

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
Acenaphthene	83-32-9	I	38	19	15	II	570	890
Acenaphthylene	208-96-8	SV	240	120	13	II	850	1,800
Acetonitrile (Methyl cyanide)	75-05-8	II	210,000	100,000	12,000		ID	ID
Acetophenone	98-86-2		ID	ID	ID			
Acrylonitrile	107-13-1	II	1,300	650	78	I	0.53 ^c	3.0 ^c
Alachlor	15972-60-8					I	-- ^k	
Aluminum	7429-90-5					II	970	4,500
2-Amino-4,6-dinitrotoluene	35572-78-2	II	320	160	18			
4-Amino-2,6-dinitrotoluene	19406-51-0	II	200	98	11			
Ammonia	7664-41-7	I		Table 35-1				
Aniline	62-53-3	I,I,II	59	30	4.1			
Anthracene	120-12-7	II	0.35	0.18	0.020	II	590	630
Antimony	7440-36-0	II	1,800	900	190	I	-- ^k	780
Arsenic - Diss	7440-38-2	I	680	340	150		NA	
Arsenic - TR	7440-38-2	I	680	340	150	I	10 ^a	580
Asbestos	1332-21-4					I	7.0 ^a Mf/l	

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
Atrazine	1912-24-9					I	-- ^k	
Barium	7440-39-3	II	i	i	i	I	-- ^k	160,000
Benzene	71-43-2	II	1,400	700	160	I	5.0 ^{a,c}	160 ^c
Benzo(a)anthracene	56-55-3	SV	85	42	4.7	I	-- ^k	
Benzo(a)pyrene	50-32-8	SV	1.1	0.54	0.060	II	0.00002 ^c	0.00002 ^c
Benzo(b)fluoranthene	205-99-2	SV	47	23	2.6			
Benzo(g,h,i)perylene	191-24-2		ID	ID	ID			
Benzo(k)fluoranthene	207-08-9		ID	ID	ID			
Beryllium	7440-41-7	II	g	g	g	I	-- ^k	130 ^c
Biphenyl	92-52-4	II	51	26	6.5			
Bis(2-ethylhexyl)phthalate	117-81-7	II	2,100	1,100	8.4	I	-- ^k	32 ^c
Bismuth	7440-69-9		ID	ID	ID		ID	ID
Boron	7440-42-8	I,II	65,000	33,000	3,900	I	2,400	200,000
Bromate	7789-38-0					I	-- ^k	
Bromide	24959-67-9						ID	ID
Bromine	7726-95-6	II	4.8	2.4	0.26			

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
Bromochloromethane	74-97-5		ID	ID	ID			
Bromodichloromethane	75-27-4	SV	6,200	3,100	340	I	6.8 ^c	180 ^c
3-Bromofluorobenzene	1073-06-9		ID	ID	ID			
4-Bromofluorobenzene	460-00-4		ID	ID	ID			
Bromoform (Tribromomethane)	75-25-2	II	2,200	1,100	230	I	52 ^c	890 ^c
Bromomethane	74-83-9	See Methyl bromide						
1,3-Butadiene	106-99-0		ID	ID	ID			
2-Butanone (Methyl ethyl ketone)	78-93-3	II	400,000	200,000	22,000			
n-Butylbenzene	104-51-8		ID	ID	ID			
sec-Butylbenzene	135-98-8		ID	ID	ID			
tert-Butylbenzene	98-06-6		ID	ID	ID			
Butylbenzyl phthalate	85-68-7	II	260	130	23			
Cadmium - Diss	7440-43-9	I	Table 35-9				NA	
Cadmium - TR	7440-43-9	I	Table 35-9			I	-- ^k	730
Carbofuran	1563-66-2					I	-- ^k	
Carbon disulfide	75-15-0	II	260	130	15			

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
Carbon tetrachloride	56-23-5	II	4,400	2,200	240	I	-- ^k	19 ^c
Chloroamine	7080-50-4					I	-- ^k	
Chlordane	12789-03-6					I	0.00025 ^c	0.00025 ^c
Chlorides	--					I	250,000 ^a	ID
Chlorine (wwh,ewh, mwh,cwh) - TRes	7782-50-5	I	38	19	11	I	-- ^k	ID
Chlorine (lrw) - TRes	7782-50-5	I	38	19	NA	I	-- ^k	ID
Chlorine (ssh) - TRes	7782-50-5	I	b	b	b	I	-- ^k	ID
Chlorine dioxide	10049-04-4					I	-- ^k	
Chlorite	14998-27-7					I	-- ^k	
Chloroacetic acid ⁵	79-11-8					I	-- ^k	
Chlorobenzene	108-90-7	II	850	420	47	I	100 ^a	800
Chlorodibromomethane	124-48-1	See Dibromochloromethane						
Chlorodibromopropane	96-12-8	See 1,2-Dibromo-3-chloropropane						
Chloroform (Trichloromethane)	67-66-3	II	2,600	1,300	140	I	56 ^c	1,700 ^c
Chloromethane	74-87-3	See Methyl chloride						

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
2-Chlorophenol	95-57-8	II	580	290	32	I,II	0.1 ^f	150
Chromium - Diss	1606-58-31	I	Table 35-9				NA	
Chromium - TR	1606-58-31	I	Table 35-9			I	-- ^k	14,000
Chromium VI - Diss	18540-29-9	I	31	16	11	I	140	14,000
Chrysene	218-01-9	SV	85	42	4.7			
Cobalt	7440-48-4	II	440	220	24		ID	ID
Copper - Diss	7440-50-8	I	Table 35-9				NA	
Copper - TR	7440-50-8	I	Table 35-9			I	790	64,000
Cyanide - amenable to chlorination	57-12-5	See Cyanide - free						
Cyanide - free	57-12-5	I	44	22	5.2	I	4.0	400
Cyanides	--					I	4.0	400
Dalapon	75-99-0					I	-- ^k	
4,4'-DDT ¹	50-29-3					I	0.00015 ^c	0.00015 ^c
Dibenzo (a,h)anthracene	53-70-3		ID	ID	ID			
Dibenzofuran	132-64-9	II	71	36	4.0			
Dibromochloromethane	124-48-1	SV	5,800	2,900	320	I	6.8 ^c	150 ^c

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
1,2-Dibromo-3-chloropropane	96-12-8		ID	ID	ID	I	-- ^k	
1,2-Dibromoethane	106-93-4	See Ethylene dibromide						
Di-n-butyl phthalate	84-74-2					II	31	31
Dichloroacetic acid ⁵	79-43-6					I	-- ^k	
1,2-Dichlorobenzene	95-50-1	II	260	130	23	I	600 ^a	11,000
1,3-Dichlorobenzene	541-73-1	II	160	79	22	II	5,200	9,300
1,4-Dichlorobenzene	106-46-7	II	110	57	9.4	I	75 ^a	240 ^c
Dichlorobromomethane	75-27-4	See Bromodichloromethane						
Dichlorodifluoromethane	75-71-8		ID	ID	ID		ID	ID
1,1-Dichloroethane	75-34-3	SV	7,300	3,700	410	I	1,500	62,000
1,2-Dichloroethane	107-06-2	II	19,000	9,600	2,000	I	5.0 ^{a,c}	230 ^c
1,1-Dichloroethylene	75-35-4	II	3,800	1,900	210	I	7.0 ^a	15 ^c
1,2-Dichloroethylene ²	156-59-2	II	18,000	8,800	970			
cis-1,2-Dichloroethylene	156-59-2		See 1,2-Dichloroethylene			I	-- ^k	36,000
trans-1,2-Dichloroethylene	156-60-5		See 1,2-Dichloroethylene			I	100 ^a	25,000
Dichloromethane	75-09-2	See Methylene chloride						

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
2,4-Dichlorophenol	120-83-2	II	210	110	11	I	0.3 ^f	320
2,4-D (2,4-Dichlorophenoxy -acetic acid)	94-75-7					I	70 ^a	
1,2-Dichloropropane	78-87-5	II	6,500	3,300	520	I	5.0 ^{a,c}	290 ^c
1,3-Dichloropropene	542-75-6	II	30	15	1.7			
Dieldrin	60-57-1	I	0.47	0.24	0.056	I	0.0000065 ^c	0.0000065 ^c
Di(2-ethylhexyl)adipate	103-23-1					I	-- ^k	
Diethyl phthalate	84-66-2	II	2,000	980	220		ID	ID
Difluorodichloromethane	75-71-8	See Dichlorodifluoromethane						
2,4-Dimethylphenol	105-67-9	II	280	140	15	I	100	3,000
Dimethyl phthalate	131-11-3	II	6,400	3,200	1,100			
3,5-Dinitroaniline	618-87-1	II	430	210	70			
1,3-Dinitrobenzene	99-65-0	II	210	100	22			
2,4-Dinitrophenol	51-28-5					I	10	300
2,3-Dinitrotoluene	602-01-07	II	41	21	2.3			
2,4-Dinitrotoluene	121-14-2	II	790	390	44			
2,5-Dinitrotoluene	619-15-8	II	100	50	5.6			

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
2,6-Dinitrotoluene	606-20-2	II	1,500	730	81			
3,5-Dinitrotoluene	618-85-9	II	1,700	860	95			
Dinoseb	88-85-7					I	-- ^k	
1,4-Dioxane	123-91-1		ID	ID	ID	I	32 ^c	2,500 ^c
Diquat	85-00-72, 764-72-9					I	-- ^k	
Dissolved oxygen	--	I		Table 35-1				
Dissolved solids	--	I	ID	ID	1,500,000 ^d	I	750,000 ^{a,e} max. 500,000 ^{a,e} ave.	ID
Endothall	145-73-3					I	-- ^k	
Endrin ⁶	72-20-8	I	0.17	0.086	0.036	I	-- ^k	
Ethylbenzene	100-41-4	II	1,100	550	61	I	-- ^k	8,900
Ethylene dibromide (EDB) (1,2-Dibromoethane)	106-93-4		ID	ID	ID	I	-- ^k	
Ethylene glycol	107-21-1	II	2,600,000	1,300,000	140,000	II	56,000	4,500,000
Fluoranthene	206-44-0	II	7.4	3.7	0.80	II	9.4	9.5
Fluorene	86-73-7	I,II	220	110	19	II	250	320

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
Fluoride	16984-48-8					I	-- ^k	ID
Fluorobenzene	462-06-6		ID	ID	ID			
2-Fluorobiphenyl	321-60-8		ID	ID	ID			
2-Fluorophenol	367-12-4		ID	ID	ID			
Formaldehyde	50-00-0						ID	ID
Glyphosate	1071-83-6					I	-- ^k	
Halomethanes	--	See criteria for individual chemicals						
Heptachlor	76-44-8					I	-- ^k	
Heptachlor epoxide	1024-57-3					I	-- ^k	
Hexachlorobenzene	118-74-1					I	0.00045 ^c	0.00045 ^c
Hexachlorobutadiene	87-68-3					II	0.22 ^c	0.24 ^c
alpha- Hexachlorocyclohexane	319-84-6					I	0.0048 ^c	0.0053 ^c
beta- Hexachlorocyclohexane	319-85-7					II	0.013 ^c	0.014 ^c
gamma-Hexachloro-cyclohexane (Lindane)	58-89-9	I,I,II	1.9	0.95	0.057	I	0.20 ^a	0.50
Hexachlorocyclohexane (technical grade)	608-73-1					I	0.013 ^c	0.014 ^c

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
Hexachlorocyclopentadiene	77-47-4					I	-- ^k	
Hexachloroethane	67-72-1					I	1.0 ^c	1.0 ^c
HMX (Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine)	2691-41-0	II	2,500	1,200	220			
Indeno(1,2,3-c,d)pyrene	193-39-5		ID	ID	ID			
Iron - Soluble	7439-89-6					I	300 ^a	
Isophorone	78-59-1	II	15,000	7,500	920		ID	ID
Isopropylbenzene	98-82-8	II	86	43	4.8	I	1,700	3,800
4-Isopropyltoluene	99-87-6	II	300	150	16			
Lead - Diss	7439-92-1	I	Table 35-9				NA	
Lead - TR	7439-92-1	I	Table 35-9				ID	ID
Lindane	58-89-9	See gamma-Hexachlorocyclohexane						
Magnesium	7439-95-4						ID	ID
Manganese	7439-96-5					I	50	61,000
MBAS (foaming agents)	--	I		500 ^f				
Mercury - Diss	7439-97-6	I	2.9	1.4	0.77		NA	
Mercury ¹ - TR	7439-97-6	I	3.4	1.7	0.91	I	0.0031	0.0031

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
Methoxychlor	72-43-5					I	-- ^k	
Methyl bromide (Bromomethane)	74-83-9	II	75	38	16	I	39	2,600
Methyl chloride (Chloromethane)	74-87-3					II	110 ^c	7,300 ^c
Methyl cyanide	75-05-8	See Acetonitrile						
Methyl ethyl ketone	78-93-3	See 2-Butanone						
4-Methyl-2-pentanone	108-10-1		ID	ID	ID			
Methylene chloride (Dichloromethane)	75-09-2	II	22,000	11,000	1,900	I	5.0 ^{a,c}	2,600 ^c
2-Methylphenol	95-48-7	II	1,200	600	67			
3-Methylphenol	108-39-4	II	1,100	560	62			
4-Methylphenol	106-44-5	II	960	480	53			
Methyl tert-butyl ether	1634-04-4	II	13,000	6,500	730			
Mirex	2385-85-5					I	0.000074 ^c	0.000074 ^c
Molybdenum	7439-98-7	II	370,000	190,000	20,000	I	120	10,000
Naphthalene	91-20-3	II	340	170	21	I	540	1,200
Nickel - Diss	7440-02-0	I	Table 35-9				NA	
Nickel - TR	7440-02-0	I	Table 35-9			I	470	43,000

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
Nitrate-N + Nitrite-N	14797-55-8, 14797-65-0					I	10,000 ^a	ID
Nitrite-N	14797-65-0					II	-- ^k	ID
Nitrobenzene	98-95-3	II	4,000	2,000	380			
Nitrocellulose	9004-70-0		ID	ID	ID			
Nitroglycerine	55-63-0	II	320	160	18			
Nitroguanidine	556-88-7		ID	ID	ID			
2-Nitrophenol	88-75-5	II	1,300	650	73			
2-Nitrotoluene	88-72-2	II	1,300	640	71			
3-Nitrotoluene	99-08-1	II	760	380	42			
4-Nitrotoluene	99-99-0	II	820	410	46			
Oil & grease	--	I		10,000 ^f				
Oxamyl (Vydate)	23135-22-0					I	-- ^k	
Parathion	56-38-2	I	0.13	0.065	0.013			
Pentachlorobenzene	608-93-5					I	0.18	0.19
Pentachlorophenol	87-86-5	I	Table 35-10			II	-- ^k	1.6 ^c
Peracetic acid	79-21-0	II	330	160				
Perchlorate	14797-73-0	I	40,000	20,000	10,000	I	20	3,600

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
pH	--	I			Table 35-1			
Phenanthrene	85-01-8	II	61	31	2.3			
Phenol (wwh,ewh,mwh)	108-95-2	I,I,II	9,400	4,700	400	I,II	1.0 ^f	2,400
Phenol (lrw)	108-95-2	I,I,II	9,400	4,700	NA	I,II	1.0 ^f	2,400
Phenol (cwh,ssh)	108-95-2	I,I,II	9,100	4,600	160	I,II	1.0 ^f	2,400
Phenolics	--	See criteria for individual chemicals						
Phosphate	14265-44-2	See Phosphorus						
Phosphorus	7723-14-0	I	Table 7-11	ID	ID	I	Table 7-11	ID
Picloram	1918-02-1					I	-- ^k	
Polychlorinated biphenyls (PCBs) ^l	1336-36-3					I	0.000026 ^c	0.000026 ^c
Polynuclear aromatic hydrocarbons (PAHs)	130498-29-2	See criteria for individual chemicals						
n-Propyl benzene	103-65-1		ID	ID	ID		ID	ID
Propylene glycol	57-55-6	II	1,300,000	640,000	71,000		ID	ID
Pyrene	129-00-0	II	83	42	4.6	I	15	15
RDX (Hexahydro-1,3,5-Trinitro-1,3,5-Triazine)	121-82-4	II	1,000	520	79			

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
SAS-310	101646-63-3, 101646-62-2, 142828-65-7	II	10	5.0	0.61			
Selenium - Diss	7782-49-2	I			4.6		NA	
Selenium - TR	7782-49-2	II	120	62	5.0	I	50 ^a	3,100
Silver - Diss	7440-22-4	I	h		ID		NA	
Silver (wwh,ewh,mwh)-TR	7440-22-4	I	h		1.3	I	130	11,000
Silver (lrw) - TR	7440-22-4	I	h		NA	I	130	11,000
Silver (ssh, cwh) - TR	7440-22-4	I	h		0.06	I	130	11,000
Silvex (2,4,5-TP, 2-[2,4,5-Trichlorophenoxy]propionic acid	93-72-1					I	50 ^a	
Simazine	122-34-9					I	-- ^k	
Strontium	7440-24-6	I,I,II	j	j	j	I	18,000	1,400,000
Styrene	100-42-5	II	570	290	32	I	-- ^k	
Sulfates	14808-79-8					I	250,000 ^a	ID
Sulfide	18496-25-8						ID	ID
Temperature	--	I		Table 35-1				

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) ^{1,3}	1746-01-6					I	0.000000050 ^c	0.000000 0086 ^c
1,1,1,2-Tetrachloroethane	630-20-6	II	1,500	770	85			
1,1,2,2-Tetrachloroethane	79-34-5	II	1,800	910	260	II	1.7 ^c	41 ^c
Tetrachloroethylene	127-18-4	II	850	430	53	I	5.0 ^{a,c}	1,800
Tetrahydrofuran	109-99-9	II	150,000	74,000	11,000			
Tetryl	479-45-8		ID	ID	ID			
Thallium	7440-28-0	II	160	79	17		ID	ID
Tin	7440-31-5	II	3,200	1,600	180		ID	ID
Titanium	7440-32-6		ID	ID	ID		ID	ID
Toluene	108-88-3	II	1,100	560	62	I	57	520
Toxaphene	8001-35-2					I	0.000068 ^c	0.000068 ^c
Tribromomethane	75-25-2	See Bromoform						
2,4,6-Tribromophenol	118-79-6	II	100	50	5.6			
Trichloroacetic acid ⁵	76-03-9					I	-- ^k	
1,2,4-Trichlorobenzene	120-82-1					I	-- ^k	
1,1,1-Trichloroethane	71-55-6	II	1,400	690	76	I	200 ^a	1,600,000

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).**

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

Chemical	CAS Number	Aquatic Life* (µg/l)				Human Health* (µg/l)		
		Tier	IMZM	OMZM	OMZA	Tier	Drink	Nondrink
1,1,2-Trichloroethane	79-00-5	II	6,600	3,300	740	II	5.0 ^{a,c}	170 ^c
Trichloroethylene	79-01-6	II	4,000	2,000	220	I	5.0 ^{a,c}	70 ^c
Trichloromethane	67-66-3	See Chloroform						
2,4,6-Trichlorophenol	88-06-2	II	79	39	4.9	I	27 ^c	190 ^c
1,2,4-Trimethylbenzene	95-63-6	II	280	140	15	SV	49	86
1,3,5-Trimethylbenzene	108-67-8	II	460	230	26	I	710	1,500
1,3,5-Trinitrobenzene	99-35-4	II	54	27	11			
2,4,6-Trinitrotoluene	118-96-7	II	230	120	13			
Urea	57-13-6	II	300,000	150,000	17,000		ID	ID
Vanadium	7440-62-2	II	300	150	44		ID	ID
Vinyl chloride	75-01-4	II	17,000	8,400	930	I	-- ^k	28 ^c
Xylenes ⁴	1330-20-7	II	480	240	27	I	-- ^k	83,000
Zinc - Diss	7440-66-6	I	Table 35-9				NA	
Zinc - TR	7440-66-6	I	Table 35-9			I	5,000	35,000
Zirconium	7440-67-7		ID	ID	ID			

* Some of the aquatic life criteria in this table are listed in OAC 3745-1-35; the other aquatic life criteria have been developed pursuant to OAC 3745-1-40. Some of the human health criteria in this table are listed in OAC 3745-1-33 and 3745-1-34; the

Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).
Table numbers within this table refer to Chapter 3745-1 of the OAC.
Ohio EPA, Division of Surface Water. 10/1/21

criteria based on protection against adverse aesthetic effects are listed in OAC 3745-1-37; the other human health criteria have been developed pursuant to OAC 3745-1-42.

Other water quality criteria:

Lake Erie temperature criteria are in OAC 3745-1-31. Those criteria supersede the criteria in this table, where applicable.

Wildlife criteria - Table 35-12.

Agricultural Water Supply criteria - Table 33-3

Recreational (fecal coliform, E. coli) criteria - Table 37-2

Biological (IBI, Miwb, ICI) criteria - Table 7-1

Legend:

All criteria and values are expressed as total unless specified otherwise.

Diss = dissolved; TR = total recoverable; TRes = total residual.

Blank space = Criterion not calculated; contact the Standards & Technical Support section.

ID = Insufficient data available to calculate criterion.

NA = Not applicable.

IMZM = Inside Mixing Zone Maximum.

OMZM = Outside Mixing Zone Maximum.

OMZA = Outside Mixing Zone Average.

Drink = Human health criterion applicable to Public Water Supply streams (2-route exposure).

Nondrink = Human health criterion - non Public Water Supply (1-route exposure).

Footnotes:

¹ See Table 33-12 for the applicable wildlife criterion.

² The Aquatic Life criteria for 1,2-dichloroethylene apply to the sum of cis-1,2-dichloroethylene and trans-1,2-dichloroethylene.

³ Regulation of the additive effects of chlorinated dibenzo dioxins and chlorinated dibenzo furans is explained in OAC 3745-2-07.

⁴ The Aquatic Life and Human Health criteria for xylenes apply to the sum of m-xylene, o-xylene and p-xylene.

⁵ The criterion for this chemical applies to the sum of chloroacetic acid, dichloroacetic acid and trichloroacetic acid.

Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/1/21

- ⁶ The criterion for this chemical apply to the sum of endrin and endrin aldehyde.
- ^a This criterion is the maximum contaminant level (MCL) developed under the “Safe Drinking Water Act”.
- ^b No chlorine is to be discharged.
- ^c This criterion is based on a carcinogenic endpoint.
- ^d Equivalent 25EC specific conductance value is 2400 micromhos/cm.
- ^e Equivalent 25EC specific conductance values are 1200 micromhos/cm as a maximum and 800 micromhos/cm as a thirty-day average.
- ^f This criterion is based on protection against adverse aesthetic effects.

^g

Beryllium	Form	Units	Equation	Criteria			
				100	200	300	400
IMZM	TR	µg/l	$e^{(1.609 [\ln H] - 2.181)}$	190	570	1100	1700
OMZM	TR	µg/l	$e^{(1.609 [\ln H] - 2.874)}$	93	280	540	870
OMZA	TR	µg/l	$e^{(1.609 [\ln H] - 5.017)}$	11	33	64	100

^h

Silver	Form	Units	Equation	Criteria			
				100	200	300	400
IMZM	Diss	µg/l	$e^{(1.720 [\ln H] - 6.922)}$	2.7	8.9	18	29
OMZM	Diss	µg/l	$e^{(1.720 [\ln H] - 7.615)}$	1.4	4.5	9.0	15
IMZM	TR	µg/l	$e^{(1.720 [\ln H] - 6.759)}$	3.2	11	21	35
OMZM	TR	µg/l	$e^{(1.720 [\ln H] - 7.452)}$	1.6	5.3	11	17

**Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)
contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).
Table numbers within this table refer to Chapter 3745-1 of the OAC.
Ohio EPA, Division of Surface Water. 10/1/21**

i

Barium	Form	Units	Equation	Criteria					
				100	150	200	250	300	350*
IMZM	TR	mg/l	$e^{(0.8713 [\ln H] - 2.310)}$	5.5	7.8	10	12	14	16*
OMZM	TR	mg/l	$e^{(0.8713 [\ln H] - 3.003)}$	2.7	3.9	5.0	6.1	7.1	8.2*
OMZA	TR	mg/l	$e^{(0.8713 [\ln H] - 4.458)}$	0.64	0.91	1.2	1.4	1.7	1.9*

*Barium criteria are capped at a water hardness of 350 mg/l

j

Strontium	Form	Units	Equation	Criteria					
				100	150	200	250	300	350*
IMZM	TR	mg/l	$e^{(1.299 [\ln H] - 1.279)}$	110	190	270	360	460	560*
OMZM	TR	mg/l	$e^{(1.299 [\ln H] - 1.994)}$	54	92	130	180	230	280*
OMZA	TR	mg/l	$e^{(1.299 [\ln H] - 2.945)}$	21	35	52	69	87	110*

*Strontium criteria are capped at a water hardness of 350 mg/l

k

US EPA has determined that the Maximum Contaminant Levels listed in OAC 3745-1-33 for the Lake Erie Basin are inconsistent with 40 CFR Part 132.4 because they were not derived in accordance with methodologies in Appendix C of 40 CFR Part 132.