

The OIG review focused heavily on one aspect of the EPA biosolids program: the chemical risk assessment process. EPA has many other controls in place and relies on other (e.g. state) regulations & research that ensure protection of public health & the environment with respect to biosolids recycling.

U.S. ENVIRONMENTAL PROTECTION AGENCY

U.S. Environmental Protection Agency
Office of Inspector General

The full OIG biosolids review provides several useful recommendations that EPA is implementing. But it also contains inaccuracies, bias, & impractical recommendations. It is important to read the report's Appendix D - EPA's response.

19-P-0002
November 15, 2018

At a Glance

EPA Unable to Assess the Impact of Hundreds of Unregulated Pollutants in Land-Applied Biosolids on Human Health and the Environment

This headline is a narrow statement and does not say anything about the overall safety of biosolids recycling. Yes, as it says, formal risk assessment regarding individual trace chemicals has not been done entirely and is not possible at this time because of lack of some data. However, decades of research and experience with biosolids use on soils has found minimal risk and many benefits to soil health and sustainability. EPA is well aware of this research and experience and, therefore, considers biosolids recycling to be a low risk activity, protective of public health and the environment.

Why We Did This Review

We conducted this audit to determine whether the U.S. Environmental Protection Agency (EPA) has and implements controls over the land application of sewage sludge that are protective of human health and the environment.

Sewage sludge is the solid, semisolid or liquid residue generated during the treatment of domestic sewage. When sludge

Clarification: The CWA does not require promulgating "regulations for such pollutants" every 2 years; it's only if they find reason to. EPA has been conducting the required biennial reviews. And, for example, EPA did a thorough risk assessment of the highly toxic dioxins & furans - worst-case chemicals of concern - and found no reason for their regulation in biosolids.

causing organisms, called pathogens, and to reduce the attractiveness to mosquitoes, flies, fleas, rodents and birds, as well as other disease-carrying organisms. If the resulting product meets regulatory standards, the product can be used for agricultural and residential soil fertilization.

This report addresses the following:

- Cleaning up and revitalizing land.

Biosolids are routinely used to revitalize land. This is a benefit! But the OIG report did not address this fact.

See **Sen pub (202, 000-200)** or visit www.epa.gov/oig.

Listing of [OIG reports](#).

What We Found

The EPA's controls over the land application of sewage sludge (biosolids) were incomplete or had weaknesses and may not fully protect human health and the environment. The EPA consistently monitored biosolids for nine regulated pollutants. However, it lacked the data or risk assessment tools needed to make a determination on the safety of 352 pollutants found in biosolids. The EPA identified these pollutants in a variety of studies from 1989 through 2015. Our analysis determined that the 352 pollutants include 61 designated as acutely hazardous, hazardous priority pollutants in other programs.

There is an abundance of peer-reviewed science that evaluates the potential risk of many of these chemicals that are found in traces in biosolids, even if formal, thorough risk assessments have not been done by EPA. The mere presence of a contaminant does not mean risk. See <https://www.nebiosolids.org/resources/#/microconstituents/>.

flame retardants. The effectiveness of the Part 503 Biosolids Rule has been reviewed twice by the National Academy of Sciences. The 2002 finding was this: "There is no documented scientific evidence that the Part 503 rule has failed to protect public health." The Rule is thorough and based on volumes of science.

The Clean Water Act requires the EPA to review biosolids regulations at least 2 years to identify additional toxic pollutants and promulgate regulations for such pollutants. Existing controls based on the Clean Water Act and the EPA's Biosolids Rule include testing for nine pollutants (all heavy metals), researching for additional pollutants that may need regulation, reducing pathogens and the attractiveness of biosolids to potential disease-carrying organisms, and conducting compliance monitoring activities. The EPA's risk communication regarding biosolids should

EPA stated an important point in their response: "we disagree with OIG characterizing uncertainties in science as known risks or 'threats' to human health and the environment."

The EPA has reduced staff and resources in the biosolids program over time, creating barriers to addressing control weaknesses identified in the program. Five reviews showed that the EPA needed more information to fully examine the health effects and ecological impacts of land-applied biosolids. Although the EPA could obtain additional data to complete biosolids risk assessments, it is not required to do so. Without such data, the agency cannot determine whether biosolids pollutants with incomplete risk assessments are safe. The EPA's website, public documents and biosolids labels do not explain the full spectrum of pollutants in biosolids and the uncertainty regarding their safety. Consequently, the biosolids program is not achieving its goal to protect public health and the environment.

Clarification: Individual chemical risk assessments are just one way to assess safety. Other research & experience are important too. See <https://www.nebiosolids.org/scientific-basis-for-biosolids-use>. Just by requiring biosolids be applied at agronomic rates means trace chemicals are limited.

Recommendations and Planned Agency Corrective Actions

We recommend that the Office of Water address control weaknesses through research, information sharing with the public, pathogen control and that we recommend that the Office of Water and Office of Enforcement and Compliance Assurance improve the consistency of compliance monitoring and biosolids inspection data. The EPA provided acceptable corrective actions and milestone dates in response to eight of the 13 recommendations. Five of the 13 (7, 9, 10, 11 and 13) are unresolved with resolution pending.

Biosolids professional associations have long urged increased funding for the EPA biosolids program. We know that more research & oversight mean higher public confidence. But we, like EPA, recognize that biosolids land application is a low-risk program, and EPA has higher priorities for its limited budget. But we hereby join OIG in urging increased appropriations for EPA's biosolids program.

This statement is misleading. EPA's confidence in protection of public health and the environment relies on more than just its own narrow chemical risk assessments. States regulate biosolids, in many cases more strictly than the 503 Biosolids Rule. And dozens of university researchers continually evaluate biosolids safety. And professional organizations & practices continually advance best practices. The EPA biosolids webpage points to these partners across the country, who help ensure biosolids are used safely.