

California Weather-Hydro Conditions during February 2008

As of March 1, Water Year 2008 statewide hydrologic conditions were as follows: precipitation, 100% of average to date; runoff, 60% of average to date; and reservoir storage, 85% of average for the date. Snowpack water content is about 130% of average to date, and about 110% of the April 1 average—the normal date of maximum accumulation. The February unimpaired runoff rates in all major Sierra basins were well below the normal February average due, in part, to below average precipitation and low snow levels. Many snow sensors in the lower elevations have well over the usual April 1 average. Sacramento River unimpaired runoff observed through February 29, 2008 was about 4.4 million acre-feet (MAF), which is about 53% of average. (On February 28, 2007, the observed Sacramento River unimpaired runoff through that date was about 4.9 MAF or about 59% of average.) The statewide Water Year runoff forecast is about 80%. The statewide April through July snowmelt runoff forecast is about 95% of average, with no large differences between regions.

On March 1, 2008, the Northern Sierra 8-Station Precipitation Index had a seasonal total of 31.5", which is about 90% of the seasonal average to date and about 63% of average for an entire Water Year (50.0"). The Water Year 2007 October through February seasonal total of 31.5" is the 43rd driest year out of 89 years of record (or approximately the median).

January and early February brought significant amounts of precipitation to California, including heavy snowfall in the mountains. Many locations in Northern and Central California now have near average rainfall. In Southern California, many stations are above average. Snow water content in California is almost twice as much as last year at this time. In fact, in almost all regions of the West, the snowpack is much above average. In the Sierra and the Cascades, the snowpack is even higher in percentage of average at low elevations. California's large water supply reservoirs received some inflow from these storms; however, the amounts were muted because much of the precipitation fell as snow. Because of the extremely dry conditions last year, the current long-term, dry hydrologic conditions still prevail. Storage in most of the major water supply reservoirs is still well below average and it would take a significant increase in the snowpack to fill them. The Sacramento and San Joaquin Valley Water Year Type indexes are forecasted to be "Dry" and "Below Normal," respectively.

Selected Cities Precipitation Accumulation as of 03/01/2008 (National Weather Service Water Year: July through June)					
	Jul 1 to Date 2007 - 2008 (in inches)	% Avg	Jul 1 to Date 2006 - 2007 (in inches)	% Avg	% Avg Jul 1 to Jun 30 2007 - 2008
Eureka	28.72	103	29.26	105	75
Redding	22.92	96	18.51	77	68
Sacramento	13.62	100	8.78	65	75
San Francisco	15.29	99	10.43	68	76
Fresno	8.08	103	4.52	58	71
Bakersfield	2.31	53	2.11	48	35
Los Angeles	13.37	121	2.42	22	88
San Diego	6.74	88	3.30	43	62

Key Reservoir Storage (1,000 AF) as of 03/01/2008								
Reservoir	River	Storage	Avg Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	1,494	1,858	80	2,448	61	---	954
Shasta Lake	Sacramento	2,679	3,394	79	4,552	59	-1,348	1,873
Lake Oroville	Feather	1,463	2,537	58	3,538	41	-1,593	2,075
New Bullards Bar Res	Yuba	580	626	93	966	60	-216	386
Folsom Lake	American	378	557	68	977	39	-255	599
New Melones Res	Stanislaus	1,534	1,444	106	2,420	63	-436	886
Don Pedro Res	Tuolumne	1,355	1,439	94	2,030	67	-335	675
Lake McClure	Merced	317	536	59	1,025	31	-354	708
Millerton Lake	San Joaquin	266	346	77	520	51	-172	254
Pine Flat Res	Kings	351	535	66	1,000	35	-477	649
Isabella	Kern	133	181	74	568	23	-122	435
San Luis Res	(Offstream)	1,774	1,768	100	2,039	87	---	265

The latest National Weather Service Climate Prediction Center (CPC) long-range weather outlook for March 2008, issued February 29, 2008, is forecasting above average precipitation for Northern California and below average precipitation for parts of Central and all of Southern California. Average rainfall is forecast for most of Central California.

The pattern of this year's long-range forecast is influenced by the continuing development of moderate La Niña conditions (cooler than average sea-surface temperatures) across the tropical Pacific. Current conditions suggest that La Niña conditions have peaked, but may continue into spring, possibly longer. This La Niña is the strongest in 8 years, and is in the top third of such events. Forecasts are for it to continue at least at moderate strength through April, May, and June.

La Niña events influence the position and strength of the jet stream over the Pacific Ocean, which in turn affects the winter precipitation and temperature patterns across the United States and other locations in the world. La Niña conditions, in general, favor a wetter than average Pacific Northwest and a drier than average American Southwest. California sits in the transition zone with the northern mountains of the State potentially wetter than average, and the Central Valley and Southern California potentially drier than average. In addition, during La Niña years, weather in Northern California can be highly variable, with both wet and dry scenarios possible. Southern California has a more consistent tendency toward dryness, suggesting that drought conditions are likely to persist in that region and the American Southwest, despite the above average precipitation the region has received so far this Water Year.