

California Cooperative
Snow Surveys
Bulletin 120-94-4

State of California
The Resources Agency

Department of
Water Resources

Water Conditions in California

Report 4 May 1, 1994



Douglas P. Wheeler
Secretary for Resources
The Resources Agency

Pete Wilson
Governor
State of California

David N. Kennedy
Director
Department of Water Resources

STATE OF CALIFORNIA

Pete Wilson, Governor

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COOPERATING AGENCIES

Public Agencies

- Buena Vista Water Storage District
- Central California Irrigation District
- East Bay Municipal Utility District
- Friant Water Users Association
- Kaweah Delta Water Conservation District
- Kern Delta Water District
- Kings River Conservation District
- Lower Tule River Irrigation District
- Merced Irrigation District
- Modesto Irrigation District
- Nevada Irrigation District
- North Kern Water Storage District
- Northern California Power Agency
- Oakdale Irrigation District
- Omochumne-Hartnell Water District
- Oroville-Wyandotte Irrigation District
- Placer County Water Agency
- Sacramento Municipal Utility District
- San Bernardino County Flood Control District
- South San Joaquin Irrigation District
- Tri-Dam Project
- Tulare Lake Basin Water Storage District
- Turlock Irrigation District
- Yuba County Water Agency
- West Basin Municipal Water District

Private Organizations

- J.G. Boswell Company
- Kaweah River Association
- Kings River Water Association
- St. Johns River Association
- Tule River Association
- U.S. Tungsten Corporation
- State Water Contractors

Public Utilities

- Pacific Gas and Electric Company
- Southern California Edison Company
- Sierra Pacific Power Company

Municipalities

- City of Bakersfield
Water Department
- City of Los Angeles
Department of Water and Power
- City and County of San Francisco
Hetch Hetchy Water and Power

State Agencies

- California Department of Forestry
& Fire Protection
- California Department of Water Resources

Federal Agencies

- U.S. Department of Agriculture
Forest Service(14 National Forests)
Pacific Southwest Forest and Range
Experiment Station
Soil Conservation Service
- U.S. Department of Commerce
National Weather Service
- U.S. Department of Interior
Bureau of Reclamation
Geological Survey, Water Resources
Division
National Park Service(3 National Parks)
- U.S. Department of Army
Corps of Engineers

Other Cooperative Programs

- Nevada Cooperative Snow Surveys
- Oregon Cooperative Snow Surveys

SUMMARY OF WATER CONDITIONS

MAY 1, 1994

April produced some showers but amounts were less than normal for the month in most places. Consequently, runoff forecasts have been lowered slightly from the already low values of last month. Carryover reservoir storage will soften the impact of low runoff this year, but concern about next year has placed California in a "drought watch".

Forecasts of April through July runoff amounts are about 45 percent of average, down slightly from last month, and amounts are lower in the north. Southern Sierra forecasts changed little from one month ago. Last year, at this time, snowmelt runoff was forecasted to be 135 percent of average.

Snowpack water content was about 1/3 of average for May 1. Most lower elevation snow courses were bare, but a significant portion of the April 1 higher elevation snowpack remains. One year ago, the snowpack stood at 160 percent of average.

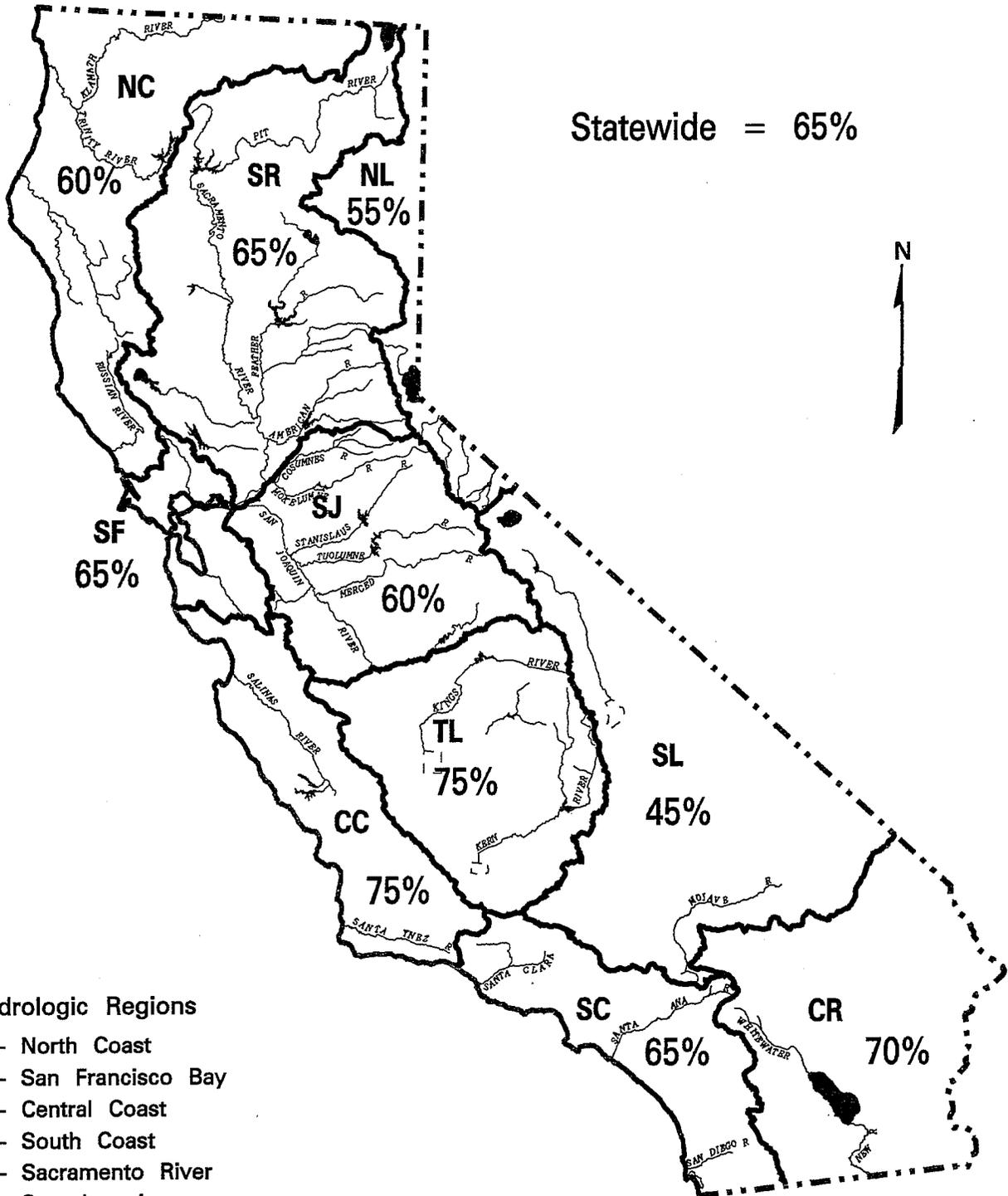
Precipitation during April improved some over the extremely dry March but remained less than normal at 75 percent of average for the month. Seasonal precipitation statewide is about 65 percent of average compared to 145 percent last year on May 1.

Runoff in April was 45 percent of average, ranging from about 65 percent in the southern Sierra group to around 5 percent on the Central Coast. Runoff so far since October 1 is 40 percent of average. One year ago seasonal runoff was 115 percent of average.

Reservoir storage gained slightly during April, but at much less than average accumulation. May 1 total in-state storage was about 24.6 million acre-feet, 90 percent of average; last year storage was nearly 27 million acre-feet and gaining.

SUMMARY OF WATER CONDITIONS						
IN PERCENT OF AVERAGE						
HYDROGRAPHIC AREA	PRECIPITATION OCTOBER 1 TO DATE	MAY 1 SNOW WATER CONTENT	MAY 1 RESERVOIR STORAGE	RUNOFF OCTOBER 1 TO DATE	APR-JULY RUNOFF FORECAST	WATER YEAR RUNOFF FORECAST
NORTH COAST	60	30	95	35	45	40
SAN FRANCISCO BAY	65	--	100	25	--	--
CENTRAL COAST	75	--	75	20	--	--
SOUTH COAST	65	--	120	65	--	--
SACRAMENTO BASIN	65	20	85	40	45	45
SAN JOAQUIN BASIN	60	35	95	40	45	40
TULARE LAKE BASIN	75	35	105	55	50	50
NORTH LAHONTAN	55	25	30	50	35	40
SOUTH LAHONTAN	45	50	95	60	55	55
COLORADO DESERT	70	--	--	--	--	--
STATEWIDE	65	30	90	40	45	45

SEASONAL PRECIPITATION
 IN PERCENT OF AVERAGE TO DATE
 OCTOBER 1, 1993 THROUGH APRIL 30, 1994

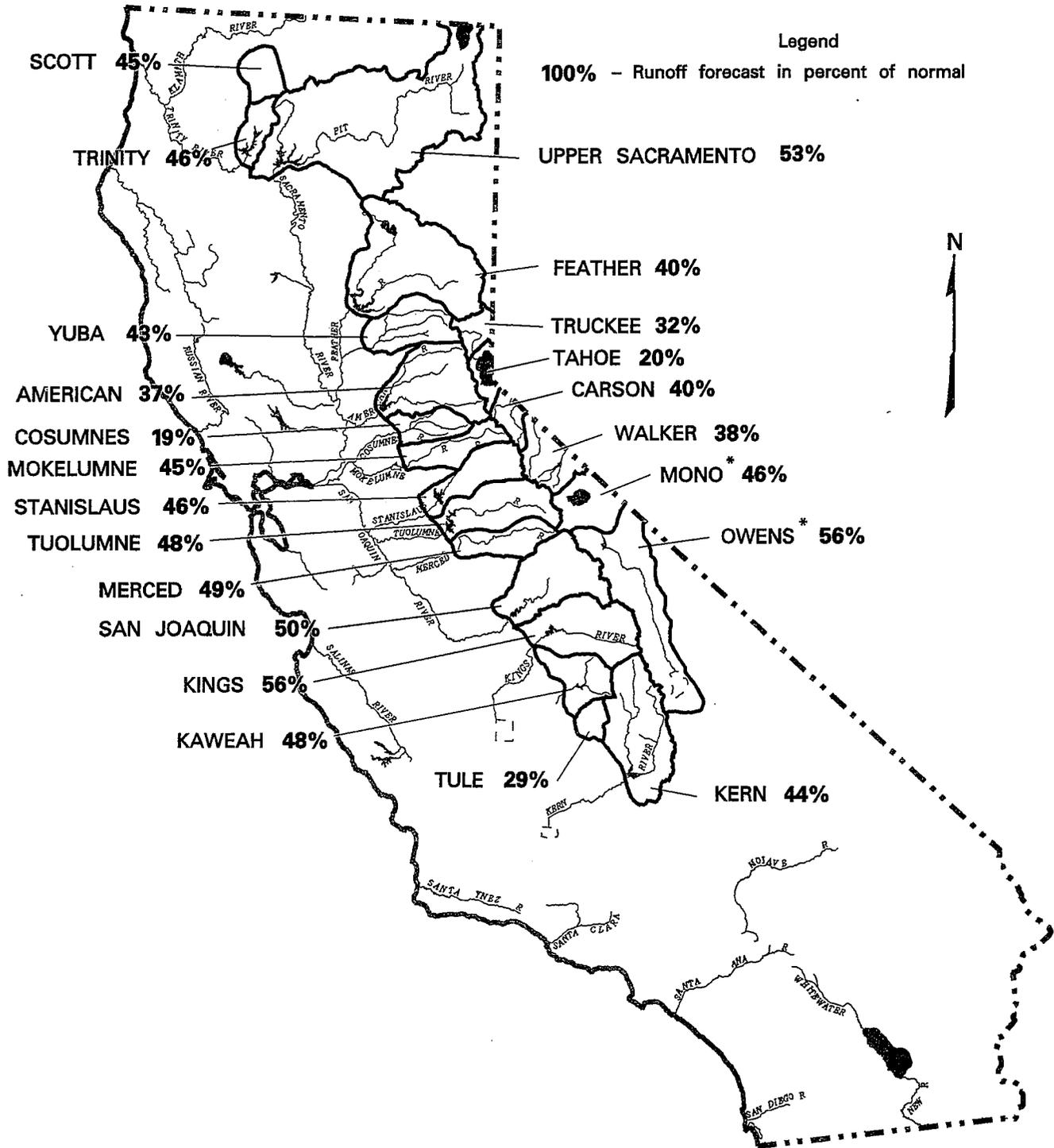


Hydrologic Regions

- NC - North Coast
- SF - San Francisco Bay
- CC - Central Coast
- SC - South Coast
- SR - Sacramento River
- SJ - San Joaquin
- TL - Tulare Lake
- NL - North Lahontan
- SL - South Lahontan
- CR - Colorado River

WATER YEAR IS OCTOBER 1 THROUGH SEPTEMBER 30

**FORECAST OF APRIL - JULY
UNIMPAIRED SNOWMELT RUNOFF
MAY 1, 1994**



* FORECAST BY DEPARTMENT OF WATER AND POWER, CITY OF LOS ANGELES

**FORECASTS OF APRIL-JULY UNIMPAIRED RUNOFF
FOR CENTRAL VALLEY STREAMS
MAY 1, 1994**

DRAINAGE BASIN AND WATERSHED	April through July Unimpaired Runoff in 1,000 Acre-Feet					
	HISTORICAL			FORECASTS		
	50 Year Average	Maximum of Record	Minimum of Record	April-July Forecast	Percent of Average	80% Prob. Range
SACRAMENTO RIVER BASIN						
Upper Sacramento River						
Sacramento River at Shasta Lake	297	702	39	120	40	
McCloud River at Shasta Lake	411	850	185	210	51	
Pit River at Shasta Lake	1,062	1,796	480	600	56	
Total inflow to Shasta Lake	1,824	3,189	726	960	53	830-1,260
Sacramento River above Bend Bridge, near Red Bluff	2,491	4,674	943	1,250	50	1,100-1,650
Feather River						
Feather River at Lake Almanor near Pratville	333	675	120	160	48	
North Fork at Pulga	1,028	2,416	243	440	43	
Middle Fork near Clio (1)	86	518	4	10	12	
South Fork at Ponderosa Dam	110	267	13	40	36	
Total inflow to Oroville Reservoir	1,857	4,676	392	750	40	630-1,050
Yuba River						
North Yuba below Goodyears Bar	286	647	51	120	42	
Inflow to Jackson Mdws and Bowman Reservoirs	112	236	25	50	45	
South Yuba at Langs Crossing	233	481	57	100	43	
Yuba River at Smartville	1,047	2,424	200	450	43	360-590
American River						
North Fork at North Fork Dam	262	716	43	80	31	
Middle Fork near Auburn	522	1,406	100	200	38	
Silver Creek below Camino Diversion Dam	173	386	37	60	35	
Total inflow to Folsom Reservoir	1,284	3,074	229	470	37	370-620
<i>Sacramento River at Sacramento</i>						
SAN JOAQUIN RIVER BASIN						
Cosumnes River at Michigan Bar	129	363	8	25	19	16-45
Mokelumne River						
North Fork near West Point (2)	437	829	104	200	46	
Total inflow to Pardee Reservoir	465	1,065	102	210	45	170-270
Stanislaus River						
Middle Fork below Beardsley Dam	334	702	64	160	48	
North Fork inflow to McKay's Point Dam	224	503	34	100	45	
Total inflow to Melones Reservoir	713	1,710	116	330	46	260-420
Tuolumne River						
Cherry Creek and Eleanor Creek near Hetch Hetchy	322	727	97	160	50	
Tuolumne River near Hetch Hetchy	606	1,392	153	300	50	
Total inflow to Don Pedro Reservoir	1,200	2,682	301	580	48	480-710
Merced River						
Merced River at Pohono Bridge	362	888	80	190	52	
Total inflow to Exchequer Reservoir	617	1,587	123	300	49	250-370
San Joaquin River						
San Joaquin River at Mammoth Pool (3)	1,014	2,279	235	540	53	
Big Creek below Huntington Lake (3)	95	264	11	45	47	
South Fork near Florence Lake (3)	202	511	58	110	54	
Total inflow to Millerton Lake	1,228	3,355	262	620	50	520-740
<i>San Joaquin River near Vernalis</i>						
TULARE LAKE BASIN						
Kings River						
North Fork Kings River near Cliff Camp	239	565	50	120	50	
Total inflow to Pine Flat Reservoir	1,203	3,114	273	670	56	570-770
Kaweah River at Terminus Reservoir	284	814	61	135	48	110-160
Tule River at Success Reservoir	63	256	2	18	29	11-30
Kern River						
Kern River near Kernville	373	1,203	83	180	48	
Total inflow to Isabella Reservoir	461	1,657	84	205	44	175-250

All 50-year averages are based on data for water years 1941-1990 except:

(1) 44-year average based on years 1936-79.
(2) 36-year average based on years 1936-71.

(3) 45-year average based on years 1936-80.

See inside back cover for definition of unimpaired runoff and 80 percent probability ranges.

**FORECASTS OF WATER YEAR UNIMPAIRED RUNOFF
FOR CENTRAL VALLEY STREAMS
MAY 1, 1994**

Water Year October through September Unimpaired Runoff in 1,000's Acre-Feet												
HISTORICAL			* * * * * DISTRIBUTION								FORECASTS	
50 Year Average	Maximum of Record	Minimum of Record	October through January	February	March	April	May	June	July	August and September	Water Year Forecast	Percent of Average
856	1,964	165										
1,244	2,353	577										
3,145	5,150	1,484										
5,987	10,796	2,479	1,070	390	380	270	290	220	180	340	3,140	52
8,664	17,180	3,294	1,470	650	540	380	360	280	230	400	(2,990-3,600) 4,310 (4,120-4,800)	50
780	1,269	366										
2,417	4,400	666										
219	637	24										
291	562	32										
4,617	9,492	994	490	230	330	270	250	140	90	130	1,930 (1,790-2,280)	42
564	1,056	102										
181	292	30										
379	565	98										
2,390	4,926	369	170	105	175	185	190	60	15	20	920 (760-1,060)	38
616	1,234	66										
1,070	2,575	144										
318	705	59										
2,736	6,381	349	120	95	160	190	210	60	10	5	850 (750-1,020)	31
385	1,253	20	10	15	15	11	9	4	1	0	65 (55-85)	17
626	1,009	197										
748	1,800	129	22	17	44	77	105	25	3	2	295 (250-355)	39
471	929	88										
1,150	2,952	155	50	30	60	105	165	50	10	5	475 (400-570)	41
461	1,147	123										
770	1,661	258										
1,882	4,430	383	70	50	110	195	265	100	20	10	820 (715-950)	44
461	1,020	92										
966	2,859	150	30	25	40	85	145	60	10	5	400 (345-470)	41
1,337	2,964	308										
112	298	14										
248	653	71										
1,776	4,642	362	85	40	75	150	270	150	50	30	850 (745-975)	48
284	607	58										
1,669	4,294	383	75	40	75	170	300	150	50	25	885 (780-990)	53
444	1,402	92	20	15	25	35	65	30	5	5	200 (170-225)	45
145	615	16	8	7	10	8	7	2	1	1	44 (36-56)	30
558	1,577	163										
716	2,309	175	65	25	40	45	80	60	20	20	355 (320-405)	50

85%
RUNOFF

* Unimpaired runoff to date

FORECASTS OF APRIL-JULY UNIMPAIRED RUNOFF FOR SELECTED CALIFORNIA

STREAMS

MAY 1, 1994

DRAINAGE BASIN AND WATERSHED	April through July Unimpaired Runoff in 1,000 Acre-Feet				
	HISTORICAL			FORECASTS	
	50 Year Average	Maximum of Record	Minimum of Record	April-July Forecast	Percent of Average
NORTH COAST AREA					
Trinity River at Lewiston	653	1,593	80	290	44
Scott River at Ft. Jones	200	*	*	90	45
Upper Klamath Lake(1)(2)(5)	336	*	*	165	49
LAHONTAN AREA					
Truckee River, Lake Tahoe to Farad accretion	268	713	58	85	32
Lake Tahoe Rise in feet (assuming gates closed)	1.5	3.75	0.23	0.3	20
East Carson River near Gardnerville	186	407	43	75	40
West Carson River at Woodfords	54	131	12	22	41
East Walker River near Bridgeport	63	209	7	15	24
West Walker River near Coleville	148	330	35	65	44
Owens River(3)	233	579	96	131	56

(1)Forecast period of May-September

(2)Forecast by U.S. Soil Conservation Service, Portland, Or.

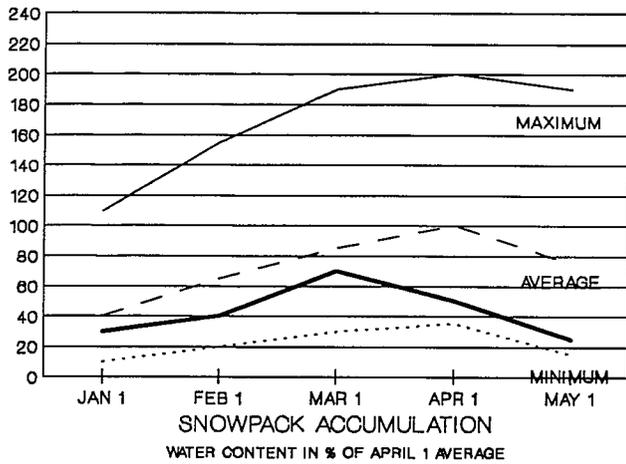
(3)Forecast by Dept. of Water and Power, City of Los Angeles

(4)Inside back cover for definition of unimpaired runoff.

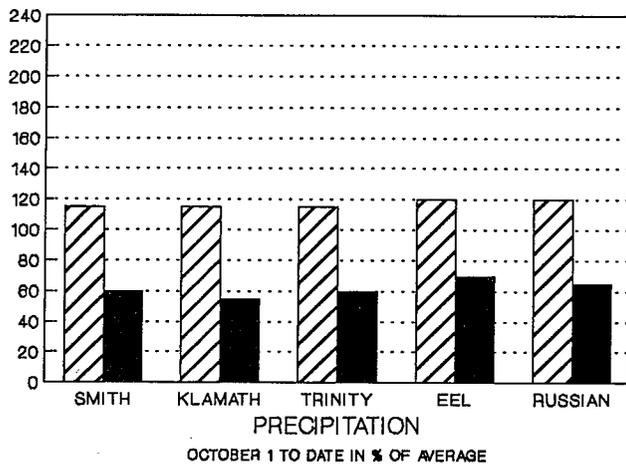
(5)Average period of 30 years

NORTH COAST AREA

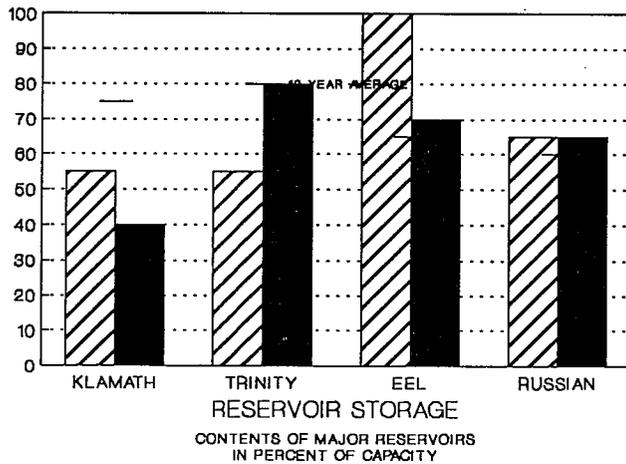
SNOWPACK - First of the month measurements made at 10 snow courses indicate an area wide snow water equivalent of 8.8 inches. This is 23 percent of the seasonal (April 1) average and about 30 percent of the May 1 average. Last year at this time the pack was holding 32.2 inches of water.



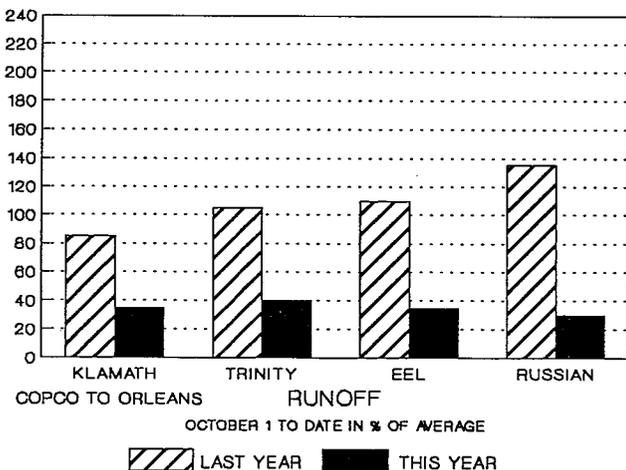
PRECIPITATION - Seasonal precipitation (October 1 through the end of April) on this area was 60 percent of normal. Precipitation last month was about 80 percent of the monthly average. Seasonal precipitation at this time last year stood at 120 percent of normal.



RESERVOIR STORAGE - First of the month storage in 7 reservoirs was 2.4 million acre-feet which is 95 percent of average. About 75 percent of available capacity was being used. Storage in these reservoirs at this time last year was 74 percent of average.

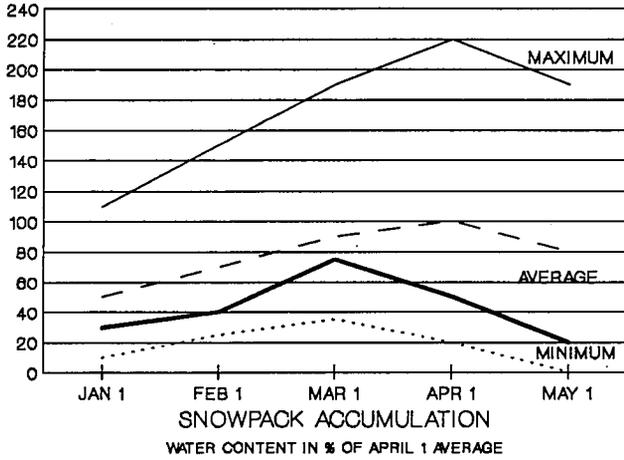


RUNOFF - Seasonal runoff of streams draining the area totaled 4.0 million acre-feet which is 36 percent of average for this period. Last year, runoff for the same period was 105 percent of average.

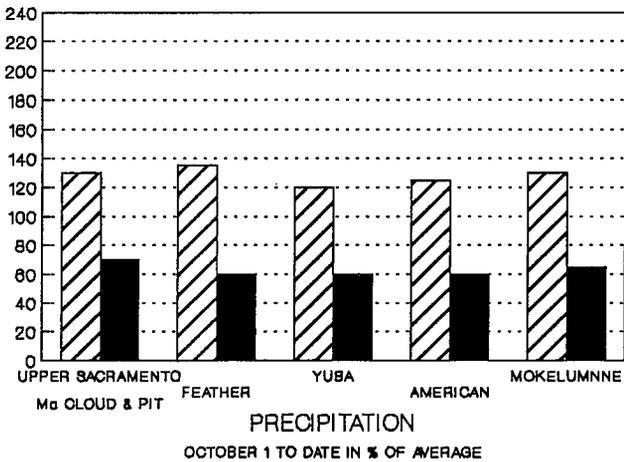


SACRAMENTO BASIN

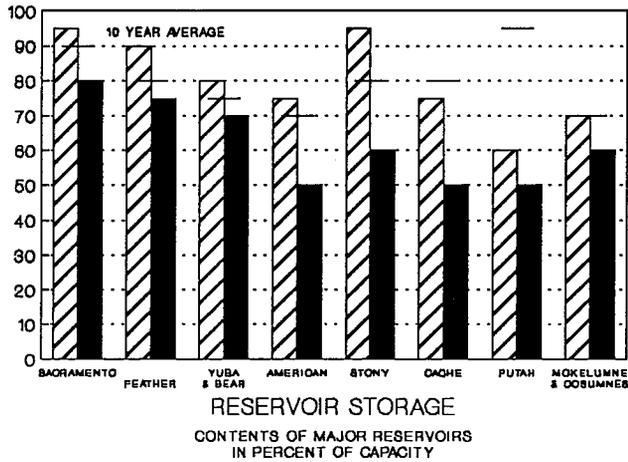
SNOWPACK - First of the month measurements made at 67 snow courses indicate a basin-wide snow water equivalent of 7.6 inches. This is 22 percent of the average for this date and 17 percent of the seasonal average. Last year at this time, the snow pack was holding 32.2 inches of water.



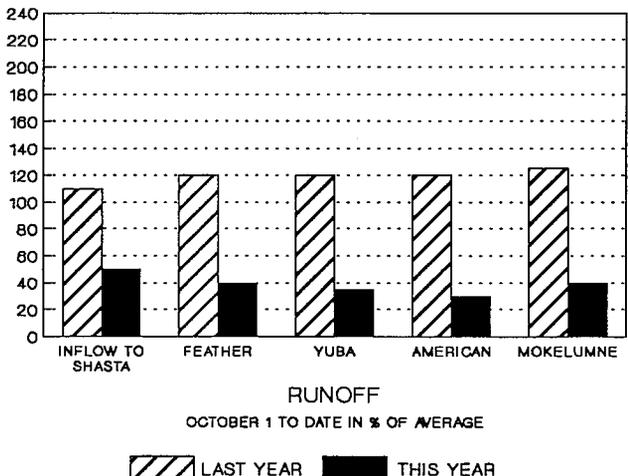
PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on the Sacramento Basin was 65 percent of normal. Precipitation last month was about 70 percent of the monthly average. Seasonal precipitation at this time last year stood at 130 percent of average.



RESERVOIR STORAGE - First of the month storage in 43 reservoirs was 11 million acre-feet which is 85 percent of average. About 70 percent of available capacity was being used. Storage in these reservoirs was about 102 percent of average at this time last year.



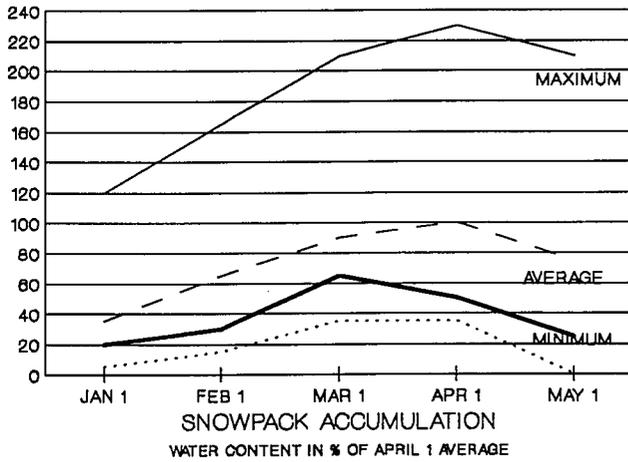
RUNOFF - Seasonal runoff from streams draining into the basin totaled 5.5 million acre-feet which is 41 percent of average for this period. Last year runoff for the same period was 115 percent of average.



The Sacramento River Index for the year is forecast at 8.0 MAF assuming median meteorological conditions for the remainder of the year. This classifies the year as "critically dry" in the Sacramento-San Joaquin Delta according to the State Water Resources Control Board's Decision 1485. The SRI at this time last year was forecasted to be 21.9 MAF.

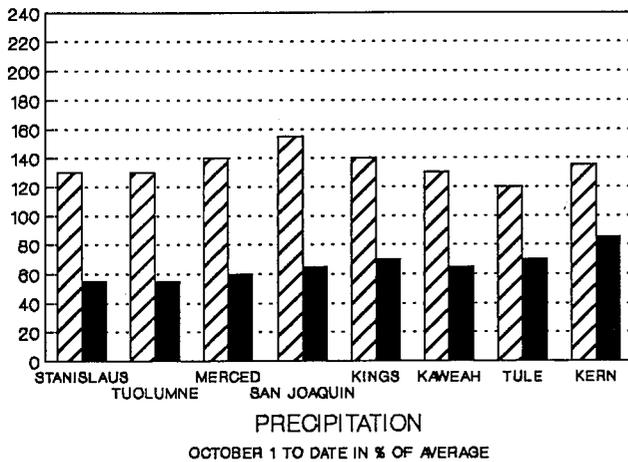
The median water year inflow forecast to Shasta Reservoir is 3.14 MAF, classifying this year as a critical year under the Shasta Lake inflow criteria.

SAN JOAQUIN AND TULARE LAKE BASINS



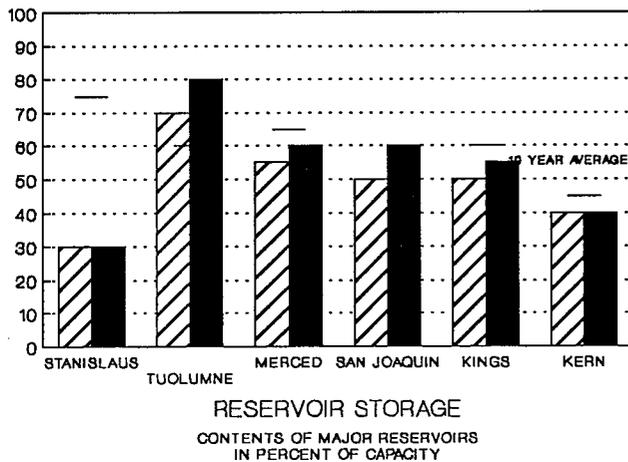
SNOWPACK - First of the month measurements made at 54 San Joaquin Basin snow courses indicate a basin wide snow water equivalent of 9.2 inches which is 25 percent of the seasonal (April 1) average and 33 percent of the average for May 1. Last year at this time, the pack was holding 46.0 inches of water.

At the same time, 38 Tulare Lake Basin snow courses indicated a basin-wide snow water equivalent of 7.3 inches which is 28 percent of the seasonal (April 1) average and 37 percent of the May 1 average. Last year at this time, the Basin was holding 33.5 inches of water.



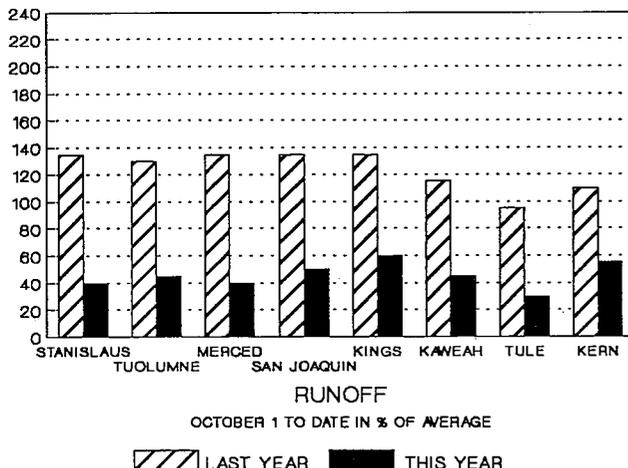
PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on the San Joaquin Basin was 60 percent of normal. Precipitation last month was 100 percent of the monthly average. Seasonal precipitation at this time last year stood at 140 percent of normal.

Seasonal precipitation on the Tulare Lake Basin was 75 percent of normal. Precipitation last month was 100 percent of the monthly average. Seasonal precipitation at this time last year stood at 135 percent of normal.



RESERVOIR STORAGE - First of the month storage in 33 San Joaquin Basin reservoirs was 7.0 million acre-feet which is 95 percent of average. About 60 percent of available capacity was being used. Storage in these reservoirs at this time last year was 90 percent of average.

First of the month storage in 6 Tulare Lake Basin reservoirs was 1.0 million acre-feet which is 105 percent of average. About 50 percent of available capacity was being used. Storage in these reservoirs at this time last year was 105 percent of average.



RUNOFF - Seasonal runoff of streams draining into the San Joaquin Basin totaled 1.4 million acre-feet which is 41 percent of average for this period. Last year, runoff for this same period was 130 percent of average.

Seasonal runoff of streams draining into the Tulare Lake Basin totaled 660 thousand acre-feet which is 53 percent of average for this period. Last year, runoff for this same period was 120 percent of average.

▨ LAST YEAR ■ THIS YEAR

NORTH AND SOUTH LAHONTAN AREA

SNOWPACK - First of the month measurements made at 11 North Lahontan snow courses indicate an area wide snow water equivalent of 7.9 inches which is 21 percent of the seasonal (April 1) average and 27 percent of the May 1 average. Last year at this time, the pack was holding 41.7 inches of water.

At the same time, 5 South Lahontan courses indicated an area-wide snow water equivalent of 8.1 inches which is 39 percent of the seasonal (April 1) average and 52 percent for this date. Last year at this time, the pack was holding 29.5 inches of water.

PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) over the North Lahontan area averaged 55 percent of normal. Precipitation last month was 50 percent of the monthly average. Seasonal precipitation at this time last year stood at 145 percent of normal.

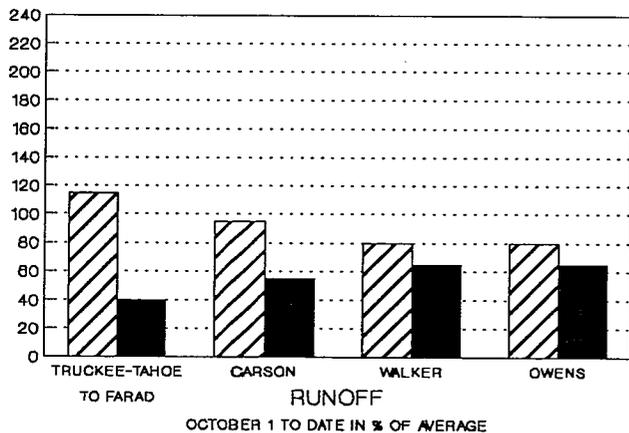
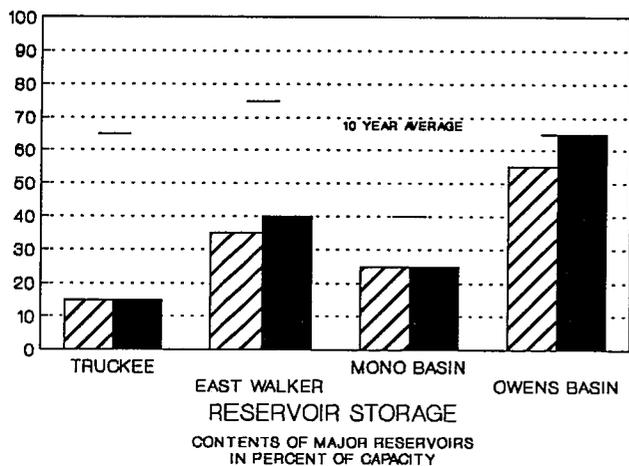
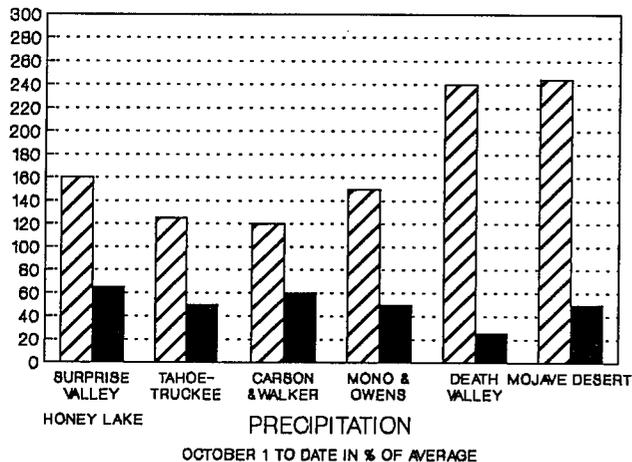
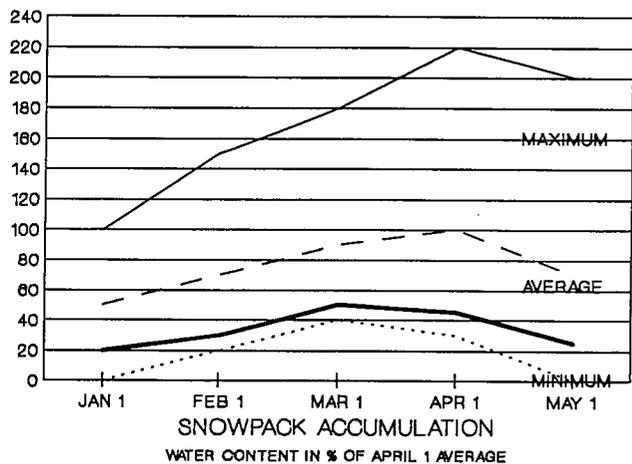
Seasonal precipitation over the South Lahontan area was about 45 percent of normal. Seasonal precipitation at this time last year stood at 160 percent of normal.

RESERVOIR STORAGE - First of the month storage in 5 North Lahontan reservoirs was 191 thousand acre-feet which is 30 percent of average. About 20 percent of available capacity was being used. Storage in these reservoirs at this time last year was 27 percent of average. Lake Tahoe was .5 foot below its natural rim.

First of the month storage in 8 South Lahontan reservoirs was 257 thousand acre-feet which is 95 percent of average. About 65 percent of available capacity was being used. Storage in these reservoirs at this time last year was 85 percent of average.

RUNOFF - Seasonal runoff of streams draining the North Lahontan area totaled 215 thousand acre-feet which is 51 percent of average for this period. Last year, runoff for this same period was 100 percent of average.

Seasonal runoff of the Owens River above Long Valley totaled 50 thousand acre-feet which is 65 percent of average for this period. Last year, runoff for this same period was 80 percent of average.

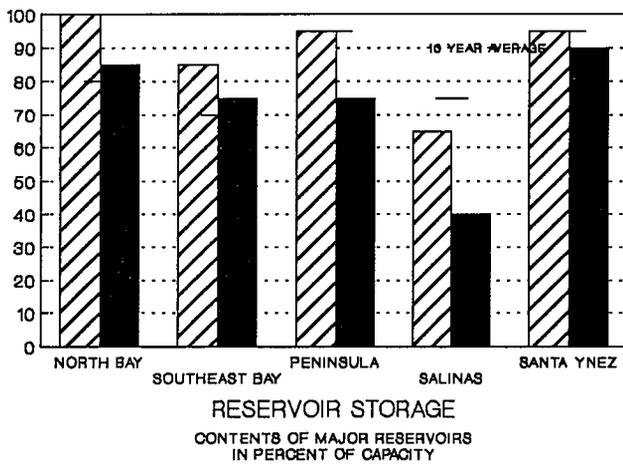
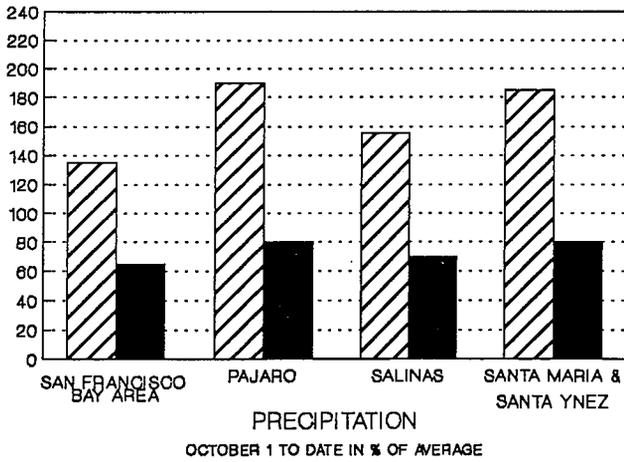


▨ LAST YEAR ■ THIS YEAR

SAN FRANCISCO AND CENTRAL COAST AREAS

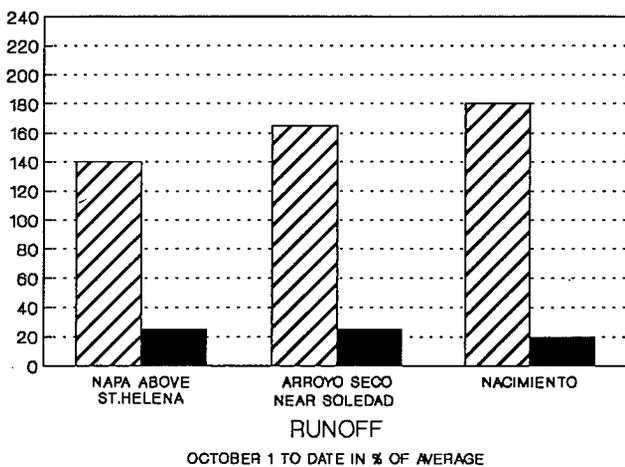
PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on the San Francisco Bay area was 65 percent of normal. Precipitation last month was 80 percent of the monthly average. Seasonal precipitation at this time last year stood at 135 percent of normal.

Seasonal precipitation on the Central Coast area averaged 75 percent of normal. Precipitation last month was 65 percent of the monthly average. Seasonal precipitation at this time last year stood at 175 percent of normal.



RESERVOIR STORAGE - First of the month storage in 18 major Bay area reservoirs was 522 thousand acre-feet which is 100 percent of average. About 75 percent of available capacity was being used. Storage in these reservoirs at this time last year was 120 percent of average.

First of the month storage in 6 major Central Coast reservoirs was 507 thousand acre-feet which is 75 percent of average. About 55 percent of available capacity was being used. Storage in these reservoirs at this time last year was 95 percent of average.



RUNOFF - Seasonal runoff of the Napa River in the San Francisco Bay area totaled 16 thousand acre-feet which is 23 percent of average for this period. Last year, runoff for this same period was 140 percent of average.

Seasonal runoff of selected Central Coast streams totaled 65 thousand acre-feet which is 21 percent of average for this period. Last year, runoff for this same period was 65 percent of average.

▨ LAST YEAR ■ THIS YEAR

SOUTH COAST AND COLORADO RIVER AREAS

PRECIPITATION - Seasonal precipitation (October through the end of last month) on the South Coast was 65 percent of normal. April precipitation was 75% of average. Seasonal precipitation at this time last year was 195 percent of normal.

Seasonal precipitation in the Colorado Desert area was 70 percent of normal, with April precipitation at 10% of average. Seasonal precipitation at this time last year was 325 percent of the average.

RUNOFF - Seasonal runoff from selected South Coast streams totaled 36 thousand acre-feet which is 65 percent of average. Last year, runoff for the same period was 355 percent of average.

The April through July inflow to Lake Powell is forecasted to be 5.7 million acre-feet which will be 74 percent of normal.

RESERVOIR STORAGE - March 31 storage in 29 major South Coast area reservoirs was 1.6 million acre-feet or 120 percent of average. About 80 percent of available capacity was being used. Storage in these reservoirs at this time last year was 140 percent of average.

First of the month combined storage in Lakes Powell, Mead, Mohave and Havasu was about 40.8 million acre-feet which is 110 percent of average. About 75 percent of available capacity was being used. One year ago, these reservoirs were storing 105 percent of average.

UPPER COLORADO RIVER BASIN - The first of the month snowpack, according to the U.S. Soil Conservation Service reports was 85 percent of average and ranges from 65 percent in the Upper Green drainage to 95 percent in the Upper Colorado Mainstem.

CENTRAL VALLEY PROJECT

Based on May 1 conditions, Bureau of Reclamation water year forecasts for runoff into CVP reservoirs are: Trinity--50% of average, Shasta--59% of average, American--34% of average, Stanislaus--40% of average, San Joaquin above Friant--49% of average. As of April 30, 1994 CVP storage was 7.7 MAF which is a decrease of 0.5 MAF compared to one year ago, and is approximately 89% of normal for that date. With the extremely low runoff amounts predicted for this year, CVP storage will be reduced to about 4 MAF by September 30, 1994.

The Bureau of Reclamation announced updated water allocations for the CVP on March 14, 1994. Agricultural contractors north and south of the Delta received 35% of their contract supply, urban contractors received 75% of historical use. Wildlife refuges received 75% of level II supplies. Sacramento River water rights settlement contractors and San Joaquin Exchange contractors allocations were increased to 100% supplies. Water rights settlement contractors may be subject to a reduction in their water allocations pending final resolution of the forecasted water year Shasta inflow. Reclamation will update its water allocation in an announcement on May 9, 1994.

Friant Division allocations were unchanged at 60% Class I and zero Class II supplies. Stanislaus River contractors were not allocated any water because of the continuing shortage in New Melones water supply.

STATE WATER PROJECT

As of May 1, State Water Project (SWP) conservation storage (Lake Oroville plus the State share of San Luis Reservoir) held 3.55 million acre-feet of water. This is approximately 790 thousand acre-feet less than at the same time last year. The dry conditions have not allowed any change from the previously approved allocation of 50 percent water supply to State Water Contractors.

MAJOR WATER DISTRIBUTION PROJECTS

RESERVOIR STORAGE

(AVERAGES BASED ON PERIOD RECORD)

RESERVOIR	CAPACITY 1,000 AF	AVERAGE STORAGE 1,000 AF	STORAGE AS OF APRIL 30		PERCENT AVERAGE
			1993 1,000 AF	1994 1,000 AF	
<u>STATE WATER PROJECT</u>					
Oroville	3,540	2,961	3,274	2,636	89
San Luis SWP	1,060	975	1,042	933	96
Lake Del Valle	77	39	41	34	87
Silverwood	73	67	72	72	108
Pyramid Lake	171	164	164	160	98
Castaic Lake	324	282	302	278	99
Perris Reservoir	132	115	124	115	100
<u>CENTRAL VALLEY PROJECT</u>					
Clair Engle Lake	2,450	2,080	1,393	1,980	95
Shasta Lake	4,552	4,096	4,263	3,534	86
Whiskeytown	241	231	234	239	103
Folsom	975	739	861	446	60
New Melones	2,420	1,549	582	692	45
Millerton Lake	521	316	365	377	119
San Luis CVP	980	850	899	859	101
<u>COLORADO RIVER PROJECT</u>					
Lake Mead	26,159	19,574	21,927	20,803	106
Lake Powell	25,002	15,098	14,160	17,720	117
Lake Mohave	1,810	1,634	1,547	1,712	105
Lake Havasu	619	579	595	569	98
<u>EAST BAY MUNICIPAL UTILITY DISTRICT</u>					
Pardee	210	180	191	183	102
Camanche	431	268	279	239	89
East Bay (4 reservoirs)	151	132	137	130	99
<u>CITY & COUNTY OF SAN FRANCISCO</u>					
Hetch Hetchy	360	151	104	236	156
Cherry Lake	268	135	142	255	189
Lake Eleanor	26	13	13	24	185
South Bay (4 reservoirs)	225	176	220	185	105
<u>CITY OF LOS ANGELES(DWP)</u>					
Crowley Lake(Long Valley)	183	127	121	123	96
Grant Lake	48	25	19	15	54
Other Aqueduct Storage(6 reservoirs)	95	75	41	69	92

DEPARTMENT OF WATER RESOURCES - CALIFORNIA DATA EXCHANGE CENTER
TELEMETERED SNOW WATER EQUIVALENTS - MAY 1, 1994

BASIN NAME STATION NAME	AGENCY	ELEV FEET	APR 1 AVG	TODAY	INCHES OF WATER EQUIVALENT		
					PERCENT OF APR 1	24 HRS AGO	1 WEEK AGO
TRINITY RIVER							
PETERSON FLAT	USBR	7150	----	1.9	----	2.6	3.4
RED ROCK MOUNTAIN	USBR	6700	39.6	14.4	36%	14.4	15.0
BONANZA KING	USBR	6450	40.5	----	----	----	----
SHIMMY LAKE	USBR	6200	40.3	17.1	42%	19.1	17.8
MIDDLE BOULDER #3	USBR	6200	28.3	1.3	5%	2.0	2.6
HIGHLAND LAKES	USBR	6030	29.9	.0r	0%	.0r	.0
SCOTTS MOUNTAIN	USBR	5900	----	.4	----	.6	.4
MUMBO BASIN	USBR	5700	22.4	----	----	----	----
BIG FLAT	USBR	5100	----	.0	----	.0	.0
SACRAMENTO RIVER							
CEDAR PASS	SCS	7100	18.1	4.3	24%	4.3	3.5
BLACKS MOUNTAIN	DWR	7100	----	1.4	----	1.6	1.4
SAND FLAT	USBR	6750	42.4	13.8	33%	14.4	14.4
MEDICINE LAKE	USBR	6700	----	7.8	----	8.3	8.1
ADIN MOUNTAIN	SCS	6350	13.6	.6	4%	.7	.5
SNOW MOUNTAIN	USBR	5950	27.0	1.0	4%	1.6	2.0
SLATE CREEK	USBR	5600	29.0	2.0	7%	2.0	2.0
STOUTS MEADOW	USBR	5400	36.0	3.2	9%	4.3	4.4
FEATHER RIVER							
KETTLEROCK	DWR	7300	25.5	.0	0%	.0	.0
GRIZZLY	DWR	6900	29.7	1.6	5%	1.8	2.5
PILOT PEAK	DWR	6800	52.6	.4	1%	.7	.6
GOLD LAKE	DWR	6750	36.5	18.0	49%	18.5	18.5
HUMBUG	DWR	6500	28.0	12.2	44%	12.1	12.0
RATTLESNAKE	DWR	6100	14.0	.0	0%	.0	.0
BUCKS LAKE	DWR	5750	44.7	21.8	49%	22.3	20.5
FOUR TREES	DWR	5150	20.0	1.2	6%	2.0	1.1
YUBA & AMERICAN RIV							
LAKE LOIS	DWR	8800	----	23.5	----	24.2	20.9
SCHNEIDERS	SMUD	8750	34.5	15.3	44%	15.3	14.2
CAPLES LAKE COURSE	USBR	7800	30.9	1.9	6%	2.3	2.0
ALPHA	SMUD	7600	35.9	2.1	6%	2.7	1.6
BETA	DWR	7600	----	7.0	----	7.2	5.7
FORNI RIDGE	USBR	7600	37.0	3.1	9%	3.1	2.0
SILVER LAKE	USBR	7100	22.7	.4	2%	.5	.0
CENT SIERRA SNOW LAB	USFS	6950	33.6	1.4	4%	1.4	1.4
HUYSINK	USBR	6600	42.6	13.2	31%	13.2	13.2
VAN VLECK	SMUD	6700	35.9	10.9	30%	11.3	9.4
ROBBS SADDLE	SMUD	5900	21.4	.0	0%	.4	.1
GREEK STORE	USBR	5600	21.0	.0	0%	.0	.0
BLUE CANYON	USBR	5280	9.0	.6	7%	.2	.0
ROBBS POWERHOUSE	SMUD	5150	5.2	.0	0%	.0	.0
MOKEL. & STANIS. RIV							
DEADMAN CREEK	USBR	9250	37.2	12.8	35%	12.8	11.2
HIGHLAND MEADOW	USBR	8800	47.9	9.0	19%	9.0	7.4
GIANELLI MEADOW	USBR	8350	55.5	19.9	36%	19.9	16.7
LOWER RELIEF VALLEY	DWR	8100	41.2	10.9	26%	10.9	9.6
BLUE LAKES	SCS	8000	33.1	16.6	50%	16.6	15.8
MUD LAKE	SMUD	7900	44.9	22.7	51%	23.0	21.4
STANISLAUS MEADOW	USBR	7750	47.5	15.0	32%	15.2	13.4
BLOODS CREEK	USBR	7200	35.5	8.5	24%	8.9	7.5
BLACK SPRINGS	USBR	6500	32.0	10.0e	31%	10.0e	7.4
TUOLUMNE & MERCED R.							
DANA MEADOWS	DWR	9800	27.7	10.3	37%	10.3	10.4
SLIDE CANYON	DWR	9200	----	20.3	----	20.3	19.0
SNOW FLAT	DWR	8700	44.1	14.4	33%	13.1	12.4
TUOLUMNE MEADOWS	DWR	8600	22.6	1.3	6%	1.3	1.3
HORSE MEADOW	DWR	8400	48.6	18.9	39%	18.9	17.7
OSTRANDER LAKE	DWR	8200	34.8	6.2	18%	6.2	4.9
PARADISE	DWR	7650	----	9.8	----	10.5	9.8
GIN FLAT	DWR	7050	34.2	7.7	22%	8.3	6.7
LOWER KIBBIE	DWR	6600	27.4	2.8	10%	4.1	2.2
SAN JOAQUIN RIVER							
VOLCANIC KNOB	USBR	10100	30.1	14.4	48%	13.7	12.4
AGNEW PASS	USBR	9450	32.3	13.4	42%	14.1	14.1
KAISER POINT	USBR	9200	37.8	----	----	----	1.8
GREEN MOUNTAIN	USBR	7900	30.8	2.2	7%	2.4	.6

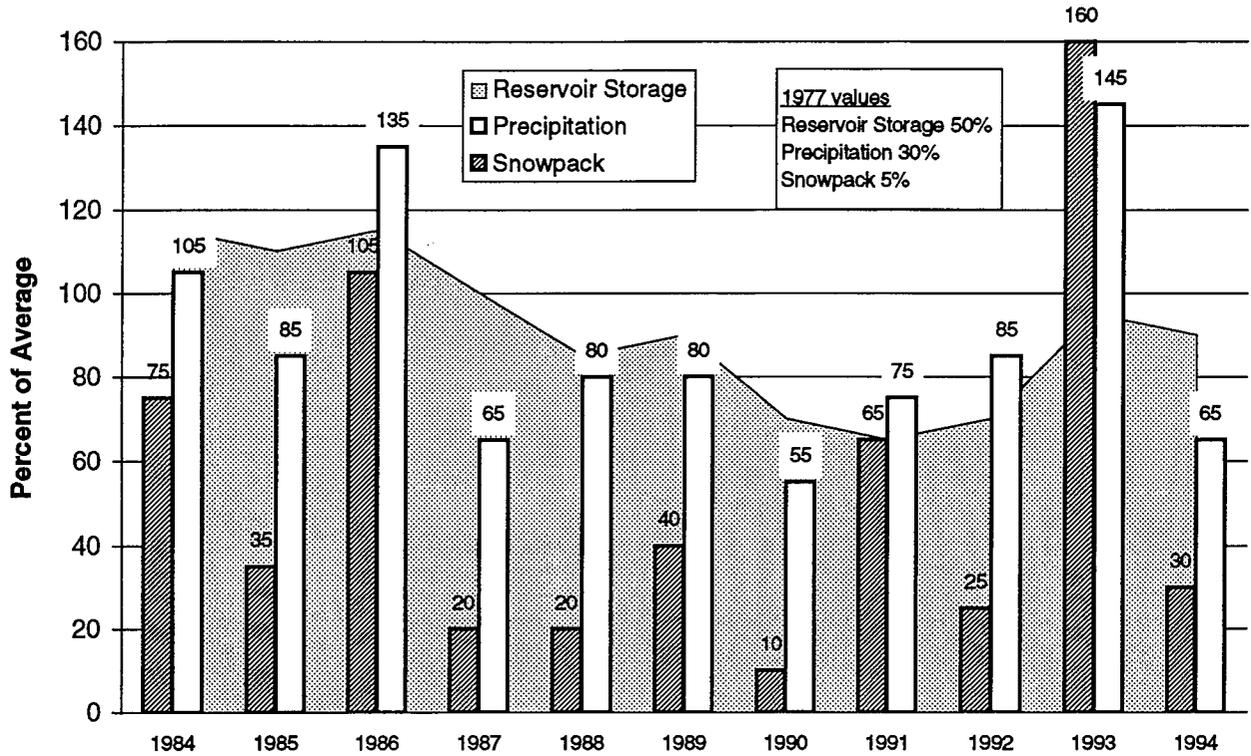
DEPARTMENT OF WATER RESOURCES - CALIFORNIA DATA EXCHANGE CENTER
TELEMETERED SNOW WATER EQUIVALENTS - MAY 1, 1994

BASIN NAME STATION NAME	AGENCY	ELEV FEET	APR 1 AVG	TODAY	INCHES OF WATER EQUIVALENT		
					PERCENT OF APR 1	24 HRS AGO	1 WEEK AGO
TAMARACK SUMMIT	USBR	7600	30.5	3.4	11%	3.4	1.8
CHILKOOT MEADOW	USBR	7150	38.0	6.1	16%	6.1	2.6
HUNTINGTON LAKE	USBR	7000	20.1	1.0	5%	1.0	.0
GRAVEYARD MEADOW	USBR	6900	18.8	2.4	13%	2.4	.0
POISON RIDGE	USBR	6900	28.9	3.9	14%	3.9	.4
KINGS RIVER							
BISHOP PASS	DWR	11200	----	15.1	----	16.3	13.1
CHARLOTTE LAKE	DWR	10400	----	12.2	----	12.2	11.1
STATE LAKES	USCE	10400	29.0	14.7	51%	11.9	11.9
MITCHELL MEADOW	USCE	10375	32.9	19.8	60%	19.8	18.2
BLACKCAP BASIN	USBR	10300	34.3	28.1	82%	28.1	27.4
UPPER BURNT CORRAL	DWR	9700	34.6	22.2	64%	21.6	20.3
WEST WOODCHUCK MDW	USCE	9100	32.8	4.3	13%	4.3	1.9
BIG MEADOWS	DWR	7600	25.9	2.9	11%	3.3	2.3
KAWEAH & TULE RIVERS							
QUAKING ASPEN	DWR	7200	21.0	2.6	13%	3.1	1.4
GIANT FOREST	USCE	6400	10.0	3.3	33%	3.4	1.4
KERN RIVER							
UPPER TYNDALL CREEK	USCE	11500	27.7	12.7	46%	12.7	11.9
CRABTREE	DWR	10700	19.8	5.0	25%	5.2	4.4
CHAGOOPA PLATEAU	DWR	10300	21.8	9.1	42%	9.1	8.5
PASCOES	USCE	9150	24.9	10.5	42%	10.5	7.7
TUNNEL	DWR	8950	15.6	1.0	6%	1.0	.8
WET MEADOW	USCE	8900	30.3	1.5	5%	1.5	.4
CASA VIEJA MDW	DWR	8400	20.9	.0	0%	.6	.0
BEACH MEADOW	DWR	7650	11.0	.6	6%	1.0	.6
SURPRISE VALLEY AREA							
DISMAL SWAMP	SCS	7050	29.2	7.2	25%	7.6	7.1
TRUCKEE RIVER							
MOUNT ROSE SKI AREA	SCS	8850	38.5	----	----	----	14.2
INDEPENDENCE LAKE	SCS	8450	41.4	21.3	51%	21.3	20.3
BIG MEADOWS	SCS	8700	25.7	.1	0%	.2	.0
INDEPENDENCE CAMP	SCS	7000	21.8	.1	0%	.1	.1
INDEPENDENCE CREEK	SCS	6500	12.7	.0	0%	.1	----
LAKE TAHOE BASIN							
HEAVENLY VALLEY	SCS	8800	28.1	4.3	15%	----	----
HAGANS MEADOW	SCS	8000	16.5	----	----	----	----
MARLETTE LAKE	SCS	8000	21.1	----	----	----	----
ECHO PEAK	SCS	7800	39.5	5.0	13%	5.4	4.9
RUBICON NO. 2	SCS	7500	29.1	7.4	25%	7.4	6.9
WARD CREEK NO. 3	SCS	6750	39.4	4.3	11%	5.2	----
FALLEN LEAF LAKE	SCS	6300	7.0	----	----	----	----
CARSON RIVER							
EBBETTS PASS	SCS	8700	38.8	12.0	31%	12.0	----
POISON FLAT	SCS	7900	16.2	.1	1%	.1	.1
WALKER RIVER							
VIRGINIA LAKES RIDGE	SCS	9200	20.3	7.0	34%	7.2	5.9
LOBDELL LAKE	SCS	9200	17.3	1.1	6%	1.2	1.2
SONORA PASS BRIDGE	SCS	8750	26.0	9.9	38%	10.0	9.5
LEAVITT MEADOWS	SCS	7200	8.0	----	----	----	----
OWENS RIVER/MONO LK.							
GEM PASS	LADWP	10750	31.7	13.7	43%	13.7	14.4
SAWMILL MEADOW	DWR	10300	19.4	3.9	20%	3.3	4.6
COTTONWOOD LAKES	LADWP	10200	11.6	.6	5%	.6	.0
BIG PINE #3	LADWP	9800	17.9	1.3	7%	2.0	1.3
SOUTH LAKE	LADWP	9600	16.0	----	----	----	----
MAMMOTH PASS (RP)	USBR	9500	42.4	16.9	40%	16.9	15.2
MAMMOTH PASS-6 TANKS	USBR	9500	----	----	----	----	----
ROCK CREEK	LADWP	8200	----	.0	----	.0	.0

NORMAL SNOWPACK ACCUMULATION EXPRESSED AS A PERCENT OF APRIL 1ST AVERAGE

AREA	JANUARY	FEBRUARY	MARCH	APRIL	MAY
CENTRAL VALLEY NORTH	45	70	90	100	75
CENTRAL VALLEY SOUTH	45	65	85	100	80
NORTH COAST	40	60	85	100	80

May 1 Statewide Conditions



***** SNOWLINES *****

A DROUGHT WATCH has been declared for California. Agencies and individuals needing information on what they should be doing should contact the DWR Water Education Office at 916-653-6192.

INFORMATION SUPERHIGHWAY has reached Sacramento. The Snow Surveys program has started making some of its products available on the World Wide Web. Its server can be reached by setting your URL to <http://snow.water.ca.gov>. Don't worry, we'll still be making information available to those folks who have the electronic equivalent of a 36 horse power Volkswagen on the information highway.

WESTERN SNOW CONFERENCE annual meeting in 1995 will be sponsored by the South Pacific Area. Area executive committee members are: Hal Klieforth, chair, Bruce McGurk, Dick Stein, Gary Freeman and Frank Gehrke. The meeting will be held in April at the Nugget Hotel in Reno, NV.

DATES being considered for the 1994 Cooperator's Meeting are December 7-10. The probable location will be at the Asilomar conference grounds in Pacific Grove, CA.

SNOWPACK - Snow data is a major index of spring and summer runoff from Sierra Nevada watersheds. April 1 data historically reflects the magnitude of the snowpack at or near the maximum seasonal accumulation. Averages are based on April 1 data for the period 1941-1990 (50 years, except for data sites established after 1941).

PRECIPITATION - averages are based on April 1 data for the period 1941-1990 (50 years, except for data sites established after 1941).

RUNOFF AND FORECASTS - Runoff data and runoff forecasts are shown as unimpaired values. Unimpaired runoff represents the natural water production of a river basin, unaltered by upstream diversions, storage, or by export or import of water to or from other watersheds. Forecast of runoff assumes median conditions subsequent to the date of forecast.

Runoff probability ranges are statistically derived from historical data. The 80 percent probability range is comprised of the 90 percent exceedence level value and the 10 percent exceedence level value. This means that actual runoff should fall within the stated limits eight times out of ten.

Runoff averages for most streams are based on the 50 year period 1941-1990. For more details contact California Cooperative Snow Surveys, P. O. Box 942836, Sacramento, CA 94236-0001, (916) 653-8292.

On the front cover:

Kevin Hanestad of Hansen's Machine Works in Sacramento sets a brass rivet in the collar of a new snow tube being fabricated in their shop on North C Street.

Photo by Dave Hart

State of California –The Resources Agency
DEPARTMENT OF WATER RESOURCES
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