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Document No. 4161

**DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**

CHAPTER 61

Statutory Authority: 1976 Code Sections 48-1-10 et seq.

61-68. Water Classifications and Standards

**Synopsis:**

The Department amended R.61-68 to strengthen and improve the existing regulation and make appropriate revisions of the State's water quality standards in accordance with Section 303(c)(2)(B) of the Federal Clean Water Act (CWA). Section 303(c)(2)(B) requires that South Carolina’s water quality standards be reviewed and revised, where necessary, at least once every three years for the purposes of considering the Environmental Protection Agency’s (EPA) most recently published numeric and narrative criteria and to comply with recent Federal regulatory revisions and recommendations. The Department updated numeric criteria, removed fecal coliform (FC) as a bacterial indicator for recreational uses in specific marine waters of the State while continuing to protect existing shellfish harvesting uses in those waters, made the regulation consistent with recent changes to the S.C. Pollution Control Act (PCA), and revised text for corrections or clarifications for language in the current regulation. See also the Statement of Need and Reasonableness and Statement of Rationale herein. The amendments will be submitted to the General Assembly for review.

A Notice of Drafting for these amendments was published in the *State Register* on March 26, 2010, and a second Notice of Drafting with one additional issue was published in the *State Register* on April 23, 2010.

Section-by-Section Discussion of Amendments:

(1) Revision of Federal toxics criteria to reflect the most current final published criteria in accordance with Sections 304(a) and 307(a) of the CWA.

Section Citation and Explanation of Change

R.61-68. Appendix - Amendment of the Priority Toxic Pollutants Chart to revise criteria for the following pollutants: acrolein, arsenic, and phenol to reflect EPA’s most recent recommendations and to add a footnote nn.

(2) Revision of the applicability of the fecal coliform bacteriological indicator for protection of recreational and shellfish harvesting uses for tidal saltwaters.

Section Citation and Explanation of Change

R.61-68.C.3. – The amended language assures that existing shellfish harvesting uses are protected and maintained.

R.61-68.C.7. and 8. – The amended language ensures that water quality sufficient to protect existing shellfish harvesting uses are protected in tidally-influenced areas of the State where the ebb and flow of tides create a situation where the waters move in multiple and opposing directions along with the tides.

R.61-68.E.14.c.8. – The amended added language ensures that existing shellfish harvesting uses found in Class SA and Class SB waters will be maintained and protected in permits issued by the Department.

R.61-68.E.14.c.9. – The amended language amends the regulation to exclude the use of fecal coliform permit limitations in Class SA and Class SB waters for protection of recreational uses only.

R.61-68.G.12.a. – i. – The Department is proposing to replace the existing column format and replace in tabular format to maintain data in place. No changes were made to a. through d.

R.61-68.G.12.e. – The Department is proposing to delete the fecal coliform bacteriological indicator for protection of recreational uses for Class SA waters.

R.61-68.G.12.i. – The amended added language will ensure that existing shellfish harvesting uses are protected and maintained in Class SA waters.

R.61-68.G.13.a. – i. – The Department is proposing to replace the existing column format and replace in tabular format to maintain data in place. No changes were made to a. through d.

R.61-68.G.13.e. – The Department is proposing to delete the fecal coliform bacteriological indicator for protection of recreational uses for Class SB waters.

R.61-68.G.13.i. – The amended added language will ensure that existing shellfish harvesting uses are protected and maintained in Class SB waters.

(3) Section 48-1-83 of the South Carolina Pollution Control Act (PCA) was recently amended by the South Carolina Legislature to change the amount of the dissolved oxygen (DO) depression that the Department may permit in waters of the State that have naturally low DO.

Section Citation and Explanation of Change

R.61-68.D.4.a.and b. – The amended language deletes the zero in the hundredth position from the 0.1 DO deficit allowance in waters with naturally low DO to make the regulation consistent with the State statute.

(4) Stylistic changes to correct readability, clarity, grammar, punctuation, typography, codification, references, consistency, and language style.

Section Citation and Explanation of Change

R.61-68.B.3. - The amended language adds a definition for 30Q5 that was not listed in the previous definitions, but is currently used in the text of the regulation. This is in response to a request made during the comment period. The Department believes the definition was previously omitted in error.

R.61-68.E.4.b. – The amended language deletes the name of a division of the Bureau of Water that has changed.

**Instructions:** Amend R.61-68 pursuant to each instruction provided with the text of the amendments below.

**Text:**

**Amend R.61-68.B., Definitions, by adding the following definition as B.3 and renumber the remaining definitions 3 through 64 as 4 through 65.**

3. 30Q5 means the annual minimum thirty day average flow rate that occurs with an average frequency of once in five years as published or verified by the U.S. Geological Survey (USGS) or an estimate extrapolated from published or verified USGS data.

**Amend R.61-68.C.3. to read.**

3. Uses in all waters shall be protected, wherever attainable, regardless of flow and classification of waters.

**Amend R.61-68.C.7. to read.**

7. The existing and classified uses of downstream waters shall be maintained and protected and existing uses shall be protected regardless of the classification of the downstream waters. In tidally-influenced waters, the existing and classified uses of both upstream and downstream waters shall be maintained and protected and the existing uses shall be protected regardless of the classification of the upstream and downstream waters.

**Amend R.61-68.C.8. to read.**

8. Where surface waters are not classified by name (unlisted) in R.61-69, Classified Waters, the water quality standards of the class of the stream to which they are tributary shall apply, disregarding any site specific numeric criteria for the named waterbody. In tidal areas where an unlisted tributary may affect or flows between two differently classified waterbodies, regardless of whether the location is upstream or downstream, the more stringent numeric criteria of the classified waters apply to the unlisted tributary, disregarding any site-specific numeric criteria for those waterbodies. This does not preclude the development of site-specific numeric criteria for unlisted tributaries.

**Amend R.61-68.D.4.a. and b. to read.**

a. For purposes of section D. of this regulation, the term “naturally low dissolved oxygen waterbody” is a waterbody that, between and including the months of March and October, has naturally low dissolved oxygen levels at some time and for which limits during those months shall be set based on a critical condition analysis. The term does not include the months of November through February unless low dissolved oxygen levels are known to exist during those months in the waterbody. For a naturally low dissolved oxygen waterbody, the quality of the surface waters shall not be cumulatively lowered more than 0.1 mg/l for dissolved oxygen from point sources and other activities; or

b. Where natural conditions alone create dissolved oxygen concentrations less than 110 percent of the applicable water quality standard established for that waterbody, the minimum acceptable concentration is 90 percent of the natural condition. Under these circumstances, an anthropogenic dissolved oxygen depression greater than 0.1 mg/l shall not be allowed unless it is demonstrated that resident aquatic species shall not be adversely affected pursuant to Section 48-1-83. The Department may modify permit conditions to require appropriate instream biological monitoring.

**Amend R.61-68.E.4.b. to read.**

b. When not specifically covered by permit reporting requirements, any unauthorized discharge into waters of the State which may cause or contribute to an excursion of a water quality standard must be reported by the responsible party to the Department orally within 24 hours of becoming aware of such conditions. Further, written notification must be provided to the Department (Bureau of Water) within five (5) days of becoming aware of such conditions and the written notice must include the following:

(1) A description of the discharge and cause;

(2) The duration of the discharge, including exact dates and times, and if not corrected, the time that the unauthorized discharge is expected to cease, and what steps are being taken to eliminate, minimize, and prevent recurrence of the discharge.

**Amend R.61-68.E.14.c.8. to read.**

(8) In order to protect for the consumption use of shellfish, for SFH waters and Class SA, Class SB, ORW, and ONRW waters with existing shellfish harvesting uses as described in Section C.7., the stated value of 14/100 ml for fecal coliform shall be used as a monthly average number for calculating permit effluent limitations and the stated value of 43/100ml for fecal coliform shall be used as daily maximum number for calculating permit effluent limitations.

**Amend R.61-68.E.14.c.9. to read.**

(9) In order to protect recreational uses for freshwaters of the State, the stated value of 200/100 ml for fecal coliform shall be used as a monthly average number for calculating permit effluent limitations and the stated value of 400/100ml for fecal coliform shall be used as daily maximum number for calculating permit effluent limitations. In order to protect recreational uses in Class SB saltwaters of the State, the stated value of 35/100 ml for enterococci shall be used as a monthly average number for permit effluent limitations and the stated value of 501/100 ml for enterococci shall be used as a daily maximum number for calculating permit effluent limitations. In order to protect recreational uses in all other saltwaters of the State, the stated value of 35/100 ml for enterococci shall be used as a monthly average number for permit effluent limitations and the stated value of 104/100 ml for enterococci shall be used as a daily maximum number for calculating permit effluent limitations.

**Retain R.61-68.G.12. and amend R.61-68.G.12.a. through i. to reformat to a table and amend e. through i. to e. through h. and add new i. to read:**

12. Class SA are tidal saltwaters suitable for primary and secondary contact recreation, crabbing, and fishing, except harvesting of clams, mussels, or oysters for market purposes or human consumption and uses listed in Class SB. Also suitable for the survival and propagation of a balanced indigenous aquatic community of marine fauna and flora.

|  |  |
| --- | --- |
| **Quality Standards for Class SA Waters** | |
| **ITEMS** | **STANDARDS** |
| a. Garbage, cinders, ashes, oils, sludge, or other refuse. | None allowed. |
| b. Treated wastes, toxic wastes, deleterious substances, colored or other wastes except those given in a. above. | None alone or in combination with other substances or wastes in sufficient amounts to make the waters unsafe or unsuitable for primary contact recreation or to impair the waters for any other best usage as determined for the specific waters which are assigned to this class. |
| c. Toxic pollutants listed in the appendix. | As prescribed in Section E of this regulation. |
| d. Dissolved oxygen. | Daily average not less than 5.0 mg/1 with a low of 4.0 mg/1. |
| e. |  |
| e. Enterococci. | Not to exceed a geometric mean of 35/100 ml based on at least four samples collected from a given sampling site over a 30 day period; nor shall more than 10% of the samples exceed a single sample maximum of 104/100 ml during any 30 day period. Additionally, for beach monitoring and notification activities for CWA Section 406 only, samples shall not exceed a single sample maximum of 104/100 ml. |
| f. pH. | Shall not vary more than one-half of a pH unit above or below that of effluent-free waters in the same geological area having a similar total salinity, alkalinity and temperature, but not lower than 6.5 or above 8.5 |
| g. Temperature. | As prescribed in E.12. of this regulation. |
| h. Turbidity. | Not to exceed 25 NTUs provided existing uses are maintained. |

i. The Department shall protect existing shellfish harvesting uses found in Class SA waters consistent with the Antidegradation Rule, Section D.1.a. of this regulation and shall establish permit limits in accordance with Section E.14.c.8. and Section G.11.e. of this regulation.

**Retain R.61-68.G.13. and amend R.61-68.G.13.a. through i. to reformat to a table and amend e. through i. to e. through h. and add new i. to read:**

13. Class SB are tidal saltwaters suitable for primary and secondary contact recreation, crabbing, and fishing, except harvesting of clams, mussels, or oysters for market purposes or human consumption or human consumption. Also suitable for the survival and propagation of a balanced indigenous aquatic community of marine fauna and flora.

|  |  |
| --- | --- |
| **Quality Standards for Class SB Waters** | |
| **ITEMS** | **STANDARDS** |
| a. Garbage, cinders, ashes, oils, sludge, or other refuse | None allowed. |
| b. Treated wastes, toxic wastes, deleterious substances, colored or other wastes except those given in a. above. | None alone or in combination with other substances or wastes in sufficient amounts to make the waters unsafe or unsuitable for primary contact recreation or to impair the waters for any other best usage as determined for the specific waters which are assigned to this class. |
| c. Toxic pollutants listed in the appendix. | As prescribed in Section E of this regulation. |
| d. Dissolved oxygen. | Not less than 4.0 mg/1. |
| e. |  |
| e. Enterococci. | Not to exceed a geometric mean of 35/100 ml based on at least four samples collected from a given sampling site over a 30 day period; nor shall more than 10% of the samples exceed a single sample maximum of 501/100 ml during any 30 day period. Additionally, for beach monitoring and notification activities for CWA Section 406 only, samples shall not exceed a single sample maximum of 501/100 ml. |
| f. pH. | Shall not vary more than one-half of a pH unit above or below that of effluent-free waters in the same geological area having a similar total salinity, alkalinity and temperature, but not lower than 6.5 or above 8.5 |
| g. Temperature. | As prescribed in E.12. of this regulation. |
| h. Turbidity. | Not to exceed 25 NTUs provided existing uses are maintained. |

i. The Department shall protect existing shellfish harvesting uses found in Class SB waters consistent with the Antidegradation Rule, Section D.1.a. of this regulation and shall establish permit limits in accordance with Section E.14.c.8. and Section G.11.e. of this regulation.

**Amend R.61-68 Appendix: Priority Toxic Pollutants chart for Arsenic, Acrolein, and Phenol only; all other entries remain the same, to read:**

**APPENDIX: WATER QUALITY NUMERIC CRITERIA FOR THE PROTECTION OF**

**AQUATIC LIFE AND HUMAN HEALTH**

**PRIORITY TOXIC POLLUTANTS**

| Priority Pollutant | | CAS  Number | Freshwater Aquatic Life | | Saltwater Aquatic Life | | Human Health | | | FR Cite/  Source |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CMC  (μg/L) | CCC  (μg/L) | CMC  (μg/L) | CCC  (μg/L) | For Consumption of: | |  |
| Water &  Organism  (μg/L) | Organism  Only  (μg/L) | MCL  (μg/L) |
| 2 | Arsenic | 7440382 | 340  A, D, K | 150  A, D, K | 69  A, D, Y | 36  A, D, Y | 10  C | 10  C | 10  C | 65FR31682  57FR60848  SDWA |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17 | Acrolein | 107028 | 3 | 3 |  |  | 6  ee, nn | 9  ee, nn |  | 74FR2753574FR46587 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 54 | Phenol | 108952 |  |  |  |  | 10,000  T, ee, nn | 860,000  T, ee, nn |  | 74FR2753574FR46587 |

**R.61-68 Appendix Priority Toxic Pollutants chart, amend the footnotes to add a new footnote nn to read:**

Footnotes:

nn. This criterion has been revised to reflect the EPA’s cancer slope factor (CSF) or reference dose (RfD), as contained in the Integrated Risk Information System (IRIS) as of (Final FR Notcie June 10, 2009). The fish tissue bioconcentration factor (BCF) from the 1980 Ambient Water Quality Criteria document was retained in each case.

**Fiscal Impact Statement:**

No costs to the State or significant cost to its political subdivisions as a whole should be incurred by these amendments. See Statement of Need and Reasonableness below.

**Statement of Need and Reasonableness:**

The statement of need and reasonableness was determined by staff analysis pursuant to S.C. Code Section 1-23-115(C)(1)-(3) and (9)-(11):

DESCRIPTION OF REGULATIONS: Amendment of Regulation 61-68, Water Classifications and Standards.

Purpose: Amendment of R.61-68 will clarify, strengthen, and improve the overall quality of the existing regulation and make appropriate revisions of the State's water quality standards in accordance with Section 303(c)(2)(B) of the Federal Clean Water Act (CWA).

Legal Authority: S.C. Code Sections 48-1-40, 48-1-60 and 48-1-80, implementing the CWA.

Plan for Implementation: The amendments would be incorporated within R.61-68 upon approval of the Board of Health and Environmental Control, the General Assembly and publication in the State Register. The amendments will be implemented in the same manner in which the present regulation is implemented.

DETERMINATION OF NEED AND REASONABLENESS OF THE AMENDED REGULATION BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFIT:

The amendment to R.61-68 is required to comply with Federal requirements of Section 303(c)(2)(B) of the CWA. The amendments to R.61-68 include the following:

Revision and adoption of Federal toxics criteria to reflect the most current final published criteria in accordance with Sections 304(a) and 307(a) of the CWA.

The changes to R.61-68 relating to criteria are reasonable because the stated criteria in the amendment are based on sound scientific principles and are required in order to comply with the goals of Section 101(a)(2) and 303(c) of the CWA for protection and maintenance of the uses of the waters of the State. These changes also reflect the EPA’s most recent human health methodology for developing criteria and also replace the drinking water Maximum Contaminant Level (MCL) in all columns of the human health chart in the Appendix.

Revision of the applicability of the fecal coliform bacteriological indicator for protection of recreational and shellfish harvesting uses for tidal saltwaters.

The changes to R.61-68 remove the fecal coliform bacteriological indicator in Class SA and Class SB waters of the State. Due to the potential for existing shellfish harvesting uses being present in these types of waters of the State and also to ensure the protection of the existing shellfish harvesting uses of any nearby or downstream waters, the Department has added language to specific sections of the regulation to ensure that those existing uses be protected and maintained.

Section 48-1-83 of the South Carolina Pollution Control Act (PCA) was recently amended by the South Carolina Legislature to change the amount of the dissolved oxygen (DO) depression that the Department may permit in waters of the State that have naturally low DO.

The Department amended the current language of R.61-68 to reflect this recent change in the language of the PCA so that the regulation will be consistent with the State statute.

Stylistic changes to correct for: readability, grammar, punctuation, typography, codification, references, and language style.

The changes to R.61-68 include a new definition for text contained in the current regulation. This will improve the clarity and readability of the regulation. The changes to R.61-68 also include corrections due to typographic errors and punctuation.

DETERMINATION OF COSTS AND BENEFITS:

Existing staff and resources will be utilized to implement these amendments to the regulation. No additional cost will be incurred by the State if the revisions are implemented and therefore, no additional State funding is being requested.

In reviewing the potential for significant economic impact of the amendments to R.61-68, the Department specifically evaluated situations in which costs would most likely be incurred by the regulated community. These estimates addressed the specific revisions by issue after determining those of greatest potential impact. The Department found that the overall impact to the State’s political subdivisions or the regulated community as a whole was not likely to be significant in that the existing standards would have incurred similar cost or the fact that the design standards required under the amendment will be substantially consistent with the current guidelines and review guidelines utilized by the Department.

UNCERTAINTIES OF ESTIMATES:

Minimal.

EFFECT ON ENVIRONMENT AND PUBLIC HEALTH:

Implementation of these amendments will not compromise the protection of the environment or the health and safety of the citizenry of the State. The amendments to R.61-68 will promote and protect aquatic life and human health by the regulation of pollutants into waters of the State.

DETRIMENTAL EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATIONS ARE NOT IMPLEMENTED:

Failure by the Department to incorporate appropriately protective water quality standards in R.61-68 that are the basis for issuance of National Pollutant Discharge Elimination System (NPDES) permits, stormwater permits, wasteload and load allocations, groundwater remediation plans, and multiple other program areas will lead to contamination of the waters of the State with detrimental effects on the health of flora and fauna in the State as well as the citizens of South Carolina.

**Statement of Rationale:**

The statement of rationale was determined by staff analysis pursuant to S.C. Code Section 1-23-110(A)(3)(h).

The first issue contained in the amendments of R.61-68 is a requirement of the CWA and is necessary for compliance with EPA’s recommendations for the triennial review of the water quality standards to ensure consistency with the CWA. The second issue addresses an issue where the Department maintained two bacteriological indicator species for the protection of recreational swimming in marine waters during a transitional period as the Department collected data for the most recently adopted indicator species and while permits were issued with the new indicator species included. Sufficient time has passed and the amendment will remove the fecal coliform bacterial indicator species for protection of recreational uses in some saltwaters. Language is being added to ensure that fecal coliform is used to protect any existing shellfish harvesting uses found in waters of the State. The next amendment addresses the inconsistency of the current language found in the regulation to the PCA by revising the language which allows a depression deficit of dissolved oxygen (DO) in waters with naturally low DO. The remaining issue includes added language and corrections for clarity of the existing language in the regulation.