

# The sloughs of Watsonville



Mike McCollum

A flock of shorebirds hunt food in Watsonville Slough this morning.

## Is the fragile system being protected?

(This is the second of a four-part series of stories on the sloughs and wetlands of Watsonville.)

By CHELA ZABIN  
STAFF WRITER

To anyone trying to develop or farm around the Watsonville-area sloughs, it may seem as though there are more than enough restrictions in place.

The county and the city require developers to give them any sloughs that lie on their property and specify how close to the slough they can build. Local governments and any number of agencies may also impose a host of conditions intended to minimize the impact building will have on the sloughs and the wildlife they contain.

Farmers wanting to apply pesticides near the slough areas may be told by the Agricultural Commissioner's office how, when and what they may put on fields near the wetlands.

But those restrictions, even when strictly applied and adhered to, have their limitations.

There's nothing that can prevent wind and rain from carrying dirt and pesticide residue into the sloughs from fields nearby. And while the city now requires detention ponds, grease traps and other methods of keeping harmful run-off into the sloughs to a minimum, run-off from the city's streets and sidewalks empties into them from older city storm drains.

Since no one is monitoring water quality on a consistent

## Wildlife abounds in sloughs

Not too far from Watsonville's traffic, office buildings and food processing plants, the black-shouldered kite few over the grasslands around Struve Slough, hunting for an afternoon meal.

Spotting something moving on the ground below, it stopped its flight, spread its wings and hung almost motionless in the air for a few minutes. Then, folding its wings, it fell straight down on its prey.

That small drama, and others, are played out many times a day in and around Watsonville's sloughs.

Small mammals, amphibians and birds thrive on the abundant plant life and make up a "prey base" for raptors like the kites, hawks and owls. Insects swarming in the swampy areas are food for other birds, like shrikes, who collect insects and keep them, skewered on thorns or other sharp objects, until they've built up a enough for a meal worth sitting down for.

Small mammals include meadow voles, mice and weasels. Rabbits, skunks, raccoons and foxes have also been seen around the sloughs.

basis, it's hard to know just how polluted the sloughs are and to what extent that may be endangering wildlife.

The information that is available isn't very heartening. In 1982, 1983 and 1986, water quality in Watsonville Slough was tested as part of the California Mussel Watch program, which studies the levels of certain pollutants in mussels.

The program found extremely

A number of birds breed in the area, including green, black-crowned night and great blue herons, various egrets, American bitterns, Virginia rails, long-billed marsh wrens and several swallow species.

More than 20 species of waterfowl — ducks, geese, swans and grebes — either breed or rest during migration in the sloughs. The Watsonville Slough area is considered the most important waterfowl habitat in the county, as a feeding and breeding ground.

Other birds living in the brush and trees surrounding the wetlands are yellow warblers and willow flycatchers, tree swallows, flycatchers, goldfinches, meadowlarks and woodpeckers.

Sixteen species of owls and hawks have been seen in the area.

Seven birds listed by the state Department of Fish and Game as "species of special concern" regularly winter there: the merlin, marsh harrier, short-eared owl, sharp-shinned hawk, Cooper's hawk, golden eagle and California gull. The burrowing owl, also on the list, breeds in the slough areas.

high levels of toxics in aquatic species collected from Watsonville Slough near the Pajaro River — levels greater than 95 percent of those found in mussels tested everywhere else in California between 1977 to 1986. The toxics included dacthal, DDT, dieldrin, endrin, endosulfan and toxaphene. Several of these were also found in a species of fish, the Whole Body Threespine Stickleback, from Watsonville Slough at Harkins

Tules and cattails live in the wetter parts of the sloughs, and slightly higher ground is covered with smartweed, rushes, sedges and dock.

Several "locally unique" plants, like Franciscan paintbrush, Schott's sedge and Olney's bulrush also thrive in the local wetlands.

Non-native grasses, brush and weeds — poison hemlock is one example — dominate the grassy areas surrounding the sloughs where there has been extensive grazing. In some places, oaks and willows grow near the water.

Some endangered species, like the Santa Cruz tarplant, live on the grassy areas near the sloughs.

Studies looking for the Santa Cruz long-toed salamander and the California tiger salamander, considered, respectively, endangered and a candidate for endangered status, in the slough areas are ongoing. There are some areas around the slough system that appear to be suitable habitat for the salamanders.

—Chela Zabin

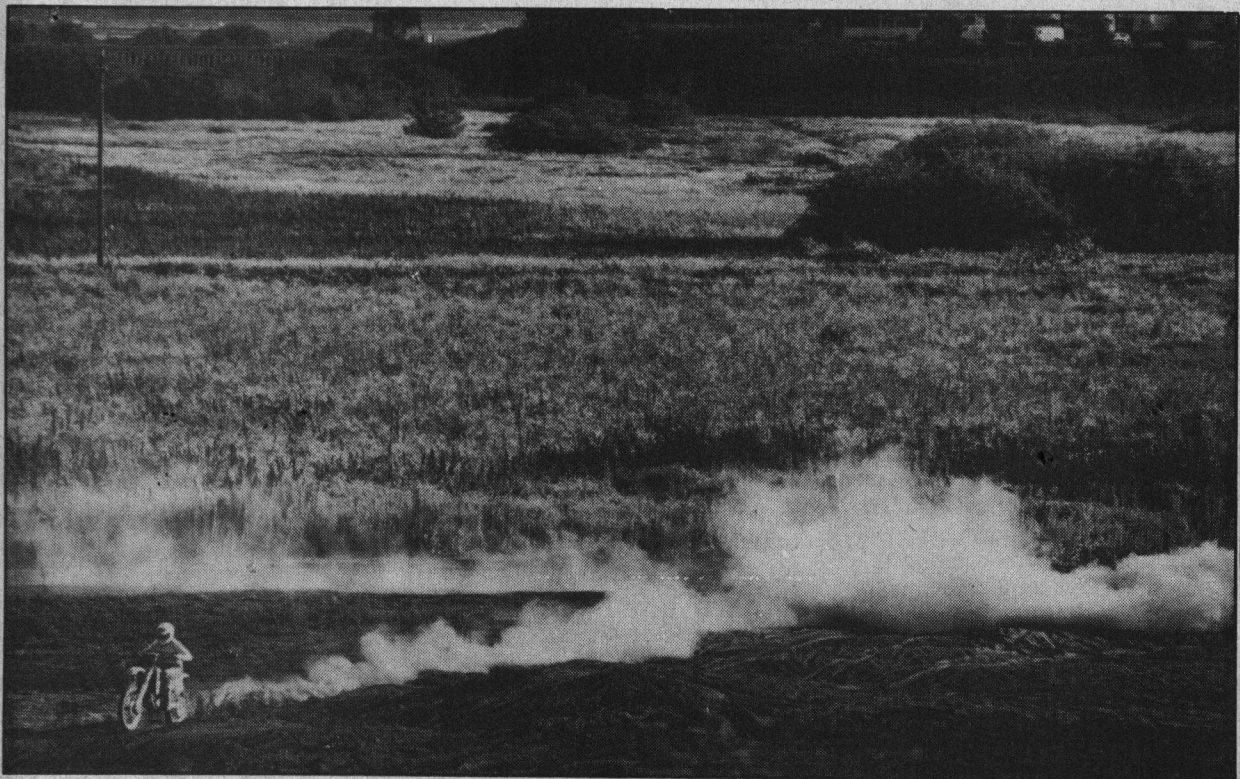
Slough Road.

Michael Martin, the lab director of the state Fish and Game Department's marine pollution studies lab, was involved in the testing in the slough.

The data, he said, "were similar to those we found in the Elkhorn Slough area," which had the highest concentrations of a number of the pesticides than elsewhere in the state.

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Kurt Ellison

**Offroad cycle driver raises cloud of dust in Struve Slough off Main Street on a recent summer evening.**

## SLOUGHS

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Martin declined to say whether the amounts found were high enough to harm the fish, fowl and other animal life in the sloughs. But he did say the findings indicated the Watsonville Slough system would be a "good candidate" for more extensive study. The findings at Elkhorn Slough were enough to cause the state and county to limit the use of certain pesticides upstream from there, he said.

In his senior thesis at UC-Santa Cruz in 1986, Jerry Busch cited a 1981 water-sampling study by the county that found that EPA standards for safety had been exceeded by DDT, endosulfan, chlordane, dieldrin, thiodan, diazinon, malathion, PCB's, manganese, phosphate and ammonia.

Water sampling done two years ago by Jesse Nighswonger, an environmental specialist with the Regional Water Quality Control Board, however, didn't find "any problems to speak of."

Nighswonger said he analyzed water samples for pesticides and heavy metals that might have leached into the sloughs. He said his findings don't necessarily contradict those of the Mussel Watch program, since mussels tend to "bioaccumulate" what's in the water, concentrating it in their tissues.

Because of that, he said, "they serve as an early warning system" for pollutants. They may also reflect how some animals handle the toxics.

While hard data is sparse, the potential threats to water quality in the sloughs are well-documented.

When it rains, motor oil, particulates from burnt gasoline, PCB's and heavy metals related to automobile use, wash from city streets into the sloughs. Those chemicals are known carcinogens and mutagens, and have been targeted by environmentalists in the San Francisco Bay Area as a major water-pollution threat there.

An environmental impact report

written in 1985 for the Rehman property (which became Watsonville Crossroads Shopping Center) by Environmental Management Consultants in Monterey said Struve Slough "has been degraded by urban pollutants including debris, oil, grease, heavy metals, sediment and animal feces."

Fertilizers from yards as well as from farms get washed into the slough and upset the system's natural balance — for example, by causing algae blooms, which deplete the water of oxygen. Other organic compounds that are washed into the sloughs from the streets also place an oxygen demand on the water as they decompose.

In fact, warns an environmental impact report done in 1978 for the Green Valley Highlands subdivision, the amount of organic matter going into waterways from urban runoff may be 40 percent to 90 percent higher than that from treated wastewater.

Busch said some people fish and catch crayfish in the sloughs. He said he wouldn't recommend eating them.

But water quality may not be the biggest threat to the sloughs.

"Some of that is self-curing," said Bruce Elliott, a biologist with the state Department of Fish and Game. Sloughs, can, in fact tolerate a certain amount of pollutants quite well, and can act as filtering devices, even helping to break down certain compounds. Elliott said his main concern was that the sloughs not be altered, disturbed or lost and that regulations were in place to guard against that.

There is some evidence, however, that pollution in the water is affecting life in the sloughs. An environmental impact report for the Madonna Vista Subdivision, written in 1978 and updated in 1982, said, "Water pollution has probably been a subtle long-term determinant of species abundance. Those species which exhibit a higher tolerance for typical pollutants are numerically more abundant."

Busch also downplayed the importance of water quality in freshwater sloughs.

ville's official land-use policy, as spelled out in the General Plan.

Not everyone agrees that the buffer zone suggested by Lohr is insufficient. John Zentner, a biologist who is working with Lohr, said the zone that is suggested is sufficient, and that while it may be ideal to preserve larger amounts of land around the sloughs, it is not necessary for species survival. He said that while some of the animals using the grasslands — like raptors — might be lost, many more will be gained as a result of slough enhancement on the property.

While he disagrees with Busch over the amount needed, Zentner does agree that the preservation of the upland areas surrounding the sloughs is essential to slough survival. "It's an integrated system," he said.

Dave Loomis, district director for the local Coastal Commission office, lists kids and dogs playing in the sloughs — and off-road vehicles being ridden in the areas — as the worst threats to the sloughs, causing erosion, destroying plants and disturbing wildlife.

Off-road vehicle riders often ride in the Struve Slough area near Highway 1. City Planning Director Maureen Owens said she has been talking to state Fish and Game officials about the problem.

Max Puckett, an environmental systems manager with the Association of Monterey Bay Area Governments, said the slough system may be affected by some of the flood-control projects proposed as part of the Zone 7 district. Environmental assessments are supposed to be done before each of the projects are carried out, he said.

Puckett couldn't say whether the projects would harm or benefit the sloughs.

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### An environmental impact report

abundant.

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He said he was more concerned with other factors, such as cattle overgrazing, removal of plants by agricultural users in the areas, sedimentation — the washing of soils into the sloughs, generally as result of farming and construction — and preservation of enough of the upland areas surrounding the sloughs to keep the system intact.

Sedimentation poses a threat to the sloughs because it fills in the sloughs and changes the acidity of the soil in the sloughs, which diminishes plant diversity, Busch said.

Cattle overgrazing denudes the slopes around the sloughs and adds to the erosion and sedimentation problem.

Busch said it's not enough to preserve just the sloughs and small barriers around them. A number of animals live in or near the sloughs part time and on upland slopes at other times, or feed at the slough and live in the grassy or brushy areas surrounding a slough, and Busch said enough of those areas need to be preserved to support them. Enough needs to be preserved so animals that live at the slough edges have somewhere to go in times of heavy rain when the sloughs swell up, he said.

Busch said he wants to make sure a significantly sized "building envelope," or buffer zone, around the sloughs is put in place on the proposed housing development on the Lohr property and wants "adequate" buffer zones around sloughs to become part of Watson-