

In May 2005, the Environmental Protection Agency (EPA) Region 8 sewage sludge pretreatment coordinator posted a warning on the Internet:

"CRITICAL ISSUE: We are currently prohibiting the discharge of untreated, potentially prion-contaminated wastes to POTWs. Typical treatment and disinfection processes used by non-domestic users and those used at Publicly Owned (sewage) Treatment Works (POTW) do not deactivate prions. Prions will pass through the POTW as a pollutant to be released into receiving waters and concentrated in biosolids. Biosolids are the solids produced by POTWs and typically land applied to food and non-food (grazing) crops."

Recent peer reviewed research confirms sewage treatment does not inactivate infectious prions. The sewage process preferentially reconcentrates prions in the sludge "biosolids" which is topdressed on grazing lands, hay fields, dairy pastures, and Class A sludge "biosolids" is spread in public parks, playgrounds, and on home lawns, flower and vegetable gardens. This sludge-spreading policy puts livestock, wildlife and humans at risk.

Prion diseases include mad cow (cattle, livestock), scrapie (sheep, goats), chronic wasting disease (deer, elk, moose, etc.) , and in humans, sporadic Creutzfeldt Jakob disease (sCJD). Animal sources in sewage include abattoirs, meat processors, butcher shops, renderers, vet clinics and labs, taxidermists, etc.

Another potentially critical source of prions in sewers and sludge is leachate from landfills in states which allow landfill disposal of dead animals, including cattle and sheep, and CWD infected carcasses of deer, elk and moose.

The USDA only tests about 40,000 animals, out of the 35 million slaughtered, for mad cow disease. National Renderers Assoc. says there are 1.8 million downer cows per year USDA has only found 3 'mad cow' animals in the US, but the USDA tests less than 20,000 of the "downers". . USDA says downers are 50 times more likely to have mad cow disease. Japan, which tests all animals, recently found its 34<sup>th</sup> "mad cow".

**Human sources of prions in public sewers are the 2 to 25% of the 5.2 million people diagnosed with Alzheimer's Disease who actually have sporadic Creutzfeldt Jakob Disease (sCJD) . (Manuelidis, et al, 1989; Bendixen, 1996; Boller, et al, 1989, 1995; Harrison, 1991; Teixeira, 1995; Warren, et al, 2005) Prions have been found in human and animal blood, muscle, urine and feces. Human blood sources in sewers include hospitals, undertakers and embalmers.**

"Land application of municipal sludge that potentially contains CWD PrP-res (prions) may result in the presence of CWD PrP-res in surface soils." (WIDNR, 2002; EPA Reg. 8, 2005)

Dr. Joel Pedersen, University of Wisconsin, working on a \$5 million Dept. of Defense prion research grant, says:

". . . If clay does boost the infectivity of any prions we happen to eat, it could also help prions that infect deer, sheep or cattle jump to another species, such as us. "This is speculation," says Pedersen, "but it's not outside the realm of the imagination that this enhancement of infectivity could perhaps enhance interspecies transmission."

"Soil may be doing more than just transporting prions, however. Pedersen and Aiken have recently reported that **prion infectivity increased by a factor of 680 when the aberrant proteins were bound to a common type of clay, meaning a prion dose of just 0.2 micrograms (less than one one-hundred millionth of an ounce) could infect a significant number of lab animals.**"

Prion infectivity survives in soil for up to 3 years (Brown, Gajdusek). Pathways of risk: Livestock, wildlife and children eat dirt (and sludge). Windborne pathogens are inhaled and swallowed. Family pets track these infectious wastes into homes on their fur and feet. Sludge and soil adhere to vegetables and crops. Prey animals eat infected carcasses. (there is no 'species barrier' – prion diseases have been found in Oxen, domestic house cats, several species of macaques/monkeys, several species of lemurs, farmed Mink, Cougars, Cheetahs, Puma, Ocelot, Tiger, Lion, Kudu, Oryx, Eland, Nyala, ostriches, Gemsbok and Ankole. .Contaminated meat and MBM feed are linked to zoo animal infections.)

By using flashlit photography, University of Wisconsin researchers found an infected CWD carcass attracted many species which could be at risk including raccoons, hawks, owls, crows, dogs, cats, coyotes, skunks, mink, foxes and opossums. Reminder: "**. . . a prion dose of just 0.2 micrograms (less than one one-hundred millionth of an ounce) could infect a significant number of lab animals.**"

The US EPA and waste industry promote Class A sewage sludge "biosolids" compost for home use as being "sterile" and "pathogen free". Prions are pathogens. Therefore, a fraud is being committed on both the public and the stores and home and garden shops which sell this waste product which is potentially contaminated with prion pathogens.

Respectfully submitted,

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Prions in sludge: <http://www.sludgevictims.com/pathogens/prion.html>

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