# 2023 drinking water quality report

OYSTER BAY WATER DISTRICT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902844

**Board of Commissioners**
Robert J. McEvoy, Chairman
Michael F. Rich, III, Secretary
Richard P. Niznik, Treasurer

## ANNUAL WATER SUPPLY REPORT — MAY 2024

The Oyster Bay Water District is pleased to present to you this year's Water Quality Report. The report is required to be delivered to all residents of our District in compliance with Federal and State regulations. The Board of Commissioners is happy to report that our water is in full compliance with all Federal, State and County regulations. Our constant goal is to provide you with a safe and dependable supply of drinking water every day. We also want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. The Board of Water Commissioners and the District employees are committed to ensuring that you and your family receive the highest quality water.

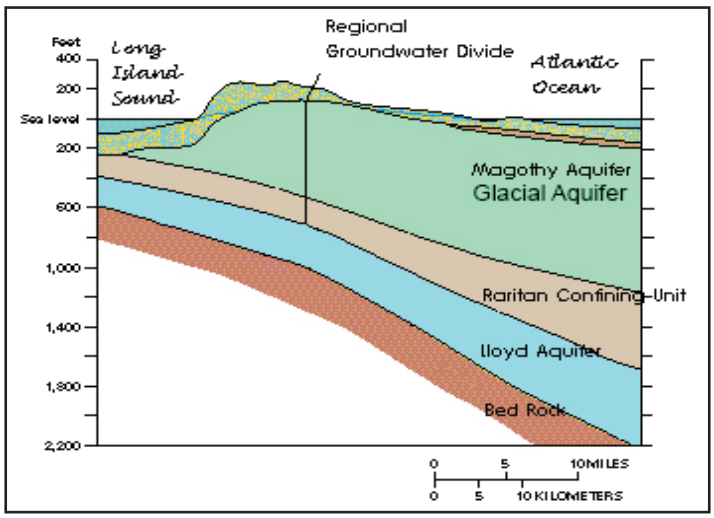
## SOURCE OF OUR WATER

The source of water for the District is groundwater pumped from five (5) wells located throughout the community that are drilled into the Glacial and Magothy aquifers beneath Long Island, as shown on the enclosed figure. Generally, the water quality of the aquifers in Oyster Bay is excellent.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants.

In order to ensure that our tap water is safe to drink, the State and the EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The population served by the Oyster Bay Water District during 2023 was approximately 8,500. The total amount of water withdrawn from the aquifer in 2023 was 412.8 million gallons, of which approximately 91 percent was billed directly to consumers. The remaining 9 percent was used for hydrant flushing, water main breaks and firefighting.




THE LONG ISLAND AQUIFER SYSTEM

## WATER TREATMENT

The Oyster Bay Water District provides treatment at all wells to improve the quality of the water pumped prior to distribution to the consumer. The pH of the pumped water is adjusted upward to reduce corrosive action between the water and water mains and in-house plumbing by the addition of sodium hydroxide. As mandated by the New York State and Nassau County Health Departments, the District currently adds a slight amount of chlorine to the water as a disinfection agent to prevent the growth of bacteria in the distribution system. A granular activated carbon treatment system is used at Plant No. 2 – Shutter Lane to remove low level volatile organic compounds (VOCs).

# CONTACTS FOR ADDITIONAL INFORMATION

We are pleased to report that our drinking water is safe and meets all Federal and State requirements. If you have any questions about this report or concerning your water utility, please contact Superintendent Edward Dupre at (516) 922-4848 or the Nassau County Department of Health at (516) 227-9692. We want our valued customers to be informed about our water system. If you want to learn more, please attend any of our regularly scheduled meetings. They are normally held on Thursday mornings at 9:00 a.m. at the Water District office.

The Oyster Bay Water District routinely monitors for different parameters and contaminants in your drinking water as required by Federal and State laws. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk. For more information on contamination and potential health risks, please contact the USEPA Safe Drinking Water Hotline at 1-800-426-4791 or www.epa.gov/safewater.

The USEPA established a Lead and Copper Rule that required all public water suppliers to sample and test for lead and copper at the tap. The first testing was required in 1992. All of our results were excellent indicating that the District's corrosion control treatment program was effective in preventing the leaching of lead and copper from your home's plumbing into your drinking water. Follow-up testing was last conducted in 2023 with the same excellent results. The next sampling program will occur in 2026. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. Oyster Bay Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested on your own. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

## COST OF WATER

In order to reward customers who conserve water, the District utilizes step billing. The average residential consumer (domestic use) is being billed at $1.20/1,000 gallons. To obtain a copy of the sprinkler system, or multi-user water rates, please contact the District office.

**QUARTERLY WATER RATES - Residential**

| Consumption (gallons) | Charges |
|---|---|
| Up to 10,000 | $1.20/thousand gallons |
| 10,001 - 20,000 | $1.75/thousand gallons |
| 20,001 - 30,000 | $2.20/thousand gallons |
| 30,001 - 50,000 | $2.70/thousand gallons |
| 50,001 - 150,000 | $3.50/thousand gallons |
| Over 150,000 | $4.30/thousand gallons |

## WATER QUALITY

In accordance with State regulations, the Oyster Bay Water District routinely monitors your drinking water for numerous parameters. We test your drinking water for coliform bacteria, turbidity, inorganic contaminants, lead and copper, nitrate, volatile organic contaminants, total trihalomethanes, synthetic organic contaminants and radiological contaminants. Over 200 separate parameters are tested for in each of our wells numerous times per year. The table presented on page 3 depicts which parameters or contaminants were detected in your drinking water. It should be noted that many of these parameters are naturally found in all Long Island drinking water and do not pose any adverse health affects.

## WATER CONSERVATION MEASURES

The underground water system of Long Island has more than enough water for present water demands. However, saving water will ensure that our future generations will always have a safe and abundant water supply.

In 2023, the Oyster Bay Water District continued to implement a water conservation program in order to minimize any unnecessary water use. The pumpage for 2023 was 2.2 percent more than in 2022. This can most likely be attributed to the hotter and drier weather conditions that occurred in 2023. The District also has implemented an increase Water Rate Structure that promotes water conservation.

Residents of the District can also implement their own water conservation measures such as retrofitting plumbing fixtures with flow restrictors, modifying automatic lawn sprinklers to include rain sensors, repairing leaks in the home, installing water conservation fixtures/appliances and maintaining a daily awareness of water conservation in their personal habits. The Water District will provide residents with dye tablets for testing of toilet leaks and water displacement bags to reduce water use in toilets. In addition, consumers should be aware that the Nassau County Lawn Sprinkler Regulations are still in effect. Besides protecting our precious underground water supply, water conservation will produce a cost savings to the consumer in terms of both water and energy bills (hot water). Utilizing the water conservation measures listed above can reduce your water use by 5%.

# 2023 DRINKING WATER QUALITY REPORT - TABLE OF DETECTED PARAMETERS

| Contaminants | Violation (Yes/No) | Date of Sample | Level Detected (Maximum Range) | Unit Measurement | MCLG | Regulatory Limit (MCL or AL) | Likely Source of Contaminant |
|---|---|---|---|---|---|---|---|
| **Inorganic Contaminants** | | | | | | | |
| Copper | No | July/August/ September 2023 | 0.027 - 0.37 0.17[1] | mg/l | 1.3 | AL = 1.3 | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead | No | July/August/ September 2023 | ND - 95.6 5.7[1] | ug/l | 0 | AL = 15 | Corrosion of household plumbing systems; Erosion of natural deposits |
| Barium | No | 04/05/23 | 0.0021 - 0.0068 | mg/l | 2.0 | MCL = 2.0 | Naturally occurring |
| Fluoride | No | 04/05/23 | ND - 0.13 | mg/l | 4.0 | MCL = 4.0 | Naturally occurring |
| Sodium | No | 03/15/23 | 6.4 - 15.1 | mg/l | n/a | No MCL[2] | Naturally occurring |
| Zinc | No | 04/05/23 | ND - 0.023 | mg/l | n/a | MCL = 5.0 | Naturally occurring |
| Magnesium | No | 04/05/23 | 3.4 - 6.3 | mg/l | n/a | None | Naturally occurring |
| Chloride | No | 04/05/23 | 11.1 - 19.7 | mg/l | n/a | MCL = 250 | Naturally occurring |
| Calcium | No | 04/05/23 | 7.2 - 13.4 | mg/l | n/a | No MCL | Naturally occurring |
| Nitrate | No | 06/23/23 | 1.8 - 2.9 | mg/l | 10 | MCL = 10 | Runoff from fertilizer and leaching from septic tanks and sewage |
| Sulfate | No | 04/05/23 | 5.7 - 15.4 | mg/l | n/a | MCL = 250 | Naturally occurring |
| Perchlorate | No | 03/15/23 | ND - 3.6 | ug/l | 0 | AL = 18[3] | Fertilizer |
| **Volatile Organic Contaminants** | | | | | | | |
| Tetrachloroethene | No | 02/14/23 | ND - 1.3 | ug/l | n/a | MCL = 5.0 | Industrial/ Commerical Discharge |
| 1,1-Dichloroethane | No | 10/10/23 | ND - 0.76 | ug/l | n/a | MCL = 5.0 | Industrial/ Commerical Discharge |
| **Disinfection By-Products** | | | | | | | |
| Total Trihalomethanes (TTHMS) | No | 09/12/23 | ND - 13.8 | ug/l | n/a | MCL = 80 | Disinfection by-products |
| Total Haloacetic Acids | No | 09/12/23 | ND - 1.0 | ug/l | n/a | MCL = 60 | |
| **Radionuclides** | | | | | | | |
| Gross Alpha | No | 12/12/22 | 0.113 - 1.09 | pCi/L | n/a | MCL = 15 | Naturally occurring |
| Gross Beta | No | 12/12/22 | 0.096 - 1.44 | pCi/L | n/a | MCL = 50 | Naturally occurring |
| Radium 226 & 228 | No | 12/12/2022 | 0.0065 - 1.07 | pCi/L | n/a | MCL = 5[4] | Naturally occurring |
| Uranium | No | 12/12/22 | 0.057 - 0.545 | ug/L | n/a | MCL = 30 | Naturally occuring |
| **Disinfectant** | | | | | | | |
| Chlorine Residual | No | 07/05/23 | 0.3 - 0.8 | mg/l | n/a | MRDL = 4.0 | Measure of disinfectant |
| **Physical Characteristics** | | | | | | | |
| pH | No | Continuous | 7.1 - 8.2 | pH units | n/a | 7.5 - 8.5[5] | Measure of water acidity or alkalinity |
| Total Alkalinity | No | 03/15/23 | 26.4 - 50.0 | mg/l | n/a | No MCL | Naturally occurring |
| Calcium Hardness | No | 04/05/23 | 18.1 - 33.5 | mg/l | n/a | No MCL | Naturally occurring |
| Total Hardness | No | 04/05/23 | 32.2 - 59.3 | mg/l | n/a | No MCL | Naturally occurring |
| Total Dissolved Solids (TDS) | No | 03/15/23 | 84.0 - 112.0 | mg/l | n/a | No MCL | Naturally occurring |
| **Synthetic Organic Contaminants (SOCs)** | | | | | | | |
| 1,4-Dioxane | No | 01/31/23 | 0.047 - 0.61 | ug/l | n/a | MCL = 1.0[6] | Industrial discharge and personal care products[7] |
| Perfluorooctanoic acid (PFOA) | No | 09/06/23 | ND - 6.2 | ng/l | n/a | MCL = 10[8] | Industrial discharge and firefighting foams[9] |

# 2023 DRINKING WATER QUALITY REPORT - TABLE OF DETECTED PARAMETERS

| Contaminants | Violation (Yes/No) | Date of Sample | Level Detected (Maximum Range) | Unit Measurement | MCLG | Regulatory Limit (MCL or AL) | Likely Source of Contaminant |
|---|---|---|---|---|---|---|---|
| Unregulated Perfluroalky Substances[10] | | | | | | | |
| Perflurobutanoic Acid (PFBA) | No | 09/06/23 | ND - 26.0 | ng/l | n/a | MCL = 50,000[8] | Industrial discharge[9] |
| Perfluoropentanoic Acid (PFPeA) | No | 09/06/23 | ND - 20.0 | ng/l | n/a | MCL = 50,000[8] | Industrial discharge[9] |
| Perfluorohexanoic Acid (PFHxA) | No | 09/06/23 | ND - 18.0 | ng/l | n/a | MCL = 50,000[8] | Industrial discharge[9] |
| Perfluoroheptanoic Acid (PFHpA) | No | 09/06/23 | ND - 9.1 | ng/l | n/a | MCL = 50,000[8] | Industrial discharge[9] |
| Perfluorohexanesulfonic Acid (PFHxS) | No | 10/25/23 | ND - 4.6 | ng/l | n/a | MCL = 50,000[8] | Industrial discharge[9] |
| Perfluorononanoic Acid (PFNA) | No | 10/25/23 | ND - 6.2 | ng/l | n/a | MCL = 50,000[8] | Industrial discharge[9] |

**Definitions:**

**Maximum Contaminant Level (MCL)** - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

**Maximum Contaminant Level Goal (MCLG)** - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Action Level (AL)** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Milligrams per liter (mg/l)** - Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

**Micrograms per liter (ug/l)** - Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

**Nanograms per liter (ng/l)** - Corresponds to one part of liquid in one trillion parts of liquid (parts per trillion - ppt).

**Non-Detects (ND)** - Constituent is not detected at the reporting level (RL).

**Nephelometric Turbidity Unit (NTU)** - Signifies that the instrument is measuring scattered light from the sample at a 90-degree angle from the incident light.

**pCi/L** - pico Curies per Liter is a measure of radioactivity in water.

**Maximum Residual Disinfectant Level (MRDL)** - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Health Advisory Level (HAL)** - An estimate of acceptable drinking water levels for a chemical substance based on health effects information; a health advisory is not a legally enforceable Federal standard, but serves as technical guidance to assist Federal, State and local officials.

[1] - During 2023, we collected and analyzed 20 samples for lead and copper. Two of the twenty samples analyzed exceeded the lead Action Level Limin of 15 ppb. None of the samples exceeded the copper Action Level of 1.3 ppm. Resampling is scheduled to occur in 2026. The values reported for lead and copper represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system. In our sampling program, the 90th percentile value is the 3rd highest result.

[2] - No MCL has been established for sodium. However, 20 mg/l is a recommended guideline for people on high restricted sodium diets and 270 mg/l for those on moderate sodium diets.

[3] - Perchlorate is an unregulated contaminant. However, the State Health Dept. has established an action level of 18 ug/l.

[4] - MCL for Radium is for Radium 226 and Radium 228 combined.

[5] - As per Nassau County Department of Health guidelines.

[6] - 1,4-Dioxane -The New York State (NYS) established an MCL for 1,4 dioxane as 1 part per billion( ppb) effective August 2020.

[7] - It is used as a solvent for cellulose formulations, resins, oils, waxes and other organic substances. It is also used in wood pulping, textile processing, degreasing, in lacquers, paints, varnishes, and stains; and in paint and varnish removers.

[8] - The New York State (NYS) maximum contaminant level (MCL) is 10 ppt for PFOA and 10 ppt for PFOS as of August 2020.

[9] - PFOA/PFOS has been used to make carpets, leathers, textiles, fabrics for furniture, paper packaging, and other materials that are resistant to water, grease, or stains. It is also used in firefighting foams. Many of these uses have been phased out by its primary U.S. manufacturer; however, there are still some ongoing uses.

[10] - All perfluoroalkyl substances, besides PFOA and PFOS, are considered Unspecified Organic Contaminants (UOC) which have an MCL = 0.05 mg/L = 50,000 ng/L.

Copies of a Supplemental Data Package, which includes the water quality data for each of our supply wells utilized during 2023, are available at the Oyster Bay Water District office located at 45 Audrey Avenue, Oyster Bay, New York and the local Public Library.

At the Oyster Bay Water District, we work around the clock to provide top quality water to every tap throughout the community. We ask that all our customers help us protect our water resources, which are the heart of our community, our way of life and our children's future.

## SOURCE WATER ASSESSMENT

The NYSDOH, with assistance from the local health department, has completed a source water assessment for this system, based on available information. Possible and actual threats to this drinking water source were evaluated. The source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how rapidly contaminants can move through the subsurface to the wells. The susceptibility of a water supply well to contamination is dependent upon both the presence of potential sources of contamination within the well's contributing area and the likelihood that the contaminant can travel through the environment to reach the well. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become, contaminated. See section "Water Quality" for a list of the contaminants that have been detected (if any). The source water assessments provide resource managers with additional information for protecting source waters into the future.

Our drinking water is derived from five (5) wells. The source water assessment has rated one (1) of the wells as having an elevated susceptibility to industrial solvents. The elevated susceptibility to industrial solvents and nitrates is due primarily to the shallow depth of Well No. 1 and due to point sources of contamination related to commercial/industrial facilities and related activities in the assessment area. In addition, the high susceptibility to nitrates is also attributable to unsewered residential land use and related practices in the assessment area, such as fertilizing lawns.

A copy of the assessment, including a map of the assessment area, can be obtained by contacting the District Office.

## WATER SYSTEM IMPROVEMENTS

The District is continuing with a Capital Improvement Program to rehabilitate existing equipment and facilities to ensure that the District is able to supply a safe and reliable source of drinking water and sufficient pumping capacity for fire flow protection. The District has recently completed construction of an emergency interconnection with neighboring Locust Valley Water District In addition, the District is currently constructing a new wellhead treatment system at Plant No. 2 and has inititiated the planning process for new wellhead treatment at Plant No. 6. Details of these projects are highlighted in the District Newsletter.

The Oyster Bay Water District conducts over 5,000 water quality tests throughout the year, testing for over 180 different contaminants which have been undetected in our water supply including:

| | | | | |
|---|---|---|---|---|
| Arsenic | Naphthalene | 1,2-Dibromoethane (EDB) | Carbon Tetrachloride | Hexachlorobutadiene |
| Cadmium | Tribromoacetic Acid | Perfluoroundecanoic Acid | 1,1-Dichloropropene | 1,2,3-Trichlorobenzene |
| Chromium | Heptachloro Epoxide | Perfluoropentanesulfonic Acid | 1,2-Dichloroethane | Benzene |
| Mercury | Dieldrin | NEtFOSSA | Trichloroethene | Toluene |
| Langlier Saturation Index | Endrin | NFDHA | 1,2-Dichloropropane | Ethylbenzene |
| Selenium | Methoxychlor | 8:2FTS | Dibromomethane | M,P-Xylene |
| Silver | Toxaphene | 1,1,2-Trichlorotrifluoroethane | Trans-1,3-Dichloropropene | O-Xylene |
| Color | Chlordane | Acetaldehyde | PFEESA | Styrene |
| Turbidity | Total PCBs | Decanal | Perfluorododecanoic Acid | Isopropylbenzene (Cumene) |
| Odor | Propachlor | Nonanal | NMeFOSSA | N-Propylbenzene |
| Iron | Alachlor | Propanal | 11Cl-P3ONS | 1,3,5-Trimethylbenzene |
| Manganese | Simazine | Cyclohexanone | ADONA | Tert-Butylbenzene |
| Ammonia | Atrazine | Germanium | 4:2FTS | 1,2,4-Trimethylbenzene |
| Nitrite | Metolachlor | Ethoprop | Acetone | Sec-Butylbenzene |
| Detergents (MBAS) | Metribuzin | Total Permethrin (cis- & trans-) | Benzaldehyde | 4-Isopropyltoluene (P-Cumene) |
| Free Cyanide | Butachlor | Quinoline | Formaldehyde | N-Butylbenzene |
| Antimony | 2,4-D | 2-Hexanone | Octanal | Methyl Tert.Butyl Ether (MTBE) |
| Beryllium | 2,4,5-TP (Silvex) | Bromochloroacetic Acid | Acetic Acid | Perfluorobutanesulfonic acid |
| Nickel | Dinoseb | 1,2-Dibromo-3-Chl.Propane | Formic Acid | Perfluorooctanesulfonic acid |
| Thallium | Dalapon | Dioxin | Chlorpyrifos | Perfluoroheptansulfonic Acid |
| Lindane | Picloram | Chloroacetic Acid | Oxyfluorfen | PFMBA |
| Heptachlor | Dicamba | Bromoacetic Acid | Tribufos | Perfluorotetradecanoic Acid |
| Aldrin | Pentachlorophenol | Dichloroacetic Acid | 1-Butanol | 9CL-PF3ONS |
| Perfluorodecanoic Acid | Hexachlorocyclopentadiene | Trichloroacetic Acid | 4-Methyl-2-Pentanone (MIBK) | Chlorate |
| PFMPA | bis(2-Ethylhexyl)adipate | Dibromoacetic Acid | Tetrahydrofuran | Bromide |
| Perfluorotridecanoic Acid | bis(2-Ethylhexyl)phthalate | Lithium | Bromodichloroacetic Acid | Butanal |
| HFPO-DA | Hexachlorobenzene | Dichlorodifluoromethane | cis-1,3-Dichloropropene | Glyoxal |
| 6:2FTS | Benzo(A)Pyrene | Chloromethane | 1,1,2-Trichloroethane | Methyl Glyoxal (2-Oxopropanal or Pyruvic Aldehyde |
| Hexavalent Chromium | Aldicarb Sulfone | Vinyl Chloride | 1,3-Dichloropropane | Butyric Acid |
| 2,3,5,6-Tetrafluorobenzaldehyde | Aldicarbsulfoxide | Bromomethane | Chlorobenzene | Propionic Acid |
| Crontonaldehyde | Aldicarb | Chloroethane | 1,1,1,2-Tetrachloroethane | Alpha-Hexachlorocyclohexane |
| Heptanal | Total Aldicarbs | Trichlorofluoromethane | Bromobenzene | Propfenofos |
| Pentanal | Oxamyl | Chlorodifluoromethane | 1,1,2,2-Tetrachloroethane | Butylated Hydroxyanisole |
| Chlorite | Methomyl | 1,1-Dichloroethene | 1,2,3-Trichloropropane | 2-Methoxyethanol |
| Valeri Acid | 3-Hydroxycarbofuran | Methylene Chloride | 2-Chlorotoluene | HAA9 (9 Haloacetic Acids) |
| Dimethipin | Carbofuran | Trans-1,2-Dichloroethene | 4-Chlorotoluene | Chlorodibromoacetic Acid |
| Tebuconazole | Carbaryl | cis-1,2-Dichloroethene | 1,2-Dichlorobenzene | HAA6Br (6 brominated Haloacetic Acids) |
| o-Toluidine | Glyphosate | 2,2-Dichloropropane | 1,3-Dichlorobenzene | |
| 2-Propen-1-OL | Diquat | Bromochloromethane | 1,4-Dichlorobenzene | |
| 2-Butanone (MEK) | Endothall | 1,1,1-Trichloroethane | 1,2,4-Trichlorobenzene | |