

## TITLE 15A – DEPARTMENT OF ENVIRONMENTAL QUALITY

*Notice is hereby given in accordance with G.S. 150B-21.2 that the Environmental Management Commission intends to amend the rule cited as 15A NCAC 02B .0211.*

**Link to agency website pursuant to G.S. 150B-19.1(c):** <https://deq.nc.gov/news/events/public-notice-hearings>

**Proposed Effective Date:** *March 1, 2022*

**Public Hearing:**

**Date:** *October 28, 2021*

**Time:** *6:00 p.m.*

**Location:**

*This public hearing can be joined starting at 5:45 pm via WebEx link:*

*<https://ncdenrits.webex.com/ncdenrits/onstage/g.php?MTID=ebd820084710fd3ddd0e554a1b4476d4f>*

*Event number: 161 161 1806*

*Event password: MPm6Jub8Y8k*

*Audio conference number: +1-415-655-0003*

*Audio conference access code: 161 161 1806*

*To register for the hearing and provide your preference regarding speaking at the hearing, please visit:*

*<https://forms.office.com/g/6Tr81DQgwL>*

*Or scan the following QR code with your phone:*



*Registration must be completed by 12:00 pm on October 28, 2021. If you have any problems registering online, please call 919-707-9011 by the registration deadline of 12:00 pm on October 28, 2021.*

*The Division of Water Resources highly recommends testing your computer's WebEx capabilities prior to the hearing at <https://www.webex.com/test-meeting.html>. For instructions about digital ways to join the public hearing, please refer to the WebEx Help Center online at <https://help.webex.com/en-us/>.*

*To comment during the hearing after your name is called as a registered speaker and/or after the hearing officer asks if any people wish to comment following the registered speakers:*

*- If you join the hearing by phone, press \*3 to "raise your hand," speak once called upon to do so, and press \*3 again to "lower your hand."*

*- If you join the hearing online, press the hand icon to "raise your hand," speak once called upon to do so, and press the hand icon again to "lower your hand."*

*- The Hearing Officer may limit the length of time that you may speak, so that all those who wish to speak may do so.*

**Reason for Proposed Action:**

*The Environmental Management Commission (EMC) will conduct a public hearing to consider proposed amendments to rule 15A NCAC 02B .0211 - Fresh Surface Water Quality Standards for Class C Waters.*

*The purpose of these proposed amendments is to establish a site-specific chlorophyll-a water quality standard for High Rock Lake that has been developed in accordance with the North Carolina Nutrient Criteria Development Plan (NCDP). The NCDP is a formal agreement between North Carolina and the United States Environmental Protection Agency with the goal of establishing appropriate, scientifically defensible, surface water quality standards for nutrient criteria. This site-specific chlorophyll-a standard will replace the existing chlorophyll-a standard for High Rock Lake. The existing chlorophyll-a standard will continue to apply to all other fresh surface waters in North Carolina.*

*The rule being proposed for amendment is 15A NCAC 02B .0211- Fresh Surface Water Quality Standards for Class C Waters. The Proposed changes include:*

- The addition of Sub-Item (4)(a) to include language for site-specific numeric and narrative standards for chlorophyll-a in the High Rock Lake Reservoir, and*
- The addition of language in the introductory sentence of Item (4), to direct attention to the site-specific standards for the High Rock Lake Reservoir that comprise Sub-Item (4)(a)*

**Comments may be submitted to:** *Christopher Ventaloro, NC DEQ-DWR Planning Section, 1611 Mail Service Center, Raleigh, NC 27699-1611; email [2B\\_HRL\\_PHComments\\_2021@ncdenr.gov](mailto:2B_HRL_PHComments_2021@ncdenr.gov)*

Comment period ends: November 15, 2021

**Procedure for Subjecting a Proposed Rule to Legislative Review:** If an objection is not resolved prior to the adoption of the rule, a person may also submit written objections to the Rules Review Commission after the adoption of the Rule. If the Rules Review Commission receives written and signed objections after the adoption of the Rule in accordance with G.S. 150B-21.3(b2) from 10 or more persons clearly requesting review by the legislature and the Rules Review Commission approves the rule, the rule will become effective as provided in G.S. 150B-21.3(b1). The Commission will receive written objections until 5:00 p.m. on the day following the day the Commission approves the rule. The Commission will receive those objections by mail, delivery service, hand delivery, or facsimile transmission. If you have any further questions concerning the submission of objections to the Commission, please call a Commission staff attorney at 919-431-3000.

**Fiscal impact. Does any rule or combination of rules in this notice create an economic impact? Check all that apply.**

- State funds affected
- Local funds affected
- Substantial economic impact ( $\geq$  \$1,000,000)
- Approved by OSBM
- No fiscal note required

## CHAPTER 02 - ENVIRONMENTAL MANAGEMENT

### SUBCHAPTER 02B - SURFACE WATER AND WETLAND STANDARDS

#### SECTION .0200 - CLASSIFICATIONS AND WATER QUALITY STANDARDS APPLICABLE TO SURFACE WATERS AND WETLANDS OF NORTH CAROLINA

##### 15A NCAC 02B .0211 FRESH SURFACE WATER QUALITY STANDARDS FOR CLASS C WATERS

In addition to the standards set forth in Rule .0208 of this Section, the following water quality standards shall apply to all Class C waters. Additional standards applicable to other freshwater classifications are specified in Rules .0212, .0214, .0215, .0216, .0218, .0219, .0223, .0224, .0225, and .0231 of this Section.

- (1) The best usage of waters shall be aquatic life propagation, survival, and maintenance of biological integrity (including fishing and fish); wildlife; secondary contact recreation as defined in Rule .0202 of this Section; agriculture; and any other usage except for primary contact recreation or as a source of water supply for drinking, culinary, and food processing purposes. All freshwaters shall be classified to protect these uses at a minimum.
- (2) The conditions of waters shall be such that waters are suitable for all best uses specified in this Rule. Sources of water pollution that preclude any of these uses on either a shortterm or -longterm- basis shall be deemed to violate a water quality standard;
- (3) Chlorine, total residual: 17 ug/l;
- (4) Chlorophyll a (corrected): except as specified in Sub-Item (a) of this Item, not greater than 40 ug/l for lakes, reservoirs, and other waters subject to growths of macroscopic or microscopic vegetation not designated as trout waters, and not greater than 15 ug/l for lakes, reservoirs, and other waters subject to growths of macroscopic or microscopic vegetation designated as trout waters (not applicable to lakes or reservoirs less than 10 acres in surface area). The Commission or its designee may prohibit or limit any discharge of waste into surface waters if the surface waters experience or the discharge would result in growths of microscopic or macroscopic vegetation such that the standards established pursuant to this Rule would be violated or the intended best usage of the waters would be impaired;  
(a) Site-specific High Rock Lake Reservoir [Index Numbers 12-(108.5), 12-(114), 12-117-(1), 12-117-(3), 12-118.5, and the uppermost portion of 12-(124.5) to the dam of High Rock Lake] Chlorophyll a (corrected): not greater than a growing season geometric mean of 35 ug/L in the photic zone based on samples collected in a minimum of five different months during the growing season. For the purpose of this Sub-Item, the growing season is April 1 through October 31 and the photic zone is represented by a composite sample taken from the water surface down to twice the measured Secchi depth. Chlorophyll a shall not occur in amounts that result in an adverse impact as defined in 15A NCAC 02H .1002.
- (5) Cyanide, total: 5.0 ug/l;
- (6) Dissolved oxygen: not less than 6.0 mg/l for trout waters; for nontrout- waters, not less than a daily average of 5.0 mg/l with an instantaneous value of not less than 4.0 mg/l; swamp waters, lake coves, or backwaters, and lake bottom waters may have lower values if caused by natural conditions;
- (7) Fecal coliform: shall not exceed a geometric mean of 200/100ml (MF count) based upon at least five samples taken over a 30-day period, nor exceed 400/100ml in more than 20 percent of the samples examined during such period. Violations of this Item are expected during rainfall events and may be caused by uncontrollable nonpoint source pollution. All coliform concentrations shall be analyzed using the membrane filter technique. If high turbidity or other conditions would cause the membrane filter technique to produce inaccurate data, the most probable number (MPN) 5-tube multiple dilution method shall be used.
- (8) Floating solids, settleable solids, or sludge deposits: only such amounts attributable to sewage, industrial wastes, or other wastes as shall not make the water unsafe or unsuitable for aquatic life and wildlife or impair the waters for any designated uses;
- (9) Fluoride: 1.8 mg/l;

- (10) Gases, total dissolved: not greater than 110 percent of saturation;
- (11) Metals:
- (a) With the exception of mercury and selenium, acute and chronic freshwater aquatic life standards for metals shall be based upon measurement of the dissolved fraction of the metal. Mercury and selenium water quality standards shall be based upon measurement of the total recoverable metal;
  - (b) With the exception of mercury and selenium, aquatic life standards for metals listed in this Sub-Item shall apply as a function of the pollutant's water effect ratio (WER). 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), which is hereby incorporated by reference, including subsequent amendments and editions, and can be obtained free of charge at <http://water.epa.gov/scitech/swguidance/standards/handbook/>. Alternative site-specific standards may also be developed when any person submits values that demonstrate to the Commission that they were derived in accordance with the "Water Quality Standards Handbook: Second Edition, Recalculation Procedure or the Resident Species Procedure", which is hereby incorporated by reference including subsequent amendments and can be obtained free of charge at <http://water.epa.gov/scitech/swguidance/standards/handbook/>.
  - (c) Freshwater metals standards that are not hardness-dependent shall be as follows:
    - (i) Arsenic, dissolved, acute: WER· 340 ug/l;
    - (ii) Arsenic, dissolved, chronic: WER· 150 ug/l;
    - (iii) Beryllium, dissolved, acute: WER· 65 ug/l;
    - (iv) Beryllium, dissolved, chronic: WER· 6.5 ug/l;
    - (v) Chromium VI, dissolved, acute: WER· 16 ug/l;
    - (vi) Chromium VI, dissolved, chronic: WER· 11 ug/l;
    - (vii) Mercury, total recoverable, chronic: 0.012 ug/l;
    - (viii) Selenium, total recoverable, chronic: 5 ug/l;
    - (ix) Silver, dissolved, chronic: WER· 0.06 ug/l;
  - (d) Hardness-dependent freshwater metals standards shall be derived using the equations specified in Table A: Dissolved Freshwater Standards for Hardness-Dependent Metals. If the actual instream hardness (expressed as CaCO<sub>3</sub> or Ca+Mg) is less than 400 mg/l, standards shall be calculated based upon the actual instream hardness. If the instream hardness is greater than 400 mg/l, the maximum applicable hardness shall be 400 mg/l.

Table A: Dissolved Freshwater Standards for Hardness-Dependent Metals

Numeric standards calculated at 25 mg/l hardness are listed below for illustrative purposes. The Water Effects Ratio (WER) is equal to one unless determined otherwise under Sub-Item (11)(b) of this Rule.

Metal	Equations for Hardness-Dependent Freshwater Metals (ug/l)	Standard at 25 mg/l hardness (ug/l)
Cadmium, Acute	$WER \cdot \{1.136672 - [\ln \text{hardness}](0.041838)\} \cdot e^{\{0.9151 [\ln \text{hardness}] - 3.1485\}}$	0.82
Cadmium, Acute, Trout waters	$WER \cdot \{1.136672 - [\ln \text{hardness}](0.041838)\} \cdot e^{\{0.9151 [\ln \text{hardness}] - 3.6236\}}$	0.51
Cadmium, Chronic	$WER \cdot \{1.101672 - [\ln \text{hardness}](0.041838)\} \cdot e^{\{0.7998 [\ln \text{hardness}] - 4.4451\}}$	0.15
Chromium III, Acute	$WER \cdot [0.316 \cdot e^{\{0.8190 [\ln \text{hardness}] + 3.7256\}}]$	180
Chromium III, Chronic	$WER \cdot [0.860 \cdot e^{\{0.8190 [\ln \text{hardness}] + 0.6848\}}]$	24
Copper, Acute	$WER \cdot [0.960 \cdot e^{\{0.9422 [\ln \text{hardness}] - 1.700\}}]$ Or, Aquatic Life Ambient Freshwater Quality Criteria-Copper 2007 Revision (EPA-822-R-07-001)	3.6  NA
Copper, Chronic	$WER \cdot [0.960 \cdot e^{\{0.8545 [\ln \text{hardness}] - 1.702\}}]$ Or, Aquatic Life Ambient Freshwater Quality Criteria-Copper 2007 Revision (EPA-822-R-07-001)	2.7  NA
Lead, Acute	$WER \cdot \{1.46203 - [\ln \text{hardness}](0.145712)\} \cdot e^{\{1.273 [\ln \text{hardness}] - 1.460\}}$	14
Lead, Chronic	$WER \cdot \{1.46203 - [\ln \text{hardness}](0.145712)\} \cdot e^{\{1.273 [\ln \text{hardness}] - 4.705\}}$	0.54

Nickel, Acute	WER: $[0.998 \cdot e^{\{0.8460[\ln \text{hardness}] + 2.255\}}]$	140
Nickel, Chronic	WER: $[0.997 \cdot e^{\{0.8460[\ln \text{hardness}] + 0.0584\}}]$	16
Silver, Acute	WER: $[0.85 \cdot e^{\{1.72[\ln \text{hardness}] - 6.59\}}]$	0.30
Zinc, Acute	WER: $[0.978 \cdot e^{\{0.8473[\ln \text{hardness}] + 0.884\}}]$	36
Zinc, Chronic	WER: $[0.986 \cdot e^{\{0.8473[\ln \text{hardness}] + 0.884\}}]$	36

- (e) Compliance with acute instream metals standards shall only be evaluated using an average of two or more samples collected within one hour. Compliance with chronic instream metals standards shall only be evaluated using an average of a minimum of four samples taken on consecutive days or as a 96-hour average;
- (12) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to 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, or 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, as described in 40 CFR 110.3(a)-(b), incorporated by reference including subsequent amendments and editions. This material is available, free of charge, at: <http://www.ecfr.gov/>;
- (13) Pesticides:
- (a) Aldrin: 0.002 ug/l;
  - (b) Chlordane: 0.004 ug/l;
  - (c) DDT: 0.001 ug/l;
  - (d) Demeton: 0.1 ug/l;
  - (e) Dieldrin: 0.002 ug/l;
  - (f) Endosulfan: 0.05 ug/l;
  - (g) Endrin: 0.002 ug/l;
  - (h) Guthion: 0.01 ug/l;
  - (i) Heptachlor: 0.004 ug/l;
  - (j) Lindane: 0.01 ug/l;
  - (k) Methoxychlor: 0.03 ug/l;
  - (l) Mirex: 0.001 ug/l;
  - (m) Parathion: 0.013 ug/l; and
  - (n) Toxaphene: 0.0002 ug/l;
- (14) pH: shall be between 6.0 and 9.0 except that swamp waters may have a pH as low as 4.3 if it is the result of natural conditions;
- (15) Phenolic compounds: only such levels as shall not result in fish-flesh tainting or impairment of other best usage;
- (16) Polychlorinated biphenyls (total of all PCBs and congeners identified): 0.001 ug/l;
- (17) Radioactive substances, based on at least one sample collected per quarter:
- (a) Combined radium-226 and radium-228: the average annual activity level for combined radium-226 and radium-228 shall not exceed five picoCuries per liter;
  - (b) Alpha Emitters: the average annual gross alpha particle activity (including radium-226, but excluding radon and uranium) shall not exceed 15 picoCuries per liter;
  - (c) Beta Emitters: the average annual activity level for strontium-90 shall not exceed eight picoCuries per liter, nor shall the average annual gross beta particle activity (excluding potassium-40 and other naturally occurring radionuclides) exceed 50 picoCuries per liter, nor shall the average annual activity level for tritium exceed 20,000 picoCuries per liter;
- (18) Temperature: not to exceed 2.8 degrees C (5.04 degrees F) above the natural water temperature, and in no case to exceed 29 degrees C (84.2 degrees F) for mountain and upper piedmont waters and 32 degrees C (89.6 degrees F) for lower piedmont and coastal plain Waters; the temperature for trout waters shall not be increased by more than 0.5 degrees C (0.9 degrees F) due to the discharge of heated liquids, but in no case to exceed 20 degrees C (68 degrees F);
- (19) Toluene: 0.36 ug/l in trout classified waters or 11 ug/l in all other waters;
- (20) Trialkyltin compounds: 0.07 ug/l expressed as tributyltin;
- (21) Turbidity: the turbidity in the receiving water shall not exceed 50 Nephelometric Turbidity Units (NTU) in streams not designated as trout waters and 10 NTU in streams, lakes, or reservoirs designated as trout waters; for lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTU; if turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased. Compliance with this turbidity standard shall be deemed met when land management activities employ Best Management Practices (BMPs), as defined by Rule .0202 of this Section, recommended by the Designated Nonpoint Source Agency, as defined by Rule .0202 of this Section.
- (22) Toxic Substance Level Applicable to NPDES Permits: Chloride: 230 mg/l. If chloride is determined by the waste load allocation to be exceeded in a receiving water by a discharge under the specified 7Q10 criterion for toxic substances, the discharger shall monitor the chemical or biological effects of the discharge. Efforts shall be made by all dischargers to reduce or eliminate chloride from their effluents. Chloride shall be limited as appropriate in the NPDES permit if sufficient information exists to indicate that it may be a causative factor resulting in toxicity of the effluent.

*Eff. February 1, 1976;*

*Amended Eff. January 1, 2015; May 1, 2007; April 1, 2003; August 1, 2000; October 1, 1995; August 1, 1995; April 1, 1994; February 1, 1993;*

*Readopted Eff. ~~November 1, 2019~~. November 1, 2019;*

*Amended Eff. Xxxx.*