

# Can an environmental goldmine be preserved?

By Diane Peterson

First of two parts

It is the second most important riparian marshland in the state. It comprises one-third of the total groundwater basin in the county. It possesses a wide range of ecological environments, from Great Blue Heron rookeries to vernal pools containing rare and endangered plants.

What is it?

It is the Laguna de Santa Rosa, an oblong rectangular piece of land east of Sebastopol from Cotati to the Russian River composed of gentle hills, floodplain and a stream.

A major tributary of the lower Russian River, the laguna is most visible during the winter, when it serves the important function of flood control. As the 1977 "Laguna de Santa Rosa" report states, "When the flow of the Russian River at its confluence with the Laguna de Santa Rosa is greater than 9000 cubic feet per second (cfs), Russian River water moves into the Laguna, retarding or reversing the Laguna flow . . . In most major storms, the Laguna simply deepens like a lake."

Recently, the laguna has become a focal point among local environmentalists concerned with potential development encroaching on the laguna.

Just last month, the Sebastopol

City Council approved a condominium project on a piece of farmland east of Palm Drive Hospital which narrowly skirts the laguna.

Sebastopol resident Dennis Machado, an appropriate horticulturist, was one of the people who opposed that project for environmental reasons.

This month, the council will review the Environmental Impact Report for the proposed "Route E" easterly bypass of Sebastopol, a non-stop road that would be built over part of the laguna.

Bill Cox, a Sebastopol resident and aquatic biologist with the State Fish and Game, recently attended a meeting of the "Environmental Forum," a group of local people who are putting together an educational slide show on the laguna.

Regarding the condo project, Cox stated: "I don't like it, but it's high enough up the slope that it's not going to affect the wetlands."

On the bypass, however, he was more emphatic: "The bypass should be kept as far away from the laguna as possible," he said. "There has to be a permanent guarantee against development on the east side (of the bypass). Without that, it's an environmental catastrophe."

In order to understand the viewpoint of Fish and Game experts and environmentalists, it is necessary to understand the history of the laguna and its delicate interac-

tion with the wildlife and plants it nurtures.

An historian writing in the July 3, 1895 edition of the Times wrote about the laguna: "Time was when the lovely Russian River, instead of hewing its way to the ocean, west from Guerneville to Duncans Mills, flowed south through what is now a peaceful lagune many miles in the area, past the present site of Sebastopol to Petaluma Creek."

According to Cox and others, it is highly likely that the laguna was once the channel for the Russian River to drain into San Pablo Bay to the south.

Cox noted that the Russian River Valley is extremely broad, indicating that the river has moved back and forth over time like the Yang-tse River in China.

According to the 1977 study on the laguna, it was probably a geological disturbance that later "blocked the Laguna-Russian River exit to San Pablo Bay, creating a low-gradient, northerly flowing stream course - the Laguna de Santa Rosa."

Since rivers often leave gravel beds below, this theory would also explain why Sonoma County is blessed with plentiful underground aquifers to supply natural irrigation to its fruit trees and vines.

According to recent studies, the laguna area once served as a rich source of food and resources to the original inhabitants of the county,

the Pomo Indians.

Development began after 1837, when a smallpox epidemic decimated the native population and allowed Spain to gain a foothold in the area. Land grants entitled "Ranchos" were later awarded by the Mexican government.

As development continued, the Santa Rosa plain began to produce hay, grains, beef, dairy products and fruits. The surplus agricultural products were taken to San Francisco along newly constructed trails.

Around 1900, oral history revealed there was enough water in the

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**THE ENVIRONMENTAL FORUM**—State Fish and Game employee Bill Cox, (left) Robbie Gardiner, Avner Perry, Peter Vilms and Dennis Machado discuss the future of the Laguna de Santa Rosa while looking down upon it from the rear of Palm Drive Hospital. The group met together in an effort to pool research for a public education slide show on the laguna.

—Times photos by Diane Peterson



**WHAT A VIEW**—The new Contour Development condominiums, 38 homes in all including several low-income units, will look down upon

this peaceful scene of the Laguna de Santa Rosa. However, if the Route E bypass is built, the scene may be considerably less peaceful.

# Laguna. . . (Continued from Page 1)

laguna to take a boat from Sebastopol to Rohnert Park.

According to Cox, there were also "sizable lakes" found at River Road, where ladies with parasols boarded steam launches for Sunday excursions.

With the increasing use of agriculture over time, however, channels of the laguna have been deepened, causing a loss of overall water in the laguna area. The channelization was done to speed up drainage of the surrounding land in order to lengthen cultivation time.

"The channel defines and lowers the streambed and allows more rapid drainage," the 1977 Laguna de Santa Rosa report states. "Much of the wetlands have been lost."

In addition, the channels need to

be dredged every 3 to 5 years, a process which necessitates the removal of marsh plants such as cattails and willows.

According to Cox, the water quality in the laguna is very poor at present and can only support carp, at best, due to pollution and the increasing lack of cover.

In its pristine form, the laguna had a large riparian forest, probably as far south as Todd Road, Cox said, which encouraged fish life by preventing evaporation and keeping the water cool and plentiful.

Another factor in the water quality of the laguna is pollution from the municipal sewage plants, which have been discharging water into the laguna since 1924.

Excessive nutrients from sewage, dairy wastes and run-off fertilizer from farmlands has en-

tered the laguna and caused algal growth and eutrophication (lack of oxygen).

Meanwhile, the loss of riparian forest and trees which served as nesting grounds for wildlife and birds has caused certain species, such as the red tail hawk, to leave the area.

One of Cox's goals is to bring back the flowing stream of the laguna, at least partially, by making ponds with check dams. With more water and plants, the area could be used as a wildlife farm, he said.

Cox reported that in Oregon, a stream that used to support trout, but dried up in the summer, was brought back through exclusion fencing to keep cattle out. After several years, Cox said the willows grew back and the stream was actively flowing with plenty of water to support fish.

Even at present the laguna harbors a multitude of plant and animal life. The channels serve as prime feeding grounds for herons and egrets, the marsh supports ducks and coots, the grasslands contain pheasant and meadowlarks and the woodlands contain owls, mice, deer and raccoons.

As for plant life, the freshwater marshes that are left contain rushes and dockweed, the riparian wood contains willows, Oregon Ash and box elders, the grasslands contain rushes, and the oak savannahs and woodlands still contain oak trees and other broadleaf trees.

However, due to heavy grazing and non-replacement of oak trees, many of the old oak trees are disappearing. As the 1977 reports notes: "Ironically, the large trees that are threatened provide useful shade for the animals that are the disruptive factor."

Should the Route E bypass be built, it will probably wipe out some of the delicate "vernal pools," shallow depressions of impermeable clay which are submerged in water half the year and dried up the other half. These vernal pools are filled with rare and endangered plants such as Limanthes Vinculans, a plant which is being researched for use in women's cosmetics.)

While the Sonoma County General Plan has listed goals to enhance riparian habitats such as vernal pools and construct an extensive trail system which would link urban areas with parklands in the laguna area, neither of these goals has come to fruition.

Also, the county has recommended adoption of a plan that would mandate developers to contribute to an off-site mitigation fund earmarked for wildlife protection. But that objective has received opposition from the Farm Bureau and the construction industry.

Cox said the State Fish and Game is also proposing a riparian ordinance that would provide legal protection for riparian vegetation along streams, but this too has received a lot of opposition from the Farm Bureau and construction industry.

Although one 50 acre piece of the laguna near Todd Road is being brought back through mitigation from the Spring Creek flood control project, Cox said, the majority of the laguna appears to be slowly nibbled away by local cities and developers.