

***Annual Drinking Water Quality Report for 2015***  
***TOWN OF MURRAY***  
***3840 FANCHER ROAD***  
***HOLLEY, NY 14470***  
***WATER DISTRICTS #2, #4, #5, #11N, #12 and #15N***  
***Murray North, PWS #NY3622603***

## **INTRODUCTION**

To comply with State regulations, the Town of Murray, annually issues a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact Ed Morgan, Town of Murray Water Superintendent at 585-638-8507, x103. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled village board meetings. The meetings are held at the Town Hall on the second Tuesday of every month at 7:00 p.m.

## **WHERE DOES OUR WATER COME FROM?**

In general, 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 State and the EPA prescribe regulations which 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.

Our water source is surface water drawn from Lake Ontario, pumped, filtered and treated by the Monroe County Water Authority at the Shoremont Water Treatment Plant in the Town of Greece, prior to distribution. Water is purchased from Monroe County Water Authority and enters the town through a 12" transmission main on Route 104 and through Clarendon's system at the Clarendon/Murray town line at Hulberton Road and Fancher Road. During 2015, our system did not experience any restriction of our water source.

## **FACTS AND FIGURES**

Our water system serves approximately 1180 people through 338 service connections in six districts. The total water purchased from the Monroe County Water Authority in 2015 was 36,110,000 gallons.

## **ARE THERE CONTAMINANTS IN OUR DRINKING WATER?**

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Orleans County Health Department at 585-589-3278.

# MCWA - Water Quality Table

Detected Substances		2015 Results Except As Noted				
Supply (Source)				Shoremont & Webster WTPs (L. Ontario)		Meets EPA Standards
Substances	Units	MCLG	MCL	Range of detected values	Likely Source	
Barium	mg/L	2	2	0.018-0.021	Erosion of natural deposits	Yes
Chloride	mg/L	NA	250	25-28	Naturally occurring	Yes
Chromium	ug/L	100	100	ND	Naturally occurring	Yes
Dacthal (DCPA)	ug/L	NA	50	ND-0.13	Herbicide	Yes
Dalapon	ug/L	NA	50	ND	Herbicide	Yes
Fluoride	mg/L	NA	2.2	0.1-1.5	Natural and additive - promotes strong teeth	Yes
Manganese	ug/L	NA	300	ND	Naturally occurring	Yes
Nitrate	mg/L	10	10	0.26-0.36	Erosion of natural deposits	Yes
Sodium	mg/L	NA	NS	15-17	Naturally occurring	Yes
Sulfate	mg/L	NA	250	28-31	Naturally occurring	Yes
Treatment Requirements - 95% of samples each month must be less than 0.3 NTU. Range and lowest monthly percentage are listed. Turbidity is a measure of water clarity and is used to gauge filtration performance.						
Turbidity - Entry Point	NTUs	NA	TT	0.03-0.13 (100%)	Soil Runoff	Yes
Microbial - No more than 5% of monthly samples can be positive. The highest monthly % positive is listed.						
Coliform	% Positive	0	5%	1.1% Sept	Naturally occurring	Yes
Disinfectant and Disinfectant By-products (DBPs) - Chlorine has a MRDL (Maximum Residual Disinfectant Level) and MRDLG (MRDL Goal) rather than an MCL and MCLG (Average and range are listed). For the DBPs (THMs and Haloacetic acids) the highest individual location annual average and the range for all locations are listed.						
Chlorine Residual-Entry Pt	mg/L	4	4	1.0 (0.3-2.2)	Additive for control of microbes	Yes
Total THMs	ug/L	NA	80	64 (43-80)	Byproduct of water chlorination	Yes
Haloacetic Acids	ug/L	NA	60	18 (ND-24)	Byproduct of water chlorination	Yes
Lead and Copper - 90% of samples must be less than the Action Level (AL). The 90th Percentile, the number of samples exceeding the AL, and the range of results are listed.						
Copper (Customer Tap Samples)	mg/L	1.3	AL=1.3	0.094 (None) - 0.500	Corrosion of household plumbing	Yes
Lead (Customer Tap Samples)	ug/L	0	AL=15	12 (Four) - ND - 63	Corrosion of household plumbing	Yes
Unregulated Contaminant Monitoring (UCMR3) - Every few years the USEPA issues a new list of up to 30 unregulated contaminants for which public water systems must monitor. This provides baseline occurrence data that the EPA combines with toxicological research to make decisions about future drinking water regulations. MCWA completed monitoring for the third list (UCMR 3) in 2014. For more information on this process go to <a href="http://www.drinktap.org/home/water-information/water-quality/ucmr3.aspx">http://www.drinktap.org/home/water-information/water-quality/ucmr3.aspx</a> .						
Supply (Source)	Units	MCL	Shoremont WTP (L. Ontario)			
			At Entry Point to System	At End of System		
Chromium (total)	ug/L	100	ND-0.23 (2014)	ND-0.44 (2014)		
Molybdenum	ug/L	NS	1.2-1.3 (2014)	ND-1.3 (2014)		
Strontium	ug/L	NS	160-190 (2014)	130-210 (2014)		
Vanadium	ug/L	NS	ND-0.2 (2014)	0.24-0.50 (2014)		
Chromium-6	ug/L	100	0.074-0.085 (2014)	0.16-0.24 (2014)		
Chlorate	ug/L	NS	ND-130 (2014)	120-350 (2014)		
Chloromethane	ug/L	5 (NYS)	ND (2014)	ND (2014)		

\*There is no MCL set for sodium in water. However, EPA has recommended that water containing more than 20 mg/L of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/L of sodium should not be used for drinking by people on moderately restricted sodium diets.

\*\* 1 out of 12 samples October (Town of Richmond)

## Key Terms Used In Water Quality Table

**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 possible.

**MCLG** = Maximum Contaminant Level Goal, the level of a contaminant below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**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.

**pCi/L** = picoCuries per liter

**TT** = Treatment Technique, a required process intended to reduce the level of a contaminant in drinking water.

**AL** = Action Level, the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**ND** = Not Detected, absent or present at less than testing method detection level. All testing methods are EPA approved with detection limits much less than the MCL.

**NA** = Not applicable **NR** = Not Required **NS** = No standard

**mg/l** = milligram (1/1,000 of a gram) per liter = ppm = parts per million

**ug/l** = microgram (1/1,000,000 of a gram) per liter = ppb = parts per billion

**ng/L** = nanogram (1/1,000,000,000 of a gram) per liter = ppt = parts per trillion

**NTU** = Nephelometric Turbidity Unit, a measure of water clarity.

**Note:** The following contaminants were tested for but not found: 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,1-Dichloropropene, EDB, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloroethene (Trans), 1,2-Dichloropropane, 1,3-Butadiene, 1,3,5-Trimethylbenzene, 1,3-Dichlorobenzene, 1,3-Dichloropropane, 1,3-Dichloropropene(Cis), 1,3-Dichloropropene(Trans), 1,3-dinitrobenzene, 1,4-Dioxane, 1,4-Dichlorobenzene, 2,2-Dichloropropane, Dioxin, 2,4 D, 2,4-5 TP, 2-Chlorotoluene, 3-Hydroxycarbofuran, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, 4-Chlorotoluene, Acetochlor, Alachlor, Aldicarb Sulfone, Aldicarb Sulfoxide, Aldrin, Androstene, Antimony, Arsenic, Asbestos, Atrazine, Benzene, Benzo(a)pyrene, Beryllium, Bromobenzene, Bromochloromethane, Bromomethane, Butachlor, Cadmium, Carbaryl, Carbofuran, Carbon Tetrachloride, Chlordane, Chlorobenzene, Chloroethane, Chlorodifluoromethane, Chloromethane, cis-1,2-Dichloroethane, Cobalt, Cryptosporidium, Cyanide, DBCP, Di(2-Ethylhexyl) Adipate, Di(2-Ethylhexyl) Phthalate, Dibromomethane, Dicamba, Dichlorodifluoromethane, Dichloromethane, Dieldrin, Dinoset, Dioxin, Diquat, Endothal, Endrin, Equilin, Estradiol, Estriol, Estrone, Ethylbenzene, Ethynylestradiol, Giardia, Glyphosate, Gross Alpha, Gross Beta, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Hexachlorobutadiene, Hexachlorocyclopentadiene, Iron, Isopropylbenzene, Lindane, Mercury, Methomyl, Methoxychlor, Metolachlor, Metribuzin, MTBE, n-Butylbenzene, Nickel, Nitrite, n-Propylbenzene, Oxamyl, Paraquat, PCB's, Pentachlorophenol, Perchlorate, PFBS, PFHpA, PFHxS, PFNA, PFOA, PFOS, Pichloram, p-Isopropyltoluene, Propachlor, Radium 226/228, sec-Butylbenzene, Selenium, Silver, Simazine, Styrene, Surfactants, tert-Butylbenzene, Testosterone, Tetrachloroethene, Thallium, Toluene, Toxaphene, trans-1,2-Dichloroethane, Trichloroethene, Trichlorofluoromethane, Uranium, Vinyl

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds.

1 – Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. Our highest single turbidity measurement for the year was .09 NTU. State regulations require that turbidity must always be below 1 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. The levels recorded were within the acceptable range allowed and did not constitute a treatment technique violation.

2 – The level presented represents the 90th percentile of the sites tested. 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 copper values detected at your water system. In this case, samples were collected at your water system of the 90th percentile value the highest level detected was .320 mg/l. The action level for copper was not exceeded at any of the sites tested.

3 – The level presented represents the 90th percentile of the samples collected. The action level for lead was exceeded at two of the 10 sites tested.

4 – This level represents the annual quarterly average calculated from data collected.

### **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.

**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.

**Maximum Residual Disinfectant Level Goal (MRDLG):** 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.

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

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**Non-Detects (ND):** Laboratory analysis indicates that the constituent is not present.

**Nephelometric Turbidity Unit (NTU):** A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**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 to one trillion parts of liquid (parts per trillion - ppt).

**Picograms per liter (pg/l):** Corresponds to one part per of liquid to one quadrillion parts of liquid (parts per quadrillion – ppq).

**Picocuries per liter (pCi/L):** A measure of the radioactivity in water.

**Millirems per year (mrem/yr):** A measure of radiation absorbed by the body.

**Million Fibers per Liter (MFL):** A measure of the presence of asbestos fibers that are longer than 10 micrometers.

### **WHAT DOES THIS INFORMATION MEAN?**

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

## **IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?**

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During 2015, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

## **DO I NEED TO TAKE SPECIAL PRECAUTIONS?**

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).

## **INFORMATION ON FLUORIDE ADDITION**

MCWA is one of the many New York water utilities providing 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 at an optimal level of 0.7 mg/L. To ensure optimal dental protection, the State Department of Health requires that we monitor fluoride levels on a daily basis. In 2015, the fluoride levels in your water were within 0.1 mg/L of the CDC's recommended optimal level 99% of the time. The highest monitoring result was 1.4 mg/L, well below the 2.2 mg/L MCL for fluoride.

## **WHY SAVE WATER AND HOW TO AVOID WASTING IT?**

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both of these necessities of life;
- ◆ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- ◆ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- ◆ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- ◆ Turn off the tap when brushing your teeth.
- ◆ Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- ◆ Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.
- ◆ Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, and then check the meter after 15 minutes. If it moved, you have a leak.

## **CLOSING**

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office at 585-638-8507, ext. 103, with any questions.