

RRC STAFF OPINION

PLEASE NOTE: THIS COMMUNICATION IS EITHER 1) ONLY THE RECOMMENDATION OF AN RRC STAFF ATTORNEY AS TO ACTION THAT THE ATTORNEY BELIEVES THE COMMISSION SHOULD TAKE ON THE CITED RULE AT ITS NEXT MEETING, OR 2) AN OPINION OF THAT ATTORNEY AS TO SOME MATTER CONCERNING THAT RULE. THE AGENCY AND MEMBERS OF THE PUBLIC ARE INVITED TO SUBMIT THEIR OWN COMMENTS AND RECOMMENDATIONS (ACCORDING TO RRC RULES) TO THE COMMISSION.

AGENCY: Environmental Management Commission

RULE CITATION: 15A NCAC 02B .0208, .0212, .0214, .0215, .0216, and .0218

RECOMMENDED ACTION:

- ☐ Approve, but note staff's comment
- ☒ Object, based on:
 - ☐ Lack of statutory authority
 - ☐ Unclear or ambiguous
 - ☐ Unnecessary
- ☒ Failure to comply with the APA
- ☐ Extend the period of review

COMMENT:

At the April 2021 meeting, the Rules Review Commission is scheduled to review the above referenced Rules. These Rules have received comments both in favor of and in opposition to the addition of 1,4-dioxane, a “contaminant of emerging concern”, to the surface water standards under which the State’s drinking water and surface water supply is regulated. The intent of this Staff Opinion to explain EMC’s failure to comply with the APA in enacting these Rules. Specifically, when EMC sent the entire regulatory framework, of which these Rules are part, to the Office of State Budget Management (OSBM) for certification, EMC did not comply with the requirements of the APA as to the fiscal impact analysis (“fiscal note”) for the regulation of 1,4-dioxane. While RRC generally will not substantively review a fiscal note, it is warranted in this instance, as explained below.

The RRC is required to determine whether each rule under review has met four standards stated in G.S. 150B-21.9. The relevant standard here is: Was this Rule, or amendment to this Rule, “adopted in accordance with Part 2 of this Article”? Part 2 of this Article lays out the framework under which State agencies must adopt their Rules, and it is for the RRC to ensure the agencies follow the framework.

One aspect of this framework is the required analysis of the fiscal and regulatory impact any change in the Rules may impose on the regulated public. G.S. 150B-21.4(a) states

- (a) State Funds. -- Before an agency publishes in the North Carolina Register the proposed text of a permanent rule change that would require the expenditure or distribution of funds subject to the State Budget Act, Chapter 143C of the General Statutes, it must submit the text of the proposed rule change, an analysis of the proposed rule change, and a fiscal note on the proposed rule change to the Office of State Budget and Management and obtain certification from the Office of State Budget and Management that the funds that would be required by the proposed rule change are available. The fiscal note must state the amount of funds that would be expended or distributed as a result of the proposed rule change and explain how the amount was computed. The Office of State Budget and Management must certify a proposed rule change if funds are available to cover the expenditure or distribution required by the proposed rule change.

Therefore, as this is from “Part 2 of this Article”, RRC must determine whether EMC complied with this requirement in obtaining certification from OSBM.

To comply with 21.3(a), the Regulatory Impact Analysis that was prepared by EMC, and certified by OSBM, “must state the amount of funds that would be expended or distributed as a result of the proposed rule change and explain how the amount was computed.” However, in EMC’s analysis of the impact of 1,4-dioxane, there are many qualitative statements about the anticipated costs (conventional treatment processes “are anticipated to be prohibitively expensive for local governments and the citizens served by public utilities”; schedules of compliance “will be common due to the high cost of treatment technology”; “it is worth acknowledging that the ongoing costs and benefits associated with monitoring and treatment of 1,4-dioxane are likely to be considerable”), but no quantitative assessment of costs. The assessment of quantitative costs is what the APA requires for a fiscal note (“...must state the amount of funds that would be expended...”).

Furthermore, the fiscal note is quite confusing in that in one breath it states that the costs will be considerable, but in another it states that the economic impact will be “none”, while the environmental impact will be “likely indirect, long-term benefit to human health”. There is no explanation how the benefit is quantitatively assessed beyond mere conjecture. This is not sufficient for compliance with the requirements of the APA.

In working on this rule with both the EMC and its representative at the Attorney General’s Office, EMC has argued that it does not matter whether its assessment of the costs is APA compliance because OSBM has blessed its assessment of the whole regulatory framework. However, it is important to note exactly what OSBM certifies when reviewing a fiscal note. As stated above, 21.4(a) only requires that “The Office of State Budget and Management must certify a proposed rule change if funds are available to cover the expenditure or distribution required by the proposed rule change.” OSBM is merely certifying that there are funds within the State budget to cover the amounts reported by the agency seeking certification, and OSBM did this. However, this certification is not sufficient to shield EMC from further review of its fiscal note and its assessment of costs associated with setting 1,4-dioxane standards.

Therefore, RRC should disapprove the addition of 1,4-dioxane standards by amendment to these Rules due to the insufficient fiscal note that does not comply with the APA.

1 15A NCAC 02B .0208 is amended as published in 35:22 NCR 2407-2433 as follows:

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3 **15A NCAC 02B .0208 STANDARDS FOR TOXIC SUBSTANCES AND TEMPERATURE**

4 (a) Toxic Substances: the concentration of toxic substances, either alone or in combination with other wastes, in
5 surface waters shall not render waters injurious to aquatic life or wildlife, recreational activities, or public health, nor
6 shall it impair the waters for any designated uses. Specific standards for toxic substances to protect freshwater and
7 tidal saltwater uses are listed in Rules .0211 and .0220 of this Section, respectively. The narrative standard for toxic
8 substances and numerical standards applicable to all waters shall be interpreted as follows:

9 (1) The concentration of toxic substances shall not result in chronic toxicity to aquatic life. Any levels
10 in excess of the chronic value for aquatic life shall be considered to result in chronic toxicity. In
11 the absence of direct measurements of chronic toxicity, the concentration of toxic substances shall
12 not exceed the concentration specified by the fraction of the lowest LC50 value that predicts a no
13 effect chronic level as determined by the use of an acceptable Acute to Chronic Ratio (ACR) in
14 accordance with U.S. Environmental Protection Agency (EPA) "Guidelines for Deriving
15 Numerical Water Quality Criteria for the Protection of Aquatic Life and its Uses." In the absence
16 of an ACR, that toxic substance shall not exceed one-one hundredth (0.01) of the lowest LC50 or,
17 if it is demonstrated that a toxic substance has a half-life of less than 96 hours, the maximum
18 concentration shall not exceed one-twentieth (0.05) of the lowest LC50.

19 (2) The concentration of toxic substances shall not exceed the level necessary to protect human health
20 through exposure routes of fish tissue consumption, water consumption, recreation, or other route
21 identified for the water body. Fish tissue consumption shall include the consumption of shellfish.
22 These concentrations of toxic substances shall be determined as follows:

23 (A) For non-carcinogens, these concentrations shall be determined using a Reference Dose
24 (RfD) as published by the EPA pursuant to Section 304(a) of the Federal Water Pollution
25 Control Act as amended, a RfD issued by the EPA as listed in the Integrated Risk
26 Information System (IRIS) file, or a RfD approved by the Director after consultation with
27 the State Health director. Water quality standards or criteria used to calculate water
28 quality based effluent limitations to protect human health through the different exposure
29 routes shall be determined as follows:

30 (i) Fish tissue consumption:

31
$$WQS = (RfD \times RSC) \times \text{Body Weight} / (FCR \times BCF)$$

32 where:

33 WQS = water quality standard or criteria;

34 RfD = reference dose;

35 RSC = Relative Source Contribution;

36 FCR = fish consumption rate (based upon 17.5 gm/person-day);

BCF = bioconcentration factor or bioaccumulation factor (BAF), as appropriate.

Pursuant to Section 304(a) of the Federal Water Pollution Control Act as amended, BCF or BAF values, literature values, or site specific bioconcentration data shall be based on EPA publications; FCR values shall be average consumption rates for a 70 Kg adult for the lifetime of the population; alternative FCR values may be used when it is considered necessary to protect localized populations that may be consuming fish at a higher rate; RSC values, when made available through EPA publications pursuant to Section 304(a) of the Federal Clean Water Pollution Control Act to account for non-water sources of exposure may be either a percentage (multiplied) or amount subtracted, depending on whether multiple criteria are relevant to the chemical;

(ii) Water consumption (including a correction for fish consumption):

$$WQS = (RfD \times RSC) \times \text{Body Weight} / [WCR + (FCR \times BCF)]$$

where:

WQS = water quality standard or criteria;

RfD = reference dose;

RSC = Relative Source Contribution;

FCR = fish consumption rate (based upon 17.5 gm/person-day);

BCF = bioconcentration factor or bioaccumulation factor (BAF), as appropriate;

WCR = water consumption rate (assumed to be two liters per day for adults).

To protect sensitive groups, exposure shall be based on a 10 Kg child drinking one liter of water per day. Standards may also be based on drinking water standards based on the requirements of the Federal Safe Drinking Water Act, 42 U.S.C. 300(f)(g)-1. For non-carcinogens, specific numerical water quality standards have not been included in this Rule because water quality standards to protect aquatic life for all toxic substances for which standards have been considered are more stringent than numerical standards to protect human health from non-carcinogens through consumption of fish. Standards to protect human health from non-carcinogens through water consumption are listed under the water supply classification standards in Rule .0211 of this Section. The equations listed in this Subparagraph shall be used to develop water quality based effluent limitations on a case-by-case basis for toxic substances that are not presently included in the water quality standards. Alternative FCR values may be used when it is necessary to protect localized populations that may be consuming fish at a higher rate;

(B) For carcinogens, the concentrations of toxic substances shall not result in unacceptable health risks and shall be based on a Carcinogenic Potency Factor (CPF). An unacceptable

health risk for cancer shall be more than one case of cancer per one million people exposed (10^{-6} risk level). The CPF is a measure of the cancer-causing potency of a substance estimated by the upper 95 percent confidence limit of the slope of a straight line calculated by the Linearized Multistage Model or other appropriate model according to U.S. Environmental Protection Agency Guidelines, FR 51 (185): 33992-34003; and FR 45 (231 Part V): 79318-79379. Water quality standards or criteria for water quality based effluent limitations shall be calculated using the procedures given in this Part and in Part (A) of this Subparagraph. Standards to protect human health from carcinogens through water consumption are listed under the water supply classification standards in Rules .0212, .0214, .0215, .0216, and .0218 of this Section. Standards to protect human health from carcinogens through the consumption of fish (and shellfish) only shall be applicable to all waters as follows:

- (i) Aldrin: 0.05 ng/l;
- (ii) Arsenic: 10 ug/l;
- (iii) Benzene: 51 ug/l;
- (iv) Carbon tetrachloride: 1.6 ug/l;
- (v) Chlordane: 0.8 ng/l;
- (vi) DDT: 0.2 ng/l;
- (vii) Dieldrin: 0.05 ng/l;
- (viii) Dioxin: 0.000005 ng/l;
- (ix) Heptachlor: 0.08 ng/l;
- (x) Hexachlorobutadiene: 18 ug/l;
- (xi) Polychlorinated biphenyls (total of all identified PCBs and congeners): 0.064 ng/l;
- (xii) Polynuclear aromatic hydrocarbons (total of all PAHs): 31.1 ng/l;
- (xiii) Tetrachloroethane (1,1,2,2): 4 ug/l;
- (xiv) Tetrachloroethylene: 3.3 ~~ug/L~~; ug/l;
- (xvi) Trichloroethylene: 30 ug/l;
- (xvii) Vinyl chloride: 2.4 ~~ug/L~~; ug/l;
- (xviii) 1,4-Dioxane: 80 ug/l.

The values listed in Subparts (i) through ~~(xvii)~~ (xviii) of this Part may be adjusted by the Commission or its designee on a case-by-case basis to account for site-specific or chemical-specific information pertaining to the assumed BCF, FCR, or CPF values or other data.

(b) Temperature: the Commission may establish a water quality standard for temperature for specific water bodies other than the standards specified in Rules .0211 and .0220 of this Section upon a case-by-case determination that thermal discharges to these waters that serve or may serve as a source or receptor of industrial cooling water provide

1 for the maintenance of the designated best use throughout a portion of the water body. Such revisions of the
2 temperature standard shall be consistent with the provisions of Section 316(a) of the Federal Water Pollution
3 Control Act, as amended. A list of such revisions shall be maintained and made available to the public by the
4 Division.

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6 *History Note: Authority G.S. 143-214.1; 143-215.3(a)(1);*
7 *Eff. February 1, 1976;*
8 *Amended Eff. May 1, 2007; April 1, 2003; February 1, 1993; October 1, 1989; January 1, 1985;*
9 *September 9, 1979;*
10 *Readopted Eff. November 1, 2019;*
11 *Amended Eff. May 1, 2022.*

1 15A NCAC 02B .0212 is amended as published in 35:22 NCR 2407-2433 as follows:

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3 **15A NCAC 02B .0212 FRESH SURFACE WATER QUALITY STANDARDS FOR CLASS WS-I**
4 **WATERS**

5 The following water quality standards shall apply to surface waters within water supply watersheds classified as WS-I.
6 Water quality standards applicable to Class C waters as described in Rule .0211 of this Section shall also apply to
7 Class WS-I waters.

8 (1) The best usage of waters classified as WS-I shall be as a source of water supply for drinking,
9 culinary, or food processing purposes for those users desiring maximum protection of their water
10 supplies in the form of the most stringent WS classification, and any best usage specified for Class
11 C waters. Class WS-I waters are waters located on land in public ownership and waters located in
12 undeveloped watersheds.

13 (2) The best usage of waters classified as WS-I shall be maintained as follows:

14 (a) Water quality standards in a WS-I watershed shall meet the requirements as specified in
15 Item (3) of this Rule.

16 (b) Wastewater and stormwater point source discharges in a WS-I watershed shall meet the
17 requirements as specified in Item (4) of this Rule.

18 (c) Nonpoint source pollution in a WS-I watershed shall meet the requirements as specified in
19 Item (5) of this Rule.

20 (d) Following approved treatment, as defined in Rule .0202 of this Section, the waters shall
21 meet the Maximum Contaminant Level concentrations considered safe for drinking,
22 culinary, and food-processing purposes that are specified in 40 CFR Part 141 National
23 Primary Drinking Water Regulations and in the North Carolina Rules Governing Public
24 Water Supplies, 15A NCAC 18C .1500, incorporated by reference including subsequent
25 amendments and editions.

26 (e) Sources of water pollution that preclude any of the best uses on either a short-term or
27 long-term basis shall be deemed to violate a water quality standard.

28 (f) The Class WS-I classification may be used to protect portions of Class WS-II, WS-III, and
29 WS-IV water supplies. For reclassifications occurring after the July 1, 1992 statewide
30 reclassification, a WS-I classification that is requested by local governments shall be
31 considered by the Commission if all local governments having jurisdiction in the affected
32 areas have adopted a resolution and the appropriate ordinances as required by G.S. 143-
33 214.5(d) to protect the watershed or if the Commission acts to protect a watershed when
34 one or more local governments has failed to adopt protective measures as required by this
35 Sub-Item.

36 (3) Water quality standards applicable to Class WS-I Waters shall be as follows:

- (a) MBAS (Methylene-Blue Active Substances): not greater than 0.5 mg/l to protect the aesthetic qualities of water supplies and to prevent foaming;
 - (b) Total coliforms shall not exceed 50/100 ml (MF count) as a monthly geometric mean value in watersheds serving as unfiltered water supplies;
 - (c) Chlorinated phenolic compounds: not greater than 1.0 ug/l to protect water supplies from taste and odor problems from chlorinated phenols;
 - (d) Solids, total dissolved: not greater than exceed 500 mg/l;
 - (e) Total hardness: not greater than 100 mg/l as calcium carbonate (CaCO₃ or Ca + Mg);
 - (f) Toxic and other deleterious substances that are non-carcinogens:
 - (i) Barium: 1.0 mg/l;
 - (ii) Chloride: 250 mg/l;
 - (iii) Nickel: 25 ug/l;
 - (iv) Nitrate nitrogen: 10.0 mg/l;
 - (v) 2,4-D: 70 ug/l;
 - (vi) 2,4,5-TP (Silvex): 10 ug/l; and
 - (vii) Sulfates: 250 mg/l;
 - (g) Toxic and other deleterious substances that are carcinogens:
 - (i) Aldrin: 0.05 ng/l;
 - (ii) Arsenic: 10 ug/l;
 - (iii) Benzene: 1.19 ug/l;
 - (iv) Carbon tetrachloride: 0.254 ug/l;
 - (v) Chlordane: 0.8 ng/l;
 - (vi) Chlorinated benzenes: 488 ug/l;
 - (vii) DDT: 0.2 ng/l;
 - (viii) Dieldrin: 0.05 ng/l;
 - (ix) Dioxin: 0.000005 ng/l;
 - (x) Heptachlor: 0.08 ng/l;
 - (xi) Hexachlorobutadiene: 0.44 ug/l;
 - (xii) Polynuclear aromatic hydrocarbons (total of all PAHs): 2.8 ng/l;
 - (xiii) Tetrachloroethane (1,1,2,2): 0.17 ug/l;
 - (xiv) Tetrachloroethylene: 0.7 ug/l;
 - (xv) Trichloroethylene: 2.5 ug/l; ~~and~~
 - (xvi) Vinyl Chloride: 0.025 ~~ug/l~~ ug/l; and
 - (xvii) 1,4-Dioxane: 0.35 ug/l.
- (4) Wastewater and stormwater point source discharges in a WS-I watershed shall be permitted pursuant to 15A NCAC 02B .0104.

(5) Nonpoint source pollution in a WS-I watershed shall not have an adverse impact, as defined in 15A NCAC 02H .1002, on use as a water supply or any other designated use.

*History Note: Authority G.S. 143-214.1; 143-215.3(a)(1);
Eff. February 1, 1976;
Amended Eff. January 1, 2015; May 1, 2007; April 1, 2003; October 1, 1995; February 1, 1993;
March 1, 1991; October 1, 1989;
Readopted Eff. November 1, 2019;
Amended Eff. May 1, 2022.*

1 15A NCAC 02B .0214 is amended as published in 35:22 NCR 2407-2433 as follows:

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3 **15A NCAC 02B .0214 FRESH SURFACE WATER QUALITY STANDARDS FOR CLASS WS-II**
4 **WATERS**

5 The following water quality standards shall apply to surface waters within water supply watersheds classified as
6 WS-II. Water quality standards applicable to Class C waters as described in Rule .0211 of this Section shall also apply
7 to Class WS-II waters.

- 8 (1) The best usage of waters classified as WS-II shall be as a source of water supply for drinking,
9 culinary, or food-processing purposes for those users desiring maximum protection for their water
10 supplies where a WS-I classification is not feasible as determined by the Commission in accordance
11 with Rule .0212 of this Section and any best usage specified for Class C waters.
- 12 (2) The best usage of waters classified as WS-II shall be maintained as follows:
- 13 (a) Water quality standards in a WS-II watershed shall meet the requirements as specified in
14 Item (3) of this Rule.
- 15 (b) Wastewater and stormwater point source discharges in a WS-II watershed shall meet the
16 requirements as specified in Item (4) of this Rule.
- 17 (c) Nonpoint source pollution in a WS-II watershed shall meet the requirements as specified
18 in Item (5) of this Rule.
- 19 (d) Following approved treatment, as defined in Rule .0202 of this Section, the waters shall
20 meet the Maximum Contaminant Level concentrations considered safe for drinking,
21 culinary, and food-processing purposes that are specified in 40 CFR Part 141 National
22 Primary Drinking Water Regulations and in the North Carolina Rules Governing Public
23 Water Supplies, 15A NCAC 18C .1500.
- 24 (e) Sources of water pollution that preclude any of the best uses on either a short-term or
25 long-term basis shall be deemed to violate a water quality standard.
- 26 (f) The Class WS-II classification may be used to protect portions of Class WS-III and WS-IV
27 water supplies. For reclassifications of these portions of Class WS-III and WS-IV water
28 supplies occurring after the July 1, 1992 statewide reclassification, a WS-II classification
29 that is requested by local governments shall be considered by the Commission if all local
30 governments having jurisdiction in the affected areas have adopted a resolution and the
31 appropriate ordinances as required by G.S. 143-214.5(d) to protect the watershed or if the
32 Commission acts to protect a watershed when one or more local governments has failed to
33 adopt protective measures as required by this Sub-Item.
- 34 (3) Water quality standards applicable to Class WS-II Waters shall be as follows:
- 35 (a) MBAS (Methylene-Blue Active Substances): not greater than 0.5 mg/l to protect the
36 aesthetic qualities of water supplies and to prevent foaming;

- (b) Odor producing substances contained in sewage or other wastes: only such amounts, whether alone or in combination with other substances or wastes, as shall not cause organoleptic effects in water supplies that cannot be corrected by treatment, impair the palatability of fish, or have an adverse impact, as defined in 15A NCAC 02H .1002, on any best usage established for waters of this class;
- (c) Chlorinated phenolic compounds: not greater than 1.0 ug/l to protect water supplies from taste and odor problems from chlorinated phenols;
- (d) Total hardness: not greater than 100 mg/l as calcium carbonate (CaCO_3 or $\text{Ca} + \text{Mg}$);
- (e) Solids, total dissolved: not greater than 500 mg/l;
- (f) Toxic and other deleterious substances that are non-carcinogens:
- (i) Barium: 1.0 mg/l;
 - (ii) Chloride: 250 mg/l;
 - (iii) Nickel: 25 ug/l;
 - (iv) Nitrate nitrogen: 10.0 mg/l;
 - (v) 2,4-D: 70 ug/l;
 - (vi) 2,4,5-TP (Silvex): 10 ug/l; and
 - (vii) Sulfates: 250 mg/l;
- (g) Toxic and other deleterious substances that are carcinogens:
- (i) Aldrin: 0.05 ng/l;
 - (ii) Arsenic: 10 ug/l;
 - (iii) Benzene: 1.19 ug/l;
 - (iv) Carbon tetrachloride: 0.254 ug/l;
 - (v) Chlordane: 0.8 ng/l;
 - (vi) Chlorinated benzenes: 488 ug/l;
 - (vii) DDT: 0.2 ng/l;
 - (viii) Dieldrin: 0.05 ng/l;
 - (ix) Dioxin: 0.000005 ng/l;
 - (x) Heptachlor: 0.08 ng/l;
 - (xi) Hexachlorobutadiene: 0.44 ug/l;
 - (xii) Polynuclear aromatic hydrocarbons (total of all PAHs): 2.8 ng/l;
 - (xiii) Tetrachloroethane (1,1,2,2): 0.17 ug/l;
 - (xiv) Tetrachloroethylene: 0.7 ug/l;
 - (xv) Trichloroethylene: 2.5 ug/l; ~~and~~
 - (xvi) Vinyl Chloride: 0.025 ~~ug/l~~ ug/l; and
 - (xvii) 1,4-Dioxane: 0.35 ug/l.
- (4) Wastewater and stormwater point source discharges in a WS-II watershed shall meet the following requirements:

- 1 (a) Discharges that qualify for a General NPDES Permit pursuant to 15A NCAC 02H .0127
2 shall be allowed in the entire watershed.
- 3 (b) Discharges from trout farms that are subject to Individual NPDES Permits shall be allowed
4 in the entire watershed.
- 5 (c) Stormwater discharges that qualify for an Individual NPDES Permit pursuant to 15A
6 NCAC 02H .0126 shall be allowed in the entire watershed.
- 7 (d) No discharge of sewage, industrial, or other wastes shall be allowed in the entire watershed
8 except for those allowed by Sub-Items (a) through (c) of this Item or Rule .0104 of this
9 Subchapter, and none shall be allowed that have an adverse effect on human health or that
10 are not treated in accordance with the permit or other requirements established by the
11 Division pursuant to G.S. 143-215.1. Upon request by the Commission, a discharger shall
12 disclose all chemical constituents present or potentially present in their wastes and
13 chemicals that could be spilled or be present in runoff from their facility that may have an
14 adverse impact on downstream water quality. These facilities may be required to have spill
15 and treatment failure control plans as well as perform special monitoring for toxic
16 substances.
- 17 (e) New domestic and industrial discharges of treated wastewater that are subject to Individual
18 NPDES Permits shall not be allowed in the entire watershed.
- 19 (f) No new landfills shall be allowed in the Critical Area, and no NPDES permits shall be
20 issued for landfills that discharge treated leachate in the remainder of the watershed.
- 21 (g) No new permitted sites for land application of residuals or petroleum contaminated soils
22 shall be allowed in the Critical Area.
- 23 (5) Nonpoint source pollution in a WS-II watershed shall meet the following requirements:
- 24 (a) Nonpoint source pollution shall not have an adverse impact on waters for use as a water
25 supply or any other designated use.
- 26 (b) Class WS-II waters shall be protected as water supplies that are located in watersheds that
27 meet average watershed development density levels specified for Class WS-II waters in
28 Rule .0624 of this Subchapter.
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30 *History Note: Authority G.S. 143-214.1; 143-215.3(a)(1);*
31 *Eff. May 10, 1979;*
32 *Amended Eff. January 1, 2015; May 1, 2007; April 1, 2003; January 1, 1996; October 1, 1995;*
33 *Readopted Eff. November 1, 2019;*
34 *Amended Eff. May 1, 2022.*
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1 15A NCAC 02B .0215 is amended as published in 35:22 NCR 2407-2433 as follows:

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3 **15A NCAC 02B .0215 FRESH SURFACE WATER QUALITY STANDARDS FOR CLASS WS-III**
4 **WATERS**

5 The following water quality standards shall apply to surface waters within water supply watersheds classified as
6 WS-III. Water quality standards applicable to Class C waters as described in Rule .0211 of this Section shall also
7 apply to Class WS-III waters.

- 8 (1) The best usage of waters classified as WS-III shall be as a source of water supply for drinking,
9 culinary, or food-processing purposes for those users where a more protective WS-I or WS-II
10 classification is not feasible as determined by the Commission in accordance with Rules .0212 and
11 .0214 of this Section and any other best usage specified for Class C waters.
- 12 (2) The best usage of waters classified as WS-III shall be maintained as follows:
- 13 (a) Water quality standards in a WS-III watershed shall meet the requirements as specified in
14 Item (3) of this Rule.
- 15 (b) Wastewater and stormwater point source discharges in a WS-III watershed shall meet the
16 requirements as specified in Item (4) of this Rule.
- 17 (c) Nonpoint source pollution in a WS-III watershed shall meet the requirements as specified
18 in Item (5) of this Rule.
- 19 (d) Following approved treatment, as defined in Rule .0202 of this Section, the waters shall
20 meet the Maximum Contaminant Level concentrations considered safe for drinking,
21 culinary, or food-processing purposes that are specified in 40 CFR Part 141 National
22 Primary Drinking Water Regulations and in the North Carolina Rules Governing Public
23 Water Supplies, 15A NCAC 18C .1500.
- 24 (e) Sources of water pollution that preclude any of the best uses on either a short-term or
25 long-term basis shall be deemed to violate a water quality standard.
- 26 (f) The Class WS-III classification may be used to protect portions of Class WS-IV water
27 supplies. For reclassifications of these portions of WS-IV water supplies occurring after
28 the July 1, 1992 statewide reclassification, a ~~WS-II classification~~ more protective
29 classification, such as WS-III, that is requested by local governments shall be considered
30 by the Commission if all local governments having jurisdiction in the affected areas have
31 adopted a resolution and the appropriate ordinances as required by G.S. 143-214.5(d) to
32 protect the watershed or if the Commission acts to protect a watershed when one or more
33 local governments has failed to adopt protective measures as required by this Sub-Item.
- 34 (3) Water quality standards applicable to Class WS-III Waters shall be as follows:
- 35 (a) MBAS (Methylene-Blue Active Substances): not greater than 0.5 mg/l to protect the
36 aesthetic qualities of water supplies and to prevent foaming;

- (b) Odor producing substances contained in sewage, industrial wastes, or other wastes: only such amounts, whether alone or in combination with other substances or wastes, as shall not cause organoleptic effects in water supplies that cannot be corrected by treatment, impair the palatability of fish, or have an adverse impact, as defined in 15A NCAC 02H .1002, on any best usage established for waters of this class;
- (c) Chlorinated phenolic compounds: not greater than 1.0 ug/l to protect water supplies from taste and odor problems from chlorinated phenols;
- (d) Total hardness: not greater than 100 mg/l as calcium carbonate (CaCO_3 or $\text{Ca} + \text{Mg}$);
- (e) Solids, total dissolved: not greater than 500 mg/l;
- (f) Toxic and other deleterious substances that are non-carcinogens:
- (i) Barium: 1.0 mg/l;
 - (ii) Chloride: 250 mg/l;
 - (iii) Nickel: 25 ug/l;
 - (iv) Nitrate nitrogen: 10.0 mg/l;
 - (v) 2,4-D: 70 ug/l;
 - (vi) 2,4,5-TP (Silvex): 10 ug/l; and
 - (vii) Sulfates: 250 mg/l;
- (g) Toxic and other deleterious substances that are carcinogens:
- (i) Aldrin: 0.05 ng/l;
 - (ii) Arsenic: 10 ug/l;
 - (iii) Benzene: 1.19 ug/l;
 - (iv) Carbon tetrachloride: 0.254 ug/l;
 - (v) Chlordane: 0.8 ng/l;
 - (vi) Chlorinated benzenes: 488 ug/l;
 - (vii) DDT: 0.2 ng/l;
 - (viii) Dieldrin: 0.05 ng/l;
 - (ix) Dioxin: 0.000005 ng/l;
 - (x) Heptachlor: 0.08 ng/l;
 - (xi) Hexachlorobutadiene: 0.44 ug/l;
 - (xii) Polynuclear aromatic hydrocarbons (total of all PAHs): 2.8 ng/l;
 - (xiii) Tetrachloroethane (1,1,2,2): 0.17 ug/l;
 - (xiv) Tetrachloroethylene: 0.7 ug/l;
 - (xv) Trichloroethylene: 2.5 ug/l; ~~and~~
 - (xvi) Vinyl Chloride: 0.025 ~~ug/l~~ ug/l; and
 - (xvii) 1,4-Dioxane: 0.35 ug/l.
- (4) Wastewater and stormwater point source discharges in a WS-III watershed shall meet the following requirements:

- (a) Discharges that qualify for a General NPDES Permit pursuant to 15A NCAC 02H .0127 shall be allowed in the entire watershed.
- (b) Discharges from trout farms that are subject to Individual NPDES Permits shall be allowed in the entire watershed.
- (c) Stormwater discharges that qualify for an Individual NPDES Permit pursuant to 15A NCAC 02H .0126 shall be allowed in the entire watershed.
- (d) New domestic wastewater discharges that are subject to Individual NPDES Permits shall not be allowed in the Critical Area and are allowed in the remainder of the watershed.
- (e) New industrial wastewater discharges that are subject to Individual NPDES Permits except non-process industrial discharges shall not be allowed in the entire watershed.
- (f) No discharge of sewage, industrial, or other wastes shall be allowed in the entire watershed except for those allowed by Sub-Items (a) through (e) of this Item or Rule .0104 of this Subchapter, and none shall be allowed that have an adverse effect on human health or that are not treated in accordance with the permit or other requirements established by the Division pursuant to G.S. 143-215.1. Upon request by the Commission, a discharger shall disclose all chemical constituents present or potentially present in their wastes and chemicals that could be spilled or be present in runoff from their facility that may have an adverse impact on downstream water quality. These facilities may be required to have spill and treatment failure control plans as well as perform special monitoring for toxic substances.
- (g) No new landfills shall be allowed in the Critical Area, and no NPDES permits shall be issued for landfills to discharge treated leachate in the remainder of the watershed.
- (h) No new permitted sites for land application of residuals or petroleum contaminated soils shall be allowed in the Critical Area.
- (5) Nonpoint source pollution in a WS-III watershed shall meet the following requirements:
- (a) Nonpoint source pollution shall not have an adverse impact on waters for use as a water supply or any other designated use.
- (b) Class WS-III waters shall be protected as water supplies that are located in watersheds that meet average watershed development density levels specified Class WS-III waters in Rule .0624 of this Subchapter.

History Note: Authority G.S. 143-214.1; 143-215.3(a)(1);
Eff. September 9, 1979;
Amended Eff. January 1, 2015; May 1, 2007; April 1, 2003; January 1, 1996; October 1, 1995;
October 1, 1989;
Readopted Eff. November 1, 2019;
Amended Eff. May 1, 2022.

1 15A NCAC 02B .0216 is amended as published in 35:22 NCR 2407-2433 as follows:

2
3 **15A NCAC 02B .0216 FRESH SURFACE WATER QUALITY STANDARDS FOR CLASS WS-IV**
4 **WATERS**

5 The following water quality standards shall apply to surface waters within water supply watersheds classified as WS-
6 IV. Water quality standards applicable to Class C waters as described in Rule .0211 of this Section shall also apply to
7 Class WS-IV waters.

- 8 (1) The best usage of waters classified as WS-IV shall be as a source of water supply for drinking,
9 culinary, or food-processing purposes for those users where a more protective WS-I, WS-II or WS-
10 III classification is not feasible as determined by the Commission in accordance with Rules .0212
11 through .0215 of this Section and any other best usage specified for Class C waters.
- 12 (2) The best usage of waters classified as WS-IV shall be maintained as follows:
- 13 (a) Water quality standards in a WS-IV watershed shall meet the requirements as specified in
14 Item (3) of this Rule.
- 15 (b) Wastewater and stormwater point source discharges in a WS-IV watershed shall meet the
16 requirements as specified in Item (4) of this Rule.
- 17 (c) Nonpoint source pollution in a WS-IV watershed shall meet the requirements as specified
18 in Item (5) of this Rule.
- 19 (d) Following approved treatment, as defined in Rule .0202 of this Section, the waters shall
20 meet the Maximum Contaminant Level concentrations considered safe for drinking,
21 culinary, or food-processing purposes that are specified in 40 CFR Part 141 National
22 Primary Drinking Water Regulations and in the North Carolina Rules Governing Public
23 Water Supplies, 15A NCAC 18C .1500.
- 24 (e) Sources of water pollution that preclude any of the best uses on either a short-term or
25 long-term basis shall be deemed to violate a water quality standard.
- 26 (f) The Class WS-II or WS-III classifications may be used to protect portions of Class WS-IV
27 water supplies. For reclassifications of these portions of WS-IV water supplies occurring
28 after the July 1, 1992 statewide reclassification, a ~~WS-IV classification~~ more protective
29 classification, such as a WS-II or WS-III, that is requested by local governments shall be
30 considered by the Commission if all local governments having jurisdiction in the affected
31 areas have adopted a resolution and the appropriate ordinances as required by G.S. 143-
32 214.5(d) to protect the watershed or if the Commission acts to protect a watershed when
33 one or more local governments has failed to adopt protective measures as required by this
34 Sub-Item.
- 35 (3) Water quality standards applicable to Class WS-IV Waters shall be as follows:
- 36 (a) MBAS (Methylene-Blue Active Substances): not greater than 0.5 mg/l to protect the
37 aesthetic qualities of water supplies and to prevent foaming;

- (b) Odor producing substances contained in sewage, industrial wastes, or other wastes: only such amounts, whether alone or in combination with other substances or waste, as will not cause organoleptic effects in water supplies that cannot be corrected by treatment, impair the palatability of fish, or have an adverse impact, as defined in 15A NCAC 02H .1002, on any best usage established for waters of this class;
- (c) Chlorinated phenolic compounds: not greater than 1.0 ug/l to protect water supplies from taste and odor problems due to chlorinated phenols shall be allowed. Specific phenolic compounds may be given a different limit if it is demonstrated not to cause taste and odor problems and not to be detrimental to other best usage;
- (d) Total hardness: not greater than 100 mg/l as calcium carbonate (CaCO₃ or Ca + Mg);
- (e) Solids, total dissolved: not greater than 500 mg/l;
- (f) Toxic and other deleterious substances that are non-carcinogens:
- (i) Barium: 1.0 mg/l;
 - (ii) Chloride: 250 mg/l;
 - (iii) Nickel: 25 ug/l;
 - (iv) Nitrate nitrogen: 10.0 mg/l;
 - (v) 2,4-D: 70 ug/l;
 - (vi) 2,4,5-TP (Silvex): 10 ug/l; and
 - (vii) Sulfates: 250 mg/l;
- (g) Toxic and other deleterious substances that are carcinogens:
- (i) Aldrin: 0.05 ng/l;
 - (ii) Arsenic: 10 ug/l;
 - (iii) Benzene: 1.19 ug/l;
 - (iv) Carbon tetrachloride: 0.254 ug/l;
 - (v) Chlordane: 0.8 ng/l;
 - (vi) Chlorinated benzenes: 488 ug/l;
 - (vii) DDT: 0.2 ng/l;
 - (viii) Dieldrin: 0.05 ng/l;
 - (ix) Dioxin: 0.000005 ng/l;
 - (x) Heptachlor: 0.08 ng/l;
 - (xi) Hexachlorobutadiene: 0.44 ug/l;
 - (xii) Polynuclear aromatic hydrocarbons (total of all PAHs): 2.8 ng/l;
 - (xiii) Tetrachloroethane (1,1,2,2): 0.17 ug/l;
 - (xiv) Tetrachloroethylene: 0.7 ug/l;
 - (xv) Trichloroethylene: 2.5 ug/l; ~~and~~
 - (xvi) Vinyl Chloride: 0.025 ~~ug/l~~ ug/l; and
 - (xvii) 1,4-Dioxane: 0.35 ug/l.

- 1 (4) Wastewater and stormwater point source discharges in a WS-IV watershed shall meet the following
2 requirements:
- 3 (a) Discharges that qualify for a General NPDES Permit pursuant to 15A NCAC 02H .0127
4 shall be allowed in the entire watershed.
- 5 (b) Discharges from domestic facilities, industrial facilities and trout farms that are subject to
6 Individual NPDES Permits shall be allowed in the entire watershed.
- 7 (c) Stormwater discharges that qualify for an Individual NPDES Permit pursuant to 15A
8 NCAC 02H .0126 shall be allowed in the entire watershed.
- 9 (d) No discharge of sewage, industrial wastes, or other wastes shall be allowed in the entire
10 watershed except for those allowed by Sub-Items (a) through (c) of this Item or Rule .0104
11 of this Subchapter, and none shall be allowed that have an adverse effect on human health
12 or that are not treated in accordance with the permit or other requirements established by
13 the Division pursuant to G.S. 143-215.1. Upon request by the Commission, dischargers or
14 industrial users subject to pretreatment standards shall disclose all chemical constituents
15 present or potentially present in their wastes and chemicals that could be spilled or be
16 present in runoff from their facility which may have an adverse impact on downstream
17 water supplies. These facilities may be required to have spill and treatment failure control
18 plans as well as perform special monitoring for toxic substances.
- 19 (e) New industrial discharges of treated wastewater in the critical area shall meet the
20 provisions of Rule .0224(c)(2)(D), (E), and (G) of this Section and Rule .0203 of this
21 Section.
- 22 (f) New industrial connections and expansions to existing municipal discharges with a
23 pretreatment program pursuant to 15A NCAC 02H .0904 shall be allowed in the entire
24 watershed.
- 25 (g) No new landfills shall be allowed in the Critical Area.
- 26 (h) No new permitted sites for land application residuals or petroleum contaminated soils shall
27 be allowed in the Critical Area.
- 28 (5) Nonpoint source pollution in a WS-IV watershed shall meet the following requirements:
- 29 (a) Nonpoint source pollution shall not have an adverse impact on waters for use as a water
30 supply or any other designated use.
- 31 (b) Class WS-IV waters shall be protected as water supplies that are located in watersheds that
32 meet average watershed development density levels specified for Class WS-IV waters in
33 Rule .0624 of this Subchapter.
- 34

35 *History Note: Authority G.S. 143-214.1; 143-215.3(a)(1);*
36 *Eff. February 1, 1986;*

1 *Amended Eff. January 1, 2015; May 1, 2007; April 1, 2003; June 1, 1996; October 1, 1995; August*
2 *1, 1995; June 1, 1994;*
3 *Readopted Eff. November 1, 2019;*
4 *Amended Eff. May 1, 2022.*

1 15A NCAC 02B .0218 is amended as published in 35:22 NCR 2407-2433 as follows:

2
3 **15A NCAC 02B .0218 FRESH SURFACE WATER QUALITY STANDARDS FOR CLASS WS-V**
4 **WATERS**

5 The following water quality standards shall apply to surface waters within water supply watersheds classified as
6 WS-V. Water quality standards applicable to Class C waters as described in Rule .0211 of this Section shall also apply
7 to Class WS-V waters.

8 (1) The best usage of waters classified as WS-V shall be as waters that are protected as water supplies
9 which are generally upstream and draining to Class WS-IV waters; waters previously used for
10 drinking water supply purposes; or waters used by industry to supply their employees, but not
11 municipalities or counties, with a raw drinking water supply source, although this type of use is not
12 restricted to WS-V classification; and all Class C uses.

13 (2) The best usage of waters classified as WS-V shall be maintained as follows:

14 (a) Water quality standards in a WS-V water shall meet the requirements as specified in Item
15 (3) of this Rule.

16 (b) Wastewater and stormwater point source discharges in a WS-V water shall meet the
17 requirements as specified in Item (4) of this Rule.

18 (c) Nonpoint source pollution in a WS-V water shall meet the requirements as specified in
19 Item (5) of this Rule.

20 (d) Following approved treatment, as defined in Rule .0202 of this Section, the waters shall
21 meet the Maximum Contaminant Level concentrations considered safe for drinking,
22 culinary, or food-processing purposes that are specified in 40 CFR Part 141 National
23 Primary Drinking Water Regulations and in the North Carolina Rules Governing Public
24 Water Supplies, 15A NCAC 18C .1500.

25 (e) The Commission or its designee may apply management requirements for the protection
26 of waters downstream of receiving waters provided in Rule .0203 of this Section.

27 (f) The Commission shall consider a more protective classification for the water supply if a
28 resolution requesting a more protective classification is submitted from all local
29 governments having land use jurisdiction within the affected watershed.

30 (g) Sources of water pollution that preclude any of the best uses on either a short-term or
31 long-term basis shall be deemed to violate a water quality standard;

32 (3) Water quality standards applicable to Class WS-V Waters shall be as follows:

33 (a) MBAS (Methylene-Blue Active Substances): not greater than 0.5 mg/l to protect the
34 aesthetic qualities of water supplies and to prevent foaming;

35 (b) Odor producing substances contained in sewage, industrial wastes, or other wastes: only
36 such amounts, whether alone or in combination with other substances or waste, as will not
37 cause organoleptic effects in water supplies that can not be corrected by treatment, impair

- the palatability of fish, or have an adverse impact, as defined in 15A NCAC 02H .1002, on any best usage established for waters of this class;
- (c) Chlorinated phenolic compounds: not greater than 1.0 ug/l to protect water supplies from taste and odor problems due to chlorinated phenols. Specific phenolic compounds may be given a different limit if it is demonstrated not to cause taste and odor problems and not to be detrimental to other best usage;
 - (d) Total hardness: not greater than 100 mg/l as calcium carbonate (CaCO_3 or $\text{Ca} + \text{Mg}$);
 - (e) Solids, total dissolved: not greater than 500 mg/l;
 - (f) Toxic and other deleterious substances that are non-carcinogens:
 - (i) Barium: 1.0 mg/l;
 - (ii) Chloride: 250 mg/l;
 - (iii) Nickel: 25 ug/l;
 - (iv) Nitrate nitrogen: 10.0 mg/l;
 - (v) 2,4-D: 70 ug/l;
 - (vi) 2,4,5-TP (Silvex): 10 ug/l; and
 - (vii) Sulfates: 250 mg/l;
 - (g) Toxic and other deleterious substances that are carcinogens:
 - (i) Aldrin: 0.05 ng/l;
 - (ii) Arsenic: 10 ug/l;
 - (iii) Benzene: 1.19 ug/l;
 - (iv) Carbon tetrachloride: 0.254 ug/l;
 - (v) Chlordane: 0.8 ng/l;
 - (vi) Chlorinated benzenes: 488 ug/l;
 - (vii) DDT: 0.2 ng/l;
 - (viii) Dieldrin: 0.05 ng/l;
 - (ix) Dioxin: 0.000005 ng/l;
 - (x) Heptachlor: 0.08 ng/l;
 - (xi) Hexachlorobutadiene: 0.44 ug/l;
 - (xii) Polynuclear aromatic hydrocarbons (total of all PAHs): 2.8 ng/l;
 - (xiii) Tetrachloroethane (1,1,2,2): 0.17 ug/l;
 - (xiv) Tetrachloroethylene: 0.7 ug/l;
 - (xv) Trichloroethylene: 2.5 ug/l; ~~and~~
 - (xvi) Vinyl Chloride: 0.025 ~~ug/l~~ ug/l; and
 - (xvii) 1,4-Dioxane: 0.35 ug/l.
- (4) No discharge of sewage, industrial wastes, or other wastes shall be allowed that have an adverse effect on human health or that are not treated in accordance with the permit or other requirements established by the Division pursuant to G.S. 143-215.1. Upon request by the Commission,

1 dischargers or industrial users subject to pretreatment standards shall disclose all chemical
2 constituents present or potentially present in their wastes and chemicals that could be spilled or be
3 present in runoff from their facility which may have an adverse impact on downstream water quality.
4 These facilities may be required to have spill and treatment failure control plans as well as perform
5 special monitoring for toxic substances.

- 6 (5) Nonpoint Source pollution in a WS-V water shall not have an adverse impact on waters for use as
7 water supply or any other designated use.
8

9 *History Note: Authority G.S. 143-214.1; 143-215.3(a)(1);*

10 *Eff. October 1, 1989;*

11 *Amended Eff. January 1, 2015; May 1, 2007; April 1, 2003; October 1, 1995;*

12 *Readopted Eff. November 1, 2019;*

13 *Amended Eff. May 1, 2022.*