California Cooperative
Snow Surveys
Bulletin 120-1-96

State of California
The Resources Agency

Department of
Water Resources

Water Conditions in California

Report 1 February 1, 1996

Pete Wilson
Governor
The Resources Agency

Douglas P. Wheeler
Secretary for Resources
State of California

David N. Kennedy
Director
Department of Water Resources

STATE OF CALIFORNIA
Pete Wilson, Governor

THE RESOURCES AGENCY
Douglas P. Wheeler, Secretary for Resources

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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
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
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
State Water Contractors
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
  Resource Conservation Service
U.S. Department of Commerce
  National Weather Service
U.S. Department of Interior
  Bureau of Reclamation
  Geological Survey, Water Resources
  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

February 1, 1996

The water year got off to a slow start with a bone dry fall. However, much above average precipitation during December and January has improved conditions to near normal now. Prospects for adequate water supply in 1996 are good although weather conditions during the remainder of the wet season can still modify the outlook considerably.

Forecasts of runoff for both the April through July period and for the water year are around 90 percent of average. Runoff percentages are somewhat wetter in the north and less in the south.

Snowpack water content is 90 percent of average for this date and about 60 percent of average for April 1, the date of maximum accumulation. Last year, the pack was 195 percent of average at this time. Warmer than average conditions have caused the snowpack percentages to lag behind precipitation.

Precipitation during January was about 130 percent of average. Statewide precipitation since October 1 is near normal at 95 percent. Last year it was 170 percent of average. The southern portion of California has been quite dry this year.

Runoff so far this season has been about 85 percent of average. One year ago seasonal runoff stood at 140 percent. January runoff was 105 percent of average. Estimated January runoff for the 8 major rivers of the Sacramento and San Joaquin River regions was 2.4 million acre-feet.

Reservoir storage remains excellent at 120 percent of average, largely due to good carryover from last year. Total storage last year was 105 percent of average.

SUMMARY OF WATER CONDITIONS

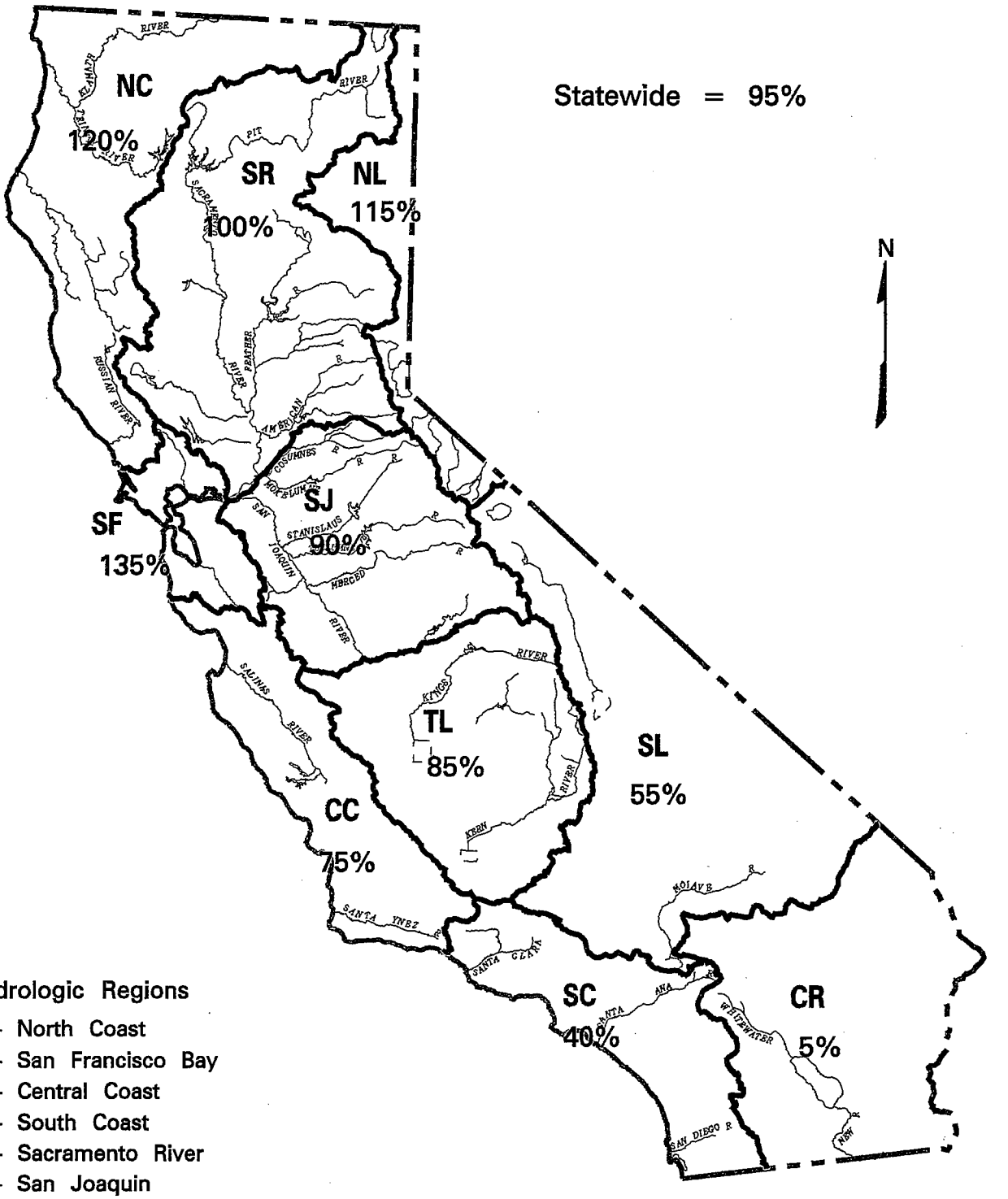
IN PERCENT OF AVERAGE

HYDROLOGIC AREA	PRECIPITATION OCTOBER 1 TO DATE	SNOW WATER CONTENT	RESERVOIR STORAGE	OCTOBER 1 TO DATE	RUNOFF APR-JULY FORECAST	WATER YEAR FORECAST
NORTH COAST	120	110	115	100	90	95
SAN FRANCISCO BAY	135	--	130	130	--	--
CENTRAL COAST	75	--	115	55	--	--
SOUTH COAST	40	--	125	90	--	--
SACRAMENTO RIVER	100	90	115	75	90	90
SAN JOAQUIN RIVER	90	95	135	70	90	85
TULARE LAKE	85	80	140	75	80	80
NORTH LAHONTAN	115	95	130	95	90	95
SOUTH LAHONTAN	55	85	95	110	95	100
COLORADO RIVER-DESERT	5	--	--	--	--	--
STATEWIDE	95	90	120	85	90	90

SEASONAL PRECIPITATION

IN PERCENT OF AVERAGE TO DATE

October 1, 1995 through January 31, 1996



Statewide = 95%

Hydrologic Regions

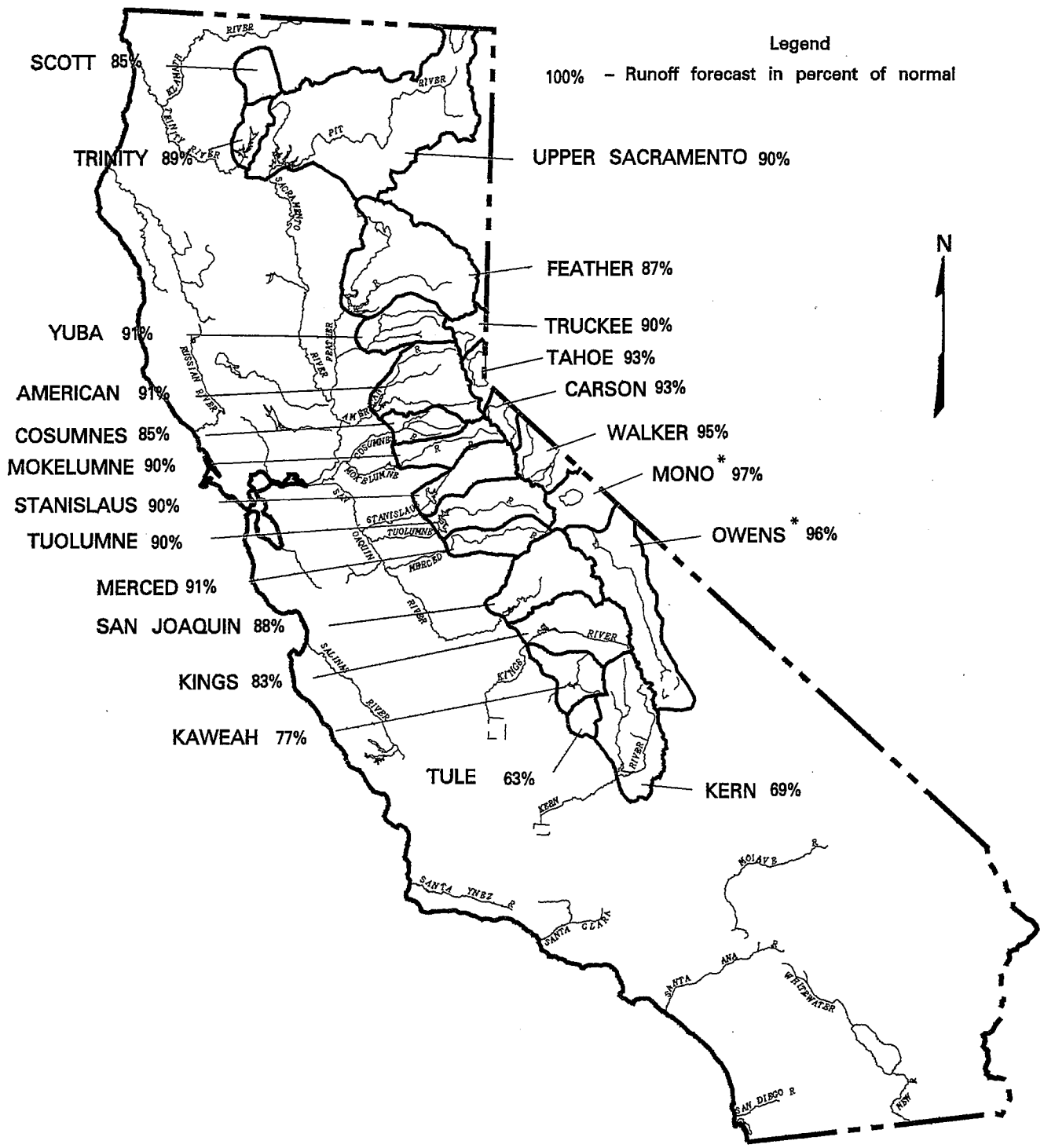
NC – North Coast
SF – San Francisco Bay
CC – Central Coast
SC – South Coast
SR – Sacramento River
SJ – San Joaquin
TL – Tulare Lake
NL – North Lahontan
SL – South Lahontan
CR – Colorado River–Desert

WATER YEAR IS OCTOBER 1 THROUGH SEPTEMBER 30

FORECAST OF APRIL – JULY

UNIMPAIRED SNOWMELT RUNOFF

February 1, 1996



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

FEBRUARY 1, 1996 FORECASTS
APRIL-JULY UNIMPAIRED RUNOFF

HYDROLOGIC REGION and Watershed	Unimpaired Runoff in 1,000 Acre-Feet (1)					
	HISTORICAL			FORECASTS		
	50 Yr Avg (2)	Max of Record	Min of Record	Apr-Jul Forecasts	Pct of Avg	80 % Probability Range (1)
SACRAMENTO RIVER						
Upper Sacramento River						
Sacramento River at Shasta Lake	297	702	39	240	81	
McCloud River at Shasta Lake	411	850	185	350	85	
Pit River at Shasta Lake	1,062	1,796	480	980	92	
Total Inflow to Shasta Lake	1,824	3,189	726	1,640	90	1,000 - 2,550
Sacramento River above Bend Bridge, near Red Bluff	2,491	4,674	943	2,200	88	1,400 - 3,650
Feather River						
Feather River at Lake Almanor near Prattville	333	675	120	290	87	
North Fork at Pulga	1,028	2,416	243	880	86	
Middle Fork near Clio (3)	86	518	4	60	70	
South Fork at Ponderosa Dam	110	267	13	95	86	
Total Inflow to Oroville Reservoir	1,857	4,676	392	1,620	87	1,020 - 2,650
Yuba River						
North Yuba below Goodyears Bar	286	647	51	250	87	
Inflow to Jackson Mdws and Bowman Reservoirs	112	236	25	100	89	
South Yuba at Langs Crossing	233	481	57	200	86	
Yuba River at Smartville	1,047	2,424	200	950	91	590 - 1,610
American River						
North Fork at North Fork Dam	262	716	43	235	90	
Middle Fork near Auburn	522	1,406	100	480	92	
Silver Creek Below Camino Diversion Dam	173	386	37	160	92	
Total Inflow to Folsom Reservoir	1,284	3,074	229	1,170	91	670 - 2,070
SAN JOAQUIN RIVER						
Cosumnes River at Michigan Bar	129	363	8	110	85	55 - 220
Mokelumne River						
North Fork near West Point (4)	437	829	104	390	89	
Total Inflow to Pardee Reservoir	465	1,065	102	420	90	270 - 660
Stanislaus River						
Middle Fork below Beardsley Dam	334	702	64	300	90	
North Fork Inflow to McKays Point Dam	224	503	34	200	89	
Total Inflow to New Melones Reservoir	713	1,710	116	640	90	400 - 1,020
Tuolumne River						
Cherry Creek and Eleanor Creek near Hetch Hetchy	322	727	97	280	87	
Tuolumme River near Hetch Hetchy	606	1,392	153	550	91	
Total Inflow to New Don Pedro Reservoir	1,200	2,682	301	1,080	90	750 - 1,600
Merced River						
Merced River at Pohono Bridge	362	888	80	330	91	
Total Inflow to Lake McClure	617	1,587	123	560	91	370 - 850
San Joaquin River						
San Joaquin River at Mammoth Pool (5)	1,014	2,279	235	870	86	
Big Creek below Huntington Lake (5)	95	264	11	80	84	
South Fork near Florence Lake (5)	202	511	58	180	89	
Total Inflow to Millerton Lake	1,228	3,355	262	1,080	88	680 - 1,660
TULARE LAKE						
Kings River						
North Fork Kings River near Cliff Camp	239	565	50	200	84	
Total Inflow to Pine Flat Reservoir	1,203	3,114	273	1,010	84	580 - 1,520
Kaweah River at Terminus Reservoir	284	814	61	220	77	120 - 370
Tule River at Success Reservoir	63	256	2	40	63	15 - 80
Kern River						
Kern River near Kernville	373	1,203	83	270	72	
Total Inflow to Isabella Reservoir	461	1,657	84	320	69	140 - 640

(1) See inside back cover for definition
(2) All 50 year averages are based on years 1941-1990 unless otherwise noted
(3) 44 year average based on years 1936-79
(4) 36 year average based on years 1936-71
(5) 45 year average based on years 1936-80

FEBRUARY 1, 1996 FORECASTS
WATER YEAR UNIMPAIRED RUNOFF

Unimpaired Runoff in 1,000 Acre-Feet (1)													
HISTORICAL			DISTRIBUTION								FORECASTS		
50 Yr Avg (2)	Max of Record	Min of Record	Oct Thru Jan*	Feb	Mar	Apr	May	Jun	Jul	Aug & Sep	Water Year Forecasts	Pct of Avg	80 % Probability Range (1)
856	1,964	165											
1,244	2,353	577											
3,145	5,150	1,484											
5,987	10,796	2,479	1,530	870	810	650	480	290	220	420	5,270	88	3,800 - 7,350
8,664	17,180	3,294	2,360	1,330	1,150	840	650	410	300	530	7,570	87	5,680 - 11,000
780	1,269	366											
2,417	4,400	666											
219	637	24											
291	562	32											
4,617	9,492	994	1,015	675	600	660	550	260	150	190	4,100	89	2,950 - 6,100
564	1,056	102											
181	292	30											
379	565	98											
2,390	4,926	369	520	320	300	370	390	150	40	40	2,130	89	1,500 - 3,250
616	1,234	66											
1,070	2,575	144											
318	705	59											
2,736	6,381	349	560	390	370	440	470	220	40	30	2,520	92	1,680 - 4,030
385	1,253	20	64	60	65	50	35	10	5	1	290	75	180 - 540
626	1,009	197											
748	1,800	129	95	60	70	120	190	100	10	5	650	87	450 - 970
471	929	88											
1,150	2,952	155	150	90	100	190	260	150	40	10	990	86	680 - 1,500
461	1,147	123											
770	1,661	258											
1,882	4,430	383	220	140	170	270	430	320	60	20	1,630	87	1,200 - 2,300
461	1,020	92											
966	2,859	150	110	80	90	150	235	140	30	15	850	88	600 - 1,230
1,337	2,964	308											
112	298	14											
248	653	71											
1,776	4,642	362	160	80	120	220	420	320	120	50	1,490	84	1,000 - 2,200
284	607	58											
1,669	4,294	383	140	60	100	200	380	320	110	40	1,350	81	830 - 1,970
444	1,402	92	40	20	30	55	100	50	15	5	315	71	190 - 500
145	615	16	20	14	20	20	15	3	2	1	95	66	45 - 170
558	1,577	163											
716	2,309	175	110	35	45	80	110	90	40	30	540	75	300 - 970

* Indicates observed runoff

FEBRUARY 1, 1996 FORECASTS
APRIL-JULY UNIMPAIRED RUNOFF

HYDROLOGIC REGION and Watershed	Unimpaired Runoff in 1,000 Acre-Feet (1)				
	HISTORICAL			FORECASTS	
	50 Yr Avg (2)	Max of Record	Min of Record	Apr-Jul Forecasts	Pct of Avg
NORTH COAST					
Trinity River					
Total Inflow to Lewiston Lake	653	1,593	80	580	89
Scott River					
Near Fort Jones	200	NA	NA	170	85
Klamath River					
Total inflow to Upper Klamath Lake (3)				545	107
NORTH LAHONTAN					
Truckee River					
Lake Tahoe to Farad accretions	268	713	58	240	90
Lake Tahoe Rise (assuming gates closed, in feet)	1.5	3.75	0.23	1.4	93
Carson River					
West Fork at Woodfords	54	131	12	55	102
East Fork near Gardnerville	186	407	43	170	91
Walker River					
West Fork near Coleville	148	330	35	140	95
East Fork near Bridgeport	63	209	7	60	95
SOUTH LAHONTAN					
Owens River					
Total tributary flow to Owens River (4)	233	579	96	223	96

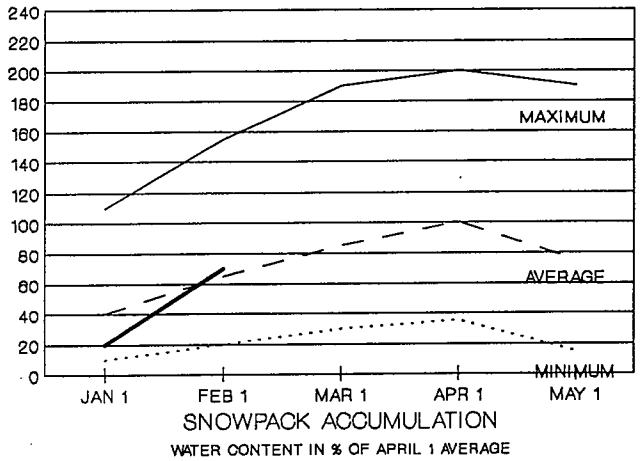
(1) See inside back cover for definition

(2) All 50 year averages are based on years 1941-1990 unless otherwise noted

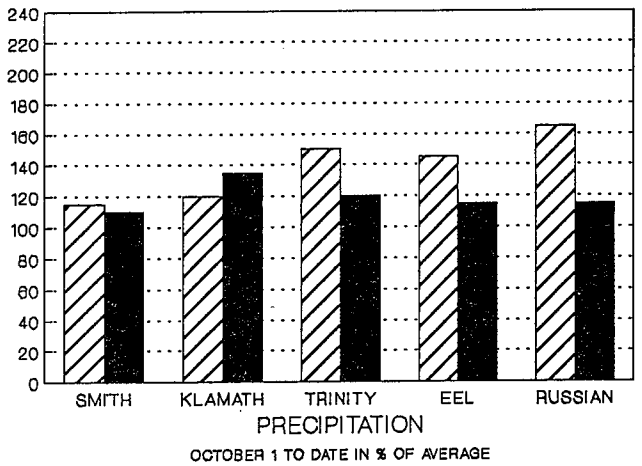
(3) Forecast by U.S. Natural Resources Conservation Service, Portland Oregon, for May through September.

(4) Forecast by Department of Water and Power, City of Los Angeles

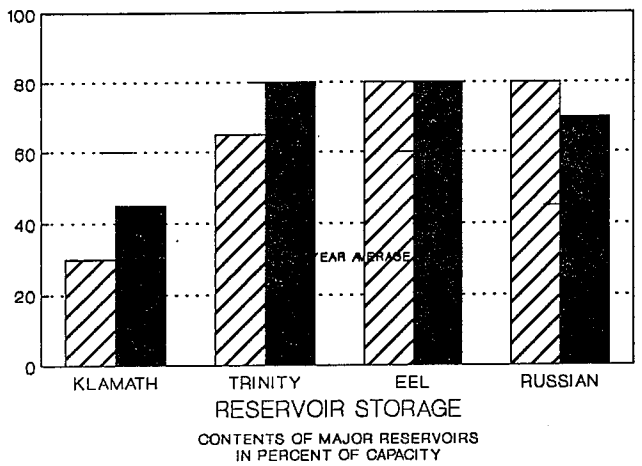
NORTH COAST AREA



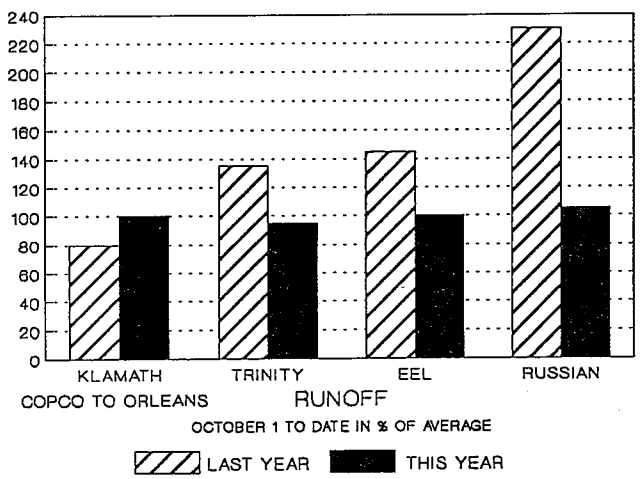
SNOWPACK - First of the month measurements made at 12 snow courses indicate an area wide snow water equivalent of 20.2 inches. This is 110 percent of the average for this date and about 70 percent of the seasonal (April 1) average. Last year at this time the pack was holding 37.6 inches of water.



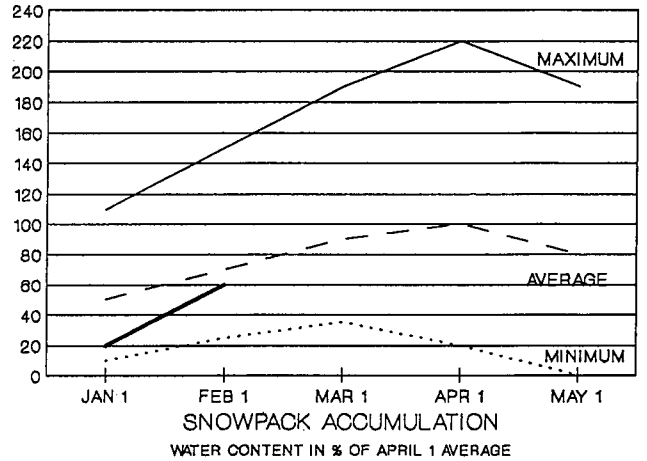
PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on this area was 120 percent of normal. Precipitation last month was about 155 percent of the monthly average. Seasonal precipitation at this time last year stood at 140 percent of normal.



RESERVOIR STORAGE - First of the month storage in 7 reservoirs was 2.5 million acre-feet which is 115 percent of average. About 80 percent of available capacity was being used. Storage in these reservoirs at this time last year was 95 percent of average.



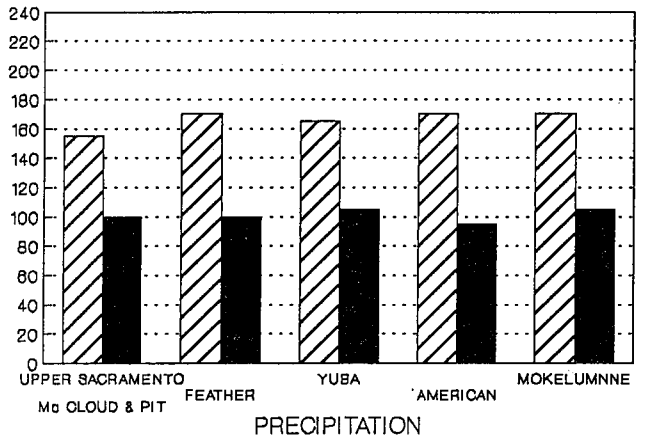
RUNOFF - Seasonal runoff of streams draining the area totaled 5.5 million acre-feet which is 100 percent of average for this period. Last year, runoff for the same period was 130 percent of average.



SNOWPACK ACCUMULATION
WATER CONTENT IN % OF APRIL 1 AVERAGE

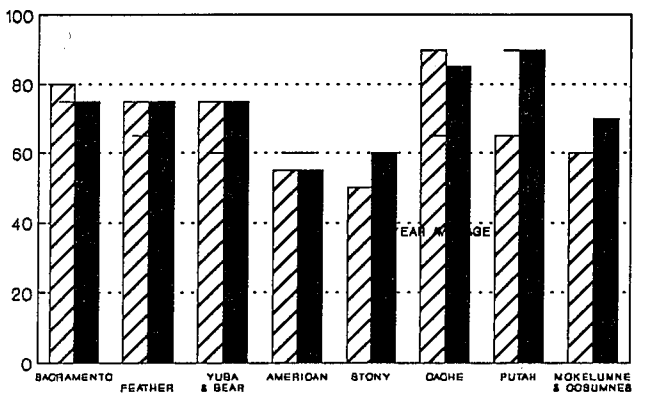
SACRAMENTO BASIN

SNOWPACK - First of the month measurements made at 71 snow course indicate a basin wide snow water equivalent of 17.6 inches. This is 90 percent of the average for this date and about 60 percent of the April 1 seasonal average. Last year at this time, the pack was holding 40 inches of water, 205 percent of average.



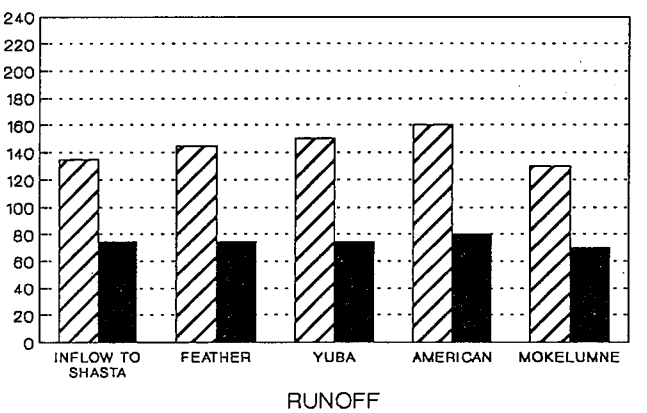
PRECIPITATION
OCTOBER 1 TO DATE IN % OF AVERAGE

PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on the Sacramento Basin was 100 percent of normal. Precipitation last month was 130 percent of the monthly average. Seasonal precipitation at this time last year stood at 175 percent of average.



RESERVOIR STORAGE
CONTENTS OF MAJOR RESERVOIRS IN PERCENT OF CAPACITY

RESERVOIR STORAGE - First of the month storage in 43 reservoirs was 12.2 million acre-feet which is 115 percent of average. About 75 percent of available capacity was being used. Storage in these reservoirs was about 110 percent of average at this time last year.

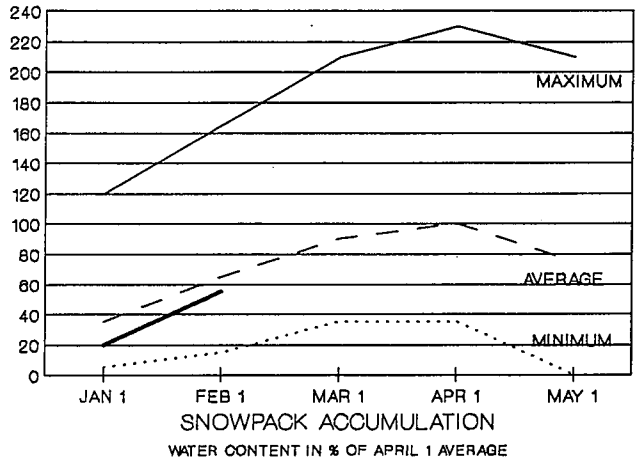


RUNOFF
OCTOBER 1 TO DATE IN % OF AVERAGE

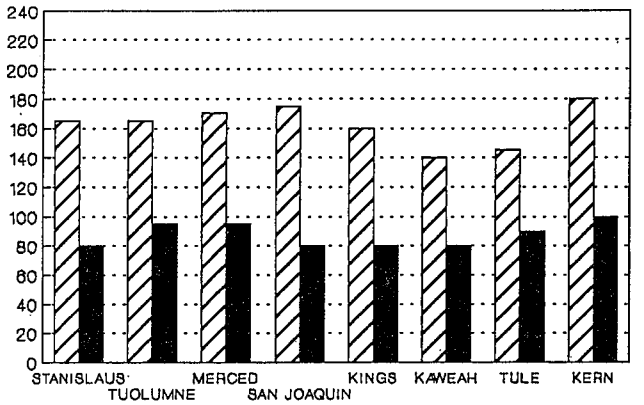
LAST YEAR THIS YEAR

RUNOFF - Seasonal runoff from streams draining into the basin totaled 4.5 million acre-feet which is about 75 percent of average for this period. Last year runoff for the same period was 150 percent of average.

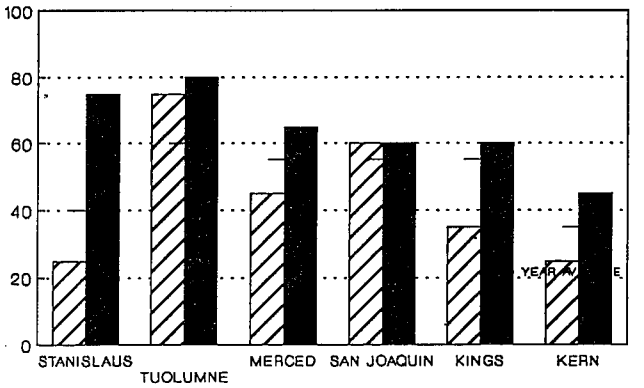
The Sacramento Region 40-30-30 Water Supply Index is forecasted to be 8.3 million acre-feet assuming median meteorological conditions for the remainder of the year. This classifies the year as "above normal" in the the Sacramento-San Joaquin Delta according to the State Water Resources Control Board. This time last year, "wet" water supply conditions were forecast.



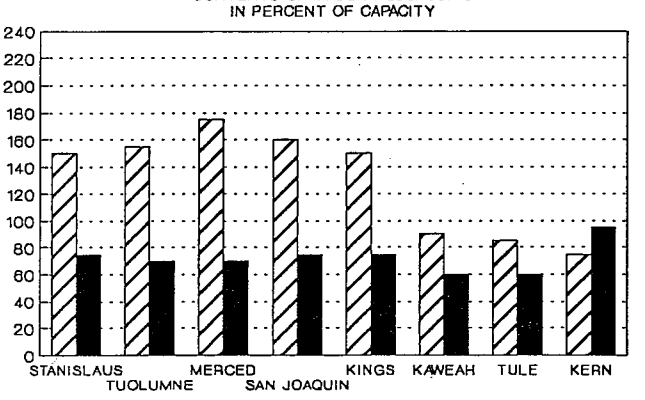
SNOWPACK ACCUMULATION
WATER CONTENT IN % OF APRIL 1 AVERAGE



PRECIPITATION
OCTOBER 1 TO DATE IN % OF AVERAGE



RESERVOIR STORAGE
CONTENTS OF MAJOR RESERVOIRS
IN PERCENT OF CAPACITY



RUNOFF
OCTOBER 1 TO DATE IN % OF AVERAGE

LAST YEAR THIS YEAR

SAN JOAQUIN AND TULARE LAKE BASINS

SNOWPACK - First of the month measurements made at 61 San Joaquin Basin snow courses indicate a basin wide snow water equivalent of 17.9 inches which is 95 percent of the average for this date and 60 percent of the seasonal (April 1) average. Last year at this time, the pack was holding 37.1 inches of water, 190% of average.

At the same time, 43 Tulare Lake Basin snow courses indicated a basin-wide snow water equivalent of 11.3 inches, which is 80 percent of the average for this date and 55 percent of the seasonal average. Last year at this time, the Basin was holding 24.9 inches of water, 190% of average.

PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on the San Joaquin Basin was 90 percent of average. Precipitation last month was 140 percent of the monthly average. Seasonal precipitation at this time last year stood at 170 percent of average.

Seasonal precipitation on the Tulare Lake Basin was 85 percent of normal. Precipitation last month was 135 percent of the monthly average. Seasonal precipitation at this time last year stood at 165 percent of normal.

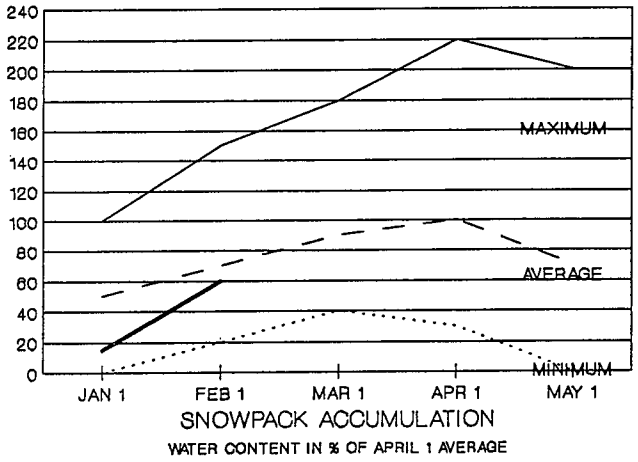
RESERVOIR STORAGE - First of the month storage in 33 San Joaquin Basin reservoirs was 8.7 million acre-feet which is 135 percent of average. About 75 percent of available capacity was being used. Storage in these reservoirs at this time last year was 105 percent of average.

First of the month storage in 6 Tulare Lake Basin reservoirs was 1.0 million acre-feet, 140 percent of average. About 50 percent of available capacity was being used. Storage in these reservoirs at this time last year was 80 percent of average.

RUNOFF - Seasonal runoff of streams draining into the San Joaquin Basin totaled 800 thousand acre-feet which is 70 percent of average for this period. Last year, runoff for this same period was 160 percent of average.

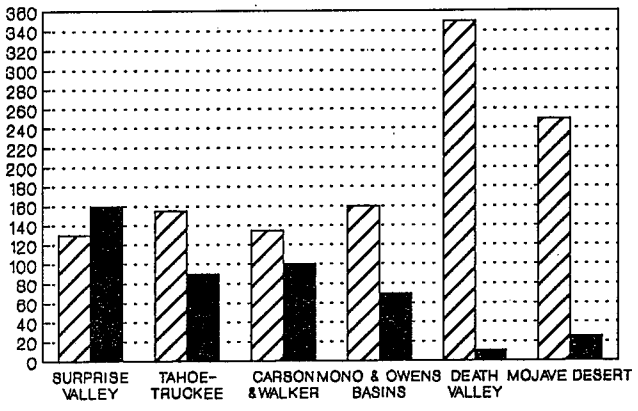
Seasonal runoff of streams draining into the Tulare Lake Basin totaled 312 thousand acre-feet which is 75 percent of average for this period. Last year, runoff for this same period was 115 percent of average.

The San Joaquin Basin 60-20-20 Water Supply Index is forecasted to be 3.2 MAF, an "above normal" year.



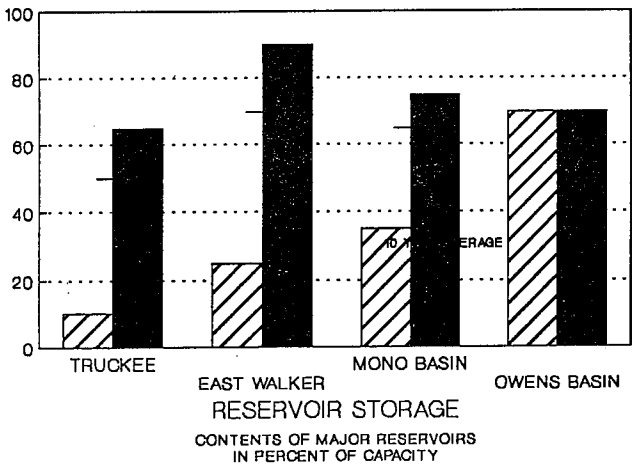
SNOWPACK ACCUMULATION

WATER CONTENT IN % OF APRIL 1 AVERAGE



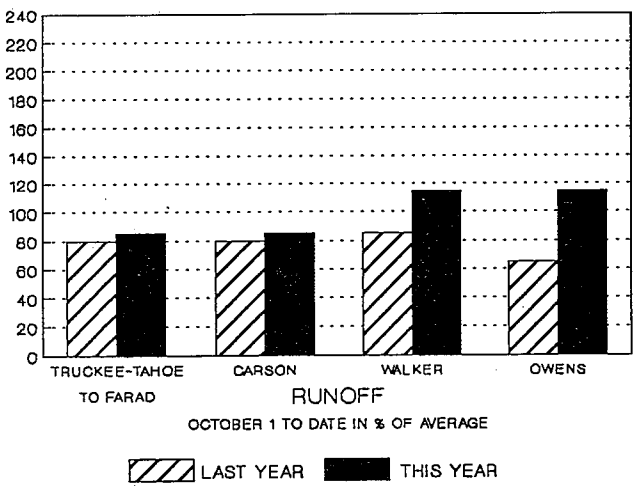
PRECIPITATION

OCTOBER 1 TO DATE IN % OF AVERAGE



RESERVOIR STORAGE

CONTENTS OF MAJOR RESERVOIRS IN PERCENT OF CAPACITY



RUNOFF

OCTOBER 1 TO DATE IN % OF AVERAGE

LAST YEAR THIS YEAR

NORTH AND SOUTH LAHONTAN AREA

SNOWPACK - First of the month measurements made at 19 North Lahontan snow courses indicate an area wide snow water equivalent of 16.4 inches which is 95 percent of the average for this date and 60 percent of the seasonal (April 1) average. Last year at this time, the pack was holding 23.0 inches of water, 195% of average.

At the same time, 21 South Lahontan courses indicated an area-wide snow water equivalent of 13.9 inches which is 85 percent of the average for this date and 55 percent of the seasonal average. Last year at this time, the pack was holding 26.1 inches of water and was at 175% of average.

PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) over the North Lahontan area averaged 115 percent of normal. Precipitation last month was 150 percent of the monthly average. Seasonal precipitation at this time last year was 155 percent of average.

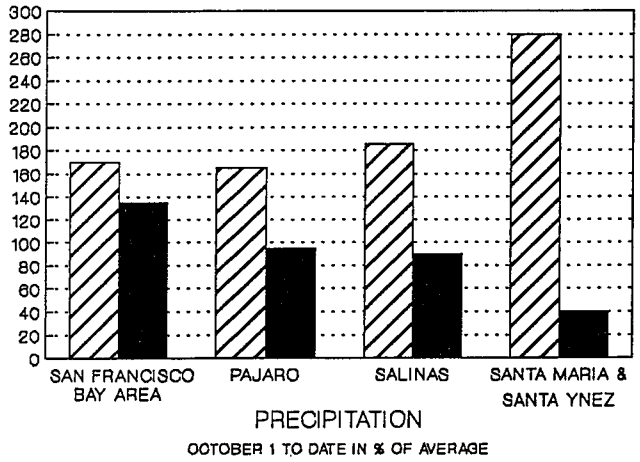
Seasonal precipitation over the South Lahontan area was 55 percent of normal. Last month's precipitation was 75 percent of the monthly average. Seasonal precipitation at this time last year stood at 230 percent of average.

RESERVOIR STORAGE - First of the month storage in 5 North Lahontan reservoirs was 732 thousand acre-feet which is 130 percent of average. About 70 percent of available capacity was being used. Storage in these reservoirs at this time last year was 20 percent of average. Lake Tahoe was 3.7 feet above its natural rim on February 1.

First of the month storage in 8 South Lahontan reservoirs was 274 thousand acre-feet, which is 95 percent of average. About 70 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 streams draining the North Lahontan area totaled 144 thousand acre-feet which is 95 percent of average for this period. Last year, runoff for this same period was 80 percent of average.

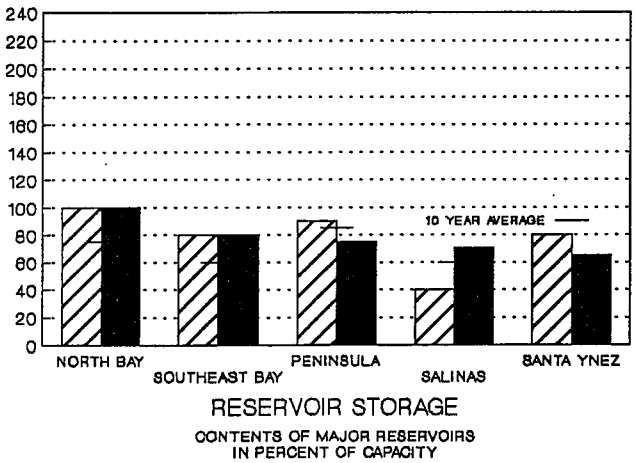
Seasonal runoff of the Owens River in the South Lahontan area totaled 52 thousand acre-feet which is 115 percent of average for this period. Last year, runoff for this same period was 70 percent of average.



SAN FRANCISCO AND CENTRAL COAST AREAS

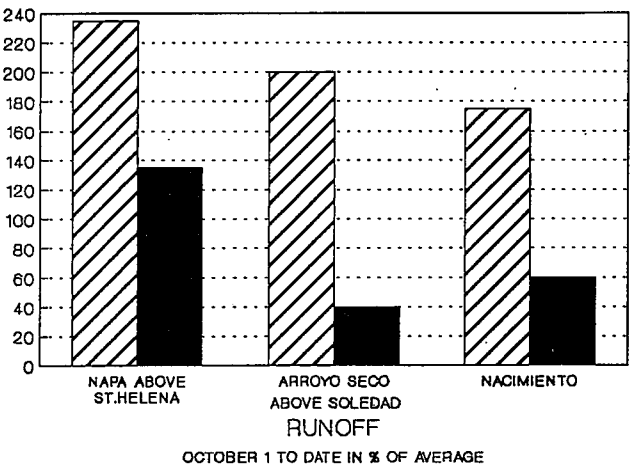
PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on the San Francisco Bay area was 135 percent of normal. Precipitation last month was 200 percent of the monthly average. Seasonal precipitation at this time last year stood at 170 percent of normal.

Seasonal precipitation on the Central Coast area averaged 75 percent of normal. Precipitation last month was 105 percent of the monthly average. Seasonal precipitation at this time last year stood at 210 percent of normal.



RESERVOIR STORAGE - First of the month storage in 18 major Bay area reservoirs was 572 thousand acre-feet which is 130 percent of average. About 80 percent of available capacity was being used. Storage in these reservoirs at this time last year was 135 percent of average.

First of the month storage in 6 major Central Coast reservoirs was 664 thousand acre-feet which is 115 percent of average. About 70 percent of available capacity was being used. Storage in these reservoirs at this time last year was 80 percent of average.



RUNOFF - Estimated seasonal runoff of the Napa River in the San Francisco Bay area totaled 44 thousand acre-feet which is 130 percent of average for this period. Last year, runoff for this same period was 235 percent of average.

Seasonal runoff of selected Central Coast streams totaled 70 thousand acre-feet which is 55 percent of average for this period. Last year, runoff for this same period was about 185 percent of average.

LAST YEAR THIS YEAR

SOUTH COAST AND COLORADO RIVER AREAS

PRECIPITATION - October through January (seasonal) precipitation on the South Coast area was 40 percent of normal. January precipitation was 65 percent of the monthly average. Seasonal precipitation at this time last year was 190 percent of normal.

Seasonal precipitation on the Colorado Desert area was 5 percent of normal. Precipitation in January was 8 percent of average. Seasonal precipitation at this time last year stood at 240 percent of average.

RESERVOIR STORAGE - February 1 storage in 29 major South Coast area reservoirs was 1.5 million acre-feet or 125 percent of average. About 75 percent of available capacity was being used. Storage in these reservoirs at this time last year was 125 percent of average.

On February 1 combined storage in Lakes Powell, Mead, Mohave and Havasu was about 45 million acre-feet or about 115 percent of average. About 85 percent of available capacity was in use. Last year at this time, these reservoirs were storing 100 percent of average.

RUNOFF - Seasonal runoff from selected South Coast streams totaled 16.8 thousand acre-feet which is 90 percent of average. Runoff from these streams during January totaled 3.6 thousand acre-feet or 45 percent of average. Seasonal runoff from these streams last year was 165 percent of average.

COLORADO - The February 1 snowpack in the Upper Colorado River basin according to U.S. Natural Resources Conservation Service reports was 135 percent of average and ranges from 70 percent in the San Juan Basin to 150 percent in the Green River Basin.

The April through July inflow to Lake Powell is forecast to be 8.2 million acre-feet, which is 106 percent of average.

CENTRAL VALLEY PROJECT

Based on February 1 conditions, Bureau of Reclamation water year forecasts for unimpaired runoff to CVP reservoirs are: Trinity--116% of average, Shasta--95% of average, American--97% of average, Stanislaus--91% of average, San Joaquin above Friant--79% of average. As of January 31, 1996, CVP storage was 8.9 million acre feet which is an increase of 2.0 million acre feet compared to one year ago, and is approximately 131% of normal for that date.

The Bureau of Reclamation announced preliminary water allocations for the CVP contractors on January 19, 1996. Based on conservative water supply forecasts prepared from information available January 1, 1996 CVP water allocations were: Agricultural contractors-40%; Urban contractors-75% to 100%; Sacramento River water rights and San Joaquin Exchange Contractors- 100%; Wildlife Refuges-75% to 100%. Updated allocations will be announced February 15, 1996.

STATE WATER PROJECT

The high level of storage in Lake Oroville due to wet conditions in 1995 coupled with an early filling of San Luis Reservoir created an opportuity for the SWP contractors to receive relatively high initial approvals for water deliveries in 1996. This approval was for 75% of contractual entitlement or their 1996 request, whichever was less. This approved allocation will be reiewed each month as the season progresses and Bulletin 120 forecasts are prepared.

MAJOR WATER DISTRIBUTION PROJECTS

RESERVOIR STORAGE

(AVERAGES BASED ON PERIOD THROUGH 1990)

RESERVOIR	CAPACITY 1,000 AF	AVERAGE STORAGE 1,000 AF	STORAGE AS OF JANUARY 31 1995 1,000 AF	1996 1,000 AF	PERCENT AVERAGE
STATE WATER PROJECT					
Oroville	3,538	2,427	2,708	2,750	113
San Luis SWP	1,062	870	1,077	1,061	122
Lake Del Valle	77	30	39	37	125
Silverwood	73	64	72	39	61
Pyramid Lake	171	162	161	159	98
Castaic Lake	324	248	170	256	103
Perris Reservoir	132	110	113	111	101
CENTRAL VALLEY PROJECT					
Clair Engle Lake	2,448	1,815	1,565	1,956	108
Shasta Lake	4,552	3,182	3,519	3,519	111
Whiskeytown	241	208	207	197	95
Folsom	977	534	559	504	94
New Melones	2,420	1,402	606	1,909	136
Millerton Lake	520	305	402	367	121
San Luis CVP	977	710	713	873	123
COLORADO RIVER PROJECT					
Lake Mead	26,159	19,864	20,190	21,643	109
Lake Powell	25,002	16,600	16,843	20,946	126
Lake Mohave	1,810	1,595	1,647	1,632	102
Lake Havasu	619	539	569	569	106
EAST BAY MUNICIPAL UTILITY DISTRICT					
Pardee	210	176	196	202	115
Camanche	417	241	247	290	120
East Bay (4 reservoirs)	151	122	135	131	107
CITY & COUNTY OF SAN FRANCISCO					
Hetch Hetchy	360	144	176	282	195
Cherry Lake	268	103	164	239	232
Lake Eleanor	26	9	13	18	200
Peninsula/East Bay (4 reservoirs)	225	157	211	203	129
CITY OF LOS ANGELES (DWP)					
Crowley Lake (Long Valley Reservoir)	183	128	134	132	103
Grant Lake	48	30	15	43	143
Other Aqueduct Storage (6 reservoirs)	83	71	64	61	86

DEPARTMENT OF WATER RESOURCES - CALIFORNIA DATA EXCHANGE CENTER
TELEMETERED SNOW WATER EQUIVALENTS - FEBRUARY 1, 1996

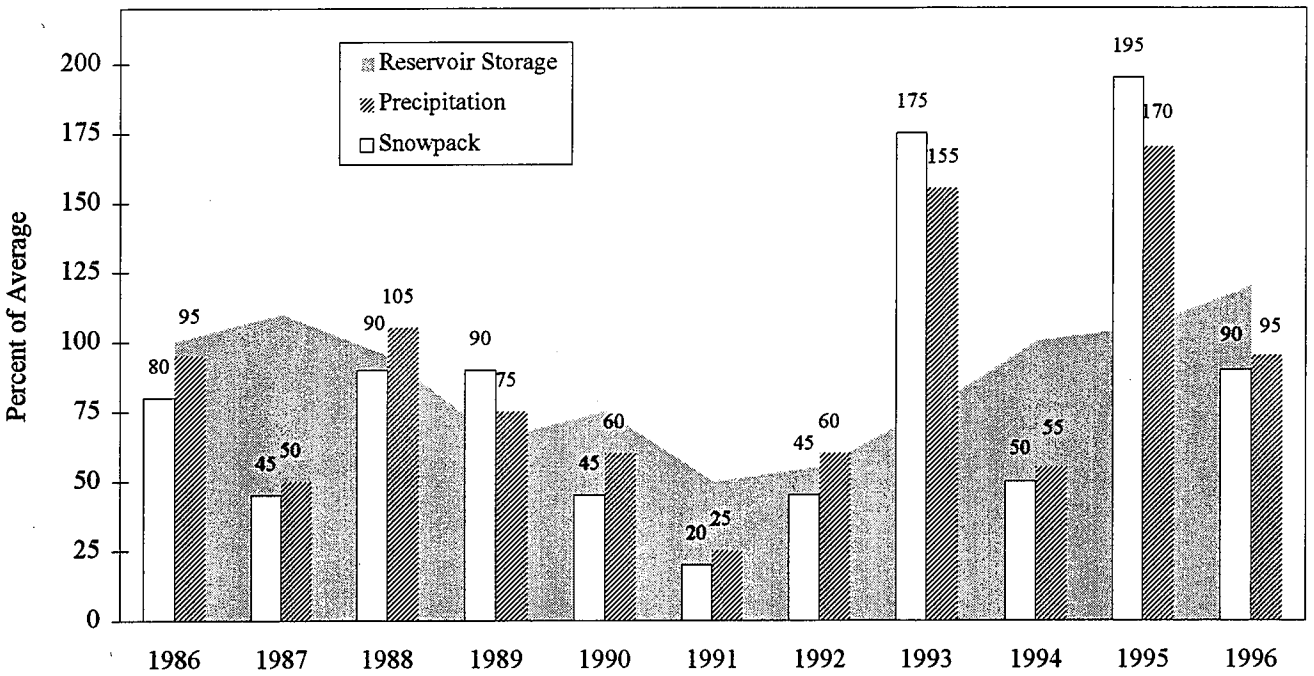
BASIN NAME / STATION NAME	AGENCY	ELEV FEET	APR 1 AVG	TODAY	INCHES OF WATER EQUIVALENT PERCENT OF APR 1	24 HRS AGO	1 WEEK AGO
TRINITY RIVER							
Peterson Flat	DWR	7150	29.2	18.6	64%	18.5	15.8
Red Rock Mountain	DWR	6700	39.6	26.8	68%	26.8	21.6
Bonanza King	USBR	6450	40.5	29.4e	73%	29.0e	25.3
Shimmy Lake	DWR	6200	40.3	----	----	----	----
Middle Boulder #3	DWR	6200	28.3	15.0	53%	15.0	12.4
Highland Lakes	DWR	6030	29.9	14.5	49%	14.5	11.6
Scotts Mountain	DWR	5900	16.0	10.6	66%	10.6	8.8
Mumbo Basin	DWR	5700	22.4	15.7	70%	15.6	12.8
Big Flat	DWR	5100	15.8	15.1	96%	15.0	11.5
SACRAMENTO RIVER							
Cedar Pass	NRCS	7100	18.1	14.0	77%	13.8	11.8
Blacks Mountain	DWR	7100	12.7	----	----	----	----
Sand Flat	USBR	6750	42.4	----	----	----	----
Medicine Lake	DWR	6700	32.6	14.2	43%	13.9	11.9
Adin Mountain	NRCS	6350	13.6	10.3	76%	10.2	8.6
Snow Mountain	USBR	5950	27.0	15.3	57%	15.1	11.5
Slate Creek	USBR	5600	29.0	15.6	54%	15.6	11.7
Stouts Meadow	DWR	5400	36.0	18.8	52%	18.6	14.6
FEATHER RIVER							
Kettlerock	DWR	7300	25.5	19.2	75%	18.7	14.2e
Grizzly	DWR	6900	29.7	15.8	53%	15.5	11.5
Pilot Peak	DWR	6800	52.6	22.3	42%	21.7	15.0
Gold Lake	DWR	6750	36.5	23.3	64%	22.9	18.6
Humbug	DWR	6500	28.0	13.2	47%	12.7	8.6
Rattlesnake	DWR	6100	14.0	11.4	81%	11.4	9.2
Bucks Lake	DWR	5750	44.7	23.8	53%	23.4	16.6
Four Trees	DWR	5150	20.0	16.5	82%	16.5	12.8
YUBA & AMERICAN RIV							
Lake Lois	DWR	8800	39.5	39.9	101%	39.9	36.6
Schneiders	SMUD	8750	34.5	27.0	78%	27.0	23.1
Caples Lake Course	DWR	7800	30.9	19.7	64%	19.7	16.0
Alpha	SMUD	7600	35.9	20.5	57%	20.4	16.1
Beta	DWR	7600	35.9	21.9	61%	21.7	17.6
Forni Ridge	USBR	7600	37.0	20.6e	56%	20.6	16.2
Silver Lake	DWR	7100	22.7	17.8	78%	17.6	14.5
Cent Sierra Snow Lab	DWR	6950	33.6	----	----	----	----
Huysink	USBR	6600	42.6	19.4e	46%	19.0e	14.1
Van Vleck	SMUD	6700	35.9	23.5	65%	24.4	20.0
Robbs Saddle	SMUD	5900	21.4	20.8	97%	19.9	16.1
Greek Store	USBR	5600	21.0	----	----	----	----
Blue Canyon	USBR	5280	9.0	9.5e	106%	9.5	7.0
Robbs Powerhouse	SMUD	5150	5.2	9.9	191%	10.1	8.6
MOKEL. & STANIS. RIV							
Deadman Creek	DWR	9250	37.2	15.2	41%	15.1	13.1
Highland Meadow	DWR	8800	47.9	22.1	46%	21.8	18.2
Gianelli Meadow	USBR	8350	55.5	24.5	44%	24.3	20.2
Lower Relief Valley	DWR	8100	41.2	24.0	58%	23.3	19.4
Blue Lakes	NRCS	8000	33.1	17.0	51%	16.8	13.4
Mud Lake	SMUD	7900	44.9	28.5	64%	28.4	24.2
Stanislaus Meadow	DWR	7750	47.5	25.4	54%	25.3	21.5
Bloods Creek	USBR	7200	35.5	----	----	----	----
Black Springs	USBR	6500	32.0	17.1e	53%	17.1	13.0
TUOLUMNE & MERCED R.							
Dana Meadows	DWR	9800	27.7	19.0	68%	18.3	16.3
Slide Canyon	DWR	9200	41.1	24.9	61%	24.9	22.3
Snow Flat	DWR	8700	44.1	----	----	----	----
Tuolumne Meadows	DWR	8600	22.6	13.4	59%	13.4	11.8
Horse Meadow	DWR	8400	48.6	----	----	----	----
Ostrander Lake	DWR	8200	34.8	19.0	54%	18.3	15.0
Paradise	DWR	7650	41.3	22.9	55%	22.9	19.0
Gin Flat	DWR	7050	34.2	11.0	32%	10.6	7.1
Lower Kibbie	DWR	6600	27.4	15.9	58%	15.9	12.6
SAN JOAQUIN RIVER							
Volcanic Knob	USBR	10100	30.1	16.3	54%	16.3	14.4
Agnew Pass	DWR	9450	32.3	17.0	53%	16.3	14.4
Kaiser Point	USBR	9200	37.8	17.2	46%	16.4	14.1
Green Mountain	USBR	7900	30.8	----	----	----	----

DEPARTMENT OF WATER RESOURCES - CALIFORNIA DATA EXCHANGE CENTER
TELEMETERED SNOW WATER EQUIVALENTS - FEBRUARY 1, 1996

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	16.4	54%	14.7	13.1
Chilkoot Meadow	USBR	7150	38.0	18.8	49%	17.2	13.3
Huntington Lake	USBR	7000	20.1	13.1	65%	12.2e	8.6
Graveyard Meadow	USBR	6900	18.8	----	----	----	----
Poison Ridge	USBR	6900	28.9	12.3	43%	10.9	7.6
KINGS RIVER							
Bishop Pass	DWR	11200	34.0	13.7	40%	13.1	10.4
Charlotte Lake	DWR	10400	27.5	14.4	52%	13.9	12.2
State Lakes	DWR	10400	29.0	7.0	24%	7.0	7.0
Mitchell Meadow	DWR	10375	32.9	17.5	53%	16.3	14.0
Blackcap Basin	DWR	10300	34.3	18.0	53%	16.7	14.1
Upper Burnt Corral	DWR	9700	34.6	19.6	57%	18.3	16.3
West Woodchuck Mdw	COE	9100	32.8	16.8	51%	15.6	12.5
Big Meadows	DWR	7600	25.9	11.5	44%	10.6	8.8
KAWEAH & TULE RIVERS							
Quaking Aspen	DWR	7200	21.0	10.8	51%	10.1	7.9
Giant Forest	COE	6400	10.0	1.6	16%	1.6	1.3
KERN RIVER							
Upper Tyndall Creek	COE	11500	27.7	13.2	48%	12.7	9.5
Crabtree	DWR	10700	19.8	7.9	40%	7.5	5.6
Chagoopa Plateau	DWR	10300	21.8	9.8	45%	9.1	7.8
Pascoes	DWR	9150	24.9	15.5	62%	14.6	11.7
Tunnel	DWR	8950	15.6	6.1	39%	5.5	4.2
Wet Meadow	COE	8900	30.3	14.9	49%	14.1	11.0
Casa Vieja Mdw	DWR	8400	20.9	8.5	41%	7.2	5.9
Beach Meadow	DWR	7650	11.0	5.9	53%	5.4	3.6
SURPRISE VALLEY AREA							
Dismal Swamp	NRCS	7050	29.2	19.6	67%	19.7	18.2
TRUCKEE RIVER							
Mount Rose Ski Area	NRCS	8850	38.5	25.8	67%	25.6	20.9
Independence Lake	NRCS	8450	41.4	21.9	53%	21.8	17.8
Big Meadows	NRCS	8700	25.7	12.7	49%	12.6	9.8
Independence Camp	NRCS	7000	21.8	10.5	48%	10.3	6.4
Independence Creek	NRCS	6500	12.7	7.6	60%	7.6	5.9
LAKE TAHOE BASIN							
Heavenly Valley	NRCS	8800	28.1	16.9	60%	16.9	14.6
Hagans Meadow	NRCS	8000	16.5	13.2	80%	13.5	11.2
Marlette Lake	NRCS	8000	21.1	16.4	78%	16.3	11.9
Echo Peak	NRCS	7800	39.5	28.9e	73%	28.7	21.0e
Rubicon No. 2	NRCS	7500	29.1	16.1	55%	15.9	12.1
Ward Creek No. 3	NRCS	6750	39.4	19.7	50%	19.5	15.4
Fallen Leaf Lake	NRCS	6300	7.0	7.8	111%	7.7	5.5
CARSON RIVER							
Ebbetts Pass	NRCS	8700	38.8	21.1	54%	21.0e	18.3
Poison Flat	NRCS	7900	16.2	11.5	71%	11.4	9.3
WALKER RIVER							
Virginia Lakes Ridge	NRCS	9200	20.3	9.5	47%	9.3	7.5
Lobdell Lake	NRCS	9200	17.3	9.0	52%	8.9	7.6
Sonora Pass Bridge	NRCS	8750	26.0	14.1	54%	13.8	11.7
Leavitt Meadows	NRCS	7200	8.0	7.8	98%	7.6	4.8
OWENS RIVER/MONO LK.							
Gem Pass	LADWP	10750	31.7	19.6	62%	18.9	14.4
Sawmill Meadow	DWR	10300	19.4	9.8	51%	9.8	8.5
Cottonwood Lakes	LADWP	10200	11.6	3.5	30%	3.1	2.2
Big Pine #3	DWR	9800	17.9	5.9	33%	5.3	3.3
South Lake	LADWP	9600	16.0	8.5	53%	8.2	7.2
Mammoth Pass (rp)	USBR	9500	42.4	19.8	47%	19.2	17.6
Rock Creek	LADWP	8200	14.0	7.3	52%	7.3	5.7

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



❄❄❄❄❄ SNOWLINES ❄❄❄❄

SNOW SURVEYS and the Department of Water Resources are forging ahead with new technology for distributing information. The Department has its very own "home page" on the World Wide Web. The address is http://wwwdwr.water.ca.gov. Water supply forecasts and other graphical products are available as close as your nearest modem and Internet provider. In another technological breakthrough, manual snow survey data from the Kern River surveys was transmitted via an e-mail, packet radio system. This is a significant improvement over voice systems, though the snow surveyors who must now add a laptop computer and modem to their packs are not overjoyed.

SNOW SURVEYS DATALINE is (800) 227-7877. If your normal method of reporting data is by telephone please leave your message by course number first, the course name, the date, the average depth and average water content. Remember, the date of measurement is important. For sensor data, the information is in the same order followed by snow manometer, precipitation manometer, if appropriate. If you have e-mail please send a message to hart@water.ca.gov for instructions regarding sending data via e-mail. It's slick.

MOVING DAY for snow surveys and the rest of the hydrology branch and flood operations arrived last August and proceeded relatively uneventfully. For that a tip of a blue and yellow DWR baseball cap to Al Cosper, O&M for overseeing the change from a department store to State and Federal offices. May he enjoy a long and happy retirement.

HEAVY RAINS to relatively high elevation occurred February 4th and 5th. The resulting runoff forced many multi-purpose reservoir operators to make moderate flood control releases. Although there was some loss in low elevation snowpack, the overall total snow pack was not depleted by the storm and actually showed a slight gain in water content.

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 period 1941-1990. For more details contact California Cooperative Snow Surveys, P.O. Box 942836, Sacramento, CA 94236-0001, (916) 574-2635 or gridley@water.ca.gov.

INDICES OF WATER AVAILABILITY

The Sacramento River Hydrologic Region 40-30-30 Water Supply Index. The *40-30-30* represent the percentage weight given to the three variables in the formula for the index. The first variable is the forecasted unimpaired runoff from April through July (*40 Percent*). The second variable is the forecasted unimpaired runoff from October through March (*30 Percent*). The third variable is the previous year's index with a cap to account for required flood control releases during wet years. The basins used in this computation are those used in the Sacramento River water year unimpaired runoff.

The Sacramento River water year unimpaired runoff is the sum of: Sacramento River above Bend Bridge, Feather River Inflow to Lake Oroville, Yuba River near Smartville and American River Inflow to Folsom Lake.

The San Joaquin River Hydrologic Region 60-20-20 Water Supply Index. In a similar manner, the *60-20-20* represents the percentage weights on April through July runoff, October through March runoff and previous year's index. The San Joaquin River unimpaired runoff is the sum of: Stanislaus River Inflow to New Melones Lake, Tuolumne River Inflow to New Don Pedro Reservoir, Merced River Inflow to Lake McClure and San Joaquin River Inflow to Millerton Lake.

Prior month unimpaired runoff is the sum of the runoff in the eight major rivers used in the two above indices.

Dudley McFadden, Snow Surveys hydrologist and Wendy Yun and Sally Hallowell from the Tahoe National Forest in Nevada City encounter a "snow donut" on their trip to the Huysink snow course and snow sensor site in the American River Watershed.

Photo by Dave Hart

State of California – The Resources Agency
DEPARTMENT OF WATER RESOURCES
P.O. Box 942836
Sacramento, CA 94236–0001

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