Despite calls for bans elsewhere,
Madison continues use of weed killer Roundup

Capital Times, Steven Elbow
June 26, 2017

When Mayor Paul Soglin wrote on his blog last month that the city has a "no chemical" policy, Charlie Romines braced himself. "I knew what was coming when I saw it," said the assistant parks superintendent. "And we got it." They got it in the form of gotcha calls from residents who had spotted city workers applying chemicals at city parks and leaving behind warning signs that pesticides had been used.

Turns out, Soglin was referring to the city's policy regarding the city's more than 350 acres of medians, which are in fact maintained without pesticides. But the rest of the city-owned landscape is fair game. Among the pesticides the city uses is the controversial weed killer Roundup, along with similar products that contain the chemical glyphosate, the use of which is coming under increasing attack because of its links to cancer, birth defects and a variety of other maladies.

Romines said the city's "very limited" use of glyphosate isn't comparable to the large-scale agricultural uses that coincided with upticks in cancer and birth defects in other countries. "That is very, very different than what we're doing in the city," he said. "In the city these are direct applications, very small-scale applications. We do not spray it even out of a boom sprayer."

But Warren Porter, a University of Wisconsin-Madison zoology professor who has done extensive research on environmental toxicology, isn't convinced. Porter said that even in minute amounts, glyphosate can have profound long-term health effects. "Most people don't have a clue as to what's going on," he said.

According to the city's 2016 Pesticide Report, the city applied hundreds of gallons of glyphosate products to nearly all large city parks and several conservation areas last year. The report lists the application of 84.5 gallons alone of Aquaneat, a glyphosate product, as part of the Tenney Park shoreline construction project. One hundred and thirty gallons of Roundup Pro Max were applied to ball diamonds at Olbrich,

Demetral and Warner parks. Applications at other sites were less specific, but it's clear that it was used in a variety of parks, golf courses and conservation areas. The report generally projected pesticide use this year to be similar to 2016.

According to records obtained through an open records request from Madison Parks, between the beginning of this year and late May the parks division had applied Roundup or other glyphosate products at 84 locations throughout the city. Many of those applications were to eradicate invasive species such as garlic mustard, burdock or dame's rocket at the city's conservation parks. It was also used to keep weeds at bay at ball fields, shelters, fence lines, cement cracks at parking lots, basketball and tennis courts and to clear ground for mulching. Larger-scale uses, Romines said, include the eradication of patches of invasive species such as dame's rocket, which can measure several square feet. Many of the applications are done with a hand-held spray bottle. Wider applications are done with a nozzle sprayer attached to a backpack chemical container, which is held about 6 inches from the target.

According to the National Pesticide Information Center, glyphosate binds to the soil and has a half life -- the time it takes for half the chemical to break down in the environment -- of between two and 197 days. For someone to get exposed to it, Romines said, one of two things would have to happen: They'd have to be exposed by air drift, "which, the way we apply it, isn't an issue," or they would have to touch it when it's still wet, typically a period of 10 to 20 minutes, maybe up to an hour under extreme humidity.

"That's where he's wrong," said Porter. Porter said that glyphosate is actually less likely to enter the body when it's wet. The chemical, he said, is fat-soluble, so when it's wet it forms a water barrier. "But once it dries and you put your fat-soluble skin against that thing, then you can get rapid transfer," he said. In addition, studies have shown that some formulations of Roundup contain "inert" ingredients that are toxic and which facilitate the biological uptake through the skin and into human cells. "All pesticides have those properties," he said. "But in the case of Roundup, some of their particular fat-soluble materials are especially toxic in their own right."

Romines said the city exceeds state signage requirements to make sure the public knows about the application, although a worker failed to put out signs after treating an area slated for mulch near the site of a new beer garden at Olbrich Park.
“We did talk to him and let him know that even on those kinds of very small areas he should have posted a sign,” he said.

Glyphosate, the most widely used weed killer in the world, has been implicated in maladies that include cancer, birth defects and the disruption of human sex hormones. And some studies suggest that other ingredients in Roundup can play havoc with human hormones, possibly causing abnormal fetal development, low birth weight or miscarriages.

Roundup maker Monsanto has refuted studies linking Roundup and other glyphosate products with industry-funded research. But the company is fighting a worldwide movement to ban the chemical. A recent court decision against Monsanto has allowed the state of California to label the chemical as a carcinogen.
Two years ago the International Agency for Research on Cancer, an arm of the World Health Organization, designated the chemical “probably carcinogenic to humans.” In Argentina, thousands of doctors have issued a collective call to ban glyphosate after increased usage coincided with cancer clusters and a drastic spike in birth defects. A divided European Union recently relicensed glyphosate, prompting, but France has placed restrictions on its sale. Use of glyphosate also has been banned or restricted in the nations of Sri Lanka, the Netherlands, Denmark, Sweden, Colombia and El Salvador, and bans are being considered in several other countries. It’s use has been restricted in several cities, including Chicago.

The Madison School District, which came under fire for applying Roundup to school grounds several years ago, has discontinued the practice. “The only place we have is at our two stadiums sites where we can close the environment during and after use,” said district spokeswoman Rachel Strauch-Nelson in an email.

Porter, the UW researcher, said any exposure to glyphosate poses a substantial health risk. “There is plenty to worry about,” he said, noting that many people already have glyphosate in their systems because of its routine agricultural applications to sugar cane, sugar beets and grains. “There’s a remarkable frequency of humans that are excreting Roundup in their urine,” he said. “Maybe you get out there in the park and you pick up some more. Especially for young kids who are still developing, the problem is probably greater.”

But Romines maintained that calling for a ban on the city’s “very limited, specific use” would be an overreaction. “It’s one of those things where you really have to have an open mind and educate yourself fully, not just on the pesticide in question but how it’s being used,” he said. “Because to be clear, any of these pesticides, if used inappropriately, can cause a problem. None of them are 100 percent safe, and we understand that.” The city banned pesticides in medians years ago, Romines said, before he began working for the city. He warned that extending the ban citywide would have an adverse effect on the city’s green space. “If we make a mistake in the city of Madison in how we use them, they’re very likely to be taken away,” he said. “And I think that would have a very detrimental effect on our ability to maintain our system in a way that is acceptable.”

But Porter said there are safer and more effective ways to control weeds. “When you go in there and just blast them with a pesticide, you just kill them and open up the area for the invasion of other weeds,” he said. He said key is keeping the soil healthy to promote healthy grass, which can be done organically, or eradicating weeds with glacial acetic acid, which he said is both effective and “totally harmless.” “They don’t need to use poisons,” he said.