

1 15A NCAC 02B .0220 is proposed for amendment as follows:  
2

3 **15A NCAC 02B .0220 TIDAL SALT WATER QUALITY STANDARDS FOR CLASS SC WATERS**

4 ~~General.~~ The water quality standards for all tidal salt waters shall be the basic standards applicable to Class SC  
5 waters. Water quality standards for temperature and numerical water quality standards for the protection of human  
6 health applicable to all surface waters are in Rule .0208 of this Section. Additional and more stringent standards  
7 applicable to other specific tidal salt water classifications are specified in Rules .0221 and .0222 of this Section.  
8 ~~Action Levels, for purposes of National Pollutant Discharge Elimination System (NPDES) permitting, are specified~~  
9 ~~in Item (20) of this Rule.~~

**Commented [A1]:** Incorporated rule reference, no effect.

10 (1) ~~Best Usage of Waters: any usage except primary recreation or shellfishing for market purposes;~~  
11 ~~usages include aquatic life propagation and maintenance of biological integrity (including fishing,~~  
12 ~~fish and functioning PNAs), wildlife, and secondary recreation; Best Usage of Waters: aquatic life~~  
13 ~~propagation, survival, and maintenance of biological integrity (including fishing, fish and Primary~~  
14 ~~Nursery Areas (PNAs)); wildlife; secondary contact recreation as defined in Rule .0202 in this~~  
15 ~~Section; and any usage except primary contact recreation or shellfishing for market purposes. All~~  
16 ~~saltwaters shall be classified to protect these uses at a minimum.~~

**Commented [A2]:** Merging information from .0101 and .0301, no effect.

17 (2) ~~Conditions Related to Best Usage: the waters shall be suitable for aquatic life propagation and~~  
18 ~~maintenance of biological integrity, wildlife, and secondary recreation, all best uses specified in~~  
19 ~~this Rule.~~ Any source of water pollution that precludes any of these ~~uses, including their~~  
20 ~~functioning as PNAs, on either a short term or a long term basis~~ uses shall be considered to be  
21 violating a water quality standard;

**Commented [A3]:** Language moved into (1) above, no effect.

22 (3) Chlorophyll a (corrected): not greater than 40 ug/l in sounds, estuaries, and other waters subject to  
23 growths of macroscopic or microscopic vegetation. The Commission or its designee may prohibit  
24 or limit any discharge of waste into surface waters if, in the opinion of the Director, the surface  
25 waters experience or the discharge would result in growths of microscopic or macroscopic  
26 vegetation such that the standards established pursuant to this Rule would be violated or the  
27 intended best usage of the waters would be impaired;

**Commented [A4]:** Delete unnecessary language, no effect

28 (4) Cyanide: 1 ug/l;

29 (5) Dissolved oxygen: not less than 5.0 mg/l, except that swamp waters, poorly flushed tidally  
30 influenced streams or embayments, or estuarine bottom waters may have lower values if caused by  
31 natural conditions;

32 (6) ~~Enterococcus, including Enterococcus faecalis, Enterococcus faecium, Enterococcus avium and~~  
33 ~~Enterococcus gallinarum; including Enterococcus faecalis, Enterococcus faecium, Enterococcus~~  
34 ~~avium and Enterococcus gallinarum;~~ not to exceed a geometric mean of 35 enterococci per 100  
35 ml based upon a minimum of five samples within any consecutive 30 days. For purposes of beach  
36 monitoring and notification, "Coastal Recreational Waters Monitoring, Evaluation and  
37 Notification" regulations (15A NCAC 18A .3400), available free of charge at:

**Commented [A5]:** Italicized genus and species names, no effect.

**Commented [A6]:** They made me take these out – but, we can try again. They don't like italics

1 http://www.ncoah.com/, are hereby incorporated by reference including any subsequent  
2 ~~amendments; amendments and editions;~~

3 (7) Floating solids, settleable solids, or sludge deposits: only such amounts attributable to sewage,  
4 industrial wastes, or other wastes, as shall not make the waters unsafe or unsuitable for aquatic life  
5 and wildlife, or impair the waters for any designated uses;

6 (8) Gases, total dissolved: not greater than 110 percent of saturation;

7 (9) Metals:

8 (a) With the exception of mercury and selenium, tidal salt water quality standards for metals  
9 shall be based upon measurement of the dissolved fraction of the metals. Mercury and  
10 selenium shall be based upon measurement of the total recoverable metal;

11 (b) Compliance with acute instream metals standards shall only be evaluated using an  
12 average of two or more samples collected within one hour. Compliance with chronic  
13 instream metals standards shall only be evaluated using averages of a minimum of four  
14 samples taken on consecutive days, or as a 96-hour average;

15 ~~(c) Metals criteria shall be used for proactive environmental management. An instream  
16 exceedence of the numeric criterion for metals shall not be considered to have caused an  
17 adverse impact to the aquatic community without biological confirmation and a  
18 comparison of all available monitoring data and applicable water quality standards. This  
19 weight of evidence evaluation shall take into account data quality and the overall  
20 confidence in how representative the sampling is of conditions in the waterbody segment  
21 before an assessment of aquatic life use attainment, or non-attainment, is made by the  
22 Division. Recognizing the synergistic and antagonistic complexities of other water  
23 quality variables on the actual toxicity of metals, with the exception of mercury and  
24 selenium, biological monitoring shall be used to validate, by direct measurement, whether  
25 or not the aquatic life use is supported.~~

26 ~~(c)~~ Acute and chronic tidal salt water quality metals standards are as follows:

- 27 (i) Arsenic, acute: WER· 69 ug/l;
- 28 (ii) Arsenic, chronic: WER· 36 ug/l;
- 29 (iii) Cadmium, acute: WER· 40 ug/l;
- 30 (iv) Cadmium, chronic: WER· 8.8 ug/l;
- 31 (v) Chromium VI, acute: WER· 1100 ug/l;
- 32 (vi) Chromium VI, chronic: WER· 50 ug/l;
- 33 (vii) Copper, acute: WER· 4.8 ug/l;
- 34 (viii) Copper, chronic: WER· 3.1 ug/l;
- 35 (ix) Lead, acute: WER· 210 ug/l;
- 36 (x) Lead, chronic: WER· 8.1 ug/l;
- 37 (xi) Mercury, total recoverable, chronic: 0.025 ug/l;

**Commented [A7]:** "Biological confirmation" disapproved by US EPA decision document on 2007-2015 Triennial Review (rec'd by DWR April 19, 2016)

- (xii) Nickel, acute: WER· 74 ug/l;
- (xiii) Nickel, chronic: WER· 8.2 ug/l;
- (xiv) Selenium, total recoverable, chronic: 71 ug/l;
- (xv) Silver, acute: WER· 1.9 ug/l;
- (xvi) Silver, chronic: WER· 0.1 ug/l;
- (xvii) Zinc, acute: WER· 90 ug/l; and
- (xviii) Zinc, chronic: WER· 81 ug/l;

With the exception of mercury and selenium, acute and chronic tidal saltwater quality aquatic life standards for metals listed above apply to the dissolved form of the metal and apply as a function of the pollutant's water effect ratio (WER). A WER expresses the difference between the measures of the toxicity of a substance in laboratory waters and the toxicity in site water. The WER shall be assigned a value equal to one unless any person demonstrates to the Division's satisfaction in a permit proceeding that another value is developed in accordance with the "Water Quality Standards Handbook: Second Edition" published by the US Environmental Protection Agency (EPA-823-B-12-002), free of charge, at <http://water.epa.gov/scitech/swguidance/standards/handbook/>, hereby incorporated by reference including any subsequent ~~amendments~~, amendments and editions. Alternative site-specific standards may also be developed when any person submits values that demonstrate to the Commissions' satisfaction that they were derived in accordance with the "Water Quality Standards Handbook: Second Edition, Recalculation Procedure or the Resident Species Procedure", hereby incorporated by reference including subsequent amendments and editions at <http://water.epa.gov/scitech/swguidance/standards/handbook/>.

This material is available free of charge;

- (10) Oils, deleterious substances, colored, or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, aquatic life, and wildlife or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses. For the purpose of implementing this Rule, oils, deleterious substances, colored, or other wastes shall include substances that cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines pursuant to ~~40 CFR 110.3; 40 CFR 110.3~~ which are incorporated by reference including any subsequent amendments and editions. This material is available free of charge on the internet at <http://www.gpo.gov/fdsys/>.

- (11) Pesticides:

- (a) Aldrin: 0.003 ug/l;
- (b) Chlordane: 0.004 ug/l;
- (c) DDT: 0.001 ug/l;
- (d) Demeton: 0.1 ug/l;

**Commented [A8]:** Reference update, no effect.

- 1 (e) Dieldrin: 0.002 ug/l;
- 2 (f) Endosulfan: 0.009 ug/l;
- 3 (g) Endrin: 0.002 ug/l;
- 4 (h) Guthion: 0.01 ug/l;
- 5 (i) Heptachlor: 0.004 ug/l;
- 6 (j) Lindane: 0.004 ug/l;
- 7 (k) Methoxychlor: 0.03 ug/l;
- 8 (l) Mirex: 0.001 ug/l;
- 9 (m) Parathion: 0.178 ug/l; and
- 10 (n) Toxaphene: 0.0002 ug/l;
- 11 (12) pH: shall be normal for the waters in the area, which range between 6.8 and 8.5, except that
- 12 swamp waters may have a pH as low as 4.3 if it is the result of natural conditions;
- 13 (13) Phenolic compounds: only such levels as shall not result in fish-flesh tainting or impairment of
- 14 other best usage;
- 15 (14) Polychlorinated biphenyls: (total of all PCBs and congeners identified) 0.001 ug/l;
- 16 (15) Radioactive substances:
  - 17 (a) Combined radium-226 and radium-228: The average annual activity level (based on at
  - 18 least one sample collected per quarter) for combined radium-226, and radium-228 shall
  - 19 not exceed five picoCuries per liter;
  - 20 (b) Alpha Emitters. The average annual gross alpha particle activity (including radium-226,
  - 21 but excluding radon and uranium) shall not exceed 15 picoCuries per liter;
  - 22 (c) Beta Emitters. The average annual activity level (based on at least one sample collected
  - 23 per quarter) for strontium-90 shall not exceed eight picoCuries per liter; nor shall the
  - 24 average annual gross beta particle activity (excluding potassium-40 and other naturally
  - 25 occurring radionuclides exceed 50 picoCuries per liter; nor shall the average annual
  - 26 activity level for tritium exceed 20,000 picoCuries per liter;
- 27 (16) Salinity: changes in salinity due to hydrological modifications shall not result in removal of the
- 28 functions of a PNA. Projects that are determined by the Director to result in modifications of
- 29 salinity such that functions of a PNA are impaired shall be required to employ water management
- 30 practices to mitigate salinity impacts;
- 31 (17) Temperature: shall not be increased above the natural water temperature by more than 0.8 degrees
- 32 C (1.44 degrees F) during the months of June, July, and August nor more than 2.2 degrees C (3.96
- 33 degrees F) during other months and in no cases to exceed 32 degrees C (89.6 degrees F) due to the
- 34 discharge of heated liquids;
- 35 (18) Trialkyltin compounds: 0.007 ug/l expressed as tributyltin;
- 36 (19) Turbidity: the turbidity in the receiving water shall not exceed 25 Nephelometric Turbidity Units
- 37 (NTU); if turbidity exceeds this level due to natural background conditions, the existing turbidity

1 level shall not be increased. Compliance with this turbidity standard can be met when land  
2 management activities employ Best Management Practices (BMPs) [as defined by Rule .0202 of  
3 this Section] recommended by the Designated Nonpoint Source Agency (as defined by Rule .0202  
4 of this Section). BMPs shall be in full compliance with all specifications governing the proper  
5 design, installation, operation, and maintenance of such ~~BMPs~~;BMPs.

6 ~~(20) Action Levels for Toxic Substances Applicable to NPDES Permits:~~

- 7 ~~(a) Copper, dissolved, chronic: 3.1 ug/l;~~
- 8 ~~(b) Silver, dissolved, chronic: 0.1 ug/l;~~
- 9 ~~(c) Zinc, dissolved, chronic: 81 ug/l~~

10 ~~If the action levels for any of the substances listed in this Item (which are generally not~~  
11 ~~bioaccumulative and have variable toxicity to aquatic life because of chemical form, solubility,~~  
12 ~~stream characteristics, or associated waste characteristics) shall be determined by the waste load~~  
13 ~~allocation to be exceeded in a receiving water by a discharge under the 7Q10 flow criterion for~~  
14 ~~toxic substances, the discharger shall monitor the chemical or biological effects of the discharge;~~  
15 ~~efforts shall be made by all dischargers to reduce or eliminate these substances from their~~  
16 ~~effluents. Those substances for which action levels are listed in this Item shall be limited as~~  
17 ~~appropriate in the NPDES permit if sufficient information (to be determined for metals by~~  
18 ~~measurements of that portion of the dissolved instream concentration of the action level parameter~~  
19 ~~attributable to a specific NPDES permitted discharge) exists to indicate that any of those~~  
20 ~~substances may be a causative factor resulting in toxicity of the effluent.~~

21  
22 *History Note: Authority G.S. 143-214.1; 143-215.3(a)(1);*  
23 *Eff. October 1, 1995;*  
24 *Amended Eff. January 1, 2015; May 1, 2007; August 1, 2000.*  
25

**Commented [A9]:** Actions Levels disapproved by US EPA decision document on 2007-2015 Triennial Review (rec'd by DWR April 19, 2016)