



Associated Press

An aerial applicator sprays a field. Oregon regulators have seen reduced pesticide levels in key waterways.

Pesticide levels drop in key Oregon waterways

By MATEUSZ PERKOWSKI
Capital Press

Pesticide levels in some key Oregon waterways have dropped to a fraction of their former concentrations due to changes voluntarily adopted by farmers, according to environmental regulators.

Monitoring by Oregon's Department of Environmental Quality has found that growers are willing to alter spray regimens to achieve successful water quality results.

"Overall, we've seen improvements in a number of agricultural areas, particularly in the Columbia plateau. We've seen agriculture respond to the data," said Kevin Masterson, the Department of Environmental Quality's toxics coordinator.

About 50% of the waterway sites tested under an interagency "pesticide stewardship partnership" program showed progress in pesticide detections and concentrations during the 2015-2017 sampling period, compared to the previous biennium.

Roughly 27% of the tested sites showed declines in water quality from pesticides, while 23% showed no change during that time, according to data compiled by the department.

Those numbers don't tell the whole story, however, because the monitoring is targeted toward streams where pesticides are detected, while those without occurrences are dropped from testing, said Masterson.

"It is a targeted monitoring program," he said, adding that the water quality improvements are noteworthy given that regulators are focusing on areas with problems. "What we don't find is as important as what we do."

The monitoring program has resulted in significant reductions in pesticide levels in such watersheds as the Walla Walla, where the concentration of diuron herbicide has

effectively fallen to zero from a maximum level of 18.9 micrograms per liter and an average level of 1.5 micrograms per liter in 2010.

When presented with the diuron data, the local irrigation district stopped treating ditches with the herbicide during dry periods and instead switched to mechanical removal and spot-treatment with a less-toxic and -persistent chemical, Masterson said.

Concentrations of the malathion insecticide have likewise plummeted in the Wasco basin, where cherry growers are now more reliant on weather stations to time their spraying, according to the department. Aerial applications now occur on the interior of orchards while areas near streams are sprayed by hand.

Not every waterway under scrutiny has seen a decrease in pesticide levels — those in the Willamette Valley, for example, have generally seen concentrations rise and fall without a clear trajectory, said Masterson.

"In a lot of areas, we haven't seen sustained trends for pesticides of interest," he said. "Even though it's a challenge in some watersheds, it's been a success in others."

Decreasing pesticide levels in water is generally more straightforward in regions primarily dedicated to certain crops — Walla Walla for apples, Hood River for pears, Wasco for cherries — compared to those where agricultural land use is less uniform, said Kirk Cook, pesticide stewardship specialist at the Oregon Department of Agriculture.

"Those are usually where we have a wide diversity of crops grown and chemicals used," he said.

For the same reason, more progress has been seen among farmers compared to more numerous city dwellers, who are more dif-

icult to communicate with on a large scale, said Masterson. "We've been able to see major declines in agricultural areas that we haven't been able to see in urban areas."

Farmers have generally taken pride in seeing a positive response from their efforts to keep pesticides out of water, Cook said. "Any regulatory action that you take is generally something that is forced on them. People are going to react negatively to something that is forced on them."

There's also an incentive to take voluntary action because growers know that a lack of improvement could result in regulatory action that cuts off access to pesticides,

he said.

For pesticides subject to the federal Clean Water Act, exceeding benchmarks for concentrations in water could result in a more restrictive "total maximum daily load" process than the current voluntary approach, he said.

Exceeding benchmarks for other "pesticides of concern" identified by Oregon regulators could also cause those chemicals to be pulled from the market if voluntary action were ineffective, Cook said.

"That would not be available for the applicator community to use," he said. "Our goal is to not have that happen."

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Ten myths about climate change

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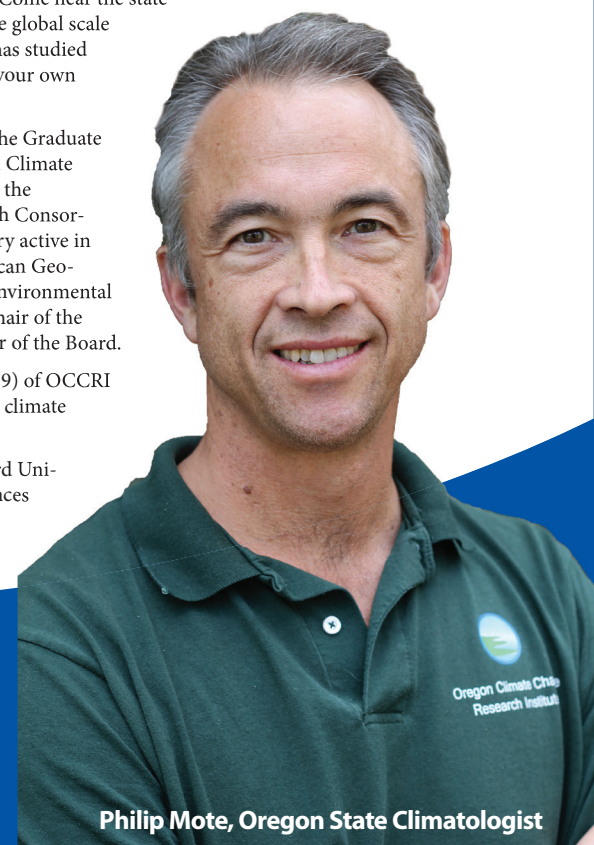
Philip Mote is vice provost and dean of the Graduate School and remains active in the Oregon Climate Change Research Institute (OCCRI) and the NOAA-funded Climate Impacts Research Consortium (CIRC) for the Northwest. He is very active in leadership of the 60,000-member American Geophysical Union, as President of Global Environmental Change, member of the Council, Vice Chair of the Council Leadership Team, and a member of the Board.

Philip was the founding director (2009-19) of OCCRI and remains involved in communicating climate science within Oregon.

He earned a B.A. in Physics from Harvard University and a Ph.D. in Atmospheric Sciences from the University of Washington.

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Philip Mote, Oregon State Climatologist

Empty-handed dinner guest

Dear Annie: I live in the Midwest. My husband and I have a good friend who dines with us quite often, usually once or twice a week, as well as on holidays. She is a long-time friend. The problem is this: She never brings anything with her when asked to dinner. She never asks us to her place for a meal. She never offers to buy dinner when we go out, maybe once a year. She never offers to bring carryout. She is fairly close and watches our house when we are out of town, which we appreciate. How do we proceed with solving this problem without alienating her? — *Hungry*

Dear Hungry: The next time you invite her over for dinner, simply say, "Oh, by the way, would you please bring an appetizer" (or dessert or side dish). Mention it as though it's the most natural thing in the world. There's no reason for you to feel awkward. It's perfectly appropriate. If you have any hesitations, just imagine if the tables were turned — that you'd been dining at a friend's house for years and then she casually asked you to bring something to dinner that week. Would you feel indignant? No. If anything, you'd perhaps feel embarrassed that she had to ask.

Dear Annie: I lost my wife of 42 and 1/2 years in late 2014. I met her when she was 15, started dating when she was 17, and I married Shirley when she was 20 and I was 21. A friend of 41 years had previously lost his wife and stepped in to assist me in nav-

igating the loss. He had attended a multi-week grief class years before and shared this event.

A petite woman faithfully attended grief classes each week for a long time and never spoke a word to the group.

Finally, at the close of the class, she spoke saying, "I'd like to say something." Everyone stopped talking, almost in disbelief. The room was quiet. She continued: "Profound grief of a spouse is like accidentally and significantly cutting your arm. It hurts really bad and seems that you may never stop the bleeding. But you do. Not too long after, you bump the wound and the scab comes off. It bleeds and hurts for a long time, and then begins to heal again. This process repeats itself over and over for a long time. One day, you look at your arm and see a tender scar that will be part of you for the rest of your life. The scar is there, but it doesn't hurt like when it was a new wound, and the bleeding has stopped."

I've shared this with so many since it was first told to me. It seems to resonate with anyone who knows the loss of a beloved spouse.

Thanks for all you do every day to help so many people you don't even know and will never meet. — *Rob R., Jacksonville Beach, Florida*

Dear Rob: Your letter brought tears to my eyes. Thank you for passing on this wisdom. I'm so sorry for your loss.



ANNIE LANE
Creators

COLUMBIAFORUM 2018-19

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