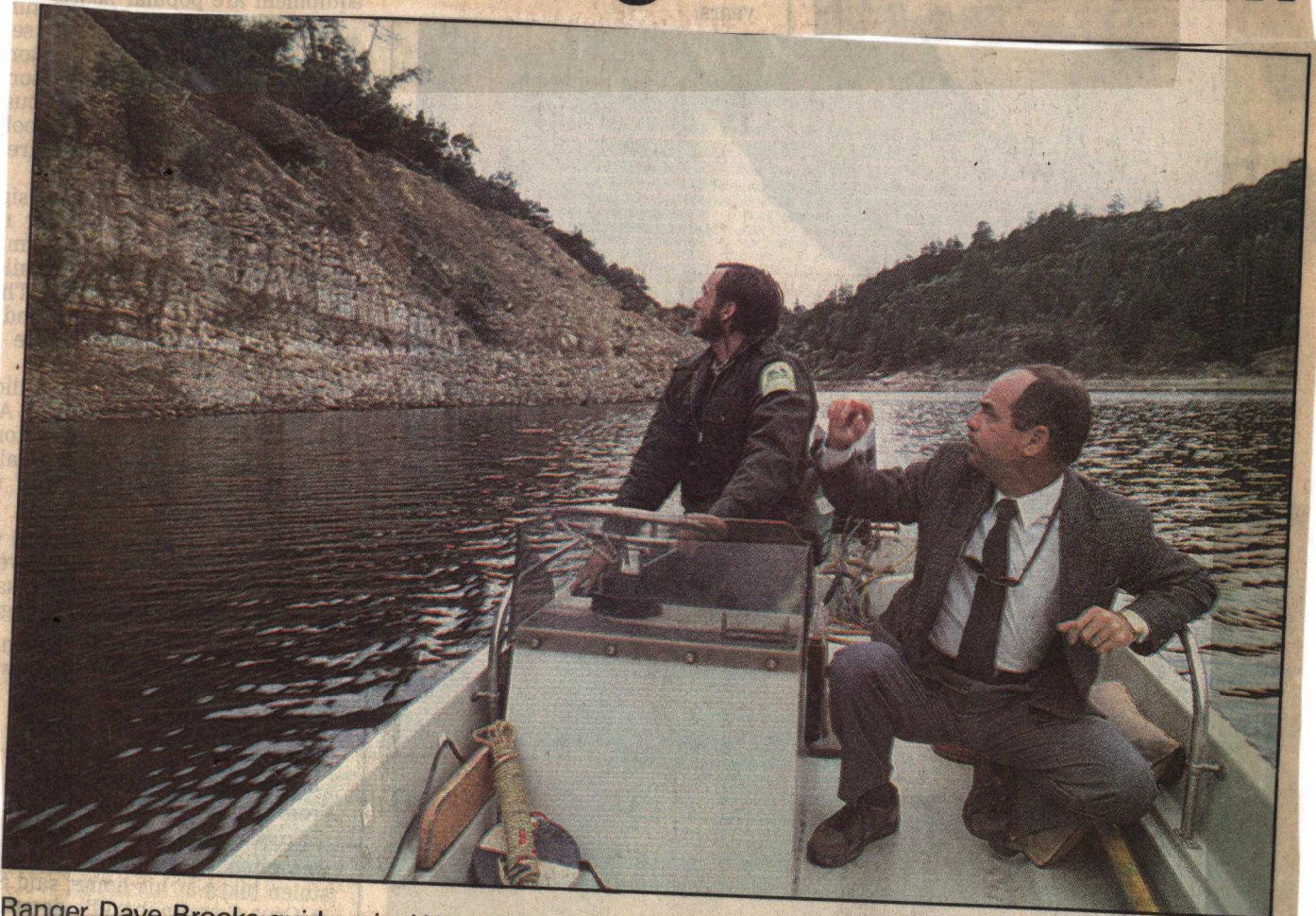


Possible danger at the dam



Ranger Dave Brooks guides city Water Director Bill Kocher past the area of concern at Loch Lomond. Dan Coyro/Sentinel photos



Engineers say the section didn't budge in the '89 quake.

Scant rain raises drought specter

Officials undiscouraged

By MARTHA MENDOZA
Sentinel staff writer

SANTA CRUZ — There might be many things to be thankful for at this time of year, but rainfall isn't one of them.

Water Department Director Bill Kocher says November's sometimes-cloudy skies have dropped less than one-third of an inch of rain on this drought-stricken region. October rains were more fruitful, bringing an above-average amount of water to the city's water sources — Loch Lomond

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Rainfall

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Reservoir and the San Lorenzo River.

"We've not seen a drought of this magnitude or duration in the past," said Water Commission Chairman Charlie Keutmann.

But Keutmann, Kocher and the other water experts in Santa Cruz who carefully monitor supply and demand are not losing hope.

"This year's rainfall is not encouraging, but it's too early to get discouraged," he said.

And there are reasons to be optimistic.

Loch Lomond Reservoir, which provides about 30 percent of all the water in Santa Cruz, is slightly higher now than it was at this time last year — Kocher says it has 289 million gallons more than last November, which could provide water to Santa Cruz for about one month.

In addition, Keutmann pointed out that the truly rainy season hits Santa Cruz in January.

He said that in November 1986, water levels were lower than they are now, but that a deluge of spring rains filled the reservoir to capacity and put an end to discussions of strict rationing.

"Our system is very sensitive to low rainfall years, but it also recovers pretty quickly," he said.

A final plus is that community members have apparently mastered the art of water conservation, rationing more water than water officials had even hoped. Kocher said customers used 11 percent less water this summer than they did before the drought.

A more disturbing issue is that despite good spring rains this year, the flow of the San Lorenzo River "dropped dramatically," Kocher said.

That occurrence is being studied by officials, who are working now to find new sources of water that can be tapped during the next decade as the local population grows.

Keutmann says it is still uncertain what, if any, rationing measures will be imposed next year.

"It is far to premature at this point to say whether we'll have restrictions or rationing," he said.

No matter how much rain falls this winter, saving water must become a way of life for Santa Cruz residents, he pointed out.

"Conservation is an essential element of the water conservation plan," Keutmann said.

Keutmann is not perturbed by National Weather Service long-range forecasts that predict another dry winter and a continuation of the drought.

"I have a hard time putting much faith or credibility in long-range forecasts, when they can't get it right 24 hours in advance," he said.

Later this year, the City Council will consider an ordinance that would impose strict landscaping requirements on properties one acre or larger.

'Unlikely' slide could breach dam with wave

By MARTHA MENDOZA
Sentinel staff writer

SANTA CRUZ — It's not likely, but one of the biggest waves to ever hit the area could occur 20 miles up in the Santa Cruz Mountains if a loose bank of Loch Lomond Reservoir suddenly slips.

"Certainly if I lived downstream of Loch Lomond, I would want the Water Department checking this out," said Water Department Director Bill Kocher.

Engineers say it's a long shot, but that if a huge chunk of loose rocks on the eastern bank of the reservoir falls at the same time, and if the reservoir was filled to capacity, a wave could be generated that could crest the dam.

The city of Santa Cruz is spending about \$250,000 this year to make sure that doesn't happen.

"This is really just a precautionary measure," said Kocher. "It is incredibly unlikely, almost impossible, that it could actually happen, but we have to be more than pretty sure."

Kocher said a damaged dam and flooding downstream could cost the city exorbitant amounts, as could the lawsuits if it was discovered the city knew about the potential problem and hadn't dealt with it.

Loch Lomond Reservoir is owned and managed by the city of Santa Cruz. About 30 percent of the city's water supply comes from the small lake, which serves as a fishing and recreation area in the summer.

Associate civil engineer Chris Chang, who works for the city's Water Department, says the landslide has been monitored since about 1980.

"We have to make sure we don't have a dangerous situation," Chang

Danger

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said.

The slide was accidentally discovered 12 years ago. At the time, engineers were studying whether the reservoir would slowly lose its capacity because it was filling up with silt eroding off its banks. They found that Loch Lomond would probably remain deep enough for years to come, but that a section of loose rock on eastern side could cause a greater problem.

The landslide area stretches about 100 feet up a steep bank of the reservoir, and trees near the top point out into different directions, indicating that the land is slowly moving toward the water.

"It is a big chunk of land," Kocher said.

Engineers say the slide did not budge in the Loma Prieta earthquake, and probably has not moved for years.

But it was the earthquake that prompted the State Division of Safety of Dams to contact the city's Water Department and ask officials there to take another look at the slide.

Kocher said that if a "worst-case scenario" did occur, water cresting the dam could flow into communities below it. In addition, he said, a strong wave might slam into the dam hard enough to damage it.

"If the wave was really ripping, it could be a problem," he said. "We don't want large volumes of water hitting that dam all at once."

This week the City Council allo-

cated another \$35,000 to go toward a \$250,000, two-to-three year geotechnical monitoring program by San Jose-based Woodward Clyde Consultants.

Those engineers will drill holes into the bedrock beneath the slide, and then sink in "piezometers" and "inclinometers," which will show the depth of the slippage plane, the mass of a potential slide, and groundwater saturation.

Kocher said he "thought long and hard" about spending so much money preventing a potential problem that probably will never happen.

"Even though we have almost no doubt whatsoever that it won't slide, we can't ignore something like this," he said. "We really don't have a choice."