



Laguna's ludwigia down, but not beaten

Three-year program has reduced fast-spreading water weed, but officials still seek effective long-term solution

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Three years ago, Sonoma County declared war on ludwigia, a fast-spreading plant that was clogging west county waterways and providing safe harbor for West Nile-carrying mosquitoes to breed.

But this summer the warriors charged with leading the fight, the Laguna de Santa Rosa Foundation, will temporarily put aside their herbicides and mechanical harvesting equipment to investigate more effective ways to battle the plant.

What they've learned is that ludwigia is the Frankenstein of invasive weeds, refusing to die despite a \$2.1 million, three-year campaign to kill it off. The fight was funded by the Sonoma County Water Agency, the city of Santa Rosa, the Marin/Sonoma Mosquito & Vector Control District and the California Wildlife Conservation Board.

"The results have been mixed," said Dan Carlson, Santa Rosa's deputy utilities director. "Some techniques worked, some didn't."

Dan Schurman, the foundation's executive director, agreed.

"We accomplished some short-term relief from the worst and heaviest infestation and the elevated population of mosquitoes that threatened public health," he said. "But did we get rid of the plant? No way."

In terms of how much of the weed has disappeared, the program has been effective, said Mike Thompson, deputy chief engineer for the Sonoma County Water Agency.

"What we see this year is nothing like years past," he said, noting in many areas the weed's thick growth beneath a creek's waterline proved nearly impassable for migrating and spawning fish.

Ron Keith, an ecologist with the mosquito and vector control district, said he now can see free-flowing water in most of the waterways once clogged and thickly carpeted with the weed.

"The ludwigia has been knocked back severely," he said, enough so that the temporary break in herbicide spraying and mechanical harvesting will not be long enough to allow the plant to reestablish itself.

"It will take a long time for it to come back to where it was three years ago, maybe five to 10 years," Keith said.

Some 30,000 cubic yards of the weed were removed from the most heavily infested waterways, including 5.5 miles of drainage creeks west of Rohnert Park and along Occidental Road and 125 acres of flood plain in the Sebastopol area, according to statistics developed by the Laguna Foundation.

Santa Rosa Deputy City Manager Greg Scoles said the most profound discovery of the foundation's work was that it is easier to control the weed in deeper, cooler waterways than shallower, warmer areas where ludwigia "grows back quickly."

"We knew going in it would only be a stopgap measure," Schurman said of his organization's efforts.

The focus of the past two years has been to develop a long-range plan to control the amount and spread of ludwigia, which has gained a foothold along portions of the 14-mile-long Laguna de Santa Rosa and hundreds of miles of tributaries that feed into it.

Scoles said the idea now is to develop, based on three years of work and analysis, a more effective attack and to seek potential state and federal funding for the fight.

Containment, restoring riparian habitat to cool the waters and addressing problems that fuel its rapid spread -- nutrient-rich run-off from lawns, golf courses and dairies -- are among longer-term strategies.

The new focus will be to develop non-chemical ways to control the weed in the future.

One major way likely will be to dig narrow, deeper channels within wider creekbeds that will drain away standing, shallower waters, prime growing habitat for ludwigia in the hot summer months.

"Then the only place it will grow will be in the thin ribbons of water still there," Thompson said.

Initial plans to use herbicides to control the weed in Sonoma County were opposed by the environmental community, but moved forward because of concerns over the rapid spread of the West Nile virus across the United States.

Ludwigia, which virtually carpeted the most affected waterways, provided safe haven from pesticides and predators to breeding mosquitoes, the primary carrier of the virus, which can be deadly to birds and horses but less so to humans, Keith said.

Since the two-prong war began, Keith said, "there has been a significant drop-off in the mosquito population."

While Keith didn't have the most recent statistics readily available, the Laguna Foundation

said traps along some of the more ludwigia-infested waterways caught about 4,000 adult mosquitoes in 2005, a number that dropped to only a few hundred in 2006.

The opening of the clogged waterways not only has reduced flooding but has opened up areas once choked off by the weed to the return of otters, osprey and even kayakers, officials said.

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