



DISTRICT IS COMMITTED TO COMBATTING 1,4 DIOXANE

Dear Residents,

Hicksville has long been known as a hub of commercial development, serving as the home of countless reputable brands in the local, regional and national sphere. While this is part of the very fabric of our everyday lives and the global esteem of Long Island as a whole, it has also put our home at odds with its most precious natural resource, water.

As many of our residents may have heard about, 1,4-dioxane is a synthetic industrial chemical that has been detected in more than 70 percent of water supply wells across Long Island. It was discovered in Hicksville in 2016 through routine testing for unregulated contaminants—wherein the District discovered an elevated level of this man-made, synthetic compound at one well location. While this measurement of 1,4-Dioxane did not exceed current New York State standards or the EPA's existing regulations for unregulated contaminants, District officials acted proactively to immediately take this well offline, where it has remained out of service to this day.



The Hicksville Water District recently met with New York State Senator Kevin Thomas to discuss the local impacts of potential 1,4-Dioxane Treatments.

The District is dedicated to working with local and state regulating authorities to ensure any regulation or treatment method that is implemented is based on sound science.

Fortunately, thanks to years of proactivity from the District, we are ahead of the curve in designing and implementing technology capable of remediating this contaminant. The District works tirelessly to ensure the costs associated with these projects mitigate the burden on Hicksville taxpayers, and we are doing so using every tool at our disposal.

Notably, the District has applied for and received \$3 million through New York State's Water Infrastructure Improvement Act (WIIA), the maximum sum allowed through this program. Additionally, we have been working to hold responsible parties accountable for the contamination at all well locations affected by 1,4-dioxane to ensure they support the costs of treatment, which is now necessary, to remediate the presence of this contaminant.

Sincerely,

NICHOLAS J. BRIGANDI
Chairman

KARL M. SCHWEITZER
Secretary

WILLIAM E. SCHUCKMANN
Treasurer

COMMISSIONERS:



NICHOLAS J. BRIGANDI
Chairman



KARL M. SCHWEITZER
Secretary



WILLIAM E. SCHUCKMANN
Treasurer

HOW DID WE GET HERE?

Pending Regulation for 1,4-Dioxane and Local Impacts

The New York State Drinking Water Quality Council was commissioned by Governor Andrew Cuomo in 2017 to review emerging contaminants in drinking water, which included the evaluation of 1,4-Dioxane.

Although for years the compound has been unregulated with a Maximum Contaminant Level (MCL) of 50 ppb, in December 2018, the New York State Drinking Water Quality Council submitted its formal recommendation to the NYS Department of Health to regulate 1,4-Dioxane at 1 ppb; a significantly lower level than currently exists for the compound.

This regulation not only affects more than 90 supply wells across Long Island, but also has deep impacts locally as a majority of the supply wells in Hicksville meet or encroach on this standard. If this regulation is not responsibly implemented, the water industry—Hicksville included—could be faced with a water shortage crisis.

We are not standing idly by in this process. We have met with our local elected representatives on the state and local levels and the NYS Department of Health regarding the potential impacts. We are making our voices heard, and we expect to continue taking every action in our power to ensure that the necessary treatment costs for any emerging contaminants do not fall solely on the backs of local ratepayers.

WHAT IS 1 PPB?

To put this number in perspective, one part-per-billion—or microgram per liter—is equivalent to a single water drop in an Olympic-sized swimming pool or one second in time in more than 31 years. While this ratio seems insurmountable, our District strives to achieve levels of non-detect for all contaminants, and works vehemently to reach this goal.



WATER TREATMENT PROCESS

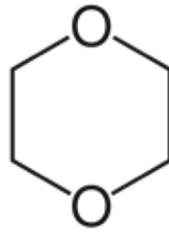
The Hicksville Water District's priority is to provide drinking water of the highest quality, free of any VOCs. Our treatment processes, combined with rigorous testing, ensures that the thousands of gallons of water pumped per minute in the Hicksville Water District are clean, pure and safe to drink.

Air Stripping: This proven, state-of-the-art equipment is in place at District plant sites to remove any traces of VOCs that may be present in the water pumped from the ground long before it enters the public supply system. Air stripping exposes a large surface area of water to air. Water is pumped to the top of a tower and cascades down over a large number of inert packing materials—small round objects that resemble wiffle balls. Simultaneously, filtered air is blown up through the tower, breaking the water molecules and removing, or “stripping,” any VOCs.

Carbon Filter: Another treatment process water can go through is a granular activated carbon (GAC) filter to remove organic compounds. The activated carbon's porous composition provides tremendous surface area that acts as an adsorption system. The water is purified as it passes through the carbon filters; the used carbon is replaced periodically according to industry standards. GAC filters are similar to air strippers as they both remove VOCs.

Nitrate Removal: The ion exchange process for the removal of nitrates is simple and effective. It operates in the same manner as a common water softener. The process uses a strong-base ion exchange resin, which regenerates with common salt.

WHAT IS 1,4 DIOXANE?



- 1,4-dioxane is a synthetic industrial chemical that is miscible in water.
- This compound is typically found in conjunction with 1,1,1-Trichloroethane (TCA) because of its widespread use as a stabilizer for chlorinated solvents.
- It is a by-product present in many goods; including paint strippers, dyes, greases, antifreeze and aircraft deicing fluids, and in some consumer products (deodorants, shampoos and cosmetics).
- 1,4-dioxane remains an unregulated contaminant by US EPA standards, setting its existing MCL at 50 ppb.

In addition to its frequent links to manufacturing processes, 1,4-dioxane is also prevalent in a number of consumer products. Below are just a few:

Tide (P&G)	55,000 ppb
Ivory Snow Gentle (P&G)	31,000 ppb
Tide Free (P&G)	29,000 ppb
Purex (Dial Corp.)	25,000 ppb

LOCAL IMPACTS OF 1,4 DIOXANE

Early cost projections from trained professionals at the Hicksville Water District predict an average cost of \$5 million per well site requiring treatment. The District has estimated the total impact, including engineering and design, to cost about \$65 million. This amount, bonded over 20 years and in combination with annual operations and maintenance costs, would incur more than \$6.5 million added to the District's annual budget. Considering the existing budget entered for 2019 of \$9.8 million, this new budget would account for a 67% increase of our budget overall.

The capital costs for treatment infrastructure, as well as the annual operations and maintenance would ultimately result in increases of more than 80% to water usage rates for both residential and commercial users.

CAPITAL COSTS

Estimated capital costs District-wide: \$65 million

- Treatment systems needed at 11/14 well sites

ANNUAL COSTS

Bonding capital costs at 4% for 20 years: \$4.8 million annually

Operation and maintenance costs: \$1.8 million annually

Total Costs Incurred Annually: \$6.6 million

Current budget (2019): \$9.8 million

Projected budget with treatment: \$16.4 million

Estimated Annual Water Rate Increase

- Residential customers: 81% increase
- Commercial customers: 80% increase

HWD DEPLOYING MULTIPLE METHODS TO FIGHTING 1,4 DIOXANE

Advanced Oxidation Process (AOP) is currently the top method to remove 1,4 dioxane from water. AOP works by adding common treatment compounds—such as hydrogen peroxide or chlorine—to raw water. The water is then fed through an ultraviolet (UV) reactor. The UV lights react with the additives to remove even the most miscible compounds in water. Finally, water is then run through Granular Activated Carbon (GAC) to remove trace elements of additive chemicals. To construct the infrastructure necessary for AOP, the District's yearly budget is projected to increase to \$16.4 million. To offset and mitigate these capital costs, the District has secured \$3 million in grant funding from New York State and a \$162,300 grant from the Stony Brook Center for Clean Water Technology. Additionally, the District is engaged in necessary research to hold polluters accountable for the presence of this compound in our water supply.





Hicksville Water District

4 Dean Street
Hicksville, NY 11801 USA
(516) 931-0184
(516) 931-6506 (Fax)

WWW.HICKSVILLEWATER.ORG

Presorted
First Class Mail
U.S. POSTAGE
PAID
Hicksville, NY 11802
Permit No. 1039

Board Meetings

Second and fourth Tuesday of the month at 5 p.m.
at the District office, unless otherwise announced.

Business Hours

8 a.m. to 4 p.m. weekdays

Interim Superintendent

Ken Claus

Business Manager

Christine Costa, CPA, CGMA

Commissioners

Nicholas J. Brigandi, Chairman
Karl M. Schweitzer, Secretary
William E. Schuckmann, Treasurer

24-Hour Emergency Number

(516) 931-0184

Member

American Water Works Association
Long Island Water Conference
Nassau-Suffolk Water Commissioners Association

Proudly serving the Hicksville area since 1921.

UPGRADES AT PLANT 5 KEY TO DISTRICT'S CONSERVATION EFFORTS

The Hicksville Water District is committed to protecting Long Island's sole-source aquifer and the environment as a whole. By improving the efficiency and productivity of all district infrastructure, the Hicksville Water District is able to conserve water and reduce its environmental footprint. Capital improvements proactively initiated by the District have been the key to ensuring a plentiful and safe water supply for years to come. In particular, there has been much progress at the Hicksville Water District's Plant 5:

New Well and Process Pumps at Plant 5

- The Hicksville Water District has taken proactive measures to replace well and booster pumps at Plant 5 with higher efficiency units.
- Replacing the pumps and maintaining the wells will help with the ultimate goal of restoring them to the original design capacity.
- Improved pumps will optimize the District's ability to bring water from the ground to homes and businesses in our community.

New Emergency Back-Up Generator at Plant 5

- The Hicksville Water District is in the process of installing a new back-up generator at their Plant 5 facility. The generator will ensure an uninterrupted supply of clean water even during long-term power outages.

Supply Reserves Undergo Updates

- Maintenance on ground storage tanks at plants 5, 8 and 9 has been completed. The tanks underwent an interior and exterior cleaning and new exterior coating and enhanced safety features were added to help preserve the integrities and lifespans of the tanks.