

Human Waste Being Used In Fertilizer In Washington State

11-21-2000

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KING 5 TV Investigation: Grounds for Concern

SEATTLE - The waste that you flush down your toilet is being treated, processed into fertilizer, and spread on farms.

Known as sewage sludge, or biosolids, the mix is really processed human sewage, and each year, thousands of tons of it are spread on farms across the country, and right here in Washington.

In fact, biosolids are in big demand in the central part of the state.

At Boulder Park Farms in Douglas County, using biosolids has been a big success. Wheat grows taller and better than with traditional fertilizers. The wheat is turned into flour, which, in turn, we eat.

From sewage to fertilizer The sludge comes from the toilets and drains across Seattle, King County and other Western Washington cities.

At the state-of-the-art West Point Treatment Plant in Seattle, raw sewage is digested, heated and spun, until it's just right for shipment to the fields. "We make sure the products that we produce are of a very high quality," says West Point manager Dick Finger.

But even "very high quality" biosolids contain heavy metals and millions of pathogens, like human viruses, bacteria and parasites.

The Environmental Protection Agency and Washington's Department of Ecology say the metal content is low, and claim the soil will kill any remaining pathogens.

"Am I concerned about significant impacts to human health and the environment? No, not based on the information I've seen so far," says state Biosolids Coordinator Kyle Dorsey.

But that notion is being challenged by Cornell University researchers.

In "The Case for Caution," Ellen Harrison and a team from Cornell tore apart the EPA's assumptions about the safety of the sludge.

"If there was widespread use on a large area next door to me, I would be concerned," said Harrison.

Cornell found EPA's Cancer Risk Assessment is "not protective," and its enforcement and oversight is "inadequate." It also found that pathogens may survive in soil, especially in cool, wet conditions.

"In humid climates, it's not clear that even appropriate management practices will prevent the leaching of some of the viruses," Harrison said. "That really needs some serious attention."

Yet, the state allows sludge to be dumped in every county - including those in wet Western Washington - with no mandatory testing for pathogens once sludge is dumped.

Bob Thode spreads 22,000 wet tons of sludge over 600 acres at his Fire Mountain Farms in Lewis County. For that, he is paid more than \$400,000 a year.

The sludge comes from Tacoma, Olympia, Fort Lewis and a half dozen other cities and counties.

Though Thode has had a permit suspended, has been written up for "leaking" and "spilling" sludge "everywhere" and dropping sludge on the road, he calls himself an environmentalist. "We believe this is part of the environmental answer," he says.

Neighbors call him something else.

"I think he is a disposer - not a farmer," says neighbor Hans Butschun.

"It's like flushing a toilet. It all washes downstream to us," said Suzanne Butschun.

"I know that he was a farmer, but not after he found out about sludge," says neighbor Merrily Knutsen.

Lincoln Creek runs through the middle of some of Thode's land, and it often floods. The KING 5 Investigators recently obtained a photo of a piece of equipment used to spread sludge, in the water. Yet Thode says no sludge has ever gotten off his land, because he uses buffer zones around the creeks, ditches and wetlands.

But at one of Thode's sites, Lewis County found "buffer area application" of biosolids and "runoff . directly into the creek."

When asked by KING 5 Chief Investigator Duane Pohlman whether he had ever made mistakes, Thode responded, "Oh yeah . but I don't think we ever made a mistake we can't control."

Thode says his tests show the sludge didn't make it to the water, but he's the only one doing the testing.

In fact, the EPA and state leave the testing to those who produce the sludge, and those who apply it.

"Thode does the testing," Butschun said, "therefore, we have no confidence."

Even the chairs of the Republican and Democratic parties in Lewis County have found common ground on this issue.

"I certainly don't think it's safe for Lewis County," said Bob Guenther, chairman of the Democratic Central Committee.

"Right now, Bob's doing the inspection," said Ron Averill, chairman of the Lewis County Republican Party, "and I think people have a right to be concerned about that."

KING 5 test results

So the KING 5 Investigators decided to look for themselves. They tested the sediment in the ditch that flows from a site where Thode is licensed to spread sludge. The ditch was tested in 1994, before sludge was applied to the land upstream.

Butschun collected that original sample in 1994, and the KING 5 Investigators asked him to collect another one last month, in the exact spot.

Metal Parts per million in 1994: Lithium 4.33
Magnesium 1750.00 Aluminum 14400.00 Phosphorous
351.00 Titanium 6.21 Chromium 24.20 Barium 97.60

Parts per million in 2000: Lithium 16.00 Magnesium
7000.00 Aluminum 33000.00 Phosphorous 930.00
Titanium 1200.00 Chromium 57.00 Barium 150.00

As you can see, the amounts of aluminum, chromium and phosphorous have doubled. Lithium and magnesium have quadrupled, and the level of titanium is nearly 200 times what it was six years ago.

As a matter of fact, those numbers were so high, that when the KING 5 Investigators gave them to Dorsey, the head of the state's Biosolids program, he thought we had tested pure sludge - not the sediment in the ditch that wasn't supposed to contain it.

While our test is not conclusive, it has raised serious questions, and the state says more comprehensive testing may be needed.

As for the food that's grown in sludge, there are no clear answers. The plants do absorb metals in the sludge, and Cornell claims the EPA underestimated how much they absorb, and what we really end up eating.

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