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Comments on WA Biosolids General Permit

Ecology's mission is to "protect, preserve and enhance Washington's environment and promote the wise management of air, land and water for the benefit of current residents and future generations."

It is time for the Washington State Biosolids Permit Program to address per-and poly-fluoroalkyl substances (PFAS) contamination with Site-Specific Permits that protect the state's lands, waters and its impacted communities from these "forever chemicals" that are now found everywhere – including inside people. General permits cover a "designated geographical area" and are too "general" in scope to provide enough protections.

PFAS IN BIOSOLIDS CONTAMINATE FARMLAND AND THREATEN DRINKING WATER SOURCES

A nationwide survey "Nationwide occurrence of PFASs in U.S. biosolids" <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3776589/> found PFAS - per-and poly-fluoroalkyl substances - in Washington state biosolids. The only Oregon facility tested was in Redmond, Washington, but because PFAS are now found widely in US biosolids, it is likely that if other Oregon facilities were tested PFAS would be found there too.

"Ten out of thirteen PFASs analyzed were consistently detected in all composite biosolids samples except for PFBA, PFHpA, and PFBS (Table 2). The most abundant PFAS in biosolids was PFOS, detected at a concentration of 403 ± 127 ng/g dw, followed by PFOA (34 ± 22 ng/g dw). The remaining eleven PFASs ranged between 2 and 26 ng/g (Table 2) and the mean total concentration of PFASs (σ PFAS) detected in the five composite samples was 539 ± 224 ng/g dw. The levels detected in U.S. biosolids are more than an order of magnitude higher than levels detected in sewage sludge samples collected from Spain and Germany."

Many kinds of Industries in Washington state use and may release PFAS compounds to sewage plants. Washington's Biosolids Program should require sewage treatment plants producing biosolids to test for PFAS because this family of thousands of synthetic, persistent, bioaccumulative, and toxic chemicals has been linked to adverse effects on human health, wildlife and ecosystems. Many PFAS found in consumer products are released to sewers from homes, a situation hard to prevent except by urging consumers to stop these uses. The good news is that some states are finding ways to reduce these discharges from the many kinds of facilities are known to use, release or dispose of PFAS: waste and sewage management; aerospace; automotive; aviation; building and construction; cable and wiring; cookware; electronics; energy; food processing; inks; paints; polishes; stain and water repellent coatings for paper, packaging, textiles, footwear, furniture and carpeting; and firefighting products.

Land application of biosolids and biosolids-based soil amendments is a serious cause of PFAS pollution:

<https://www.sierraclub.org/toxics/pfas/pfas-sludge>

Washington can clean up its biosolids by regulating PFAS discharges from Washington's industries that discharge to sewers. States such as Michigan and others are now testing for PFAS and if levels

exceed the regulatory levels they have set – action must be taken. Actions vary across states but Michigan is a leader.

Michigan Issues Interim Strategy for Land Application

"Land Application of Biosolids Containing PFAS Interim Strategy. michigan.gov

"The Michigan Department of Environment, Great Lakes, and Energy (EGLE) has released its "Interim Strategy for Land Application of Biosolids Containing PFAS," published in late March, to formalize EGLE's guidance for recycling biosolids in light of concerns about per- and polyfluoroalkyl substances (PFAS).

The strategy document has been expected for a while now following the work EGLE put into studying the issue of PFAS in land applied biosolids. EGLE reports issued to date include: SUMMARY REPORT: Initiatives to Evaluate the Presence of PFAS in Municipal Wastewater and Associated Residuals (Sludge/Biosolids) in Michigan and Evaluation of PFAS in Influent, Effluent, and Residuals of Wastewater Treatment Plants (WWTPs) in Michigan.

The interim strategy will be effective for land application occurring after July 1st but EGLE is recommending that biosolids producers consider following the guidelines starting this Spring. Testing of biosolids for PFAS prior to land application is required. Based on previous work by EGLE to understand the concentrations and impacts of PFAS in land-applied biosolids, the Department has established the following guidelines for perfluorooctane sulfonate (PFOS):

- Biosolids with concentrations at or above 150 µg/kg (equivalent to parts per billion, ppb) are considered industrially-impacted and cannot be land applied. Water resource recovery facility (WRRF) biosolids managers must immediately notify EGLE of these test results and begin effluent sampling and an investigation into potential sources of PFOS in their sewershed. Of course, they will also have to make other arrangements for treatment or disposal of the industrially-impacted biosolids.
- If PFOS concentrations are less than 150 ppb but greater than 50 ppb, the generators must again notify EGLE immediately and initiate effluent testing and investigations into the sources of PFOS to develop a source reduction program. Materials in this concentration range can be land-applied but in order to reduce the overall PFOS loading to the site, EGLE is restricting application rates to 1.5 dry tons per acre.
- Biosolids with PFOS concentrations below 50 ppb, which was the case for the majority of WRRFs that EGLE studied, can continue to be land applied. EGLE recommends for PFOS concentrations above 20 ppb, the WRRF consider investigating possible sources and conducting additional sampling."

Like the state of Maine, Washington's Site Specific Biosolids permits should at the very least require testing of soils for PFAS before biosolids are applied. If PFAS contamination is found, biosolids should not be applied. Ecology should assist producers in finding safer alternative ways to dispose of them

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