



PORT WASHINGTON WATER DISTRICT

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1,4-Dioxane and Drinking Water Concerns Fact Sheet

What is 1,4 – Dioxane

1,4-dioxane is a synthetic chemical used as a solvent and a chlorinated solvent stabilizer for industrial chemicals, predominantly 1,1,1-trichloroethane (TCA). Apart from its use as a stabilizer, it is used in a variety of applications as a solvent, such as in inks and adhesives. However, it is also found in cosmetics, in detergents, shampoos and deodorants, just to cite a few other examples. It is important to note, that it is an issue that reaches far beyond drinking water. This is only an issue for water supply systems because its presence is so pervasive in everyday household products.

No Long Island Water Provider Exceeds the New York State Health Department standard of 50 ppb

There is currently no chemical-specific Federal or New York State drinking water standard for 1,4-dioxane; however, it is regulated as an Unspecified Organic Contaminants by the New York State Department of Health (NYSDOH) at a maximum contaminant level (standard) of 50 parts per billion (ppb). Our 1,4-Dioxane point of entry test results ranged from below detection limits to 1.90 ppb with an average of 0.75 ppb. These results are lower than the New York State Health Department standard, so there are no special actions our district or customers need to take. Levels of 1,4-dioxane do not appear to be increasing on Long Island. Generally, detections of the compound have been fairly stable, not trending upward.

EPA also established a lifetime health advisory of 200 ppb for 1,4-dioxane in drinking water (EPA 2012). In addition, the US EPA has estimated the concentration of 1,4-dioxane in water corresponding to an increased lifetime cancer risk of one-in-a-million, assuming consumption of 2 liters of water per day each and every day for a lifetime (70 years), which is 0.35 ppb. This health-protective criterion is often used as a non-regulatory benchmark for minimal risk.

The Federal Consumer Product Safety Commission continues to monitor for 1,4-dioxane in consumer products and legislation has been proposed to regulate and restrict chemicals such as 1,4-dioxane. Many personal care product companies are beginning to voluntarily remove this chemical from their products.

What about home water treatment devices and bottled water?

Water provided by our district is already lower than the current state regulatory standard for unspecified organic contaminants, so there are no special actions that our customers need to take.



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Regulations for 1,4-Dioxane in bottled water (which are enforced by the Food and Drug Administration) have not been developed. Bottled water manufacturers may have specific information on 1,4-Dioxane levels for their products.

Will the EPA be setting a standard for 1,4-Dioxane?

That is yet to be determined. The EPA regularly reviews drinking water standards as new science becomes available and is currently reviewing new 1,4-Dioxane health effects information. Once the review is completed, the EPA will carefully review the conclusions and consider all relevant information to determine whether a drinking water standard for 1,4-Dioxane is needed. The drinking water community is working with the EPA to review all relevant information on 1,4-Dioxane including health effects, occurrence and treatment options. This work will help support the EPA in its decision-making process.

Where Can I Find More Information about 1,4-Dioxane?

- US EPA Technical Fact Sheet 1,4-Dioxane. http://www2.epa.gov/sites/production/files/2014-03/documents/ffro_factsheet_contaminant_14-dioxane_january2014_final.pdf
- US EPA Integrated Risk Information System (IRIS). <http://www.epa.gov/iris/subst/0326.htm>
- US EPA TSCA Work Plan Chemical Problem Formulation and Initial Assessment. 2015. http://www.epa.gov/oppt/existingchemicals/pubs/14-Dioxane_final.pdf
- Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs fact sheets. <http://www.atsdr.cdc.gov/toxfaqs/tfacts187.pdf>
- Water Research Foundation. 2014. "1,4-Dioxane White Paper." <http://www.waterrf.org/resources/StateOfTheScienceReports/1,4-dioxane.pdf>
- National Institute for Occupational Safety and Health (NIOSH). 2010. "Dioxane." NIOSH Pocket Guide to Chemical Hazards. www.cdc.gov/niosh/npg/npgd0237.html

All results of our water quality testing are presented to our residents in our annual drinking water quality report and our tap water remains to be of the highest quality possible and safe to drink. For additional information, please visit the USEPA's website at www.epa.gov, or contact the Port Washington Water District at 516.767.0171 or at info@pwwd.org.

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