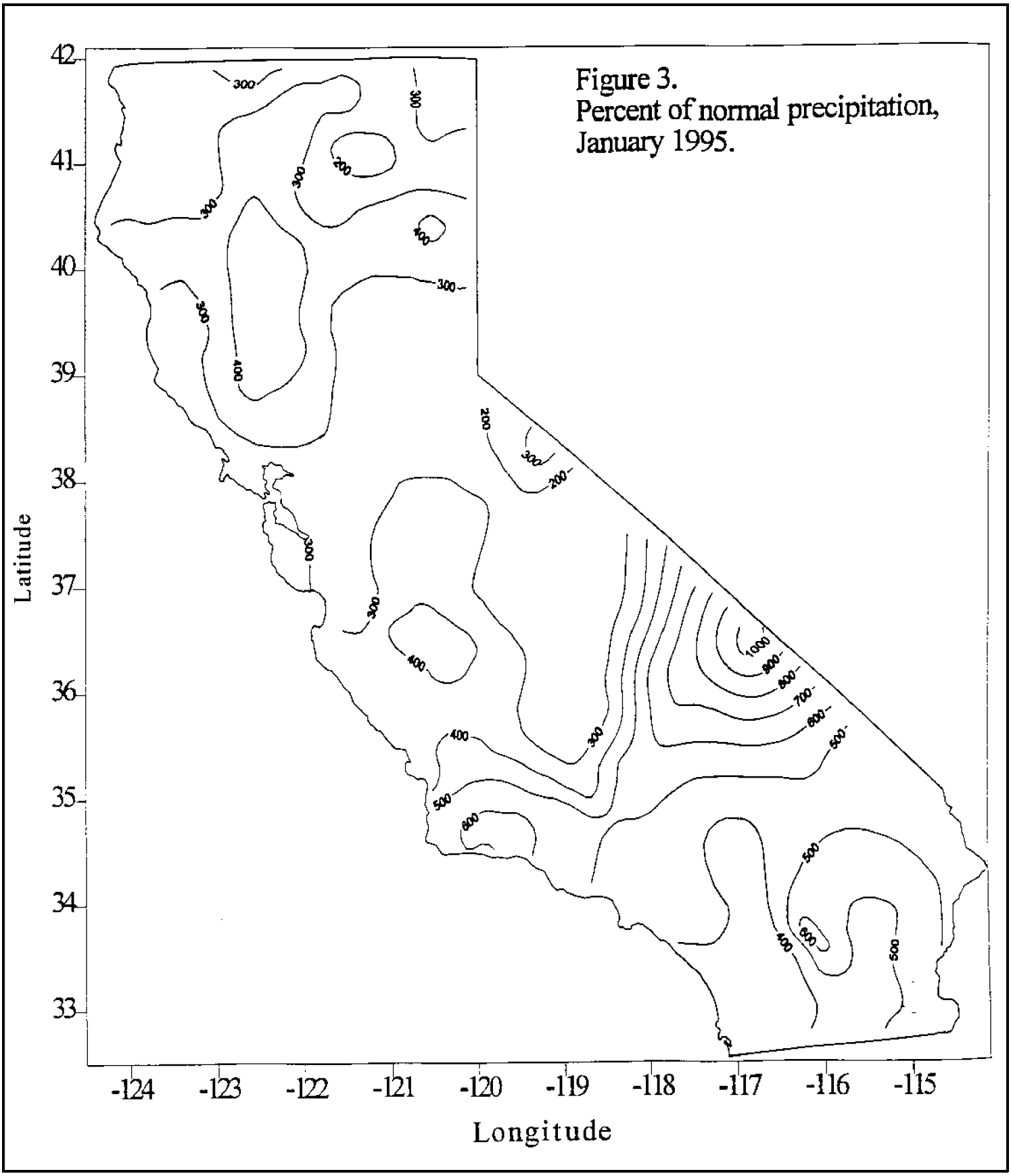

Figure 3.
Percent of normal precipitation, January 1995.

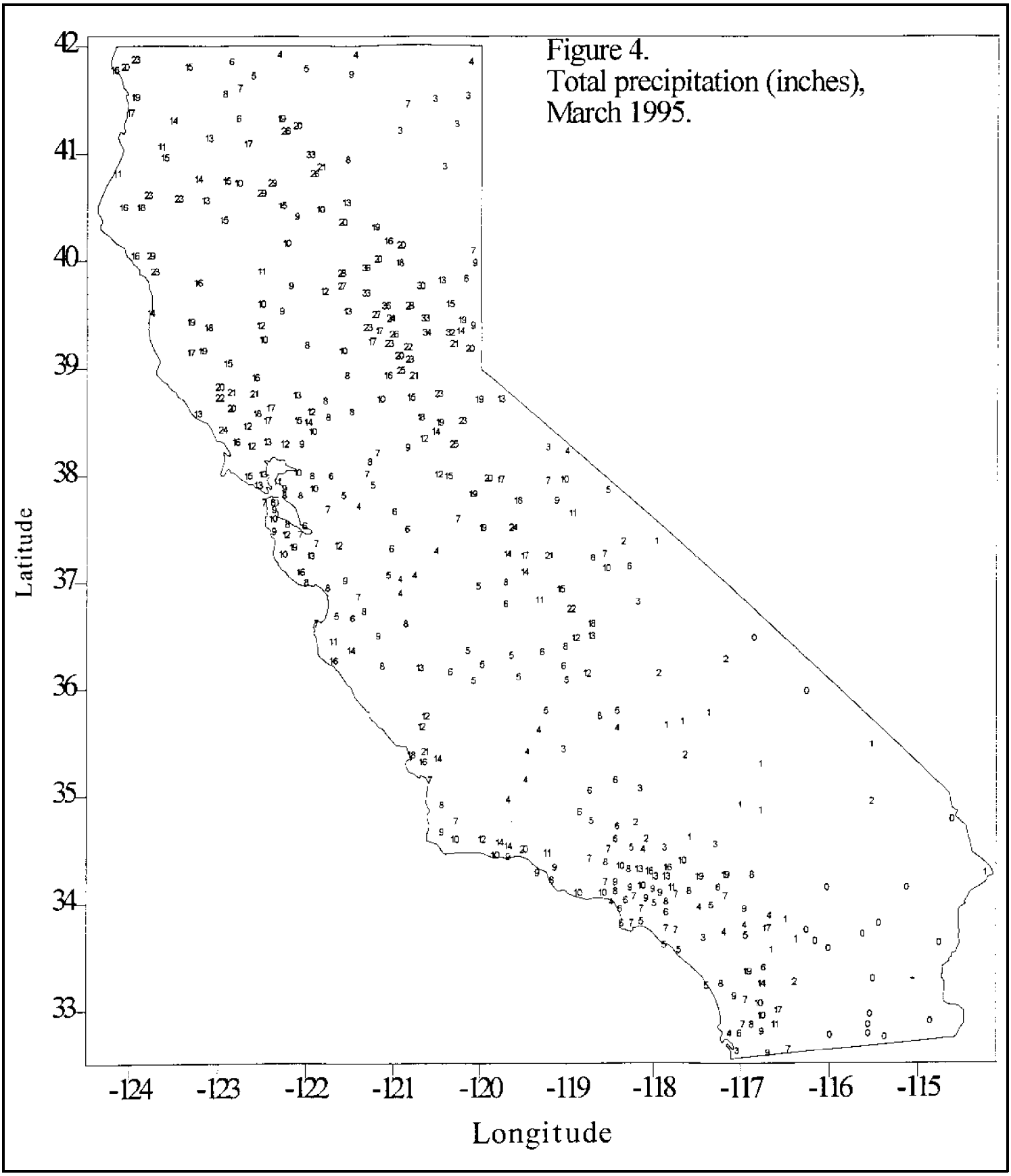

Figure 4.
Total precipitation (inches),
March 1995.

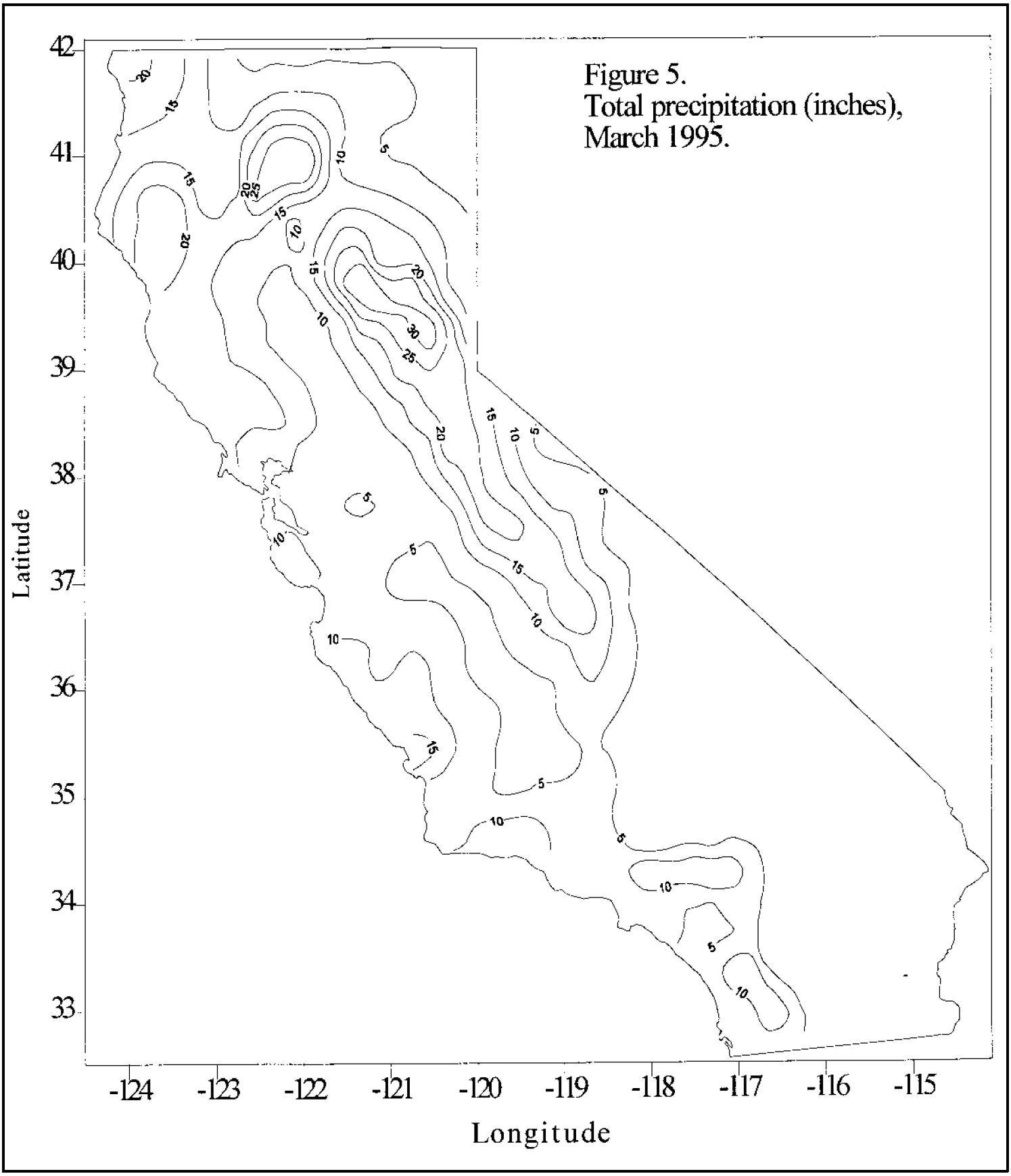

Figure 5.
Total precipitation (inches),
March 1995.

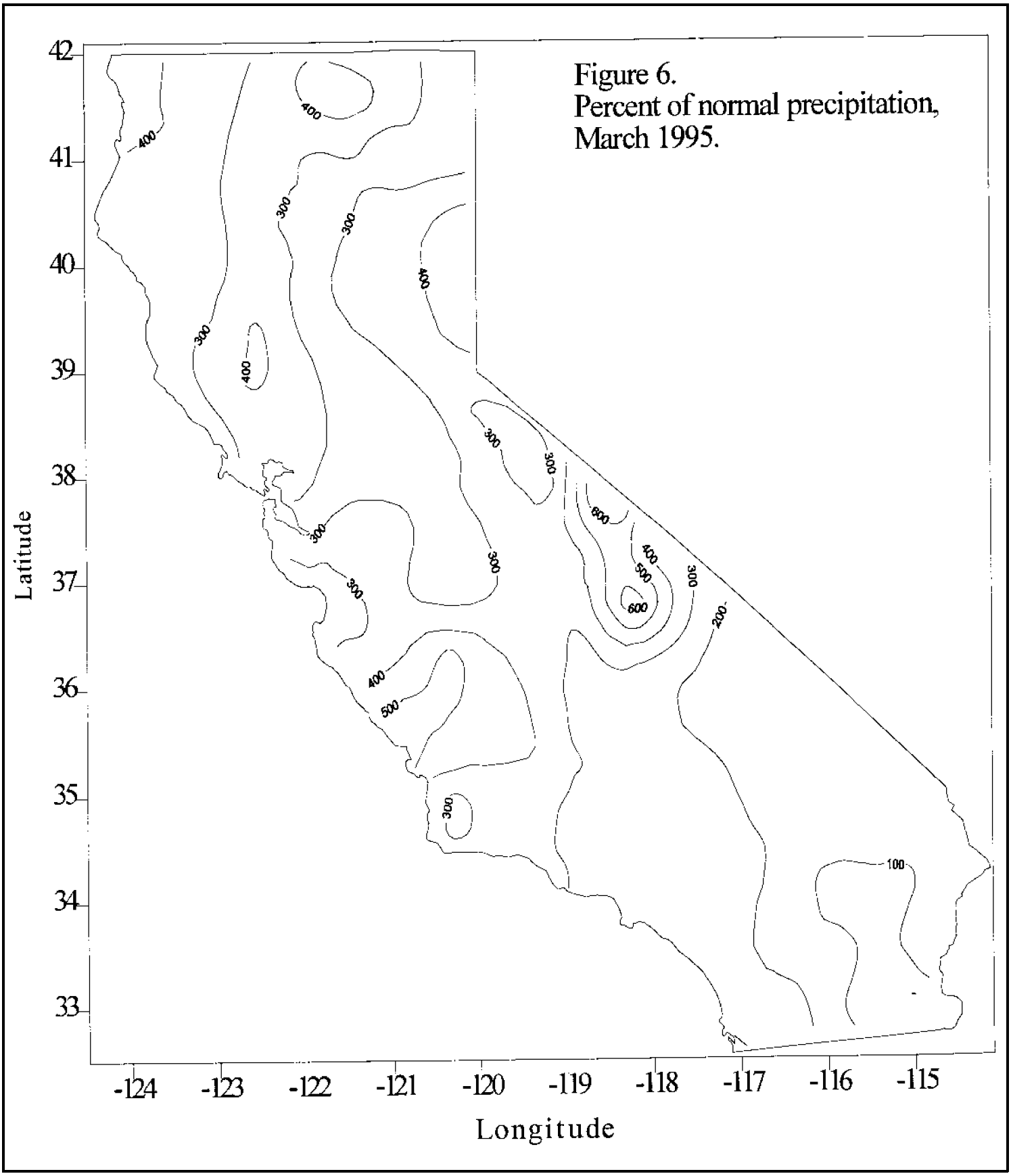

Figure 6.
Percent of normal precipitation, March 1995.

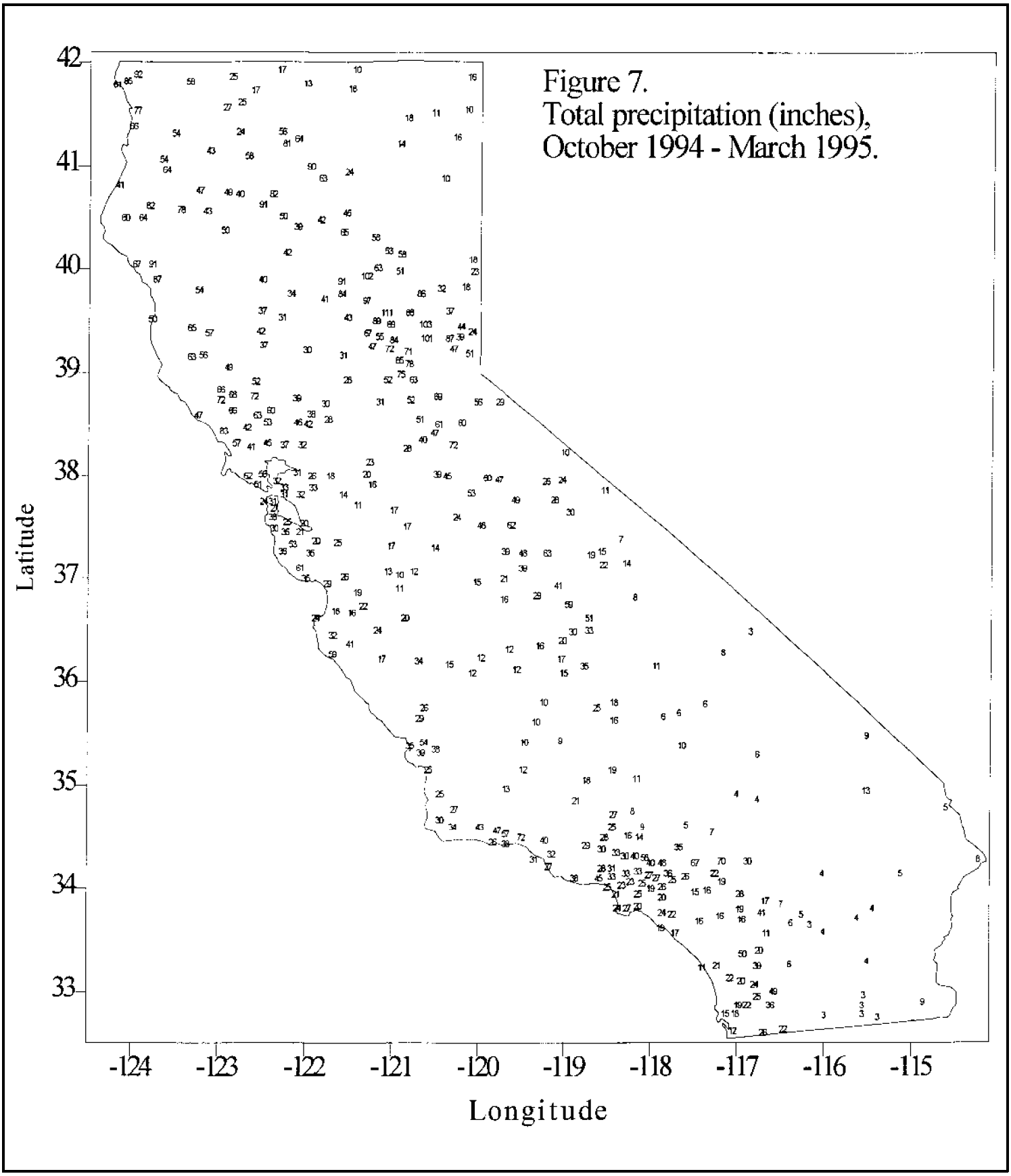
Figure 7.
Total precipitation (inches),
October 1994 - March 1995.
Latitude
Longitude
42
41
40
39
38
37
36
35
34
33
-124
-123
-122
-121
-120
-119
-118
-117
-116
-115

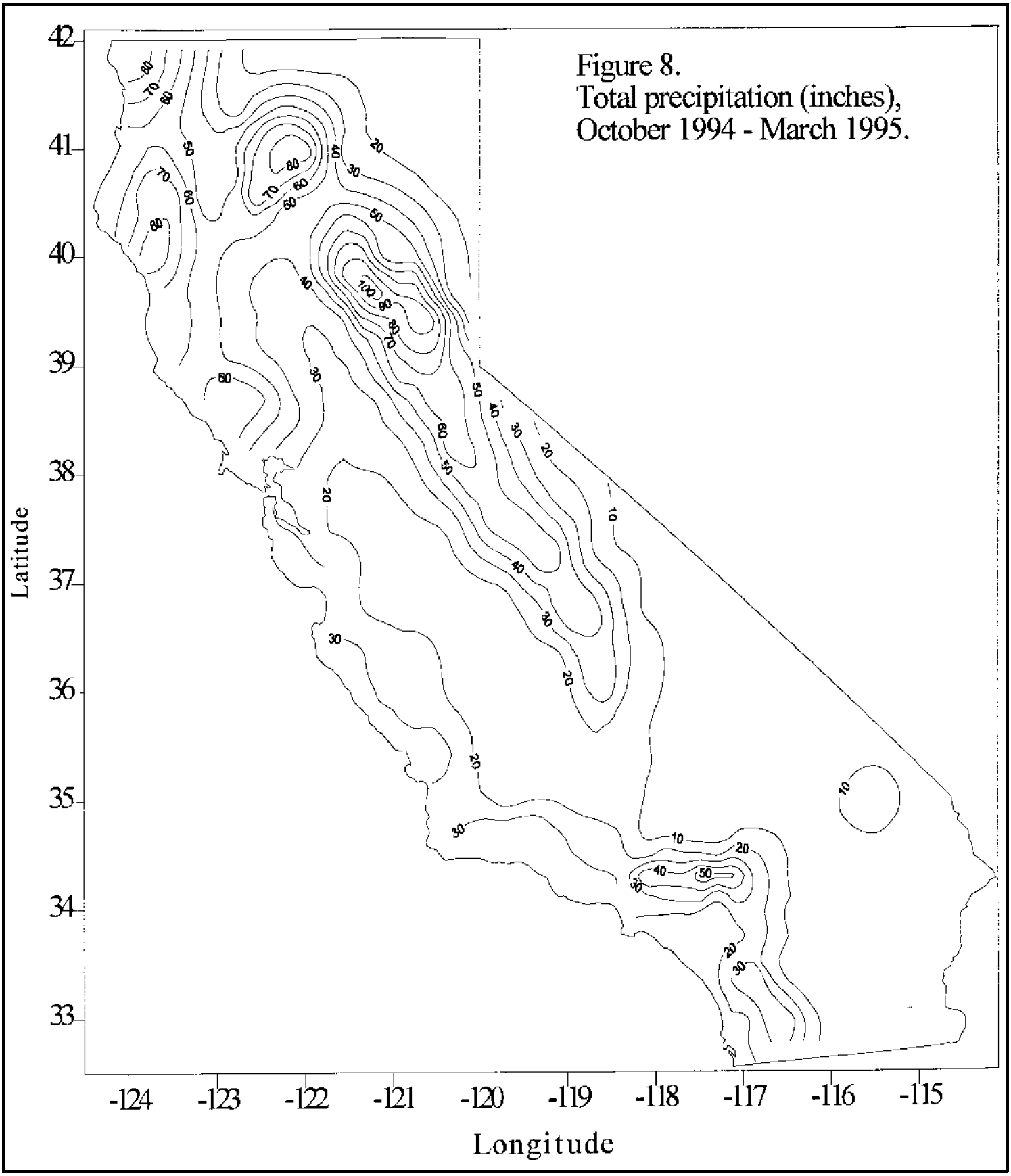

Figure 8.
Total precipitation (inches),
October 1994 - March 1995.

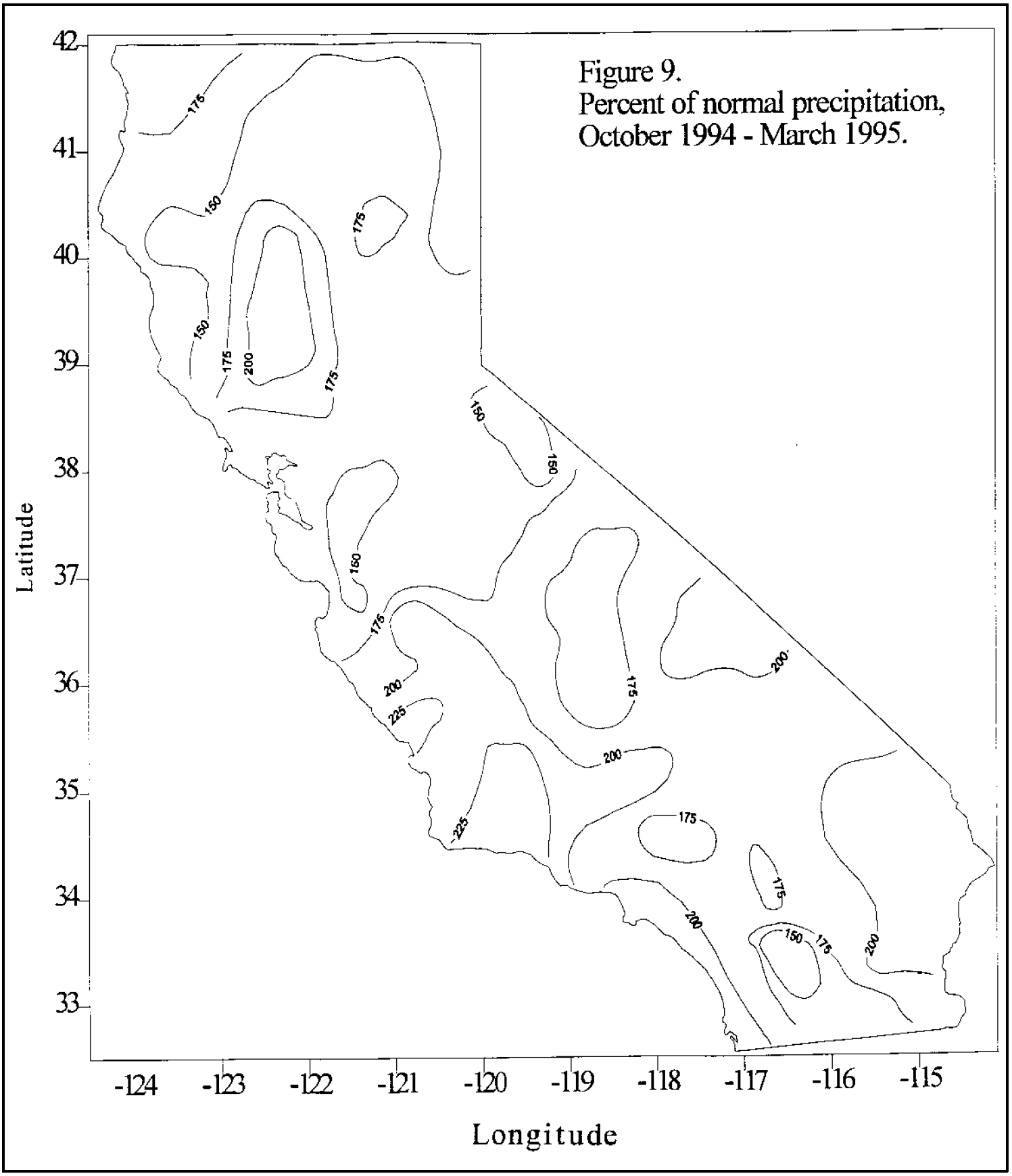
Figure 9.
Percent of normal precipitation,
October 1994 - March 1995.
Latitude
Longitude
42
41
40
39
38
37
36
35
34
33
-124
-123
-122
-121
-120
-119
-118
-117
-116
-115
175
150
200
225

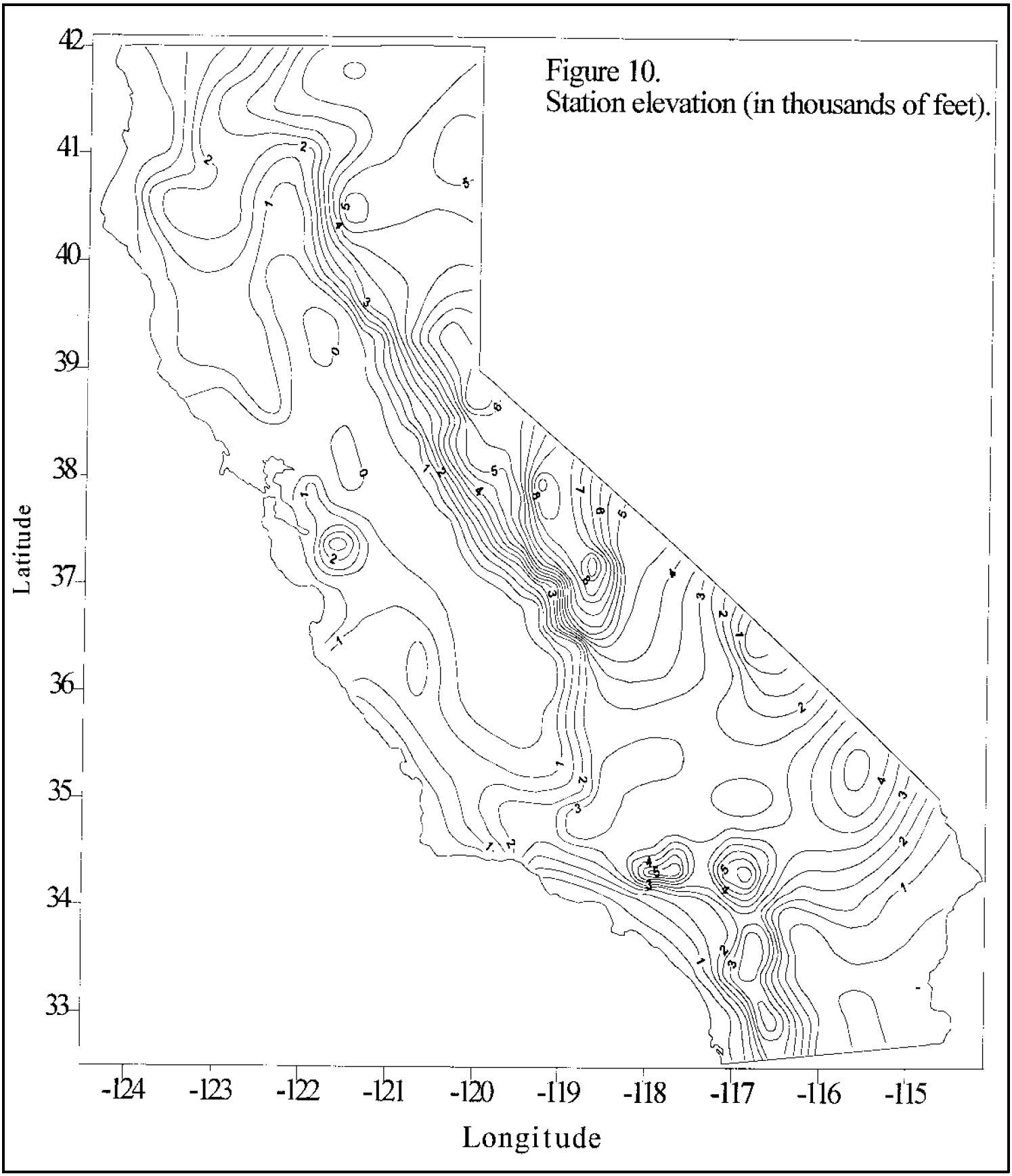

Figure 10.
Station elevation (in thousands of feet).