

Frequently Asked Questions (FAQs) regarding 1,4-dioxane Bull Creek Regional Water System

What is 1,4-dioxane?

1,4-Dioxane is a clear liquid and is a synthetic industrial chemical that can mix with water. It can be found in many industrial/factory facilities due to its widespread use as a stabilizer in industrial applications. Trace amounts of 1,4-dioxane can be found in some chemicals used in cosmetics, detergents and shampoos. Other names for 1,4-dioxane include dioxane, dioxan, p-dioxane, diethylene dioxide, diethylene oxide, diethylene ether and glycol ethylene ether.

Is 1,4-dioxane harmful?

The effects of 1,4-dioxane on human health depends on how much you are exposed to and the length of exposure. At higher concentrations and higher exposure times 1,4-dioxane becomes more harmful and could lead to kidney and liver complications and possibly cancer. The EPA has established drinking water health advisory levels (HALs) with durations and concentrations:

- 1 day exposure with of 4,000 ug/L (micrograms per liter) for a 22 pound child.
- 10 day exposure with 400 ug/L (micrograms per liter) for a 22 pound child.
- Lifetime exposure with 200 ug/L (micrograms per liter).

Has GSWSA ever tested for 1,4-dioxane?

Grand Strand Water and Sewer Authority (GSWSA) in conjunction with the Department of Environmental Services (SC DES) formerly known as the Department of Health and Environmental Control (DHEC) tested GSWSA drinking water in 2014. The value was determined to be 0.18 ug/L (micrograms per liter). GSWSA is coordinating with an external provider on collecting additional and more current data. Note that this level is much lower than the health advisory level of 200 ug/L (micrograms per liter).

Is 1,4-dioxane regulated by federal or state entities for drinking water?

This parameter of concern is not currently regulated by the United States Environmental Protection Agency (EPA) nor the South Carolina Department of Environmental Services (SC DES) formerly known as the Department of Health and Environmental Control (DHEC). No federal or state maximum contaminant level has been established at this time. A health advisory has been established. See answer to “*Is 1,4-dioxane harmful?*” above.

Is GSWSA in a lawsuit over 1,4-dioxane?

GSWSA is not in any lawsuit related to this parameter. There is pending litigation between the South Carolina Department of Environmental Services (formerly South Carolina Department of Health and Environmental Control) and Winyah Rivers Alliance.

Where can I find more information in 1,4-dioxane?

Lawsuit:

https://www.scribd.com/document/751006120/Winyah-Rivers-Alliance-Pre-Hearing-Statement#from_embed

Center of Disease Control (CDC):

<https://wwwn.cdc.gov/TSP/PHS/PHS.aspx?phsid=953&toxid=199>

Environmental Protection Agency:

<https://semspub.epa.gov/work/01/575107.pdf>

National Institute of Health:

<https://www.ncbi.nlm.nih.gov/books/NBK153666/>