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

The Rules of the Department of the Natural Resources, Chapter 391-3-6, Water Quality Control are hereby amended and revised for specific Rules, or such subdivisions thereof as may be indicated.

[Note: Underlined text is proposed to be added. ~~Lined-through~~ text is proposed to be deleted.]

CHAPTER 391-3-6 WATER QUALITY CONTROL

391-3-6-.03 Designated Uses~~Water Use Classifications~~ and Water Quality Standards

(1) Purpose. The establishment of water quality standards.

(2) Water Quality Enhancement:

(a) The purposes and intent of the State in establishing Water Quality Standards are to provide enhancement of water quality and prevention of pollution; to protect the public health or welfare in accordance with the public interest for drinking water supplies, conservation of fish, wildlife and other beneficial aquatic life, and agricultural, industrial, recreational, and other reasonable and necessary uses and to maintain and improve the biological integrity of the waters of the State.

(b) The following paragraphs describe the three tiers of the State's waters.

(i) Tier 1 - Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

(ii) Tier 2 - Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the division finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the division's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the division shall assure water quality adequate to protect existing uses fully. Further, the division shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

1. The division may identify waters for Tier 2 protections on a parameter-by-parameter basis or on a water body-by-water body basis in accordance with 40 CFR 131.12(a)(2)(i).

2. Before allowing any lowering of high quality water the division shall find, after an analysis of alternatives, that such a lowering is necessary to accommodate important

economic or social development in the area in which the waters are located. The analysis of alternatives shall evaluate a range of practicable alternatives that would prevent or lessen the degradation associated with the proposed activity. When the analysis of alternatives identifies one or more practicable alternatives, the division shall only find that a lowering is necessary if one such alternative is selected for implementation.

(iii) Tier 3 - Outstanding National Resource Waters (ONRW). This designation will be considered for an outstanding national resource waters, such as waters of National or State parks and wildlife refuges and waters of exceptional aesthetic, historic, recreational, or ecological significance. For waters designated as ONRW, existing water quality shall be maintained and protected. The following waters below are designated as ONRWs:

Conasauga River within the Cohutta Wilderness Area of the Chattahoochee National Forest (headwaters to Forest Service Road 17).

1. No new point source discharges or increases in the discharge of pollutants above permitted level from existing point source discharges to ONRW shall be allowed.

2. Existing point source discharges to ONRW shall be allowed, provided they are treated or controlled in accordance with applicable laws and regulations.

3. New point source discharges or expansions of existing point source discharges to waters upstream of, or tributary to, ONRW shall be regulated in accordance with applicable laws and regulations, including compliance with water quality criteria for the designated use ~~classification~~ applicable to the particular water. However, no new point source discharge or expansion of an existing point source discharge to waters upstream of, or tributary to, ONRW shall be allowed if such discharge would not maintain and protect water quality within the ONRW.

4. Activities that result in short-term, temporary, and limited changes to water quality may be allowed if authorized by the Division and the water quality is returned or restored to conditions equal to or better than those existing prior to the activities.

(c) In applying these policies and requirements, the Division will recognize and protect the interest of the Federal Government in interstate and intrastate (including coastal and estuarine) waters. Toward this end the Division will consult and cooperate with the Environmental Protection Agency on all matters affecting the Federal interest.

(d) In those cases where potential water quality impairment associated with a thermal discharge is involved, the division's actions shall be consistent with Section 316 of the Federal Clean Water Act.

(e) Variance**.** Variances are a temporary modification to the designated use and associated criteria. Variances may be written for a specific geographic area, pollutant, or source. The State may issue variances that can provide relief to a permittee while they upgrade their facility to meet the standard. Variances are based on a use attainability demonstration, which requires a scientific assessment of factors affecting the attainment of a standard. Variances target achievement of the highest attainable water quality standard, must be reviewed every three years, and do not allow for a reduction in treatment efforts. Before a variance to a water quality standard is applied to a permitted

discharger or to a water body, it must be demonstrated that one of the following factors has been satisfied:

(i) Naturally occurring pollutant concentrations prevent the attainment of the use; or

(ii) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating Georgia's water conservation requirements to enable uses to be met; or

(iii) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place, or

(iv) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or

(v) Physical conditions related to the natural features of the water body such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or

(vi) Controls more stringent than those required by sections 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

(f) Removal of a Designated Use**.** The State may remove a designated use which is not an existing use, as defined in 40 CFR 131.3, or establish sub-categories of a use if the State can demonstrate that attaining the designated use is not feasible. This is done through a use attainability analysis. The use attainability analysis is a scientific assessment of factors affecting the attainment of a use and may include physical, chemical, biological and/or economic factors. A detailed analysis is required demonstrating that certain conditions are met indicating that the designated use cannot be met and should be removed. The use attainability analysis should be conducted in accordance with the US EPA Technical Support Manual: *Waterbody Surveys and Assessments for Conducting Use Attainability Analyses* and /or any State guidance documents. The factors that can be used are as follows:

(i) Naturally occurring pollutant concentrations prevent the attainment of the use; or

(ii) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating Georgia's water conservation requirements to enable uses to be met; or

(iii) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place, or

(iv) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or

(v) Physical conditions related to the natural features of the water body such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or

(vi) Controls more stringent than those required by sections 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

(g) Schedules of Compliance. The division may allow the use of schedules of compliance for water quality based effluent limits in NPDES permits in accordance with 40 CFR 131.15. Such schedules of compliance shall be implemented in accordance with 391-3-6-.06 (10).

(3) Definitions. All terms used in this paragraph shall be interpreted in accordance with definitions as set forth in the Act and as otherwise herein defined:

(a) "Acute criteria" corresponds to EPA's definition for Criteria Maximum Concentration which is defined in 40 CFR 131.36 as the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (1-hour average) without deleterious effects.

(b) "Biological integrity" is functionally defined as the condition of the aquatic community inhabiting least impaired waterbodies of a specified habitat measured by community structure and function.

(c) "Chronic criteria" corresponds to EPA's definition for Criteria Continuous Concentration which is defined in 40 CFR 131.36 as the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects.

(d) "Coastal waters" are those littoral recreational waters on the ocean side of the Georgia coast.

(e) "Estuarine waters" are areas where salt, fresh and brackish waters mix. Those areas on the coast of Georgia have a salinity of 0.5 parts per thousand and greater. This includes all of the creeks, rivers, and sounds of the coastal area of Georgia and portions of the Savannah, Ogeechee, Altamaha, Satilla, and St. Marys Rivers where those rivers flow into coastal sounds. Mixing areas are generally maintained by seawater transported through the sounds by tide and wind which is mixed with fresh water supplied by land runoff, subsurface water and river flow. Mixing areas have moving boundaries based upon but not limited to river stage, rainfall, moon phase and water use. (For the purposes of this rule salinity shall be analyzed by in situ measurement using a properly calibrated multi-parametric probe connected by hard line to a deck display or by measuring electrical conductivity according to one of the methods specified in Title 40, Code of Federal Regulations, Part 136 and applying the guidance for conversion to salinity in the

same volume. Collection of salinity samples must consider river flow, precipitation, tidal influences and other variables of the estuarine environment and must conform to the National Coastal Assessment-Quality Assurance Project Plan 2001-2004 (EPA/620/R-01/002). Measurements at each sampling location must be made in a distribution in the water column according to the Quality Assurance Project Plan, with the minimum observations at each station including surface, mid-depth and near-bottom readings. In situ salinity analysis must comply with the Quality Assurance Project Plan and the manufacturer's guidance for the specific instrument used).

(f) "Existing instream water uses" include water uses actually attained in the water body on or after November 28, 1975.

(g) "Intake temperature" is the natural or background temperature of a particular water body unaffected by any man-made discharge or thermal input.

(h) "Critical conditions" are the collection of conditions for a particular water body used to develop Total Maximum Daily Loads (TMDLs), determine NPDES permit limits, or assess the protection of water quality standards. The Division considers appropriate critical conditions to represent the event that would occur once in ten years on the average or less often, unless otherwise stated.

(i) "Natural conditions" are the collection of conditions for a particular water body used to develop numeric criteria for water quality standards which are based on natural conditions. This is commonly the case for temperature, pH, and natural dissolved oxygen standards. For this purpose the Division defines "natural conditions" as those that would remain after removal of all point sources and water intakes, would remain after removal of man made or induced nonpoint sources of pollution, but may include irretrievable effects of man's activities, unless otherwise stated. Natural conditions shall be developed by an examination of historic data, comparisons to reference watersheds, application of mathematical models, or any other procedure deemed appropriate by the Director.

(j) "Naturally variable parameters." 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. Assessment of State waters may allow for a 10% excursion frequency for these parameters.

(k) "Practicable alternatives" are alternatives that are technologically possible, able to be put into practice, and economically viable.

(l) "Primary contact recreation" is full immersion contact with water where there is significant risk of ingestion that includes, but is not limited to, swimming, diving, whitewater boating (Class III and above), water skiing, and surfing.

(~~l~~m) "Reasonable and necessary uses" means drinking water supplies, conservation, protection, and propagation of fish, shellfish, wildlife and other beneficial aquatic life, agricultural, industrial, recreational, and other legitimate uses.

(~~m~~n) "Secondary contact recreation" is incidental contact with the water not involving a significant risk of water ingestion such as canoeing, fishing, kayaking, motor boating, rowing, tubing, splashing, wading, and occasional swimming.

(~~n~~o) "Shellfish" refers to clams, oysters, scallops, mussels, and other bivalve mollusks.

(~~o~~p) "Significant Figures." The number of "significant figures" represented in numeric criteria are the number of figures or digits that have meaning as estimated from the accuracy and precision with which the quantity was measured and the data were rounded off. Technical guidance on significant figures, including rules for rounding off following mathematical operations, is provided in the publication entitled *Standard Methods for the Examination of Water and Wastewater*, in "Part 1050 Expression of Results, B. Significant Figures" (American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF); 18th, 19th, 20th, or subsequent Editions).

(~~p~~q) "Water" or "waters of the State" means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, wetlands, and all other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the State which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.

(4) **Designated Uses~~Water Use Classifications~~**. Designated uses ~~Water use classifications~~ for which the criteria of this Paragraph are applicable are as follows:

(a) Drinking Water Supplies

(b) Recreation

(c) Fishing, Propagation of Fish, Shellfish, Game and Other Aquatic Life

(d) Wild River

(e) Scenic River

(f) Coastal Fishing

(5) **General Criteria for All Waters**. The following criteria are deemed to be necessary and applicable to all waters of the State:

(a) All waters shall be free from materials associated with municipal or domestic sewage, industrial waste or any other waste which will settle to form sludge deposits that become putrescent, unsightly or otherwise objectionable.

(b) All waters shall be free from oil, scum and floating debris associated with municipal or domestic sewage, industrial waste or other discharges in amounts sufficient to be unsightly or to ~~unreasonably~~ interfere with the designated use of the water body.

(c) All waters shall be free from material related to municipal, industrial or other discharges which produce turbidity, color, odor or other objectionable conditions which ~~unreasonably~~ interfere with the designated use of the water body.

(d) Turbidity. The following standard is in addition to the narrative turbidity standard in Paragraph 391-3-6-.03(5)(c) above: All waters shall be free from turbidity which results in a substantial visual contrast in a water body due to a man-made activity. The upstream appearance of a body of water shall be as observed at a point immediately upstream of a turbidity-causing man-made activity. That upstream appearance shall be compared to a point which is located sufficiently downstream from the activity so as to provide an appropriate mixing zone. For land disturbing activities, proper design, installation, and maintenance of best management practices and compliance with issued permits shall constitute compliance with Paragraph 391-3-6-.03(5)(d).

(e) All waters shall be free from toxic, corrosive, acidic and caustic substances discharged from municipalities, industries or other sources, such as nonpoint sources, in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life.

(i) Instream concentrations of the following chemical constituents which are considered to be other toxic pollutants of concern in the State of Georgia shall not exceed the criteria indicated below under 7-day, 10-year minimum flow (7Q10) or higher stream flow conditions except within established mixing zones:

1.	2,4-Dichlorophenoxyacetic acid (2,4-D)	70 μg/L
2.	Methoxychlor	0.03 μg/L*
3.	2,4,5-Trichlorophenoxy propionic acid (TP Silvex)	50 μg/L

(ii) Instream concentrations of the following chemical constituents listed by the U.S. Environmental Protection Agency as toxic priority pollutants pursuant to Section 307(a)(1) of the Federal Clean Water Act (as amended) shall not exceed the acute criteria indicated below under 1-day, 10-year minimum flow (1Q10) or higher stream flow conditions and shall not exceed the chronic criteria indicated below under 7-day, 10-year minimum flow (7Q10) or higher stream flow conditions except within established mixing zones or in accordance with site specific effluent limitations developed in accordance with procedures presented in 391-3-6-.06. Unless otherwise specified, the criteria below are listed in their total recoverable form. Because most of the numeric criteria for the metals below are listed as the dissolved form, total recoverable concentrations of metals that are measured instream will need to be translated to the dissolved form in order to compare the instream data with the numeric criteria. This translation will be performed using guidance found in "Guidance Document of Dynamic Modeling and Translators August 1993" found in Appendix J of EPA's Water Quality Standards Handbook: Second Edition, EPA-823-B-94-005a or by using other appropriate guidance from EPA.

		Acute	Chronic
1.	Arsenic		
	(a) Freshwater	340 μg/L [1]	150 μg/L [1]
	(b) Coastal and Estuarine Waters	69 μg/L [1]	36 μg/L [1]
2.	Cadmium		
	(a) Freshwater	0.94 μg/L [1, 3]	0.43 μg/L [1, 3]
	(b) Coastal and Estuarine Waters	33 μg/L [1]	7.9 μg/L [1]
3.	Chromium III		
	(a) Freshwater	320 μg/L [1,3]	42 μg/L [1,3]
	(b) Coastal and Estuarine Waters	--	--
4.	Chromium VI		

	(a) Freshwater	16 µg/L [1]	11 µg/L [1]
	(b) Coastal and Estuarine Waters	1,100 µg/L [1]	50 µg/L [1]
5.	Copper[5]		
	(a) Freshwater	7.0 µg/L [1,2*,3]	5.0 µg/L [1,2*,3]
	(b) Coastal and Estuarine Waters	4.8 µg/L [1,2]	3.1 µg/L [1,2]
6.	Lead		
	(a) Freshwater	30 µg/L [1,3]	1.2 µg/L [1,2*,3]
	(b) Coastal and Estuarine Waters	210 µg/L [1]	8.1 µg/L [1]
7.	Mercury		
	(a) Freshwater	1.4 µg/L	0.012 µg/L [2]
	(b) Coastal and Estuarine Waters	1.8 µg/L	0.025 µg/L [2]
8.	Nickel		
	(a) Freshwater	260 µg/L [1,3]	29 µg/L [1,3]
	(b) Coastal and Estuarine Waters	74 µg/L [1]	8.2 µg/L [1]
9.	Selenium		
	(a) Freshwater	--	5.0 µg/L
	(b) Coastal and Estuarine Waters	290 µg/L [1]	71 µg/L [1]
10.	Silver	-- [4]	-- [4]
11.	Zinc		
	(a) Freshwater	65 µg/L [1,3]	65 µg/L [1,3]
	(b) Coastal and Estuarine Waters	90 µg/L [1]	81 µg/L [1]
12.	Lindane [Hexachlorocyclohexane (g-BHC-Gamma)]		
	(a) Freshwater	0.95 µg/L	

[1] The in-stream criterion is expressed in terms of the dissolved fraction in the water column. Conversion factors used to calculate dissolved criteria are found in the EPA document – National Recommended Water Quality Criteria – EPA 2006.
[2] The in-stream criterion is lower than the EPD laboratory detection limits (A "*" indicates that the criterion may be higher than or lower than EPD laboratory detection limits depending upon the hardness of the water).
[3] The freshwater aquatic life criteria for these metals are expressed as a function of total hardness (mg/L) in a water body and a water effect ratio (WER). Values in the table above assume a hardness of 50 mg/L CaCO3 and a WER of 1. For other hardness values, the following equations from the EPA document – National Recommended Water Quality Criteria – EPA 2006 should be used. For site-specific criteria with WER values other than 1, see 391-3-6-.03(18)(b).
[4] This pollutant is addressed in 391-3-6-.06.
[5] For applicable site-specific criteria, see 391-3-6-.03(18)(a).

Cadmium

acute criteria = WER* $(e^{(0.9789[\ln(\text{hardness})] - 3.866)})(1.136672-[(\ln \text{hardness})(0.041838)]$ µg/L

chronic criteria = WER* $(e^{(0.7977[\ln(\text{hardness})] - 3.909)})(1.101672-[(\ln \text{hardness})(0.041838)]$ µg/L

Chromium III

acute criteria = WER* ($e^{(0.8190[\ln(\text{hardness})] + 3.7256)}$)(0.316) µg/L

chronic criteria = WER* ($e^{(0.8190[\ln(\text{hardness})] + 0.6848)}$)(0.860) µg/L

Copper

acute criteria = WER* ($e^{(0.9422[\ln(\text{hardness})] - 1.700)}$)(0.96) µg/L

chronic criteria = WER* ($e^{(0.8545[\ln(\text{hardness})] - 1.702)}$)(0.96) µg/L

~~Site-specific Copper criteria developed using the biotic ligand model (BLM):~~

~~Buffalo Creek (Richards Lake Dam to confluence with Little Tallapoosa River):~~

~~$\text{Acute criteria} = 4.9X10^{8}\ e^{\left(-0.5\left(\left(\frac{(\ln(pH)-2.316)}{-0.1816}\right)^{2}+\left(\frac{(\ln(DOC)-32.18)}{-5.453}\right)^{2}\right)\right)}$~~

~~$\text{Chronic criteria} = 3.043X10^{8}\ e^{\left(-0.5\left(\left(\frac{(\ln(pH)-2.316)}{-0.1816}\right)^{2}+\left(\frac{(\ln(DOC)-32.18)}{-5.453}\right)^{2}\right)\right)}$~~

Lead

acute criteria = WER* ($e^{(1.273[\ln(\text{hardness}) - 1.460)}$)(1.46203 - [(ln hardness)(0.145712)]) µg/L

chronic criteria = WER* ($e^{(1.273[\ln(\text{hardness}) - 4.705)}$)(1.46203 - [(ln hardness)(0.145712)]) µg/L

Nickel

acute criteria = WER* ($e^{(0.8460[\ln(\text{hardness})] + 2.255)}$)(0.998) µg/L

chronic criteria = WER* ($e^{(0.8460[\ln(\text{hardness})] + 0.0584)}$)(0.997) µg/L

Zinc

acute criteria = WER* ($e^{(0.8473[\ln(\text{hardness})] + 0.884)}$)(0.978) µg/L

chronic criteria = WER* ($e^{(0.8473[\ln(\text{hardness})] + 0.884)}$)(0.986) µg/L

(iii) Instream concentrations of the following chemical constituents listed by the U.S. Environmental Protection Agency as toxic priority pollutants pursuant to Section 307(a)(1) of the Federal Clean Water Act (as amended) shall not exceed criteria indicated below under 7-day, 10-year minimum flow (7Q10) or higher stream flow conditions except within established mixing zones or in accordance with site specific effluent limitations developed in accordance with procedures presented in 391-3-6-.06.

1.	Acrolein (CAS RN[1] 107-02-8)	
	(a) Freshwater	3.0 µg/L*
2.	Carbaryl (CAS RN[1] 63-25-2)	
	(a) Freshwater	2.1 µg/L*
	(b) Coastal and Estuarine Waters	1.6 µg/L*
~~1~~3.	Chlordane (CAS RN[1] 57749)	
	(a) Freshwater	0.0043 µg/L*
	(b) Coastal and Estuarine Waters	0.004 µg/L*
~~2~~4.	Cyanide (CAS RN[1] 57125)	
	(a) Freshwater	5.2 µg/L*
	(b) Coastal and Estuarine Waters	1.0 µg/L*
~~3~~5.	Dieldrin (CAS RN[1] 60571)	
	(a) Freshwater	0.056 µg/L*
	(b) Coastal and Estuarine Waters	0.0019 µg/L*
~~4~~6.	4,4'-DDT (CAS RN[1] 50293)	0.001 µg/L*
~~5~~7.	a-Endosulfan (CAS RN[1] 959988)	
	(a) Freshwater	0.056 µg/L*
	(b) Coastal and Estuarine Waters	0.0087 µg/L*
~~6~~8.	b-Endosulfan (CAS RN[1] 33213659)	
	(a) Freshwater	0.056 µg/L*
	(b) Coastal and Estuarine Waters	0.0087 µg/L*
~~7~~9.	Endrin (CAS RN[1] 72208)	
	(a) Freshwater	0.036 µg/L*
	(b) Coastal and Estuarine Waters	0.0023 µg/L*
~~8~~10.	Heptachlor (CAS RN[1] 76448)	
	(a) Freshwater	0.0038 µg/L*
	(b) Coastal and Estuarine Waters	0.0036 µg/L*
~~9~~11.	Heptachlor Epoxide (CAS RN[1] 1024573)	
	(a) Freshwater	0.0038 µg/L*
	(b) Coastal and Estuarine Waters	0.0036 µg/L*
~~10~~12.	Pentachlorophenol (CAS RN[1] 87865)	
	(a) Freshwater[2]	15 µg/L[2,]*
	(b) Coastal and Estuarine Waters	7.9 µg/L*
~~11~~13.	PCBs	
	(a) Freshwater	0.014 µg/L*
	(b) Coastal and Estuarine Waters	0.03 µg/L*
~~12~~14.	Phenol (CAS RN[1] 108952)	300 µg/L
~~13~~15.	Toxaphene (CAS RN[1] 8001352)	0.0002 µg/L*

[1] "CAS RN" or the Chemical Abstract Service (CAS) Registry Number is a unique numerical identifier assigned to each chemical and some chemical mixtures.

[2] The instream freshwater criterion for pentachlorophenol is a function of pH, determined by the formula ($e^{(1.005(pH) - 5.134)}$). At a pH equal to 7.8 standard units the criterion is 15 µg/L.

* The in-stream criterion is lower than the EPD laboratory detection limits.

(iv) Instream concentrations of the following chemical constituents listed by the U. S. Environmental Protection Agency as toxic priority pollutants pursuant to Section 307(a)(1) of the Federal Clean Water Act (as amended) shall not exceed criteria indicated below under annual average or higher stream flow conditions:

1.	Acenaphthene (CAS RN[1] 83329)	990 µg/L
2.	Acenaphthylene (CAS RN[1] 208968)	**
3.	Acrolein (CAS RN[1] 107028)	9.3 µg/L
4.	Acrylonitrile (CAS RN[1] 107131)	0.25 µg/L
5.	Aldrin (CAS RN[1] 309002)	0.000050 µg/L
6.	Anthracene (CAS RN[1] 120127)	40000 µg/L
7.	Antimony	640 µg/L
8.	Arsenic (Total)	
	(a) Drinking Water Supplies	10 µg/L
	(b) All Other Designated Uses~~Classifications~~	50 µg/L
9.	Benzidine (CAS RN[1] 92875)	0.0002 µg/L
10.	Benzo(a)Anthracene (CAS RN[1] 56553)	0.018 µg/L
11.	Benzo(a)Pyrene (CAS RN[1] 50328)	0.018 µg/L
12.	3,4-Benzofluoranthene (CAS RN[1] 205992)	0.018 µg/L
13.	Benzene (CAS RN[1] 71432)	51 µg/L
14.	Benzo(ghi)Perylene (CAS RN[1] 191242)	**
15.	Benzo(k)Fluoranthene (CAS RN[1] 207089)	0.018 µg/L
16.	Beryllium	**
17.	a-BHC-Alpha (CAS RN[1] 319846)	0.0049 µg/L
18.	b-BHC-Beta (CAS RN[1] 319857)	0.017 µg/L
19.	Bis(2-Chloroethyl)Ether (CAS RN[1] 111444)	0.53 µg/L
20.	Bis(2-Chloroisopropyl)Ether (CAS RN[1] 108601)	65000 µg/L
21.	Bis(2-Ethylhexyl)Phthalate (CAS RN[1] 117817)	2.2 µg/L
22.	Bromoform (Tribromomethane) (CAS RN[1] 75252)	140 µg/L
23.	Butylbenzyl Phthalate (CAS RN[1] 85687)	1900 µg/L
24.	Carbon Tetrachloride (CAS RN[1] 56235)	1.6 µg/L
25.	Chlorobenzene (CAS RN[1] 108907)	1600 µg/L
26.	Chlorodibromomethane (CAS RN[1] 124481)	13 µg/L
27.	2-Chloroethylvinyl Ether (CAS RN[1] 110758)	**
28.	Chlordane (CAS RN[1] 57749)	0.00081 µg/L
29.	Chloroform (Trichloromethane) (CAS RN[1] 67663)	470 µg/L
30.	2-Chloronaphthalene (CAS RN[1] 91587)	1600 µg/L
31.	2-Chlorophenol (CAS RN[1] 95578)	150 µg/L
32.	Chrysene (CAS RN[1] 218019)	0.018 µg/L
33.	Dibenzo(a,h)Anthracene (CAS RN[1] 53703)	0.018 µg/L
34.	Dichlorobromomethane (CAS RN[1] 75274)	17 µg/L
35.	1,2-Dichloroethane (CAS RN[1] 107062)	37 µg/L
36.	1,1-Dichloroethylene (CAS RN[1] 75354)	7100 µg/L

37.	1,2 – Dichloropropane (CAS RN[1] 78875)	15 µg/L
38.	1,3-Dichloropropylene (CAS RN[1] 542756)	21 µg/L
39.	2,4-Dichlorophenol (CAS RN[1] 120832)	290 µg/L
40.	1,2-Dichlorobenzene (CAS RN[1] 95501)	1300 µg/L
41.	1,3-Dichlorobenzene (CAS RN[1] 541731)	960 µg/L
42.	1,4-Dichlorobenzene (CAS RN[1] 106467)	190 µg/L
43.	3,3'-Dichlorobenzidine (CAS RN[1] 91941)	0.028 µg/L
44.	4,4'-DDT (CAS RN[1] 50293)	0.00022 µg/L
45.	4,4'-DDD (CAS RN[1] 72548)	0.00031 µg/L
46.	4,4'-DDE (CAS RN[1] 72559)	0.00022 µg/L
47.	Dieldrin (CAS RN[1] 60571)	0.000054 µg/L
48.	Diethyl Phthalate (CAS RN[1] 84662)	44000 µg/L
49.	Dimethyl Phthalate(CAS RN[1] 131113)	1100000 µg/L
50.	2,4-Dimethylphenol (CAS RN[1] 105679)	850 µg/L
51.	2,4-Dinitrophenol (CAS RN[1] 51285)	5300 µg/L
52.	Di-n-Butyl Phthalate (CAS RN[1] 84742)	4500 µg/L
53.	2,4-Dinitrotoluene (CAS RN[1] 121142)	3.4 µg/L
54.	1,2-Diphenylhydrazine (CAS RN[1] 122667)	0.20 µg/L
55.	Endrin (CAS RN[1] 72208)	0.060 µg/L
56.	Endrin Aldehyde (CAS RN[1] 7421934)	0.30 µg/L
57.	alpha – Endosulfan (CAS RN[1] 959988)	89 µg/L
58.	beta – Endosulfan (CAS RN[1] 33213659)	89 µg/L
59.	Endosulfan Sulfate (CAS RN[1] 1031078)	89 µg/L
60.	Ethylbenzene (CAS RN[1] 100414)	2100 µg/L
61.	Fluoranthene (CAS RN[1] 206440)	140 µg/L
62.	Fluorene (CAS RN[1] 86737)	5300 µg/L
63.	Heptachlor (CAS RN[1] 76448)	0.000079 µg/L
64.	Heptachlor Epoxide (CAS RN[1] 1024573)	0.000039 µg/L
65.	Hexachlorobenzene (CAS RN[1] 118741)	0.00029 µg/L
66.	Hexachlorobutadiene (CAS RN[1] 87683)	18 µg/L
67.	Hexachlorocyclopentadiene (CAS RN[1] 77474)	1100 µg/L
68.	Hexachloroethane (CAS RN[1] 67721)	3.3 µg/L
69.	Indeno(1,2,3-cd)Pyrene (CAS RN[1] 193395)	0.018 µg/L
70.	Isophorone (CAS RN[1] 78591)	960 µg/L
71.	Lindane [Hexachlorocyclohexane (g-BHC-Gamma)] (CAS RN[1] 58899)	1.8 µg/L
72.	Methyl Bromide (Bromomethane) (CAS RN[1] 74839)	1500 µg/L
73.	Methyl Chloride (Chloromethane) (CAS RN[1] 74873)	**
74.	Methylene Chloride (CAS RN[1] 75092)	590 µg/L
75.	2-Methyl-4,6-Dinitrophenol (CAS RN[1] 534521)	280 µg/L
76.	3-Methyl-4-Chlorophenol (CAS RN[1] 59507)	**

77.	Nitrobenzene (CAS RN[1] 98953)	690 μg/L
78.	N-Nitrosodimethylamine (CAS RN[1] 62759)	3.0 μg/L
79.	N-Nitrosodi-n-Propylamine (CAS RN[1] 621647)	0.51 μg/L
80.	N-Nitrosodiphenylamine (CAS RN[1] 86306)	6.0 μg/L
81.	PCBs	0.000064 μg/L
82.	Pentachlorophenol (CAS RN[1] 87865)	3.0 μg/L
83.	Phenanthrene (CAS RN[1] 85018)	**
84.	Phenol (CAS RN[1] 108952)	857000 μg/L
85.	Pyrene (CAS RN[1] 129000)	4000 μg/L
86.	1,1,2,2-Tetrachloroethane (CAS RN[1] 79345)	4.0 μg/L
87.	Tetrachloroethylene (CAS RN[1] 127184)	3.3 μg/L
88.	Thallium	0.47 μg/L
89.	Toluene (CAS RN[1] 108883)	5980 μg/L
90.	Toxaphene (CAS RN[1] 8001352)	0.00028 μg/L
91.	1,2-Trans-Dichloroethylene (CAS RN[1] 156605)	10000 μg/L
92.	1,1,2-Trichloroethane (CAS RN[1] 79005)	16 μg/L
93.	Trichloroethylene (CAS RN[1] 79016)	30 μg/L
94.	2,4,6-Trichlorophenol (CAS RN[1] 88062)	2.4 μg/L
95.	1,2,4-Trichlorobenzene (CAS RN[1] 120821)	70 μg/L
96.	Vinyl Chloride (CAS RN[1] 75014)	2.4 μg/L

[1]"CAS RN" or the Chemical Abstract Service (CAS) Registry Number is a unique numerical identifier assigned to each chemical and some chemical mixtures.
** These pollutants are addressed in 391-3-6-.06.

(v) Site specific criteria for the following chemical constituents will be developed on an as needed basis through toxic pollutant monitoring efforts at new or existing discharges that are suspected to be a source of the pollutant at levels sufficient to interfere with designated uses:

1. Asbestos

(vi) Instream concentrations of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) must not exceed 0.0000000051 μg/L under long-term average stream flow conditions.

(vii) Mercury: For the protection of human health, total mercury concentrations bioaccumulating in a water body, in a representative population of fish, shellfish and/or other seafood representing different trophic levels, shall not exceed a total mercury concentration in edible tissues of 0.3 mg/kg wet weight. This standard is in accord with the USEPA *Water Quality Criterion for the Protection of Human Health: Methylmercury*, (January 2001, EPA-823-R-01-001), and because nearly 100% of the mercury in fish tissue is methylmercury, adoption of the standard as total mercury is an additional conservative measure. The representative fish tissue total mercury concentration for a water body is determined by calculating a Trophic-Weighted Residue Value, as described by the Georgia EPD Protocol (October 19, 2001).

(f) Applicable State and Federal requirements and regulations for the discharge of radioactive substances shall be met at all times.

(g) The dissolved oxygen criteria as specified in individual designated uses~~water use classifications~~ shall be applicable at a depth of one meter below the water surface; in those instances where depth is less than two meters, the dissolved oxygen criterion shall be applied at a mid-depth. On a case specific basis, alternative depths may be specified.

(6) Specific Criteria for Specific Designated Uses~~Classified Water Usage~~. In addition to the general criteria, the following criteria are deemed necessary and shall be required for the specific ~~water usage as shown~~designated uses:

(a) Drinking Water Supplies: Those waters approved as a source for public drinking water systems permitted or to be permitted by the Environmental Protection Division. Waters classified for drinking water supplies will also support the fishing use and any other use requiring water of a lower quality.

(i) Bacteria: ~~The provisions of paragraph 391-3-6-.03(6)(a)(i)1. shall apply until the effective date of EPA's final approval of the criteria specified in paragraph 391-3-6-.03(6)(a)(i)2.~~

~~1. For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200 counts per 100 mL (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall not exceed 300 counts per 100 mL in lakes and reservoirs and 500 counts per 100 mL in free flowing freshwater streams. For the months of November through April, fecal coliform not to exceed a geometric mean of 1,000 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours and not to exceed a maximum of 4,000 counts per 100 mL for any sample.~~

~~2~~1. For the months of May through October, when primary water contact recreation activities are expected to occur, culturable E. coli not to exceed a geometric mean of 126 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. ~~The geometric mean duration shall not be greater than 30 days.~~ There shall be no greater than a ten percent excursion frequency of an E. coli statistical threshold value (STV) of 410 counts per 100 mL in the same 30-day interval. ~~Should water quality and sanitary studies show E. coli levels from non-human sources exceed 126 counts per 100 mL (geometric mean) occasionally, then the allowable geometric mean E. coli shall not exceed 189 counts per 100 mL in lakes and reservoirs and 315 counts per 100 mL in free flowing freshwater streams.~~

2. For the months of November through April, culturable E. coli not to exceed a geometric mean of ~~630~~265 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. ~~The geometric mean~~

~~duration shall not be greater than 30 days.~~ There shall be no greater than a ten percent excursion frequency of an E. coli statistical threshold value (STV) of ~~2050~~861 counts per 100 mL in the same 30-day interval.

3. The State does not encourage swimming in these surface waters since a number of factors which are beyond the control of any State regulatory agency contribute to elevated levels of bacteria.

(ii) Dissolved oxygen: A daily average of 6.0 mg/L and no less than 5.0 mg/L at all times for waters designated as trout streams by the Wildlife Resources Division. A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for water supporting warm water species of fish.

(iii) pH: Within the range of 6.0 - 8.5.

(iv) No material or substance in such concentration that, after treatment by the public water treatment system, exceeds the maximum contaminant level established for that substance by the Environmental Protection Division pursuant to the Georgia Rules for Safe Drinking Water.

(v) Temperature: Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F. In streams designated as primary trout or smallmouth bass waters by the Wildlife Resources Division, there shall be no elevation of natural stream temperatures. In streams designated as secondary trout waters, there shall be no elevation exceeding 2°F of natural stream temperatures.

(b) Recreation: ~~General~~Primary contact recreational activities that occur year round such as ~~water skiing, boating, and~~ swimming, diving, whitewater boating (class III and above), water skiing, and surfing, or for any other use requiring water of a lower quality, such as recreational fishing. These criteria are not to be interpreted as encouraging water contact sports in proximity to sewage or industrial waste discharges regardless of treatment requirements:

(i) Bacteria:

1. Coastal and estuarine waters: Culturable enterococci not to exceed a geometric mean of 35 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. ~~The geometric mean duration shall not be greater than 30 days.~~ There shall be no greater than a ten percent excursion frequency of an enterococci statistical threshold value (STV) of 130 counts per 100 mL in the same 30-day interval.

2. All other recreational waters: Culturable E. coli not to exceed a geometric mean of 126 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. ~~The geometric mean duration shall not be greater than 30 days.~~ There shall be no greater than a ten percent excursion frequency of

an E. coli statistical threshold value (STV) of 410 counts per 100 mL in the same 30-day interval.

(ii) Dissolved Oxygen: A daily average of 6.0 mg/L and no less than 5.0 mg/L at all times for waters designated as trout streams by the Wildlife Resources Division. A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for waters supporting warm water species of fish.

(iii) pH: Within the range of 6.0 - 8.5.

(iv) Temperature: Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F. In streams designated as primary trout or smallmouth bass waters by the Wildlife Resources Division, there shall be no elevation of natural stream temperatures. In streams designated as secondary trout waters, there shall be no elevation exceeding 2°F natural stream temperatures.

(c) Fishing: Propagation of Fish, Shellfish, Game and Other Aquatic Life; primary contact recreation in and on the water for the months of May – October, secondary contact recreation in and on the water for the months of November – April; or for any other use requiring water of a lower quality.

~~(i) Dissolved Oxygen: A daily average of 6.0 mg/L and no less than 5.0 mg/L at all times for water designated as trout streams by the Wildlife Resources Division. A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for waters supporting warm water species of fish.~~

~~(ii) pH: Within the range of 6.0 - 8.5.~~

(i~~i~~i) Bacteria: ~~The provisions of paragraph 391-3-6-.03(6)(c)(iii)1. shall apply until the effective date of EPA's final approval of the criteria specified in paragraphs 391-3-6-.03(6)(c)(iii)2. and 391-3-6-.03(6)(c)(iii)3.~~

~~1. For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200~~ counts ~~per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200~~ counts per ~~/100 mL (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall not exceed 300~~ counts ~~per 100 mL in lakes and reservoirs and 500~~ counts ~~per 100 mL in free flowing freshwater streams. For the months of November through April, fecal coliform not to exceed a geometric mean of 1,000~~ counts ~~per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours and not to exceed a maximum of 4,000~~ counts ~~per 100 mL for any sample.~~

~~2~~1. Estuarine waters:

For the months of May through October, when primary water contact recreation activities are expected to occur, culturable enterococci not to exceed a geometric mean of 35 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. ~~The geometric mean duration shall not be greater than 30 days.~~ There shall be no greater than a ten percent excursion frequency of an enterococci statistical threshold value (STV) of 130 counts per 100 mL the same 30-day interval. ~~Should water quality and sanitary studies show enterococci levels from non-human sources exceed 35 counts per 100 mL (geometric mean) occasionally, then the allowable geometric mean enterococci shall not exceed 53 counts per 100 mL in lakes and reservoirs and 88 counts per 100 mL in free flowing freshwater streams.~~

For the months of November through April, culturable enterococci not to exceed a geometric mean of ~~175~~74 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. ~~The geometric mean duration shall not be greater than 30 days.~~ There shall be no greater than a ten percent excursion frequency of an enterococci statistical threshold value (STV) of ~~650~~273 counts per 100 mL in the same 30-day interval.

~~3~~2. All other fishing waters:
For the months of May through October, when primary water contact recreation activities are expected to occur, culturable E. coli not to exceed a geometric mean of 126 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. ~~The geometric mean duration shall not be greater than 30 days.~~ There shall be no greater than a ten percent excursion frequency of an E. coli statistical threshold value (STV) of 410 counts per 100 mL in the same 30-day interval. ~~Should water quality and sanitary studies show E coli levels from non-human sources exceed 126 counts per 100 mL (geometric mean) occasionally, then the allowable geometric mean E. coli shall not exceed 189 counts per 100 mL in lakes and reservoirs and 315 counts per 100 mL in free flowing freshwater streams.~~

For the months of November through April, culturable E. coli not to exceed a geometric mean of ~~630~~265 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. ~~The geometric mean duration shall not be greater than 30 days.~~ There shall be no greater than a ten percent excursion frequency of an E. coli statistical threshold value (STV) of ~~2050~~861 counts per 100 mL in the same 30-day interval.

~~4~~3. The State does not encourage swimming in these surface waters since a number of factors which are beyond the control of any State regulatory agency contribute to elevated levels of bacteria.

~~5~~4. For waters designated as shellfish growing areas by the Georgia DNR Coastal Resources Division, the requirements will be consistent with those established by the State and Federal agencies responsible for the National Shellfish Sanitation Program. The requirements are found in National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish, 2007 Revision (or most recent version), Interstate Shellfish Sanitation Conference, U.S. Food and Drug Administration.

(ii) Dissolved Oxygen: A daily average of 6.0 mg/L and no less than 5.0 mg/L at all times for water designated as trout streams by the Wildlife Resources Division. A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for waters supporting warm water species of fish.

(iii) pH: Within the range of 6.0 - 8.5.

(iv) Temperature: Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F. In streams designated as primary trout or smallmouth bass waters by the Wildlife Resources Division, there shall be no elevation of natural stream temperatures. In streams designated as secondary trout waters, there shall be no elevation exceeding 2°F natural stream temperatures.

(d) Wild River: For all waters designated in 391-3-6-.03(1~~3~~4) as "Wild River," there shall be no alteration of natural water quality from any source.

(e) Scenic River: For all waters designated in 391-3-6-.03(1~~3~~4) as "Scenic River," there shall be no alteration of natural water quality from any source.

(f) Coastal Fishing: ~~This classification will be applicable to specific sites when so designated by the Environmental Protection Division.~~ For waters designated in 391-3-6-.03(14) as "Coastal Fishing,"~~,~~ site specific criteria for dissolved oxygen will be assigned. All other criteria and uses for the fishing designated use ~~classification~~ will apply for coastal fishing.

(i) Dissolved Oxygen: A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times. If it is determined that the "natural condition" in the water body is less than the values stated above, then the criteria will revert to the "natural condition" and the water quality standard will allow for a 0.1 mg/L deficit from the "natural" dissolved oxygen value. Up to a 10% deficit will be allowed if it is demonstrated that resident aquatic species shall not be adversely affected.

(7) Natural Water Quality. It is recognized that certain natural waters of the State may have a quality that will not be within the general or specific requirements contained herein. These circumstances do not constitute violations of water quality standards. This is especially the case for the criteria for dissolved oxygen, temperature, pH and bacteria. NPDES permits and best management practices will be the primary mechanisms for ensuring that discharges will not create a harmful situation.

(8) Treatment Requirements. Notwithstanding the above criteria, the requirements of the State relating to secondary or equivalent treatment of all waste shall prevail. The adoption of these criteria shall in no way preempt the treatment requirements.

(9) Streamflows. Specific criteria or standards set for the various parameters apply to all flows on regulated streams. On unregulated streams, they shall apply to all streamflows equal to or exceeding the 7-day, 10-year minimum flow (7Q10) and/or the 1-day, 10-year minimum

flow (1Q10). All references to 7-day, 10-year minimum flow (7Q10) and 1-day, 10-year minimum flow (1Q10) also apply to all flows on regulated streams. All references to annual average stream flow also apply to long-term average stream flow conditions. Numeric criteria exceedences that occur under streamflows lower than 7Q10 or 1Q10, whichever applies, do not constitute violations of water quality standards as long as all current permit conditions are met.

(10) Mixing Zone. Effluents released to streams or impounded waters shall be fully and homogeneously dispersed and mixed insofar as practical with the main flow or water body by appropriate methods at the discharge point. Use of a reasonable and limited mixing zone may be permitted on receipt of satisfactory evidence that such a zone is necessary and that it will not create an objectionable or damaging pollution condition. Protection from acute toxicity shall be provided within any EPD designated mixing zone to ensure a zone of safe passage for aquatic organisms. The procedure is as described in paragraph 391-3-6-.06(4)(d)(5)(vi), except that the numerical pass/fail criteria applies to the end-of-pipe without the benefit of dilution provided by the receiving stream.

(11) Toxic Pollutant Monitoring. The Division will monitor waters of the State for the presence or impact of Section 307 (a)(l) Federal Clean Water Act toxic pollutants**,** and other priority pollutants. The monitoring shall consist of the collection and assessment of chemical and/or biological data as appropriate from the water column, from stream bed sediments, and/or from fish tissue. Specific stream segments and chemical constituents for monitoring shall be determined by the Director on the basis of the potential for water quality impacts from toxic pollutants from point or nonpoint waste sources. Singularly or in combination, these constituents may cause an adverse effect on fish propagation at levels lower than the criteria. Instream concentrations will be as described in 391-3-6-.03 (5)(e). Additional toxic substances and priority pollutants will be monitored on a case specific basis using Section 304(a) Federal Clean Water Act guidelines or other scientifically appropriate documents.

(12) Bacteria Criteria. The criteria for bacteria provide the regulatory framework to support the USEPA requirement that States protect all waters for recreational use. The bacterial indicators for primary and secondary contact recreational waters are E. coli and enterococci. ~~The bacterial indicator for secondary contact recreational waters is fecal coliform, E. coli or enterococci.~~

(a) Fecal coliform, E. coli and enterococci bacteria live in the intestinal tract of warm blooded animals including man. These organisms are excreted in extremely high numbers. Pathogenic bacteria also originate in the fecal material of diseased persons. Therefore, waters with high levels of bacteria represent potential problem areas for swimming. Scientific studies indicate there is a positive correlation between E. coli and enterococci counts and gastrointestinal illness. However, there is no positive scientific evidence correlating elevated fecal coliform counts with transmission of enteric diseases. In addition, these bacteria can originate from any warm blooded animal or from the soil.

(b) Monitoring programs have documented bacterial levels in excess of the criteria in many streams and rivers in urban areas, agricultural areas, and even in areas not extensively

impacted by man such as national forest areas. This is not a unique situation to Georgia as similar levels of bacteria have been documented in streams across the nation.

(13) Acceptance of Data. Sampling methods for water quality samples collected and reported by any person(s), (including volunteer groups), to the Division for its use in listing or delisting impaired waters pursuant to the State's responsibilities under Sections 303(d) and 305(b) of the Federal Act shall conform to the guidance in the *Water Protection Branch Quality Assurance Manual* (June, 1999), or most current version, Georgia Department of Natural Resources, Environmental Protection Division, Watershed Protection Branch, Atlanta, GA 30354. Analytical standards for these samples must comply with the requirements of *Title 40, Code of Federal Regulations*, Part 136. Sample analyses shall be performed by an analyst certified in compliance with the *Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act*, as amended, or by a laboratory facility accredited in compliance with the *Georgia Rules for Commercial Environmental Laboratory Accreditation* (O.C.G.A. 12-2-9). A site-specific sampling and quality assurance plan is required if the data is to be considered and Division concurrence must be obtained prior to monitoring. Laboratories operated by Federal and State government agencies and laboratories at academic institutions with active or current contracts with the Division are exempt from these provisions. The Division may use water quality data for screening purposes if it was collected by any person(s), (including volunteer groups), without an approved sampling and quality assurance plan.

(14) Specific Designated Uses~~Water Use Classifications~~. Beneficial water uses assigned by the State to all surface waters. These designations ~~classifications~~ are scientifically determined to be the best utilization of the surface water from an environmental and economic standpoint. Streams and stream reaches not specifically listed are classified as Fishing. The specific designated uses~~classifications~~ are as follows:

ALTAMAHA RIVER BASIN		DESIGNATED USE ~~CLASSIFICATION~~
~~All littoral waters on the ocean side of Sea and Sapelo Islands, and on the ocean and sound side of St. Simons Island~~		~~Recreation~~
Altamaha River	Doctors Creek to Butler River	Recreation
Altamaha and Doboy Sounds	All littoral waters including the waters on the ocean side of Sapelo and Little St. Simons Islands	Recreation
Buttermilk Sound	Reimolds Pasture	Recreation

CHATTAHOOCHEE RIVER BASIN		DESIGNATED USE ~~CLASSIFICATION~~
Alexander Creek	Headwaters to confluence with Cedar Creek	Drinking Water

Bear Creek	Headwaters to confluence with Chattahoochee River	Drinking Water
Big Creek	Foe Killer Creek to Chattahoochee River	Drinking Water
Blue Creek	Headwaters to Yellowjacket Creek	Drinking Water
Camp Creek	Headwaters to confluence with Hazel Creek	Drinking Water
Cedar Creek	Headwaters to Alexander Creek	Drinking Water
Centralhatchee Creek	Little Taylor Creek to Chattahoochee River	Drinking Water
Chattahoochee River	Headwaters to confluence with Soque River	Recreation
Chattahoochee River	Soque River to White Creek	Recreation and Drinking Water
Chattahoochee River	White Creek to Mud Creek	Recreation
Chattahoochee River/Lake Lanier	Mud Creek to Buford Dam	Recreation and Drinking Water
Chattahoochee River	Buford Dam to Atlanta (Peachtree Creek)	Recreation and Drinking Water
Chattahoochee River	Snake Creek to Yellowdirt Creek	Recreation
Chattahoochee River	Pink Creek to Harris Creek	Drinking Water
Chattahoochee River/West Point Lake	New River to West Point Dam	Recreation and Drinking Water
Chattahoochee River	West Point Dam to Long Cane Creek	Drinking Water
Chattahoochee River	House Creek to North Highland Dam (including Lakes Harding, Goat Rock, Oliver, and North Highlands)	Recreation and Drinking Water
Chattahoochee River	Cowikee Creek to Lake Walter F. George Dam	Recreation
Chattahoochee River/Lake Seminole	Georgia Hwy. 91 to Jim Woodruff Dam	Recreation
Dog River	Mobley Creek to Chattahoochee River	Drinking Water
Flat Creek	Turkey Creek to confluence with Yellowjacket Creek	Drinking Water
Hazel Creek	Law Creek to Camp Creek	Drinking Water
Headwaters of Unnamed Tributary to Bethlehem Creek	Lake Franklin, F.D. Roosevelt State Park Beaches	Recreation
Hillabahatchee Creek	Tolieson Branch to Chattahoochee River	Drinking Water
Little Kolomoki Creek	Lake Kolomoki, Kolomoki Mounds State Park Beach	Recreation
Sandy Creek	Headwaters to Golden Creek	Drinking Water
Smith Creek	Unicoi Lake, Unicoi State Park Beach	Recreation
Snake Creek	Crews Creek to Chattahoochee River	Drinking Water
Soque River	Deep Creek to Sutton Mill Creek	Drinking Water
Sweetwater Creek	Olley Creek to Chattahoochee River	Drinking Water
Turner Creek	Headwaters to confluence with Tesnatee Creek	Drinking Water

Upatoi Creek	Heriot Creek to Armory Creek	Drinking Water
Yahoola Creek	Bryant Creek to confluence with Chestatee River	Drinking Water

COOSA RIVER BASIN		DESIGNATED USE ~~CLASSIFICATION~~
Beech Creek	Headwaters to Dry Creek (including Possum Trot Reservoir)	Drinking Water
Blackwell Creek	Headwaters to Cox Lake Dam	Drinking Water
Cartecay River	Clear Creek to confluence with Ellijay River	Drinking Water
Chestnut Cove Creek	Headwaters to and including Lake Tamarack	Drinking Water
Coahulla Creek	Bates Branch to Mill Creek	Drinking Water
Conasauga River	Waters Within the Cohutta Wilderness Area	Wild and Scenic
Conasauga River	Sugar Creek to Spring Creek	Drinking Water
Coosa River	At the Alabama State Line	Recreation
Coosawattee River/Carters Lake	Confluence with Mountaintown Creek to Carters Dam	Recreation and Drinking Water
Coosawattee River	Mineral Springs Branch to confluence with Conasauga River	Drinking Water
Dry Creek	Headwaters to confluence with Duck Creek	Drinking Water
Duck Creek	Confluence with Dry Creek to Dickson Creek	Drinking Water
Ellijay River	Briar Creek to confluence with Cartecay River	Drinking Water
Etowah River	Headwaters to Montgomery Creek	Drinking Water
Etowah River	Lily Creek to Mill Creek	Drinking Water
Etowah River	Long Swamp Creek to Canton Creek	Drinking Water
Etowah River/Lake Allatoona	Georgia Hwy. 20 to Allatoona Dam	Recreation and Drinking Water
Etowah River	Allatoona Dam to Ward Creek	Drinking Water
Etowah River	Dykes Creek to Silver Creek	Drinking Water
Euharlee Creek	Parham Springs Creek to Fish Creek	Drinking Water
Headwaters of Gold Mine Branch	Fort Mountain Lake, Fort Mountain State Park Beach	Recreation
Holly Creek	Dill Creek to Chicken Creek	Drinking Water
Jacks Creek	Waters Within the Cohutta Wilderness Area	Wild and Scenic
Long Swamp Creek	Lake Tamarack Dam to Cox Creek	Drinking Water
Mill Creek	Hurricane Creek to confluence with Conasauga River	Drinking Water
Oostanaula River	Confluence of Conasauga and Coosawattee Rivers to Oothkalooga Creek	Drinking Water

Oostanaula River	Confluence with Woodward Creek to Coosa River	Drinking Water
Pettit Creek	Headwaters to confluence with Disharoon Creek (including Lake Pettit)	Drinking Water
Raccoon Creek	Headwaters to confluence with Chattooga River	Drinking Water
Tributaries to Heath Creek	Rocky Mountain Public Fishing Lakes, Rocky Mountain Public Fishing Area	Recreation
Tributary of Dakwa Lake	Headwaters to confluence with Turniptown Creek (including Dakwa Lake)	Drinking Water
Woodward Creek	Headwaters to confluence with Oostanaula River	Drinking Water

FLINT RIVER BASIN		DESIGNATED USE ~~CLASSIFICATION~~
Elkins Creek	Headwaters to Powder Creek	Drinking Water
Flat Creek	Headwaters to confluence with Line Creek (including Lake Kedron and Lake Peachtree)	Drinking Water
Flint River	Swamp Creek to Horton Creek	Drinking Water
Flint River	Birch Creek to Red Oak Creek	Drinking Water
Flint River	Georgia Hwy. 27 to Georgia Power Dam at Lake Worth, Albany including Lakes Blackshear, Chehaw, and Worth	Recreation
Flint River	Bainbridge, U.S. Hwy. 84 Bridge to Jim Woodruff Dam, Lake Seminole	Recreation
Heads Creek	Headwaters to Shoal Creek (including Heads Creek Reservoir)	Drinking Water
Horton Creek	Headwaters to Flint River (including Horton Creek Reservoir)	Drinking Water
Keg Creek	Headwaters to Line Creek (including Hutchins Lake)	Drinking Water
Lazer Creek	Rocky Branch to Gin Creek	Drinking Water
Line Creek	Persimmon Creek to Flat Creek (including Lake McIntosh)	Drinking Water
Potato Creek	Fivemile Creek to Hoyle Branch	Drinking Water
Pound Creek	Headwaters to confluence with Cane Creek (including Lake Meriwether)	Drinking Water
Rush Creek	Headwaters to confluence with Lazer Creek (including Rush Creek Reservoir)	Drinking Water
Shoal Creek	Headwaters to Flint River (including Shoal Creek Reservoir)	Drinking Water
Still Branch	Headwaters to confluence with Flint River (including Still Branch Reservoir)	Drinking Water
White Oak Creek	Headwaters to Chandlers Creek	Drinking Water
Whitewater Creek	Tar Creek to Haddock Creek	Drinking Water

OCMULGEE RIVER BASIN		DESIGNATED USE ~~CLASSIFICATION~~
Alcovy River	Maple Creek to Cornish Creek (including John T. Briscoe Reservoir)	Drinking Water
Beaverdam Creek	Headwaters to confluence with Alcovy River	Drinking Water
Big Cotton Indian Creek	Coker Branch to Rocky Branch	Drinking Water
Big Haynes Creek	Georgia Highway 78 to confluence with Yellow River	Drinking Water
Big Sandy Creek	Chief McIntosh Lake, Indian Springs State Park Beaches	Recreation
Big Towaliga Creek	Headwaters to confluence with Edie Creek	Drinking Water
Brown Branch	Headwaters to Wolf Creek	Drinking Water
Cornish Creek	Headwaters to confluence with Alcovy River (including Lake Varner)	Drinking Water
Edie Creek	Headwaters to confluence with Big Towaliga Creek	Drinking Water
Indian Creek	Headwaters to confluence with Towaliga River	Drinking Water
Jackson Lake	From South River at Georgia Hwy. 36; from Yellow River at Georgia Hwy. 36; from Alcovy River at Newton Factory Road Bridge to Lloyd Shoals Dam	Recreation
Little Cotton Indian Creek	Confluence of Reeves and Rum Creeks to confluence with Big Cotton Indian Creek	Drinking Water
Headwaters of Little Ocmulgee River	Little Ocmulgee Lake, Little Ocmulgee State Park Beach	Recreation
Little Towaliga River	Confluence of Edie and Big Towaliga Creeks to confluence with Towaliga River	Drinking Water
Long Branch	Headwaters to confluence with Towaliga River	Drinking Water
Ocmulgee River	Jackson Lake Dam to Wise Creek	Drinking Water
Ocmulgee River	Pratts Creek to Walnut Creek	Drinking Water
Pates Creek	Headwaters to confluence with Little Cotton Indian Creek (including Blalock Reservoir)	Drinking Water
Rocky Creek	Headwaters to Towaliga River	Drinking Water
South River	Honey Creek (Henry County) to Lake Jackson at Georgia Hwy. 36	Recreation
Towaliga River	Thompson Creek to Georgia Hwy. 36	Drinking Water
Towaliga River	Georgia Hwy. 36 to High Falls Lake Dam	Recreation

Towaliga River	High Falls Lake, High Falls State Park Beaches	Recreation
Tobesofkee Creek	Reeves Creek to Rock Branch	Drinking Water
Tobesofkee Creek	Georgia Hwy. 74 to Lake Tobesofkee Dam	Recreation
Town Creek	Headwaters to Ocmulgee River	Drinking Water
Tributary to Dried Creek	Headwaters to confluence with Dried Indian Creek (including Covington Reservoir)	Drinking Water
Tussahaw Creek	Headwaters to Baker Branch	Drinking Water
Walnut Creek	Headwaters to Camp Creek (including Walnut Creek Reservoir)	Drinking Water
Yellow River	Georgia Hwy. 124 to Porterdale Water Intake	Drinking Water

OCONEE RIVER BASIN		DESIGNATED USE ~~CLASSIFICATION~~
Apalachee River	Shoal Creek to Freeman Creek	Drinking Water
Barber Creek	Headwaters to Parker Branch	Drinking Water
Bear Creek	Headwaters to confluence with Middle Oconee River (including Bear Creek Reservoir)	Drinking Water
Cedar Creek (Hall Co.)	Headwaters to confluence with North Oconee River	Drinking Water
Curry Creek	Headwaters to confluence with Little Curry Creek	Drinking Water
Fort Creek	Headwaters to confluence with Sikes Creek upstream of Lake Sinclair	Drinking Water
Hard Labor Creek	Headwaters to Lake Brantley Dam	Drinking Water
Hard Labor Creek	Lake Rutledge, Hard Labor Creek State Park Beaches	Recreation
Hard Labor Creek	Lake Rutledge Dam to Mile Branch	Drinking Water
Jacks Creek	Headwaters to Grubby Creek	Drinking Water
Lake Oconee	Lake Oconee to Lake Oconee Dam (Wallace Dam)	Recreation and Drinking Water
Lake Sinclair	Lake Oconee Dam downstream to Sinclair Dam	Recreation and Drinking Water
Little River	Big Indian Creek to Glady Creek	Drinking Water
Lowry Branch	Headwaters to confluence with Pearson Creek	Drinking Water
Marbury Creek	Fort Yargo Lake, Fort Yargo State Park Beaches	Recreation
Middle Oconee River	Beech Creek to McNutt Creek	Drinking Water
Mulberry River	Little Mulberry Creek to Barbers Creek	Drinking Water
North Oconee River	Cedar Creek to Gravelly Creek	Drinking Water
North Oconee River	Shankles Creek to Trail Creek	Drinking Water
Oconee River	Sinclair Dam to Fishing Creek	Drinking Water

Oconee River	Oochee Creek to ~~Long Branch~~Flat Creek	Recreation and Drinking Water
Oconee River	Flat Creek to Long Branch	Drinking Water
Parks Creek	Headwaters to confluence with North Oconee River	Drinking Water
Popes Branch	Headwaters to confluence with Pearson Creek	Drinking Water

OGEECHEE RIVER BASIN		DESIGNATED USE ~~CLASSIFICATION~~
Julienton River	Contentment Bluff Sandbar and Dallas Bluff Sandbar	Recreation
Little Ogeechee River	South end of White Bluff Road near Carmelite Monastery to ~~Open Sea~~open sea and littoral waters of Skidaway ~~and Ossabaw~~ Island~~s~~	Recreation
Ogeechee River	U.S. Hwy. 17 Bridge to ~~Open Sea~~open sea ~~and littoral waters of Skidaway, Ossabaw, Sapelo, and St. Catherines Islands~~	Recreation
Ossabaw Sound	All littoral waters including the waters on the ocean side of Wassaw and Ossabaw Islands	Recreation
Rocky Comfort Creek	Headwaters to confluence with Whetstone Creek	Drinking Water
Sapelo Sound	All littoral waters including the waters on the ocean side of St. Catherines and Sapelo Islands	Recreation
Skidaway River	Skidaway Narrows in Chatham County	Recreation
St. Catherines Sound	All littoral waters including the waters on the ocean side of Ossabaw and St. Catherines Islands	Recreation
Wassaw Sound	All littoral waters including the waters on the ocean side of Little Tybee and Wassaw Islands	Recreation

SATILLA RIVER BASIN		DESIGNATED USE ~~CLASSIFICATION~~
~~All littoral waters on the ocean side of Cumberland Island~~		~~Recreation~~
~~All littoral waters on the ocean and sound side of Jekyll Island~~		~~Recreation~~
Big Creek	Lake Laura S. Walker, Laura Walker State Park Beach	Recreation

Satilla River	Alabaha River to Woodbine Boat Ramp at Hwy. 17	Recreation
South Brunswick River	Blythe Island Sandbar	Recreation
St. Andrews Sound	All littoral waters including the waters on the ocean side of Jekyll and Cumberland Islands	Recreation
St. Simons Sound	The littoral waters on the ocean side of Sea Island, and all littoral waters including the waters on the ocean side of St. Simons and Jekyll Islands	Recreation

SAVANNAH RIVER BASIN		DESIGNATED USE ~~CLASSIFICATION~~
Abercorn Creek	Confluence with Little Abercorn Creek to Savannah River	Drinking Water
Beaverdam Creek	Confluence with Little Beaverdam Creek to Carters Creek	Drinking Water
Beaverdam Creek (Lake Boline)	Headwaters to confluence with Little Beaverdam Creek (including Lake Boline)	Drinking Water
Brier Creek	Walnut Branch to Fitz Creek	Drinking Water
Broad River	Comer Carlton Rd. (Athens Hwy) to Mill Branch	Recreation
Broad River	Wildcat Bridge Rd. to Scull Shoal Creek	Recreation
Chattooga River	Georgia-North Carolina State Line to ~~Tugaloo Reservoir~~confluence with West Fork Chattooga River	Wild and Scenic
Chattooga River	Confluence with West Fork Chattooga River to Tugaloo Reservoir	Recreation and Wild and Scenic
Chattooga River/Tugaloo Reservoir	Tugaloo Reservoir to confluence with Tallulah River	Recreation
Cedar Creek	Headwaters to confluence with Little Toccoa Creek (including Toccoa Reservoir)	Drinking Water
Grove Creek	Headwaters to confluence with Hickory Level Creek	Drinking Water
Unnamed Tributary to Lick Creek	Lake Liberty, A.H. Stephens State Park Beach	Recreation
Little Beaverdam Creek	Headwaters to confluence with Beaverdam Creek	Drinking Water
Mountain Creek	Headwaters to Little Nails Creek	Drinking Water
North Fork Broad River	Confluence with Double Branch to confluence with Middle Fork Broad River	Drinking Water
Savannah River/Lake Russell and Clarks Hill Lake	GA Highway 368/SC Highway 184 to Clarks Hill Dam (Mile 238)	Recreation and Drinking Water

Savannah River	Clarks Hill Dam (Mile 238) to Horse Creek including Stevens Creek Reservoir and Augusta Canal	Drinking Water
Savannah River	US Hwy. 301 Bridge (Mile 129) to Seaboard Coastline RR Bridge (Mile 27.4)	Drinking Water
Savannah River	Seaboard Coastline RR Bridge (Mile 27.4) to Fort Pulaski (Mile 0)	Coastal Fishing
Savannah River	Fort Pulaski (Mile 0) to ~~Open Sea~~open sea and all littoral waters including those on the ocean side of Tybee Island	Recreation
Sherrills Creek	Headwaters to confluence with South Fork Little River (including Sherrills Reservoir)	Drinking Water
Sweetwater Creek	Headwaters to confluence with Brier Creek (including Usry Lake)	Drinking Water
Tallulah River	Headwaters, including Lakes Burton and Seed, to confluence with Flat Creek	Recreation
Tallulah River/ Lake Rabun	Confluence of Flat Creek, including Lake Rabun, to Rabun Dam	Recreation and Drinking Water
Tallulah River	Lake Rabun Dam to confluence with Chattooga River	Recreation
Town Creek (Tributary to Long Creek)	Headwaters to confluence with Brooks Creek	Drinking Water
Tributary to Crawford Creek	Headwaters to confluence with Crawford Creek (including Water Works Reservoir)	Drinking Water
Tugaloo River	Confluence of Tallulah and Chattooga Rivers to Yonah Lake Dam	Recreation and Drinking Water
Tugaloo River/Lake Hartwell	Confluence with Prather Creek (near GA SR 184) to Lake Hartwell Dam	Recreation and Drinking Water
West Fork Chattooga	Confluence of Overflow Creek and Clear Creek to confluence with Chattooga River (7.3 mi.)	Wild and Scenic
ST. MARYS RIVER BASIN		DESIGNATED USE ~~CLASSIFICATION~~
St. Marys River~~All littoral waters on the ocean side of Cumberland Island~~	All littoral waters including the waters on the ocean side of Cumberland Island	Recreation
St. Marys River	Deep Creek to Boone Creek	Recreation
St. Marys River	Prospect Landing Rd. to Little St. Marys River	Recreation
SUWANNEE RIVER BASIN		DESIGNATED USE ~~CLASSIFICATION~~
Alapaha River	Willacoochee River to Dampier Branch	Recreation

Alapaha River	Cherry Creek to State Line	Recreation
~~Big Creek~~	~~Lake Laura S. Walker, Laura Walker State Park Beach~~	~~Recreation~~
Little River	Reed Bingham State Park Lake, Reed Bingham State Park Lake Beach	Recreation
Withlacoochee River	Tiger Creek to State Line	Recreation

TALLAPOOSA RIVER BASIN		DESIGNATED USE ~~CLASSIFICATION~~
Astin Creek	Headwaters to Little Tallapoosa River including unnamed tributary to Cowans Lake	Drinking Water
Beach Creek	Headwaters to Bush Creek	Drinking Water
Bush Creek	Headwaters to Beach Creek	Drinking Water
Indian Creek	Confluence with Turkey Creek to Indian Branch	Drinking Water
Little Tallapoosa River	Headwaters of Lake Paradise to confluence with Astin Creek	Drinking Water
Little Tallapoosa River	Sharpe Creek to Buck Creek	Drinking Water
Tallapoosa River	Beach Creek to Mann Creek	Drinking Water
Turkey Creek	Jump In Creek to Indian Creek	Drinking Water

TENNESSEE RIVER BASIN		DESIGNATED USE ~~CLASSIFICATION~~
Black's Creek	Headwaters to confluence with Little Tennessee River	Drinking Water
Hiawassee River	Headwaters to Lake Chatuge	Recreation
Hiawassee River/ Lake Chatuge	Lake Chatuge to Georgia - North Carolina State Line	Recreation and Drinking Water
Lookout Creek	Confluence with Turner Branch to confluence with Sitton Gulch Creek	Drinking Water
Mud Creek	Headwaters to confluence with Little Tennessee River	Drinking Water
Nottely River	Headwaters to confluence with Fortenberry Creek	Recreation
~~Notley~~Nottely River/Lake ~~Notley~~Nottely	Confluence with Fortenberry Creek to Lake ~~Notley~~Nottely Dam	Recreation and Drinking Water
~~Notley~~Nottely River	Lake ~~Notley~~Nottely Dam to Georgia - North Carolina State Line	Recreation
South Chickamauga Creek	Confluence of Tiger Creek with East Chickamauga Creek to confluence with Little Chickamauga Creek	Drinking Water
Toccoa River/Lake Blue Ridge	Headwaters to Lake Blue Ridge Dam	Recreation
Toccoa River	Lake Blue Ridge Dam to Georgia - Tennessee State Line	Recreation and Drinking Water

Tributary to Crawfish Spring Lake	Headwaters to confluence with Coke Oven Branch (including Crawfish Spring Lake) to West Chickamauga Creek	Drinking Water
Wolf Creek	Lake Trahlyta, Vogel State Park Beach	Recreation

(15) Trout Streams. Streams designated as Primary Trout Waters are waters supporting a self-sustaining population of Rainbow, Brown or Brook Trout. Streams designated as Secondary Trout Streams are those with no evidence of natural trout reproduction, but are capable of supporting trout throughout the year. Trout streams are classified in accordance with the designations and criteria as follows:

(a) **Criteria.**

(i) There shall be no elevation of natural stream temperatures for Primary Trout Waters; 2°F or less elevation for Secondary Trout Waters.

(ii) No person shall construct an impoundment on Primary Trout Waters, except on streams with drainage basins less than 50 acres upstream of the impoundment. Impoundments on streams with drainage basins less than 50 acres must be approved by the Division.

(iii) No person shall construct an impoundment on Secondary Trout Waters without the approval of the Division.

(b) **Designations by County.**

BARTOW COUNTY

Primary:

None.

Secondary:

1. Boston Creek watershed upstream from Georgia Hwy. 20.
2. Connesena Creek watershed.
3. Dykes Creek watershed.
4. Pine Log Creek watershed.
5. Pyle Creek watershed.
6. Salacoa Creek watershed.
7. Spring Creek watershed.
8. Stamp Creek watershed upstream from Bartow County Road 269.
9. Toms Creek watershed upstream from Bartow County Road 82.

10. Two Run Creek watershed.

11. Ward Creek watershed.

CARROLL COUNTY

Primary:

None.

Secondary:

1. Brooks Creek watershed.
2. Mud Creek watershed.
3. Tallapoosa River.

CATOOSA COUNTY

Primary:

None.

Secondary:

1. Dry Creek watershed upstream from Catoosa County Road 257 (East Chickamauga Creek Watershed).
2. Hurricane Creek watershed upstream from Peters Branch.
3. Little Chickamauga Creek watershed upstream from Catoosa County Road 387.
4. Tiger Creek watershed upstream from Georgia Hwy. 2.

CHATTOOGA COUNTY

Primary:

None.

Secondary:

1. Allgood Branch watershed upstream from Southern Railroad.
2. Chappel Creek watershed.
3. Chelsea Creek watershed.
4. East Fork Little River watershed.
5. Hinton Creek watershed.

6. Kings Creek watershed.
7. Little Armuchee Creek watershed upstream from Chattooga County Road 326.
8. Middle Fork Little River watershed.
9. Mt. Hope Creek watershed.
10. Perennial Spring watershed.
11. Raccoon Creek watershed upstream from Georgia Hwy. 48.
12. Ruff Creek watershed.
13. Storey Mill Creek watershed.
14. Taliaferro Creek watershed.

CHEROKEE COUNTY

Primary:

None.

Secondary:

1. Bluff Creek watershed upstream from Cherokee County Road 114.
2. Boston Creek watershed.
3. Murphy Creek watershed.
4. Pine Log Creek watershed.
5. Salacoa Creek watershed.
6. Soap Creek watershed upstream from Cherokee County Road 116.
7. Stamp Creek watershed.
8. Wiley Creek watershed.

COBB COUNTY

Primary:

None.

Secondary:

1. Chattahoochee River upstream from I-285 West Bridge.

DADE COUNTY

Primary:

None.

Secondary:

1. Allison Creek watershed.
2. East Fork Little River watershed.
3. Lookout Creek watershed upstream from Dade County Road 197.
4. Rock Creek watershed.
5. West Fork Little River watershed.

DAWSON COUNTY

Primary:

1. Amicalola Creek watershed upstream from Dawson County Road 192 (Devil's Elbow Road).
2. Anderson Creek watershed.
3. Long Swamp Creek watershed.
4. Nimblewill Creek watershed.
5. Sweetwater Creek watershed.

Secondary:

1. Amicalola Creek watershed from Georgia Hwy. 53 upstream to Dawson County Road 192 (Devil's Elbow Road).
2. Shoal Creek watershed upstream from the mouth of Burt Creek.

ELBERT COUNTY

Primary:

None.

Secondary:

1. Savannah River for the ten-mile reach downstream from Hartwell Dam.

FANNIN COUNTY

Primary:

1. Conasauga River - Jacks River watershed.
2. Ellijay River watershed.

3. Etowah River watershed.
4. Fightingtown Creek watershed.
5. Owenby Creek watershed.
6. Persimmon Creek watershed.
7. South Fork Rapier Mill Creek watershed.
8. Toccoa River watershed upstream to Blue Ridge Reservoir dam.
9. Toccoa River watershed upstream from the backwater of Blue Ridge Reservoir.
10. Tumbling Creek watershed.
11. Wilscot Creek watershed.

Secondary:

All streams or stream sections not classified as primary in the above list.

FLOYD COUNTY

Primary:

None.

Secondary:

1. Dykes Creek watershed.
2. Johns Creek watershed upstream from Floyd County Road 212.
3. Kings Creek watershed.
4. Lavender Creek watershed upstream from Floyd County Road 893.
5. Little Cedar Creek watershed.
6. Mt. Hope Creek watershed.
7. Silver Creek watershed upstream from Georgia Highway 1E.
8. Spring Creek watershed (flows into State of Alabama).
9. Spring Creek water shed (flows into Etowah River).
10. Toms Creek watershed.

FORSYTH COUNTY

Primary:

None.

Secondary:

1. Chattahoochee River.

FULTON COUNTY

Primary:

None.

Secondary:

1. Chattahoochee River upstream from I-285 West Bridge.

GILMER COUNTY

Primary:

1. Cartecay River watershed upstream from the mouth of Clear Creek.
2. Clear Creek watershed upstream from Gilmer County Road 92.
3. Conasauga River watershed - including Jacks River watershed.
4. Ellijay River watershed upstream from the mouth of Kells Creek.
5. Harris Creek watershed.
6. Johnson Creek watershed.
7. Mountaintown Creek watershed upstream from U.S. Highway 76.
8. Tails Creek watershed upstream from Georgia Hwy. 282.
9. Toccoa River watershed - including Fightingtown Creek watershed.

Secondary:

1. All streams or sections thereof except the Coosawattee River downstream from Ga. Hwy. 5 Bridge, and Talking Rock Creek (not including tributaries) and those classified as primary.
2. Ball Creek watershed.
3. Sevenmile Creek watershed.
4. Town Creek watershed.
5. Wildcat Creek watershed.

GORDON COUNTY
Primary:

None.

Secondary:

1. Johns Creek watershed.
2. Long Branch watershed.
3. Pine Log Creek watershed upstream from Georgia Hwy. 53.
4. Pin Hook Creek watershed upstream from Gordon County Road 275.
5. Rocky Creek watershed upstream from Gordon County Road 210.
6. Salacoa Creek watershed upstream from U.S. Hwy. 411.
7. Snake Creek watershed.

GWINNETT COUNTY

Primary:

None.

Secondary:

1. Chattahoochee River.

HABERSHAM COUNTY

Primary:

1. Chattahoochee River watershed upstream from Georgia Hwy. 255 Bridge.
2. Middle Fork Broad River watershed upstream from USFS Route 92-B.
3. Panther Creek watershed.
4. Soque River watershed upstream from King's Bridge (bridge on Georgia Hwy. 197 just below the mouth of Shoal Creek).

Secondary:

1. Chattahoochee River watershed upstream from Georgia Hwy. 115 to the Georgia Hwy. 255 Bridge.
2. Davidson Creek watershed.
3. Middle Fork Broad River tributaries entering below USFS Route 92-B.
4. Nancytown Creek watershed upstream from Nancytown Lake.
5. North Fork Broad River watershed.

6. Soque River watershed upstream from the mouth of Deep Creek to King's Bridge (Georgia Hwy. 197).

7. Toccoa Creek watershed.

HARALSON COUNTY

Primary:

None.

Secondary:

1. Beach Creek watershed upstream from Haralson County Road 34.

2. Flatwood Creek watershed.

3. Lassetter Creek watershed.

4. Mann Creek watershed upstream from Haralson County Road 162.

5. Mountain Creek watershed.

6. Tallapoosa River watershed upstream from Haralson County Road 222.

7. Tallapoosa Creek watershed.

HART COUNTY

Primary:

None.

Secondary:

1. Savannah River.

LUMPKIN COUNTY

Primary:

1. Amicalola Creek watershed.

2. Camp Creek watershed.

3. Cane Creek watershed upstream from Cane Creek Falls.

4. Cavender Creek watershed.

5. Chestatee River watershed upstream from Lumpkin County Road 52-S976 (Lumpkin County Road 190).

6. Clay Creek watershed.

7. Etowah River watershed upstream from the Georgia Hwy. 52 Bridge.
8. Hurricane Creek watershed upstream from Lumpkin County Road 202.
9. Mooney Branch watershed.
10. Tobacco Pouch Branch watershed.

Secondary:

1. Cane Creek watershed upstream from Georgia Hwy. 52 Bridge to Cane Creek Falls.
2. Chestatee River watershed upstream from the mouth of Tesnatee Creek to Lumpkin County Road 52-S976 (Lumpkin County Road 190).
3. Etowah River watershed upstream from Castleberry Bridge to Georgia Hwy. 52 except those classified as primary above.
4. Shoal Creek watershed.
5. Yahoola Creek watershed upstream from Georgia Hwy. 52.

MURRAY COUNTY

Primary:

1. Conasauga River watershed, including - Jacks River watershed, upstream from Georgia--Tennessee state line.
2. Holly Creek watershed upstream from Murray County Rd. SR826 (U.S. Forest Service line).
3. Rock Creek watershed upstream from Murray County Rd. 4 (Dennis).

Secondary:

1. All tributaries to Carters Reservoir.
2. Holly Creek watershed (including Emory Creek watershed) upstream from Emory Creek to Murray County Road SR826 (U.S. Forest Service line).
3. Mill Creek watershed upstream from Murray County Road 27.
4. Mill Creek (Hassler Mill Creek) watershed within the Holly Creek watershed.
5. North Prong Sumac Creek watershed.
6. Sugar Creek watershed upstream from Murray County Road 4.
7. Sumac Creek watershed upstream from Coffey Lake.
8. Rock Creek watershed upstream of Murray County Road 301.

PAULDING COUNTY

Primary:

None.

Secondary:

1. Possum Creek watershed upstream from Paulding County Road 64.
2. Powder Creek (Powder Springs Creek) watershed.
3. Pumpkinvine Creek watershed upstream from Paulding County Road 231.
4. Pyle Creek watershed.
5. Raccoon Creek watershed upstream from Road SR2299 (Paulding County Road 471).
6. Tallapoosa River watershed.
7. Simpson Creek watershed.
8. Thompson Creek watershed.
9. Ward Creek watershed.

PICKENS COUNTY

Primary:

1. Cartecay River watershed.
2. Talking Rock Creek watershed upstream from Route S1011 (GA Highway 136).

Secondary:

1. Amicalola Creek watershed.
2. Ball Creek watershed.
3. Bluff Creek watershed.
4. East Branch watershed (including Darnell Creek watershed).
5. Fisher Creek watershed (upstream from the confluence of Talona Creek and Fisher Creek).
6. Fourmile Creek watershed.
7. Hobson Creek watershed.
8. Little Scarecorn Creek watershed.
9. Long Branch watershed.
10. Long Swamp Creek watershed upstream from Pickens County Road 294.

11. Mud Creek watershed.
12. Pin Hook Creek watershed.
13. Polecat Creek watershed.
14. Rock Creek watershed.
15. Salacoa Creek watershed.
16. Scarecorn Creek watershed upstream from Georgia Hwy. 53.
17. Sevenmile Creek watershed.
18. Soap Creek watershed.
19. Town Creek watershed.
20. Wildcat Creek watershed.

POLK COUNTY

Primary:

None.

Secondary:

1. Cedar Creek watershed upstream from Polk County Road 121.
2. Fish Creek watershed upstream of Plantation Pipeline.
3. Lassetter Creek watershed.
4. Little Cedar Creek watershed.
5. Pumpkinpile Creek watershed upstream from Road SR1032.
6. Silver Creek watershed.
7. Simpson Creek watershed upstream of Lake Dorene.
8. Spring Creek watershed.
9. Swinney Branch watershed.
10. Thomasson Creek watershed.
11. Thompson Creek watershed upstream of Polk County Road 441.

RABUN COUNTY

Primary:

1. Chattooga River - all tributaries classified as primary.

2. Little Tennessee River - entire stream and tributaries classified as primary except all streams or sections thereof classified as secondary.

3. Tallulah River - entire stream and tributaries classified as primary except the Tallulah River downstream from Lake Rabun Dam to headwaters of Tugaloo Lake.

Secondary:

1. Little Tennessee River downstream from U.S. Hwy. 441 Bridge.

2. Mud Creek downstream from Sky Valley Ski Resort Lake to the Little Tennessee River.

STEPHENS COUNTY

Primary:

1. Middle Fork Broad River watershed upstream from USFS Route 92-B.

2. Panther Creek watershed upstream from the mouth of Davidson Creek.

Secondary:

1. Davidson Creek watershed.

2. Leatherwood Creek watershed upstream from Georgia Hwy. 184 Bridge.

3. Little Toccoa Creek watershed.

4. Middle Fork Broad River watershed upstream from SCS flood control structure #44 to USFS Route 92-B.

5. North Fork Broad River watershed upstream from SCS flood control structure #1.

6. Panther Creek watershed downstream from the mouth of Davidson Creek.

7. Toccoa Creek upstream from Toccoa Falls.

TOWNS COUNTY

Primary:

1. Brasstown Creek watershed.

2. Chattahoochee River watershed.

3. Gumlog Creek watershed.

4. Hiawassee River watershed - entire stream and all tributaries classified as primary except all streams or sections thereof classified as secondary.

5. Tallulah River watershed.

6. Winchester Creek watershed.

Secondary:

1. Hightower Creek downstream from the mouth of Little Hightower Creek.

UNION COUNTY

Primary:

1. Arkaqua Creek watershed.
2. Brasstown Creek watershed.
3. Chattahoochee River watershed.
4. Conley Creek watershed upstream from Road S2325 (Union County Rd 237).
5. Coosa Creek watershed upstream from mouth of Anderson Creek.
6. Dooley Creek watershed.
7. East Fork Wolf Creek watershed upstream from Lake Trahlyta.
8. Gumlog Creek watershed.
9. Ivylog Creek watershed upstream from USDA Forest Service property line.
10. Nottely River watershed upstream from the mouth of Town Creek.
11. Toccoa River watershed.
12. Town Creek watershed.
13. West Fork Wolf Creek watershed.
14. Youngcane Creek watershed upstream from the mouth of Jones Creek.

Secondary:

1. All streams or sections thereof except the Butternut Creek watershed and the Nottely River downstream of Nottely Dam and those classified as primary.

WALKER COUNTY

Primary:

1. Furnace Creek watershed.
2. Harrisburg Creek watershed (including Dougherty Creek and Allen Creek) upstream from Dougherty Creek.

Secondary:

1. Chappel Creek watershed.
2. Chattanooga Creek watershed upstream of Walker County Road 235.
3. Concord Creek watershed.
4. Dry Creek watershed (tributary to East Armuchee Creek).
5. Duck Creek watershed.
6. East Armuchee Creek watershed upstream from Georgia Hwy. 136.
7. East Fork Little River watershed (flows into Dade County).
8. East Fork Little River watershed (flows into Chattooga County; includes Gilreath Creek).
9. Gulf Creek watershed.
10. Johns Creek watershed.
11. Left Fork Coulter Branch watershed.
12. Little Chickamauga Creek watershed.
13. Middle Fork Little River watershed (includes Cannon Branch and Hale Branch).
14. Rock Creek watershed (including Sawmill Branch) upstream from Sawmill Branch.
15. Ruff Creek watershed.
16. Snake Creek watershed.
17. West Armuchee Creek watershed.
18. West Chickamauga Creek watershed upstream from Walker County Road 107.
19. West Fork Little River watershed.

WHITE COUNTY

Primary:

1. Cathey Creek watershed upstream from the Arrowhead Campground Lake at the mouth of Tom White Branch.
2. Chattahoochee River watershed upstream from Georgia Hwy. 255 Bridge.
3. Town Creek watershed upstream from the mouth of Jenny Creek.

Secondary:

1. Chattahoochee River watershed upstream from Georgia Hwy. 115 to the Georgia Hwy. 255 Bridge.

2. Little Tesnatee Creek watershed upstream from the mouth of Turner Creek.

3. Turner Creek watershed except as listed under primary above (Turner Creek nearest to Cleveland city limits).

WHITFIELD COUNTY

Primary:

None.

Secondary:

1. Coahulla Creek watershed upstream from Whitfield County Road 183.

2. Dry Creek watershed.

3. Snake Creek watershed.

4. Spring Creek watershed.

5. Swamp Creek watershed upstream from Whitfield County Road 9.

6. Tiger Creek watershed

(16) Waters Generally Supporting Shellfish. The waters listed below are either productive shellfish waters or have the potential to support shellfish. However, it may not be lawful to harvest shellfish from all of the waters listed below. Shellfish may only be harvested from waters approved for harvest by the Georgia DNR Coastal Resources Division. For a current list of approved waters for harvesting, contact the Coastal Resources Division.

CHATHAM COUNTY

1. Savannah River South Channel at Fort Pulaski to confluence with Lazaretto Creek.

2. Tybee River at confluence with Bates Creek and eastward, including Bates Creek.

3. Wilmington River at confluence with Herb River and eastward.

4. Herb River at confluence with Wilmington River to County Road 890.

5. All waters surrounding Skidaway Island including Moon River North to Skidaway Island Road.

6. Vernon River at Vernonburg and eastward.

7. Little Ogeechee River from Rose Dhu Island and eastward excluding Harvey Creek on Harvey's Island.

8. Ogeechee River below Shad Island and eastward (north of center line).

9. All waters surrounding Ossabaw Island and Wassaw Island to the center line of the intracoastal waterway.

BRYAN COUNTY

1. Ogeechee River below Shad Island and eastward (south of center line).

2. Redbird Creek at Cottonham and eastward.

3. All waters west of main channel center line of intracoastal waterway to confluence of Medway River.

4. Medway River at south confluence of Sunbury Channel and East Channel and eastward (north of center line).

LIBERTY COUNTY

1. Medway River at south confluence of Sunbury Channel and East Channel and eastward (south of center line).

2. Dickinson Creek at Latitude 31° 44.2' to confluence with Medway River.

3. Johns Creek at end of County Road 3 and eastward to confluence with Medway River.

4. All other waters east and north of Colonels Island.

5. North Newport River System at confluence with Carrs Neck Creek and eastward, including Cross Tide Creek.

6. South Newport River System north of center line and eastward from confluence with South Hampton Creek.

MCINTOSH COUNTY

1. South Newport River System south of centerline and eastward from confluence with South Hampton Creek.

2. Julienton River at Latitude 31° 36.8' and eastward to confluence with Sapelo River, including Broad River near Shellman Bluff.

3. Sapelo River from end of County Road 127 eastward excluding White Chimney River and Savannah Cut.

4. All waters surrounding Creighton Island.

5. Atwood Creek at Latitude 31° 28.3' and eastward.

6. Hudson Creek at Latitude 31° 27.2' and eastward.

7. Carnigan River at Latitude 31° 26.2' and eastward.

8. All waters surrounding Sapelo Island to the center line of Sapelo Sound, including New Teakettle Creek, Old Teakettle Creek and Dark Creek.

9. Dead River at Longitude 81° 21.5' to confluence with Folly River.

10. Folly River at Longitude 81° 21.2' to confluence with intracoastal waterways including Fox Creek tributary.

11. North River from confluence with Old Darien River to confluence with intracoastal waterway, including Old Darien River.

12. Darien River from confluence with Three Mile Cut to intracoastal waterway.

13. Rockdedundy River from confluence with Darien River to intracoastal waterway.

14. All waters surrounding Doboy Island, Commodore Island, Wolf Island, and Rockdedundy Island.

15. South River at confluence of intracoastal waterway to Doboy Sound.

16. Altamaha River from confluence with Three Mile Cut and Mackay River and eastward, including Buttermilk Sound, but excluding South Altamaha River.

17. Dog Hammock to confluence with Sapelo River.

18. Eagle Creek to confluence with Mud River.

GLYNN COUNTY

1. Mackay River water system from confluence with South Altamaha River to confluence with Brunswick River, excluding Wally's Leg.

2. All waters surrounding St. Simons Island and Little St. Simons Island.

3. All waters surrounding Andrews Island excluding Academy Creek.

4. Turtle River from confluence with Buffalo River to confluence with South Brunswick River, excluding Cowpen Creek, Yellow Bluff Creek, and Gibson Creek.

5. South Brunswick River and drainage system to confluence of Brunswick River.

6. Fancy Bluff Creek from confluence with South Brunswick River to the Little Satilla River.

7. Brunswick River from confluence of Turtle River and South Brunswick River to St. Simons Sound.

8. Little Satilla River from confluence with Fancy Bluff Creek to St. Andrews Sound (north of center line).

9. All waters surrounding Jekyll Island, Jointer Island, and Colonels Island.

CAMDEN COUNTY

1. Little Satilla River from confluence with Fancy Bluff Creek to St. Andrews Sound (south of center line), excluding Maiden Creek.

2. Umbrella Creek from confluence with Dover Creek below Dover Bluff.

3. Dover Creek from confluence with Umbrella Creek to confluence with Satilla River.

4. Satilla River near Floyd Basin and unnamed cut over to Dover Creek to St. Andrews Sound.

5. Floyd Basin at confluence with Todd Creek to confluence with Satilla River.

6. Floyd Basin at confluence with Todd Creek to confluence with Cumberland River.

7. Black Point Creek south of Latitude 30° 52.0' south to Crooked River.

8. Crooked River from Crooked River State Park to Cumberland River.

9. Cumberland River from confluence of St. Andrews Sound to confluence with St. Marys River (north of center line).

10. North River from County Road 75 to confluence with St. Marys River.

11. All waters surrounding Cumberland Island.

12. St. Marys River (north of center line) from end of State Road 40 to Cumberland Sound.

(17) Specific Criteria for Lakes and Major Lake Tributaries. In addition to the general criteria, the following lake specific criteria are ~~deemed necessary and shall be~~ required ~~for the specific water usage as shown~~:

(a) **West Point Lake**: Those waters impounded by West Point Dam and downstream of U.S. 27 at Franklin.

(i) Chlorophyll *a*: For the months of April through October, the average of monthly photic zone composite samples shall not exceed the chlorophyll *a* concentrations at the locations listed below more than once in a five-year period.

1. Upstream from the Dam in the Forebay: 22 µg/L
2. LaGrange Water Intake: 24 µg/L

(ii) pH: Within the range of 6.0 - 9.5.

(iii) Total Nitrogen: Not to exceed 4.0 mg/L as Nitrogen in the photic zone.

(iv) Total Phosphorous: Total lake loading shall not exceed 2.4 pounds per acre foot of lake volume per year.

(v) Bacteria:

1. U.S. 27 at Franklin to New River: Bacteria shall not exceed the Fishing criterion as presented in 391-3-6-.03(6)(c)(iii).

2. New River to West Point Dam: E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

(vi) Dissolved Oxygen: A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times at the depth specified in 391-3-6-.03(5)(g).

(vii) Temperature:

1. U.S. 27 at Franklin to New River: Water temperature shall not exceed the Fishing criterion as presented in 391-3-6-.03(6)(c)(iv).

2. New River to West Point Dam: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).

(viii) Major Lake Tributaries: For the following tributaries, the annual total phosphorus loading to West Point Lake shall not exceed the following:

1.	Yellow Jacket Creek at Hammet Road:	11,000 pounds
2.	New River at Hwy 100:	14,000 pounds
3.	Chattahoochee River at U.S. 27:	1,400,000 pounds

(b) **Lake Walter F. George**: Those waters impounded by Walter F. George Dam and upstream to Georgia Highway 39 near Omaha.

(i) Chlorophyll *a*: For the months of April through October, the average of monthly photic zone composite samples shall not exceed 18 µg/L at mid-river at U.S. Highway 82 or 15 µg/L at mid-river in the dam forebay more than once in a five-year period.

(ii) pH: Within the range of 6.0-9.5 standard units.

(iii) Total Nitrogen: Not to exceed 3.0 mg/L as nitrogen in the photic zone.

(iv) Total Phosphorous: Total lake loading shall not exceed 2.4 pounds per acre-foot of lake volume per year.

(v) Bacteria:

1. Georgia Highway 39 to Cowikee Creek: Bacteria shall not exceed the Fishing criterion as presented in 391-3-6-.03(6)(c)(iii).

2. Cowikee Creek to Walter F. George Dam: E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

(vi) Dissolved Oxygen: A daily average of no less than 5.0 mg/L and no less than 4.0 mg/L at all times at the depth specified in 391-3-6-.03(5)(g).

(vii) Temperature:

1. Georgia Highway 39 to Cowikee Creek: Water temperature shall not exceed the Fishing criterion as presented in 391-3-6-.03(6)(c)(iv).

2. Cowikee Creek to Walter F. George Dam: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).

(viii) Major Lake Tributary: The annual total phosphorous loading to Lake Walter F. George, monitored at the Chattahoochee River at Georgia Highway 39, shall not exceed 2,000,000 pounds.

(c) **Lake Jackson**: Those waters impounded by Lloyd Shoals Dam and upstream to Georgia Highway 36 on the South and Yellow Rivers, upstream to Newton Factory Bridge Road on the Alcovy River and upstream to Georgia Highway 36 on Tussahaw Creek.

(i) Chlorophyll *a*: For the months of April through October, the average of monthly mid-channel photic zone composite samples shall not exceed 20 µg/L at a location approximately 2 miles downstream of the confluence of the South and Yellow Rivers at the junction of Butts, Newton and Jasper Counties more than once in a five-year period.

(ii) pH: Within the range of 6.0-9.5 standard units.

(iii) Total Nitrogen: Not to exceed 4.0 mg/L as nitrogen in the photic zone.

(iv) Total Phosphorous: Total lake loading shall not exceed 5.5 pounds per acre-foot of lake volume per year.

(v) Bacteria: E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

(vi) Dissolved Oxygen: A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times at the depth specified in 391-3-6-.03(5)(g).

(vii) Temperature: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).

(viii) Major Lake Tributaries: For the following major tributaries, the annual total phosphorous loading to Lake Jackson shall not exceed the following:

1.	South River at Island Shoals:	179,000 pounds
2.	Yellow River at Georgia Highway 212:	116,000 pounds
3.	Alcovy River at Newton Factory Bridge Road:	55,000 pounds
4.	Tussahaw Creek at Fincherville Road:	7,000 pounds

(d) **Lake Allatoona**: Those waters impounded by Allatoona Dam and upstream to State Highway 5 on the Etowah River, State Highway 5 on Little River, the Lake Acworth Dam, and the confluence of Little Allatoona Creek and Allatoona Creek. Other impounded tributaries to an elevation of 840 feet mean sea level corresponding to the normal pool elevation of Lake Allatoona.

(i) Chlorophyll *a*: For the months of April through October, the average of monthly mid-channel photic zone composite samples shall not exceed the chlorophyll *a* concentrations at the locations listed below more than once in a five-year period:

1.	Upstream from the Dam:	10 µg/L
2.	Allatoona Creek upstream from I-75:	12 µg/L

3. Mid-Lake downstream from Kellogg Creek: 10 μg/L
4. Little River upstream from Highway 205: 15 μg/L
5. Etowah River upstream from Sweetwater Creek: 14 μg/L

(ii) pH: Within the range of 6.0-9.5 standard units

(iii) Total Nitrogen: Not to exceed a growing season average of 4 mg/L as nitrogen in the photic zone.

(iv) Total Phosphorous: Total lake loading shall not exceed 1.3 pounds per acre-foot of lake volume per year.

(v) Bacteria:

1. Etowah River, State Highway 5 to State Highway 20: Bacteria shall not exceed the Fishing Criterion as presented in 391-3-6-.03(6)(c)(iii).

2. Etowah River, State Highway 20 to Allatoona Dam: E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

(vi) Dissolved Oxygen: A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times at the depth specified in 391-3-6-.03(5)(g).

(vii) Temperature:

1. Etowah River, State Highway 5 to State Highway 20: Water temperature shall not exceed the Fishing criterion as presented in 391-3-6-.03(6)(c)(iv).

2. Etowah River, State Highway 20 to Allatoona Dam: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).

(viii) Major Lake Tributaries: For the following major tributaries, the annual total phosphorous loading to Lake Allatoona shall not exceed the following:

1. Etowah River at State Highway 5 spur and 140, at the USGS gage: 340,000 lbs/yr
2. Little River at State Highway 5 (Highway 754): 42,000 lbs/yr
3. Noonday Creek at North Rope Mill Road: 38,000 lbs/yr
4. Shoal Creek at State Highway 108 (Fincher Road): 12,500 lbs/yr

(e) **Lake Sidney Lanier**: Those waters impounded by Buford Dam and upstream to Belton Bridge Road on the Chattahoochee River, 0.6 miles downstream from State Road 400 on the Chestatee River, as well as other impounded tributaries to an elevation of 1070 feet mean sea level corresponding to the normal pool elevation of Lake Sidney Lanier.

(i) Chlorophyll *a*: For the months of April through October, the average of monthly mid-channel photic zone composite samples shall not exceed the chlorophyll *a* concentrations at the locations listed below more than once in a five-year period:

1. Upstream from the Buford Dam forebay: 5 μg/L
2. Upstream from the Flowery Branch confluence: 6 μg/L

3. At Browns Bridge Road (State Road 369): 7 μg/L
4. At Bolling Bridge (State Road 53) on Chestatee River: 10 μg/L
5. At Lanier Bridge (State Road 53) on Chattahoochee River: 10 μg/L

(ii) pH: Within the range of 6.0-9.5 standard units.

(iii) Total Nitrogen: Not to exceed 4 mg/L as nitrogen in the photic zone.

(iv) Total Phosphorous: Total lake loading shall not exceed 0.25 pounds per acre-foot of lake volume per year.

(v) Bacteria: E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

(vi) Dissolved Oxygen: A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times at the depth specified in 391-3-6-.03(5)(g).

(vii) Temperature: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).

(viii) Major Lake Tributaries: For the following major tributaries, the annual total phosphorous loading to Lake Sidney Lanier shall not exceed the following:

1. Chattahoochee River at Belton Bridge Road: 178,000 pounds
2. Chestatee River at Georgia Highway 400: 118,000 pounds
3. Flat Creek at McEver Road: 14,400 pounds

(f) **Carters Lake**: Those waters impounded by Carters Dam and upstream on the Coosawattee River as well as other impounded tributaries to an elevation of 1072 feet mean sea level corresponding to the normal pool elevation of Carters Lake.

(i) Chlorophyll *a*: For the months of April through October, the average of monthly mid-channel photic zone composite samples shall not exceed the chlorophyll *a* concentrations at the locations listed below more than once in a five-year period:

1. Carters Lake upstream from Woodring Branch: 10 μg/L
2. Carters Lake at Coosawattee River embayment mouth: 10 μg/L

(ii) pH: within the range of 6.0 – 9.5 standard units.

(iii) Total Nitrogen: Not to exceed 4.0 mg/L as nitrogen in the photic zone.

(iv) Total Phosphorous: Total lake loading shall not exceed 172,500 pounds or 0.46 pounds per acre-foot of lake volume per year.

(v) Bacteria: E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

(vi) Dissolved Oxygen: A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times at the depth specified in 391-3-6-.03(5)(g).

(vii) Temperature: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).

(viii) Major Lake Tributaries: For the following major tributaries, the annual total phosphorous loading at the compliance monitoring location shall not exceed the following:

1.	Coosawattee River at Old Highway:	151,500 pounds
2.	Mountaintown Creek at U.S. Highway 76:	16,000 pounds

(g) **Lake Oconee**: Those waters impounded by Wallace Dam and upstream on the Oconee River as well as other impounded tributaries to an elevation of 436 feet mean sea level corresponding to the normal pool elevation of Lake Oconee.

(i) Chlorophyll *a*: For the months of April through October, the average of monthly mid-channel photic zone composite samples shall not exceed the chlorophyll *a* concentrations at the locations listed below more than once in a five-year period:

1.	Oconee Arm at Highway 44:	26 µg/L
2.	Richland Creek Arm:	15 µg/L
3.	Upstream from the Wallace Dam Forebay:	18 µg/L

(ii) pH: within the range of 6.0 – ~~9.5~~9.0 standard units.

~~(iii) Total Nitrogen: Not to exceed a growing season average of 2 mg/L in the photic zone.~~

~~(iv) Total Phosphorous: Not to exceed a growing season average of 0.2 mg/L in the photic zone.~~

(~~v~~iii) Bacteria: E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

(iv) Dissolved Oxygen: A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times at the depth specified in 391-3-6-.03(5)(g).

(v~~ii~~) Temperature: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).

(h) **Lake Sinclair**: Those waters impounded by Sinclair Dam and upstream on the Oconee River as well as other impounded tributaries to an elevation of 340 feet mean sea level corresponding to the normal pool elevation of Lake Sinclair.

(i) Chlorophyll *a*: For the months of April through October, the average of monthly mid-channel photic zone composite samples shall not exceed the chlorophyll *a* concentrations at the locations listed below more than once in a five-year period:

1. Oconee River Arm Midlake: 14 µg/L
2. Little River and Murder Creek Arm Upstream from Highway 441: 14 µg/L
3. Upstream from the Sinclair Dam Forebay: 10 µg/L

(ii) pH: within the range of 6.0 – ~~9.5~~9.0 standard units.

~~(iii) Total Nitrogen: Not to exceed a growing season average of 2 mg/L in the photic zone.~~

~~(iv) Total Phosphorous: Not to exceed a growing season average of 0.2 mg/L in the photic zone.~~

(~~v~~iii) Bacteria: E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

(iv) Dissolved Oxygen: A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times at the depth specified in 391-3-6-.03(5)(g).

(v~~i~~) Temperature: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).

(18) Site Specific Metal Criteria based on Biotic Ligand Models and Water Effect Ratio

(a) The Biotic Ligand Model (BLM) is a metal bioavailability model that uses receiving water body characteristics and monitoring data to develop site-specific water quality criteria. A study plan and findings shall be submitted and approved that conforms to the requirements outlined in the *2007 Aquatic Life Ambient Freshwater Quality Criteria-Copper 2007 Revision EPA-822-R-07-001.*

(i) Site-specific Copper criteria developed using the BLM:

Buffalo Creek (Richards Lake Dam to confluence with Little Tallapoosa River):

$$\text{Acute Copper criteria} = 4.9X10^{8}\ e^{\left(-0.5\left(\left(\frac{(\ln(pH)-2.316)}{-0.1816}\right)^{2}+\left(\frac{(\ln(DOC)-32.18)}{-5.453}\right)^{2}\right)\right)}$$

$$\text{Chronic Copper criteria} = 3.043X10^{8}\ e^{\left(-0.5\left(\left(\frac{(\ln(pH)-2.316)}{-0.1816}\right)^{2}+\left(\frac{(\ln(DOC)-32.18)}{-5.453}\right)^{2}\right)\right)}$$

(b) A Water Effect Ratio (WER) is site specific and is the ratio of the toxicity of a metal in site water to the toxicity of the same metal in standard laboratory. A study plan and findings shall be submitted and approved that conforms to the requirements outlined in the *1994 Interim Guidance on Determination and Use of Water Effect Ratios for Metals EPA-823-B-94-001.* If the WER is for Copper, the *Interim Guidance* may be complemented with the *2001 Streamline Water Effect Ratio Procedure for Discharges of Copper EPA-822-R-01-005.*

Authority: O.C.G.A. Sec. 12-5-20 et seq.