# Nitrates rising in San Lorenzo River

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SANTA CRUZ — Nitrate levels in the San Lorenzo River have increased over the last 30 years, and while there's no need to get alarmed, they should be reduced, according to a recent study.

State and county officials recently discussed the preliminary results of a continuing study of nitrate levels in the San Lorenzo River.

Nitrates come from septic systems, livestock and fertilizer runoff. As they percolate through the soil, and enter waterways, they can adversely affect the water quality, especially at higher levels.

"We're definitely concerned about the nitrate problem in the river," said John Ricker, of the county Health Services Agency.

The current study, which continues through 1993, is hoping to pin down just how severe the problem is, and suggest ways to reduce the levels.

So far, the impact of nitrates is "inconclusive," the study said, but "concern remains that further increases in nitrate could result in more significant impacts."

If so, the results could be more than a drop in the honeybucket for San Lorenzo Valley residents, since the main source of nitrates in the river is the Valley's thousands of septic systems.

The nitrate level in the San Lorenzo River is now two to three times higher than in the '60s, and five to eight times higher than a standard established by the Regional Water Quality Board.

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>
> — *John Ricker, county Health Services Agency*

Nitrate levels increased through the mid-'70s but have leveled off somewhat since, partly because of changes in waste disposal and land use regulations.

Although the effects of the nitrates are considered low to moderate by the county and state, they are worried enough to study the situation.

More than half of the summer nitrates — 56 percent — in the river come from septic systems, according to the report, especially from those in sandy areas.

Another significant source is sewage discharge from the Boulder Creek County club, which contributes 16 percent.

Natural sources are responsible for 15 percent, and the Scotts Valley nitrate plume contributes 8 percent.

Livestock and stables contribute 4 percent of the nitrates, and fertilizers contribute 1 percent.

Nitrates themselves, at least at their current levels, do not pose a health hazard, said Ricker.

"They'd have to be 30 times higher to be a problem," he said.

However, they contribute indirectly to a potential health hazard, said Ricker.

Higher nitrate levels are one of the factors that promote the growth of algae and other micro-organisms.

This growth, in turn, can made the water smell or taste bad.

Some of the city of Santa Cruz's water supply comes from the San Lorenzo River.

Since 1976, taste and odor problems from San Lorenzo River water have been worse during wet years, which typically have higher nitrate levels.

The growth of algae and other micro-organisms also increases the amount of "dissolved organic compounds."

When the water is disinfected with chlorine, those compounds react with the chlorine to create trihalomethane, a carcinogenic substance.

Ricker cautioned that the city's water meets current drinking water standards.

However, the federal Environmental Protection Agency is currently debating those standards, he said, and the acceptable level of trihalomethanes could go up or down.

There seems to be at least one beneficiary of the nitrate levels, the report said — fish.

The nitrate and algae growth do not appear to hurt them, and may even be a help.

The study is being done by the county Environmental Health Service using federal Clean Water Act funds provided by the state Water Resources Control Board.

Ricker said another public meeting will be held next summer. The report made the following preliminary recommendations:

- Continue to restrict new development served by septic systems in the San Lorenzo watershed.
- Require shallow leachfields (less than five feet) for new and repaired septic systems.
- Identify other ways to reduce nitrate discharge for septic systems in sandy areas.
- Reduce nitrate discharge from the Boulder Creek County Club Treatment Plant, perhaps by using reclaimed wastewater on the golf course.
- Keep livestock and manure piles at least 100 feet from streams or drainageways.