FOREVER CHEMICALS & WASTEWATER

By Kevin Maine

There is an alphabet soup of acronyms and chemical compounds operation specialists deal with every day. Most recent are PFOA, PFAS, PFOS, PTFE and the latest Gen X, just to name a few.

PFOAs were once used in cleaners, to treat leather, fabrics, carpet treatment and firefighting foams. In 2009, GenX is a trade name that was developed to replace PFOA (perfluorooctanoic acid). Unfortunately, it appears to have the same negative environmental impact. PFOAs have been around since the mid-1950s.

PTFE commonly known as Teflon is in many products, we use daily. It's found in gaskets, older cookware, pipe joint tape and compound, lubricants, upholstery, and multiple applications in the automotive industry. These products have been with us since the 1930s.

PFOS can be found in Scotchgard, paper leather, wax, polishes, and paints. PFOS was created in 1949.

PFAS is most often found in microwave popcorn, pizza boxes, food wrappers and cosmetics. PFAS has been in use since 1950.

These compounds in some cases have been in use since the 1930s and many are still in use today and do not breakdown in the environment. We've already been looking at them in drinking water. What is their impact on wastewater?

We have been receiving these compounds for decades at our wastewater treatment facilities and only the more advanced facilities are testing and treating these compounds. Sadly, these remain in the effluent and biosolids and reenter the environment.

Removal in wastewater is still somewhat unknown. GAC (granular activate carbon) appears to be the most effective. Studies are ongoing to see if GAC can be effectively reactivated. The best course of action would be to avoid accepting these compounds. Especially those who take in landfill leachate and certain septic wastes.

Like drinking water, wastewater's future most likely will have quarterly testing. It would be a good idea to collect and test your effluent to determine a baseline planning for future remediation. It is definitely recommended to begin testing for these compounds if there are plans to overhaul the treatment facility.

For more information, the EPA's website has an abundance of information on the subject. 💧💧💧

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