

**SYNOPSIS OF
PROPOSED AMENDMENTS TO THE RULES OF THE
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
RELATING TO WATER QUALITY CONTROL, CHAPTER 391-3-6**

The Proposed Amendments revise **Rule 391-3-6-.03 Water Use Classifications and Water Quality Standards**.

Purpose of Amendment:

The Federal Clean Water Act and the Georgia Water Quality Control Act authorize EPD to develop water quality standards and to periodically review and update those standards. The periodic review must be done at least every three years and is known as the Triennial Review. EPD is proposing revisions to the Rules and Regulations for Water Quality Control to reflect findings during the Triennial Review and to establish a new dissolved oxygen criterion for the designated use of Coastal Fishing which applies to the Savannah Harbor area.

EPD has been working with the U.S. Environmental Protection Agency (EPA) and the South Carolina Department of Health and Environmental Control (DHEC) to develop a new dissolved oxygen criterion for the designated use of Coastal Fishing, which applies to the Savannah Harbor area. The State's current dissolved oxygen criterion for this area was rejected by U.S. EPA in 1989 and EPD needs to adopt an approvable dissolved oxygen criterion in order to revise the total maximum daily load for dissolved oxygen that was written on the disapproved standard in 2006. Wastewater discharge permitting in the Savannah River Basin is on hold until a new criterion is adopted. In addition, the Federal Clean Water Act requires States to review their water quality standards at least once every three years, and revise them if appropriate. Since the schedule for the development of a new dissolved oxygen criterion currently coincides with the schedule for the Triennial Review Process, the proposal of a new dissolved oxygen criterion has been included with other revisions under Triennial Review.

Rule 391-3-6-.03(2)(f)&(g) Water Quality Enhancement is proposed for amendment by adding language to clarify the purpose and use of variances and use attainability analysis.

Rule 391-3-6-.03(3) Definitions is proposed for amendment by adding sub-paragraph (i) to provide a definition for "Naturally Variable Parameters" because it is recognized that certain parameters including dissolved oxygen, pH, bacteria, turbidity and water temperature, vary through a given period of time (such as daily or seasonally) due to natural conditions.

Rule 391-3-6-.03(3) Definitions is proposed for amendment by adding sub-paragraph (m) to provide a definition for "Significant Figures" to describe the appropriate rounding used to assess standards.

Rule 391-3-6-.03(5) General Criteria for All Waters is proposed for amendment of sub-paragraphs (e) (iii) and (e)(iv) for the Toxic Priority Pollutants criteria based on EPA's most current National Recommended Criteria.

The proposed changes to the Georgia numeric human health criteria reflect changes that have occurred with a chemical cancer potency factor or noncancer reference dose, and more

significantly by using the new general population fish consumption rate of 17.5 grams per day in the criterion calculations.

An additional proposed change to most of the organic toxic priority pollutants is the inclusion of the Chemical Abstract Service Registry Number (CAS number), with the chemical name. The CAS number is a unique identifier assigned to each chemical and to some mixtures of chemicals, by the Chemical Abstracts Service, a division of the American Chemical Society.

It is also proposed that the cadmium acute and chronic criteria equations and the freshwater pentachlorophenol criterion equation be updated to reflect the most current EPA Guidance.

Rule 391-3-6-.03(13) Acceptance of Data is proposed for amendment to provide a mechanism for EPD to consider data that was not collected under an approved sampling and quality assurance plan. The proposed amendment adds a statement that EPD may use water quality data for screening purposes if data were not collected under an approved sampling and quality assurance plan. This screening data will aid in focusing EPD's future monitoring efforts.

Rule 391-3-6-.03(14) Specific Water Use Classifications is proposed for amendment to provide new dissolved oxygen criteria for the Coastal Fishing designated use. The criteria will be 5.0 mg/L (daily average) and 4.0 mg/L (daily minimum). The proposed criteria also contains a provision that if it is determined that the "natural" dissolved oxygen concentration in the waterbody is less than the values stated above, then the criteria would revert to the "natural" dissolved oxygen concentration and the water quality standard would allow for a 0.1 mg/L deficit from "natural". In addition, up to a 10% deficit will be allowed if it is demonstrated that resident aquatic species shall not be adversely affected.

Rule 391-3-6-.03(17) Specific Criteria for Lakes and Major Lake Tributaries Water Quality Enhancement is proposed for amendment by clarifying the chlorophyll a standard for each lake by adding frequency (more than once) and duration (most recent five years). This will also provide agreement with the State's assessment methodology for the impaired waters list.

STATEMENT OF RATIONALE

Rules for Water Quality Control, Chapter 391-3-6

Chapter 391-3-6 Rules for Water Quality Control establish, pursuant to O.C.G.A. Section 12-5-20, water quality standards for the State of Georgia. Water quality standards are made up of three parts including: designated uses, criteria (either numeric or narrative), and antidegradation policy. Water quality standards are used for a number of purposes under the Clean Water Act including assessing the quality of the State's waters in accordance with Sections 305(b) and 303(d) of the Clean Water Act, in developing Total Maximum Daily Loads to bring waters not meeting their standards back into compliance and in issuing National Pollutant Discharge Elimination System Permits.

The State of Georgia has been delegated by EPA to establish water quality standards. The Federal Clean Water Act and the Georgia Water Quality Control Act authorize EPD to develop water quality standards and to periodically review and update those standards. The periodic review must be done at least every three years and is known as the Triennial Review.

EPD is proposing revisions to Rule 391-3-6-.03 for the following reasons:

- In response to stakeholder input, revisions are proposed to clarify the purpose and use of variances and use attainability analysis.
- The Division is proposing to make revisions to its water quality standards by adding a definition for "Naturally Variable Parameters" because certain parameters including dissolved oxygen, pH, bacteria, turbidity and water temperature, vary over a given period of time (such as daily or seasonally) due to natural conditions. The method currently used in the assessment of State waters allows for a 10% excursion frequency for these parameters to account for variability. This excursion frequency has been supported by EPA in the past and is used by other States in Region IV. The language is being added to rules to help clarify how waters are assessed for these parameters.
- Due to comments received regarding the 2006 303(d) list, the Division is proposing to provide a definition for "Significant Figures" to describe the appropriate rounding used to assess standards based on the accuracy and precision of the measurement.
- In accordance with current EPA guidance (*National Recommended Water Quality Criteria 2006*), the Division is proposing that the toxic priority pollutant human health criteria be updated by using the new general population fish consumption rate of 17.5 grams per day in the criterion calculations. This results in a criterion that is approximately 2.7 times lower than that calculated using the previous 6.5 grams per day rate. The human health criteria for phenol, toluene and acrolein are also being updated based on new reference dose concentrations provided in U.S. EPA's IRIS database. In addition, the inclusion of the Chemical Abstract Service Registry Number (CAS RN), with the chemical name is being proposed for most of the organic toxic priority pollutants to prevent any confusion concerning the chemical identity when an alternate name for a chemical is used. It is also proposed that the cadmium acute and chronic criteria equations be updated to reflect the most current EPA Guidance.

- Based on a comment received during the triennial review public meetings, the Division is proposing that water quality data may be used for screening purposes if data were not collected under an approved sampling quality assurance plan (SQAP). This change provides a mechanism for EPD to consider data that was not collected under an approved SQAP. This screening data will aid in focusing EPD's future monitoring efforts.
- EPD is proposing a new dissolved oxygen criterion for the Coastal Fishing designated use. The current Coastal Fishing dissolved oxygen criteria for the Savannah River was disapproved by EPA in 1989. A total maximum daily load (TMDL) for dissolved oxygen was established for the Savannah Harbor based on the disapproved criteria. Under the current disapproved dissolved oxygen criteria and the TMDL that was written on it, all dischargers from Augusta to the Harbor (on the Savannah River and its tributaries) would have to meet an oxygen demanding load of zero. An approvable dissolved oxygen criteria needs to be adopted in order for the TMDL to be rewritten and in order for EPD to move forward with wastewater discharge permit issuances and reissuances.

The proposed dissolved oxygen criterion is consistent with the criterion that South Carolina has for the Savannah River. EPD investigated a number of possible criteria including the modified freshwater standard and criteria based on a modified Virginia Province standard. EPD has determined that the modified freshwater standard is most appropriate. The proposed standard is a daily average of 5.0 mg/L, not less than 4.0 mg/L with a provision that if it is determined that the "natural dissolved oxygen" in the waterbody is less than the values stated above, then the criteria would revert to the "natural dissolved oxygen" and the water quality standard would allow for a 0.1 mg/L deficit from "natural". In addition, up to a 10% deficit will be allowed if it is demonstrated that resident aquatic species shall not be adversely affected. Much work was done to model what "natural dissolved oxygen" conditions of the waterbody would be and to compare these numbers with the dissolved oxygen needs of aquatic life in the area. Information about the modeling performed, presentations given and other information can be found at the website: ftp.planetwater.com; username: savannah; Password: savharbortmdl.

- The Division proposes to clarify the site-specific chlorophyll *a* standards for lake waters by adding frequency (more than once) and duration (most recent five years) to the magnitude currently given in the rules. The chlorophyll *a* standards for lakes were adopted primarily from data collected during intensive two year monitoring period without any specification on the duration or frequency of exceedances that would constitute use impairment. These data were insufficient in capturing the cyclic variation that has since been documented with further monitoring. The magnitude, frequency, and duration will help to account for natural variability in chlorophyll *a* levels observed and will provide agreement with the State's assessment methodology for the impaired waters list.
- Correction of several typographical, grammatical and formatting errors, including inconsistencies with the document outline format and character errors from software conversions is necessary.

The proposed revisions described above are not expected to result in significant additional costs to the Department of Natural Resources or to the regulated community. This is because 1) many of the revisions are simply clarifying the Rules to state what EPD is already doing; 2) few permittees have the human health criteria in their permits, so the change to the criteria is not

expected to cause problems for many permittees; 3) while the implementation of the new dissolved oxygen criteria in the Savannah Harbor is expected to cause the regulated community and EPD to have to spend considerable resources, this would occur even if EPD did not adopt a new criteria. As explained above, the current dissolved oxygen TMDL for the Savannah Harbor assigns a wasteload allocation of zero to all dischargers between Augusta and the Harbor on the River itself and its tributaries. The new criteria will not result in any greater burden on the permittees and will offer some alternatives. Failure to adopt an approvable dissolved oxygen criterion, on the other hand, may result in an inability for EPD to issue or reissue wastewater discharge permits in the area impacted by the current TMDL because EPA may not allow EPD to issue a variance to the disapproved criteria.