93-16



APPLESAUCE

# Marsh mellow

By Bruce Robinson

It just could be the proverbial silver lining.

Amidst the stormy history and uncertain future of Santa Rosa's long-running struggle to dispose of an ever-increasing volume of sewage without polluting or enraging its downstream neighbors, there is an oasis of optimism just off Occidental Road, not far from the midsummer ribbon of lazy stream that is the modern-day Laguna de Santa Rosa. Here, on 11.5 acres of man-made marshland, there is an abundance of wildlife that hints at the rich diversity of plants, animals, birds, and fish that once occupied a major portion of the low-lying lands in the Santa Rosa Plain.

Ducks, crawfish, and songbirds were the most apparent residents of the Kelly Farm Demonstration Wetland during an early September afternoon walking tour of the site, while more frequent visitors to the area described seeing mink, otters, bullfrogs, raccoon, an errant black-tailed deer, and both red and grey foxes. Careful monitoring has identified some 84 species of birds and migratory waterfowl within the marshland area, which was carefully designed to attract them.

In fact, virtually every aspect of this biotic bonanza has been precisely planned and rigorously studied, from the detailed monitoring of water flows and water quality to the systematic charting of tule growth rates. For this pilot project could be the start of something big; as many as 1,000 acres of similar marshland and adjacent riparian habitat could be created in or near the Laguna as a part of the ultimate Santa Rosa wastewater empire.

What's wrong with this picture?

There is no denying the attractiveness of that idea. Not only does it restore a dramatic chunk of historic wetlands to something approaching its former condition, but it would create a distinct and unbroachable western boundary for Santa Rosa's creeping urban sphere. The very real appeal of the Laguna Park that has been drawn up along Sebastopol's side of the meandering channel could only be enhanced by such large reaches of marshy habitat to the north and east. And the environmental and recreational value of such a resource would be considerable.

Not that this is an altruistic enterprise on the part of the city. It's not even an elaborate public-relations ploy, although it will surely have benefits in that area. The fact is, marshlands such as the Kelly Ponds are remarkably efficient mechanisms for dispersing water back into the air. The rate of evapo-transpiration, as that process is known, can be as high as 25 percent of the water that flows through the marsh, or 2.2 million gallons per year per acre, according to the city's research. For a system that is looking for ways to harmlessly dispose of vast volumes of wastewater, that is no small consideration.

**But all of this seems to beg a key question**, one that has been raised but not yet answered by the policy pooh-bahs at the Water Quality Control Board. Through all of its planning and analysis, past and present, Santa Rosa has concerned itself with wastewater discharges into the Russian River. The river is considered the "receiving water" for the treated sewage, in WQCB terminology, and the 1 percent dilution rate standard that has been the critical discharge yardstick for the city for years is based on river flow rates. Yet all of that effluent, hundreds of millions of gallons each year, flows several miles through two tributary waterways before it ever reaches the Russian River. It is a particularly noteworthy detail, when contrasted with the discharge standards the WQCB applies to other, smaller sewer systems elsewhere in Sonoma County, where Graton and Forestville, for example, are constrained to a 1 percent discharge limit into Green Valley Creek, not the Russian River into which the creek empties.

Clearly, Santa Rosa could achieve the same net effect, at least for its disposal purposes, by routing a pipeline from the Llano Road treatment plant directly to the banks of the river. But the political cost of pursuing such a project would be enormous, while the evaporative gains from the wetlands would be lost, meaning that the volumes of effluent requiring disposal by other means would be increased correspondingly.

Meanwhile, as I strolled the berms between towering thickets of cattails and bullrushes at the Kelly Ponds last week, I encountered a series of feisty red crayfish, small agitated crustaceans defending their spongy turf with claws upraised and snapping. They reminded me, in a way, of the dauntless denizens of the lower Russian River, standing up to the intrusions of much larger urban entities with comparable blind determination. But such an analogy can only hold up so far, I realized, as I stepped over a half-eaten crayfish lying along the path. For all their bold stance and large numbers, the crayfish are only supper for the bigger, faster, and more predatory otters. One man's metaphor is another mammal's munchies.

**A recent report to the Sebastopol City** Council on the Kelly Ponds project suggested that it was seen by Santa Rosa officials as a failure on two counts, neither of which was confirmed by the tour I took. Yes, the fathead minnow is proliferating in the marshland pools, where biologists have installed mosquito fish to abate potential bug problems. But the two species can coexist and there is room enough for both, city staff biologist Carolyn Dixon assured me.

As for the apparent preference that many migratory waterfowl have shown for the city's huge (two square miles of surface area) Delta storage pond over the comparatively tiny Kelly Farm marshlands, raw numbers can be misleading. It is the size of the water area that draws the crowds, Dixon says, not the differences in surrounding habitat. With nesting pairs of mergansers, grebes, green herons, and even a red-tailed hawk breeding successfully in the small artificial wetland, there is little doubt that it is drawing the diversity of wildlife that its designers envisioned. "You can only assume that on a bigger scale, you'd get more of everything," Dixon said.