



PORT WASHINGTON WATER DISTRICT

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## 1,4-DIOXANE AND DRINKING WATER CONCERNS FACT SHEET

### WHAT IS THE DISTRICT'S COMMITMENT TO WATER QUALITY?

The Port Washington Water District's commitment to providing the community with high-quality water is unwavering. We take an immense amount of pride in providing residents throughout the Port Washington peninsula with water that meets or surpasses all federal, state and local standards. Whenever there is a need for treatment, we invest what is necessary to ensure the safety of our water. If you have specific questions or concerns about your water quality with regards to 1,4-dioxane please contact the Nassau County Health Department at (516) 227-9697.

### WHAT IS 1,4-DIOXANE?

1,4-Dioxane is a synthetic chemical historically used as a stabilizer for industrial solvents, predominantly 1,1,1-trichloroethane (TCA). Apart from its use as a solvent stabilizer, it is used in small concentrations in a variety of applications, such as inks and adhesives. It may also be present in some consumer products, such as cosmetics, detergents, shampoos, deodorants, pharmaceuticals and food packaging.

### HOW DOES 1,4-DIOXANE GET INTO DRINKING WATER?

Port Washington Water District, like the other public water providers on Long Island, relies on groundwater for its drinking water supply. 1,4-dioxane has reached that groundwater primarily because of industrial manufacturing operations on Long Island that used TCA stabilized by 1,4-dioxane from the 1950s to 1990s. Once dioxane reached the ground from routine spills or disposal straight to the soil, it could migrate to the groundwater and persist for many years. Additionally, 1,4-dioxane present in household products can contribute to ongoing and future contamination as it gets washed down the drain and seeps into the ground and, eventually, Long Island's aquifer.

### IS 1,4-DIOXANE REGULATED?

There is currently no chemical-specific Federal or New York State drinking water standard for 1,4-dioxane. The U.S. Environmental Protection Agency (EPA) has listed 1,4-dioxane as a probable human carcinogen, but at present the EPA has no plans for establishing water quality standards for the compound.

The New York State Department of Health (NYSDOH) currently regulates 1,4-dioxane as an Unspecified Organic Contaminant (UOC). UOC's have a blanket Maximum Contaminant Level (MCL) of 50 parts per billion (ppb).

The NYSDOH released a draft regulation which proposes an MCL of 1.0 ppb for 1,4-dioxane. The 45-day comment period on the regulation ended on March 7, 2020. The regulation has been delayed by NYS Executive Orders due to COVID. It is anticipated that the new regulations could go into effect as early as the summer of 2020.

## WHAT ACTIONS ARE BEING UNDERTAKEN BY THE WATER DISTRICT TO ADDRESS 1,4-DIOXANE?

### LOCALLY:

The Port Washington Water District (PWWD) has been sampling for 1,4-dioxane since 2014; long before recent efforts to regulate the compound at the state level. While waiting for a MCL to be established, PWWD's commissioners have authorized additional proactive actions, including:

- Production of education materials such as consumer fact sheets;
- Operational measures to reduce exposure;
- Bench testing (aggressive water sampling); and
- Three engineering studies and applications for New York State grants for Advanced Oxidation Process treatment (AOP) systems, resulting in award of over \$18 million to the District.
- Piloting and design of AOP treatment systems

This advanced planning will place the District in a very favorable position to implement wellhead treatment as quickly as possible once an MCL is set.

The District is planning significant investments in wellhead treatment through grants, bonding and adjusting rates. The estimated capital cost to implement 1,4-dioxane treatment at our largest water plant is projected to be more than \$18

million. In addition to the significant grant award from NYS of over \$18 million for this treatment, we are also seeking to hold companies that caused the contamination accountable for the additional treatment costs.

### REGIONALLY:

The PWWD is partnering with organizations, such as the Long Island Water Conference and various environmental and community organizations, to improve public education and gather support for initiatives to stop the inclusion of the chemical in consumer products. If the sources of 1,4-dioxane contamination are not eliminated, the problem will only get worse. Legislation must be passed to regulate and restrict chemicals such as 1,4-dioxane so we don't keep recharging our aquifer with them.

As noted, the PWWD is also one of many Long Island water districts pursuing legal action against polluters and manufacturers to better protect our ratepayers.

## WHEN WILL TREATMENT BE IMPLEMENTED?

There are many things that are beyond the control of water suppliers since new and yet-to-be-proven treatment systems will be required. This will impact how long treatment implementation will take and includes the following concerns:

- It will take more time to implement effective wellhead treatment for a low 1,4-dioxane MCL based on the need for special customized treatment equipment and appropriately skilled contractors and engineers.
- Analytical lab capacity and associated costs are of great concern also. Comprehensive testing and quality control are required for 1,4-dioxane treatment removal because of the by-products generated by the advanced oxidation process. Because of the nature of the byproducts and specialized analytical methods

required, it will cost more than \$100,000 for the pilot testing.

Rest assured that PWWD is undertaking proactive action to position the District to implement effective wellhead treatment as soon as possible. 1,4-dioxane is not the first threat to Long Island's drinking water source. By working collaboratively, we have dealt with other serious threats such as MBTE. All levels of government must step up to ensure Long Island has access to sufficient quantities of customized treatment equipment, skilled contractors, engineers and analytical lab capacity needed to meet any new mandate.

## WHAT ABOUT HOME WATER TREATMENT DEVICES AND BOTTLED WATER?

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. At present there are no NSF or UL certified home water treatment devices available for the removal of 1,4-dioxane.

## WHERE CAN I FIND MORE INFORMATION ABOUT 1,4-DIOXANE?

### New York State Website

<https://www.governor.ny.gov/news/governor-cuomo-announces-availability-350-million-water-system-upgrades-statewide-and-directs>

### US EPA Integrated Risk Information System (IRIS)

<https://www.epa.gov/iris/subst/0326.htm>

### National Institute for Occupational Safety and Health (NIOSH):

#### Dioxane - NIOSH Pocket Guide to Chemical Hazards

<https://www.cdc.gov/niosh/npg/npgd0237.html>

### Agency for Toxic Substances and Disease Registry (ATSDR):

#### ToxFAQs Fact Sheets

<https://www.atsdr.cdc.gov/toxfaqs/tfacts187.pdf>

## WHERE CAN I FIND INFORMATION ABOUT PORT WASHINGTON'S WATER QUALITY?

Our tap water continues to be of the highest quality possible and meets or surpasses all federal, state, and local standards. Residents can access each annual water quality report from the District's website, [www.pwwd.org](http://www.pwwd.org). For additional information, please visit the USEPA's website at [www.epa.gov](http://www.epa.gov), or contact the Port Washington Water District at 516.767.0171 or at [info@pwwd.org](mailto:info@pwwd.org).

