

Frequently Asked Questions About Sewage Sludge

What is it and where does it come from?

We all create sewage sludge. Anything flushed down the toilet or dumped down the drain in homes, schools, hospitals, streets, businesses and industry flows through the sewer system to sewage treatment plants. Treatment plants clean the liquid part of the sewage and attempt to remove some of the toxic metals, excess nutrients and pathogens from wastewater. The resulting liquid is discharged into river, lakes and streams as effluent. The leftover solids and semi solids that are “filtered” from wastewater make up the “sewage sludge.”

What’s in it?

Over 60,000 toxic substances and chemical compounds can be found in sewage sludge. The American Society of Civil Engineers shows that sludge typically contains the following toxins:

- Polychlorinated Biphenyls (PCBs) – although banned in the 1970s due to their high toxicity, PCB’s are not easily degraded and are persistent organic pollutants.
- PBDEs - polybrominated diphenyl ethers – chemicals found in fire retardants that have been associated with developmental disorders and thyroid malfunctions.
- Chlorinated pesticides such as DDT, dieldrin, aldrin, endrin, chlordane, heptachlor, lindane, mirex, kepone, 2,4,5-T, 2,4-D.
- Chlorinated compounds such as dioxins which have been shown to bioaccumulate in humans and wildlife and are known teratogens, mutagens, and suspected human carcinogens.
- Polynuclear aromatic hydrocarbons -- one of the most widespread organic pollutants, known or suspected carcinogens and linked to other health problems as well.
- Heavy metals such as arsenic, cadmium, chromium, lead, mercury, zinc, copper.
- Bacteria, viruses, protozoa, parasitic worms, fungi.
- Asbestos, petroleum products, industrial solvents.
- Endocrine disrupting compounds from pharmaceutical drugs and personal care products that have been linked with reproductive problems and sex changes in fish and other aquatic organisms.
- Radioactive materials from hospitals, treatment facilities and labs.

Conventional treatment does not destroy all toxic substances in the sludge.

After “treatment” where does sewage sludge go?

The end product, referred to as “treated” sewage sludge (also euphemistically called “biosolids” by agencies and industry) is spread on farmland in nearly 70 counties in North Carolina and in communities across the U.S. In NC alone over 50 million tons of treated sewage sludge is spread on farmlands every year. And it is only getting worse. Our population is growing and with it the amount of sewage generated while precious farmland is shrinking to make way for more roads and housing. Sewage sludge is also incinerated, but on a much smaller scale because of concerns over air pollution.

Why is it sprayed on land?

It’s the cheapest method of disposal that is legally available to municipalities and water treatment plants. Ocean dumping of sewage sludge was banned in 1988 because it was polluting coastal waters. In an effort to get rid of it, treated sewage sludge is offered free to farmers to use as fertilizer. Farmers are persuaded to use sludge because of its high nutrient content.

Do food companies prohibit purchasing produce grown on sewage sludge?

Yes. At least eight major food companies have policies that prohibit using produce grown on land that has been sprayed with sewage sludge: Dole Foods, Inc.; Del Monte; H.J. Heinz; Western Growers; Kraft Foods, Inc.; Campbell Soup Company; Nestle USA; and Progresso (Pillsbury, Green Giant, Totinos, Jenos, Haagen Dazs, Martha White, Old El Paso).

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Why are some scientists and citizens concerned about sewage sludge being spread on land?

Currently, there is no testing or treatment conducted for the thousands of potentially harmful substances found in sludge. Many are known to cause cancer and other diseases. Certain compounds found in sludge (endocrine disrupting compounds and antimicrobials) have been found to harm the reproductive systems of fish and other aquatic life. Nitrates from sewage sludge have contaminated ground water and private wells, and can cause "blue baby" disease in infants. Hundreds of dairy cattle deaths and contamination of milk supplies in Georgia have been attributed to sludge, and at least three deaths have been associated with exposure to sludge.

In 2000, the Centers for Disease Control and Prevention concluded that sewage sludge that has been converted to fertilizer can pose a potential health risk from E. coli, salmonella, hepatitis B and other bacteria and viruses.

The Environmental Protection Agency (EPA) has stated it can no longer say that land applied sewage sludge is safe (NEED SOURCE October 29, 2003, CBS Evening News). The EPA is also on record stating it no longer promotes using sewage sludge as a fertilizer on farmlands.

Is our health at risk?

Hundreds of people who live near fields where treated sewage sludge is applied have complained of the following health problems:

- Burning eyes, nose and throat
- Coughing, chest tightness, breathing problems
- Hoarseness, stuffy nose, headaches, fever
- Nausea, vomiting, diarrhea
- Skin infections, sores
- A higher incidence of illnesses than populations not exposed to sludge

These symptoms may last for a short time; however, children, the elderly and people with on-going health problems may have symptoms for much longer.

Is there scientific evidence that sewage sludge is harmful?

That's the wrong way to ask that question. We need to ask if there is scientific evidence that it is safe. Proponents of land-applied sewage sludge often claim that there is no scientific evidence that treated sewage sludge is harmful. Technically, they are right. Little is known about long-term health effects on populations routinely exposed to sewage sludge or living on or near land where sewage sludge has been applied in the past because no human health studies have been conducted. But not knowing is not the same as being safe!

Are there laws that regulate sewage sludge?

In 1993, laws were made to control some harmful materials in treated sewage sludge. But the laws do not regulate many of the heavy metals, germs, toxic chemicals and dioxins that are spread on our fields. For example, of the tens of thousands of toxic substances and chemical compounds that can be found in sewage sludge, only 11 toxic metals are tested by the state, nitrogen and phosphorus, and coliform.

Current laws also do not require the disclosure of prior use of sewage sludge on a property that is being developed, so homes, schools and parks are being built on potentially contaminated land.

What can you do?

Ask for a copy of the "What You Can Do About SLUDGE" handout from BREDL to help protect our communities and environment from the potential health risks associated with the land application of sewage sludge.

Buy certified organic products. To be certified as an organic grower, farmers are not permitted to use sewage sludge in their fields because of the number of toxic chemicals and heavy metals it contains.

Contact your County Commissioners and State Representatives to voice your concerns about sewage sludge.

For more information contact Sue Dayton, BREDL/NC Healthy Communities at: sdayton@swcp.com or 336-525-2003.

BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE