Nothing Compares
NORTH CAROLINA

Hearing Officer's Report of Proceedings for the 2020-2022 Surface Water Triennial Review Amendments To Select Rules in 15A NCAC 02B .0200 and .0300

Environmental Management Commission

March 10, 2022

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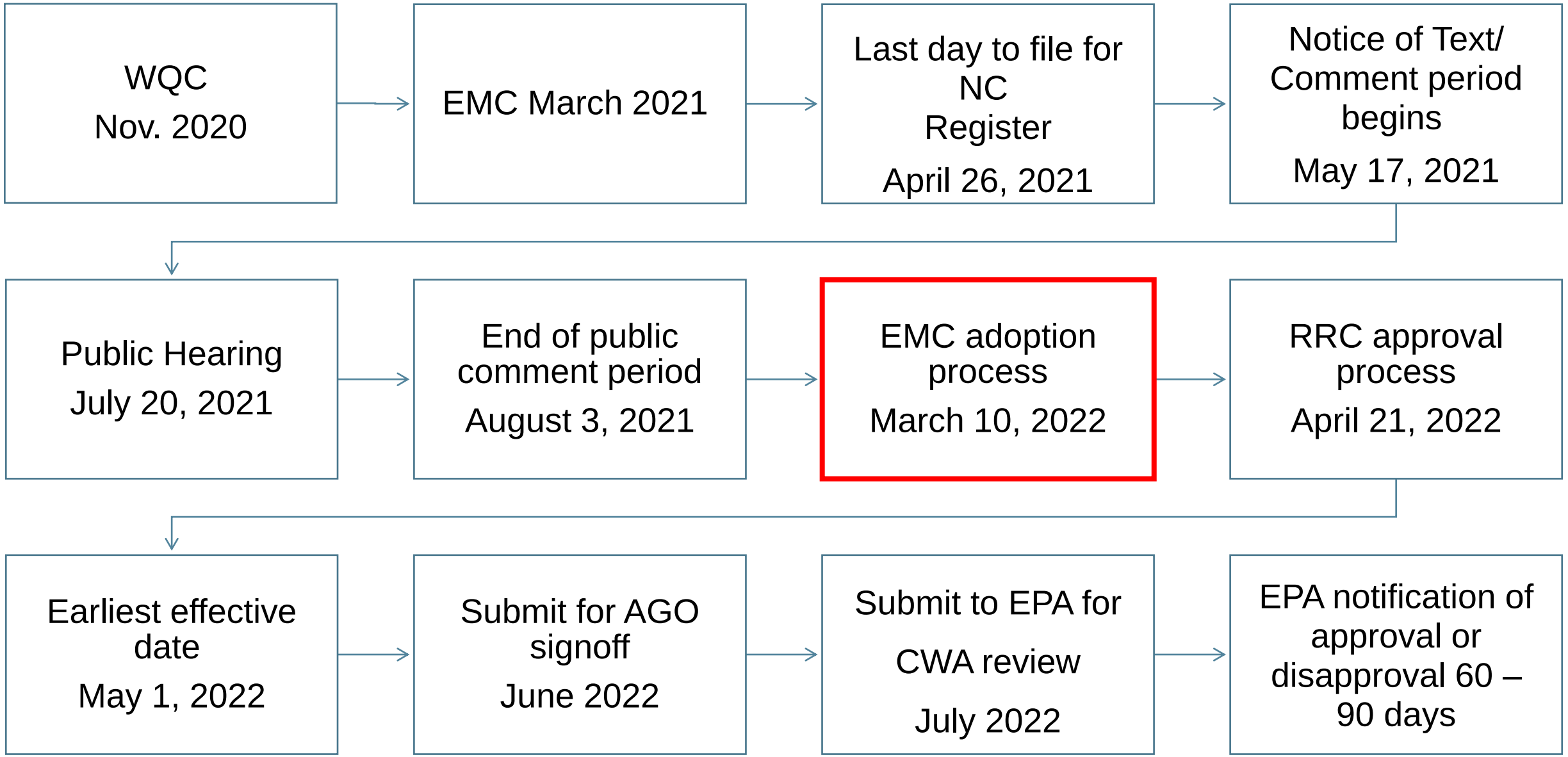
Hearing Officer's Report of Proceedings

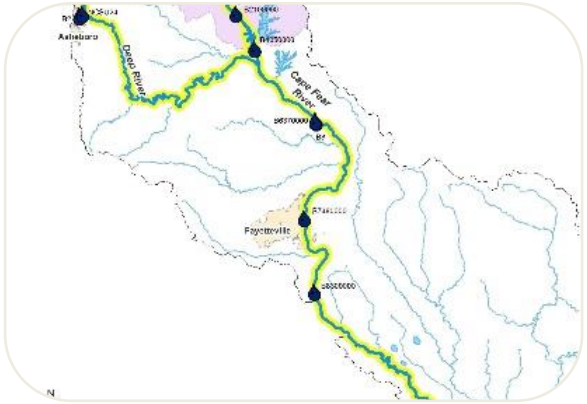
Overview including summaries of:

- 2020-2022 surface water triennial review topics
- Public comments related to each topic
- Hearing Officer's recommendations for adoption

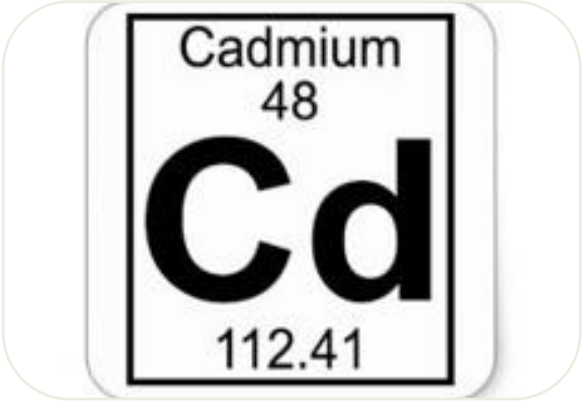
SW Triennial Review Timeline



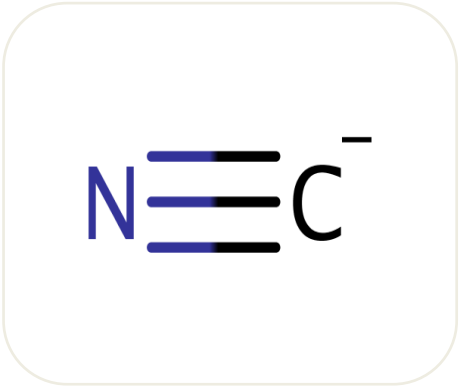
Topics for this Rulemaking



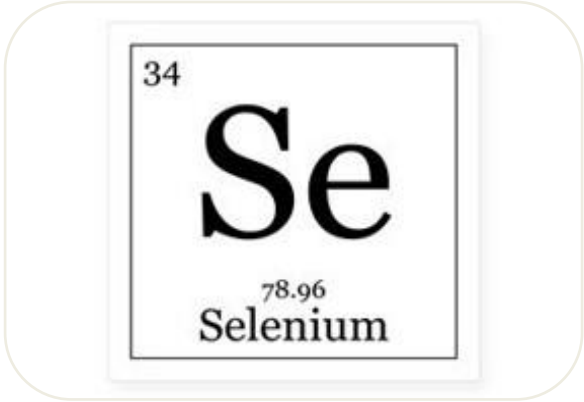
1,4-Dioxane



Cadmium



Cyanide

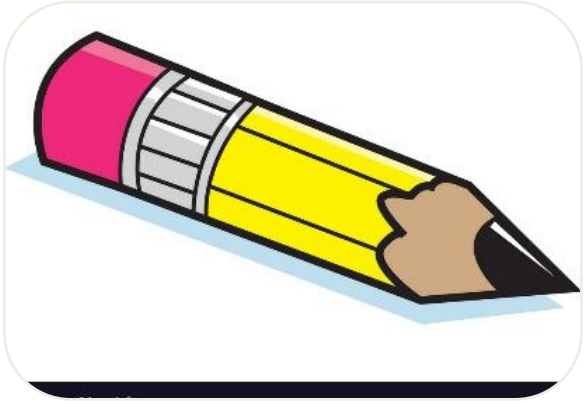


Selenium

Recreational bacteria (E. coli)

Eastern Band of Cherokee Indians

Definitions



Technical corrections

1,4-Dioxane

Proposal was to adopt the following:

- Fish consumption in all waters = **80 ug/L** in 02B .0208
- Water & fish consumption in Water Supplies = **0.35 ug/L** in 02B .0212, .0214, .0215, .0216, and .0218

$$WQS = \frac{RL\ x\ BW}{CPF\ x\ (FCR\ x\ BCF)}$$

CPF (Cancer Potency Factor) = 0.1 mg/kg/day

RL (Risk Level) = 1.00 x 10^{-6}

BW (Body Weight) = 70 kg

FCR (Fish Consumption Rate) = 17.5 g/person-day

BCF (Bioconcentration factor) = 0.5 L/kg

1,4-Dioxane

About 2,000 comments received

- Most supported adoption
- Some requested adoption of 0.35 ug/L for all waters to protect downstream water supplies
- Some mentioned the financial burden of implementing the standard
- EPA commented on the human health exposure factors that were updated in 2015

→ Plan to evaluate in future triennial review

1,4-Dioxane

Final recommendation is to adopt:

- *Fish consumption in all waters = **80 ug/L** in 02B .0208*
- *Water & fish consumption in Water Supplies = **0.35 ug/L** in 02B .0212, .0214, .0215, .0216, and .0218*

Cadmium

Proposal was to:

- Update existing freshwater dissolved, hardness-dependent & saltwater dissolved cadmium standards to match EPA's Aquatic Life Ambient Water Quality Criteria for Cadmium – 2016

Important note

- An error was identified in the freshwater acute cadmium calculation --> this error has been corrected
- Only affects the freshwater acute standard

Comparison of freshwater acute hardness-dependent cadmium standard at varying hardness levels			
In-stream hardness (mg/L)	Current Standard (ug/L)	Proposed Standard (ug/L)	Corrected Standard (ug/L)
10	0.37	0.35	0.32
15	0.52	0.51	0.46
25	0.82	0.83	0.75

Cadmium

About 20 comments received

- Concern expressed that the freshwater acute standard will not be protective of sensitive species

Final recommendation is to adopt:

- *The proposed amendments to the cadmium surface water quality standards in 15A NCAC 02B .0211 and .0220*
- *Including the corrected version of the freshwater acute standard*

Selenium

Proposal was to:

- Replace existing standard = 5 ug/L (total Se)
- EPA's Aquatic Life Ambient Water Quality Criteria for Selenium (Freshwater) – 2016

Priority	Component	Magnitude	Duration
1	Fish egg/ovary	15.1 mg/kg	Instantaneous
2	Fish whole body	8.5 mg/kg	Instantaneous
	Fish muscle tissue	11.3 mg/kg	Instantaneous
3	Water (lentic)	1.5 ug/L	30-day average
	Water (lotic)	3.1 ug/L	30-day average

Selenium

About 25 comments received

- Most support the proposed amendment
- Considerations for site-specific conditions including lake specific bioaccumulation potential, species occurrence, and species-specific toxicity information
- Regarding implementation for NPDES permitting & assessment
- Clarifying language regarding how the fish tissue & water column components are applied

Selenium

Final recommendation is to adopt with modifications:

Add language:

- *Defining instantaneous as it pertains to the duration for fish tissue criteria*
- *Clarifying the use of the fish tissue & water column hierarchy*
- *Clarifying that fish tissue data represents a measure of selenium that has accumulated over time and space at a given water body.*

Cyanide

Proposal was to:

- Replace existing 02B .0211 standard = Cyanide, total = 5 ug/L
- Incorporate free cyanide as an option along with total cyanide
- Proposed standard = Cyanide, free or total = 5 ug/L

Cyanide

About 66 comments received

- Most concerned that “free” cyanide would not be protective & requested maintaining the use of “total” cyanide.
- Comments on use of “available” cyanide instead of “free” cyanide.
- “Available” cyanide addresses concerns of both permittees & the public as expressed in the comments.
- “Available” cyanide accounts for more types of bioavailable cyanide than the “free” cyanide method and excludes non-bioavailable cyanide.

Cyanide

Final recommendations is to adopt

- *Cyanide as = Cyanide, total or available = 5 ug/L*
- *Include definition of available cyanide in 02B .0202 =*

  Available cyanide refers to inorganic cyanides that are free (HCN and CN^-) and metal-cyanide complexes that are dissociated into free cyanide ions under mildly acidic conditions (pH 3 to 6)

Site-Specific Recreational (E. coli)

Proposal was to:

- Establish site-specific standard for Class B waters in 19 Counties in the Asheville Region
- EPA's 2012 Recreational Water Quality Criteria
- *E. coli* indicator replacing existing fecal coliform indicator
- 15A NCAC 02B .0219

Site-Specific Recreational (E. coli)

About 1400 comments received

- Comments for and against statewide adoption of *E. coli*
- Concern with lack of consideration of environmental justice concerns in proposing the site-specific standard
- Comments about lack of information regarding impacts from switching to *E. coli*.

Site-Specific Recreational (E. coli)

Final recommendation is to:

- *Commit to the adoption of E. coli standard statewide for Class B waters*
- *Must evaluate state-wide adoption:*
  - *Consider statistical threshold values, rates of exceedance, and magnitudes as recommended by* EPA
  - *Initiate monitoring effort to inform RIA & develop "cross walk" for TMDLs*
  - *Consider timelines for statewide implementation & "phase-in" approach recommended by EPA*
  - *Include outreach to stakeholders*

Eastern Band of Cherokee Indians

Proposal was to modify the language in 02B .0301 to recognize the EBCI jurisdiction over the waters within boundaries

15A NCAC 02B .0301 language change:

"(f)(2) In addition to Subparagraph ~~(f)(1)~~ (1) of this ~~Rule,~~ Paragraph, for unnamed streams entering other ~~states,~~ states, tribes approved for treatment as a state and administering an United States Environmental Protection Agency approved water quality standards program, or for specific areas of a river basin, the following Rules shall apply:"

Final recommendation is to adopt as proposed

Definitions

Final Recommendation is to add definitions to 15A NCAC 02B .0202:

- *"Lentic"*
- *"Lotic"*
- *"Industrial discharge" (clarification only)*
- *"Available cyanide"*

New Definitions

- *<u>Lentic</u> means an aquatic ecosystem with standing or slow flowing water such as a lake, pond, or reservoir. 02B .0202 (35)*
- *<u>Lotic</u> means an aquatic ecosystem with rapidly flowing water such as a stream or river. 02B .0202 (37)*
- *<u>Available cyanide</u> refers to inorganic cyanides that are free (HCN and CN^-) and metal-cyanide complexes that are dissociated into free cyanide ions under mildly acidic conditions (pH 3 to 6)*

Technical Corrections

15A NCAC 02B .0215

.0215(2)(f) Correct “WS-II classification” to “more protective classification, such as WS-III”

15A NCAC 02B .0216

.0216(2)(f) Correct “WS-IV classification” to “more protective classification, such as WS-II or WS-III”

15A NCAC 02B .0311(o)(4)

Correction to the classification of Weymouth Woods Sandhill Seep near Mill Creek from “Class UWL” to “Class WL UWL.”

15A NCAC 02B .0311(u)

Correction to the effective date of the reclassification of Sandy Creek from “September 1, 2019” to “November 1, 2019.”

15A NCAC 02B .0311(m)

Correction to the reference to Water Supply development requirements from “Rule .0215(3)(b)(i)(E) of this Subchapter” to “Rule .0624 of this Subchapter.”

15A NCAC 02B .0311(m)(2)

Correction to the reference to the Stormwater: High Quality Water rule from “15A NCAC 02H .1006” to “15A NCAC 02H .1021.”

Updated Evaluation of Costs

Evaluated correction of error in the freshwater acute cadmium standard:

- No effect

Evaluated costs associated with switch from “Total or Free” cyanide to “Total or Available” cyanide:

- No change to benefit for regulated parties
- Additional DWR lab cost to replace equipment

Additional Public Comment Topics

EPA Aluminum Criteria (2018)

EPA Ammonia Criteria (2013)

EPA Cyanotoxin Criteria (2016)

PFAS

Methyl Mercury

Flow

Nutrient Criteria

Pesticides

Request for Approval of the Hearing Officer's Report of Proceedings and Adoption of the 2020-2022 Surface Water Triennial Review Amendments to select rules in Sections .0200 and .0300

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