

# OUR DRINKING WATER SUPPLY

## By

# Franklin Square Water District



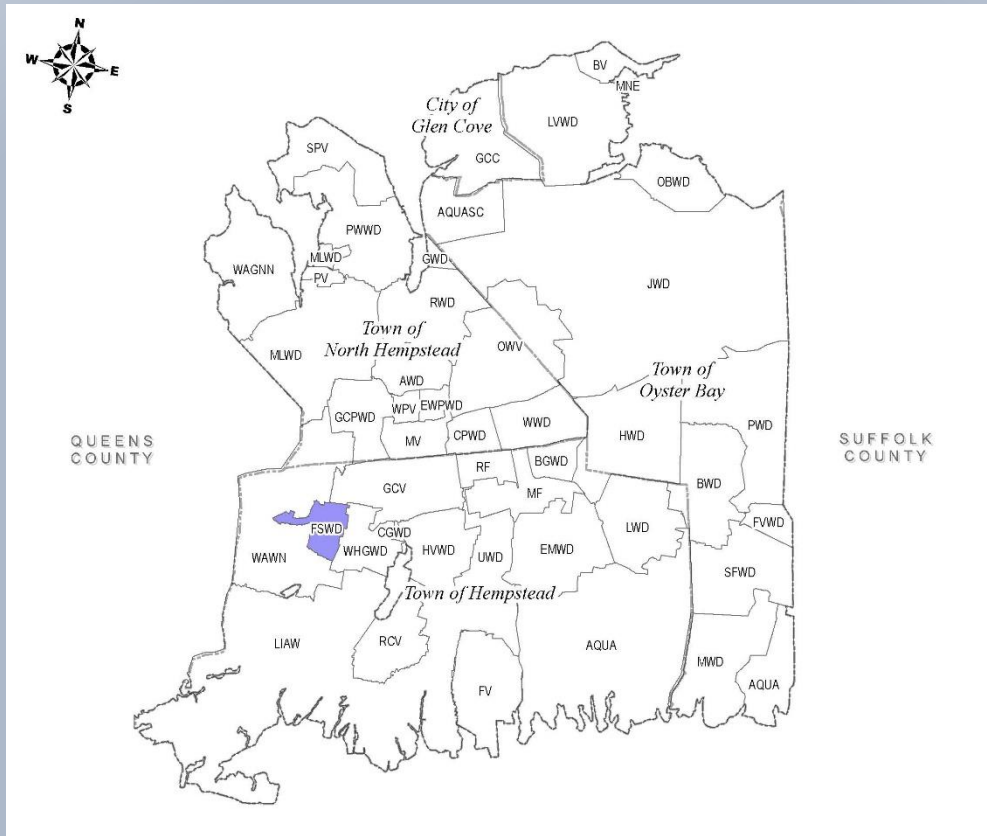
**Commissioner Salvatore A. Intagliata**  
**Commissioner Ralph D. Pugliese**  
**Commissioner Madeline F. Presta**  
**Supt. John Hughes**  
**Asst. Supt. Scott Schemmer**  
**District Engineer – Dennis M. Kelleher, P.E. – H2M**

January 28, 2020



# About The Franklin Square Water District

<b>Population Served:</b>	<b>20,000</b>
<b>Number of Services:</b>	<b>5,210 Accounts</b>
<b>Miles of Water Main:</b>	<b>41.0 miles</b>
<b>Supply Wells:</b>	<b>5</b>
<b>System Capacity:</b>	<b>9.81 Million Gallons a Day</b>
<b>Average Day Demand:</b>	<b>2.46 Million Gallons a Day</b>
<b>Peak Day Demand:</b>	<b>5.13 Million Gallons a Day (2010)</b>
<b>Storage Tanks:</b>	<b>2 Tanks @ 0.5 Million Gallons each</b>
<b>Emergency Interconnections:</b>	<b>6</b> <b>(West Hempstead Water District, Village of Garden City and Water Authority of Western Nassau)</b>



**KEY TO NASSAU COUNTY PUBLIC WATER SUPPLIERS**

AQUA	AQUA OF NY	FV	FREEPORT (V)	MF	MITCHEL FIELD	RWD	ROSLYN W.D.
AQUA	AQUA OF NY	FWWD	FARMINGDALE (V)	MLWD	MANHASSET-LAKEVILLE W.D.	SFWD	SOUTH FARMINGDALE W.D.
AQUASC	AQUA OF NY SEA CLIFF	GCC	CITY OF GLEN COVE	MNE	MILL NECK ESTATES	SPV	SANDS POINT (V)
AWD	ALBERTSON W.D.	GCPWD	GARDEN CITY PARK W.D.	MV	MINEOLA (V)	UWD	UNIONDALE W.D.
BGWD	BOWLING GREEN W.D.	GCV	GARDEN CITY (V)	MWD	MASSAPEQUA W.D.	WAGNN	W.A. OF GREAT NECK NORTH
BV	BAYVILLE (V)	GWD	GLENWOOD W.D.	OBWD	OYSTER BAY W.D.	WAWN	W.A. OF WESTERN NASSAU
BWD	BETHPAGE W.D.	HWD	HEMPSTEAD (V)	OWW	OLD WESTBURY (V)	WHGWD	WEST HEMPSTEAD W.D.
CGWD	CATHEDRAL GARDENS W.D.	HWD	HICKSVILLE W.D.	PV	PLANDOME (V)	WPV	WILLISTON PARK (V)
CPWD	CARLE PLACE W.D.	JWD	JERICO W.D.	PWD	PLAINVIEW W.D.	WWD	WESTBURY W.D.
EMWD	EAST MEADOW W.D.	LIAW	LONG ISLAND AMERICAN WATER CORP	PWWD	PORT WASHINGTON W.D.		
EWPWD	EAST WILLISTON PARK W.D.	LWWD	LOCUST VALLEY W.D.	RCV	ROCKVILLE CENTRE (V)		
FSWD	FRANKLIN SQUARE W.D.	LWD	LEVITOWN W.D.	RF	ROOSEVELT FIELD		

Franklin Square Water District service area includes parts of Stewart Manor, Elmont and Franklin Square

# Water Quality Regulations and Testing

- **Established by USEPA, NYSDOH and NCDH**
- **District Collects over 600 Samples, Tests for more than 150 separate Parameters and Run Over 10,000 Tests per year**
- **Routine Testing (Wells and Distribution System)**
  - **Bacteria**
  - **Inorganics/Metals**
  - **VOCs (Volatile Organic Contaminants)**
  - **SOCs (Synthetic Organic Contaminants)**
    - **Herbicides**
    - **Pesticides**
  - **Radiologicals**
  - **Emerging Contaminants**
- **Required to Issue an Annual Water Supply Statement Every Year That Summarizes Water Quality Testing**

# How Safe Is Your Water?

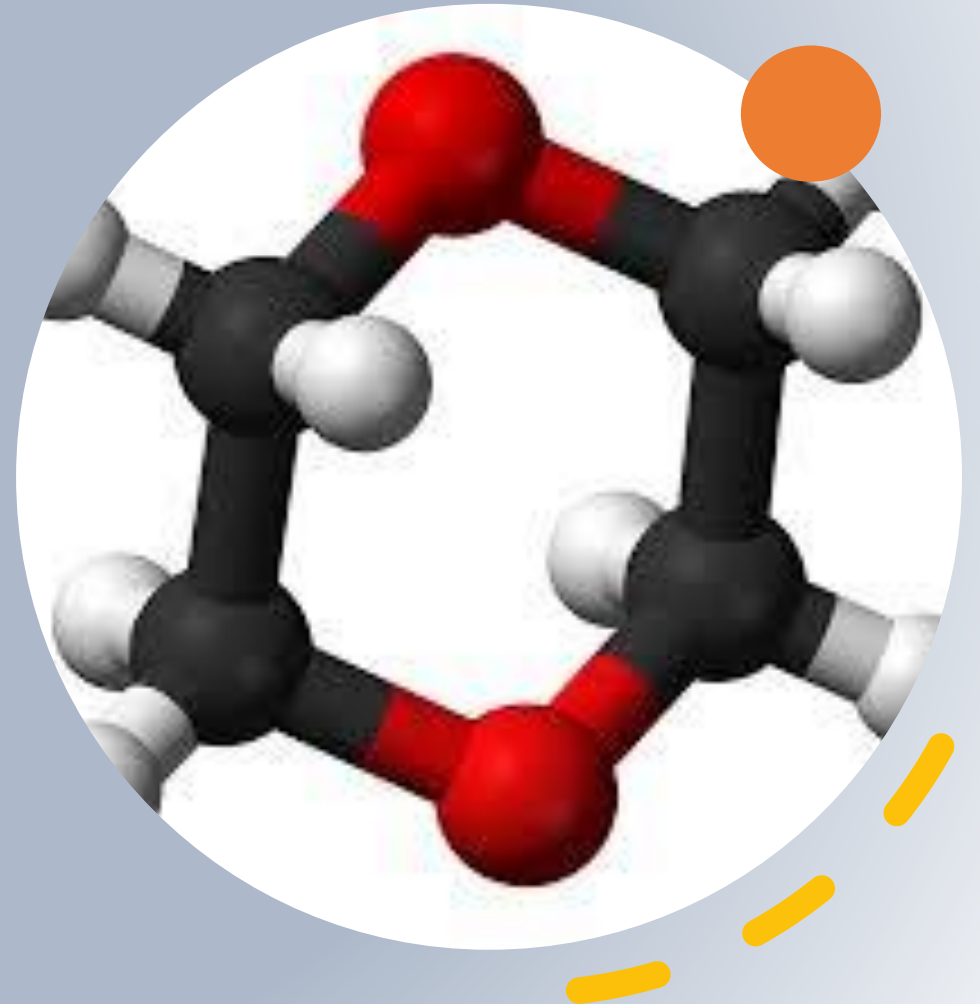
- **Continuously Tested!**
- **Drinking Water Standards - Federal Standards Established in 1974 - New Contaminant Standards Every 5 Years**
- **Water is Not Just H<sub>2</sub>O!**
- **Maximum Contaminant Level - MCL**
  - **1 Parts Per Billion (1 second in 32 years)**
  - **1 Parts per Trillion (1 second in 32,000 years)**
- **Standards Set by Evaluating Lifetime Health Risk**
  - **Based on toxicology studies where drinking two liters of water over 70 years that would cause a 1 in 1 million persons health risk.**

# Emerging Contaminants

- **No Current Drinking Water Standards**
- **Now Fall Under Unregulated Contaminant MCL = 50 ppb**
- **New York State is Proposing Regulations for:**
  - **1,4-Dioxane (1.0 ppb)**
  - **Perfluorinated Compounds:**
    - **PFOA (10 ppt)**
    - **PFOS (10 ppt)**
- **Proposed New Regulations to be Finalized Sometime in 2020. Must Comply by 2022.**
- **District is Taking Pro-Active Approach to Remove Contaminants Before the Regulation is Proposed.**

# 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**
- **Detected in over 70% of Supply Wells on Long Island**



# 1,4-Dioxane: Where Does it Come From?

In addition to industrial use, 1,4-dioxane is also prevalent in a number of cleaning products used everyday in homes. In lab tests conducted by an independent third party of the top 20 laundry brands, the following measurements were recorded: In addition to its frequent links to manufacturing processes, 1,4-dioxane is also prevalent in a number of consumer products, including:

1. Tide (P&G) – 55,000 parts per billion (ppb)
2. Ivory Snow Gentle (P&G) – 31,000 ppb
3. Tide Free (P&G) – 29,000 ppb
4. Purex (Dial Corp.) – 25,000 ppb
5. Gain 2X Ultra (P&G) – 21,000 ppb
6. Cheer BrightClean Detergent (P&G) – 20,000 ppb
7. Era 2X Ultra (P&G) – 14,000 ppb
8. Arm & Hammer (Church & Dwight Co.) – 5,000 ppb
9. Wisk 2X Ultra (Sun Products Corp.) – 3,900 ppb
10. Woolite Complete Detergent (Reckitt Benckiser) – 1,300 ppb





# Specific Franklin Square Water Quality



# Well Nos. 1 and 2 – Schroeter Avenue

- **Low Level VOCs – Trichloroethene From Industrial Contamination Plumes**
- **Air Stripper Installed – 2009**
- **Treatment Removes All VOCs**



**Air Stripping Facility at Well Nos. 1 & 2 - Schroeter Avenue**



**Air Strippers being installed at Well Nos. 1 & 2**



**GAC being installed at Well Nos. 4 & 5**

# Well No. 3 – Arlington Avenue

- **High Iron Concentration (Rusty Water) – Not a Health Concern**
- **Low Level VOCs**
  - **Chlorodifluoromethane (Freon)**
- **Well Held in Reserve – Only Being Used In Emergency**
- **Planning on Treatment in Future**
- **Well Has Not Been Used in Over 2 Years**

# Well Nos. 4 and 5 – Theodora Street

- **Low Level VOC – Trichloroethene**
- **GAC Treatment in Place Since 1989 (GAC Vessels Replaced in 2010)**
- **Low Level – PFOA (Totally removed by GAC Treatment)**
- **Low Level – 1,4-Dioxane – 1.2 ppb**
  - **Proposed AOP Treatment**
- **Low Level VOC – 1,1,2-Trichlorotrifluoroethane (Freon 113)**
  - **Freon Levels Below MCL**
  - **Proposed Air Stripping Treatment**

# Proposed Additional Treatment at Well Nos. 4 and 5

- **District Awarded \$4.122 million NYS Grant for Emerging Contaminants**
- **Proposed Advanced Oxidation Process (AOP)**
  - **Ultraviolet Light and Hydrogen Peroxide**
  - **To Remove 1,4-Dioxane**
- **Proposed Air Stripper**
  - **To Remove Freon**
- **Total Cost – Approximately \$6.87 million**  
**(\$4.122 million Grant + \$2.748 million District/Town Bond)**
- **District Taking Legal Action Against 1,4-Dioxane Manufacturers so community does not have to pay for treatment**

# Proposed Schedule For Treatment At Well Nos. 4 & 5

- **Pilot Study:** **Complete in December 2019**
- **Town Hearing for Bonding:** **Spring 2020**
- **Design:** **Summer 2020**
- **Construction:** **Fall 2020/2021**
- **Start Up:** **2021**

**In summary:**

**Your water is Safe to Drink!**

**District Does Everything Possible to Ensure it stays  
that way**

**QUESTIONS ?**