

# County water supplies dwindle

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Despite several years of above average rainfall, streams and underground water supplies are continuing to drop while increased demand is driving agencies to find new sources.

This stark conclusion is from a draft study released Wednesday by the county Planning Department and Environmental Health Service on resources, monitoring and management of Santa Cruz County water.

The study will go to the county Board of Supervisors in April with recommendations for more comprehensive water supply planning and more extensive erosion

control measures.

The two-year study has concluded:

- Groundwater levels have declined significantly in many critical water basins and that pumping in all the county's major underground aquifers exceeds natural recharge rates;

- Streamflows have been diminished, and in some areas depleted, by surface diversions and wells;

- Fish habitat has been degraded by sediment and streamflow depletion to the point that streams are drying up during summer months;

- Water quality is threatened by saltwater intrusion and pollution;

- There is a serious need to develop additional water supplies and to coordi-

nate all water-related activities.

More comprehensive water management is more than a priority, the study concluded: "It has become a necessity."

Underground aquifer systems that provide much of the county's water are severely stressed, according to the study. Increasing demand coupled with the most recent drought from 1987-92 resulted in progressive degradation of groundwater quality, lowered groundwater levels and significant reduction of water to many county streams.

Despite above average rainfall from 1993-97, the aquifers do not seem to have recovered, said John Ricker, county water quality program manager and an author of the study. Well pumping in all of the

county's major aquifers appears to exceed natural recharge rates, resulting in overdraft of the different aquifers, he said.

The study does not include this year's rainfall, but does include three previous above-average rainfall years, said Ricker.

"We keep hoping we'll see some recovery, but haven't," said Ricker.

The "mining" or overdraft of groundwater levels has resulted in seawater intrusion in the county's coastal aquifers that now exceeds water use by all urban areas in the north county, the study said.

The seawater intrusion occurs when groundwater levels are pumped down below sea level, allowing seawater to percolate back into the aquifer, making the groundwater along the coast unfit for use.

The county study concluded that groundwater use in the Pajaro basin is now approximately 70,000 acre feet per year while the safe yield of the basin is half that amount. The volume of seawater now moving into south county coastal aquifers is now about 16,000 acre feet a year. That amount is more water than is delivered annually by all water districts in Mid-County, Scotts Valley and the San Lorenzo Valley, the study said.

Seawater has moved into the coastal aquifers underlying the Pajaro Valley and is now starting to push north into the La Selva Beach areas of the Soquel Creek Water District and to a lesser extent, into the

Please see WATER — BACK PAGE

## Water

Continued from Page A1

Seascape area, according to the study. While less than the Pajaro Valley, the volume of seawater in those areas "should not be considered insignificant," said the study.

In the Scotts Valley and Pasatiempo areas, groundwater levels have declined by as much as 150 feet, causing dry areas of the Santa Margarita aquifer. As the water levels have dropped, water districts have pushed down to the deeper Lompico aquifer to supply water.

This deeper aquifer, because it gets less natural recharge, is likely to be depleted at a faster rate than the upper Santa Margarita aquifer, said researchers. Pumping of water from the Santa Margarita aquifers already appears to have reduced streamflows in Carbonera Creek, Bean Creek, Zayante Creek, Newell Creek and the San Lorenzo River, the report said. As more and more well water has been pumped, levels of individual private wells

and better coordinate data. The county should also consider requiring meters on all new wells drilled in critical groundwater areas and should consider requiring meters on existing large wells, according to the recommendations.

Some streams are faring no better. According to the study, it appears that direct water diversions from streams and groundwater pumping have lowered streamflows, especially in the summer when it is most critical for fish and water supplies. Records of how much water is diverted are sketchy, but in Soquel Creek it seems that either more water has been allocated for diversion than is actually available or some parties are taking more than their fair share, the study has concluded.

The diversions and reduced groundwater levels below the creek are contributing to the more frequent drying of the creek in its lower reaches. Mid-County groundwater levels have declined to the extent that groundwater no longer appears to contribute to streamflows for the last three or four miles of Soquel Creek, said the study.

Ricker said more tracking of water rights and stream use is needed throughout the county to better manage streamflows and increase the amount of water in the summer. He and county hydrologist Bruce Laclergue said water rights in Soquel Creek may need to be reallocated.

"I'm wondering if that's not jumping the gun," said Laura Brown, general manager of the Soquel Creek Water District. Brown maintained that more study is needed to determine the causes of Soquel Creek's woes.

According to Ricker, erosion and sedimentation are perhaps the worst villains causing surface water quality problems and fishery declines in the county. Excessive erosion also limits the ability to use surface water during the winter, when large volumes of flow are available.

Despite the severity of the sedimentation problem, however, no monitoring is devoted to the issue and little progress has been made over the years in controlling it, he said. "We've been trying for years and haven't made much progress," said Ricker.

REFERENCE

WATER SUPPLY

-1990-2000

SANTA CRUZ SENTINEL  
March 19, 1998