

■ **AGRICULTURE:** Cramahe Township council learns new regulations on spreading of biosolids expected soon

Officials spread news on sludge

BY BOB OWEN

lowen@explornet.com

Expect new regulations governing the spreading of sewage sludge on farm fields later this year, an Ontario's Ministry of Environment (MoE) spokesperson says.

Cramahe Township heard from the Ontario government Tuesday.

A team of three presenters, led by MoE manager of policy and special projects Eileen Smith, set out to reassure the five council members that the government has been diligent, researching and providing appropriate guidelines for spreading municipal sewage sludge, or biosolids, safely on farmland.

Smith explained how the ministry has consulted broadly as it makes changes to the system governing the spreading of the material. She admitted that some are in favour of the practice and some oppose it.

Smith anticipates the ministry will present new regulations by the end of this year.

MoE biosolids engineer Shelly Bonte-Gelok outlined some of the research done on the chemicals and pathogens found in the treated waste product used as fertilizer.

She acknowledged that giardia, salmonella and listeria are commonly found in sludge samples, but yersinia and cryptosporidium are found in less than 20% of samples tested by the MoE.

Speaking briefly on the topic, Michael Payne, an environment management specialist with Ontario's Ministry of Agriculture, Food and Rural Affairs (OMAFRA), said some pathogenic materials were "addressed through treatment prior to application (on designated farmland)."

His response appears to have answered part of a question posed by area residents at a meeting with Cramahe council two months ago about pathogens in sludge, but not asked at Tuesday's meeting due to limitations imposed by the presenters.

It did not answer concerns about

The MoE has methods to detect about 150 of these products. The biosolids engineer pointed to the commonly known fact that PPCPs are produced everywhere. Medicines are not all absorbed, and skin and hair products are frequently flushed or enter the waste stream when people bathe.

However, sewage plants are not designed to handle these kinds of materials.

A 2006 report by Susan Holtz, senior policy analyst for the Canadian Institute for Environmental Law and Policy, appeared to agree with some of the Bonte-Gelok findings.

The Holtz report was primarily aimed at reducing environmental contamination, and only secondarily at immediate personal consumer protection, and listed 11 recommendations. Among them were establishing better ways to determine the chemical contents of sewage and increasing research efforts for these issues, including surveillance and monitoring, environmental risks, ecological science, and human and wildlife health.

The Holtz recommendations were broadly based and included support or development of municipal bylaws banning pharmaceuticals and other chemical discards in sewers, a review of biosolids and animal manure management practices in light of issues related to pharmaceuticals and resistant bacteria in water, and public education.

Bonte-Gelok said Tuesday that the federal Ministry of Agriculture, Agri-Food Canada and the Canadian Council of Ministers of the Environment are doing research and surveys related to PPCPs.

The MoE is looking at contaminants and information gaps in this area, Cramahe council was told.

Payne noted most PPCPs were at or near-zero levels when tests were done in the spring after they were deposited.

He admitted there are a lot of chemicals, and only a few have



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(From left) Environment management specialist Michael Payne of Ontario's Ministry of Agriculture, Food and Rural Affairs answers questions from Cramahe Township council Tuesday along with biosolids engineer Shelly Bonte-Gelok and policy and special projects manager Eileen Smith, both of Ontario's Ministry of Environment.

been studied. Government researchers are attempting to look at the big families of chemicals.

In his presentation Tuesday, Payne laid out the health and safety standards currently in effect for sludge spreading. He told listeners that the allowable dosage of biosolids would provide enough nitrogen for corn for four years. He said he believes it is safe if the application and timing are correctly done, the material is placed properly and cover crops are used.

Cramahe Mayor Marc Coombs did not ask questions put forward to him by residents. The ministry officials came on the condition that only council would be allowed to question or comment. Coombs said there were time constraints and Smith said he believed a lot were answered in the joint presentation.

Coombs did ask if, given the research and facts available, there'd be a moratorium on sludge spreading.

Smith replied the MoE has been allowing sludge spreading for 30 years. When the rules have been followed, there have been no demonstrated problems, she said.

"I believe the program is safe, and

beneficial to the municipality and the agricultural community."

Cramahe Councillor Ed Van Egmond appeared to support the ministry officials' statements, pointing out, "I don't know how much greener we can get."

Referring to times when biosolids were spread directly on snow and frozen soil, Van Egmond commented, "They do a good job - much better than 30 years ago."

Until someone comes forward with incinerator funding, he said, he favours the current practice.

Cramahe Deputy Mayor Jim Williams seemed to favour the ministry view, adding a comment made at a conference he attended in Barrie last December at which a speaker had claimed the MoE was not aware of any employee at any sewage plant who had taken sick time due to working with sewage.

Van Egmond wanted more information about the practice of spreading sludge on food crops grown for human consumption.

Smith said there are waiting periods between the spreading of sludge and crop harvesting. Payne said he knew of no operation from

Highway 115 to Brockville that spreads sludge on land used the same year for soft vegetables and small fruits.

Coombs was asked later in the meeting where council was going with the information. He replied the township is collecting information and council is educating itself.

Cramahe Township has budgeted \$1.4 million for sludge removal in Phase 2 of its sewage treatment expansion and is set to move forward immediately with last week's announcement of federal and provincial funding.

When asked how this, and council's green policy, would affect making a ruling on spreading sludge, the mayor replied the \$1.4 million was a high figure and most of the sludge removal had already been done.

Cramahe resident Nick Ignatieff, a Green Party activist, was asked to comment on the presentation.

"I was impressed by the amount of research they have done on potential hazards and how little scientific examination of risk to human health. There was emphasis on the microscopic quantities of hazards in parts per million, billion or trillion, inferring that these were tolerable but without any current research on the actual levels of specific substances on risk."

There was no real answer to the mayor's direct question about the safety for human consumption of leaf crops and vegetables grown on sludged land. The speakers admitted no regulation exists to prevent growing these crops on sludged land, but admitted it isn't done. Japan won't accept various bean crops if they come from land sludged in the previous year.

Professor Murray McBride, internationally respected head of the Cornell Institute for Waste Management, cautions that cattle pasturing on sludged land absorb toxins from sludge and can transmit them to milk and meat products.

pathogenic viruses such as hepatitis and Norwalk which critics claim have been found in the biosolids.

Another of the 13 resident questions asked how sludge spreading can be declared to be safe if no testing of pathogens is conducted.

Bonte-Gelok concluded there are data gaps in the current research. Based on its findings, the MoE has set further research priorities.

Bonte-Gelok and Payne both spoke about the impact on soils of the metals found in sludge.

The 11 metals regulated by the MoE are all found naturally in Ontario soils, Bonte-Gelok said. Actions taken by municipalities have reduced the amount of heavy metals found in sludge.

Comparing 1985 with numbers collected in 2002, she showed that cadmium and nickel levels in 2002 were about 10% of what they were in 1985. Zinc levels were less than half and copper was down by about 20%.

Payne told council and a crowd of 10 to 15 people that the current guidelines do not allow spreading of biosolids if it will raise the accepted levels of heavy metals over provincial standards.

When the ministry studied polybrominated diphenyl ethers (PBDEs) used largely in fire retardants, little difference was evident in the levels from large and small sewage treatment systems.

Bonte-Gelok did not say whether the amounts measured were considered safe, but did refer to a 2004 conclusion that there were dioxins, furans and PBDEs in all sizes of treatment systems. The setting of standards was not warranted.

The 2004 report quoted by Bonte-Gelok acknowledged information gaps existed in this area too.

Bonte-Gelok also discussed pharmaceuticals and personal-care products (PPCPs)

