

Laguna de Santa Rosa from Occidental Road in Sebastopol.

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snipe shot, and the first rule in the mountains is to spare your powder." It is claimed that one market hunter bagged 6,200 ducks in 1892!

Further records state: "Deer and antelope brought twenty dollars each delivered to the waiting boats on the headwaters of Petaluma Creek. The hind quarters of a fat elk was worth \$40, and even quail sold for \$9 a dozen. Ducks were worth a dollar each and bear meat jerked or fresh was a staple in the gold rush diet. Some elk and grizzlies could be found far back in the hills of the county until the 1870s, but the valley populations were quickly exterminated."

The combined effect of the market hunters had decimated waterfowl to such a degree by 1897 that a local gun club prevailed on the Board of Supervisors to outlaw commercial hunting. But by this time the composition and diversity of the Laguna ecosystem had dimin-

ished greatly in feeding the rapid development of the Golden State.

Altering the Laguna Channel

A systematic drainage of the Laguna wetlands began around the turn of the century. The earliest maps of the Laguna channel show a broad waterway, consisting of three lakes along the Laguna's length: one at the south end near Cunningham; one just east and north of Sebastopol; and one, referred to as Ballard Lake, between River and Occidental Roads. A 1915 map illustrates areas north of Sebastopol considered to be swamp and marsh. These wetlands conservatively totalled approximately 1,400 acres.

North of the study area, in the "upper Laguna" reach, Ballard Lake provided fishing, boating and swimming. Even portions of the "lower Laguna" on the edge of Sebastopol were documented by postcards as a prime recreation water body. For a variety of reasons, including mosquito problems, the desire to create more land suitable for farming, and a concern about the flooding of Sebastopol, Mr. Denner, a local rancher, and Mr. Doyle of Santa Rosa, decided to dynamite an outlet, causing the lake to drain. Mr. Doyle owned land in northeast Sebastopol that fronted the Laguna.

In 1945, the U.S. Fish and Wildlife Service surveyed the Laguna and reported that "at times, the Laguna area is one continuous body of water as much as 10 miles in length and ranging in width from a few hundred feet to as much as 1.5 miles locally." The survey goes on to report that "evapotranspiration occurs on a large scale along the Laguna de Santa Rosa at the western side of Santa Rosa Valley in a swampy area that varies in size with seasonal rainfall conditions but averages about 1,000 acres during the summer." By this time, at least 500 acres of riparian forest had already been cleared by local farmers wishing to increase cultivated acreage along the boundaries of the Laguna floodplain.

Most of the recent clearance of the Laguna channel was a direct result of a channelization project undertaken in 1966, which the Sonoma County Water Agency (SCWA) implemented for agricultural drainage purposes. The Water Agency undertook the project at the urging of local farmers. Eight miles of pilot channel with a 100 foot right-of-way was excavated from Occidental Road to one mile north of Guerneville Road. From this point to River Road, the Laguna was channelized by the efforts of local farmers. Only 272 acres of the original riparian forest in this area exists today.

Habitat Loss

The following table shows the loss of habitats at the regional scale of the greater Laguna ecosystem. Current acreage of oak woodland/vernal pool complex is only for unirrigated areas because irrigated oak savanna is dissimilar in many respects.

	Historic Average	Current Average	Percent Loss
Oak woodland/vernal pool complex	20,200	1,300	94%
Freshwater Marsh*	4,400	1,900	57%
Riparian forest	3,400	450	87%
Total	28,000	3,650	87%

*Current acreage of freshwater marsh is estimated at 150 of permanent wetland and 1,750 acres of seasonal wetland.

Fortunately, there are still significant remnants of the original riparian forest, freshwater marsh and oak woodland/vernal pool complex. This is what we need to protect. And, hopefully, combined with efforts to reclaim some of the Laguna de Santa Rosa and Santa Rosa Creek, we will be successful in preserving the very wetlands that help sustain our existence.

Next month's article will explore the vernal pool and its role in a wetland ecosystem.

Sources: Fredrickson and Markwyn, 1990; Marrat, 1977; Dods, 1976; LeBaron 1987; Waaland, et al, 1980, 1990; Watson et al, 1917; McBride 1945, in Cardwell 1958; SCWA 1960; de Mars et al, 1977.

Marco Waaland is a 5th generation native of Sonoma County. After receiving his degree in Ecology at Utah State, Marco came back to Sonoma County. He established the Golden Bear Biostudies which involve wetland restoration projects, natural park restoration and endangered plant studies.

Gravel Update

By Marty Griffen

New Gravel Control Organization

Several groups concerned with gravel mining on the Russian River have recently met with representatives from other river areas to form a new organization called the "River Conservancy Alliance" of northern California (RCA).

The organizational groups are from Cache Creek, the Tuolumne River, the Garcia River and the Russian River. Included are the Russian River Task Force, Cloverdale Tomorrow, Citizens for Cloverdale and the Russian River Sewer Committee. Gravel control and fishing groups from all coastal gravel bed rivers and tributaries of the Sacramento River are invited to join. Janet Levens is the secretary and can be reached at: 36750 County Road #20, Woodland, CA 95695.

The new organization will seek to improve regulation of gravel mining and to enact legislation to prohibit gravel mining that impacts salmon and steelhead fisheries, prime ag lands, farm and public wells and water quality. RCA will furnish a Hotline. State Lands Commission estimates there are over 30 mining operations on coastal rivers that are not in compliance with existing laws.

ARM Plan and Hydrology Study

The long awaited Hydrology Study of the Russian River for the Aggregate Resource Management Plan update has been released to the County Planning Dept. for administrative review. After that it will be released to the public.

In the meantime, with the ARM Update not due until January 1993, there are several applications for mining projects:

1. Cloverdale Sand & Gravel (Shamrock) seek a new application to mine in-stream near Cloverdale, construct five river crossings and 2.2 miles of in-channel haul roads.
2. Kaiser Sand & Gravel has applied to continue mining the Prombo pit adjacent to Winsor's gravel wells, using Vested Rights. The County is requiring an EIR on the Reclamation Plan submitted.

Two New Mining Laws

Two new State mining laws may have a powerful effect on river mining. One prohibits mining of aquifers on which cities, farms and industries depend for water supply and water quality. The other establishes a benchmark, below which there can be no mining. These laws still have to go through "Administrative Law Review."

Update of Wetlands Legislation

The following is a brief description, and update, of the two main wetlands legislation bills which were reported in the last issue of Sonoma County E.I.R.

HR1330 (Hayes)

HR1330 would dismantle the whole system. It calls for setting up categories of wetlands. Those meeting highest requirements would be protected, eliminating major portions of wetlands. Scientifically, wetlands have different functions dependent upon one another: wildlife habitat, flood control, water purification, and recreation. (See Wetlands — A Priceless Commodity, E.I.R., May 1992). Scientifically, wetlands cannot be judged better than the other. Ranking is a political move.

HR4255 (Edwards)

HR 4255 was created to counter HR 1330 (Hayes) and build in improvements to the existing Section 404 by broadening its scope and impeding President Bush's efforts to deregulate. Basically, it closes loopholes in existing regulatory structure and strengthens or clarifies other elements. One key element expands Section 404 of the Clean Water Act. Currently it only prohibits filling or dredging activities in wetlands. It expands the regulation to all activities that harm wetlands, such as draining, removal of vegetation (disking), channelization, etc. This means that developers will no longer be able to drain a wetland, get rid of its wetland vegetation and then go to the Army Corp of Engineers and declare that "this is no wetland."

Update: HR 4255 (Edwards) has received 60 co-sponsors to date. Congressman Riggs dropped his co-sponsorship of HR 1330 (Hayes) but has not joined HR 4255. Unlikely that these bills will be enacted this year. There is concern: Hayes bill is not losing any more sponsors.

Please contact Marc Holmes (510) 452-9261 of the Save California Wetlands organization headquartered in Oakland to find out what you can do. You can write your congressman. See page 20 for address.

Correction

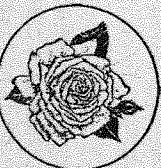
The aerial photo of the Laguna De Santa Rosa in April's edition was taken by Bill Cox of the Department of Fish and Games, not Peeter Vilms.

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