



The United Sludge-Free Alliance

Home and Garden Risks

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The Basics – From the Flush to Your Family

What is sewage sludge and how does it affect your home and community?

Are you using sewage sludge in your home garden? Is sludge used to “fertilize” your local parks, playgrounds and golf courses?

Sewage sludge is the concentration of everything that goes down the drain of homes, businesses, industries and hospitals after water is extracted at the wastewater treatment plant. Everything. After the water is extracted from the waste, the toxic chemicals, pathogens, bacteria, pharmaceuticals and poisons are concentrated into a solid or semi-solid form that is promoted as a “fertilizer option” called biosolids or sludge.

Because levels of nutrients can be found in the sludge/biosolids byproduct, it is promoted as a cheap or free fertilizer. More than 8 million tons of America’s sewage sludge is land applied on farms and as a fertilizer on parks, playgrounds, golf courses and sold to home gardeners at municipalities, garden centers or as a bagged “fertilizer”. Sludge contains an ever changing mixture of known and unknown hazardous waste, depending on what goes down the drain at any given time or at any given location including pathogenic bacteria, viruses, protozoa and parasites. Promoting sludge as a fertilizer is an inexpensive way to dispose of the hazardous waste created by our modern society. It is naïve to think that we can grow our food in toxic waste and produce a healthy and safe product. It is naïve to think that we can surround our homes and communities with toxic waste without paying the final price of our health and quality of life both long term and short term.

The minimal regulations set by the federal Environmental Protection Agency (EPA) for land application of sludge requires testing for only nine heavy metals out of the thousands of toxic chemicals, pathogens, bacteria, medications, pharmaceuticals and poisons found in our waste. These tests determine if the sludge can be marketed as Class A, Class B or must be sent to another disposal site, like a landfill. Salmonella or E. coli are tested for as “indicator” pathogens, with the theory that if you stabilize either of these elements, you will have stabilized or controlled other pathogens. Testing is required for either “indicator” not both. For instance, high levels of Salmonella are permitted in sewage sludge and considered “safe” if low levels of E. coli exist. Certainly, many pathogens survive and are stronger than the “indicator” pathogens yet do not require testing, such as MRSA, AIDS and H1N1. Although found in wastewater and sewage sludge, no pharmaceuticals or hormones require testing.

The sludge industry or hauler administers the “quality” test once a month to once a year, depending on the size of the wastewater treatment facility. The industry/hauler maintains the records and is not required to report test findings – in other words, there are no checks and balances. The EPA’s own testing has found over 145 known toxins in every sample of nationally tested sewage sludge.

The wastewater treatment industry, municipalities and the EPA, encourage public acceptance of this waste by using terms like “organic”, “beneficial”, “compost” or “nutrient rich.” After the Federation of Sewage Works Association changed its name in the late 1980’s to the Water Environment Federation, the industry also flooded the public image with marketing efforts, including their industry magazine “Biocycle.” But once the natural human feces and food waste is blended with the hazardous waste from our hospitals, industries and businesses, it cannot be cleaned and purified easily, if at all. Wastewater treatment plants were never intended to create fertilizer. By greenwashing toxic waste with user-friendly terms or minimizing the real dangers by using false, industry funded “science”, our society has avoided funding real solutions to dispose

of our waste. In reality, no one is protecting America's health and safety from the concerns of sewage sludge in our food, water and communities.

Bagged Fertilizer – Home Gardeners Beware

Sewage sludge looks innocent enough – just like any manure or fertilizer. And if it is turned into fertilizer pellets, the issue of the smell can be avoided. But the nose knows: the smell is just the indicator that something is not right. When sludge is given away or sold as "compost" - or turned into neat little pellets - it still contains the hazardous waste that was washed down the drain. Remember, toxins and heavy metals don't disappear because they are exposed to sun or rain – they build in your soil or travel by wind and water run-off into your home and community. The heavy metals and toxic waste also are absorbed in your vegetables, plants and livestock animals. Sludge can legally be "blended" into other bagged fertilizers and there is no labeling requirement. Sometimes the product is called "biosolids," sometimes they're not. Remember, the term "biosolids" is the user friendly term for sewage sludge.

If the bag says topsoil, it is topsoil. If the bag says it is humus from a location, it is probably all humus. If the bag says compost and nothing else, it is a "crap shoot" at best. There are no federal or state regulations that require listing sludge as a component in bagged compost. Bagged fertilizer most often has the word compost somewhere on the label. There are no requirements by the EPA to list sewage sludge or biosolids as an ingredient in the material. If a bag lists the ingredient only as "compost" you can bet this is composted Class A sewage sludge. Once the sludge leaves the wastewater treatment facility, it is considered a "product" and no longer under any federal or state regulations. No tests are required for bacteria, metals, chemicals – nothing. The EPA regulations say that as long as the compost is on site at the wastewater treatment or generating facility, they must take pathogen tests every two weeks. But once off the site, no more testing is required - by anyone! Obviously, it is a financial and liability benefit to move the sludge/biosolids product off site as soon as possible.

Sometimes bagged fertilizer will list the compost generator such as St. Paul, MN, etc. - but not often. The big piles of compost you see in large nursery and garden centers will often contain sewage sludge--UNLESS the owner can give you the originating site of the compost and where it came from. Most garden centers and nursery owners have no idea what they are selling in bulk to landscape companies and homeowners.

If a landfill is offering really cheap compost, it will probably have Class B sewage sludge mixed with green waste such as grass clippings, wood chips, leaves and sawdust. It is indeed turned and composted. But bacteria are resistant and the exotoxin (outer shell of the bacteria) can rejuvenate and becomes full, live bacteria when the temperature is lowered. All regulations stop when the sludge is sold or leaves the treatment plant.

Sludge/biosolids are often marketed as a composted, Class A sludge which means the treatment levels are higher and the sludge is heated to 131 degrees F. If the toxic metals are above the EPA limit, it cannot be considered Class A. You will also hear that the compost sludge is "sterilized" or "pasteurized" or "sanitized". All good words, but they have little meaning since bacteria are now thermo tolerant to temperatures about the 113 degree F. that is supposed to kill them. None of the regulations have been changed to require higher temperatures for the thermophilic or mesophilic process used – and they are certainly NOT 99% bacteria free. All you have to do is apply water and let the bagged compost mixed with sludge sit in a warm place, and you will smell the sludge which indicates the bacteria are alive. This is called a bacteria "bloom".

The EPA and the Water Environment Research Foundation issued a report that said the re-growth of bacteria in Class A and B sludge after leaving the treatment plant was often explosive and they could not explain the cause. The most significant type of treatment that caused the explosive re-growth of bacteria was dewatering the sludge, a regular process for all types of Class A sewage sludge. E. coli and Salmonella are the two resistant bacteria tested for and they often do not show up on lab tests before the sludge leaves the plant. However, the re-growth often doubles every 30 minutes. Their tests showed sludge bacterial re-growth up to the 6th power from the time it left the treatment plant until it was delivered to the composting or land application site. This is common and is called "viable but non-culturable bacteria"

There is a federal Right-To-Know Law, and the Consumer Protection Act which requires labeling, but the sludge industry and EPA have avoided both these regulations. When you buy a bag of 10-10-10 fertilizer, it has to tell you the predominant ingredients but it does not tell you what the other stuff might be. Be careful of that, too. If the granules are black or dark grey, they are mine tailings and probably toxic metals.

Independent tests show the extreme variations of heavy metals when comparing animal manure to bagged fertilizer. Luckily, the sludge industry has strong lobbying involved in determining our laws. Who's protecting us?

Food for human and animal consumption can be grown on land that has been treated with sewage sludge. When you consume foods grown in sludge, you consume whatever the plant takes up from the soil. When you consume animals that are fed crops grown in sewage sludge, elements like heavy metals collect in the animal's meat, milk and fat. If sewage sludge is used as a fertilizer on crops, the food from these crops cannot receive USDA organic certification. US National Organic Standards prohibits the use of sewage sludge on organic crops but there is no federal rule that forbids non-organic fertilizers from using the term "organic." The grower must know what he or she is putting on his or her fields and gardeners also have to do some investigative work if they buy compost or fertilizer.

Ensure your food products are sludge free when you buy USDA certified organic – avoid other foods labeled "organic" if they don't have the USDA organic certification and beware of imports. When purchasing from local farms and markets, ask the farmer if they use sludge OR biosolids as a fertilizer (many farmers are only told the fertilizer is "biosolids"). Don't buy products from farms that use sludge/biosolids and let them know why you are no longer a client. Check our listing for commercial food distributors that pledge to be sludge free.

Check our listing of bagged fertilizer companies that are sludge-based and some that are sludge-free. Keep asking questions. Tell us if you find more sludge-based and sludge-free bagged fertilizer companies. Protect your family, pets and home garden by using sludge-free fertilizer. Tell your local officials you do not want sludge/biosolids on your parks and playgrounds. Tell your state and federal elected officials to change the laws - sewage sludge doesn't belong in our food, water and communities.

Home Ownership & Sludge in Your Community

Federal EPA laws regarding land application of sewage sludge does nothing to protect your rights as a home owner. EPA 503 rules require a minimum level of testing of sewage sludge for nine elements by the waste water treatment facility or the sludge hauler. Somehow, you - the American home owner and tax payer - have no rights to stop a neighboring property owner from spreading a waste product that can have a smell so foul as to cause headaches, nausea, vomiting plus induce breathing and asthma problems. Other health related problems associated with living near an area where sewage sludge is spread include skin infections, muscle and joint pain, diarrhea and death. Trucks and farm equipment transferring sludge on site or between sites often trail the oozing sewage onto public roadways and throughout communities. All health related risks and deaths are directly linked to living in the communities where the sludge is spread. Legally, sewage sludge can be used to 'fertilize' parks, playgrounds, schools and golf courses. The onerous task of protecting well water, aquifers and streams from toxins in sewage sludge run-off falls on the home owner or community. The home owner must pay for water testing and then prove the contamination source. Real estate property values are affected.

Every situation associated with sewage sludge exposure differs depending on the toxins and hazardous materials mixed together at the wastewater treatment plant, the weather at the time of sludge spreading, if the sludge is turned into the soil promptly and the health of the individual. The more thorough the wastewater treatment plant is at removing the water, the more concentrated and toxic the sludge may be. The wastewater ingredients in the toxic soup are different every time.

Each state has the right to create stricter laws about the land application of sludge. Many states do not bother with stricter regulations or feign safety concerns by requiring one or two extra tests. This can vary extremely, depending on the level of involvement the sewage industry has in influencing state laws and "scientific studies." While some states, like New York, create stricter laws to guard - but not fully protect - the health and safety of their citizens, other states import sewage sludge from neighbors. For instance, Pennsylvania imports sludge from New York, New Jersey, Virginia, Delaware and Maryland – an excellent example of how a community and a farmer has no idea of what industrial, medical and hazardous waste is actually present in the sewage sludge being spread on the farmland. Sadly, the counties with the most land application are the counties that have farmland close to major urban centers. In states like Pennsylvania – and throughout the country - the counties that are convenient to large cities often receive the most sludge. The fertile farmlands of Berks, Lancaster and York counties, located near the city of Philadelphia, PA and within easy access to bordering states via the highway system, are now the toxic dump locations for urban waste. The goal is cheap disposal. The concern of land application of sludge is becoming more of an issue

as the recent suburban sprawl has increased the number of citizens now living in rural communities. The issue is not anti-farm – the issue is anti-pollution transfer.

Each state, and many municipalities, can create regulations - and copious bureaucracy - that add extra testing requirements, notifications, road weight limits or access restrictions. But, some states create laws that actually deprive citizens of the basic rights to protect their health and safety in their own homes and communities. Pennsylvania's Act 38 ACRE rule removes the rights of locally elected municipalities and private citizens to protect themselves from the dangers of sewage sludge. In a push against democracy while using state tax dollars, the ACRE rule enables the state to sue anyone who the PA Attorney General deems a "threat to farming practice." Conveniently, land application of sewage sludge was put in the rule as a "farming practice" even though the federal Clean Water Act calls sewage sludge a "toxic waste." The regulations do little more than remove the rights of the individual or community to halt the practice of spreading sludge (or other hazardous disposal problems), forcing the burden of proof of health and environmental affects to the citizens. With the goal of protecting the policy, not the people, complaints to government bodies like the Environmental Protection Agency (EPA), Department of Environmental Protection (DEP) or Department of Health (DOH) are met with the dismissive response that the land application of sewage sludge is legal. Complaints are often not recorded so the official response can be "no complaints or health related issues have been recorded." Who are these policies protecting?

Sometimes state regulations can slow the spreading of sludge. In Pennsylvania, the state regulations require that property owner directly neighboring the farmland permitted to be sludged be notified in writing before the FIRST application. This gives neighbors the ability to "review", but not halt the sludge application or file a complaint. Be forewarned – if you can farm it, you can sludge it. Many neighbors take this opportunity to talk with their farmer – civilly discuss concerns about how sludge will affect themselves and the farmer. Permits are rarely changed after initial approval. Check with your state DEP, or similar state environmental protection agency, for listings of land holders that accept sewage sludge. Be prepared for the bureaucratic run-around. Some DEP offices maintain websites or you can contact their regional offices for listings of farms permitted to use sludge.

If your land does not directly touch the property requesting a permit from the state DEP, you will not be notified that sewage sludge is being spread. If the first application has already been laid, you will not be notified. If you are a tenant renting a property, you will not be notified. A farmer need only limit access to his property after spreading sludge by posting a "private property" or "do not enter" sign. But the toxins spread by wind or run-off into waterways does not respect property boundaries. The overwhelming smell affects the quality of life of the community at large. The obvious and immediate effect after sewage sludge is spread is the challenge of home ownership. The long term health related effects are more insidious, but no less relevant.

In some states, major purchases like real estate have a written full disclosure of the potential future problems associated with land application of sewage sludge. By Pennsylvania law, a "seller's disclosure sheet" is a way to track the history of what has occurred on a particular real estate site, both for buildings and for land. (See attach sellers disclosure sheet sample). It is a written way for the buyer to have a history of what has happened on the property and a way to transfer the knowledge of that history to subsequent buyers. Listed under the PA Sellers Disclosure sheet heading "Hazardous Substances and Environmental Issues", section 213 asks the sellers to note "Are you aware of sewage sludgebeing spread on the property, or have you received written notice of sewage sludge being spread on an adjacent property?"

The value of this notice is it allows for full disclosure of an issue or potential problem while allowing the homebuyer to determine his or her own level of concern. Unfortunately, notification of neighboring sewage sludge spreading does not empower a property owner the right to stop the spreading of sewage sludge. Of course, farmers and neighboring properties are not notified of this novel concept of full disclosure when the sludge is being spread. And yes, real estate sales have been lost due to the land application of sewage sludge, both because of the concern of short term smell and long term soil and water effects. Unfortunately, your financial investment of home ownership can be influenced by the uninformed decisions made by the farmer or the business decisions of a land owner in your community. Check with your state Real Estate Association or the National Association of Realtors for your state laws regarding sewage sludge use notification. Federal and state laws are absent in protecting you and your investment.

The repercussions to the land owner neighboring a farm receiving sewage sludge are often the most obvious. The smell, stunning and vile enough to cause breathing problems and vomiting, permeates the community. The industry calls the smell "distinctive" and paints suffering neighbors as people who don't understand farming. In Canada, one family has made the heartbreaking decision to abandon their home in

the country and declare bankruptcy: their health and finances have taken the worst that sludge has to offer. No realtor will list their home for fear of the legal ramifications and no one will buy their home next to a heavily sludge property.

Illnesses in humans and family pets from sewage sludge exposure vary, but are persistent and are often dismissed by authorities as incidental. Reports of illness continue to be unmonitored and unrecorded by municipalities, states or national authorities, the issue casually drowning in the bureaucratic irresponsibility. Deaths associated with the land application of sludge have occurred in states including Pennsylvania and New Hampshire (check The Victims website link for full national health reports). But no one who experiences health impacts or death considers their own plight "incidental."

Why do farmers use sludge/ biosolids as a fertilizer? Farmers using sewage sludge are supplied very limited information – they are told the nitrogen, phosphorous and "natural" byproducts of sludge are just like regular manure. Farmers are told how sludge/biosolids will help the plants grow and this product, often offered for free, saves the farmer money. They are often offered extra incentives by the sludge hauler: free delivery of the product, help spreading the product and sometimes free farm equipment. The farmers is also coached that neighbors against sludge are against "farming." In some locations, the farmer does not live at the property where the sludge is being spread or the land is owned by an individual or business that is just using the farmland as a dumping ground.

The most infamous case of farms using sludge to the point of toxicity, poisoning of crops, and death of livestock and loss of the farms is near Augusta, Georgia. In both cases, *McElmurray vs. USDA* and *Boyce vs. City of Augusta*, the farmers were told the sludge applied to their fields was safe. Over the 10 to 20 years that it took for the levels of toxic hazardous waste to poison the farm beyond use, McElmurray and Boyce were constantly reassured that the sludge was not the cause of their farming woes. How could it be – the EPA and DEP say the product is safe? Ultimately, the farmers won their legal battles but lost their farms. Now one farm lays fallow, with no healthy crops or livestock able to be supported by the land. The other farm was sold to a developer who installed a mobile home park on the land where farm animals died by the hundreds from the toxic crops grown in toxic soil.

Nationally, farmers who have been using sludge are concerned for the health of their farms. But, caught in a catch-22 situation, many recognize the potential financial and legal trap they are in. In some locations, fearful farmers refuse testing after being informed that any problems found will be their responsibility. Suddenly, the friendly, neighborhood sludge haulers have removed legal and financial support. Sewage sludge is not a normal farming practice – it is a way to dispose of toxic waste. Sewage sludge impacts the farm where it is being spread, the food and water supply of America AND the communities and home owners that live close by.

World-wide, the land application of sewage sludge is the wake-up call to reevaluate the practice of protecting a waste policy that benefits a small group, despite the objections and concerns of the citizens. Unfortunately, by refusing to create a comprehensive federal law protecting all of America from the hazardous waste that is part of our modern life and sewage treatment system, the EPA and federal government have allowed for state regulation to vary from state to state. But these policies do nothing to secure the health and safety of the communities receiving sewage sludge. These policies do nothing to secure the health and safety of our food and water supply.

By the EPA's own admission, the regulations currently in place cannot guarantee the health and safety of citizens. This ironic act of short-sightedness only highlights that our food supply comes from all parts of America and the world: we are part of a global food economy. Who will grow America's food once these lands become too toxic to sustain our food and water? Where will our clean water come from and how do we protect the lands surrounding our homes and communities? Only regular complaints to your elected state and federal representative will change the fact that sewage sludge is used as a fertilizer option on large farms and in small family gardens throughout the nation. Are your family's health and your financial home investment worth the letter or phone call? Make the difference for our future.