

Water supply: so far, snow good

Peter Fimrite, San Francisco Chronicle, 3-4-10

Californians are experiencing a unique kind of drought - one in which there appears to be plenty of water to squirt around.

Repeated deluges have replenished many reservoirs and blanketed the Sierra with snow, ensuring that there will be at least an average amount of runoff in the spring.

And the state's third monthly survey of snow in the Sierra showed Wednesday that the water content of the snowpack is 107 percent of average statewide for this time of year. Last year at this time, it was just 80 percent of average.

Despite this bounty, the California Department of Water Resources is reluctant to declare an end to the state's three-year drought.

"February was a below-average month" for rainfall and snow, explained David Rizzardo, the chief of snow surveys for the Department of Water Resources. "So if you look at that bigger picture, things haven't improved. The recent storms have definitely slowed the bleeding of the drought, but we still have a good month of precipitation to go here before we can really determine where we stand."

The real pool-party pooper is Lake Oroville, the State Water Project's primary source of drinking water, which is only 40 percent full. That's 55 percent of the average storage for this date even after repeated winter deluges heaped snow all over the mountains.

Oroville provides drinking water to about 25 million Californians and irrigates 700,000 acres of farmland. Water officials hope melting snow in the northern Sierra will fill up the reservoir, but they won't know until April, when the snowpack reaches its historic peak.

Still, Wednesday's monthly trek into the high country to measure the Sierra snowpack indicates that the state's water supply is doing pretty well. The water content was 102 percent of the average for this time of year in a field next to the privately owned cabin known as Phillips Station, a 6,800-foot elevation spot where the department traditionally announces the results of the snow surveys.

The water content was 94 percent of average at 7,600-foot Alpha; 105 percent of average at 6,700-foot Lyons Creek; and 112 percent at Tamarack Flat, which is at 6,500 feet.

Those four locations, located off Highway 50 near Echo Summit on the way to Lake Tahoe, are averaged with electronic measurements taken elsewhere in the state to come up with the statewide figure of 107 percent of average.

Estimating the supply

The measurements are done so that water agencies will be able to anticipate how much water will be available for consumption. It is an effective measure because the vast majority of California's water supply takes the form of snow during the winter.

The monthly surveys, which have been conducted from January through May for more than 80 years, are fed into a statewide database with survey information from 300 locations collected by 50 other agencies, including the California Department of Forestry and Fire Protection, the U.S. Forest Service, several municipalities and water agencies, and PG&E.

Most eyes are on the measurements in the northern Sierra, where the snowpack is 126 percent of normal. Rain and snow runoff in the northern Sierra and Cascade regions feeds the state's largest reservoir, Shasta Lake, which, at its current 75 percent capacity, is at 101 percent of average for this date.

The federal Central Valley Project uses water from Shasta to irrigate about 3 million acres of farmland from Redding to Bakersfield and provide drinking water for close to 2 million people. The relative abundance at Shasta may explain why the U.S. Bureau of Reclamation decided last week to increase the amount of water it will provide to farmers this year.

Feeding Lake Oroville

A different part of the northern Sierra feeds Lake Oroville, the second-largest reservoir, oriented more toward urban and industrial uses. The reservoir, which relies almost entirely on snowmelt, would need close to 2 million acre feet more water before it reaches average storage. One acre-foot is enough water to cover an acre in one foot of water, the amount used by a typical family of four in one year.

As of Wednesday, the central Sierra's snowpack was 93 percent and the southern Sierra was 109 percent of average.

The snow that melts in the spring and summer in the Sierra contains up to 60 percent of California's water, which is used to irrigate some 9 million acres of farmland and quench the thirst of 36 million people.

Changes in allotments

The drought, which left what amounted to puddles in the state's largest reservoirs, caused the state and federal governments to drastically reduce water allotments, forcing residents to ration water and farmers to leave fields fallow. Federal protection of fish like the chinook salmon and the endangered delta smelt have also forced reductions in the amount of water pumped out of the Sacramento-San Joaquin River Delta.

The situation has improved to the point that fisheries analysts are predicting a large increase in the number of chinook salmon in the Sacramento River system this fall after record low numbers the past two years forced bans on ocean fishing.

Recent increases in state and federal allotments of water prompted Sen. Dianne Feinstein to rescind her threat to bypass the Endangered Species Act to get farmers more water.