Surface Water Standards Table

Technical Memorandum 18.02

February 2019

Alaska Department of Environmental Conservation
Division of Environmental Health
Solid Waste Program

Surface water monitoring results should be compared to the standards in the table below. The standards are based on the following hierarchy:

EPA Primary Drinking Water MCLs (40 CFR 141) as reference in 18 AAC 70.

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Alaska Pollutant Discharge Elimination System (APDES) Multisector General Permit for Storm Water Discharges Associated with Industrial Activity (MSGP), Sector L - Landfills, Land Application Site, and Open Dumps.

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National Secondary Drinking Water Regulation standards under 40 CFR 143.

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ADEC 18 AAC 75.345, Table C groundwater cleanup levels

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EPA Lifetime Health Advisory Levels

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ADEC 18 AAC 70, Water Quality Standards

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Where no standard exists, a site-specific standard will be developed by the facility in consultation with ADEC if the constituent is detected in surface water.

The standards contained in this table are effective July 9, 2018. The standards will be updated as needed.

CAS RN	CONSTITUENT	STANDARD	UNIT	SOURCE
67-64-1	Acetone	14,000	µg/L	D
107-13-1	Acrylonitrile	6	µg/L	A
7664-41-7	Ammonia Nitrogen	10,000	µg/L	B
7440-36-0	Antimony	6	µg/L	A
7440-38-2	Arsenic	10	µg/L	A
7440-39-3	Barium	2000	µg/L	A
71-43-2	Benzene	5	µg/L	A
7440-4107	Beryllium	4	µg/L	A
	Biochemical oxygen demand	140,000	µg/L	B
74-97-5	Bromochloromethane	90	µg/L	E
75-27-4	Bromodichloromethane	1.3	µg/L	D
75-25-2	Bromoform; Tribromomethane	33	µg/L	D
7440-43-9	Cadmium	5	µg/L	A

CAS RN	CONSTITUENT	STANDARD	UNIT	SOURCE
7440-70-2	Calcium	****		
75-15-0	Carbon disulfide	810	µg/L	D
56-23-5	Carbon tetrachloride	5	µg/L	A
	Chemical oxygen demand			G
	Chlorides	250,000	µg/L	C
108-90-7	Chlorobenzene	100	µg/L	A
75-00-3	Chloroethane; Ethyl chloride	21,000	µg/L	D
67-66-3	Chloroform; Trichloromethane	2.2	µg/L	D
Total	Chromium	100	µg/L	A
7440-48-4	Cobalt			G
7440-50-8	Copper	1,300	µg/L	A
124-48-1	Dibromochloromethane; Chlorodibromomethane	8.7	µg/L	D
75-34-3	1,1-Dichlorethane; Ethylidene chloride	28	µg/L	D
75-35-4	1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride	7	µg/L	A
156-59-2	cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	70	µg/L	A
156-60-5	trans-1, 2-Dichloroethylene; trans-1,2-Dichloroethene	360	µg/L	D
96-12-8	1,2-Dibromo-3-chloropropane; DBCP	0.2	µg/L	A
106-93-4	1,2-Dibromoethane; Ethylene dibromide; EDB	0.075	µg/L	D
95-50-1	o-Dichlorobenzene; 1,2-Dichlorobenzene	600	µg/L	A
106-46-7	p-Dichlorobenzene; 1,4-Dichlorobenzene	75	µg/L	A
107-06-2	1,2-Dichloroethane; Ethylene dichloride	5	µg/L	A
110-57-6	trans-1, 4-Dichloro-2-butene			G
78-87-5	1,2-Dichloropropane; Propylene dichloride	5	µg/L	A
10061-01-5	cis-1,3-Dichloropropene	4.7*	µg/L	D
10061-02-6	trans-1,3-Dichloropropene	4.7*	µg/L	D
	Diesel-Range Organics (DRO)	1,500	µg/L	D
	Dissolved oxygen	> 4,000		F
100-41-4	Ethylbenzene	700	µg/L	A
	Gasoline-Range Organics (GRO)	2,200	µg/L	D
591-78-6	2-Hexanone; Methyl butyl ketone	38	µg/L	D
7439-89-6	Iron	1,000	µg/L	B
7439-92-1	Lead	15	µg/L	A
7439-95-4	Magnesium	****		
7439-96-5	Manganese	50	µg/L	C
7439-97-6	Mercury	2	µg/L	A
74-83-9	Methyl bromide; Bromomethane	7.5	µg/L	D
74-87-3	Methyl chloride; Chloromethane	190	µg/L	D
78-93-3	Methyl ethyl ketone; MEK; 2-Butanone	5,600	µg/L	D
74-88-4	Methyl iodide; Idomethane			G
108-10-1	4-Methyl-2-pentanone; Methyl isobutyl ketone	6,300	µg/L	D
74-95-3	Methylene bromide; Dibromomethane	8.3	µg/L	D
75-09-2	Methylene chloride; Dichloromethane	110	µg/L	D
7440-02-0	Nickel	390	µg/L	D
	Nitrate Nitrogen	10,000	µg/L	A
	pH	6.5-8.5		B

CAS RN	CONSTITUENT	STANDARD	UNIT	SOURCE
7440-09-07	Potassium			G
	Redox potential at collection			G
	Residual-Range Organics (RRO)	1,100	µg/L	D
7782-49-2	Selenium	50	µg/L	A
7440-22-4	Silver	100	µg/L	C
	Sodium	****		
	Sodium Absorption Ratio (SAR)	2.5**		A
	Sulfate	250,000	µg/L	C
100-42-5	Styrene	100	µg/L	A
	TAH (Sum of BTEX analytical results)	10	µg/L	F
	TAqH (Sum of BTEX and PAH analytical results)	15	µg/L	F
	Temperature at collection			G
630-20-6	1,1,1,2-Tetrachloroethane	5.7	µg/L	D
79-34-5	1,1,2,2-Tetrachloroethane	0.76	µg/L	D
127-18-4	Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	5	µg/L	A
7440-28-0	Thallium	2	µg/L	A
7440-31-5	Tin			G
108-88-3	Toluene	1000	µg/L	A
	Total kjeldahl nitrogen			G
	Total dissolved solids	500,000	µg/L	C
71-55-6	1,1,1-Trichloroethane; Methylchloroform	200	µg/L	A
79-00-5	1,1,2-Trichloroethane	5	µg/L	A
79-01-6	Trichloroethylene; Trichloroethene	5	µg/L	A
75-69-4	Trichlorofluoromethane; CFC-11	5,200	µg/L	D
96-18-4	1,2,3-Trichloropropane	0.0075	µg/L	D
	Turbidity	5***	NTU	F
7440-62-2	Vanadium	86	µg/L	D
108-05-4	Vinyl acetate	410	µg/L	D
75-01-4	Vinyl chloride	2	µg/L	A
1330-20-7	Xylenes	10,000	µg/L	A
7440-66-6	Zinc	200	µg/L	B

Notes:

* The total of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene may not exceed 4.7 µg/L.

** SAR= $\frac{[Na^+]}{\sqrt{0.5([Ca^{2+}]+[Mg^{2+}])}}$

*** May not exceed 5 nephelometric turbidity units (NTU) above natural conditions when the natural turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU.

**** No standard - used to calculate SAR

Acronyms and Abbreviations:

CAS RN = Chemical Abstract Service Registry Number
MCL = Maximum Contaminant Level
SAR = Sodium Absorption Ratio
µg/L = microgram per liter

Standard Source Key:

A = EPA Primary Drinking Water MCLs (40 CFR 141)
B = APDES MSGP, Sector L
C = EPA Drinking Water Secondary MCLs (40 CFR 143)
D = 18 AAC 75 Table C
E = EPA Lifetime Health Advisory Level
F = Water Quality Standards (18 AAC 70)
G = Where no standard exists, a site-specific standard will be developed by the facility in consultation with ADEC