### WATER CONSERVATION TIPS

The ECWA encourages water conservation. Although Lake Erie and the Niagara River are a vast source of high quality fresh water, it must not be wasted. A few simple steps will preserve this precious resource for future generations:

- Use low flow shower heads and faucets.
- Repair all leaks in your plumbing system.
- Water your lawn sparingly in early morning or late evening.
- Do only full loads of laundry and dishes.
- Wash your car with a bucket and hose with a nozzle.
- Don't cut the lawn too short; longer grass saves water.

## **CRYPTOSPORIDIUM & GIARDIA ANALYSIS**

*Cryptosporidium* and *Giardia* are microscopic protozoa that are widely present in the environment and to some degree in most surface water sources throughout the United States. They can cause intestinal illnesses if ingested. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the illnesses within a couple of weeks. However, both can be serious for people with weak immune systems. Although filtration removes Cryptosporidium, even the most commonly used filtration methods cannot guarantee 100 percent removal. Giardia is removed by a combination of filtration and disinfection.

In 2017, the ECWA analyzed a total of 6 source water samples for *Cryptosporidium* and *Giardia* taken from Lake Erie and the Niagara River as part of EPA's Long Term 2 Enhanced Surface Water Treatment Rule. No *Cryptosporidium* were detected in any samples. *Giardia* were detected in each of the source water samples in January. In our treatment process *Giardia* is removed by a combination of filtration and disinfection.

The ECWA encourages immune compromised individuals to consult their physicians regarding appropriate precautions to avoid infection. Both protozoa must be ingested to cause disease, and they may spread through means others than drinking water. For additional information on Cryptosporidiosis or Giardiasis, please contact the Erie County Health Department at (716) 961-6800.

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 at (800) 426-4791.



# Water Quality Report



PUBLIC WATER SYSTEM IDENTIFICATION NUMBERS							
PWSID NAME	PWSID NAME						
NY1400399 ECWA AMHERST	NY1400488 ECWA HAMBURG (T)						
NY1450033 ECWA AURORA	NY1400515 ECWA HAMBURG (V)						
NY1421897 ECWA BOSTON	NY1400421 ECWA LANCASTER						
NY1400443 ECWA DIRECT	NY1422651 ECWA NEWSTEAD						
NY1400435 ECWA EDEN	NY1421762 ECWA ORCHARD PARK						
NY1400445 ECWA EVANS	NY1404543 ECWA WEST SENECA						

If you would like additional copies of this report, please contact Customer Service at (716) 849-8444 or e-mail questionscomments@ecwa.org.



**Erie County Water Authority** Administrative Offices 295 Main Street, Room 350 Buffalo, New York 14203

# **FREQUENTLY ASKED QUESTIONS**

### Who sets and enforces drinking water standards?

The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of your drinking water. Under the SDWA, the United States Environmental Protection Agency (EPA) sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. In New York, the State Health Department enforces the EPA's regulations and often makes them even more stringent.

The EPA sets standards for approximately 150 regulated contaminants in drinking water. For each of these contaminants, EPA sets a legal limit, called a maximum contaminant level (MCL). EPA regulations specify strict testing and reporting requirements for each contaminant. Water suppliers may not provide water that doesn't meet these standards. Water that does meet these standards is safe to drink. In Erie County, the Erie County Health Department is the agency that administers and enforces these standards. Their phone number is (716) 961-6800.

### Where does my water come from?

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 tap water is safe to drink, the New York State Department of Health (NYSDOH) and the EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The NYSDOH and the Food and Drug Administration (FDA) set regulations that limit contaminants in bottled water, which must provide the same protection for public health.

Your water comes from two sources. The ECWA's Sturgeon Point Treatment Plant in the Town of Evans draws water from Lake Erie to supply the southern part of Erie County and some communities in Chautauqua and Cattaraugus Counties. The Van de Water Treatment Plant in Tonawanda draws water from the Niagara River and services municipalities in northern Erie County as well as some in Genesee and Wyoming Counties. These two plants serve more than 500,000 consumers in Western New York.

### How is my water treated?

Both ECWA treatment facilities use the conventional filtration method. First, raw water flows by gravity through a large intake tunnel to the raw water building. Pumps draw the water through traveling screens to prevent large objects such as driftwood and fish from entering the system. A chemical, polyaluminum chloride, is added to the water, which causes suspended particles in the water to clump together to form floc. Floc particles then settle to the bottom of large sedimentation basins. The water is filtered through layers of anthracite, sand, and gravel, to remove any remaining particles. Chlorine is added for disinfection to kill bacteria. Small amounts of fluoride are added to help prevent tooth decay. Caustic soda is added to stabilize the alkalinity of the water and prevent corrosion in home plumbing. Powdered activated carbon may be added in summer months to help remove unpleasant tastes and odors. Water is temporarily stored in clearwells or storage tanks before it is pumped to the public. High service pumps deliver the clean water through more than 3.574 miles of water mains to homes and businesses. The ECWA closely monitors its 38 pump stations and 38 water storage tanks to assist in the distribution process. On average, the ECWA delivered 68.1 million gallons a day in 2017 to serve more than 500.000 consumers in Western New York.

# Are there contaminants in our water? Do I need to take special precautions?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Safe Drinking Water Hotline at (800) 426-4791 or the Erie County Health Department at (716) 961-6800.

Although our drinking water met or exceeded all state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immunocompromised 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 at (800) 426-4791.

### How will I know if my water is not safe to drink?

In the unlikely event that water becomes unsafe to drink, the EPA mandates the ECWA notify its customers. Water is not safe to drink when testing reveals that contaminants in the water exceed federal or state limits for contaminant levels. If the water is not safe to drink, ECWA will alert the public through proper media channels and electronic communications that a "boil water order" has been issued, along with advice regarding measures that should be taken to protect your health.

### Does ECWA add fluoride to drinking water?

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water. ECWA's target fluoride level is 0.7 mg/L. To ensure that the fluoride supplement in your water provides optimal dental protection, the NYSDOH requires that the ECWA monitor fluoride levels on a daily basis. In 2017, fluoride was only added to the drinking water from January to March due to renovation of the facilities. During that period, monitoring showed fluoride levels in your water were in the optimal range 95% of the time. None of the monitoring results during fluoride addition showed fluoride at levels that approached the 2.2 mg/I maximum contaminant level (MCL).

### Why is my water sometimes cloudy or "milky"?

In the winter months the water becomes colder than your home's air temperature. When you pour cold water from the tap the water begins to warm to room temperature immediately. This rapid change in temperature causes the release of millions of tiny air bubbles which temporarily give the water a cloudy or "milky" appearance. After a few minutes the water reaches room temperature, the bubbles release their air and a cloudy glass of water will clear starting from the bottom to the top. This is normal. It does not affect the water's quality.

# How can I participate in decisions that affect drinking water quality?

Any member of the public may participate in decisions affecting their water quality. The ECWA's Board of Commissioners ultimately makes those decisions on behalf of our customers. Board meetings take place in the board meeting room, Erie County Water Authority, 295 Main Street, Room 350, Buffalo, New York 14203. Call (716) 849-8444 or visit www.ecwa.org for updated board meeting information.

# *In 2017, your tap water met all federal and state drinking water standards for quality and safety.*

## **ABOUT THE ERIE COUNTY WATER AUTHORITY**

The ECWA was created in 1949 by a special act of the New York State Legislature to ensure that the people and industry of Erie County would have a safe, plentiful supply of water for the future. Since 1953, the ECWA has produced and reliably delivered water of the highest quality to its customers at an affordable rate.

As an independent public-benefit corporation, ECWA is not an agency of New York State and is totally independent of Erie County government. ECWA operates as a financially self-sustaining public utility and pays all operating expenses from revenues generated by the sale of water to its 170,042 customers.

In 2017, the ECWA produced approximately 24.9 billion gallons of high-quality water for residential, commercial, and industrial use in 35 municipalities throughout Western New York. Some of this was unmetered water (34.1%) used for flushing water mains, fighting fires, training firefighters, filter backwashing, plant processes, equipment and hydrant testing and lost to leaks. Approximately 16.4 billion gallons were sold to our customers.

The ECWA owns and operates two water treatment plants, a nationally recognized Department of Water Quality, 38 pump stations, 38 water storage tanks and maintains 3,574 miles of water mains, 19,262 fire hydrants, 35,608 valves and numerous appurtenances.

The cost per thousand gallons of water for residential customers was \$3.17 in 2017. The average residential customer who used 18,750 gallons of water per quarter paid a total of \$316.35 in 2017, or about 87 cents per day, to be provided with a plentiful supply of safe, high quality drinking water.

## **IMPROVEMENTS TO YOUR WATER SYSTEM**

In 2017 the Authority invested more than \$20.25 million in system-wide infrastructure upgrades, including;

- \$6 million on water mains, hydrants, and service connection replacements in Clarence, Amherst, Cheektowaga, Blasdell and at the Sturgeon Point Water Plant.
- \$2.3 million on system-wide water meter replacements.
- Continued ongoing inspections of water storage tanks in our distribution system.
- Refurbishing and painting of the Eden 3, Pleasantview and East Church Street water storage tanks.
- \$4 million on rehabilitation and improvements at the Raw Water Pumping Station of the Sturgeon Point Water Treatment Plant
- \$3.6 million on upgrades to multiple chemical systems at both the Sturgeon Point and Van de Water Treatment Plants

The seal of the Partnership for Safewater as seen on this document indicates that we are part of a select group of water systems nationwide who have voluntarily committed themselves toward a proactive approach to strengthen the safety of drinking water for our customers above and beyond the current regulatory requirements. For additiona information on the Partnership for Safewater visit www.awwa.org/science/partnership.

### Dear Customer,

We are pleased to provide you with the ECWA's 2017 Annual Water Quality Report (AWQR). Included are details about where your water comes from, how your water is treated and tested, and how it compares to the various standards set by our regulatory agencies. This report fulfills the United States Environmental Protection Agency's (EPA) requirement to prepare and deliver a Consumer Confidence Report (CCR), as well as the New York State Department of Health's (NYSDOH) requirement to prepare and deliver an Annual Water Quality Report.

ECWA remains focused on our promise to deliver safe, high quality drinking water and professional service that our customers deserve. To ensure that we meet our commitments, we maintain a rigorous quality control program, constant monitoring and testing, and continue to invest substantial financial resources to improve our two treatment plants, distribution system infrastructure, our nationally recognized department of water quality and laboratory facilities.

ECWA continues to position itself to achieve our mission of providing a plentiful supply of safe, high quality, affordable drinking water through a reliable infrastructure to the more than 500,000 consumers that rely on us 24 hours a day, 365 days a year.

Thank you for allowing the Erie County Water Authority (ECWA) to supply you with the high quality drinking water that you deserve. We are committed to providing you with an excellent product, reliable service, and detailed information about the drinking water you consume and use every time you turn on your tap.

We appreciate you taking the time to learn about your water supply. We believe that well-informed customers are our best allies in supporting the improvements necessary to maintain high quality drinking water. You can learn more about the quality of your water and ECWA's mission at www.ecwa.org.

If you have comments or questions about your 2017 Annual Water Quality Report, please submit them by e-mail to questionscomments@ecwa.org.

Sincerely,

BOARD OF COMMISSIONERS Robert Anderson, Chairman Jerome D. Schad, Vice-Chairman Karl J. Simmeth, Jr, Treasurer

### **ECWA'S TEST RESULTS FOR 2017**

The ECWA's water system operated under "NO VARIANCE OR EXEMPTION" from any federal or state regulatory requirements. To comply with EPA mandated requirements, water quality data tables of detected regulated and unregulated contaminants are detailed in this report. The tables summarize test results for the past year or from the most recent year that tests were conducted in accordance with regulatory requirements. They also list the maximum contaminant levels (MCL). The EPA is responsible for establishing the MCL standards. Some tests are not required to be performed on an annual basis. For your convenience, important terms and abbreviations are defined throughout this document More information regarding all substances tested for, but not detected, can be obtained upon request from the ECWA Department of Water Quality by calling (716) 685-8580 or at www.ecwa.org.



## ERIE COUNTY WATER AUTHORITY 2017 Annual Water Quality Report

DETECTED CONTAMINANTS							
Metals, Inorganics, Physical Tests	Violation Yes/No	Sample Date (or date of highest detection)	MCL	MCL MCLG Level Detected		Sources in Drinking Water	
Barium	No	8/17	2 mg/liter	2 mg/liter	0.0191 - 0.0192 mg/liter; Average = 0.0192	Erosion of natural deposits; drilling and metal wastes	
Chloride	No	4/17	250 mg/liter	NE	16 - 29 mg/liter; Average = 21	Naturally occurring in source water	
Chlorine	No	10/17	MRDL = 4.0 mg/liter	NE	<0.2 - 2.0 mg/liter; Average = 0.8	Added for disinfection	
Copper	No	8/16	1300 ug/liter (AL)	1300 ug/liter (AL)	ND - 88 ug/liter, 90th percentile = 40 ug/liter, 0 of 52 above AL	Home plumbing corrosion; natural erosion	
Fluoride1	No	1/17	2.2 mg/liter	NE	<0.2 - 0.87 mg/liter; Average = 0.65	Added to water to prevent tooth decay	
Lead <sup>2</sup>	No	8/16	15 ug/liter (AL)	0 ug/liter (AL)	ND - 29 ug/liter; 90th percentile =7.8 ug/liter, 2 of 52 above AL	Home plumbing corrosion; natural erosion	
Nitrate	No	8/17	10 mg/liter	10 mg/liter	0.21 - 0.23 mg/liter; Average = 0.22	Runoff from fertilizer use	
pН	No	7/17	NR	NE	6.52 - 8.44; Average = 7.89 SU	Naturally occurring; adjusted for corrosion control	
Distribution Turbidity <sup>3</sup>	No	7/17	TT - 5 NTU	NE	0.02 - 1.01; Average = 0.22 NTU	Soil runoff	
Entry Point Turbidity <sup>3</sup>	No	2/17	TT - 0.3 NTU	NE	0.26 NTU highest detected; Lowest monthly % < 0.30 NTU = 100%	Soil runoff	

<sup>1</sup>Our system is one of the many water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centrol, the addition of fluoride is a very effective means of preventing cavities when present in drinking water with a property controlled level. To ensure that the fluoride supplement in your water provides orthinal drinking water with a controlled level. To ensure that the fluoride supplement in your water provides orthinal drinking water with a controlled level. To ensure that the fluoride supplement in your water provides orthinal drinking water with a controlled level. To make sure fluoride is maintained at a target value of 0,7 mg/l. During 2017, fluoride was only added to the drinking water from January to March due to renovation of the facilities. During that period monitoring showed fluoride levels in your water writhin 0,2 mg/l to the target level 95% of the time.

<sup>2</sup> Lead is not present in the drinking water that is treated and delivered to your home. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. The Eric County Water Authority is responsible for providing high quality drinking water has been sitting for several hours, you can minimize the potential for lead exposure by flushing ingour top 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. Information on lead in drinking water, testing methods, and steps you can take to minimize the power is available from the Safe Drinking Water Hotline (800-426-4791) or at www.epa.gov/ safewater/lead. The level presented represents the 90th percentile is a value on a scale of 100 that indicates a percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead or cooper values detected in the water system. In this case, 52 samples were collected in the water system and the 90th percentile value for lead was the eighth highest value (7.8 ug/1).

<sup>3</sup> Turbidity is a measure of the cloudiness of water. ECWA monitors turbidity because it is a good indicator of the effectiveness of our filtration system. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for bacterial growth. State regulations require that the delivered water turbidity must always be below 1 NTU in the combined filter effluent. The regulations also require that 95% of the turbidity samples collected from that point have measurements below 0.3 NTU. The maximum turbidity allowed in the distribution system is 5 NTU.

Organic Compounds	Violation (or	Sample Date or date of high- est detection)	MCL (ug/liter)	MCLG (ug/liter)	Level Detected (ug/liter)	Sources in Drinking Water
Total Trihalomethanes4,6	No	2/17	LRAA = 80	NE	11 - 85 ug/liter; LRAA = 71	By-product of water disinfection (chlorination)
Total Haloacetic Acids <sup>5,6</sup>	No	2/17	LRAA = 60	NE	7 - 47 ug/liter; LRAA = 46	By-product of water disinfection (chlorination)
Total Trihalomethanes <sup>4,6</sup>	No	2/17		NE		<b>7 F F F F F F F F F F</b>

<sup>4</sup> Trihalamenthanes are byproducts of the water disinfection process that occur when natural organic compounds react with the chlorine required to kill harmful organisms in the water. Some people who drink water containing trihalomenthanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. The level detected is the highest single location's running annual average (71 ug/L), <sup>4</sup> Holacetic acids are byproducts of the water disinfection process required to kill harmful organisms. Some people who drink water containing trihalocatic acids in excess of the MCL over many years may have an increased risk of getting cancer. The level detected represents the system's highest single location's running annual average (44 ug/L). <sup>6</sup> A monitoring and reporting violation was issued in quarter two of 2017 for failure to sample and report a result for the Eden 3 Tank. The tank and sample site were out of service for routine maintenance. The tank was placed back in service and

<sup>6</sup> A monitoring and reporting violation was issued in quarter two of 2017 for failure to sample and report a result for the Eden 3 Tank. The tank and sample site were out of service for routine maintenance. The tank was placed back in service and compliance was maintained during the remainder of the year.

Radiological Parameters	Violation Yes/No	Sample Date (or date of high- est detection)	MCL (pCi/liter)	MCLG (pCi/ liter)	Level Detected (pCi/liter)	Sources in Drinking Water
Radium 228	No	4/13	NE	NE	0.99 - 1.10 pCi/liter; Average = 1.05	Erosion of Natural Deposits
Combined Radium 226/228	No	4/13	5.0	0	1.15 - 1.25 pCi/liter; Average = 1.2	Erosion of Natural Deposits

Microbiological Parameters	Violation Yes/No	Sample Date (or date of high- est detection)	MCL	MCLG	Level Detected	Sources in Drinking Water
Total Coliform Bacteria	No <sup>7</sup>	None	5% of samples positive	0	0% = highest percentage of monthly positives (None Detected)	Naturally present in the environment

<sup>7</sup>A violation occurs when more than 5% of the total coliform samples collected per month are positive. No MCL violation occurred

Cryptosporidium and Giardia	Violation Yes/No	Sample Date (or date of highest	Number of Samples Testing Positive		Number of Samples
		detection)	Giardia	Cryptosporidium	Tested
Source Water	No	1/17	2	0	6

Cryptosporidium is a microscopic pathogen found in surface waters throughout the United States, as a result of animal waste runoff. It can cause abdominal infection, diarrhea, nausea, and abdominal cramps if ingested. Our fittration process effectively removes cryptosporidium. No Cryptosporidium was detected in any samples taken in 2017.

Giardia is a microbial pathogen present in varying concentrations in many surface waters. Giardia was detected in 2 source water samples taken in 2017. In our treatment process Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfecti

DETECTED UNREGULATED CONTAMINANTS							
Parameter	MCL	MCLG	Average Level Detected (mg/liter or as noted)	Range			
Calcium Hardness (as mg/l CaCO3)	NR	NE	92	75 - 99			
Conductivity (uS/cm)	NR	NE	296	273 - 392			
Alkalinity (as mg/l CaCO3)	NR	NE	91	85 - 94			

### We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the levels allowed by the state.

#### **New York State Department of Health Source Water Assessment**

The New York State Department of Health completed a draft Source Water Assessment of the supply's raw water sources under the state's Source Water Assessment Program (SWAP). The purpose of this program is to compile, organize, and evaluate information regarding possible and actual threats to the quality of public water supply (PWS) sources. It is important to note that source water assessment reports estimate the potential for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water. The Great Lakes' watershed is exceptionally large and too big for a detailed evaluation in the SWAP. General drinking water concerns for public water supplies, which use these sources include: storm generated turbidity, wastewater, toxic sediments, shipping related spills, and problems associated with exotic species (e.g. zebra mussels - intake clogging and taste and odor problems). The SWAP is based on the analysis of the contaminant inventory compiled for the drainage areas deemed most likely to impact drinking water quality at this public water supply's raw water intakes. Separate assessments were completed for the Lake Erie source and the Niagara River source. The assessment found a moderate susceptibility to contamination for the Lake Erie source. The amount of agricultural land in the assessment area results in elevated potential of disinfection byproduct precursors and pesticides contamination. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality based on their density in the assessment area. There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: landfills. The assessment found an elevated susceptibility to contamination for the Niagara River source. The amount of agricultural (and to a lesser extent residential) lands in the assessment area results in elevated potential for microbials disinfection byproduct precursors, and pesticides contamination. There is also a high density of sanitary wastewater discharges, which results in elevated susceptibility for all contaminant categories. Non-sanitary wastewater discharges may also contribute to contamination. There is also considerable contamination susceptibility associated with other discrete contaminant sources, and these facility types include: chemical bulk storage, inactive hazardous waste sites, landfills, Resource Conservation and Recovery Act facilities and Toxics Release Inventory facilities. If you have any questions about New York State's Source Water Assessment Program, please contact the Director of Environmental Health, Erie County Health Department at (716) 961-6800.

Results presented here are from 2017 analyses or from the most recent year that tests were conducted in accordance with regulatory requirements. Some tests are not required to be performed on an annual basis. Further normation can be obtained upon request from the ECWA Water Quality Laboratory at (716) 685-8580 or on the Internet at www.ecwa.org.

### **ABBREVIATIONS AND TERMS**

AL = Action Level: the concentration of a contaminant which, when exceeded, riggers treatment or other requirements which a water system must follow. LRAA = Locational Running Annual Average MCL= Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible. MCLG = Maximum Contaminant Level Goal: 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 MFL= Million Fibers per Liter (Asbestos)

mg/liter = milligrams per liter (parts per million) MRDL = Maximum Residual Disinfectant Level : 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. MRDLG = Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination. ND = Not Detected: absent or present at less than testing method detection limit. NE = Not Established

- NR = Not Established NR = Not Regulated
- NTU = Nephelometric Turbidity Units
- pCi/liter = Picocuries per liter
- SU = Standard Units (pH measurement)

 $\pi$  = Treatment Technique: a required process intended to reduce the level of a contaminant in drinking water. ug/liter (ug/L) = micrograms per liter = parts per

billion

 $\textbf{uS/cm}\xspace$  = Microsiemens per centimeter (a measure of conductivity)

Variances and Exemptions = State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

< = Denotes Less Than

≤ = Denotes Less Than or Equal To

### **TYPES OF CONTAMINANTS**

Contaminants that may be present in source water before we treat it include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and Herbicides, which may come from a variety of sources such as urban storm water runoff, agricultural and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive Contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Water, including bottled water, may reasonably be expected to contain at least small amounts of some contami nants. The presence of contaminants does not necessarily indicate that the water poses a health risk.

### COMPOUNDS TESTED FOR BUT NOT DETECTED

4-Androstene-3,17-dione	1,3,5-Trimethylbenzene	Di(2-ethylhexyl) adipate	Metribuzin
2-Chlorotoluene	Alachlor	Di(2-ethylhexyl) phthalate	Nickel
4-Chlorotoluene	Aldicarb	Dibromochloropropane	Oxamyl (Vydate)
17-beta-Estradiol	Aldicarb Sulfone	Dibromomethane	PCB 1016
17-alpha-Ethynyl estradiol	Aldicarb Sulfoxide	Dicamba	PCB 1221
2,4-D	Aldrin	Dichlorodifluoromethane	PCB 1232
1,3 Butadiene	Antimony	Dieldrin	PCB 1242
1,2-Dichlorobenzene	Arsenic	Dinoseb	PCB 1248
1,3-Dichlorobenzene	Asbestos	Diquat	PCB 1254
1,4-Dichlorobenzene	Atrazine	Endothall	PCB 1260
1,1-Dichloroethane	Benzene	Endrin	Pentachlorophenol
1,2-Dichloroethane	Benzo(a)pyrene	Equillin	Perfluorobutanesulfonic acid
1,1-Dichloroethylene	Beryllium	Estriol	Perfluoroheptanoic acid
cis-1,2-Dichloroethylene	Bromobenzene	Estrone	Perfluorohexanesulfonic acid
trans-1,2-Dichloroethylene	Bromochloromethane	Ethylbenzene	Perfluoronanoic acid
1,2-Dichloropropane	Bromomethane	Ethylene Dibromide (EDB)	Perfluorooctane sulfonate
1,3-Dichloropropane	Butachlor	Glyphosate	Perfluorooctanoic acid
2,2-Dichloropropane	n-Butylbenzene	Gross Alpha Particles	Pichloram
1,1-Dichloropropene	sec-Butylbenzene	Gross Beta Particles	Propachlor
cis-1,3-Dichloropropene	t-Butylbenzene	Heptachlor	n-Propylbenzene
trans-1,3-Dichloropropene	Cadmium	Heptachlor Epoxide	Radium 226
1,4-Dioxane	Carbaryl	Hexachlorobenzene	Selenium
3-Hydroxycarbofuran	Carbofuran	Hexachlorobutadiene	Simazine
2,3,7,8-TCDD (Dioxin)	Carbon Tetrachloride	Hexachlorocyclopentadiene	Styrene
2,4,5-TP (Silvex)	Chlordane	Isopropylbenzene	Tetrachloroethylene
1,1,1,2-Tetrachloroethane	Chlorobenzene	p-lsopropyltoluene	Thallium
1,1,2,2-Tetrachloroethane	Chlorodifluoromethane	Lindane	Toluene
1,2,3-Trichlorobenzene	Chloroethane	Mercury	Toxaphene
1,2,4-Trichlorobenzene	Chloromethane	Methomyl	Trichloroethylene
1,1,1-Trichloroethane	Chromium,Total	Methoxychlor	Trichlorofluoromethane
1,1,2-Trichloroethane	Cobalt	Methyl t-butyl ether (MTBE)	Vinyl Chloride
1,2,3-Trichloropropane	Cyanide	Methylene Chloride	Xylenes (o,m and p)
1,2,4-Trimethylbenzene	Dalapon	Metolachlor	

For a large-print copy of ECWA's 2017 Water Quality Report , please visit www.ecwa.org or email your request to questionscomments@ecwa.org