

PFAS Flame Retardant Article Links

Health, Food & Water Impacts

EPA Unable to Assess the Impact of Hundreds of Unregulated Pollutants In Land-Applied Biosolids on Human Health (2018)

https://www.epa.gov/sites/production/files/2018-11/documents/_epaig_20181115-19-p-0002_glance.pdf :
https://www.epa.gov/sites/production/files/2018-11/documents/_epaig_20181115-19-p-0002.pdf

The EPA identified 352 pollutants in biosolids but cannot yet consider these pollutants for further regulation due to either a lack of data or risk assessment. Pollutants found in biosolids can include pharmaceuticals, steroids and flame retardants.

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EPA : Certain Toxic Release Inventory Data Disclosed to the Public (2019)

https://www.epa.gov/sites/production/files/2019-04/documents/_epaig_20190408-19-n-0115.pdf

“ ... the U.S. EPA’s Office of Inspector General (OIG) issues an immediate management alert ... pertaining to releases of hazardous substances from Publicly Owned Treatment Works (POTW) are inaccurate. As a result, the public is not receiving complete and timely information about environmental conditions affecting human health.”

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National inventory of perfluoroalkyl substances in archived U.S. biosolids from the 2001 EPA National Sewage Sludge Survey

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3776589/>

2015 review of EPA 2001 National Sewage Sludge Survey finds 10 out of 13 PFAS analyzed were consistently detected in all biosolids samples. This PFAS risk assessment provides a solid link to biosolids application on land.

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Statement on FDA’s scientific work to understand per- and polyfluoroalkyl substances (PFAS) in food, and findings from recent FDA surveys

https://www.fda.gov/news-events/press-announcements/statement-fdas-scientific-work-understand-and-polyfluoroalkyl-substances-pfas-food-and-findings?utm_campaign=061119_Statement_Understanding%20per%20and%20polyfluoroalkyl%20substances%20%28PFAS%29%20in%20food&utm_medium=email&utm_source=Eloqua

Information Compiled: United Sludge Free Alliance/usludgefree.org/610-823-8258

PFAS Flame Retardant Article Links: Health, Food & Water Impacts

FDA Tests Confirm Suspicions about PFAS Chemicals in Food

<https://www.ewg.org/news-and-analysis/2019/06/fda-tests-confirm-suspicions-about-pfas-chemicals-food>

FDA found toxic per- and poly- fluoroalkyl substances, or PFAS, in food, including meat, seafood and dairy products; sweet potatoes; pineapples; leafy greens, and chocolate cake with icing.

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WEF: PFAS, Wastewater and Biosolids Management Presentation (2018)

<https://www.wef.org/globalassets/assets-wef/3---resources/online-education/webcasts/presentation-handouts/8-1-18-handouts.pdf>

The Water Environment Federation, the waste water treatment industry knows the dangers of PFAS to human health, the environment and their bottom line.

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PFAS Chemicals Are Emerging Water Contamination Crisis, But Ag Incidents Still Isolated

<https://www.dtnpf.com/agriculture/web/ag/news/world-policy/article/2019/05/01/pfas-chemicals-emerging-water-crisis?referrer=twitter#>

Art Schaap, NM, and Fred Stone, ME, have been dumping their milk for months, and their cows also might never become beef from PFAS contamination in water and fodder.

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Farmers Losing Everything After “Forever Chemicals” Turned Up In Their Food

<https://www.buzzfeednews.com/article/nidhisubbaraman/pfas-food-farms-milk-produce>

“Forever chemicals” [linked to cancer](#) are turning up in farm produce across the country, leading farms to lay off workers, incinerate harvests, kill cows, and dump thousands of gallons of dairy milk.

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Wisconsin case shows how sewage plants spread toxins across landscape

https://madison.com/wsj/news/local/govt-and-politics/wisconsin-case-shows-how-sewage-plants-spread-unregulated-toxins-across/article_e9e50bb6-85b8-5377-95ab-736541129386.html

As Wisconsin discovers more PFAS contamination will the role of wastewater treatment plants in spreading the indestructible, toxic compounds across the landscape be investigated?

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(Maine) DEP Announces Testing of All Sludge Materials Before Land Application

<http://www.publicnow.com/view/C398FE82C08344F4EA611893758E361AA2EE3A30?2019-03-22-21:00:14+00:00-xxx156> <https://www.pressherald.com/2019/03/22/maine-dep-to-require-testing-of-sludge-for-forever-chemicals/>

The Maine Department of Environmental Protection (DEP) announced that it will require the testing of all sludge material licensed for land application in the state for PFAS

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PFAS in Plants – 2017 Study Findings Australia Army Aviation Centre Oakey Stage 2C Environmental Investigation

<http://www.defence.gov.au/Environment/PFAS/Docs/Oakey/FactSheets/20171206AACOPlantStudy.pdf>

Minimize PFAS exposure by limiting consumption of home grown vegetables irrigated with PFAS-impacted water or grown in soil irrigated with PFAS-impacted water.

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Perfluoroalkyl Acid Distribution in Various Plant Compartments of Edible Crops Grown in Biosolids-Amended soils (2014)

<https://pubs.acs.org/doi/10.1021/es500016s>

Crop uptake of perfluoroalkyl acids (PFAAs) from biosolids-amended soil has been identified as a potential pathway for PFAA entry into the terrestrial food chain.

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Uptake of Perfluoroalkyl Acids into Edible Crops via Land Applied Biosolids: Field and Greenhouse Studies (2013)

<https://pubs.acs.org/doi/10.1021/es403094q>

This study confirms that the bioaccumulation of PFAA's from biosolids-amended soils depends strongly on PFAA concentrations, soil properties, the type of crop and analyte.

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Per- and polyfluoroalkyl substances (PFASs) in water, soil and plants in wetlands and agricultural areas in Kampala, Uganda (2018)

<https://www.ncbi.nlm.nih.gov/pubmed/29539594>

Occurrence and concentrations of 26 PFASs were evaluated in wastewater, surface water, soil and crop plants, demonstrated entry into the terrestrial food chain.

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Behavior of Decabromodiphenyl Ether (BDE-209) in the Soil-Plant System: Uptake, Translocation, and Metabolism in Plants and Dissipation in Soil

<https://pubs.acs.org/doi/abs/10.1021/es901860r>

Nineteen lower brominated PBDEs were detected in the soil and plant samples and five hydroxylated congeners were detected in the plant samples, indicating debromination and hydroxylation of BDE-209 in the soil-plant system.

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Prenatal exposure to PBDE, PFAS linked to poorer executive function in children

<https://www.healio.com/family-medicine/gynecology-obstetrics/news/online/%7Bdfb50b62-5c0b-4bd9-82f4-4e8c2f9131db%7D/prenatal-exposure-to-pbde-pfas-linked-to-poorer-executive-function-in-children>

“These findings suggest that concentrations of maternal serum PBDEs and PFAS during pregnancy may be associated with poorer executive function in school-age children.”

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Occurrence of perfluoroalkyl substances (PFAS) in garden produce at homes with a history of PFAS-contaminated drinking water

<https://www.sciencedirect.com/science/article/pii/S0045653517321574>

PFAS in home garden produce with past/ongoing water contamination; results demonstrate PFAS entry into food chain under real-world conditions.

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