Drinking Water Standards for Ohio Public Water Systems
November 26, 2010

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

Inorganic Chemicals	Maximum Contaminant Level (MCL, mg/L)
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
Pesticides and Other Synthetic Organic Chemicals	**MCL (mg/L)**
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)	$3x10^{-8}$
2,4,5-TP (Silvex)	0.05
Toxaphene	0.003
Organic Disinfection Byproducts (DBPs)	**MCL (mg/L)**
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
Inorganic Disinfection Byproducts (DBPs)	**MCL (mg/L)**
Bromate	0.010
Chlorite	1.0
Volatile Organic Chemicals (VOCs)	**MCL (mg/L)**
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

Radiological		MCL (pCi/L)
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
Microbiological		**MCL**
Total coliform	Public water systems monitoring with at least 40 samples per month	No more than 5% total coliform positive samples per month *(monthly MCL)*
	Public water systems monitoring with fewer than 40 samples per month	No more than 1 total coliform positive per month *(monthly MCL)*
E. coli and fecal coliform		A routine sample and a repeat sample are total coliform positive, and one is also *E. coli* or fecal coliform positive *(acute MCL)*
Lead and Copper		**Action Level**
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

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

Parameter	Secondary Maximum Contaminant Level (SMCL, mg/L)
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_2) in Distribution		4.0	
Chlorine Dioxide (as ClO_2)		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), http://epa.ohio.gov/ddagw/reporting.aspx#Forms.

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