

Wasted waters

Treated sewage dumped in the Russian River spells trouble for spawning fish

BY JULIANE POIRIER LOCKE

One day in early spring this year a group of fishermen sat in folding chairs above the Russian River at Mirabel Park Resort. Barely observable filament lines draped from the ends of their fishing poles down a 15-foot bluff and into the dark green surface of the water.

The Russian River is the only river in the state where three federally listed fish still run—Chinook, steelhead and coho salmon. At one time, Green Valley Creek, a tributary of the river, was a world-famous steelhead fishing spot. As recently as 1968, 50,000 wild steelhead still migrated up the river, but that number has dropped to 5,000, mostly hatchery fish.

And yet, people still come to the Russian River to fish, as they did that spring day at Mirabel. It might otherwise have been a good day for fishing, except there was something strange about the river. Someone peering over the cliff pointed to where a wide, brown stripe entered the river from a creek, marking the otherwise emerald flow.

"What's that?" the visitor asked.

One of the old-time fishermen slowly looked up and said, "That's Santa Rosa's shit coming down the river." He said no more and the visitor left.

Although the man did not specify whether his explanation was scatological, sociological, or both, it turns out that the brown stripe was indeed colored by fecal material suspended in sediment, brought downriver with the wastewater discharge coming from the city of Santa Rosa.

The brown stripe in the river is the result of treated sewage being pumped into Russian River tributaries—coinciding with the time that migrating fish species are trying to get up the river to their spawning grounds.

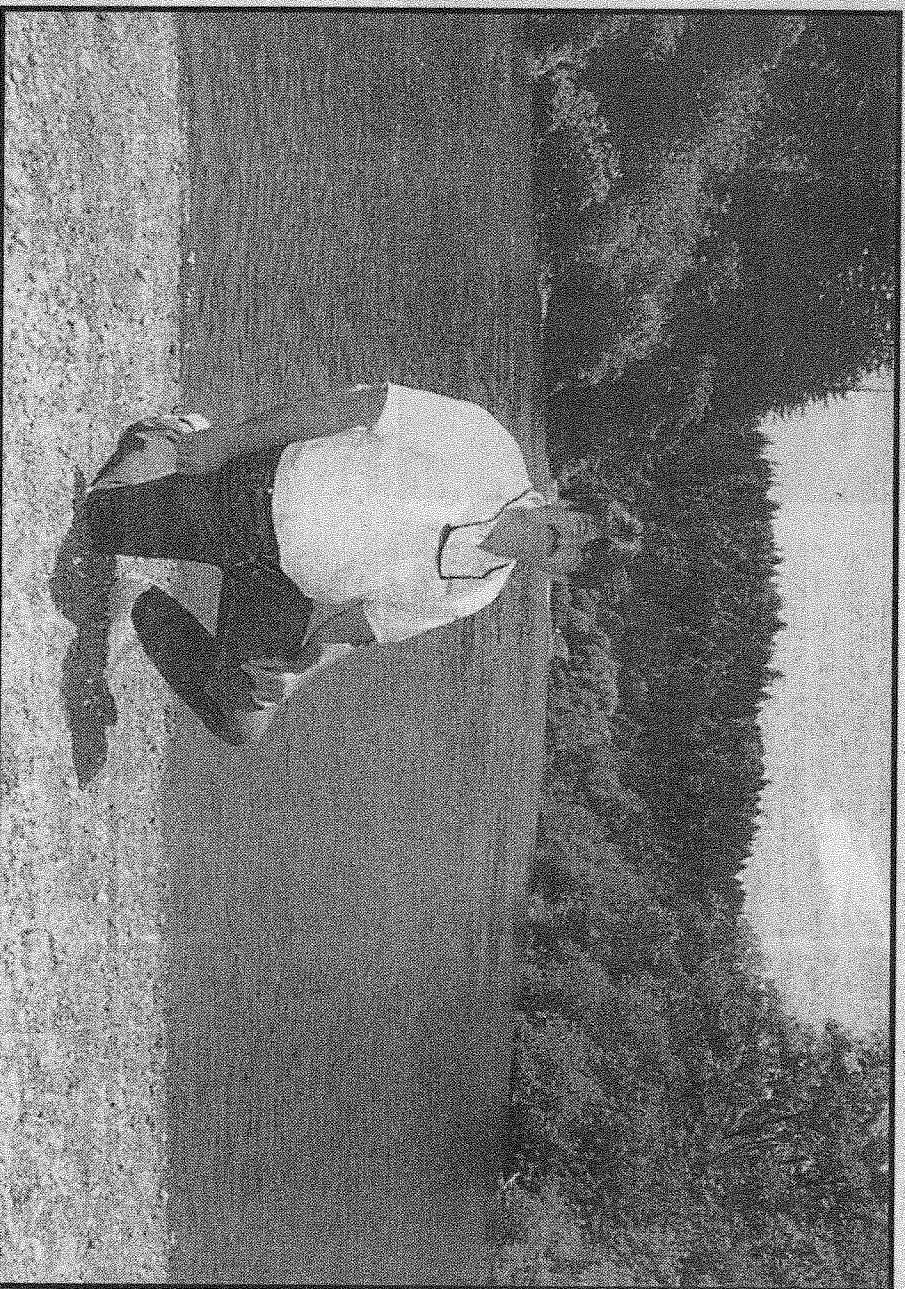
Unfortunately, the fish migrating up from the ocean navigate by smell and are forced to sniff their way through the effluent—if they can.

For its Environmental Impact Report (EIR) justifying the permit request, the city purchased a scientific study that was highly criticized. Although in May this EIR was deemed inadequate by a Superior Court judge, the study nevertheless claimed that fish can simply swim through this effluent with no problem. But peer-reviewed science carried out by outside sources came up with the opposite findings: Fish can't swim through this stuff without suffering harm.

Government studies show that gunk in the water not only clogs up fish gills but does a number of other nasty things to fish. Mere sediment, one study reports, can provide conditions that encourage "disease-related organisms," change fish behavior, bury fish eggs and directly injure fish.

But there's more than sediment involved here, and the other discharged stuff carries eerie biological implications that go far beyond fish to affect other species, including, perhaps, humans.

In Ukridge, England, Brunel University biologists John Jumpter and Charles Tyler studied caged trout suspended in the outflow of 30 different sewage treatment outflows,



Steve Jackson, owner of King's Sporting and Tackle in Guerneville, says his business has been hurt by wastewater dumping.

finding that fish experienced serious and harmful effects from hormones in wastewater, derived from certain plastics and breakdown products of common household detergents. These hormones are bad news.

Known to scientists as environmental hormones, these wastewater ingredients mimic the female hormone estrogen. Some scientists are concerned that these environmental hormones are increasing the risk of reproductive-system cancer in females while reportedly emasculating males of many species. In some studies, males exposed to environmental hormones show reduced or absent sexual instinct, and fail to mate.



WHILE THIS SHOP of biological horrors may be opening underwater each time Santa Rosa opens the valves to dump its treated wastewater, the businesses above water have their own problems to deal with.

Since 1954, King's Sporting and Tackle in Guerneville has been an institution for outdoor enthusiasts, the place to go for fishing gear and reports from those-in-the-know of where the fish are biting. Like other businesses and resort spots affected by the discharges into the river, King's is experiencing the consequences of having sewage wastewater in the river.

Steve Jackson, who has owned the store since 1989, says the fishing isn't good anywhere downriver of Mirabel.

"When the water's muddy, the chances of catching a fish are about nil," said Jackson, who reports his business is suffering. "I've lost revenue, so have other businesses. As the river gets ready to fish, especially in winter, it'll be clear in Healdsburg. But it'll take an extra five to seven days to clear down here."

The fishing folks, according to Jackson, prefer to go fishing up around Healdsburg, above the discharge. He's not pleased with Santa Rosa's decision to dump wastewater in the river. "It's pitiful," he added, "to sit around and wait 'til they decide not to discharge anymore."

Why can't Santa Rosa do something else with its wastewater? Some people assume that Santa Rosa will just continue dumping until they can build the controversial pipeline to the geysers where, according to longtime environmentalist Bill Kortum, treated wastewater will "go up in steam" rather than be used for something really needed in Sonoma County, such as irrigation for agriculture. The wastewater, under Santa Rosa's current plan, will eventually be pumped into the geysers to produce steam, generating electricity sold by Calpine Corporation. The pipeline plans call for the 4.5-foot pipe to travel under the river at two locations.

Kortum points out that taxpayer money will be funding a pipeline that serves a private business interest. "We could have designed an agricultural project that would have run circles around the geyser project," said Kortum. "An agricultural project is a much less costly project [than the geyser pipeline]." According to Kortum, the county will get \$8 million per year through the completed pipeline project, but would have received \$100 million by "keeping the water in agriculture."

Calpine will get the wastewater for free, after a one-time pipe and pump construction cost of \$50 million while taxpayers will spend \$115 million to get the water to Calpine.

Miles Ferris, the director of Santa Rosa's (water and sewer) utilities, told the *Sun* that some of the city's wastewater is already being used for agriculture, but there

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