

Appendix 2: NC Water Quality Standards Summary

Summary Table of Surface Water Standards

Disclaimer: This table is intended to provide summary information only. It does not substitute for any written regulation, nor is it a regulation itself.

May 1, 2007

The following standards, criteria, or toxic concentrations are adopted per 15A NCAC 2B. See last page for appropriate use information.

Pollutant	CAS #	Freshwater Aquatic Life	Saltwater Aquatic Life	Water Supply (WS) ¹	Human Health (HH) ²	Trout Waters (Tr)	High Quality Waters (HQW)	Swamp Waters (Sw)	Synonyms & Other Info	Carcinogen
		ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)			
Aldrin	309-00-2	0.002	0.003	0.05 ng/L	0.05 ng/L					y
Arsenic	7440-38-2	50	50	10	10					y
Barium	7440-39-3			1.0 mg/L						n
Bacterial Indicators	<i>see enterococcus and fecal coliform</i>									NA
Benzene	71-43-2			1.19	51					y
Beryllium	7440-41-7	6.5								n
Cadmium	7440-43-9	2 (N)	5 (N)			0.4 (N)				n
Carbon Tetrachloride	56-23-5			0.254	1.6				Benzenoform; Carbon Chloride	y
Chlordane	57-74-9	0.004	0.004	0.8 ng/L	0.8 ng/L					y
Chloride	16887-00-6	230 mg/L (AL)		250 mg/L						n
Chlorine (TRC)	7782-50-5	17								n
Chlorinated Benzenes				488						y
Chlorinated Phenols				1.0 (N)						NA
Chlorophyll -a, corrected		40(N)	40(N)			15(N)				NA
Chromium		50	20							NA
Copper	7440-50-8	7 (AL)	3 (AL)							n
Cyanide	57-12-5	5 (N)	1							n
D, 2,4-	94-75-7			100					2,4-Dichlorophenoxy acetic acid	n
DDT, 4,4'-	50-29-3	0.001	0.001	0.2 ng/L	0.2 ng/L				4,4'-Dichlorodiphenyltrichloroethane	y
Demeton	8065-48-3	0.1	0.1							n
Dieldrin	60-57-1	0.002	0.002	0.05 ng/L	0.05 ng/L					y
Dioxin (2,3,7,8-TCDD)	1746-01-6			0.000005 ng/L	0.000005 ng/L				2,3,7,8-Tetrachlorodibenzo-p-dioxin	y
Dissolved Gases		110% sat (N)	110% sat (N)							NA

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Pollutant	CAS #	Freshwater Aquatic Life	Saltwater Aquatic Life	Water Supply (WS) ¹	Human Health (HH) ²	Trout Waters (Tr)	High Quality Waters (HQW)	Swamp Waters (Sw)	Synonyms & Other Info	Carcinogen
		ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)			
Dissolved Oxygen		not less than 5.0 mg/L (N)	not less than 5.0 mg/L (N)			not less than 6.0 mg/L (N)	not less than 6.0 mg/L (E)	(N)		NA
Endosulfan	115-29-7	0.05	0.009						Same values apply to Endosulfan Sulfate, alpha-Endosulfan, and beta-Endosulfan	n
Endrin	72-20-8	0.002	0.002							n
Enterococcus					geomean of 35 organisms/100 mL (applicable to class SA, SB, and SC Saltwaters) (N)					NA
Fecal Coliform (MFTCC/100mL) ³					geomean of 200 organisms/100 mL in Class C Freshwaters (N); and a geomean of 14 organisms/100 mL in class SA Saltwaters (N)					NA
Fluoride		1.8 mg/L								NA
Guthion	86-50-0	0.01	0.01							NA
Hardness, Total				100 mg/L Calcium Carbonate						NA
Heptachlor	76-44-8	0.004	0.004	0.08 ng/L	0.08 ng/L					y
Hexachlorobutadiene	87-68-3			0.44	18				HCBD	y
Iron	7439-89-6	1.0 mg/L (AL)								n
Lead	7439-92-1	25 (N)	25 (N)							n
Lindane	58-89-9	0.01	0.004						gamma-BHC, g-HCH	c
Manganese	7439-96-5			200						n
MBAS ⁴				500 (N)					Methylene-blue-active substances (see note)	NA

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		ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)			
Mercury	7439-97-6	0.012	0.025							n
Methoxychlor	72-43-5	0.03	0.03							n
Mirex	2385-85-5	0.001	0.001							c
Nickel	7440-02-0	88 (N)	8.3 (N)	25						n
Nitrate (as N)	14797-55-8			10.0 mg/L					Total nitrogen may be regulated in NSW waters. See 2B .0200s for further info	n
Oil and Grease		(N)	(N)							NA
Parathion	56-38-2	0.013	0.178							n
PCB, total		0.001 (N)	0.001 (N)		0.064 ng/L (N)				polychlorinated biphenyls / (Total of all identified PCBs)	y
pH		6.0-9.0 (N)	6.8-8.5 (N)					(N)	Freshwater and Saltwater Aquatic Life Standards are listed as acceptable pH ranges	NA
Phenolic Compounds		(N)	(N)		(N)				(phenolic compounds: no fish flesh tainting)	NA
Polynuclear aromatic hydrocarbons (PAH's) ⁵				0.0028 Total PAH's	0.0311 Total PAH's					y
Radioactive Substances		(N)	(N)		(N)					NA
Salinity			(N)							NA
Selenium	7782-49-2	5	71							n
Sewage		(N)	(N)	(N)						NA
Silver	7440-22-4	0.06 (AL)	0.1 (AL)							n
Silvex	93-72-1			10					2,4,5-TP; 2,4,5-Trichlorophenoxypropionic Acid	n
Solids, settleable		(N)	(N)						also includes floating solids and sludge deposits	NA
Solids, total dissolved				500 mg/L						NA
Solids, total suspended		(N)				HQW=10 mg/L (E)	20 mg/L (E)			NA
Sulfates				250 mg/L						n
Temperature		(N)	(N)		(N)					NA
Tetrachloroethane, 1,1,2,2-	79-34-5			0.17	4				acetosol; acetylene tetrachloride	y
Tetrachloroethylene (PERC)	127-18-4			0.7	3.3				PERC; PCE; perchloroethylene	y

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		ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)	ug/l (unless noted)			
Toluene	108-88-3	11				0.36			methyl benzene; phenyl methane	n
Toxaphene	8001-35-2	0.2 ng/L	0.2 ng/L							y
Trialkyltin		0.07	0.007							n
Tributyltin (TBT)	56573-85-4	0.07	0.007							n
Trichloroethylene	79-01-6			2.5	30				TCE	y
Turbidity		50/25 NTU (N)	25 NTU (N)			10 NTU (N)				NA
Vinyl Chloride	75-01-4			0.025	2.4				chloroethylene	y
Zinc	7440-66-6	50 (AL)	86 (AL)							n

Footnotes, Codes, and Additional Information with Reference to Classifications and Standards

*To determine the appropriate standard, use the most stringent of all applicable columns. For Class C, use the most stringent of freshwater (or, if applicable, saltwater) column and the Human Health column.

* For a WS water, use the most stringent of Freshwater, WS & Human Health. Trout Waters & High Quality Waters likewise must adhere to the most stringent of all applicable standards

* All metal criteria are as total recoverable metals.

(AL) Action Level Standard - See 2B .0211 for additional information

(N) = Narrative standard See 2B .0211 and for WS: .0212, .0214, .0215, .0216 and .0218

(E) For effluent limits only. See 2B .0224

(NTU) Nephelometric Turbidity Units

(HQW) High Quality Waters - see 02B .0101 and .0201

(Sw) Swamp Waters - as defined by 02B .0101

(Tr) Trout Waters - as defined by 02B .0101 and 0301

1 WS standards are applicable to all Water Supply Classifications. WS standards are based on the consumption of fish and water. See 2B .0208 for equation.

2 Human Health Standards are based on the consumption of fish only unless dermal contact studies are available. See 2B .0208 for applicable equations.

3 MFTCC/100 mL = Membrane Filter Total Coliform Count per 100 mL of sample

4 MBAS: additional narrative language is located in 02B .0212, .0214, .0215, .0216, .0218

5 PAH=Applies to total PAHs present and includes the following: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene and indeno(1,2,3-cd)pyrene

Carcinogenicity Color Key:	
Known to cause cancer in humans (y)	Blue
Not known to cause cancer in humans (n)	Green
Possible human carcinogen (c)	Yellow
Carcinogenicity not assessed or Does Not Apply (NA)	No Color

Unit Conversions: 1.0 mg/L = 1000.0 ug/L = 1000000.0 ng/L

1.0 ng/L = 0.001 ug/L = 0.000001 mg/L