

PFAS-CONTAINING WASTE STREAM CYCLE

A growing understanding of the health and environmental impacts of per- and polyfluoroalkyl substances (PFAS) has led to a greater interest in understanding the movement of PFAS compounds in various waste streams.

PFAS are highly stable chemicals that may not be destroyed during typical waste management processes. Once in the waste stream, PFAS can move from one disposal facility to another and may ultimately be released into the environment.

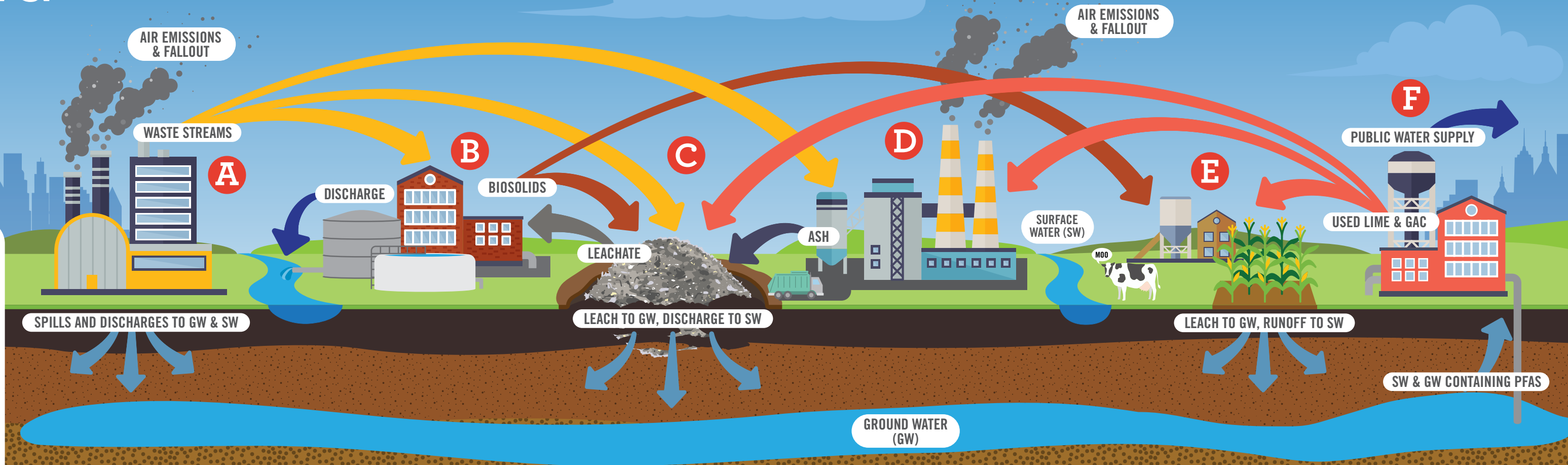
This diagram shows generalized and hypothetical flow paths for waste streams potentially containing PFAS compounds.



Let's Talk PFAS

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For more information on this topic, check out Dennis's article [Why Doesn't Melted Cheese Stick to a Food Wrapper?](#)



A Manufacturing of PFAS, Manufacturing with PFAS, Military Facilities, Firefighting Training Areas: Air emissions and PFAS fallout from industrial facilities. PFAS-containing solid waste is disposed of at the landfill or transported for incineration. PFAS-containing liquid waste is treated at the wastewater treatment plant (WWTP).

B Wastewater Treatment Plants: Private or public WWTPs receive PFAS-containing liquids via the sewer system. PFAS compounds may be discharged to surface water (SW) in the effluent from the plant. Releases of wastewater at the plant may leach into the groundwater (GW). PFAS-containing biosolids may be spread on agricultural lands or used at compost facilities as a soil amendment.

C Landfills: Municipal, industrial, construction and debris landfills may receive PFAS-containing solid waste from industrial, commercial and residential sources. PFAS leaches from solid waste into landfill leachate. PFAS-containing leachate may be transferred to a WWTP, discharged to surface water or leached to groundwater.

D Incinerators: PFAS-containing solid/liquid waste, including firefighting foams, are sent for incineration. Air emissions containing PFAS may lead to PFAS fallout downwind of the facility. PFAS-containing ash from the incinerator may be disposed of at the landfill.

E Agricultural Lands/Compost Facilities: PFAS-containing biosolids from WWTP and used lime from water

treatment plants may be applied to agricultural land and compost facilities. Uptake of PFAS by plants and livestock may result in the introduction of PFAS into the food supply. PFAS runoff from these facilities enters surface waters or leaches into groundwater.

F Drinking Water Treatment Facilities: Used lime and granular activated carbon (GAC) from water treatment plants, possibly containing PFAS, is landfilled or sent for incineration. Used lime may be spread on agricultural lands or used at compost facilities as a soil amendment. PFAS-containing groundwater or surface water may be used as source waters for public or private drinking water systems, resulting in PFAS contamination of drinking water.