
EWEB examines herbicides in the watershed

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Activists have long argued that the timber industry's practice of annually spraying herbicides over thousands of acres in Lane County pollutes the water, harming fish and people.

Now the Eugene Water & Electric Board is raising its own concerns about the aerial spraying of herbicides in the McKenzie River watershed - the sole source of drinking water for 200,000 Eugene-area residents.

Second only to the heavy doses of bug- and weed-killers found in urban runoff, spraying by commercial foresters is the greatest potential threat to Eugene's drinking water, said Karl Morgenstern, EWEB's drinking water source protection coordinator.

Each year, timber companies douse the McKenzie watershed with 54,000 to 102,000 pounds of herbicides - and that's the weight of active ingredients alone, before the chemicals are mixed with a delivery agent, company filings show.

"It's a large number; it's a big quantity," said Morgenstern, who analyzed the filings. "That's more than a tanker truck. That's, like, a couple tanker trucks."

But aerial chemical spraying on private land is a legal, decades-old practice among timber companies. Critics have persuaded many government agencies, including Lane County and the U.S. Bureau of Land Management, to cut back on spraying but have made scant headway in curbing spraying on private timberland.

Weyerhaeuser Co. spokesman Mike Moskovitz said applying spray by air is an essential practice in commercial timber production and pilots apply the herbicide with great care.

Weyerhaeuser plans to spray at least 5,232 acres in Lane County - including in the McKenzie watershed - between now and the end of the year, according to notices the company is required to file with the state.

"We have to apply them according to the federal and state laws, and those laws are designed to protect people's health and safety and the environment," Moskovitz said.

Surgical application

Commercial timber companies use aerially applied herbicides to retard the growth of competing broad-leaf plants on clear-cut acreage that's been newly planted with seedlings.

They spray once just after harvest, once after the seedlings are planted and then - if

needed - a third time the following year, all to allow young trees to get their crowns up above the brush, Moskovitz said.

"Then nothing happens for 40 years because when the trees start to grow we just leave it. It's not like we're spraying the same area all the time," he said.

Weyerhaeuser sprays chemicals such as triclopyr, imazapyr and sulfometuron-methyl for the same weed-control purposes that homeowners spray the dandelions in their lawns, Moskovitz said. Forest sprayers, however, use a much more diluted form of spray, he said. Spray drift is a major concern, according to U.S. Environmental Protection Agency documents. The EPA receives thousands of complaints about drifting aerial spray each year.

The Oregon Forest Practices Act, which regulates forestry on private land, requires pilots to leave a 60-foot buffer around significant wetlands, streams and lakes.

Weyerhaeuser hires mostly military-trained pilots who are skilled and take extra care when they spray the forests, Moskovitz said.

"We use state-of-the-art technology. There are computers inside our helicopters that let the operator know when it's OK to drop the spray, and that's based on weather and wind," he said. "The operators know exactly where that spray is going to go."

Pesticide fever

But in Lane County, a growing number of activist groups are questioning the aerial application of herbicides.

The groups include the 29-year-old Northwest Coalition for Alternatives to Pesticides, the 7-year-old Oregon Toxics Alliance, the 3-year-old Forestland Dwellers' No-Spray Group and the Pitchfork Rebels, a group of Blachly area residents who coalesced earlier this year against spraying in the western part of the county.

The increase in activism has been spurred by rural population growth, increased knowledge about herbicides, and changing consumer expectations, said Norma Grier, executive director of NCAP.

The groups say they want timber companies to at least stop applying herbicides by air, Grier said, adding, "It's a very crude management approach."

EWEB's Morgenstern said timber management practices in the Willamette National Forest, which leaves 30 percent or 40 percent of the trees in its logging projects, don't require spraying because shade from the remaining trees keeps weeds from growing.

However, Moskovitz said Weyerhaeuser - which owns 575 of the more than 4,500 square miles in Lane County - has a completely different mission from a government agency.

"They protect the forest for mostly recreational use," he said. "Our business is to cut the trees and do the clear-cuts and regrow the trees. It's a totally different situation."

Still, activists and EWEB officials are trying to encourage timber companies to cut back on the use of herbicides.

In recent years, the utility has focused its efforts on reducing farm-related pesticide runoff in a program that is so innovative that Morgenstern was called to Washington, D.C., to describe it to a U.S. Senate advisory panel.

One effort was a plan to haul off any old chemicals farmers have stored in their barns.

"The way we like to approach it is to help people do the right thing - encourage it and not take an adversarial approach," Morgenstern said.

EWEB's forestry-related drinking water protection efforts are in their infancy. Taking a cooperative approach requires the utility to build a good relationship with timber companies, and that's challenging, Morgenstern said.

"They've been attacked and beat up for so long that they're just in a defensive posture," he said. "It's going to be a while before we get some trust so we can break through that and find some solutions that are win-win."

Morgenstern would like timber companies that spray in the McKenzie watershed to provide him their spray schedules so he can better time his stream testing to figure out whether the herbicides are washing into the river and into EWEB's water intake.

In their legal notices, companies are allowed to give as much as a five-month window of when they plan to spray but are not required to list specific dates.

The activists, meanwhile, plan to do some testing of their own. The Forestland Dwellers and the Oregon Toxics Alliance are teaming up with the San Francisco-based Pesticide Action Network North America to erect at least one "drift catcher" air-monitoring device in Lane County. The idea is to sample the air near a rural school.

"We want to use science to back up what we say," said Lisa Arkin, executive director of the Oregon Toxics Alliance, "so we're not just mouthing off."

FORESTRY HERBICIDES

Here are the six most-used herbicides in the 1,300-square-mile McKenzie River drainage. The U.S. Environmental Protection Agency measures toxicity on a scale of 1 (most toxic) to 5 (least toxic).

- **Imazapyr:** Rated 5 for toxicity. State researchers say there's no evidence it causes cancer. The chemical is water soluble and highly mobile. Its half-life in soils (the time it takes for half of it to disintegrate) is 19 to 34 days.

- **Glyphosate:** Rated 2 or 3 for toxicity. State researchers say there's no evidence it causes cancer, but the Northwest Coalition for Alternatives to Pesticides points to studies that show a link with non-Hodgkin's lymphoma. Other studies link the chemical with genetic damage in mice and in human blood cells. It persists in water for 14 to 21 days and has a half-life in soil of 47 days.
- **Atrazine:** Rated a 3 for toxicity. It ranks as a possible human carcinogen. In animal studies the chemical was shown to disrupt hormone systems, reducing testosterone in male offspring and interfering with the nursing hormone prolactin. It is moderately toxic to fish and persists in water. It has a half-life of 100 days in surface layers of soil but can last for years underground.
- **Hexazinone:** Rated a 1 for toxicity. It ranks as "not classifiable" in its ability to cause cancer but has a high potential to cause eye damage in humans. It can be moderately toxic to birds and slightly toxic to honeybees. It is highly mobile and can travel through soil into water. Its typical half-life in soil is 90 days.
- **Triclopyr:** Rated a 1 for toxicity. It ranks "not classifiable" for cancer-causing potential but is acutely toxic and corrosive in the human eye. Rats fed the chemical over two generations had smaller litters and smaller offspring. Some formulations are highly toxic to trout and salmon. It is highly mobile and can travel through soil into the ground and surface water. Its half-life in soil ranges from 79 to 361 days.
- **2,4-D:** Rated 3 for toxicity. It is not classifiable for its cancer-causing ability but high-level exposure has been linked to birth defects and impaired nervous systems. It may be highly to slightly toxic to invertebrates and fish. It persists in water for as long as six months. Its half-life in soils is 10 days or longer. Source: Oregon State University Extension Service, Northwest Coalition for Alternatives to Pesticides

MORE INFORMATION

Companies spraying pesticides or herbicides near water bodies must file notices with the state Department of Forestry. The Eugene-based Forestland Dwellers posts notices for some Lane County spray projects on its Web site:
www.forestlanddwellers.org/notices/