



Flood-induced erosion threatens the 16th green at Whitehawk Ranch Golf Club.

California hit hard by heavy rains

By DOUG SAUNDERS

In the aftermath of unprecedented flooding that began on New Year's Day, California has been ringing out the old year and "wringing" in the new. More than 40 inches of rain fell here in the High Sierras during a six-day period, soaking a snowpack that was 10 feet deep. This dangerous combination of snow and rain ripped down through river valleys with awesome force.

By week's end more than 100,000 people had been evacuated from their homes as

levee breaks and raging rivers turned 37 of the state's 58 counties into disaster areas. Not surprisingly, many of the region's golf facilities were also effected by the onslaught of the rampaging waters, as local courses experienced heavy silt deposits and water up to three feet deep on the fairways.

"The Carson River was 150 yards wide as it flowed through my golf course," said Jed Anderson of Genoa Lakes in Genoa, Nev. "I had five holes totally engulfed by the river when it spilled over the banks. I was left with quite a bit of debris on the course but no major damage."

Craig Pearson at Whitehawk Ranch, a newly opened course in the Feather River watershed, was not as fortunate.

"The Sulphur Creek, which borders our back nine, is a stream that usually dries up in late fall," Pearson explained. "We picked up 15 inches in the three days around New Year's and the creek was 100 yards wide and out of control. The heavy flow washed away three holes on the back. The 16th hole, which is 15 feet above the creek, was completely washed away, as well as the bunkers around the green. We will have to do some major rebuilding before we reopen in May."

At the Resort at Squaw Creek in Squaw Valley, mud slides off the adjacent mountain sides did heavy damage on the 2nd, 4th and 13th holes, and also destroyed a stretch of floating bridges.

"My course was also impacted by mud slides from a mountain side a half-mile away that dumped debris and silt on the course," said Superintendent Mike Carlson. "I still have a foot of snow on the ground so I can't really see all of the damage."

The same was true for the other mountain courses that have streams running through their layouts. Luckily, most mountain facilities are routinely closed until May anyway, giving superintendents the needed time to make repairs.

However, these mountain torrents headed downhill and quickly filled reservoirs, placing pressure directly on the flood-control dams. Oroville Dam on the Feather River, Shasta Dam, and Folsom Dam on the American River filled to near capacity in just a few days. It was the continuing runoff that forced the hand of water officials — resulting in water releases at record rates.

The first round of evacuations came in the town of Yuba City below Oroville Dam. The town is bordered by levees that control the Feather River. At Peachtree Golf Club, head superintendent Tim Thilo was ready for water on his course because it is built in an old river bed. But he couldn't believe how quickly the water rose.

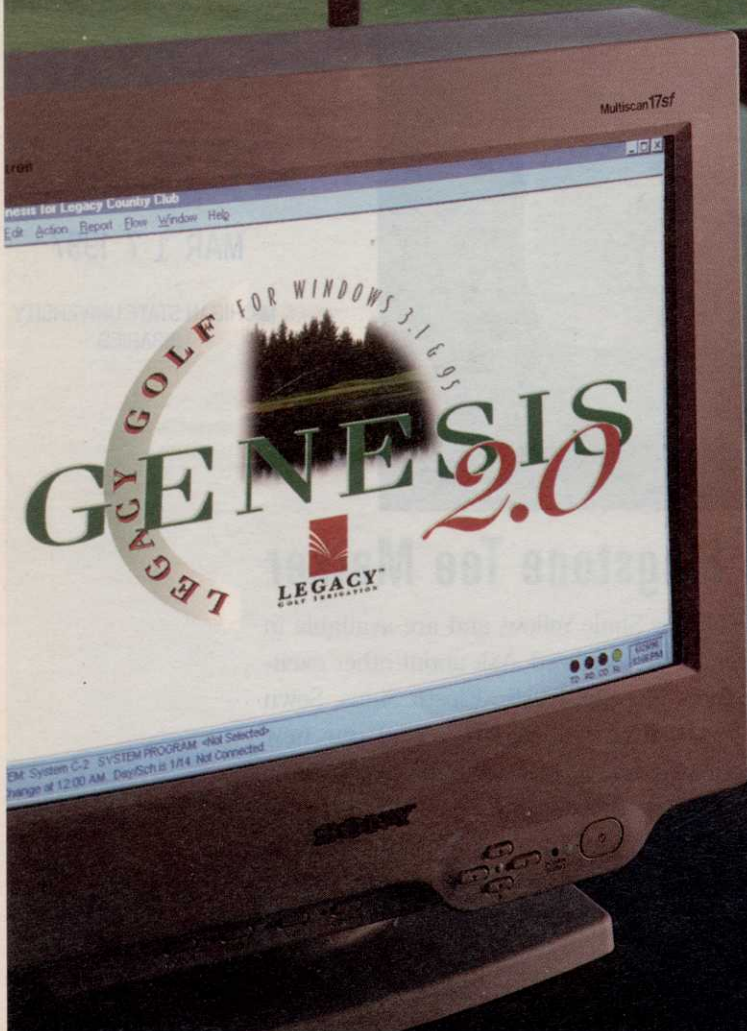
"We had a bad flood in 1986 and my course was under 4 feet of water," said Thilo. "I spent Dec. 31 moving my equipment to a cart barn that stayed dry in '86. On New Year's Day I checked the course around 2 p.m. and decided to do some sandbagging around the clubhouse. The police came by and told us the water would be coming up soon. In a few hours there was over eight feet of water on the golf course and over 4 feet in the clubhouse!"

The high water drowned not only his equipment, clubhouse, and course but also did major damage to pumps, irrigation transmission boxes and other infrastructure that will take months to com-

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McNeil has already secured several projects throughout the Northeast, including a new 18-hole course at Canon Farms

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The Northeast Golf Co. is the course design entity of The McNeil De-



Robert McNeil

sign Collaborative, which specializes in landscape architecture and land planning.

A Massachusetts native, McNeil intends to work with golf course clients from New England to Virginia.

The Northeast Golf Co. is located at 50 Gillespie Avenue, Fairhaven, N.J. 07704; telephone 908-747-1888; facsimile 908-933-4750.

Calif. floods

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pletely correct.

"But I am lucky in that my course is built on very sandy soil that drains quickly," Thilo pointed out. "I had to dig silt out of the bunkers and clear silt from the fairways, and there was some puckering of the greens from the water. But I will hopefully have the golf course playable in a week."

The levee system on the Feather River was designed to withstand flows of 100,000 cubic feet per second (CFS). However, New Year's afternoon Oroville Dam was forced to release 200,000 CFS just to keep up with what was entering the dam. The pressure downstream was too much and a 1,000-foot-long levee break south of Olivehurst suddenly flooded a 20-square-mile area.

Just a mile from the break was Plumas Lakes Golf Course. In a matter of hours, the entire course was under 20 feet of water, totally submerging its two-story clubhouse, equipment sheds—everything. It was estimated the water wouldn't recede until late January. Whether the course can be rebuilt is debatable until a full damage assessment is completed.

On the American River, outflows at Folsom Dam were up to 115,000 CFS when the river spread out over Ancil Hoffman Golf course in Sacramento.

"The river grew to almost a mile wide as it poured up over my course," said superintendent Rich Sizelove. "Two of the seven spill gates broke last spring—the flow in the river then was only 55,000 CFS. I had more than half of the course under water."

Sizelove's major problem stemmed from debris carried by the river's force. Trees, limbs, old fencing and thick silt covered the course. It took three days for the water to subside before he could clean up. Sizelove estimated it would take two weeks to collect and haul away the debris.

The downstream flow also hit hard at Dry Creek Golf Course in Galt, near Modesto. The normally tame Dry Creek became a raging river, as deep as 15 feet, and soon covered the golf course.

"Even though this is the most water I've ever seen on our golf course, we pulled through rather well," reported Club Manager Tom Park. "Our clubhouse and pro shop did not get damaged and we lost no bridges. I should get the front nine opened within a week and the back nine a few days later."

It was interesting how well some newer courses handled the test of a 100-Year Flood Plain. Clearly, precautions were taken during construction. Still, the devastating floods gave course operators a glimpse at the true power of nature and how they need to account for it in the future.

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