

Health Advisory, Perfluorooctanoic Sulfonate (PFOS).

For Customers in Hagåtña, Anigua, Asan, Piti and Tiyan areas:
You may have received water prior to August 12th with enough PFOS in it that you are being advised of its presence.

Advisory:

The USEPA has recently established **lifetime exposure** health **advisory** of 70 parts per trillion (70 nanograms per liter or **70 ng/L** or 70/1,000,000,000,000) for individual or combined concentrations of PFOA and PFOS in drinking water. Health advisories are a recommendation to notify consumers of the presence of such materials and are based on a substantial margin of protection from adverse health effects when the average consumption is at or below advisory levels, over a full lifetime. An “advisory level” means that we (GWA) are encouraged to let you know about the finding. ***GWA has chosen to go a step further and eliminate these materials from water supplied to our customers. GWA water meets safe drinking water standards and is safe to drink.***

Guam Waterworks Authority (GWA) has detected the presence of PFOS in three wells with levels that are above the 70 ng/L “advisory”. If you are receiving this message, it is because you may have received water directly or indirectly from one of the three sources that have such PFOS levels. The “above advisory” levels found range from 88 ng/L up to 410 ng/L. GWA will continue to monitor the presence of PFOS in the entire water system. Similar advisories are being issued in water systems across the U.S.A. as other jurisdictions continue to monitor for unregulated compounds.

Although not required, GWA is in the process of modifying existing or adding new treatment systems and other system modifications at the affected wells. The wells with PFOS have been removed from the distribution system, and will remain isolated until treatment measures are in place.

Additional Information:

In keeping with the policy to look more and more closely at the composition of the water we have to drink, the USEPA, under the Federal Unregulated Contaminant Monitoring Rule (UCMR), establishes lists of materials that could have impacts on human health. Every few years, a new list is generated and a nationwide study of water in the US is conducted. This procedure involves taking samples from all drinking water sources (e. g., wells) two times within a specified one year period. Duplicate sampling is done in order to reduce the risk of single event errors in sampling. During the third cycle of this testing (UCMR3), new contaminants were found in wells accessing a very limited area of the island’s Northern Guam Lens Aquifer (NGLA). These were “perfluoralkane” compounds. Of these, two may possibly have potential health impacts. They are: perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). **Only the sulfonate (PFOS)** was observed to be present in a handful of NGLA wells.

Perfluoroalkane compounds are human-made substances and are **not naturally found** in the environment. They have been used extensively in stain resistant commercial goods (carpets, clothing, furniture, paper packaging for food, etc.). The compounds were used to make materials that are very resistant to water, grease or other stains and materials used in car detailing. The most common source of human exposures to these compounds with which most people are familiar come from the manufacture and then subsequent use of poly tetrafluoro-ethylene (PTFE) [often called “Teflon”] coated cookware. They are also present in the slick/non-stick lining of paper packaging such as microwave popcorn bags, pizza boxes and other fast-food/take-out paper/cardboard containers; in frozen food packaging and in the insert lining-seals in the caps of bottled water, beverage containers and other food products with re-closable lids. These are some examples of the things manufactured with PFOS commonly found in consumer products.

These compounds are used in firefighting foams at airfields. They are also used in a number of industrial processes world-wide, but none of these have been centered on Guam. These products have been used since the mid-1950’s until between 2000 and 2002, PFOS was voluntarily phased out of production in the United States by its primary manufacturer.

While consumer products are the most probable source of exposure to these chemicals, drinking water can be an additional source in communities where these chemicals have reached/entered water supplies. Such contamination is typically localized and associated with a specific facility, for example, an airfield at which these chemicals were used in firefighting foams. This reasoning supports the finding of water from a well near what is now the Guam International Airport. GWA is working with Guam EPA to determine if such “probable source” is available for its detection in water wells located elsewhere.

Because perfluoroalkanes are not natural compounds, studies on laboratory animals have been undertaken to see if exposure to PFOA and PFOS over certain levels may possibly result in adverse health effects. Of a primary concern are possible developmental effects (such as low birth weight, accelerated puberty or skeletal variations) in fetuses exposed during pregnancy or exposed during nursing. A further concern is that lifetime exposure may result in the possibility of, some cancers (such as testicular or kidney), in liver effects (such as tissue damage), in immunological effects (such as modified antibody production and immunity), in potential thyroid effects and in possible cholesterol changes.

You may contact us with any questions at PFOS.info@guamwaterworks.org

For more information about PFOA and PFOS visit EPA’s webpage at: <https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos> or contact Guam EPA at 671 300 4759.