



## Drinking Water Standards for Ohio Public Water Systems September 2018

### I. Primary Standards (Ohio Administrative Code Chapter 3745-81)

<b>Inorganic Chemicals</b>	<b>Maximum Contaminant Level (MCL, mg/L)</b>
Antimony	0.006
Arsenic	0.010
Asbestos	7 million fibers/liter (longer than 10 µm)
Barium	2
Beryllium	0.004
Cadmium	0.005
Chromium	0.1
Cyanide	0.2
Fluoride	4
Mercury	0.002
Nitrate (as N)	10
Nitrate-Nitrite (as N)	10
Nitrite (as N)	1
Selenium	0.05
Thallium	0.002
<b>Pesticides and Other Synthetic Organic Chemicals</b>	<b>MCL (mg/L)</b>
Alachlor	0.002
Atrazine	0.003
Benzo[a]pyrene	0.0002
Carbofuran	0.04
Chlordane	0.002
2,4-D	0.07
Dalapon	0.2
Dibromochloropropane (DBCP)	0.0002
Di(2-ethylhexyl)adipate	0.4
Di(2-ethylhexyl)phthalate	0.006
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Endrin	0.002
Ethylene dibromide (EDB)	0.00005
Glyphosate	0.7
Heptachlor	0.0004
Heptachlor epoxide	0.0002
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05

Lindane	0.0002
Methoxychlor	0.04
Oxamyl (Vydate)	0.2
Pentachlorophenol	0.001
Picloram	0.5
Polychlorinated Biphenyls (PCBs)	0.0005
Simazine	0.004
2,3,7,8-TCDD (Dioxin)	$3 \times 10^{-8}$
2,4,5-TP (Silvex)	0.05
Toxaphene	0.003
<b>Organic Disinfection Byproducts (DBPs)</b>	<b>MCL (mg/L)</b>
Total Trihalomethanes (TTHMs): the sum of the concentrations of Bromodichloromethane, Dibromochloromethane, Bromoform and Chloroform	0.080
Five Haloacetic Acids (HAA5): the sum of the concentrations of Monochloroacetic acid, Dichloroacetic acid, Trichloroacetic acid, Monobromoacetic acid and Dibromoacetic acid	0.060
<b>Inorganic Disinfection Byproducts (DBPs)</b>	<b>MCL (mg/L)</b>
Bromate	0.010
Chlorite	1.0
<b>Volatile Organic Chemicals (VOCs)</b>	<b>MCL (mg/L)</b>
Benzene	0.005
Carbon Tetrachloride	0.005
o-Dichlorobenzene	0.6
p-Dichlorobenzene	0.075
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
cis-1,2-Dichloroethylene	0.07
trans-1,2-Dichloroethylene	0.1
Dichloromethane	0.005
1,2-Dichloropropane	0.005
Ethylbenzene	0.7
Monochlorobenzene	0.1
Styrene	0.1
Tetrachloroethylene	0.005
Toluene	1
1,2,4-Trichlorobenzene	0.07
1,1,1-Trichloroethane	0.2
1,1,2-Trichloroethane	0.005
Trichloroethylene	0.005
Vinyl Chloride	0.002
Xylenes (total)	10

<b>Radiological</b>	<b>MCL (pCi/L)</b>
Beta particle and photon radioactivity	4 mrem/yr (based on calculated levels for 168 possible contaminants)
Combined Radium-226 and Radium-228	5
Gross Alpha particle activity	15
Uranium	30 µg/L
<b>Microbiological</b>	<b>MCL</b>
<i>E. coli</i>	A routine sample and a repeat sample are total coliform positive, and one is also <i>E. coli</i> positive; failure to collect all required repeat samples following an <i>E. coli</i> -positive routine
<b>Lead and Copper</b>	<b>Action Level</b>
Lead	Greater than 0.015 mg/L in more than 10% of tap samples in a compliance period
Copper	Greater than 1.3 mg/L in more than 10% of tap samples in a compliance period
<b>Algal Toxin</b>	<b>Action Level</b>
Microcystins	0.3 ug/L for people under the age of six, pregnant women, nursing mothers, those receiving dialysis treatment and those with pre-existing liver conditions 1.6 ug/L for all individuals

## II. Secondary Standards (Ohio Administrative Code Chapter 3745-82)

<b>Parameter</b>	<b>Secondary Maximum Contaminant Level (SMCL, mg/L)</b>
Aluminum	0.05 to 0.2
Chloride	250
Color	15 color units
Corrosivity	Non-corrosive
Fluoride	2.0
Foaming agents	0.5
Iron	0.3
Manganese	0.05
Odor	3 threshold odor number
pH	7.0-10.5
Silver	0.1
Sulfate	250
Total dissolved solids (TDS)	500
Zinc	5

### III. Disinfection Requirements (Ohio Administrative Code Chapters 3745-81 and 3745-83)

Disinfectant Residuals		Maximum Residual Disinfectant Level (mg/L)	
Total Chlorine (as Cl <sub>2</sub> ) in Distribution		4.0	
Chlorine Dioxide (as ClO <sub>2</sub> )		0.8	
Disinfectant Residuals		Minimum Required Free or Combined Chlorine*	
		Free Chlorine	Combined Chlorine
Community & Major Noncommunity, Distribution (3745-83-01)		at least 0.2 mg/L (unless superseded by the Director)	at least 1 mg/L (unless superseded by the Director)
Surface Water System (3745-81-72)**	Entry Point	not less than 0.2 mg/L for more than 4 consecutive hours	not less than 1 mg/L for more than 4 consecutive hours
	Distribution	not less than 0.2 mg/L in more than 5% of the samples for two consecutive months	not less than 1 mg/L in more than 5% of the samples for two consecutive months
Disinfection Efficacy		Treatment Technique Requirement	
Surface Water System / Ground Water (4-log)		Actual CT ≥ Required CT (Daily Verification)	

\* Only have to satisfy either the free or combined chlorine residual. However, monitoring for both is required.

\*\* Surface water systems that would also be classified as either a community or major noncommunity public water system also have to comply with minimum required free or combined chlorine residual levels in the distribution system, as cited above for rule 3745-83-01. Failure to meet the requirements in rule 3745-83-01 would be an operational violation while failure to meet the requirements in rule 3745-81-72 would be a treatment technique violation.)

### IV. Turbidity Requirements (Ohio Administrative Code rules 3745-81-73 to 3745-81-75)

Turbidity (Finished Water)	Treatment Technique
Conventional filtration or alternative filtration technology	Less than or equal to 0.3 NTU in at least 95% of samples per month and shall not exceed 1 NTU
Slow sand filtration	Less than or equal to 1 NTU in at least 95% of samples per month and shall not exceed 5 NTU
Turbidity (Individual Filter Effluent)	Actionable Requirements per Event*
Surface Water System Population ≥ 10,000	Individual Filter Events A, B, C, D
Surface Water System Population < 10,000	Individual Filter Events A, B, C

\* Events and Actionable Requirements are defined in Appendices A and B to the Surface Water Plant MOR Instructions (Form 5109), [https://epa.ohio.gov/portals/28/documents/reporting/MOR\\_SW5109\\_Instructions.pdf](https://epa.ohio.gov/portals/28/documents/reporting/MOR_SW5109_Instructions.pdf)

**Note:** To determine compliance with the drinking water standards listed in this document, please see rules associated with each section.

#### Unit Abbreviations

mg/L: milligrams per liter (parts per million, ppm) = 1,000 µg/L

NTU: nephelometric turbidity units

pCi/L: picocurie per liter

µg/L: micrograms per liter (parts per billion, ppb)

µm: micrometers

mrem: millirem