PA Exhibit

Department of Water Resources
Department of Food and Agriculture



# & CALIFORNIA'S ROUGHT

MATTER CONDITIONS & STRATEGIES
TO REDUCE IMPACTS

ort to the Governor March 30, 2009

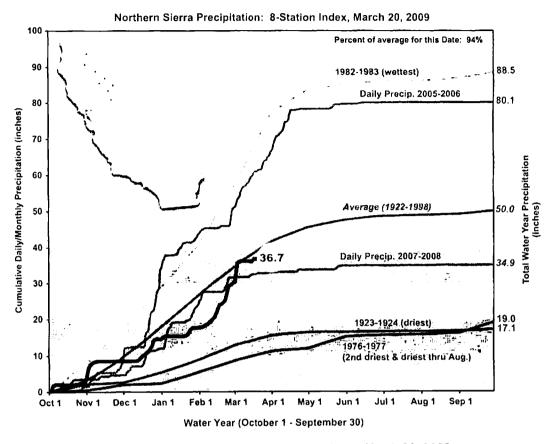


Figure 1. Northern Precipitation: 8 Station Index, March 20, 2009

# **Snowpack**

Sierra snowpack represents one-third of California's water supply. The state's snowpack levels also benefited greatly from the influx of water in February and March 2009. As of March 27, 2009, statewide snowpack levels have reached 87 percent of average. April 1 is historically considered the peak of the snowpack development and the beginning of the snowmelt period.

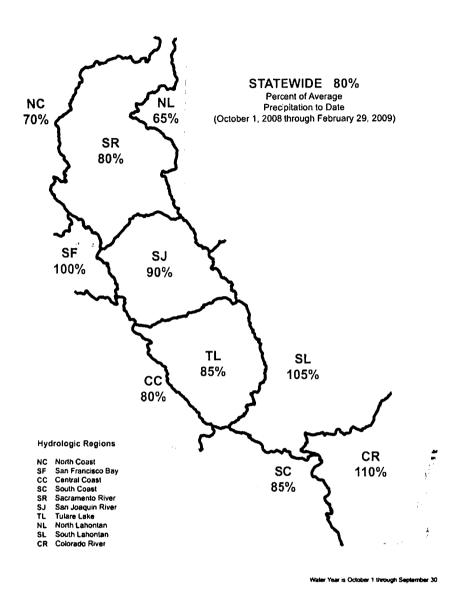


Figure 2. This season's precipitation, percent of average

#### **Reservoir Storage**

Over the last two months, the state's reservoirs gained nearly 3 million acre-feet of storage. Smaller reservoirs like Friant and Folsom were able to fill to their current flood control limits. However, the state's largest reservoirs, which are major water supply sources for the state and federal water systems, Lake Shasta and Lake Oroville, still remain significantly below average. Although Lake Shasta gained over 1 million acre-feet of storage from the February and March rains, it remains 860,000 below its average end-of-March storage. Oroville, after gaining 600,000 acre-feet of storage from the storms, remains 795,000 acre-feet short of its average for the end of March. The current condition of the state's larger reservoirs is shown in Figure 3.

#### **Runoff Forecasts**

Beginning in April, many of the state's reservoirs shift from flood control to water supply operations. Runoff from the spring snowmelt is captured for use later in the season. In terms of water year runoff, the past two years and projections for this water year rank among the top eight driest for the Sacramento and San Joaquin basins.

Water year 2006-07 ended with 53 percent of average statewide runoff. Sacramento River region was classified as "Dry." and the San Joaquin River region was classified "Critical." Water year 2007-08 ended with 58 percent of average statewide runoff. and both the Sacramento and San Joaquin River regions were classified "Critical." Water year 2008-09 is expected to yield more runoff than 2007-08 with a forecast of 70 percent of average. The March 1, 2009, forecast had been for both regions to be classified as "Critical" at the end of this water year, though current snowpack and runoff may improve these forecasts. Estimates now are that the April 1 projections will project that both river regions will end the water year "Dry."

The present drought period—water years 2007, 2008, and 2009 to date—is shorter in duration than California's most significant statewide multiyear droughts (1929–34 and 1987–92) and less severe in single-year intensity than 1977, when estimated statewide runoff reached a record low.

# CURRENT RESERVOIR CONDITIONS

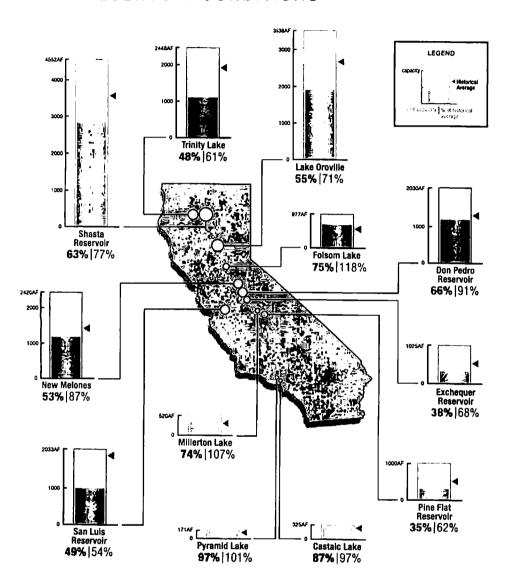


Figure 3. Reservoir levels for selected reservoirs on March 28, 2009

Figure 4 shows a comparison of statewide runoff from 2006-09. The impact of the below-average runoff will be smaller for the reservoirs that are closer to their average storage. Reservoirs with significant storage deficits like Shasta and Oroville will not recover this year. In basins that lack significant snowmelt such as the Russian River, further gains in reservoir storage will only be realized with additional spring storms.

# **Groundwater Basin Conditions**

DWR monitors groundwater levels in some groundwater basins and relies on local agencies to conduct the monitoring in other parts of the state. The current data shown in Figure 5 indicate that some groundwater levels are comparable to previous drought periods (1976-77 and 1991-92).

# Statewide Runoff

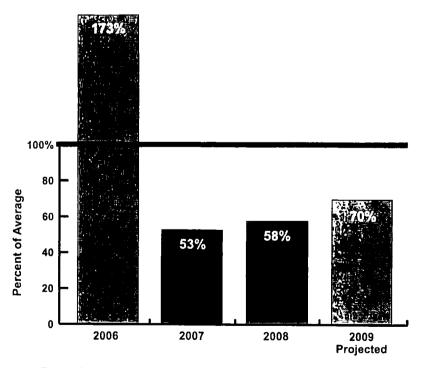


Figure 4. Statewide runoff for water years 2006, 2007, 2008, and projection as of March 27, 2009