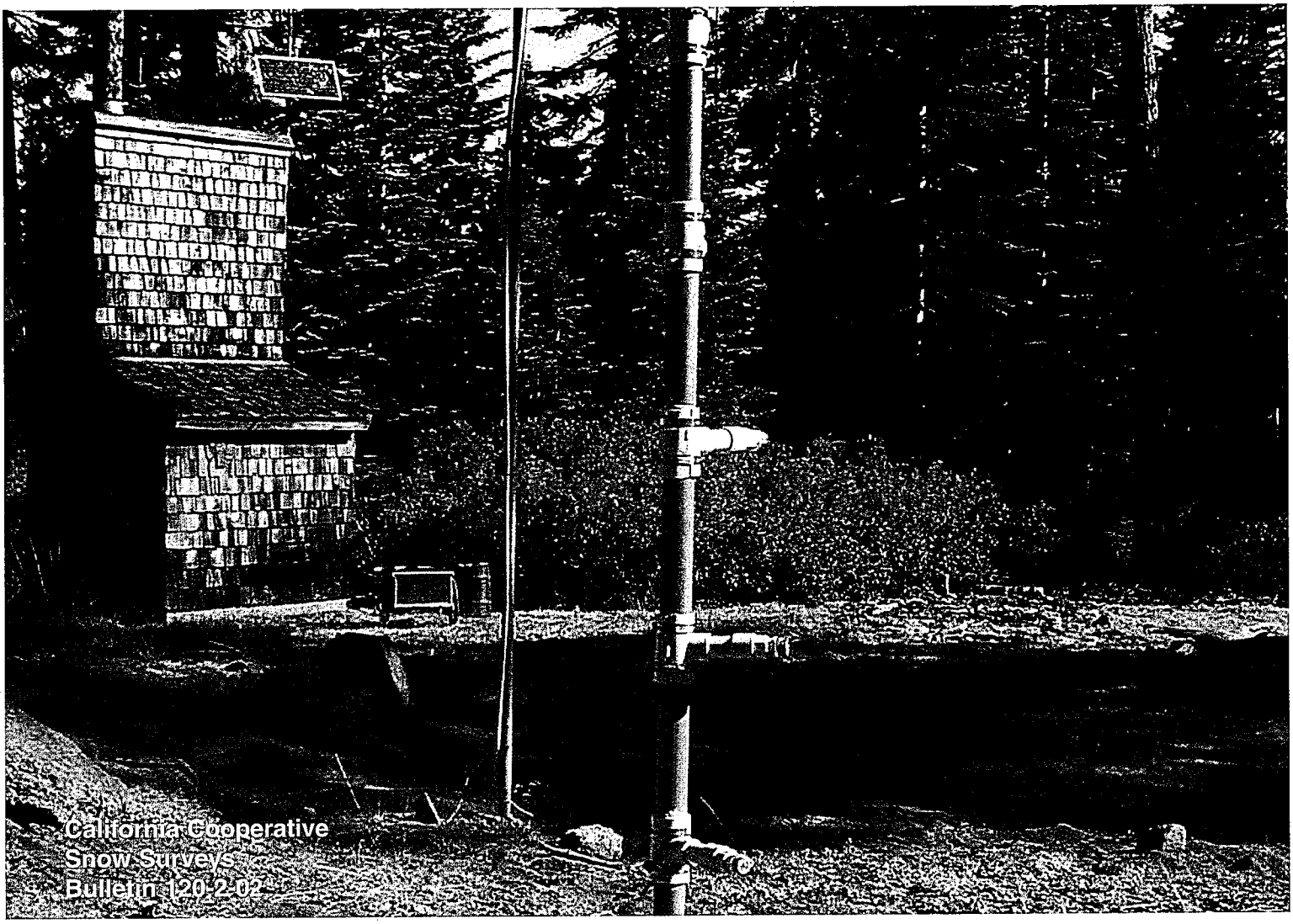

State of California
The Resources Agency

Department of
Water Resources

Water Conditions in California

Report 2 March 1, 2002

Gray Davis
Governor
State of California

Mary D. Nichols
Secretary for Resources
The Resources Agency

Thomas M. Hannigan
Director
Department of Water Resources

STATE OF CALIFORNIA
Gray Davis, Governor

THE RESOURCES AGENCY
Mary D. Nichols, Secretary for Resources

Department of Water Resources
Thomas M. Hannigan
Director

Raymond D. Hart
Deputy Director

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COOPERATING AGENCIES

Public Agencies
Buena Vista Water Storage District
East Bay Municipal Utility District
Eldorado Irrigation 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 Joaquin Exchange Contractors Water Association
South San Joaquin Irrigation District
Tri–Dam Project
Truckee River Basin Water Commission
Tulare Lake Basin Water Storage District
Turlock Irrigation District
Yuba County Water Agency

Private Organizations
J.G. Boswell Company
Kaweah and St. Johns River Association
Kings River Water 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
University of California
Central Sierra Snow Laboratory
Scripps Institution of Oceanography
California Department of Forestry & Fire Protection
California Department of Water Resources

Public Utilities
Pacific Gas and Electric Company
Southern California Edison Company

Federal Agencies
U.S. Department of Agriculture
Forest Service(14 National Forests)
Natural 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

March 1, 2002

Another dry month has reduced the chance of average river runoff this water year. The southern part of the state was particularly dry. Several inches of precipitation fell during storms centered in northern California February 7 and 19 and central California on February 19, but much of the month was dry. As a result runoff forecasts have been reduced and the year is likely to be below average. Hydrologic conditions in northern and central California are appreciably better than last year thanks to a wet November and December. There is still about one fourth of the rainy season left; a couple of good March storms could raise the water supply outlook considerably.

Forecasts of April through July runoff have been lowered about 15 percent from one month ago and are now 80 percent of average overall. The declining gradient from north to south increased during February. Water year forecasts have also been reduced to about 80 percent, but are still higher than the 50 percent actual runoff last year.

Snowpack water content increased about 5 percent during February, considerably less than the average accumulation. The pack is about 95 percent of average for this date, compared to 85 percent last year. The pack is about 80 percent of the April 1 average, which is the date of maximum accumulation.

Precipitation during February was about 45 percent of average statewide. The precipitation since October 1 is now about 90 percent of average compared to 75 percent a year ago. Northern regions fared better in February than did the south.

Runoff so far this season is about 85 percent of average, double the meager 40 percent recorded in 2001. February runoff was 55 percent of average for the month. Estimated runoff of the 8 major rivers of the Sacramento and San Joaquin River regions was 1.7 million acre−feet in February.

Reservoir Storage continued to increase during the month at a pace slightly ahead of average as major reservoir operators stored all the runoff available. Storage is about 100 percent of average for the date overall, approximately the same as last year on March 1.

SUMMARY OF WATER CONDITIONS
IN PERCENT OF AVERAGE

HYDROLOGIC REGION	PRECIPITATION OCTOBER 1 TO DATE	MARCH 1 SNOW WATER CONTENT	MARCH 1 RESERVOIR STORAGE	RUNOFF OCTOBER 1 TO DATE	APR−JULY RUNOFF FORECAST	WATER YEAR RUNOFF FORECAST
NORTH COAST	110	110	95	95	95	95
SAN FRANCISCO BAY	110	−−	95	105	−−	−−
CENTRAL COAST	80	−−	115	50	−−	−−
SOUTH COAST	35	−−	90	10	−−	−−
SACRAMENTO RIVER	100	100	100	85	80	85
SAN JOAQUIN RIVER	90	90	105	60	80	75
TULARE LAKE	85	80	80	65	70	70
NORTH LAHONTAN	85	85	60	55	75	70
SOUTH LAHONTAN	30	80	105	100	80	80
COLORADO RIVER−DESERT	5	−−	−−	−−	−−	−−
STATEWIDE	90	95	100	85	80	80

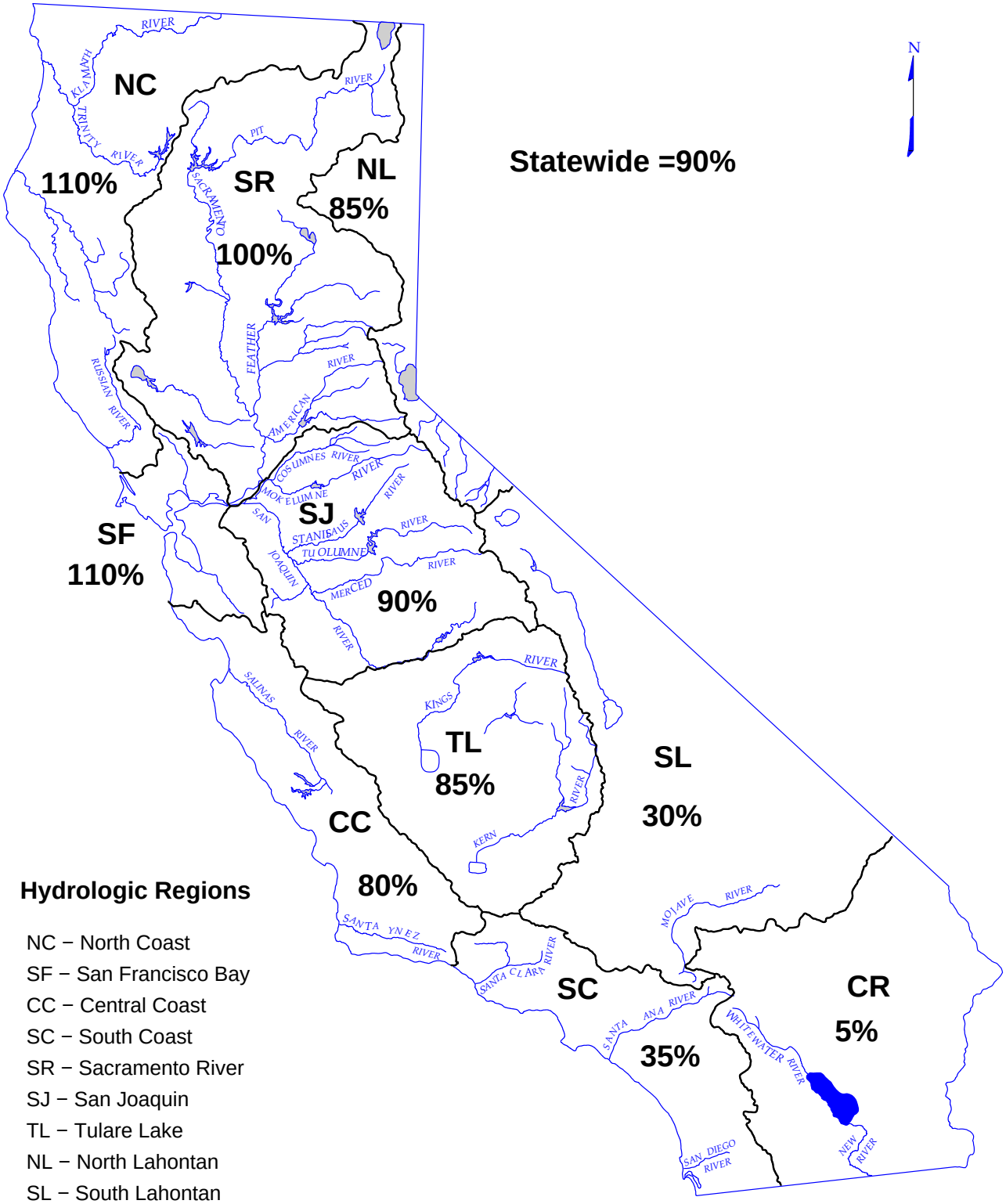
DEPARTMENT OF WATER RESOURCES

CALIFORNIA COOPERATIVE SNOW SURVEYS

SEASONAL PRECIPITATION

IN PERCENT OF AVERAGE TO DATE

October 1, 2001 through February 28, 2002

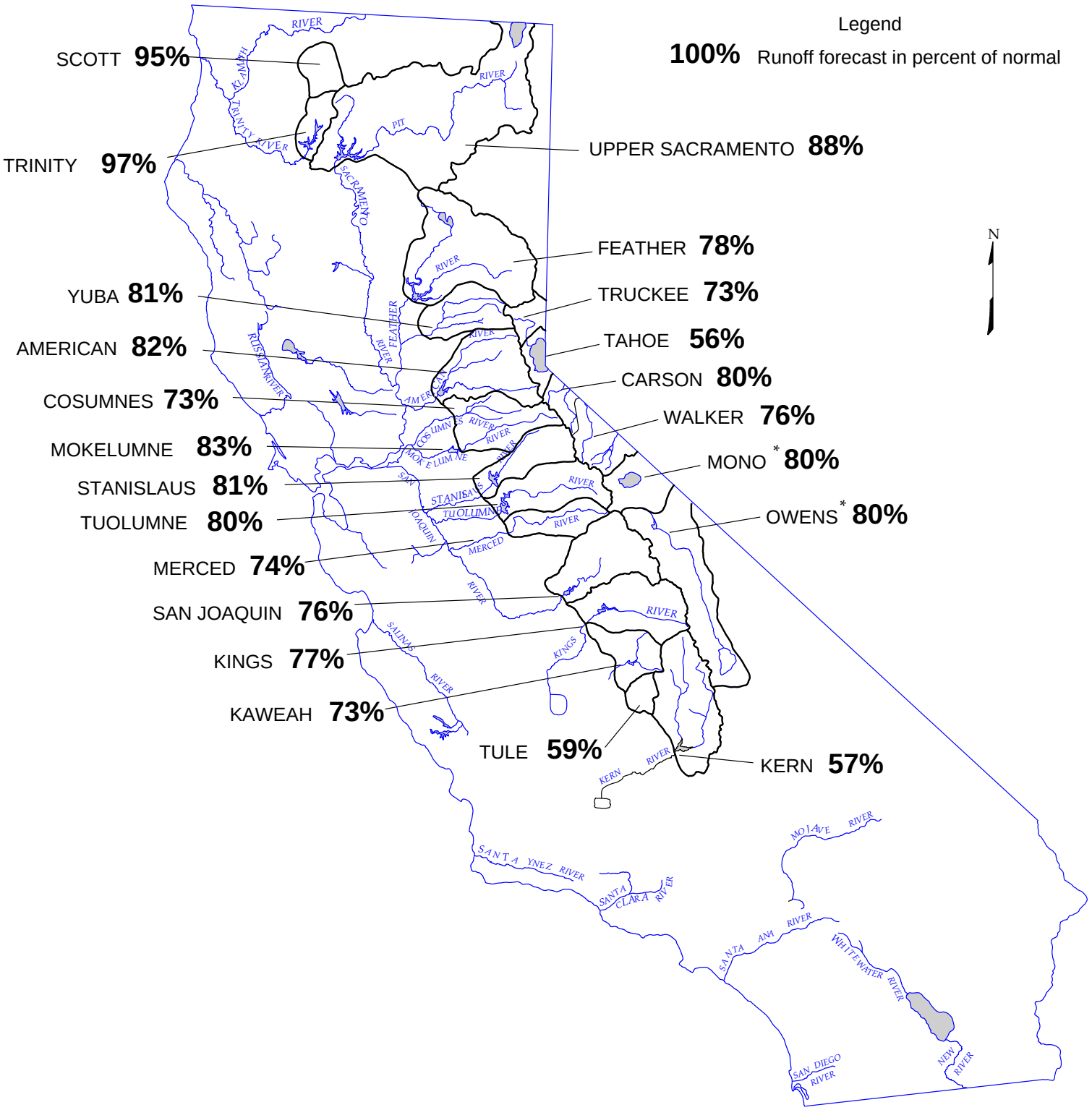


Hydrologic Regions

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

DEPARTMENT OF WATER RESOURCES
CALIFORNIA COOPERATIVE SNOW SURVEYS
FORECAST OF APRIL – JULY
UNIMPAIRED SNOWMELT RUNOFF
March 1, 2002



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

MARCH 1, 2002 FORECASTS
APRIL-JULY UNIMPAIRED RUNOFF

HYDROLOGIC REGION and Watershed	Unimpaired Runoff in 1,000 Acre-Feet (1) HISTORICAL 50 Yr Avg (2)	Max of Record	Min of Record	FORECAST Apr-Jul Forecasts	Pct of Avg	80 % Probability Range (1)
SACRAMENTO RIVER						
Upper Sacramento River						
Sacramento River at Delta above Shasta Lake (3)	299	711	39	260	87%	
McCloud River above Shasta Lake	400	850	185	370	93%	
Pit River near Montgomery Creek + Squaw Creek	1,090	2,098	480	930	85%	
Total Inflow to Shasta Lake	1,849	3,525	726	**1,630**	88%	1,130 - 2,430
Sacramento River above Bend Bridge, near Red Bluff	2,521	5,075	943	**2,160**	86%	1,400 - 3,340
Feather River						
Feather River at Lake Almanor near Prattville (3)	333	675	120	270	81%	
North Fork at Pulga (3)	1,028	2,416	243	800	78%	
Middle Fork near Clio (4)	86	518	4	65	76%	
South Fork at Ponderosa Dam (3)	110	267	13	85	77%	
Feather River at Oroville	1,870	4,676	392	**1,450**	78%	950 - 2,410
Yuba River						
North Yuba below Goodyears Bar (3)	286	647	51	230	80%	
Inflow to Jackson Mdws and Bowman Reservoirs (3)	112	236	25	90	80%	
South Yuba at Langs Crossing (3)	233	481	57	180	77%	
Yuba River near Smartville plus Deer Creek	1,044	2,424	200	**850**	81%	530 - 1,400
American River						
North Fork at North Fork Dam (3)	262	716	43	210	80%	
Middle Fork near Auburn (3)	522	1,406	100	430	82%	
Silver Creek Below Camino Diversion Dam (3)	173	386	37	140	81%	
American River below Folsom Lake	1,282	3,074	229	**1,050**	82%	610 - 1,760
SAN JOAQUIN RIVER						
Cosumnes River at Michigan Bar	130	363	8	**95**	73%	45 - 195
Mokelumne River						
North Fork near West Point (5)	437	829	104	360	82%	
Total Inflow to Pardee Reservoir	469	1,065	102	**390**	83%	260 - 610
Stanislaus River						
Middle Fork below Beardsley Dam (3)	334	702	64	270	81%	
North Fork Inflow to McKays Point Dam (3)	224	503	34	180	80%	
Stanislaus River below Goodwin Reservoir	716	1,710	116	**580**	81%	380 - 900
Tuolumne River						
Cherry Creek & Eleanor Creek near Hetch Hetchy (3)	322	727	97	250	78%	
Tuolumme River near Hetch Hetchy (3)	606	1,392	153	500	83%	
Tuolumne River below La Grange Reservoir	1,230	2,682	301	**990**	80%	710 - 1,480
Merced River						
Merced River at Pohono Bridge (3)	362	888	80	270	75%	
Merced River below Merced Falls	633	1,587	123	**470**	74%	350 - 770
San Joaquin River						
San Joaquin River at Mammoth Pool (6)	1,014	2,279	235	780	77%	
Big Creek below Huntington Lake (6)	95	264	11	70	74%	
South Fork near Florence Lake (6)	202	511	58	160	79%	
San Joaquin River below Millerton Lake	1,262	3,355	262	**960**	76%	640 - 1,470
TULARE LAKE						
Kings River						
North Fork Kings River near Cliff Camp (3)	239	565	50	180	75%	
Kings River below Pine Flat Reservoir	1,234	3,113	274	**950**	77%	630 - 1,410
Kaweah River below Terminus Reservoir	290	814	62	**210**	73%	130 - 350
Tule River below Lake Success	65	259	2	**38**	59%	20 - 80
Kern River						
Kern River near Kernville (3)	373	1,203	83	230	62%	
Kern River inflow to Lake Isabella	470	1,657	84	**270**	57%	150 - 510

(1) See inside back cover for definition
(2) All 50 year averages are based on years 1951-2000 unless otherwise not
(3) 50 year average based on years 1941-9
(4) 44 year average based on years 1936-79
(5) 36 year average based on years 1936-7
(6) 45 year average based on years 1936-8

MARCH 1, 2002 FORECASTS
WATER YEAR UNIMPAIRED RUNOFF

Unimpaired Runoff in 1,000 Acre-Feet (1)

HISTORICAL			DISTRIBUTION								FORECAST			
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)	
888	1,965	165												
1,234	2,353	557												
3,217	5,150	1,484												
6,194	10,796	2,479	2,275	520	800	620	480	300	230	445	**5,670**	92%	4,780	- 7,080
8,990	17,180	3,294	3,835	810	1,050	840	630	400	290	525	**8,380**	93%	7,060	- 10,420
780	1,269	366												
2,417	4,400	666												
219	637	24												
291	562	32												
4,775	9,492	994	1,090	305	510	610	500	220	120	175	**3,530**	74%	2,810	- 4,950
564	1,056	102												
181	292	30												
379	565	98												
2,459	4,926	369	495	170	280	340	350	130	30	35	**1,830**	74%	1,410	- 2,590
616	1,234	66												
1,070	2,575	144												
318	705	59												
2,830	6,382	349	470	220	310	410	430	170	40	20	**2,070**	73%	1,530	- 3,010
409	1,253	20	59	32	60	50	30	10	5	1	**247**	60%	165	- 415
626	1,009	197												
774	1,800	129	85	40	70	120	180	80	10	5	**590**	76%	430	- 860
471	929	88												
1,196	2,952	155	145	55	105	180	240	130	30	15	**900**	75%	670	- 1,310
461	1,147	123												
770	1,661	258												
1,974	4,631	383	245	80	150	250	380	290	70	25	**1,490**	75%	1,170	- 2,080
461	1,020	92												
1,014	2,787	150	105	35	75	120	210	110	30	15	**700**	69%	550	- 1,060
1,337	2,964	308												
112	298	14												
248	653	71												
1,851	4,642	362	155	55	105	200	380	280	100	45	**1,320**	71%	960	- 1,940
284	607	58												
1,736	4,287	386	145	50	100	200	400	260	90	45	**1,290**	74%	920	- 1,830
460	1,402	94	60	17	35	60	90	50	10	8	**330**	72%	230	- 500
153	615	16	30	6	14	17	14	6	1	0	**88**	58%	60	- 150
558	1,577	163												
741	2,318	175	75	20	40	70	90	80	30	25	**430**	58%	300	- 740

* Unimpaired runoff in prior months based on measured flows

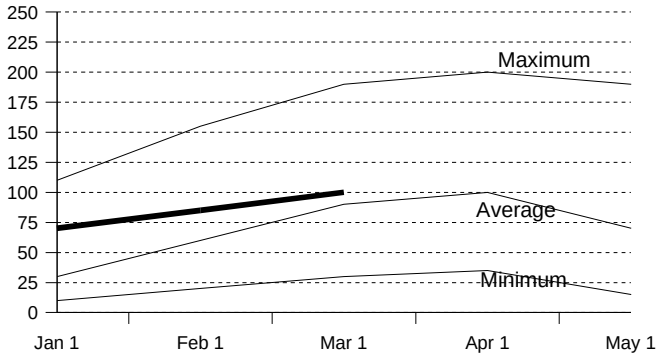
MARCH 1, 2002 FORECASTS
APRIL-JULY UNIMPAIRED RUNOFF

HYDROLOGIC REGION and Watershed	Unimpaired Runoff in 1,000 Acre-Feet (1) HISTORICAL 50 Yr Avg (2)	Max of Record	Min of Record	FORECAST Apr-Jul Forecasts	Pct of Avg
NORTH COAST					
Trinity River					
Trinity River at Lewiston Lake	660	1,593	80	**640**	97%
Scott River					
Scott River near Fort Jones	200	400	30	**190**	95%
Klamath River					
Total inflow to Upper Klamath Lake (3)	515	758	280	**445**	86%
NORTH LAHONTAN					
Truckee River					
Lake Tahoe to Farad accretions	272	713	52	**200**	73%
Lake Tahoe Rise (assuming gates closed, in feet)	1.4	5.4	0.2	**0.8**	56%
Carson River					
West Fork Carson River at Woodfords	55	135	12	**45**	81%
East Fork Carson River near Gardnerville	190	407	43	**150**	79%
Walker River					
West Walker River below Little Walker, near Coleville	153	330	35	**120**	78%
East Walker River near Bridgeport	65	209	7	**45**	69%
SOUTH LAHONTAN					
Owens River					
Total tributary flow to Owens River (4)	235	579	96	**187**	80%

(1) See inside back cover for definition
(2) All 50 year averages are based on years 1951-2000 unless otherwise not
(3) Forecast by U.S. Natural Resources Conservation Service and National Weather Service California-Nevada River Forecast Cer April through Septembe forecast, 30 year average based on yea 1971-2000.
(4) Forecast by Department of Water and Power, City of Los Angeles, average based on yea 1951-2000.

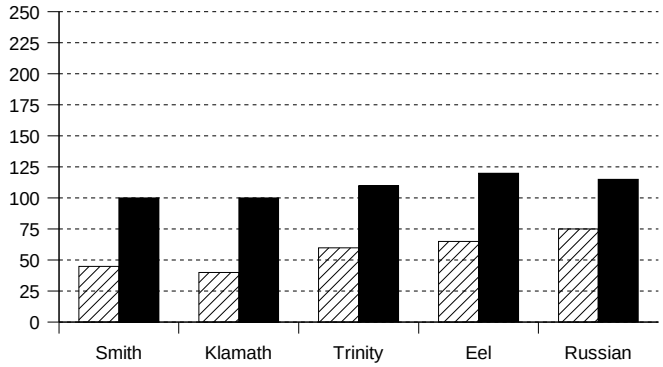
Snowpack Accumulation

Water Content in % of April 1 Average



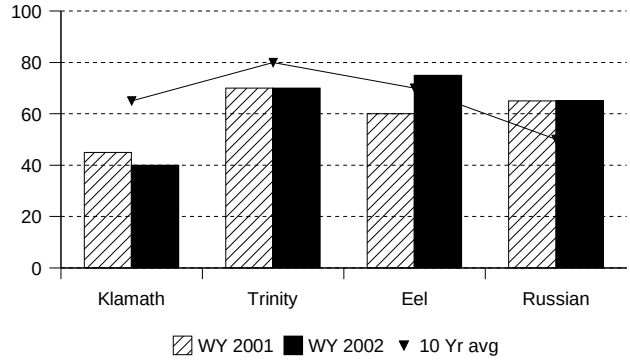
Precipitation

October 1 to date in % of Average



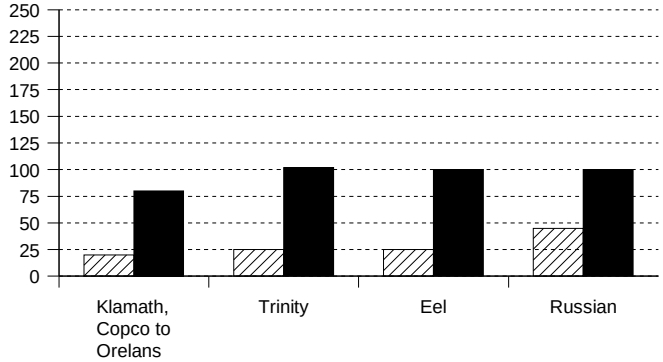
Reservoir Storage

Contents of major reservoirs in % of capacity



Runoff

October 1 to date in % of average



NORTH COAST REGION

SNOWPACK− First of the month measurements made at 11 snow courses indicate an area wide snow water equivalent of 28.4 inches. This is 110 percent of the March 1 average and 100 percent of the seasonal (April 1) average. Last year at this time the pack was holding 22.4 inches of water.

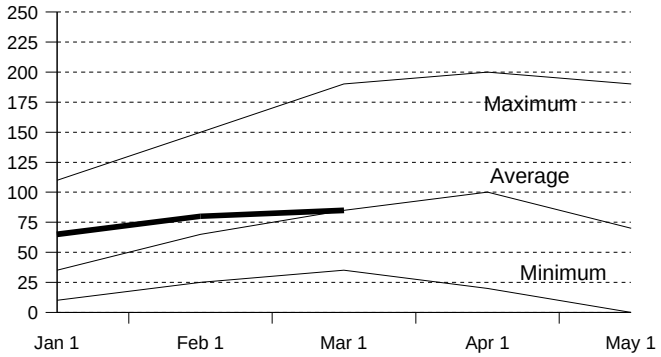
PRECIPITATION − Seasonal precipitation (October 1 through the end of last month) on this area was 110 percent of normal. Precipitation last month was about 80 percent of the monthly average. Seasonal precipitation at this time last year stood at 55 percent of normal.

RESERVOIR STORAGE− First of the month storage in 7 reservoirs was 2.2 million 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 area totaled 7.3 million acre−feet which is 95 percent of the average for this period. Last year, runoff for the same period was 25 percent of average.

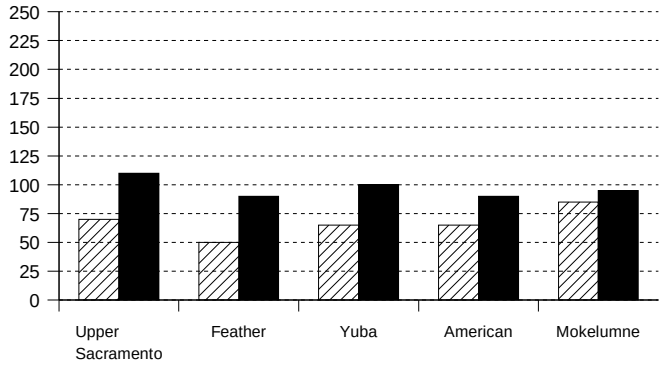
Snowpack Accumulation

Water Content in % of April 1 Average



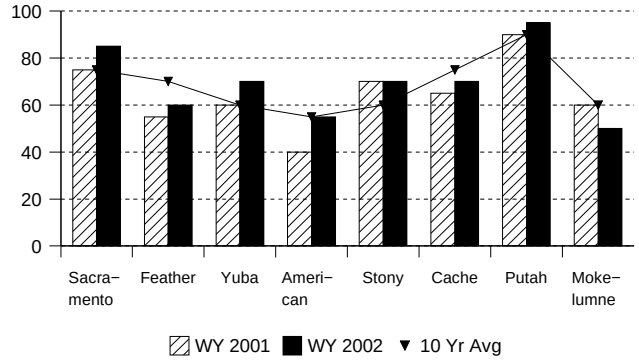
Precipitation

October 1 to date in % of Average



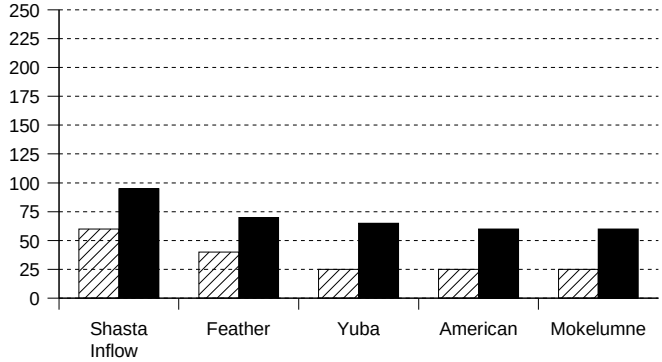
Reservoir Storage

Contents of major reservoirs in % of capacity



Runoff

October 1 to date in % of average



SACRAMENTO RIVER REGION

SNOWPACK− First of the month measurements made at 69 snow courses indicate an area wide snow water equivalent of 26.8 inches. This is 100 percent of the March 1 average and 85 percent of the seasonal (April 1) average. Last year at this time the pack was holding 21.8 inches of water.

PRECIPITATION − Seasonal precipitation (October 1 through the end of last month) on this area was 100 percent of normal. Precipitation last month was about 45 percent of the monthly average. Seasonal precipitation at this time last year stood at 70 percent of normal.

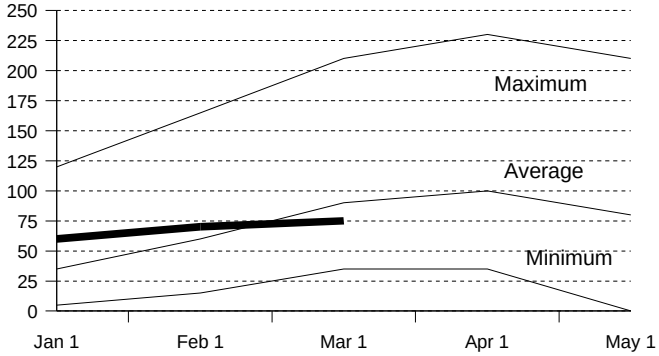
RESERVOIR STORAGE− First of the month storage in 43 reservoirs was 11.5 million acre−feet which is 100 percent of average. About 70 percent of available capacity was being used. Storage in these reservoirs at this time last year was 90 percent of average.

RUNOFF − Seasonal runoff of streams draining the area totaled 7.4 million acre−feet which is 85 percent of average for this period. Last year, runoff for the same period was 50 percent of average.

The **Sacramento Region 40−30−30 Water Supply Index** is forecast to be 6.8 assuming median meteorological conditions for the remainder of the year. This classifies the year as " below normal" in the Sacramento Valley according to the State Water Resources Control Board.

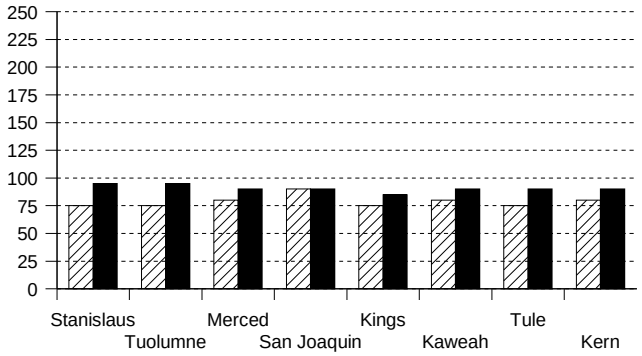
Snowpack Accumulation

Water Content in % of April 1 Average



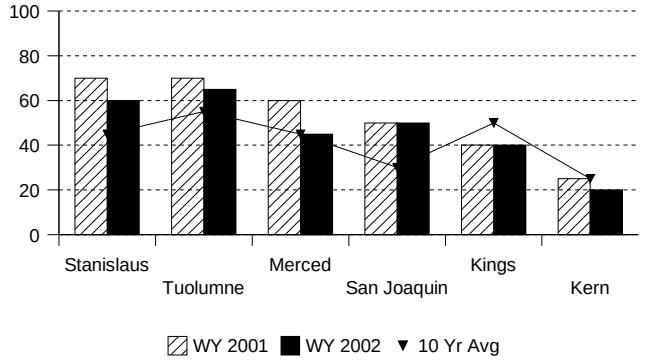
Precipitation

October 1 to date in % of Average



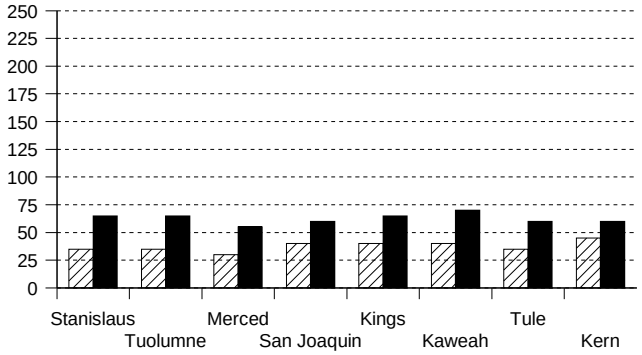
Reservoir Storage

Contents of major reservoirs in % of capacity



Runoff

October 1 to date in % of average



SAN JOAQUIN RIVER AND TULARE LAKE REGIONS

SNOWPACK− First of the month measurements made at 65 **San Joaquin Region** snow courses indicate an area wide snow water equivalent of 25.2 inches. This is 90 percent of the March 1 average and 80 percent of seasonal (April 1) average. Last year at this time the pack was holding 21.7 inches of water.

At the same time 36 **Tulare Lake Region** snow courses indicated a basin−wide snow water equivalent of 17.3 inches which is 80 percent of the average for March 1 and 70 percent of the seasonal average. Last year at this time the basin was holding16.8 inches of water.

PRECIPITATION − Seasonal precipitation (October 1 through the end of last month) on the **San Joaquin Region** was 90 percent of normal. Precipitation last month was about 40 percent of the monthly average. Seasonal precipitation at this time last year stood at 85 percent of normal.

Seasonal precipitation on the **Tulare Lake Region** was 85 percent of normal. Precipitation last month was about 20 percent of the monthly average. Seasonal precipitation at this time last year stood at 80 percent of normal.

RESERVOIR STORAGE− First of the month storage in 34 **San Joaquin Region** reservoirs was 7.3 million acre−feet which is 105 percent of average. About 65 percent of available capacity was being used. Storage in these reservoirs at this time last year was also 110 percent of average.

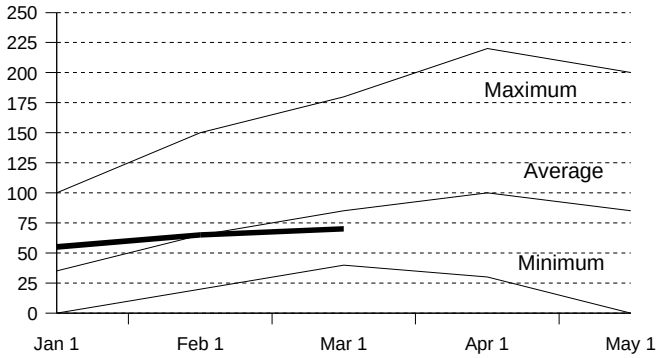
First of the month storage in 6 **Tulare Lake Region** reservoirs was 666 thousand acre−feet which is 80 percent of average and about 35 percent of available capacity. Storage in these reservoirs at this time last year was 85 percent of average.

RUNOFF− Seasonal runoff of streams draining the **San Joaquin Region** totaled 1.1 million acre−feet which is 60 percent of average for this period. Last year, runoff for the same period was 35 percent of average. Seasonal runoff of streams draining the **Tulare Lake Basin** totaled 406 thousand acre−feet which is 65 percent of average for this period. Last year runoff for this same period was 40 percent of average.

The **San Joaquin Region 60−20−20 Water Supply Index** is forecast to be 2.5 assuming median meteorological conditions. This classifies the year as "dry" in the San Joaquin Region according to the State Water Resources Control Board.

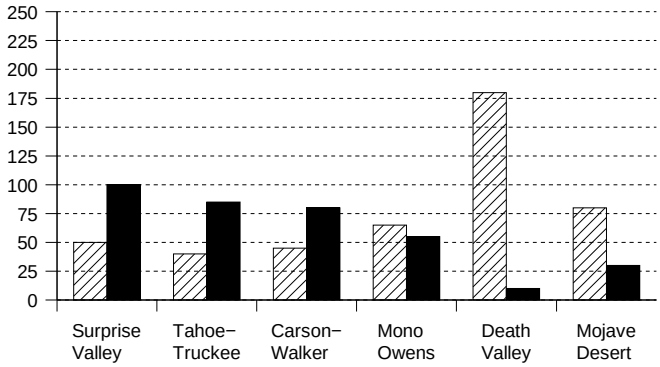
Snowpack Accumulation

Water Content in % of April 1 Average



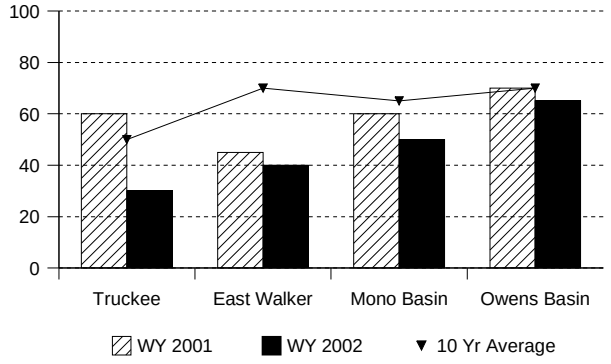
Precipitation

October 1 to date in % of Average



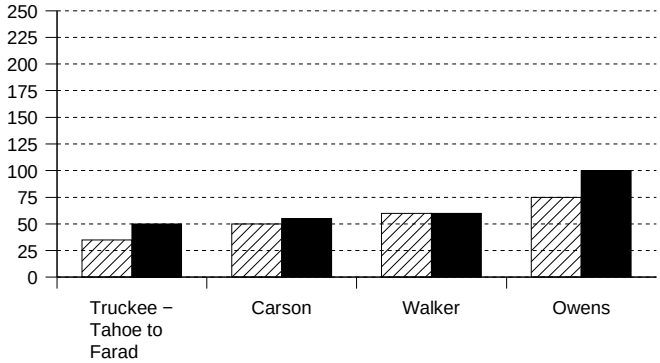
Reservoir Storage

Contents of major reservoirs in % of capacity



Runoff

October 1 to date in % of average



NORTH AND SOUTH LAHONTAN REGIONS

SNOWPACK− First of the month measurements made at 14 **North Lahontan snow** courses indicate an area wide snow water equivalent of 22.6 inches. This is 85 percent of the March 1 average and 75 percent of seasonal (April 1) average. Last year at this time the pack was holding 15.0 inches of water. At the same time 19 **South Lahontan Region** snow courses indicated a basin−wide snow water equivalent of 14.7 inches which is 80 percent of the average for March 1 and 65 percent of the seasonal average. Last year at this time the basin was holding 12.8 inches of water.

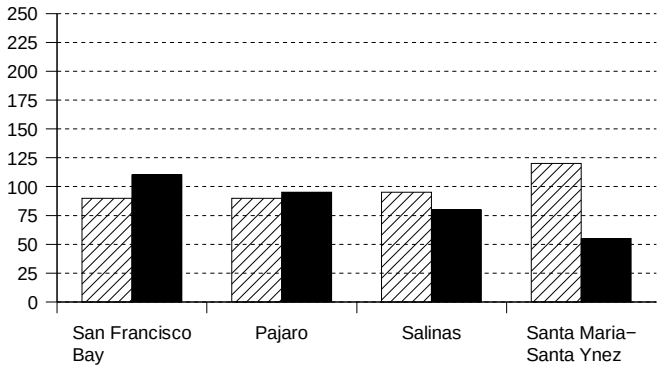
PRECIPITATION − Seasonal precipitation (October 1 through the end of last month) on the **North Lahontan** was 85 percent of normal. Precipitation last month was about 65 percent of the monthly average. Seasonal precipitation at this time last year stood at 45 percent of normal.
Seasonal precipitation on the **South Lahontan** was 40 percent of normal. Precipitation last month was about 10 percent of the monthly average. Seasonal precipitation at this time last year stood at 110 percent of normal.

RESERVOIR STORAGE− First of the month storage in 5 **North Lahontan** reservoirs was 334 thousand acre−feet which is 60 percent of average. About 30 percent of available capacity was being used. Storage in these reservoirs at this time last year was 110 percent of average. Lake Tahoe was 1.2 feet above its natural rim on March 1.
First of the month storage in 8 **South Lahontan** reservoirs was 275 thousand acre−feet which is 105 percent of average and about 70 percent of available capacity. Storage in these reservoirs at this time last year was 110 percent of average.

RUNOFF− Seasonal runoff of streams draining the **North Lahontan Region** totaled 119 thousand acre−feet which is 55 percent of average for this period. Last year, runoff for the same period was 45 percent of average.
Seasonal runoff of the Owens River in the **South Lahontan Region** totaled 55 thousand acre−feet which is 100 percent of average for this period. Last year runoff for this same period was also at 75 percent of average.

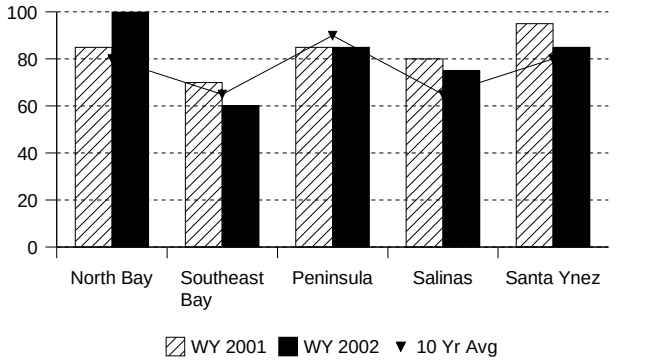
Precipitation

October 1 to date in % of Average



Reservoir Storage

Contents of major reservoirs in % of capacity



Runoff

October 1 to date in % of average

SAN FRANCISCO BAY AND CENTRAL COAST REGIONS

PRECIPITATION − Seasonal precipitation (October 1 through the end of last month) on the **San Francisco Bay Region** was 110 percent of normal. Precipitation last month was about 45 percent of the monthly average. Seasonal precipitation at this time last year stood at 90 percent of normal.
Seasonal precipitation on the **Central Coast Region** was 65 percent of normal. Precipitation last month was about 15 percent of the monthly average. Seasonal precipitation at this time last year stood at 100 percent of normal.

RESERVOIR STORAGE− First of the month storage in 18 **San Francisco Bay Region** reservoirs was 482 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 100 percent of average.
First of the month storage in 6 **Central Coast Region** reservoirs was 743 thousand acre−feet which is 115 percent of average and about 75 percent of available capacity. Storage in these reservoirs at this time last year was 125 percent of average.

RUNOFF− Seasonal runoff of the Napa River in the **San Francisco Bay Region** totaled 57 thousand acre−feet which is 105 percent of average for this period. Last year, runoff for the same period was 40 percent of average. Seasonal runoff of streams draining the **Central Coast Region** totaled 93 thousand acre−feet which is 45 percent of average for this period. Last year runoff for this same period was 50 percent of average.

SOUTH COAST AND COLORADO RIVER REGIONS

PRECIPITATION − October through February (seasonal) precipitation on the **South Coast Region** was 35 percent of normal. February precipitation was 10 percent of the monthly average. Seasonal precipitation at this time last year was 100 percent of normal. Seasonal precipitation on the **Colorado River−Desert Region** was 5 percent of normal and last year's seasonal precipitation on the **Colorado River−Desert Region** was 165 percent of normal. Precipitation in February was 0 percent of average.

RESERVOIR STORAGE − March 1 storage in 29 major **South Coast Region** reservoirs was 1.3 million acre−feet or 90 percent of average. About 65 percent of available capacity was being used. Storage in these reservoirs at this time last year was 90 percent of average. On March 1 combined storage in Lakes Powell, Mead, Mohave and Havasu was about 39.7 million acre−feet or about 95 percent of average. About 75 percent of available capacity was in use. Last year at this time, these reservoirs were storing about 44 million acre−feet.

RUNOFF − Seasonal runoff from selected **South Coast Region** streams totaled 3 thousand acre−feet which is 10 percent of average. Seasonal runoff from these streams last year was 30 percent of average.

COLORADO RIVER − The April −July inflow to Lake Powell is forecast to be 4 million acre−feet, which is 50 percent of average. The March 1 snowpack in the Upper Colorado River basin was 60 percent of average, lowest in the San Juan at 35 percent and highest in the Upper Green at 73 percent.

STATE WATER PROJECT

Total storage in the major SWP reservoirs was about 3.77 MAF on February 28, 2002, compared with 3.2 MAF at this time in 2001. On February 28 storage at Lake Oroville was about 2.12 MAF as compared to about 1.84 MAF last year.

The State's share of San Luis Reservoir storage at the end of February was 1.03 MAF, as compared to about 748 TAF at this time last year. The storage in the State's share of San Luis Reservoir includes approximately 93 TAF of water acquired by the Environmental Water Account.

The combined storage of SWP's southern reservoirs was about 619 TAF on February 28 as compared to 633 TAF at this time last year.

SWP water deliveries through February 2002 were about 344 TAF. This is a combination of project, transfer, and exchange waters. This was about 97 TAF more than February 2001.

Due to significantly drier than average conditions in January and February the SWP allocation has remained unchanged since the January 11 announcement of 45% (1.86 MAF) for most long−term contractors.

CENTRAL VALLEY PROJECT

As of February 28, 2002 CVP storage was 8.7 million acre−feet which is the same as one year ago,and is approximately 118% of normal for that date.

The Bureau of Reclamation announced initial water allocations for the CVP contractors on February 15, 2002. Based on a conservative water supply forecast prepared from information available February 1, 2002, and a water year inflow into Shasta Reservoir of 4.8 million acre−feet, CVP water allocations were: Agricultural contractors North of Delta 100% and South of Delta 55%; Urban contractors North of Delta 100% and South of Delta 80%; Sacramento River water rights and San Joaquin Exchange Contractors 100%; Wildlife Refuges 100%; Friant Contractors will be 75 percent of Class 1 and 0 (zero) percent of Class 2. Updated allocations will be announced in Mid−March.

MAJOR WATER DISTRIBUTION PROJECTS

RESERVOIR STORAGE

(AVERAGES BASED ON 1951-20 OR PERIOD RECORD)

RESERVOIR	CAPACITY 1,000 AF	AVERAGE STORAGE 1,000 AF	STORAGE AT END OF February 2001 1,000 AF	2002 1,000 AF	PERCENT AVERAGE	PERCENT CAPACITY
STATE WATER PROJECT						
Lake Oroville	3,538	2,570	1,842	2,120	82%	60%
San Luis Reservoir (SWP)	1,062	944	747	1,031	109%	97%
Lake Del Valle	77	34	31	34	100%	44%
Lake Silverwood	73	65	69	72	110%	98%
Pyramid Lake	171	163	161	164	101%	96%
Castaic Lake	324	268	305	269	100%	83%
Perris Lake	132	117	99	115	98%	87%
CENTRAL VALLEY PROJECT						
Trinity Lake	2,448	1,853	1,708	1,757	95%	72%
Lake Shasta	4,552	3,342	3,496	3,840	115%	84%
Whiskeytown Lake	241	207	211	205	99%	85%
Folsom Lake	977	551	525	602	109%	62%
New Melones Reservoir	2,420	1,407	1,896	1,587	113%	66%
Millerton Lake	520	341	306	334	98%	64%
San Luis Reservoir (CVP)	971	798	1,050	894	112%	92%
COLORADO RIVER PROJECT						
Lake Mead	26,159	20,793	22,430	19,682	95%	75%
Lake Powell	25,002	19,028	19,023	17,201	90%	69%
Lake Mohave	1,810	1,679	1,657	1,643	98%	91%
Lake Havasu	619	547	593	560	103%	90%
EAST BAY MUNICIPAL UTILITY DISTRICT						
Pardee Res	198	180	168	183	101%	92%
Camanche Reservoir	417	246	281	234	95%	56%
East Bay (4 res.)	147	133	133	130	98%	88%
CITY AND COUNTY OF SAN FRANCISCO						
Hetch-Hetchy Reservoir	360	140	178	124	89%	35%
Cherry Lake	268	118	99	215	182%	80%
Lake Eleanor	26	11	1	6	54%	22%
Souty Bay/Peninsula (4 res.)	225	174	180	144	83%	64%
CITY OF LOS ANGELES (D.W.P.)						
Lake Crowley	183	126	133	130	103%	71%
Grant Lake	48	27	40	32	115%	66%
Other Aqueduct Storage (6 res.)	83	75	63	61	81%	73%

TELEMETERED SNOW WATER EQUIVALENTS

March 1, 2002

(AVERAGES BASED ON PERIOD RECORD)

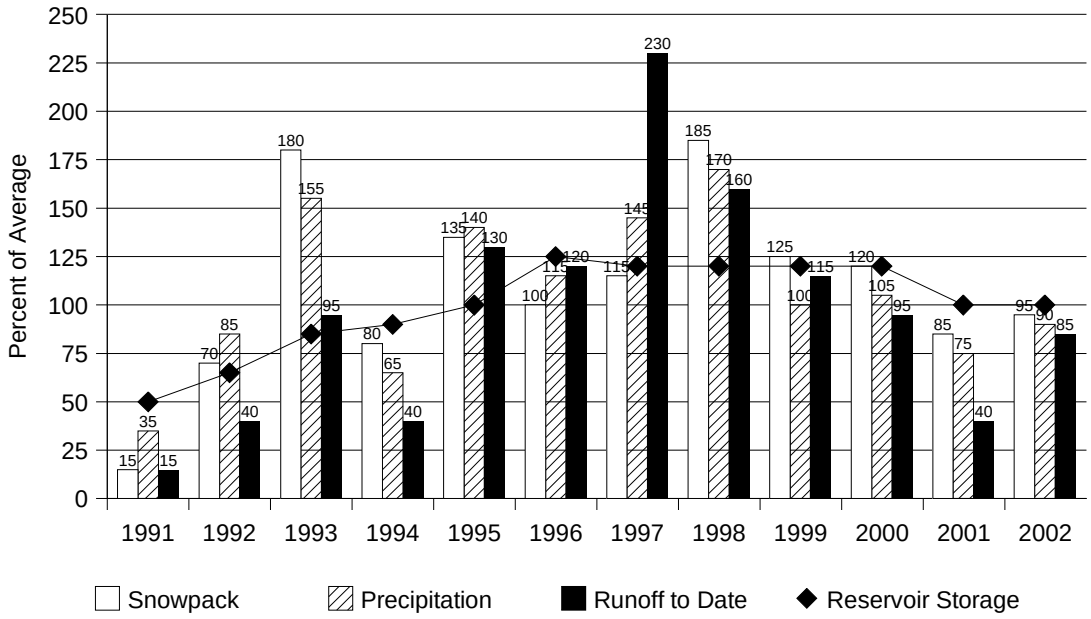
BASIN NAME			INCHES OF WATER EQUIVALENT			
		APRIL 1		PERCENT	24 HRS	1 WEEK
STATION NAME	ELEV	AVERAGE	Mar 1	OF AVERAGE	PREVIOUS	PREVIOUS
TRINITY RIVER						
Peterson Flat	7150’	29.2	29.2	100.1	29.2	28.5
Red Rock Mountain	6700’	39.6	—	—	—	—
Bonanza King	6450’	40.5	31.1	76.7	31.3	30.0
Shimmy Lake	6400’	40.3	—	—	—	—
Middle Boulder 3	6200’	28.3	29.0	102.5	29.0	29.7
Highland Lakes	6030’	29.9	25.1	83.9	25.1	23.6
Scott Mountain	5900’	16.0	18.2	114.1	18.2	18.7
Mumbo Basin	5650’	22.4	—	—	—	—
Big Flat	5100’	15.8	22.4	141.6	22.4	22.3
SACRAMENTO RIVER						
Cedar Pass	7100’	18.1	16.7	92.3	16.7	16.0
Blacks Mountain	7050’	12.7	5.6	44.4	5.6	4.4
Sand Flat	6750’	42.4	30.5	71.9	30.2	30.2
Medicine Lake	6700’	32.6	26.5	81.3	26.5	25.7
Adin Mountain	6200’	13.6	10.8	79.4	10.8	10.5
Snow Mountain	5950’	27.0	28.6	105.8	28.6	28.9
Slate Creek	5700’	29.0	29.8	102.6	30.0	31.4
Stouts Meadow	5400’	36.0	24.7	68.7	24.7	24.8
FEATHER RIVER						
Kettle Rock	7300’	25.5	24.0	94.1	24.0	24.0
Grizzly Ridge	6900’	29.7	20.4	68.7	20.4	21.0
Pilot Peak	6800’	52.6	23.6	44.9	23.9	25.4
Gold Lake	6750’	36.5	28.2	77.3	28.3	28.2
Humbug	6500’	28.0	30.8	109.9	30.8	29.6
Rattlesnake	6100’	14.0	17.8	126.9	17.8	18.5
Bucks Lake	5750’	44.7	38.5	86.2	38.8	39.1
Four Trees	5150’	20.0	26.0	130.2	26.4	27.6
EEL RIVER						
Noel Spring	5100’	—	1.8	—	1.9	4.2
YUBA & AMERICAN RIVERS						
Lake Lois	8600’	39.5	—	—	—	—
Schneiders	8750’	34.5	39.4	114.2	39.3	39.8
Caples Lake	8000’	30.9	22.8	73.8	23.0	23.6
Alpha	7600’	35.9	25.7	71.5	25.6	25.9
Meadow Lake	7200’	55.5	47.6	85.7	47.4	47.7
Silver Lake	7100’	22.7	21.1	93.0	21.5	22.2
Central Sierra Snow Lab	6900’	33.6	26.5	78.9	26.7	28.0
Huysink	6600’	42.6	27.5	64.5	27.5	27.2
Van Vleck	6700’	35.9	31.0	86.2	30.8	31.6
Robbs Saddle	5900’	21.4	15.5	72.3	15.5	15.8
Greek Store	5600’	21.0	23.9	113.7	24.0	24.1
Blue Canyon	5280’	9.0	7.3	81.1	—	—
Robbs Powerhouse	5150’	5.2	10.6	204.0	10.7	11.7
MOKELUMNE & STANISLAUS RIVERS						
Deadman Creek	9250’	37.2	16.2	43.7	16.2	16.1
Highland Meadow	8700’	47.9	35.2	73.5	35.2	35.2
Gianelli Meadow	8400’	55.5	30.8	55.6	30.8	30.6
Lower Relief Valley	8100’	41.2	29.9	72.5	29.9	29.9
Blue Lakes	8000’	33.1	23.5	71.0	23.4	23.3
Mud Lake	7900’	44.9	42.2	94.0	42.2	42.2
Stanislaus Meadow	7750’	47.5	38.5	81.1	38.5	38.5
Bloods Creek	7200’	35.5	25.7	72.3	25.6	25.0
Black Springs	6500’	32.0	21.7	67.8	21.7	21.5
TUOLUMNE & MERCED RIVERS						
Dana Meadows	9800’	27.7	21.3	76.8	21.3	21.1
Slide Canyon	9200’	41.1	30.8	74.9	30.8	31.4
Lake Tenaya	8150’	33.1	25.9	78.2	25.9	25.9
Tuolumne Meadows	8600’	22.6	16.8	74.3	16.8	16.8
Horse Meadow	8400’	48.6	32.1	66.0	32.1	31.4
Ostrander Lake	8200’	34.8	24.2	69.4	24.2	23.5
Paradise Meadow	7650’	41.3	33.8	81.8	33.8	33.8
Gin Flat	7050’	34.2	17.8	52.0	17.8	17.4
Lower Kibbie Ridge	6700’	27.4	18.2	66.4	18.2	19.5

BASIN NAME		APRIL 1	INCHES OF WATER EQUIVALENT	PERCENT	24 HRS	1 WEEK
STATION NAME	ELEV	AVERAGE	Mar 1	OF AVERAGE	PREVIOUS	PREVIOUS
SAN JOAQUIN RIVER						
Volcanic Knob	10050’	30.1	22.2	73.8	22.2	22.2
Agnew Pass	9450’	32.3	17.9	55.6	17.9	19.3
Kaiser Point	9200’	37.8	23.8	63.0	23.9	23.4
Green Mountain	7900’	30.8	13.3	43.2	13.4	13.4
Tamarack Summit	7550’	30.5	17.2	56.4	17.3	18.2
Chilkoot Meadow	7150’	38.0	24.7	65.1	24.8	25.1
Huntington Lake	7000’	20.1	15.2	75.8	15.5	16.0
Graveyard Meadow	6900’	18.8	15.6	83.0	15.7	16.2
Poison Ridge	6900’	28.9	16.1	55.6	16.6	18.6
KINGS RIVER						
Bishop Pass	11200’	34.0	18.0	53.1	18.0	18.0
Charlotte Lake	10400’	27.5	30.5	110.8	30.5	30.5
State Lakes	10300’	29.0	26.1	90.0	26.1	26.4
Mitchell Meadow	9900’	32.9	25.8	78.4	25.7	25.4
Blackcap Basin	10300’	34.3	26.2	76.5	26.2	26.2
Upper Burnt Corral	9700’	34.6	26.6	77.0	26.6	27.3
West Woodchuck Meadow	9100’	32.8	24.9	75.9	24.9	25.0
Big Meadows	7600’	25.9	15.8	61.0	15.9	16.9
KAWEAH & TULE RIVERS						
Farewell Gap	9500’	34.5	29.2	84.6	29.2	29.7
Quaking Aspen	7200’	21.0	16.0	76.1	16.1	16.2
Giant Forest	6650’	10.0	5.5	55.0	6.0	8.6
KERN RIVER						
Upper Tyndall Creek	11400’	27.7	14.7	53.1	14.7	14.8
Crabtree Meadow	10700’	19.8	11.2	56.7	11.2	11.2
Chagoopa Plateau	10300’	21.8	11.5	52.9	11.5	11.5
Pascoes	9150’	24.9	24.0	96.4	24.3	26.8
Tunnel Guard Station	8900’	15.6	6.8	43.8	7.5	8.2
Wet Meadows	8950’	30.3	11.4	37.6	11.4	11.4
Casa Vieja Meadows	8300’	20.9	13.8	65.9	13.8	13.1
Beach Meadows	7650’	11.0	2.9	26.4	3.0	4.0
SURPRISE VALLEY AREA						
Dismal Swamp	7050’	29.2	29.5	101.0	29.6	28.4
TRUCKEE RIVER						
Mount Rose Ski Area	8900’	38.5	32.7	84.9	32.7	32.5
Independence Lake	8450’	41.4	35.5	85.7	35.5	35.5
Big Meadows	8700’	25.7	14.8	57.6	14.5	13.6
Squaw Valley	8200’	46.5	48.0	103.2	48.3	46.9
Independence Camp	7000’	21.8	12.5	57.3	12.4	12.2
Independence Creek	6500’	12.7	10.9	85.8	10.9	10.8
Truckee 2	6400’	14.3	13.5	94.4	13.0	13.0
LAKE TAHOE BASIN						
Heavenly Valley	8800’	28.1	16.4	58.4	16.3	16.2
Hagans Meadow	8000’	16.5	12.2	73.9	12.3	13.0
Marlette Lake	8000’	21.1	16.3	77.3	16.3	16.1
Echo Peak 5	7800’	39.5	33.5	84.8	33.5	34.8
Rubicon Peak 2	7500’	29.1	19.6	67.4	19.6	19.6
Tahoe City Cross	6750’	16.0	11.3	70.6	11.4	12.3
Ward Creek 3	6750’	39.4	31.8	80.7	31.4	29.0
Fallen Leaf Lake	6250’	7.0	4.8	68.6	4.9	6.0
CARSON RIVER						
Ebbetts Pass	8700’	38.8	27.9	71.9	27.6	27.2
Poison Flat	7900’	16.2	14.5	89.5	14.6	14.4
Monitor Pass	8350’	—	11.2	—	11.2	11.0
Spratt Creek	6150’	4.5	0.0	0.0	0.0	2.5
WALKER RIVER						
Leavitt Lake	9600’	—	43.9	—	44.1	44.1
Virginia Lakes	9300’	20.3	11.4	56.2	11.4	11.6
Lobdell Lake	9200’	17.3	10.5	60.7	10.5	10.5
Sonora Pass Bridge	8750’	26.0	17.6	67.7	17.6	17.5
Leavitt Meadows	7200’	8.0	6.7	83.8	6.8	7.4
OWENS RIVER/MONO LAKE						
Gem Pass	10750’	31.7	24.0	75.7	24.0	22.0
Sawmill	10200’	19.4	12.1	62.2	12.1	12.7
Cottonwood Lakes	10150’	11.6	5.7	49.0	5.7	5.7
Big Pine Creek	9800’	17.9	10.3	57.8	10.3	11.0
South Lake	9600’	16.0	10.9	67.9	10.7	10.5
Mammoth Pass	9300’	42.4	29.3	69.1	29.3	29.3
Rock Creek Lakes	10000’	14.0	9.6	68.9	9.6	9.6

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%

March 1 Statewide Conditions



SNOWLINES

The 2002 WESTERN SNOW CONFERENCE annual meeting is shaping up well. Poster papers will still be accepted. It will be held May 20−23 near Denver, CO. For further information contact Frank Gehrke at 916−574−2635 or gridley@water.ca.gov. Information is available on the web at http://snobear.colorado.edu/WSC/WSC.html.

DEPICTED on this month's cover is an array of 12 TidBit temperature data loggers installed by Mike Dettinger at the Gin Flat snow sensor. The temperature histories along with other measurements will be used to examine heat flow in/out of the snowpack. Immediately to the left of this pole the bear net protecting the pillow is visible with the combined instrument and emergency shelter in the background. Gin Flat is part of an intensive network of sensors directed towards a hydroclimatic network in Yosemite National Park.
(Photo by Frank Gehrke)

THIS MONTHS BULLETIN represents the beginning of a new era. All previous issues of the bulletin involved photographing camera ready copy from which the printed copies were created. This and subsequent issues will use a digital file and go direct to press.

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 1951–2000 (50 years, except for data sites established after 1951).

PRECIPITATION – Averages are based on April 1 data for the period 1941–1990 (50 years, except for data sites established after 1941). These averages are in the process of being updated.

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(dry) and the 10 percent exceedence level value(wet). 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 1951–2000.

Reservoir storage averages are based on the period from 1951(or beginning of operation) to 2000.

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 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 Sacramento Valley Water Year Hydrologic Classification (40–30–30 Index). The values *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 San Joaquin Valley Water Year Hydrologic Classification (60–20–20 Index). In a similar manner, the values *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.

Runoff of the eight major rivers of the Sacramento and San Joaquin Regions is the sum of the runoff in the eight major rivers used in the two above indices.

State of California – The Resources Agency
DEPARTMENT OF WATER RESOURCES
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First Class