

✓ WEATHER SJM 12-25-90 1A

PUBLIC LIBRARY
SANTA CRUZ

PUBLIC LIBRARY
SANTA CRUZ

Frozen legacy at home, on farm

Growers try to save crops

By Lee Gomes and Michelle Levander
Mercury News Staff Writers

Jeff Brothers of Watsonville tried warming his calla lilies with propane furnaces. Kirk Williams of the Salinas Valley foothills took to the air, sending five helicopters hovering to create a warm draft through his avocado farm.

Both farmers were fighting what turned out to be a losing battle against the cold that has numbed Northern California since last week.

■ **IT'S COLD EVERYWHERE:** *The East gets its own dose of frigid weather after enjoying a balmy December. Page 8A*

■ **WHAT HIT US?** *A graphic look at why Northern California got so cold. Back Page*

While a break in the record-setting icy weather is expected starting today, it will come too late for much of the state's agriculture industry, which is bracing for hundreds of millions of dollars in losses from what many are calling the worst cold spell in memory.

Consumers, too, should be bracing for
See CROP DAMAGE, Back Page



Jason M. Grow — Mercury News

Ken Hanford and daughter Brittany, 6, fill containers Monday at a Boulder Creek fire hydrant.

Mountain residents facing Christmas without water

By Esther Schrader
Mercury News Staff Writer

Hauling water home in a wheelbarrow from a swimming pool a mile downhill for the makings of Christmas dinner seemed ruggedly romantic to 14-year-old Troy Rush when he started out Monday.

But with Troy and his family going on their fourth day without showers, and his mother's formal Christmas meal replaced by cold salads and paper plates, the mountain life doesn't seem like such a

frolic anymore.

"It was kind of fun at first; I mean, we're living like real mountain boys," he said of his Christmas without running water as he pointed wistfully up a series of switchbacks to his house. "But we're tired of it now."

Troy and his family aren't the only ones without the water to wash their plates this Christmas. They and more than 10,000 other residents of the San Lorenzo Val-

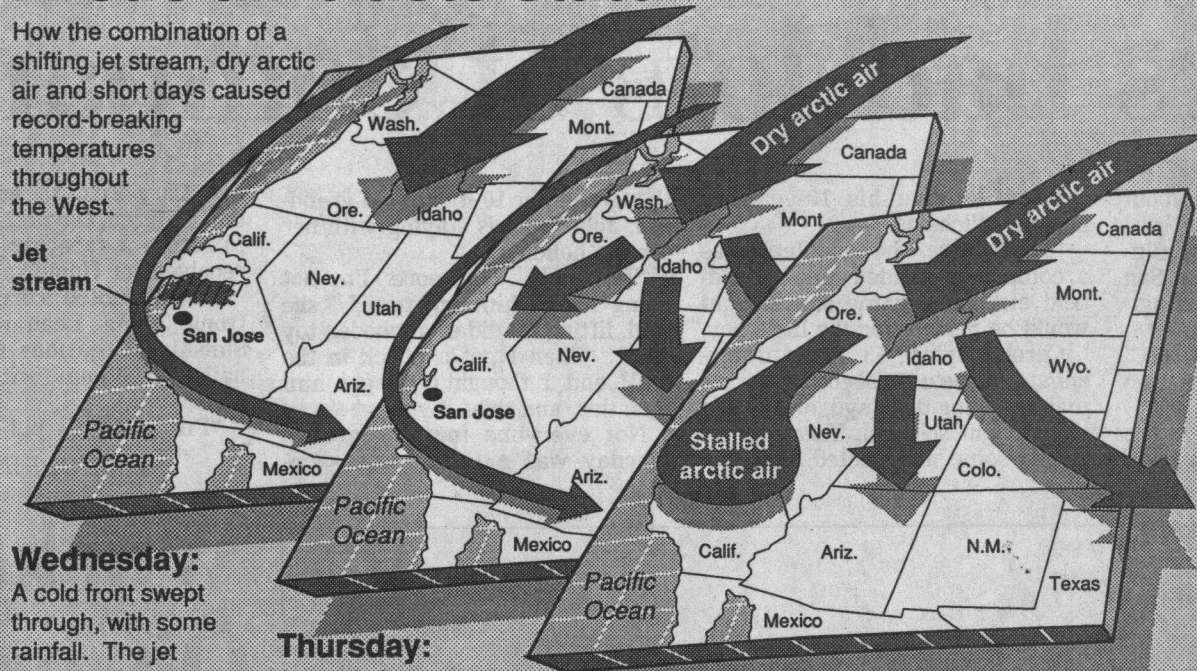
See WATER, Back Page

Crop damage will hit consumers

Arctic air blasts state

How the combination of a shifting jet stream, dry arctic air and short days caused record-breaking temperatures throughout the West.

Jet stream



Wednesday:

A cold front swept through, with some rainfall. The jet stream shifted so it was running north-south, rather than the usual east-west direction. The jet stream, the upper atmosphere river of air that follows an undulating path around the globe, guides air masses and storms.

Thursday:

An arctic front, guided by the jet stream, reached the Bay Area about late morning to midday. In the wake of the front was dry, cold air, which moved down through Alaska and Canada, and flowed into the United States.

By the weekend:

The cold air mass could not be moved out due to a weakening jet stream. The sunlight did not have a warming effect because these were the shortest days of the year, about 9 1/2 hours of daylight. More cold air from the Arctic flowed into the United States over the Rockies, then the Midwest and the East Coast.

The forecast:

No change for the next couple of days. Sunshine will slowly moderate the cold. **What's needed:** strong winds out of the west from over the water.

Record low temps

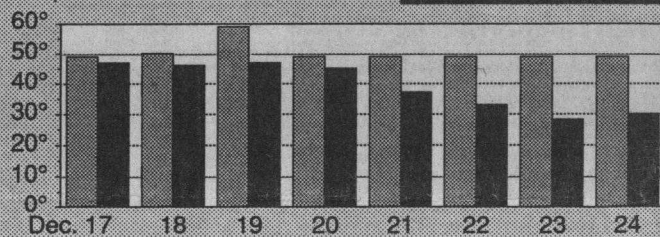
Set across the Bay Area Monday

City	Old record	New record
San Francisco	34° (1979)	32°
Oakland	36° (1985)	34°
Moffett Field	29° (1948)	26°
San Jose	24° (1930)	23°

Source: Associated Press, Mercury News weather services

Below average*

A week of below normal temperatures for San Jose



* Average temperature is determined by adding the days' high and low temperatures and then dividing the sum in half.

Ron Coddington — Mercury News

Market prices likely to rise in cold's wake

CROP DAMAGE, from Page 1A

higher supermarket prices on oranges, avocados and other California winter crops — though it was unclear Monday when prices will go up or how much they will rise.

With the thermometer hitting 23, San Jose set another record low early Monday, as did Moffett Field Naval Air Station with 26, San Francisco with 32 and Oakland with 34.

In fact, the weather has been so cold that records have been set for the number of records set, such as in San Francisco, which Monday marked the fourth day of sub-32-degree weather, tying a record from 1888.

Ross Dickman, a forecaster with the National Weather Service in Redwood City, said a warming trend is in the works, with daytime temperatures in the area being the first to return to more normal levels. Today, for example, highs are expected to reach the 50s.

But freezing temperatures could continue for several more nights, he said.

That's bad news for the state's farmers, many of whom already have seen a season of work turn to ice.

May be worst ever

"It's the most extensive damage I've seen, ever," said Clark Briggs of the California Farm Bureau Federation, which represents about 45,000 farmers.

Williams, for example, was up all night Friday and Saturday walking in the 20-degree weather on his 400 acres, sometimes directing the helicopters flying above by walkie-talkie. He guessed that most of his \$750,000 avocado crop was killed by the frost and that 30 percent of his trees perished.

"You plant all the trees," he said, "and they are your babies. It



Associated Press

CHILLED CITRUS — Icicles surround oranges in this grove near Riverside.

puts you through an ordeal to see them die."

Virtually all agricultural experts were expecting supermarket prices to go up, though no one was willing yet to predict how much.

Some said the price increases might be mitigated by other forces. For example, Jim Rickert, past president of the American Society of Farm Managers and Rural Appraisers, said imports from other states and Mexico and Chile could help boost supply, as could a decision by California farmers to sell more of their crop in California rather than shipping it to Japan, as they are doing increasingly often.

Oranges hit hardest

The brunt of the agricultural losses was borne by growers of oranges, which are a year-round, \$700-million-a-year crop in California, the nation's second-largest orange producer behind Florida.

Oranges can be damaged by just four hours of sub-25-degree temperatures, and the cold spell caught the state with 80 percent of its winter navel orange crop still on the trees. Up to half of it was destroyed, said Ron Radenz, a stat-

istician in the U.S. Department of Agriculture.

If picked right after freezing, frozen oranges can still be used for juice, though they command only a third as much money as table oranges. Growers won't know until later in the week whether their orange trees themselves — which can cost \$1,000 an acre to replace — were also killed by the cold.

The state's \$200 million avocado industry was also badly damaged by the cold, Radenz said. Lettuce farms also suffered, but in many cases, thawed lettuce can still be sent to market with its outer leaves removed.

Locally, nursery farmers in southern Alameda and Santa Clara counties lost some of their small plants, while a number of outdoor flower growers in San Mateo County were badly hurt, as were broccoli, celery and cauliflower farmers in Monterey County.

A state-sponsored program of low-interest loans for farmers is expected to be announced later this week or early next week, Radenz said.

Households, too, are likely to see plant losses from the cold, said Michael A. Greene, Alameda County agriculture commissioner.

Homeowners with citrus trees were advised to wait until spring to prune them, since even trees that appear badly damaged can recover.

Besides damaging crops outright, the cold could have more subtle effects on agriculture — and shoppers' pocketbooks — in coming weeks, say farm experts. Cows, for example, are often kept outdoors, and they produce less milk in extremely cold weather because they must spend much of their energy staying warm.

While adult cows can handle extreme weather, young animals cannot, and a number of calves on some farms in the northern part of the state froze to death as soon they were born.

Staff Writer Esther Schrader at Mercury News wire services contributed to this report.