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312 Rosa L. Parks Ave., 8th Floor, Snodgrass/TN Tower
Nashville, TN 37243
Phone: 615-741-2650
Email: publications.information@tn.gov

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Rulemaking Hearing Rule(s) Filing Form

Rulemaking Hearing Rules are rules filed after and as a result of a rulemaking hearing (Tenn. Code Ann. § 4-5-205).

Pursuant to Tenn. Code Ann. § 4-5-229, any new fee or fee increase promulgated by state agency rule shall take effect on July 1, following the expiration of the ninety (90) day period as provided in § 4-5-207. This section shall not apply to rules that implement new fees or fee increases that are promulgated as emergency rules pursuant to § 4-5-208(a) and to subsequent rules that make permanent such emergency rules, as amended during the rulemaking process. In addition, this section shall not apply to state agencies that did not, during the preceding two (2) fiscal years, collect fees in an amount sufficient to pay the cost of operating the board, commission or entity in accordance with § 4-29-121(b).

Agency/Board/Commission:	Board of Water Quality, Oil, and Gas
Division:	Water Resources
Contact Person:	Richard Cochran
Address:	William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 11th Floor Nashville, Tennessee
Zip:	37243
Phone:	615-532-0997
Email:	Richard.Cochran@tn.gov

Revision Type (check all that apply):

_X_ Amendment
___ New
___ Repeal

___ Content based on previous emergency rule filed on _____
___ Content is identical to the emergency rule

Rule(s) (**ALL** chapters and rules contained in filing must be listed here. If needed, copy and paste additional tables to accommodate multiple chapters. Please make sure that **ALL** new rule and repealed rule numbers are listed in the chart below. Please enter only **ONE** Rule Number/Rule Title per row.)

Chapter Number	**Chapter Title**
0400-40-03	General Water Quality Criteria
Rule Number	**Rule Title**
0400-40-03-.01	Tennessee Board of Water Quality, Oil, and Gas
0400-40-03-.02	General Considerations
0400-40-03-.03	Criteria for Water Uses
0400-40-03-.04	Definitions
0400-40-03-.05	Interpretation of Criteria
0400-40-03-.06	Antidegradation Statement

Chapter Number	**Chapter Title**
0400-40-04	Use Classifications For Surface Waters
Rule Number	**Rule Title**
0400-40-04-.01	Memphis Area Basin
0400-40-04-.02	Hatchie River Basin
0400-40-04-.03	Obion-Forked Deer Basin
0400-40-04-.04	Tennessee River Basin – Western Valley

0400-40-04-.05	Duck River Basin
0400-40-04-.06	Elk River Basin (including Shoal Creek)
0400-40-04-.07	Lower Tennessee River Basin (including Conasauga Basin)
0400-40-04-.08	Upper Tennessee River Basin
0400-40-04-.09	Clinch River Basin
0400-40-04-.10	French Broad River Basin
0400-40-04-.11	Holston River Basin
0400-40-04-.12	Lower Cumberland River Basin
0400-40-04-.13	Upper Cumberland River Basin
0400-40-04-.14	Barren River Basin

Place substance of rules and other info here. Statutory authority must be given for each rule change. For information on formatting rules go to https://sos.tn.gov/products/division-publications/rulemaking-guidelines.

Chapter 0400-40-03
General Water Quality Criteria

Amendments

Table of Contents

The Table of Contents to Chapter 0400-40-03 General Water Quality Criteria is amended by deleting the current title to Rule 0400-40-03-.01 and substituting instead the following new title to read as follows:

0400-40-03-.01 Tennessee Board of Water Quality, Oil, and Gas

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

Rule 0400-40-03-.01 Tennessee Board of Water Quality, Oil and Gas is amended by deleting it in its entirety and substituting instead the following:

0400-40-03-.01 Tennessee Board of Water Quality, Oil, and Gas.

The Water Quality Control Act, T.C.A., § 69-3-101, et seq., makes it the duty of the Board of Water Quality, Oil, and Gas to study and investigate all problems concerned with the pollution of the waters of the state and with its prevention, abatement, and control; and to establish such standards of quality for any waters of the state in relation to their reasonable and necessary use as the Board shall deem to be in the public interest; and establish general policies relating to pollution as the Board shall deem necessary to accomplish the purposes of the Act. The following general considerations and criteria shall be used to determine the permissible conditions of waters with respect to pollution and preventative or corrective measures required to control pollution in various waters or in different sections of the same waters.

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

Rule 0400-40-03-.02 General Considerations is amended by deleting it in its entirety and substituting instead the following:

0400-40-03-.02 General Considerations.

(1) Tennessee water quality standards shall consist of the General Water Quality Criteria and the Antidegradation Statement found in Chapter 0400-40-03, and the Use Classifications for Surface Waters found in Chapter 0400-40-04.

(2) Waters have many uses which in the public interest are reasonable and necessary. Such uses include: sources of water supply for domestic and industrial purposes; propagation and maintenance of fish and other aquatic life; recreation in and on the waters including the safe consumption of fish and shellfish; livestock watering and irrigation; navigation; generation of power; propagation and maintenance of wildlife; and the enjoyment of scenic and aesthetic qualities of waters.

(3) The rigid application of uniform water quality is not desirable or reasonable because of the varying uses of such waters. The assimilative capacity of a stream for sewage and waste varies depending upon various factors and including the following: volume of flow, depth of channel, the presence of falls or rapids, rate of flow, temperature, natural characteristics, and the nature of the stream.

(4) In order to permit the reasonable and necessary uses of the waters of the state, existing pollution should be corrected as rapidly as practicable, and future pollution prevented through the level of treatment technology applicable to a specific source or that greater level of technology necessary to meet water quality standards; i.e., modeling and stream survey assessments, treatment plants, or other control measures.

(5) Because all streams are classified for more than one use, the most stringent criteria will be applicable.

(6) Waters identified as wet weather conveyances according to the definition found in Rule 0400-40-03-.04, shall be protective of humans and wildlife that may come in contact with them and shall not adversely affect the quality of downstream waters. Applicable water quality standards will be maintained downstream of wet weather conveyances.

(7) Where general water quality criteria are applied on a regional, ecoregional, or subecoregional basis, these criteria will be considered to apply to a stream if eighty percent (80%) of its watershed or catchment is contained within the unit upon which the criterion is based.

(8) All fish and aquatic life metals criteria are expressed as total recoverable, except cadmium, copper, lead, nickel, silver, and zinc which are expressed as dissolved. Translators will be used to convert the dissolved fraction into a total recoverable permit limit. One of three approaches to metals translation will be used: (1) translator is the same as the conversion factor, (2) translator is based on relationships derived from STORET data, (3) a site-specific translator is developed. Where available, a site-specific translator is preferred. For assessing whether criteria for cadmium, copper, lead, nickel, silver, and zinc are exceeded by ambient water quality conditions, the dissolved criteria will also be translated in order to allow direct comparison to the ambient data, if total recoverable. The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit From a Dissolved Criteria (EPA-823-B-96-007) may be referenced in applying this provision.

(9) Site-specific numeric criteria studies may be conducted on any appropriate fish and aquatic life criterion.

(a) Site-specific criteria studies based on a Water Effects Ratio (WER) calculated from the documented toxicity of a parameter in the stream in which it will be introduced may supersede the adopted criteria at a site. The Division shall approve a site-specific criterion for metals developed by others provided that the WER methodology [Interim Guidance on Determination and Use of Water-effect Ratios for Metals (EPA-823-B-94-001)] or the Streamlined Water-effects Ratio Procedure for Discharges of Copper (EPA-822-R-01-001) is used, both the study plan and results are approved by the Department, and the U.S. Environmental Protection Agency (EPA) has concurred with the final site specific criterion value(s).

(b) Any site-specific criterion for other toxics based on methodologies other than the above-listed methodologies which recalculate specific criterion, such as the Resident Species Method or the Recalculation Method or the Biotic Ligand Model (BLM) for copper, must be adopted as a revision to Tennessee water quality standards into this chapter, and following EPA approval, can be used for Clean Water Act purposes.

References on this subject include, but are not limited to: Technical Support Document for Water Quality-based Toxics Control (EPA - 505/2-90-001); Technical Guidance Manual for Performing Waste Load Allocations: Book VIII (EPA/600/6-85/002a/002b/002c); MinteqA2, An Equilibrium Metal Speciation Model (EPA/600/3-87/012); Water Quality Standards Handbook, Second Edition (EPA-823-B-93-002); Interim Guidance on Determination and Use of Water-effect Ratios for Metals (EPA-823-B-94-001).

(10) Interpretation and application of narrative criteria shall be based on available scientific literature and EPA guidance and regulations.

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

Rule 0400-40-03-.03 Criteria for Water Uses is amended by deleting it in its entirety and substituting instead the following:

0400-40-03-.03 Criteria for Water Uses.

(1) The criteria for the use of Domestic Water Supply are the following.

(a) Dissolved Oxygen - There shall always be sufficient dissolved oxygen present to prevent odors of

decomposition and other offensive conditions.

(b) pH - The pH value shall lie within the range of 6.0 to 9.0 and shall not fluctuate more than 1.0 unit in this range over a period of 24 hours.

(c) Hardness or Mineral Compounds - The hardness of, or the mineral compounds contained in, the water shall not appreciably impair the usefulness of the water as a source of domestic water supply.

(d) Total Dissolved Solids - The total dissolved solids shall at no time exceed 500 mg/l.

(e) Solids, Floating Materials, and Deposits - There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits, or sludge banks of such size or character as may impair the usefulness of the water as a source of domestic water supply.

(f) Turbidity or Color - There shall be no turbidity or color in amounts or characteristics that cannot be reduced to acceptable concentrations by conventional water treatment processes (See definition).

(g) Temperature - The maximum water temperature change shall not exceed 3°C relative to an upstream control point. The temperature of the water shall not exceed 30.5°C and the maximum rate of change shall not exceed 2°C per hour. The temperature of impoundments where stratification occurs will be measured at a depth of five feet or mid-depth, whichever is less, and the temperature in flowing streams shall be measured at mid-depth.

(h) Coliform - The concentration of the E. coli group shall not exceed 630 colony forming units (cfu) per 100 ml as a geometric mean based on a minimum of five samples collected from a given sampling site over a period of not more than 30 consecutive days with individual samples being collected at intervals of not less than 12 hours. For the purpose of determining the geometric mean, individual samples having an E. coli group concentration of less than 1 cfu per 100 ml shall be considered as having a concentration of 1 cfu per 100 ml.

(i) Taste or Odor - The waters shall not contain substances that will result in taste or odor that prevent the production of potable water by conventional water treatment processes.

(j) Toxic Substances - The waters shall not contain toxic substances, whether alone or in combination with other substances, which will produce toxic conditions that materially affect the health and safety of man or animals, or impair the safety of conventionally treated water supplies. Available references include, but are not limited to: Quality Criteria for Water (Section 304(a) of Public Law 92-500 as amended); Federal Regulations under Section 307 of Public Law 92-500 as amended; and Federal Regulations under Section 1412 of the Public Health Service Act as amended by the Safe Drinking Water Act, (Public Law 93-523). In addition, the following numeric criteria are for the protection of domestic water supply:

Compound	Criteria (µg/L)	Compound	Criteria (µg/L)
Antimony	6	Diquat	20
Arsenic	10	Endothall	100
Beryllium	4	Glyphosate	700
Barium	2000	Hexachlorobenzene	1
Cadmium	5	Hexachlorocyclopentadiene	50
Chromium, total	100	Oxamyl (Vydate)	200
Lead	5	Picloram	500
Cyanide (as free cyanide)	200	Simazine	4
Mercury	2	2,3,7,8 TCDD (Dioxin)	0.00003
Nickel	100	Benzene	5
Selenium	50	Carbon tetrachloride	5
Thallium	2	1,2-Dichloroethane	5
Alachlor	2	1,1-Dichloroethylene	7
Atrazine	3	1,1,1-Trichloroethane	200

Carbofuran	40	Trichloroethylene	5
Chlordane	2	Vinyl chloride	2
Dibromo chloropropane	0.2	para-Dichlorobenzene	75
2,4 Dichlorophenoxyacetic Acid	70	cis 1,2-Dichloroethylene	70
Ethylene dibromide	0.05	1,2-Dichloropropane	5
Heptachlor	0.4	Ethyl benzene	700
Heptachlor epoxide	0.2	Monochlorobenzene	100
Lindane	0.2	ortho-Dichlorobenzene	600
Methoxychlor	40	Styrene	100
Polychlorinated biphenyls	0.5	Tetrachloroethylene	5
2,4,5 Trichlorophenoxyprioponic acid	50	Toluene	1000
		trans 1,2-Dichloroethylene	100
Pentachlorophenol	1	Xylenes, total	10000
Benzo(a)pyrene	0.2	Dichloromethane	5
Chlorobenzene	100	1,2,4-Trichlorobenzene	70
Dalapon	200	1,1,2-Trichloroethane	5
Di(2-ethylhexyl) adipate	400	Endrin	2.0
Di(2-ethylhexyl) phthalate	6	Toxaphene	3
Dinoseb	7	Nitrate	10000
		Nitrite	1000

(k) Other Pollutants - The waters shall not contain other pollutants in quantities that may be detrimental to public health or impair the usefulness of the water as a source of domestic water supply.

(2) The criteria for the use of Industrial Water Supply are the following.

(a) Dissolved Oxygen - There shall always be sufficient dissolved oxygen present to prevent odors of decomposition and other offensive conditions.

(b) pH - The pH value shall lie within the range of 6.0 to 9.0 and shall not fluctuate more than 1.0 unit in this range over a period of 24 hours.

(c) Hardness or Mineral Compounds - The hardness of, or the mineral compounds contained in, the water shall not appreciably impair the usefulness of the water as a source of industrial water supply.

(d) Total Dissolved Solids - The total dissolved solids shall at no time exceed 500 mg/l.

(e) Solids, Floating Materials, and Deposits - There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits, or sludge banks of such size or character as may impair the usefulness of the water as a source of industrial water supply.

(f) Turbidity or Color - There shall be no turbidity or color in amounts or characteristics that cannot be reduced to acceptable concentrations by conventional water treatment processes.

(g) Temperature - The maximum water temperature change shall not exceed 3°C relative to an upstream control point. The temperature of the water shall not exceed 30.5°C and the maximum rate of change shall not exceed 2°C per hour. The temperature of impoundments where stratification occurs will be measured at a depth of five feet or mid-depth, whichever is less, and the temperature in flowing streams shall be measured at mid-depth.

(h) Taste or Odor - The waters shall not contain substances that will result in taste or odor that would prevent the use of the water for industrial processing.

(i) Toxic Substances - The waters shall not contain toxic substances whether alone or in combination with other substances, that will adversely affect industrial processing.

(j) Other Pollutants - The waters shall not contain other pollutants in quantities that may adversely affect the water for industrial processing.

(3) The criteria for the use of Fish and Aquatic Life are the following.

(a) Dissolved Oxygen - The dissolved oxygen shall not be less than 5.0 mg/l with the following exceptions.

1. In streams identified as trout streams, including tailwaters, dissolved oxygen shall not be less than 6.0 mg/L.

2. The dissolved oxygen concentration of trout waters identified as supporting a naturally reproducing population shall not be less than 8.0 mg/L. (Tributaries to trout streams or naturally reproducing trout streams should be considered to be trout streams or naturally reproducing trout streams, unless demonstrated otherwise. Additionally, all streams within the Great Smoky Mountains National Park should be considered naturally reproducing trout streams.)

3. In wadeable streams in subecoregion 73a, dissolved oxygen levels shall not be less than a daily average of 5.0 mg/L with a minimum dissolved oxygen level of 4.0 mg/L.

4. The dissolved oxygen level of streams in ecoregion 66 (Blue Ridge Mountains) not identified as naturally reproducing trout streams shall not be less than 7.0 mg/L.

Substantial and/or frequent variations in dissolved oxygen levels, including diel fluctuations, are undesirable if caused by man-induced conditions. Diel fluctuations in wadeable streams shall not be substantially different than the fluctuations noted in reference streams in that region.

In lakes and reservoirs, the dissolved oxygen concentrations shall be measured at mid-depth in waters having a total depth of 10 feet or less, and at a depth of five feet in waters having a total depth of greater than 10 feet and shall not be less than 5.0 mg/L.

(b) pH - The pH value shall not fluctuate more than 1.0 unit over a period of 24 hours and shall not be outside the following ranges: 6.0 – 9.0 in wadeable streams and 6.5 – 9.0 in larger rivers, lakes, reservoirs, and wetlands.

(c) Solids, Floating Materials, and Deposits - There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits, or sludge banks of such size or character that may be detrimental to fish and aquatic life.

(d) Turbidity, Total Suspended Solids, or Color - There shall be no turbidity, total suspended solids, or color in such amounts or of such character that will materially affect fish and aquatic life. In wadeable streams, suspended solid levels over time should not be substantially different than conditions found in reference streams.

(e) Temperature - The maximum water temperature change shall not exceed 3°C relative to an upstream control point. The temperature of the water shall not exceed 30.5°C and the maximum rate of change shall not exceed 2°C per hour. The temperature of recognized trout waters shall not exceed 20°C. There shall be no abnormal temperature changes that may affect aquatic life unless caused by natural conditions. The temperature in flowing streams shall be measured at mid-depth.

The temperature of impoundments where stratification occurs will be measured at mid-depth in the epilimnion (see definition in Rule 0400-40-03-.04) for warm water fisheries and mid-depth in the hypolimnion (see definition in Rule 0400-40-03-.04) for cold water fisheries. In the case of large impoundments (100 acres or larger) subject to stratification and recognized as trout waters, the temperature of the hypolimnion shall not exceed 20°C.

A successful demonstration as determined by the Department conducted for thermal discharge limitations under Section 316(a) of the Clean Water Act~~,~~ (33 U.S.C. §1326)~~,~~ shall constitute compliance with this paragraph.

(f) Taste or Odor - The waters shall not contain substances that will impart unpalatable flavor to fish or result in noticeable offensive odors in the vicinity of the water or otherwise interfere with fish or aquatic life. References include, but are not limited to: Quality Criteria for Water (section 304(a) of Public Law 92-500 as amended).

(g) Toxic Substances - The waters shall not contain substances or a combination of substances including disease - causing agents which, by way of either direct exposure or indirect exposure through food chains, may cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), physical deformations, or restrict or impair growth in fish or aquatic life or their offspring. References on this subject include, but are not limited to: Quality Criteria for Water (Section 304(a) of Public Law 92-500 as amended); Federal Regulations under Section 307 of Public Law 92-500 as amended. In addition, the following numeric criteria are for the protection of fish and aquatic life:

Compound	Criterion Maximum Concentration µg/L (CMC)	Criterion Continuous Concentration µg/L (CCC)
Arsenic (III) [1]	340	150
Chloride	860000	230000
Cadmium [2]	1.8	0.72
Chromium, III [2]	570	74
Chromium, VI [1]	16	11
Copper [2]	13	9.0
Lead [2]	65	2.5
Mercury [1] (b)	1.4	0.77
Nickel [2]	470	52
Selenium (lentic)	20	1.5 [3]
Selenium (lotic)	20	3.1 [3]
Silver [2]	3.2	---
Zinc [2]	120	120
Cyanide [4]	22	5.2
Chlorine (TRC)	19	11
Pentachlorophenol [5]	19	15
Acrolein	3.0	3.0
Aldrin	3.0	---
g-BHC – Lindane (b)	0.95	---
Carbaryl	2.1	2.1
Chlordane (b)	2.4	0.0043
Chlorpyrifos	0.083	0.041
4-4'-DDT (b)	1.1	0.001
Demeton	----	0.1
Diazinon	0.17	0.17
Dieldrin (b)	0.24	0.056
a-Endosulfan	0.22	0.056
b-Endosulfan	0.22	0.056
Endrin	0.086	0.036
Guthion	----	0.01
Heptachlor	0.52	0.0038
Heptachlor epoxide	0.52	0.0038
Malathion	----	0.1
Methoxyclor	----	0.03
Mirex	----	0.001
Nonylphenol	28.0	6.6
Parathion	0.065	0.013
PCBs, total (b)	---	0.014
Toxaphene (b)	0.73	0.0002
Tributyltin (TBT)	0.46	0.072

(b) Bioaccumulative parameter.

[1] Criteria for these metals are expressed as dissolved.

[2] Criteria for these metals are expressed as dissolved and are a function of total hardness (mg/L). Hardness-dependent metals criteria may be calculated from the following (values displayed above correspond to a total hardness of 100 mg/l and may have been rounded):

CMC (dissolved) = exp{mA[ln(hardness)]+bA } (CF)

CCC (dissolved) = exp{mC [ln(hardness)]+bC} (CF)

Chemical	MA	bA	MC	BC	Freshwater Conversion Factors (CF)	
					CMC	CCC
Cadmium	0.9798	-3.866	0.7977	-3.909	1.136672-[(ln hardness)(0.041838)]	1.101672-[(ln hardness)(0.041838)]
Chromium III	0.8190	3.7256	0.8190	0.6848	0.316	0.860
Copper	0.9422	-1.700	0.8545	-1.702	0.960	0.960
Lead	1.273	-1.460	1.273	-4.705	1.46203-[(ln hardness)(0.145712)]	1.46203-[(ln hardness)(0.145712)]
Nickel	0.8460	2.255	0.8460	0.0584	0.998	0.997
Silver	1.72	-6.59			0.85	
Zinc	0.8473	0.884	0.8473	0.884	0.978	0.986

If criteria are hardness-dependent, the Criterion Maximum Concentration (CMC) and Criterion Continuous Concentration (CCC) shall be based on the actual stream hardness. When an ambient hardness of less than 25 mg/L is used to establish criteria for cadmium or lead, the hardness dependent conversion factor (CF) shall not exceed one. When ambient hardness is greater than 400 mg/L, criteria shall be calculated according to one of the following two options: (1) calculate the criterion using a default Water Effects Ratio (WER) of 1.0 and a hardness of 400 mg/L in the hardness based equation; or (2) calculate the criterion using a WER and the actual ambient hardness of the surface water in the hardness based equation. For information concerning metals translation and site-specific criteria, see paragraph (9) of Rule 0400-40-03-.02.

[3] The numeric water criteria for selenium are applicable for all purposes, but for water quality assessment, fish tissue values may be used to confirm or refute impacts to aquatic life in accordance with and using the values from EPA's Final Criterion: Aquatic Life Ambient Water Quality Criterion for Selenium – Freshwater (June 30, 2016). However, a lack of fish tissue data or the absence of fish from a waterbody will not prevent it from being assessed as impaired if a numeric water concentration criterion is exceeded. Fish tissue concentration alone may be used to establish use impairment.

[4] If Standard Methods 4500-CN I (Weak Acid Dissociable), 4500-CN G (Cyanides Amenable to Chlorination after Distillation), or OIA-1677 are used, this criterion may be applied as free cyanide.

[5] Criteria for pentachlorophenol are expressed as a function of pH. Values displayed above correspond to a pH of 7.8 and are calculated as follows:

CMC = exp(1.005(pH) - 4.869) CCC = exp(1.005(pH) - 5.134)

(h) Other Pollutants - The waters shall not contain other pollutants that will be detrimental to fish or aquatic life.

(i) Iron – The waters shall not contain iron at concentrations that cause toxicity or in such amounts that interfere with habitat due to precipitation or bacteria growth.

(j) Ammonia – The concentration of total ammonia nitrogen (in mg N/L) shall not exceed the CMC (acute criterion) calculated using the following equation:

$$CMC = MIN\left(\left(\frac{0.275}{1+10^{7.204-pH}}+\frac{39.0}{1+10^{pH-7.204}}\right),\right.$$
$$\left.\left(0.7249\times\left(\frac{0.0114}{1+10^{7.204-pH}}+\frac{1.6181}{1+10^{pH-7.204}}\right)\times\left(23.12\times 10^{0.036\times(20-T)}\right)\right)\right)$$

The 30-day average concentration of total ammonia nitrogen (in mg N/L) shall not exceed the CCC (chronic criterion) calculated using the following equation:

$$CCC = 0.8876\times\left(\frac{0.0278}{1+10^{7.688-pH}}+\frac{1.1994}{1+10^{pH-7.688}}\right)\times\left(2.126\times 10^{0.028\times(20-MAX(T,7))}\right)$$

In addition, the highest four-day average within the 30-day period shall not exceed 2.5 times the CCC.

(k) Nutrients - The waters shall not contain nutrients in concentrations that stimulate aquatic plant and/or algae growth to the extent that aquatic habitat is substantially reduced and/or the biological integrity fails to meet regional goals. Additionally, the quality of downstream waters shall not be detrimentally affected. Examples of parameters associated with the criterion include but are not limited to: nitrogen, phosphorus, potassium, calcium, magnesium, and various forms of each.

Interpretation of this provision may be made using the 2001 document Development of Regionally-based Interpretations of Tennessee's Narrative Nutrient Criterion and/or other scientifically defensible methods.

(l) Coliform - The concentration of the E. coli group shall not exceed 630 cfu per 100 ml as a geometric mean based on a minimum of five samples collected from a given sampling site over a period of not more than 30 consecutive days with individual samples being collected at intervals of not less than 12 hours. For the purposes of determining the geometric mean, individual samples having an E. coli group concentration of less than 1 cfu per 100 ml shall be considered as having a concentration of 1 cfu per 100 ml. In addition, the concentration of the E. coli group in any individual sample shall not exceed 2,880 cfu per 100 ml.

(m) Biological Integrity - The waters shall not be modified through the addition of pollutants or through physical alteration to the extent that the diversity and/or productivity of aquatic biota within the receiving waters are substantially decreased or, in the case of wadeable streams, substantially different from conditions in reference streams in the same ecoregion. The parameters associated with this criterion are the aquatic biota measured. These are response variables.

Interpretation of this provision for any stream that (a) has at least 80% of the upstream catchment area contained within a single bioregion and (b) is of the appropriate stream order specified for the bioregion and (c) contains the habitat (riffle or rooted bank) specified for the bioregion, may be made using protocols found in the Department's 2021 Quality System Standard Operating Procedure for Macroinvertebrate Stream Surveys and/or other scientifically defensible methods.

Interpretation of this provision for all other wadeable streams, lakes, and reservoirs may be made using Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers (EPA/841-B-99-002) or Lake and Reservoir Bioassessment and Biocriteria (EPA 841-B-98-007), and/or other scientifically defensible methods. Interpretation of this provision for wetlands or large rivers may be made using scientifically defensible methods. Effects to biological populations will be measured by comparisons to upstream conditions or to appropriately selected reference sites in the same bioregion if upstream conditions are determined to be degraded.

(n) Habitat - The quality of stream habitat shall provide for the development of a diverse aquatic community that meets regionally-based biological integrity goals. Examples of parameters associated with this criterion include but are not limited to: sediment deposition, embeddedness of riffles, velocity/depth regime, bank stability, and vegetative protection. Types of activities or conditions that can cause habitat loss include, but are not limited to: channel and substrate alterations, rock and gravel removal, stream flow changes, accumulation of silt, precipitation of metals, and removal of riparian vegetation. For wadeable streams, the in stream habitat within each subecoregion shall be generally similar to that found at reference streams. However, streams shall not be assessed as impacted by habitat loss if it has been demonstrated that the biological integrity goal has been met.

(o) Flow – Stream or other waterbody flows shall support the fish and aquatic life criteria.

(4) The criteria for the use of Recreation are the following.

(a) Dissolved Oxygen - There shall always be sufficient dissolved oxygen present to prevent odors of decomposition and other offensive conditions.

(b) pH - The pH value shall lie within the range of 6.0 to 9.0 and shall not fluctuate more than 1.0 unit in this range over a period of 24 hours.

(c) Solids, Floating Materials, and Deposits - There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits, or sludge banks of such size or character that may be detrimental to recreation.

(d) Total Suspended Solids, Turbidity, or Color - There shall be no total suspended solids, turbidity or color in such amounts or character that will result in any objectionable appearance to the water, considering the nature and location of the water.

(e) Temperature - The maximum water temperature change shall not exceed 3°C relative to an upstream control point. The temperature of the water shall not exceed 30.5°C and the maximum rate of change shall not exceed 2°C per hour. The temperature of impoundments where stratification occurs will be measured at a depth of five feet, or mid- depth whichever is less, and the temperature in flowing streams shall be measured at mid-depth.

(f) Coliform - The concentration of the E. coli group shall not exceed 126 cfu per 100 ml, as a geometric mean based on a minimum of five samples collected from a given sampling site over a period of not more than 30 consecutive days with individual samples being collected at intervals of not less than 12 hours. For the purposes of determining the geometric mean, individual samples having an E. coli concentration of less than 1 cfu per 100 ml shall be considered as having a concentration of 1 cfu per 100 ml.

Additionally, the concentration of the E. coli group in any individual sample shall not exceed 410 cfu per 100 ml more often than in 10% of samples during any 30-day interval.

(g) Taste or Odor - The waters shall not contain substances that will result in objectionable taste or odor.

(h) Nutrients - The waters shall not contain nutrients in concentrations that stimulate aquatic plant and/or algae growth to the extent that the public's recreational uses of the waterbody or other downstream waters are detrimentally affected. Unless demonstrated otherwise, the nutrient criteria

found in subparagraph (3)(k) of this rule will be considered adequately protective of this use.

(i) Nutrient Response Criteria for Pickwick Reservoir: those waters impounded by Pickwick Dam on the Tennessee River. The reservoir has a surface area of 43,100 acres at full pool, 9,400 acres of which are within Tennessee. Chlorophyll *a* (corrected, as described in Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998): the mean of the photic-zone (See definition) composite chlorophyll *a* samples collected monthly April through September shall not exceed 18 µg/L, as measured over the deepest point, main river channel, dam forebay.

(j) Toxic Substances - The waters shall not contain toxic substances, whether alone or in combination with other substances, that will render the waters unsafe or unsuitable for water contact activities including the capture and subsequent consumption of fish and shellfish, or may result in toxic conditions that will adversely affect man, animal, aquatic life, or wildlife. Human health criteria have been derived to protect the consumer from consumption of contaminated fish and water. The water and organisms criteria should only be applied to those waters classified for both recreation and domestic water supply. In addition, the following numeric criteria are for the protection of recreation:

Compound	Water & Organisms Criteria [1] (µg/L)	Organisms Only Criteria (µg/L)
INORGANICS		
Antimony	5.6	640
Arsenic (c)	10.0	10.0
Mercury (b)	0.05	0.051
Nickel	610	4600
Thallium	0.24	0.47
Cyanide	140	140
Selenium	170	4200
Zinc	7400	26000
Dioxin [2] (b)	0.000001	0.000001
VOLATILES		
Acrolein	6	9
Acrylonitrile (c)	0.51	2.5
Benzene (c)	22	510
Bromoform (c)	43	1400
Carbon tetrachloride (c)	2.3	16
Chlorobenzene	130	1600
Chlorodibromomethane (c)	4.0	130
Chloroform (c)	57	4700
Dichlorobromomethane (c)	5.5	170
1,2-Dichloroethane (c)	3.8	370
1,1-Dichloroethylene	330	7100
1,2-Dichloropropane (c)	5.0	150
1,3-Dichloropropene (c)	3.4	210
Ethylbenzene	530	2100
Methyl bromide	47	1500
Methylene chloride (c)	46	5900
1,1,2,2-Tetrachloroethane (c)	1.7	40
Tetrachloroethylene (c)	6.9	33
Toluene	1300	15000
1,2-Trans-Dichloroethylene	140	10000
1,1,2-Trichloroethane (c)	5.9	160
Trichloroethylene (c)	25	300
Vinyl chloride (c)	0.25	24

Compound	Water & Organisms Criteria [1] (µg/L)	Organisms Only Criteria (µg/L)
ACID EXTRACTABLES		
2-Chlorophenol	81	150
2,4-Dichlorophenol	77	290
2,4-Dimethylphenol	380	850
2-Methyl-4,6-dinitrophenol	13	280
Dinitrophenols	69	5300
Pentachlorophenol (c) (pH)	2.7	30
Phenol	10000	860000
2,4,6-Trichlorophenol (c)	14	24
BASE NEUTRALS		
Acenaphthene	670	990
Anthracene	8300	40000
Benzidine (c)	0.00086	0.0020
Benzo(a)anthracene (c)	0.038	0.18
Benzo(a)pyrene (c)	0.038	0.18
Benzo(b)fluoranthene (c)	0.038	0.18
Benzo(k)fluoranthene (c)	0.038	0.18
Bis(2-Chlorethyl)ether (c)	0.30	5.3
Bis(2-Chloro-isopropyl)ether	1400	65000
Bis(2-Ethylhexyl)phthalate (c)	12	22
Bis(Chloromethyl)ether (c)	0.0010	0.0029
Butylbenzyl Phthalate (c)	1500	1900
2-Chloronaphthalene	1000	1600
Chrysene (c)	0.038	0.18
Dibenz(a,h)Anthracene (c)	0.038	0.18
1,2-Dichlorobenzene	420	1300
1,3-Dichlorobenzene	320	960
1,4-Dichlorobenzene	63	190
3,3-Dichlorobenzidine (c)	0.21	0.28
Diethyl phthalate	17000	44000
Dimethyl phthalate	270000	1100000
Di-n-butyl phthalate	2000	4500
2,4-Dinitrotoluene (c)	1.1	34
1,2-Diphenylhydrazine (c)	0.36	2.0
Fluoranthene	130	140
Fluorene	1100	5300
Hexachlorobenzene (b)(c)	0.0028	0.0029
Hexachlorobutadiene (b)(c)	4.4	180
Hexachlorocyclohexane-Technical (b)(c)	0.123	0.414
Hexachlorocyclopentadiene	40	1100
Hexachloroethane (c)	14	33
Ideno(1,2,3-cd)Pyrene (c)	0.038	0.18
Isophorone (c)	350	9600
Nitrobenzene	17	690
Nitrosamines	0.0008	1.24
Nitrosodibutylamine (c)	0.063	2.2
Nitrosodiethylamine (c)	0.008	12.4
Nitrosopyrrolidine (c)	0.16	340
N-Nitrosodimethylamine (c)	0.0069	30
N-Nitrosodi-n-Propylamine (c)	0.05	5.1
N-Nitrosodiphenylamine (c)	33	60

Compound	Water & Organisms Criteria [1] (µg/L)	Organisms Only Criteria (µg/L)
Pyrene	830	4000
Pentachlorobenzene (b)	1.4	1.5
1,2,4,5-Tetrachlorobenzene (b)	0.97	1.1
1,2,4-Trichlorobenzene	35	70
2,4,5-Trichlorophenol	1800	3600
PESTICIDES		
Aldrin (c)	0.00049	0.00050
a-BHC (c)	0.026	0.049
b-BHC (c)	0.091	0.17
g-BHC - Lindane (b)	0.98	1.8
Chlordane (b)(c)	0.0080	0.0081
4-4'-DDT (b)(c)	0.0022	0.0022
4,4'-DDE (b)(c)	0.0022	0.0022
4,4'-DDD (b)(c)	0.0031	0.0031
Dieldrin (b)(c)	0.00052	0.00054
a-Endosulfan	62	89
b-Endosulfan	62	89
Endosulfan Sulfate	62	89
Endrin	0.059	0.06
Endrin Aldehyde	0.29	0.30
Heptachlor (c)	0.00079	0.00079
Heptachlor epoxide (c)	0.00039	0.00039
PCB, total (b)(c)	0.00064	0.00064
Toxaphene (b)(c)	0.0028	0.0028

(b) Bioaccumulative parameter.

(c) Carcinogenic pollutant. 10^{-5} risk level is used for all carcinogenic pollutants.

[1] These criteria are for protection of public health due to consumption of water and organisms and should only be applied to these waters designated for both recreation and domestic water supply.

[2] Total dioxin is the sum of the concentrations of all dioxin and dibenzofuran isomers after multiplication by Toxic Equivalent Factors (TEFs). Following are the TEFs currently recommended by EPA (subject to revision):

DIOXIN ISOMERS	TEF	FURAN ISOMERS	TEF
Mono-, Di-, & TriCDDs	0.0	Mono-, Di-, & TriCDFs	0.0
2,3,7,8 TCDD	1.0	2,3,7,8 TCDF	0.1
Other TCDDs	0.0	Other TCDFs	0.0
1,2,3,7,8 PeCDD	1.0	1,2,3,7,8 PeCDF	0.03
Other PeCDDs	0.0	2,3,4,7,8 PeCDF	0.3
		Other PeCDFs	0.0
1,2,3,4,7,8 HxCDD	0.1	1,2,3,4,7,8 HxCDF	0.1
1,2,3,6,7,8 HxCDD	0.1	1,2,3,6,7,8 HxCDF	0.1

1,2,3,7,8,9 HxCDD	0.1	1,2,3,7,8,9 HxCDF	0.1
Other HxCDDs	0.0	2,3,4,6,7,8 HxCDF	0.1
		Other HxCDFs	0.0
1,2,3,4,6,7,8 HpCDD	0.01	1,2,3,4,6,7,8 HpCDF	0.01
		1,2,3,4,7,8,9 HpCDF	0.01
Other HpCDDs	0.0	Other HpCDFs	0.0
OCDD	0.0003	OCDF	0.0003

(k) Other Pollutants - The waters shall not contain other pollutants in quantities that may have a detrimental effect on recreation.

(l) Fish Consumption Advisories - A public fishing advisory will be considered when the calculated risk of additional cancers exceeds 10^{-4} for typical consumers or 10^{-5} for atypical consumers (See definition). A "do not consume" advisory will be issued for the protection of typical consumers and a "precautionary advisory" will be issued for the protection of atypical consumers. The following formula will be used to calculate the risk of additional cancers, using the current risk calculation factors and assumptions used by EPA unless better site-specific information is available:

R = qE

where:

R= Plausible-upper-limit risk of cancer associated with a chemical in a fisheries species for a human subpopulation.

q = Carcinogenic Potency Factor for the chemical (mg kg-1 day-1)-1 estimated as the upper 95% confidence limit of the slope of a linear dose-response curve. Scientifically defensible Potency Factors will be used.

E = Exposure dose of the chemical (mg kg-1 day-1) from the fish species for the human subpopulation in the area. E is calculated by the following formula:

$$E = \frac{C \; I \; X}{W}$$ where:

C = Concentration of the chemical (mg/kg) in the edible portion of the species in the area. The average levels from multiple fillet samples of the same species will be used. Catfish will be analyzed skin-off with the belly flap included in the sample. Gamefish and carp will be analyzed skin-on with the belly flap included in the sample. Sizes of fish collected for analysis will represent the ranges of sizes likely to be collected and consumed by the public. References on this subject include, but are not limited to: EPA's Guidance for Assessing Chemical Contaminant Data for use in Fish Advisories.

I = Mean daily consumption rate (g/day averaged over 70-year lifetime) of the fish species by the human subpopulation in the area.

X = Relative absorption coefficient, or the ratio of human absorption efficiency to test animal absorption efficiency of the chemical.

W = Average human mass (kg).

For substances for which the public health concern is based on toxicity, a "do not consume" advisory will be considered warranted when average levels of the substance in the edible portion of fish exceed U.S. Food and Drug Administration (FDA) Action Levels or EPA national criteria.

Based on the rationale used by FDA or EPA for their levels, the Commissioner may issue precautionary advisories at levels appropriate to protect sensitive populations.

(m) Flow – Stream flows shall support recreational uses.

(5) The criteria for the use of Irrigation are the following.

(a) Dissolved Oxygen - There shall always be sufficient dissolved oxygen present to prevent odors of decomposition and other offensive conditions.

(b) pH - The pH value shall lie within the range of 6.0 to 9.0 and shall not fluctuate more than 1.0 unit in this range over a period of 24 hours.

(c) Hardness or Mineral Compounds - The hardness of or the mineral compounds contained in the water shall not impair its use for irrigation.

(d) Solids, Floating Materials, and Deposits - There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits, or sludge banks of such size or character as may impair the usefulness of the water for irrigation purposes.

(e) Temperature - The temperature of the water shall not interfere with its use for irrigation purposes.

(f) Toxic Substances - The waters shall not contain toxic substances whether alone or in combination with other substances that will produce toxic conditions that adversely affect the quality of the waters for irrigation.

(g) Other Pollutants - The waters shall not contain other pollutants in quantities that may be detrimental to the waters used for irrigation.

(6) The criteria for the use of Livestock Watering and Wildlife are the following.

(a) Dissolved Oxygen - There shall always be sufficient dissolved oxygen present to prevent odors of decomposition and other offensive conditions.

(b) pH - The pH value shall lie within the range of 6.0 to 9.0 and shall not fluctuate more than 1.0 unit in this range over a period of 24 hours.

(c) Hardness or Mineral Compounds - The hardness of or the mineral compounds contained in the water shall not impair its use for livestock watering and wildlife.

(d) Solids, Floating Materials, and Deposits - There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits, or sludge banks of such size or character as to interfere with livestock watering and wildlife.

(e) Temperature - The temperature of the water shall not interfere with its use for livestock watering and wildlife.

(f) Toxic Substances - The waters shall not contain substances whether alone or in combination with other substances, that will produce toxic conditions that adversely affect the quality of the waters for livestock watering and wildlife.

(g) Other Pollutants - The waters shall not contain other pollutants in quantities that may be detrimental to the water for livestock watering and wildlife.

(7) The criteria for the use of Navigation are the following.

(a) Solids, Floating Materials, and Deposits - There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits, or sludge banks of such size or character as to interfere with navigation.

(b) Other Pollutants - The waters shall not contain other pollutants in quantities that may be detrimental to the waters used for navigation.

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

Rule 0400-40-03-.04 Definitions is amended by deleting it in its entirety and substituting instead the following:

0400-40-03-.04 Definitions.

In addition to the meanings provided in the Water Quality Control Act (T.C.A. § 69-3-103), terms used in these rules shall mean the following:

(1) Atypical consumers - Those persons in the vicinity of a stream or lake who due to physiological factors or previous exposure are more sensitive to specific pollutants than is the population in general. Examples of atypical consumers may include, but are not limited to: children; pregnant or nursing women; subsistence fishermen; frequent purchasers of commercially harvested fish; and agricultural, industrial, or military personnel who may have had previous occupational exposure to the contaminant of concern.

(2) Conventional water treatment - Conventional water treatment as referred to in the criteria denotes coagulation, sedimentation, filtration, and chlorination or disinfection.

(3) Degradation - The alteration of the properties of waters by the addition of pollutants, withdrawal of water, or removal of habitat, except those alterations of a short duration.

(4) De Minimis degradation – Degradation of a small magnitude, as provided in this paragraph.

(a) Discharges and withdrawals.

1. Subject to the limitation in part 3 of this subparagraph, a single discharge will be considered de minimis if it uses less than five percent of the available assimilative capacity for the substance being discharged.

(Note: Consistent with T.C.A. § 69-3-108, special consideration will be given to bioaccumulative substances to confirm the effect is de minimis, even if they use less than five percent of the available assimilative capacity under this part or less than 10% of the available assimilative capacity under part 3 of this subparagraph.)

2. Subject to the limitation in part 3 of this subparagraph, a single water withdrawal will be considered de minimis if it removes less than five percent of the 7Q10 flow of the stream, unless the withdrawal may adversely affect waters designated as Exceptional Tennessee Waters pursuant to part (4)(a)3 of Rule 0400-40-03-.06.

3. If more than one activity described in part 1 or 2 of this subparagraph has been authorized (including withdrawals exempted by paragraph (4) of Rule 0400-40-07-.02) in a segment, and the total impact of the authorized and proposed impacts uses no more than 10% of the assimilative capacity, or 7Q10 low flow, then activities are presumed to be de minimis, unless the withdrawal may adversely affect waters designated as Exceptional Tennessee Waters pursuant to part (4)(a)3 of Rule 0400-40-03-.06.

(b) Habitat alterations authorized by an Aquatic Resource Alteration Permit (ARAP) are de minimis if the Division finds that the impacts, individually and cumulatively are offset by impact minimization and/or in-system mitigation, provided however, in ONRWs the mitigation must occur within the ONRW.

(5) Domestic wastewater discharge – A discharge of sanitary and other non-process wastewater from a treatment facility other than a publicly-owned treatment works (POTW) treating municipal sewage and/or

industrial waste. Examples of domestic wastewater discharges include, but are not limited to, homes, subdivisions, campgrounds, hotels, travel centers, parks, and schools.

(6) Ecoregion - A relatively homogeneous area defined by similarity of climate, landform, soil, potential natural vegetation, hydrology, or other ecologically relevant variables.

(7) Epilimnion – The upper layer of water in a thermally stratified lake or reservoir. This layer consists of the warmest water and has a fairly uniform (constant) temperature.

(8) Groundwater – Water beneath the surface of the ground within the zone of saturation, whether or not flowing through known and definite channels.

(9) Groundwater table – The upper surface of the zone of saturation by ground water.

(10) Hypolimnion – The lowest layer in a thermally stratified lake or reservoir. This layer consists of colder, more dense water, has a constant temperature and no mixing occurs. The hypolimnion of a eutrophic lake is usually low or lacking in oxygen.

(11) Interflow – The runoff infiltrating into the surface soil and moving toward streams as shallow, perched water above the main groundwater level.

(12) In-system mitigation – mitigation for habitat alterations sufficient to result in no overall net loss of resource values, if provided in the same eight-digit hydrologic unit code as the alteration, or in another area proximate to the alteration as approved by the Division to offset the loss of resource values in the area. In-system mitigation may not occur within a different major river drainage basin as the alteration (i.e., Tennessee River, Cumberland River, Mississippi River).

(13) Lentic – Still water aquatic ecosystems such as ponds, lakes, or reservoirs.

(14) Lotic – Flowing water aquatic ecosystems such as streams and rivers.

(15) Measurable degradation, as used in the context of discharges or withdrawals – Changes in parameters of waters that are of sufficient magnitude to be detectable by the best available instrumentation or laboratory analyses.

(Note: Because analytical techniques change, the Department may consider either the most sensitive detection method needed to comply with State standards or any biological, chemical, physical, or analytical method, conducted in accordance with EPA approved methods as identified in 40 C.F.R. part 136 (2022). Consistent with T.C.A. § 69-3-108, for scenarios involving cumulative, non-measurable activities or parameters that are managed by a narrative criterion, the Department will use mathematical models and ecological indices to ensure no degradation will result from the authorization of such activities, consistent with the State's mixing zone policy.)

(16) Minimum Level (ML) – a term referring to the lowest sample concentration at which reliable quantitative measurements can be made as defined in Appendix A of 40 C.F.R. part 136 (2022).

(17) Mixing zone - That section of a flowing stream or impounded waters in the immediate vicinity of an outfall where an effluent becomes dispersed and mixed.

(18) Multiple populations – Two or more individuals from each of two or more distinct taxa, in the context of obligate lotic aquatic organisms.

(19) New or increased discharge – A new discharge of pollutants to waters of the state or an increase in the authorized loading of a pollutant above either (1) numeric effluent limitations established in a National Pollutant Discharge Elimination System permit for that discharge, or (2) if no such limitations exist, the actual discharges of that pollutant.

(20) Normal weather conditions – Those within one standard deviation of the cumulative monthly precipitation means for at least the three months prior to the hydrologic determination investigation, based on a 30-year

average computed at the end of each decade. Precipitation data shall come from National Oceanographic and Atmospheric Agency's National Climatic Data Center, National Resources Conservation Service's National Climatic Data Center, Natural Resources Conservation Service's National Water and Climate Center, or other well-established weather station.

(21) Obligate lotic aquatic organisms - Organisms that require flowing water for all or almost all of the aquatic phase of their life cycles.

(22) Parameter – A biological, chemical, radiological, bacteriological, or physical property of water that can be directly measured. Some criteria are expressed in terms of a single parameter; others, such as habitat, nutrients, and biological integrity are not directly measured, but are derived from measurements of parameters.

(23) Perched water – Water that accumulates above an aquitard that limits downward migration where there is an unsaturated interval below it, between the aquitard and the zone of saturation.

(24) Photic zone - the region of water through which light penetrates and where photosynthetic organisms live.

(25) Reference condition - A parameter-specific set of data from regional reference sites that establish the statistical range of values for that particular substance at least-impacted streams.

(26) Reference site - Least impacted waters within an ecoregion that have been monitored to establish a baseline to which alterations of other waters can be compared.

(27) Resource values – The physical, chemical, and biological properties of the water resource that help maintain classified uses. These properties may include, but are not limited to, the ability of the water resource to:

(a) Filter, settle, and/or eliminate pollutants;

(b) Prevent the entry of pollutants into downstream waters;

(c) Assist in flood prevention;

(d) Provide habitat for fish, aquatic life, and wildlife;

(e) Provide drinking water for wildlife and livestock;

(f) Provide and support recreational and navigational uses; and

(g) Provide both safe quality and adequate quantity of water for domestic water supply and other applicable classified uses.

(28) Response variable – a characteristic of water quality that can be measured and changes as a result of an alteration of habitat, water withdrawal, or discharge of pollutants, as distinguished from agents that cause changes in aquatic systems.

(29) Significant degradation – an appreciable permanent loss of resource values resulting from a habitat alteration in a waterbody with unavailable parameters for habitat, unless mitigation sufficient to ensure no overall net loss of resource values is provided.

(30) Stratification – The tendency in lakes and reservoirs for distinct layers of water to form as a result of vertical change in temperature and, therefore, in the density of water. During stratification, dissolved oxygen, nutrients, and other parameters of water chemistry do not mix well between layers, establishing chemical as well as thermal gradients.

(31) Stream - A surface water that is not a wet weather conveyance.

(32) Subecoregion - A smaller, more homogenous area that has been delineated within an ecoregion.

(33) Thermocline – The middle layer in a thermally stratified lake or reservoir. In this layer there is a rapid decrease in temperature with depth. Also called the metalimnion.

(34) Wadeable streams - Streams that can be sampled using a hand held, one meter square or smaller kick net without water and materials escaping over the top of the net.

(35) Watercourse - A man-made or natural hydrologic feature with a defined linear channel which discretely conveys flowing water, as opposed to sheet-flow.

(36) Wet weather conveyance - Man-made or natural watercourses, including natural watercourses that have been modified by channelization:

(a) That flow only in direct response to precipitation runoff in their immediate locality;

(b) Whose channels are at all times above the groundwater table;

(c) That are not suitable for drinking water supplies; and

(d) In which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow there is not sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months.

(37) Wet weather conveyance determination - The decision based on site specific information of whether a particular watercourse is a stream or a wet weather conveyance. It is synonymous with “stream determination” and “hydrologic determination.”

(38) Zone of saturation – A subsurface zone below the groundwater table in which all of the interconnected voids and pore spaces are filled with water.

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

Rule 0400-40-03-.05 Interpretation of Criteria is amended by deleting it in its entirety and substituting instead the following:

0400-40-03-.05 Interpretation of Criteria.

(1) Interpretation of the above criteria shall conform to any rules and regulations or policies adopted by the Board of Water Quality, Oil, and Gas.

(2) For measuring compliance with permit conditions, the effect of treated sewage or waste discharge on the receiving waters shall be considered beyond the mixing zone except as provided in this paragraph. Such mixing zones (See definition) shall be restricted in area and length; and shall not (a) prevent the free passage of fish or cause aquatic life mortality in the receiving waters; (b) contain materials in concentrations that exceed acute criteria beyond the zone immediately surrounding the outfall; (c) result in objectionable colors, odors, or other conditions; (d) produce undesirable aquatic life or result in dominance of a nuisance species; (e) endanger the public health or welfare; or (f) impair classified uses outside of the mixing zone; (g) create a condition of chronic toxicity beyond the edge of the mixing zone; (h) adversely affect nursery and spawning areas; or (i) adversely affect species with special state or federal status. Mixing zones shall not apply to the discharge of bioaccumulative pollutants to waters of the state where the risk-based factors in subparagraph (4)(l) of Rule 0400-40-03-.03 are exceeded for the pollutant group.

(3) Permits for the discharge of pollutants may establish a schedule of compliance when necessary to allow a reasonable opportunity to comply with these water quality standards. When the Division establishes a compliance schedule, it shall consider the technical and economic feasibility of waste treatment, recovery, or adjustment of the method of discharge. Any such schedule of compliance shall require compliance with an enforceable final effluent limitation as soon as possible and include a final compliance date. If compliance will take longer than one year, the schedule of compliance shall establish enforceable interim

requirements, establish dates for compliance with these requirements that are no longer than one year apart, and require reporting of interim compliance actions within 14 days of the applicable deadline. If the time necessary for completion of any requirement is more than one year and the requirement is not readily divisible into stages for completion, the permit shall require, at a minimum, specified dates for annual submission of progress reports on the status of interim requirements.

(4) Water quality criteria for fish and aquatic life and livestock watering and wildlife set forth shall generally be applied in permits on the basis of the following stream flows: unregulated streams - stream flows equal to or exceeding the seven-day minimum, 10-year recurrence interval; regulated streams - all flows in excess of the minimum critical flow occurring once in 10 years as determined by the Division. All other criteria shall be applied in permits on the basis of stream flows equal to or exceeding the 30-day minimum five year recurrence interval.

(5) In general, deviations from normal water conditions are undesirable, but the frequency, magnitude, and duration of the deviations shall be considered in interpreting the above criteria in assessing use support. Excursions from water quality criteria of a magnitude, frequency, and/or duration such that a specific use classification is no longer supported by existing water quality is the condition of impairment. When interpreting pathogen data, samples collected during or immediately after significant rain events may be treated as outliers unless caused by point source dischargers. Such outlier data may be given less weight in assessment decisions than non-rain event sampling results.

(6) All discharges of sewage, industrial waste, and other waste shall receive the degree of treatment or effluent reduction necessary to comply with water quality standards, or state or federal laws and regulations pursuant thereto, and where appropriate will comply with the "Standards of Performance" as required by the Tennessee Water Quality Control Act, (T.C.A., §§ 69-3-101, et seq.).

(7) Where naturally formed conditions (e.g., geologic formations) or background water quality conditions are substantial impediments to attainment of the water quality standards, these natural or background conditions shall be taken into consideration in establishing any effluent limitations or restrictions on discharges to such waters. For purposes of water quality assessment, with the exception of pathogens, exceedances of water quality standards caused by natural conditions alone will not be considered the condition of impairment. Examples of natural conditions include alterations caused by beaver activity, non-construction related rockslides of pyritic materials, and groundwater with naturally elevated metals or low dissolved oxygen levels.

(8) All chemical data reported under this rule shall be generated using “sufficiently sensitive” analytical methods approved under 40 C.F.R. part 136 (2022) or required under 40 C.F.R. chapter I, subchapter N or O (2022). An approved method is “sufficiently sensitive” when:

(a) The method minimum level (ML) is at or below the level of the applicable water quality criterion or the effluent limit established by the permit for the measured pollutant or pollutant parameter; or

(b) The method ML is above the applicable water quality criterion or the effluent limit established by the permit, but the amount of the pollutant or pollutant parameter actually measured is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter; or

(c) Demonstration is made showing that the method used has the lowest ML of the approved methods for the measured pollutant or pollutant parameter in the sample/matrix being analyzed. (Documentation supporting this demonstration is to be submitted with reported data and shall include narrative justification for why the method chosen is believed to have the lowest ML of all approved methods identified in 40 C.F.R. part 136 (2022). The Director shall determine whether the submitted information demonstrates sufficient method sensitivity.)

Note: When there is no analytical method that has been approved under 40 C.F.R. part 136 (2022) or required under 40 C.F.R. chapter I, subchapter N or O (2022), and a specific method is not otherwise required by the Director, the applicant may use any suitable method but shall provide a description of the method. When selecting a suitable method, factors such as a method’s precision, accuracy, or resolution must be considered when assessing the performance of the method.

(9) Standard operating procedures for making stream and wet weather conveyance determinations (hydrologic determinations).

(a) General.

1. Because a primary purpose of the Water Quality Control Act is to protect the waters of the state for the public, and since streams receive a higher level of protection than wet weather conveyances, anyone desiring to alter a watercourse who wishes to avoid unnecessary expense and delay, may request the department to process a permit application or issue an authorization under a general permit with the presumption that the watercourse is a stream. In that instance, a full hydrologic determination would not be performed under these rules. However, nothing shall preclude an applicant from subsequently seeking a wet weather conveyance determination.

2. The procedures detailed in this rule are intended to be used in situations where there is some question whether a watercourse is a stream or wet weather conveyance. In situations where it is obvious that a watercourse is a stream, such as named rivers or streams with watersheds larger than a square mile, or spring-fed streams with consistent flow greater than one cubic foot per second, it is not necessary to conduct a detailed hydrologic determination.

3. It is the purpose of this rule to set out the framework for making stream and wet weather conveyance determinations taking into consideration all relevant and necessary information on the biology, geology, geomorphology, precipitation, hydrology, and other scientifically based principles. Staff of the Department and certified hydrologic professionals not employed by the Department who are making a submission pursuant to T.C.A. § 69-3-108(r) shall follow these rules and the Guidance for Making Hydrologic Determinations (Guidance) which contains the instructions and examples for proper application of these rules to situations in the field that has been developed pursuant to T.C.A. § 69-3-107(25) in making these determinations.

4. The format for documenting these determinations is provided in the Hydrologic Determination Field Data Sheet (Data Sheet) in the Guidance. All available field characteristics necessary to make an accurate determination shall be evaluated, and all evidence utilized in making a determination shall be documented using the Data Sheet or as an addendum. Applicants may choose to submit additional hydrological or geotechnical data not included in the standard procedure in support of a hydrologic determination. Any additional relevant information submitted to the Department shall be considered by the Division in its determination.

5. Any significant revision to the Data Sheet or Guidance shall be subject to a 30-day public comment period prior to adoption. The Department shall advertise its intent to modify the Data Sheet or Guidance by posting notice of proposed changes on the Department's internet web site and by sending to the permit mailing list. Significant modifications include the addition or deletion or substantive modification of either the primary or secondary indicators or a change in the scoring system. The Department shall consider the need for modifications to the Data Sheet and Guidance periodically and whenever a significant comment is submitted in regard to them.

6. To be classified as a wet weather conveyance, a watercourse must meet all four elements of the definition in T.C.A. § 69-3-103. Therefore, if it is determined that any one of the four elements does not apply to a watercourse, the watercourse is a stream.

7. Because natural variation and human activities can alter hydrologic conditions over time, hydrologic determination will only be considered valid for a maximum of five years or the term of a permit based on it.

8. Because there can be considerable variability within a given reach of a watercourse, wet weather conveyance determinations should not be made on a single point but must also investigate up and down channel and consider the watercourse's landscape context.

9. All of the indicators referred to in these rules and the Guidance are evidence relevant to the presence or absence of one or more of the four elements of the wet weather conveyance definition. The difference between the primary and secondary indicators is that each of the primary indicators is considered presumptive evidence alone regarding one or more of the four elements, and will allow for an immediate hydrologic determination to be made in most cases. Some of the primary indicators involve direct observations of the presence or absence of one or more of the elements. The primary indicators of wet weather conveyances are:

    (i) Hydrologic feature exists solely due to a process discharge;

    (ii) Defined bed and bank absent, watercourse dominated by upland vegetation/ grass;

    (iii) Watercourse dry anytime during February through April 15 under normal precipitation/ groundwater conditions; and

    (iv) Daily flow and precipitation records showing feature only flows in direct response to rainfall.

10. Primary indicators of streams are:

    (i) Presence of multiple populations of obligate lotic organisms with two months or longer aquatic phase;

    (ii) Presence of fish (except Gambusia);

    (iii) Presence of naturally occurring groundwater table connection;

    (iv) Flowing water in channel seven days or more since the last precipitation in the local watershed; and

    (v) Evidence watercourse has been used as a supply of drinking water.

11. When primary indicators cannot be observed or documented, then the investigator must evaluate the watercourse using secondary indicators. The secondary indicators are an aggregate set of observations that in total are used to evaluate the presence or absence of one or more of the elements of a wet weather conveyance. Secondary indicators are:

    (i) Continuous bed and bank;

    (ii) Sinuous channel;

    (iii) In-channel structure, riffle-pool sequences;

    (iv) Sorting of soil textures or other substrate;

    (v) Active/relic floodplain;

    (vi) Depositional bars or benches;

    (vii) Braided channel;

    (viii) Recent alluvial deposits;

(ix) Natural levees;

(x) Headcuts;

(xi) Grade controls;

(xii) Natural valley drainageway;

(xiii) At least second order channel on United States Geological Survey or Natural Resources Conservation Service map;

(xiv) Subsurface flow/discharge into channel;

(xv) Water in channel more than forty-eight hours since rain;

(xvi) Leaf litter in channel;

(xvii) Sediment on plants or on debris;

(xviii) Organic debris lines or piles (wrack lines);

(xix) Hydric soils in channel bed or sides;

(xx) Fibrous roots in channel;

(xxi) Rooted plants in channel;

(xxii) Crayfish in channel (exclude in floodplain);

(xxiii) Bivalves/mussels;

(xxiv) Amphibians;

(xxv) Macrobenthos;

(xxvi) Filamentous algae, periphyton;

(xxvii) Iron-oxidizing bacteria/fungus; and

(xxviii) Wetland plants in channel.

12. The secondary indicators shall be scored in accordance with the instructions in the Guidance. Hydrologic determinations will often be made on the basis of secondary indicators because none of the primary indicators are present at the time of investigation. Any of the primary indicators contained in these rules and the Guidance may be considered conclusive after consideration of appropriate background information including recent weather and precipitation, in the absence of any directly contradictory evidence. However, since hydrologic determinations are required to be made at all times of year, secondary indicators of hydrologic status will be used, in accordance with the Guidance and these rules, as determinant evidence in the absence of primary indicators. The secondary indicators used in the Guidance shall be based on sound scientific principles.

13. Watercourses in which flow is solely a result of process or wastewater discharge or other non-natural sources shall not be regulated as streams even though they may exhibit characteristics of a stream rather than a wet weather conveyance.

(b) The specific procedures outlined herein are intended to consider each of the four elements necessary for a watercourse to be classified as a wet weather conveyance.

1. Because the duration of the flow in a watercourse is the central inquiry of hydrologic determinations, all of the primary and secondary indicators are relevant to evaluating it. Although other factors may also be relevant, at a minimum the following procedures shall be used to determine if a watercourse flows only in direct response to precipitation runoff in its immediate vicinity.

   (i) Prior to conducting a field evaluation, the investigator should review recent precipitation patterns for the local area, the longer-term seasonal precipitation trends, and any other available information such as historic land use, regional geology and soil types, or previous hydrologic determinations near the site to be investigated.

   (ii) The investigator must decide if the determination is being conducted under "normal weather conditions." The procedure for determining if weather conditions are normal, or either wetter or drier than normal, is contained in the Guidance. If conditions are either wetter or drier than normal the investigator must take this into consideration in making a hydrologic determination.

   (iii) The vast majority of wet weather conveyances will generally cease to flow within 48 hours of almost all except some of the largest rain events. This is especially true in urbanized, impervious areas, or other areas with low infiltration rates, such as mowed lawns. The investigator shall document the presence or absence of flow within the watercourse. If in-stream surface flow is observed within the evaluated reach, and it has been at least seven days since the last rainfall event in the upstream watershed, the flow will not be considered a direct storm response, and the investigator shall conclude that the feature is a stream. The investigator shall document the source of the precipitation data. The source used shall be as close as feasible to the watercourse.

   (iv) When subsurface water discharges such as seeps, interstitial flow, perched water, or interflow are observed and used as indicators of hydrology, investigators shall consider the influence of recent precipitation events and localized soil and geologic conditions on these features to determine if these features provide adequate hydrology such that the watercourse flows more than in direct response to precipitation. For example, since some such features have more flow when there has been significant recent precipitation, if they are flowing when there has not been much recent precipitation, it is more likely that they flow for sustained periods. In some instances, there may be observable outcroppings of a confining layer such as shale or clay that causes interstitial flow to discharge to a watercourse. In this situation, the capacity of up-gradient conditions such as the permeability and volume of the soils above the confining layer to sustain extended periods of surface flow should be considered. These types of sustained discharges should not be considered a direct response to rainfall. In other instances, such as in areas with a highly karst geology, observed seeps into a watercourse may be not be able to sustain extended periods of flow, and may be considered a more direct response to rainfall.

   (v) Field investigations for hydrologic determinations should not be conducted if a one-inch precipitation event in 24 hours has occurred in the area of investigation within the previous 48 hours.

2. The following procedures are to determine if the channel is above the groundwater table at all times. Under the definition of wet weather conveyance in T.C.A. § 69-3-103, if there are any times that the channel is not above the groundwater table, it is a stream.

   (i) Since larger streams and rivers are frequently in contact with the groundwater table, the investigator shall review topographic maps to determine if the watercourse is within the floodplain of, or within 20 feet in elevation of a larger stream or river known to carry perennial flow. Flow in such a watercourse should

not be considered conclusive evidence of a groundwater table connection, but is contributing evidence to be considered in the determination. Therefore further investigation into additional factors including those listed below is necessary to determine that the watercourse in question is in contact with the groundwater table.

(ii) Since the presence of wetlands often indicates a shallow depth to the groundwater table, the investigator shall search for the presence of wetlands in the immediate vicinity of the watercourse both on topographic maps and in the field. The presence of wetlands in the vicinity of the watercourse being examined should not be considered conclusive evidence of a groundwater table connection, but is contributing evidence to be considered in the determination. Therefore further investigation into other factors including those listed below is necessary to determine that the watercourse in question is in contact with the groundwater table.

(iii) The investigator shall review United States Department of Agriculture soil surveys. Their soil descriptions often contain information on depth to water table. For watercourses whose channels are at a depth that indicates contact with the groundwater table for the soil type in which they are formed, the investigator can conclude that the watercourse is in contact with the water table, absent contradicting field information.

(iv) The investigator shall review site geological characteristics affecting the elevation of the groundwater table with respect to the elevation of the channel, including the presence of karst bedrock features, erodibility of watershed soils, thickness of regolith and channel alluvium, depth to bedrock or laterally persistent silt or clay horizons, land-use disturbances, and other watershed conditions controlling or contributing to the presence or absence of channel base flow.

(v) If data are available from water wells within one mile of and in similar landscape position to a watercourse under investigation, and if the surface elevation of standing water in the well is at or above the elevation of the bottom of the channel of the watercourse, then the investigator can conclude that the watercourse is in contact with the groundwater table.

(vi) The observed emergence of water from the ground is not necessarily water from the groundwater table and should not be considered as conclusive for the purpose of this element. Therefore further investigation into factors including those listed above is necessary to determine the source of the emergent water.

3. The following procedures are to determine if a watercourse is suitable for drinking water supplies. The investigator should note spring boxes, water pipes to carry water from the watercourse to a residence, or other observable evidence the watercourse is being used as a household water supply upstream of or within the segment being evaluated. When these features are noted, the investigator can conclude that the watercourse is a stream absent contradicting information.

4. The following procedures are to determine if a watercourse, under normal weather conditions, due to naturally occurring ephemeral or low flow does not have sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months.

(i) The presence of the requisite aquatic life is a primary indicator that the watercourse supports that aquatic life. In order to find that the requisite aquatic life is present, the investigator must document more than one individual of at least two qualifying taxa in the evaluated reach under normal weather conditions. Unhatched eggs or any other stage of a taxon’s life cycle that could be found in a wet weather conveyance or lentic habitat (such as a deceased winged adult) should not be considered as a primary indicator that a watercourse is a stream. The specific taxa found should be noted on the Data Sheet. Representative individuals of the taxa

used to make this determination should be collected for confirmation of identification. All aquatic life observed should be noted, even if some do not qualify as primary indicators. These organisms may also be relevant as secondary field indicators.

(ii) Indigenous members of taxa within the benthic macroinvertebrate groups listed below are obligate lotic aquatic organisms and thus are primary indicators that a watercourse is a stream when two or more specimens of two or more taxa are documented under normal weather conditions.

(I) Gastropoda: Pleuroceridae, Viviparidae, Valvatidae

(II) Bivalvia: Unionidae

(III) Coleoptera: Dryopidae, Elmidae, Psephenidae, Ptilodactylidae, Staphylinidae

(IV) Diptera: Athericidae, Blephariceridae, Chironomidae (except: Chironomini or red midges), Empididae, Ptychopteridae, Tanyderidae, and some Tipulidae (Antocha, Rhabdomastix, Dicranota, Hexatoma, Limnophila, Tipula)

(V) Ephemeroptera: all members, except: Siphlonuridae, and some Ephemeridae (Hexagenia)

(VI) Megaloptera: all members, except: Chauliodes

(VII) Odonata: Aeshnidae, Calopterygidae, Cordulegastridae, Gomphidae, some Coenagrionidae (Argia, Chromagrion, Amphiagrion), some Libellulidae (Perithemis), and some Corduliidae (Epitheca, Helocordulia, Neurocordulia)

(VIII) Plecoptera: all members

(IX) Trichoptera: all members, except: Molannidae, some Leptoceridae (Nectopsyche, Triaenodes), and some Limnephilidae (Ironoquia, Limnephilus, Hesperophylax)

(X) Oligochaetes: Branchiobdellidae, Lumbriculidae, Sparganophilidae, some Tubificidae (subfamily Naidinae, Ilyodrilus, Rhyacodrilus, Varichaetadrilus), and some Lumbricidae (Eiseniella tetraedra only).

(iii) The presence of any indigenous fish species, other than the Mosquitofish (Gambusia), documented under normal weather conditions, is also a primary indicator that the watercourse is a stream, and constitutes support of the requisite aquatic life.

(iv) There are conditions in which a stream may be dry for a period of weeks or even months, but supports multiple populations of lotic aquatic organisms or fish at other times during a year. In such conditions, an investigator could appropriately determine that there is sufficient water on an annual basis to support such populations even though there were not any present on a particular date. In addition, man-made pollution or other water quality issues may preclude support of these organisms. Therefore, the absence of lotic aquatic organisms at the time of the investigation cannot be the sole basis for a determination that a watercourse meets the fourth element of the definition. When multiple populations of lotic aquatic organisms or fish cannot be documented to occur in a watercourse, then the investigator must consider the hydrologic and biologic factors referred to as

secondary indicators in these rules and the Guidance to make a hydrologic determination.

(v) Under normal weather conditions, if the investigator documents the absence of water due to naturally occurring conditions in a watercourse between February 1 and April 15, then the investigator can conclude the watercourse is unable to support fish or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months and is therefore a wet weather conveyance.

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

Rule 0400-40-03-.06 Antidegradation Statement is amended by deleting it in its entirety and substituting instead the following:

0400-40-03-.06 Antidegradation Statement.

(1) General.

(a) It is the purpose of Tennessee's standards to fully protect existing uses of all surface waters as established under the Act. Existing uses are those actually attained in the waterbody on or after November 28, 1975. Where the quality of Tennessee waters is better than the level necessary to support propagation of fish, shellfish, and wildlife, or recreation in and on the water, that quality will be maintained and protected unless the Department finds, after intergovernmental coordination and public participation, that lowering water quality is necessary to accommodate important economic or social development in the area in which the waters are located as established herein. In such waters, there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources in that stream segment and sources or activities exempted from permit requirements under the Water Quality Control Act in that stream segment should utilize all cost-effective and reasonable best management practices to prevent degradation of waters. Where new or increased temperature alterations are proposed, a successful demonstration as determined by the Department under Section 316(a) of the Clean Water Act, 33 U.S.C. § 1326, shall be considered to be in compliance with this rule.

(b) To apply this antidegradation statement to permits for new or increased discharges, new or increased water withdrawals, or new or expanded habitat alterations, the Department shall first determine if the application is complete. Absent extraordinary circumstances, the Department shall notify the applicant that an application is complete or of any deficiencies within 30 days of receipt of the application. When the Department determines the application is complete, it shall provide notice to the applicant in writing.

1. A complete application will include all of the information requested on the forms provided by the Department. For activities other than new domestic wastewater discharges, a complete application will include the applicant's basis for concluding that the proposed activity:

(i) Will not cause measurable degradation (for withdrawals or discharges);

(ii) Will only cause de minimis degradation;

(iii) Will cause no significant degradation (for habitat alterations); or

(iv) Will cause more than de minimis degradation.

2. If the proposed activity will cause degradation of any available parameter above a de minimis level, or if it is a new discharge of domestic wastewater, a complete application will:

(i) Analyze a range of potentially practicable alternatives to prevent or lessen the

degradation associated with the proposed activity;

(ii) Demonstrate that the proposed degradation is necessary to accommodate important social or economic development in the area in which the waters are located; and

(iii) Demonstrate that the proposed degradation will maintain water quality sufficient to protect existing uses in the receiving waters.

3. An alternative to degradation is practicable if it is technologically possible, able to be put into practice, and economically viable. Potentially practicable alternatives include, but are not limited to, the following:

(i) Alternatives for discharges include connection to an existing collection system, land application, water reuse, water recycling, or other treatment alternatives to prevent or reduce the level of degradation. For small domestic discharges, connection to an existing system or land application will be considered preferable.

(ii) For water withdrawals, alternatives include water conservation, water reuse or recycling, off-stream impoundments, water harvesting during high flow conditions, regionalization, withdrawing water from a larger waterbody, use of groundwater, connection to another water supply with available capacity, and pricing structures that encourage a reduction in consumption.

(iii) For activities that cause habitat alterations, alternatives that avoid or minimize degradation should be explored and explained by the applicant. These avoidance or minimization activities could include maintaining or enhancing buffer zones, bridging a stream rather than culverting it, altering the footprint of a project instead of relocating a stream, or using a culvert without a bottom, instead of one that is fully concreted.

4. To demonstrate that greater than de minimis degradation is necessary to accommodate important social or economic development in the area in which the waters are located, the applicant shall provide a written justification to include, as applicable, a description of the project, the number of jobs anticipated to be created (including salaries/benefits, duration, and type), tax revenue to be generated, impact of the proposed degradation to development potential in the area, other social/cultural impacts, and any other justification. Applicants shall submit alternative or additional information regarding economic or social necessity as directed by the Department. The justification should demonstrate an overall benefit to the local community, not just a benefit to the applicant.

(c) The Department shall propose a permit action by notifying the applicant in writing and by notifying the public and the state and federal agencies with jurisdiction over fish, wildlife, shellfish, plant and wildlife resources, parks, and historic preservation by posting a notice on the Department's web site and sending email to persons who have asked to be notified of permit actions. In the case of new or expanded habitat alterations or new or increased water withdrawals this public notice shall be a part of the public notice under paragraph (4) of Rule 0400-40-07-.04 and shall contain the information required by, and be governed by the procedures of, that paragraph of the rules. For a new or increased discharge, the public notice shall summarize the information given by the applicant pursuant to subparagraph (b) of this paragraph and shall contain the information required by, and be governed by the procedures of, Rule 0400-40-05-.06. Public notices should also include the Department's preliminary determination of the level of degradation and the antidegradation category of the affected waters.

(d) After completion of the public notice and comment period, the Department shall make a final determination of the level of degradation that would occur as a result of the proposed activity. Not all activities cause an addition of pollutants, diminish flows, or impact habitat.

1. In the case of new or increased discharges, if the Department determines that no

measurable degradation will occur as a result of the activity, no further review under this rule is required regardless of the antidegradation classification of the receiving stream, unless the activity:

(i) Is a new domestic wastewater discharge;

(ii) Introduces a parameter identified as bioaccumulative;

(iii) Introduces a parameter with a criterion below the current method detection level for that substance; or

(iv) Is proposed to occur in an ONRW.

2. In the case of new or increased water withdrawals requiring permits from waters other than ONRWs, if the Department determines that no measurable degradation will occur, no further review under this rule is required regardless of the antidegradation classification of the receiving stream.

3. In the case of new or expanded habitat alterations, if the Department determines that no more than de minimis degradation will occur, no further review under the rule is required regardless of the antidegradation classification of the receiving stream.

(e) If the steps described in subparagraphs (b), (c) and (d) of this paragraph do not conclude the review under this rule, the Department shall make a final determination whether the waters impacted by the activity are ones with available parameters, unavailable parameters, Exceptional Tennessee Waters, or ONRWs, or if they are in more than one category. For example, a stream segment may be unavailable for one parameter and be available for others and Exceptional Tennessee Waters may also be unavailable for certain parameters. If an activity is proposed in a waterbody that is in more than one category, it must meet all of the applicable requirements.

(2) Waters with unavailable parameters.

Unavailable parameters exist where water quality is at, or fails to meet, the levels specified in water quality criteria in Rule 0400-40-03-.03, even if caused by natural conditions. In the case of a criterion that is a single response variable or is derived from measurement of multiple response variables, the unavailable parameters shall be the agents causing water quality to be at or failing to meet the levels specified in criteria. For example, if the biological integrity criterion (derived from multiple response variables) is violated, the unavailable parameters shall be the pollutants causing the violation, not the response variables.

(a) In waters with unavailable parameters, new or increased discharges that would cause measurable degradation of the parameter that is unavailable shall not be authorized. Nor will discharges be authorized in such waters if they cause additional loadings of unavailable parameters that are bioaccumulative or that have criteria below current method detection levels.

(b) In waters with unavailable parameters, no new or increased water withdrawals that will cause additional measurable degradation of the unavailable parameter shall be authorized.

(c) Where one or more of the parameters comprising the habitat criterion are unavailable, new or expanded habitat alterations that cause significant degradation shall not be authorized.

(3) Waters with available parameters.

Available parameters exist where water quality is better than the levels specified in water quality criteria in Rule 0400-40-03-.03.

(a) In waters with available parameters, new or increased discharges that would cause degradation above the level of de minimis for any available parameter for any criterion, or a new domestic wastewater discharge, will only be authorized if the applicant has demonstrated to the Department that there are no practicable alternatives to prevent or lessen degradation associated with the

proposed activity and the degradation is necessary to accommodate important economic or social development in the area in which the waters are located and the degradation will not violate the water quality criteria for uses existing in the receiving waters. If one or more practicable alternatives is identified, the Department shall only find that a lowering is necessary if those alternative(s) are selected for implementation.

(b) In waters with available parameters, new or increased water withdrawals that would cause degradation above the level of de minimis will only be authorized if the applicant has demonstrated to the Department that there are no practicable alternatives to prevent or lessen degradation associated with the proposed activity and the degradation is necessary to accommodate important economic or social development in the area in which the waters are located and will not violate the water quality criteria for uses existing in the receiving waters. If one or more practicable alternatives is identified, the Department shall only find that a lowering is necessary if those alternative(s) are selected for implementation.

(c) In waters with available parameters, ~~an~~ a new or expanded activity that would cause degradation of habitat above the level of de minimis will only be authorized if the applicant has demonstrated to the Department that there are no practicable alternatives to prevent or lessen degradation associated with the proposed activity and the degradation is necessary to accommodate important economic or social development in the area in which the waters are located and will not violate the water quality criteria for uses existing in the receiving waters. If one or more practicable alternatives is identified, the Department shall only find that a lowering is necessary if those alternative(s) are selected for implementation.

(4) Exceptional Tennessee Waters.

(a) Exceptional Tennessee Waters are surface waters other than wet weather conveyances that are in any one of the following categories:

1. Waters within state or national parks, wildlife refuges, forests, wilderness areas, or natural areas;

2. State scenic rivers or federal Wild and Scenic Rivers;

3. Federally-designated critical habitat or other waters with documented non-experimental populations of State or federally-listed threatened or endangered aquatic or semi-aquatic plants or animals;

4. Waters within areas designated as Lands Unsuitable for Mining pursuant to the federal Surface Mining Control and Reclamation Act where such designation is based in whole or in part on impacts to water resource values;

5. Waters with naturally reproducing trout;

6. Waters with exceptional biological diversity as evidenced by a score of 40 or 42 on the Tennessee Macroinvertebrate Index using protocols found in the Department's 2021 Quality System Standard Operating Procedure for Macroinvertebrate Stream Surveys, provided that the sample is considered representative of overall stream conditions; or

7. Other waters with outstanding ecological, or recreational value as determined by the Department. When application of this provision is a result of a request for a permit, such preliminary determination is to be made within 30 days of receipt of a complete permit application.

(b) The Department will maintain a list of waterbodies that have been reviewed and are known to have one or more of the above characteristics on its website and will make paper copies of that list available upon request.

(c) Authorization of Activities in Exceptional Tennessee Waters.

1. In waters identified as Exceptional Tennessee Waters new or increased discharges that would cause degradation of any available parameter above the level of de minimis and new domestic wastewater discharges will only be authorized if the applicant has demonstrated to the Department that there are no practicable alternatives to prevent or lessen degradation associated with the proposed activity, the degradation is necessary to accommodate important economic or social development in the area in which the waters are located, and the discharge will not violate the water quality criteria for uses existing in the receiving waters. If one or more practicable alternatives is identified, the Department shall only find that a lowering is necessary if those alternative(s) are selected for implementation. At the time of permit renewal, previously authorized discharges, including upstream discharges, which presently degrade Exceptional Tennessee Waters above a de minimis level, will be subject to a review of updated analysis of alternatives information provided by the applicant, but not to a determination of economic/social necessity. Public participation for these existing discharges will be provided in conjunction with permitting activities.

2. In waters identified as Exceptional Tennessee Waters, new or increased water withdrawals that would cause degradation of any available parameter above the level of de minimis will only be authorized if the applicant has demonstrated to the Department that there are no practicable alternatives to prevent or lessen degradation associated with the proposed activity and the degradation is necessary to accommodate important economic or social development in the area in which the waters are located and will not violate the water quality criteria for uses existing in the receiving waters. If one or more practicable alternatives is identified, the Department shall only find that a lowering is necessary if those alternative(s) are selected for implementation.

3. In waters identified as Exceptional Tennessee Waters, a new or expanded activity that would cause degradation of habitat above the level of de minimis will only be authorized if the applicant has demonstrated to the Department that there are no practicable alternatives to prevent or lessen degradation associated with the proposed activity, and the degradation is necessary to accommodate important economic or social development in the area in which the waters are located and will not violate the water quality criteria for uses existing in the receiving waters. If one or more practicable alternatives is identified, the Department shall only find that a lowering is necessary if those alternative(s) are selected for implementation.

(d) Determination of Economic/Social Necessity - The Department’s determination that degradation above a de minimis level of Exceptional Tennessee Waters resulting from a proposed new or increased discharge, new or expanded habitat alteration, or new or increased water withdrawal is, or is not, necessary to accommodate important economic or social development in the area in which the waters are located shall be subject to review by the Board of Water Quality, Oil, and Gas under the following procedures.

1. If the Department determines after completion of the public notice and comment procedures established in subparagraph (1)(c) of this rule that an activity that would cause degradation above a de minimis level of Exceptional Tennessee Waters is necessary to accommodate important economic or social development in the area in which the waters are located, it shall give notice to the applicant, the public, and federal and State agencies with jurisdiction over fish, wildlife, shellfish, plant and wildlife resources, parks, and advisory councils for historic preservation. This notice shall be given by being posted on the Department’s website and by sending email to persons who have asked to be notified of permit actions. Within 30 days after the date of the notification, any affected intergovernmental coordination agency or affected third person may petition the Board for a declaratory order under T.C.A. § 4-5-223, and the Board shall convene a contested case. After the Board has convened a contested case in response to a declaratory order petition under this part, the Department shall within five business days thereafter transmit the petition to the Administrative Procedures Division of the Secretary of State so the contested case may be docketed and an administrative law judge may be assigned to the case. If a

declaratory order petition is timely filed, the Department shall not proceed further in processing the permit application until the petition has been resolved before the Board. In the contested case, the petitioner shall have the burden of proof, and the Department's determination shall carry no presumption of correctness before the Board. The applicant is a necessary party to the declaratory order contested case, and if the applicant does not participate in the contested case, the Board shall render a decision that degradation is not necessary to accommodate important economic or social development in the area in which the waters are located. If no intergovernmental coordination agency or third person petitions for a declaratory order within 30 days of the notification date, or if one is filed after the 30 days expires, then the Department shall proceed with processing the permit application.

2. A declaratory order contested case conducted under this subparagraph shall be subject to the following procedures. Mediation may occur if all the parties agree. Any proposed agreed order resulting from mediation shall be subject to approval by the Board. In order to provide for an expedited proceeding, the contested case is subject to the following time limitations. The time periods specified in this part shall commence on the day after the contested case has been docketed by the Administrative Procedures Division of the Secretary of State and an administrative law judge has been assigned to the case. Any alteration of the time periods set out in this part shall be granted only upon agreement of all the parties, or when there have been unforeseen developments that would cause substantial prejudice to a party, or when the parties have agreed to mediation. Within 20 days, the parties shall confer to try and develop a proposed agreed scheduling order. If the parties are unable to agree, then each party shall submit a proposed scheduling order, and the administrative law judge, after a hearing, shall enter a scheduling order. All discovery shall be completed no later than 20 days prior to the date the hearing before the Board is to begin. Within 120 days, the hearing before the Board shall begin, but the Board on its own initiative may exceed 120 days to complete the hearing and render its final decision. In order for degradation of Exceptional Tennessee Waters to proceed pursuant to these rules, the Board must make a finding approving degradation by a majority vote of the members of the Board present and voting.

3. If the Department determines that degradation is not necessary to accommodate important economic or social development in the area in which the waters are located, it will notify the applicant, the federal and state agencies with jurisdiction over fish, wildlife, shellfish, plant and wildlife resources, parks, and advisory councils for historic preservation, and third persons who have asked to be notified of permit actions. The Department also will issue a tentative decision to deny the permit because degradation is not necessary. In accordance with paragraph (4) of this rule, the Department will provide the public with notice of and an opportunity to comment on its tentative denial decision. If no public hearing is requested within the 30-day public comment period, and if the Department does not alter its tentative decision to deny, the Department shall notify the applicant of its final decision to deny the permit because degradation is not necessary. Within 30 days after receiving notice of the final decision to deny the permit, the applicant may seek review of the decision that the degradation is not necessary to accommodate important economic or social development in the area in which the waters are located in a contested case before the Board in accordance with T.C.A. § 69-3-105(i). Within five business days after the Department receives an applicant's written request for a contested case hearing before the Board, the Department shall transmit the written request to the Administrative Procedures Division of the Secretary of State so the contested case may be docketed and an administrative law judge may be assigned to the case. In the contested case, the applicant shall have the burden of proof, and the Department's determination shall carry no presumption of correctness before the Board. The federal and state intergovernmental coordination agencies, and third persons who requested notification of the Department's degradation determination will be notified by the Department of the applicant's permit appeal. The intergovernmental coordination agencies and third persons may seek to intervene in the contested case in accordance with T.C.A. § 4-5-310.

(5) Outstanding National Resource Waters.

(a) The following streams or portions of streams are designated as ONRW:

	WATERBODY	PORTION DESIGNATED AS ONRW
1.	Little River	Portion within Great Smoky Mountains National Park.
2.	Abrams Creek	Portion within Great Smoky Mountains National Park.
3.	West Prong Little Pigeon River	Portion within Great Smoky Mountains National Park upstream of Gatlinburg
4.	Little Pigeon River	From the headwaters within Great Smoky Mountains National Park downstream to the confluence of Mill Branch.
5.	Big South Fork Cumberland River	Portion within Big South Fork National River and Recreation Area.
6.	Reelfoot Lake	Tennessee portion of the lake and its associated wetlands.
7.	Obed River	The portion that is designated as a federal wild and scenic river as of June 22, 1999, is designated as ONRW, provided however, that if the current search for a regional water supply by the Cumberland Plateau Regional Water Authority results in a determination that it is necessary to utilize the Obed River as its source of drinking water, for that purpose the Obed shall be designated as an Exceptional Tennessee Water and any permit issued for that project, whether state, federal, or otherwise, shall be considered under the requirements for Exceptional Tennessee Waters.

(b) The Department may recommend to the Board of Water Quality, Oil, and Gas that certain waterbodies be designated as ONRWs. These shall be high quality waters which constitute an outstanding national resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance. Designation of ONRWs must be made by the Board of Water Quality, Oil, and Gas and will be accomplished in accordance with T.C.A. § 69-3-105(a)(1) of the Tennessee Water Quality Control Act and through the appropriate rulemaking process.

1. In surface waters designated by the Board of Water Quality, Oil, and Gas as ONRWs, no new discharges, expansions of existing discharges, water withdrawals or mixing zones will be permitted unless such activity will not result in either measurable degradation or discernible effect. At the time of permit renewal, previously authorized discharges, including upstream discharges and withdrawals, which presently degrade an ONRW, will be subject to an analysis of alternatives. Public participation for these existing discharges will be provided in conjunction with permitting activities.

2. In waters designated by the Board of Water Quality, Oil, and Gas as ONRWs, no new or expanded habitat alteration that would cause degradation of habitat above the level of de minimis or degrade water chemistry for more than a short duration will be authorized.

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

Chapter 0400-40-04
Use Classifications For Surface Waters

Amendments

Chapter 0400-40-04 Use Classifications For Surface Waters is amended by deleting it in its entirety and substituting instead the following:

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0400-40-04-.01 Memphis Area Basin
0400-40-04-.02 Hatchie River Basin
0400-40-04-.03 Obion-Forked Deer Basin
0400-40-04-.04 Tennessee River Basin–Western Valley
0400-40-04-.05 Duck River Basin
0400-40-04-.06 Elk River Basin (including Shoal Creek)
0400-40-04-.07 Lower Tennessee River Basin (including Conasauga Basin)
0400-40-04-.08 Upper Tennessee River Basin
0400-40-04-.09 Clinch River Basin
0400-40-04-.10 French Broad River Basin
0400-40-04-.11 Holston River Basin
0400-40-04-.12 Lower Cumberland River Basin
0400-40-04-.13 Upper Cumberland River Basin
0400-40-04-.14 Barren River Basin

Abbreviations for Designated Uses and Trout Streams:

Domestic Water Supply	DOM
Industrial Water Supply	IWS
Fish and Aquatic Life	FAL
Trout Stream	TS
Naturally Reproducing Trout Stream	NRTS
Recreation	REC
Livestock Watering and Wildlife	LWW
Irrigation	IRR
Navigation	NAV

0400-40-04-.01 MEMPHIS AREA BASIN.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Mississippi River	Mississippi-Tennessee State Line (Mile 714.0) to Upstream End of Loosahatchie Bar (Mile 741.0)		X	X	X	X	X	X		
McKellar Lake	Mouth on Mississippi R. to Origin		X	X	X			X		
Nonconnah Creek	Mile 0.0 to Origin			X	X	X	X			
Wolf River	Mile 0.0 to 6.7 (L & N Railroad Bridge)			X	X	X	X			
Cypress Creek	Mile 0.0 to Origin			X	X	X	X			
Wolf River	Mile 6.7 to Miss.-TN State Line (Mile 77.0)		X	X	X	X	X	X		
Loosahatchie River	Mile 0.0. to 20.9 (Austin Peay Hwy Bridge)			X	X	X	X			
Big Creek	Mile 0.0 to Origin			X	X	X	X			
North Fork Creek	Mile 0.0 to Origin			X	X	X	X			
Crooked Creek	Mile 0.0 to Origin			X	X	X	X			
Trib. to Mile 3.0 of Crooked Creek	Mile 0.0 to Origin			X	X	X	X			
Loosahatchie River	Mile 20.9 (Austin Peay Hwy) to 30.7			X	X	X	X			
Clear Creek Canal	Mile 0.0 to Origin at Mile 2.6 (Confluence of Hall Creek and Cypress Creek Canal)			X	X	X	X			
Cypress Creek Canal	Mile 0.0 to Origin			X	X	X	X			
Loosahatchie River	Mile 30.7 to 45.5			X	X	X	X			
Middle Beaver Creek	Mile 0.0 to Origin			X	X	X	X			
West Beaver Creek	Mile 0.0 to Origin			X	X	X	X			
East Beaver Creek	Mile 0.0 to Origin			X	X	X	X			
Little Cypress Creek Canal	Mile 0.0 to Origin			X	X	X	X			
Loosahatchie River	Mile 45.5 to 50.2			X	X	X	X			
Davis Creek	Mile 0.0 to Origin			X	X	X	X			
Town Branch	Mile 0.0 to Origin			X	X	X	X			
Loosahatchie River	Mile 50.2 to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
All other surface waters named and unnamed in the Memphis Area Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

0400-40-04-.02 HATCHIE RIVER BASIN.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Mississippi River	Mile 741.0 to 820.0	X	X	X	X	X	X	X		
Hatchie River	Mile 0.0 to Mile 129.0	X	X	X	X	X	X			
Town Creek	Mile 0.0 to Origin			X	X	X	X			
Cane Creek	Mile 0.0 to Origin			X	X	X	X			
Alston Creek	Mile 0.0 to Origin			X	X	X	X			
Big Muddy Canal	Mile 0.0 to Origin			X	X	X	X			
Unnamed Trib. to Mile 3.1 of Big Muddy Canal	Mile 0.0 to Origin			X	X	X	X			
Sugar Creek	Mile 0.0 to Origin			X	X	X	X			
Mill Creek	Mile 2.0 to Origin			X	X	X	X			
Pugh Creek South	Mile 0.0 to Origin			X	X	X	X			
Mill Creek	Mile 2.0 to Origin			X	X	X	X			
Hatchie River	Mile 129.0 to Mile 131.0		X	X	X	X	X			
Hatchie River	Mile 131.0 to Miss-Tenn State Line (Mile 188.5)	X	X	X	X	X	X			
Spring Creek	Mile 0.0 to Origin			X	X	X	X			
Cypress Creek	Mile 0.0 to Origin			X	X	X	X			
Tuscumbia River	Mile 0.0 to Miss-Tenn State Line (Mile 10.5)	X		X	X	X	X			
Cypress Creek	Mile 0.0 to 14.2			X	X	X	X			
Cypress Creek	Mile 14.2 to 15.2			X	X	X	X			
Cypress Creek	Mile 15.2 to Origin			X	X	X	X			
All other surface waters named and unnamed in the Hatchie Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

0400-40-04-.03 OBION-FORKED DEER BASIN.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Mississippi River	Mile 820.0 to Mile 905.0 (Kentucky State Line)	X	X	X	X	X	X	X		
Obion River	Mile 0.0 to Confluence of North and			X	X	X	X			
	South Fork Obion River (Mile 71.8)			X	X	X	X			
Running Reelfoot Bayou	Mile 0.0 to Reelfoot Lake Spillway			X	X	X	X			
Reelfoot Lake	Entirety			X	X	X	X			
Biffle Creek	Mile 0.0 to Origin			X	X	X	X			
Reeds Creek	Mile 0.0 to Origin			X	X	X	X			
Cool Springs Branch	Mile 0.0 to Origin			X	X	X	X			
North Fork Obion River	Mile 0.0 to Origin			X	X	X	X			
Hoosier Creek	Mile 0.0 to Origin			X	X	X	X			
First Creek	Mile 0.0 to Origin			X	X	X	X			
Grove Creek	Mile 0.0 to Origin			X	X	X	X			
Harris Fork Creek	Mile 0.0 to Kentucky-Tennessee State Line			X	X	X	X			
Walnut Fork Creek	Mile 0.0 to Origin			X	X	X	X			
Trib. to Mile 3.8 of Walnut Fork Creek	Mile 0.0 to Origin			X	X	X	X			
South Fork Obion River	Mile 0.0 to 38.9 (Formed at Confluence of Beaver			X	X	X	X			
	Creek and Crooked Creek)									
Mud Creek	Mile 0.0 to Origin			X	X	X	X			
Cane Creek	Mile 0.0 to Origin			X	X	X	X			
Trib. to Mile 9.8 of Cane Creek	Mile 0.0 to Origin			X	X	X	X			
Trib. to Mile 11.0 of Cane Creek	Mile 0.0 to Origin			X	X	X	X			
Brassfield Creek	Mile 0.0 to Origin			X	X	X	X			
Trib. to Mile 0.5 of Brassfield Creek	Mile 0.0 to Origin			X	X	X	X			
Rutherford Fork	Mile 0.0 to Origin			X	X	X	X			
Carroll Creek	Mile 0.0 to Origin			X	X	X	X			
Wolf Creek	Mile 0.0 to Origin			X	X	X	X			
E. Fork Wolf Creek	Mile 0.0 to Origin			X	X	X	X			
Trib. to Mile 27.7 of Rutherford Fork	Mile 0.0 to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Middle Fork Obion River	Mile 0.0 to Origin			X	X	X	X			
Buckor Ditch	Mile 0.0 to Origin			X	X	X	X			
Spring Creek	Mile 0.0 to Origin			X	X	X	X			
Pritchett Branch	Mile 0.0 to Origin			X	X	X	X			
Bradford Creek	Mile 0.0 to Origin			X	X	X	X			
Reedy Creek	Mile 0.0 to Origin			X	X	X	X			
Lick Creek	Mile 0.0 to Origin			X	X	X	X			
Clear Creek	Mile 0.0 to Origin			X	X	X	X			
Beaver Creek	Mile 0.0 to Origin		X	X	X	X	X			
Crooked Creek	Mile 0.0 to Origin		X	X	X	X	X			
Guins Creek	Mile 0.0 to Origin		X	X	X	X	X			
Trib. to Mile 9.7 of Guins Creek	Mile 0.0 to Origin			X	X	X	X			
Forked Deer River	Mouth at Obion River Mile 3.3 to Mile 20.3 at Confluence of North and South Fork			X	X	X	X	X		
South Fork Forked Deer	Mile 0.0 to 48.8			X	X	X	X	X		
Nixon Creek	Mile 0.0 to Origin			X	X	X	X			
Little Nixon Creek	Mile 0.0 to Origin			X	X	X	X			
Old Channel Forked Deer-Trib. at Mile 35.8	Mile 0.0 to Origin			X	X	X	X			
South Fork Forked Deer River	Mile 48.8 to 70.3			X	X	X	X	X		
North Fork of South Fork Forked Deer River	Mile 0.0 to Origin			X	X	X	X			
Johnson Creek	Mile 0.0 to Origin			X	X	X	X			
Anderson Branch	Mile 0.0 to Origin			X	X	X	X			
Turkey Creek	Mile 0.0 to 1.2			X	X	X	X			
Trib. to Mile 1.0 of Turkey Creek	Mile 0.0 to Origin			X	X	X	X			
Turkey Creek	Mile 1.2 to Origin			X	X	X	X			
South Fork Forked Deer River	Mile 70.3 to Origin			X	X	X	X			
Sugar Creek	Mile 0.0 to Origin			X	X	X	X			
North Fork Forked Deer River	Mile 0.0 to 5.8			X	X	X	X	X		

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
North Fork Forked Deer River	Mile 5.8 to 33.9			X	X	X	X			
Middle Fork Forked Deer River	Mile 0.0 to Origin			X	X	X	X			
Mosquito Creek	Mile 0.0 to Origin			X	X	X	X			
Moize Creek	Mile 0.0 to Origin			X	X	X	X			
Dyer Creek	Mile 0.0 to Origin			X	X	X	X			
North Mud Creek	Mile 0.0 to Origin			X	X	X	X			
Cow Creek	Mile 0.0 to Origin			X	X	X	X			
Sand Creek	Mile 0.0 to Origin			X	X	X	X			
North Fork Forked Deer River	Mile 33.9 to Origin			X	X	X	X			
Trib. to Mile 857.5 of Mississippi River	Mile 0.0 to Origin			X	X	X	X			
Harris Ditch	Mile 0.0 to Origin			X	X	X	X			
All other surface waters named and unnamed in the Obion-Forked Deer Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

0400-40-04-.04 TENNESSEE RIVER BASIN - WESTERN VALLEY.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Tennessee River	Mile 49.1 (Tenn-Ky Line) to 215.1 (Tn-Miss Line)	X	X	X	X	X	X	X		
Big Sandy River	Mile 0.0 to 15.1		X	X	X	X	X	X		
Big Sandy River	Mile 15.1 to Origin		X	X	X	X	X			
West Sandy Creek	Mile 0.0 to Origin			X	X	X	X			
Holly Fork Creek	Mile 0.0 to Origin			X	X	X	X			
Bailey Fork Creek	Mile 0.0 to Origin			X	X	X	X			
Town Creek	Mile 0.0 to Origin			X	X	X	X			
Big Beaver Creek	Mile 0.0 to Origin			X	X	X	X			
Little Beaver Creek	Mile 0.0 to Origin			X	X	X	X			
Little Beaver Creek	Mile 0.0 to Origin			X	X	X	X			
Hurricane Creek	Mile 0.0 to Origin			X	X	X	X		X	
S. Fk Hurricane Cr	Mile 0.0 to Origin			X	X	X	X			
Beaverdam Creek	First bridge above mouth to origin.			X	X	X	X		X	
Cane Creek	Mile 0.0 to Origin			X	X	X	X			
Trace Creek	Mile 0.0 to Origin			X	X	X	X			
Cypress Creek	Mile 0.0 to Origin			X	X	X	X			
Cane Creek	Mile 0.0 to Origin			X	X	X	X			
North Indian Creek	Mile 0.0 to Origin			X	X	X	X			
Birdsong Creek	Mile 0.0 to Origin			X	X	X	X			
Wolf Creek	Mile 0.0 to Origin			X	X	X	X			
Eagle Creek	Mile 0.0 to Origin			X	X	X	X			
Morgan Creek	Mile 0.0 to Origin			X	X	X	X			
Beech River	Mile 0.0 to 7.2	X	X	X	X	X	X	X		
Beech River	Mile 7.2 to 27.4	X	X	X	X	X	X			
Beech River	Mile 27.4 to 30.4		X	X	X	X	X			
Beech River	Mile 30.4 to Origin	X	X	X	X	X	X			
Rushing Creek	Mile 0.0 to Origin			X	X	X	X			
Harmon Creek	Mile 0.0 to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Bear Creek	Mile 0.0 to Origin			X	X	X	X			
Wolf Creek	Mile 0.0 to Origin			X	X	X	X			
Doe Creek	Mile 0.0 to Origin			X	X	X	X			
East Prong Doe Creek	Mile 0.0 to Origin			X	X	X	X			
White Oak Creek	Mile 0.0 to Origin			X	X	X	X			
Little Hurricane Creek	Mile 0.0 to Origin			X	X	X	X			
Horse Creek	Mile 0.0 to Origin			X	X	X	X			
Beason Creek	Mile 0.0 to Origin			X	X	X	X			
South Fork Beason Creek	Mile 0.0 to Origin			X	X	X	X			
Dollar Creek	Mile 0.0 to Origin			X	X	X	X			
Beech Creek	Mile 0.0 to Origin			X	X	X	X			
Leatherwood Creek	First bridge to origin			X	X	X	X		X	
E. Fork Leatherwood Cr	Mile 0.0 to second tributary			X	X	X	X		X	
N. Fork Leatherwood Cr	Mile 0.0 to second tributary			X	X	X	X		X	
Town Branch	Mile 0.0 to Origin			X	X	X	X			
Chambers Creek	Mile 0.0 to Origin			X	X	X	X			
All other surface waters named and unnamed in the Western Valley Tennessee River Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

0400-40-04-.05 DUCK RIVER BASIN.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Duck River	Mile 0.0 to 67.0	X	X	X	X	X	X			
Blue Creek	Mile 0.0 to 14.0	X	X	X	X	X	X			
Blue Creek	Mile 14.0 to 16.2		X	X	X	X	X			
Blue Creek	Mile 16.2 to Origin			X	X	X	X			
Buffalo River	Mile 0.0 to 24.0	X	X	X	X	X	X			
Cane Creek	Hickman Co. line to Lewis Co. line			X	X	X	X		X	
Buffalo River	Mile 24.0 to 26.0		X	X	X	X	X			
Buffalo River	Mile 26.0 to 38.0	X	X	X	X	X	X			
Hurricane Creek	Mile 0.0 to Origin			X	X	X	X			X
Sinking Creek	Mile 0.0 to Origin			X	X	X	X		X	
Buffalo River	Mile 38.0 to 41.1		X	X	X	X	X			
Buffalo River	Mile 41.1 to Origin	X	X	X	X	X	X			
Green River	Mile 0.0 to 9.0	X	X	X	X	X	X			
Green River	Mile 9.0 to 11.7		X	X	X	X	X			
Green River	Mile 11.7 to Origin	X	X	X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Rockhouse Creek	Mile 0.0 to 6.0	X	X	X	X	X	X			
Rockhouse Creek	Mile 6.0 to 9.5		X	X	X	X	X			
Rockhouse Creek	Mile 9.5 to Origin	X	X	X	X	X	X			
Little Buffalo River	Mile 0.0 to Origin			X	X	X	X		X	
Hurricane Creek	Mile 0.0 to Origin			X	X	X	X		X	
Beaverdam Creek	Highway 100 to Sulfur Fork Cr			X	X	X	X			X
Sulfur Fork Creek	Mile 0.0 to Origin			X	X	X	X			X
Piney River	Mile 0.0 to Origin	X	X	X	X	X	X			X
Mill Creek	Mile 0.0 to Origin	X		X	X	X	X		X	
Little Spring Creek	Mile 0.0 to Origin			X	X	X	X		X	
Big Spring Creek	Mile 0.0 to Origin			X	X	X	X			X
Garner Creek	Mile 0.0 to Origin			X	X	X	X		X	
Bear Creek	Mile 0.0 to Origin			X	X	X	X			X
East Piney River	Mile 0.0 to 4.0	X	X	X	X	X	X			
East Piney River	Mile 4.0 to 6.1		X	X	X	X	X			
East Piney River	Mile 6.1 to Origin	X	X	X	X	X	X			
Defeated Camp Creek	Mile 0.0 to 4.4		X	X	X	X	X			
Defeated Camp Creek	Mile 4.4 to Origin			X	X	X	X			
Defeated Branch	Mile 0.0 to Origin			X	X	X	X			
Duck River	Mile 67.0 to 71.5		X	X	X	X	X			
Duck River	Mile 71.5 to 123.2	X	X	X	X	X	X			
Big Bigby Creek	Mile 0.0 to Origin	X	X	X	X	X	X			
Sugar Fork	Mile 0.0 to 1.9	X	X	X	X	X	X			
Sugar Fork	Mile 1.9 to 2.9		X	X	X	X	X			
Sugar Creek	Mile 0.0 to 0.7		X	X	X	X	X			
Sugar Creek	Mile 0.7 to Origin	X	X	X	X	X	X			
Quality Creek	Mile 0.0 to Origin	X	X	X	X	X	X			
Big Swan Creek	Mile 0.0 to Origin	X	X	X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Little Swan Creek	Mile 0.0 to Origin			X	X	X	X		X	
Cathey's Creek	Mile 0.0 to Origin	X	X	X	X	X	X			
Duck River	Mile 123.2 to 127.2		X	X	X	X	X			
Little Bigby Creek	Mile 0.0 to Origin	X	X	X	X	X	X			
Rutherford Creek	Mile 0.0 to Origin	X	X	X	X	X	X			
Duck River	Mile 127.2 to 217.0	X	X	X	X	X	X			
Big Rock Creek	Mile 0.0 to 14.0	X	X	X	X	X	X			
Big Rock Creek	Mile 14.0 to 16.9		X	X	X	X	X			
Big Rock Creek	Mile 16.9 to Origin	X	X	X	X	X	X			
Duck River	Mile 217.0 to 221.3		X	X	X	X	X			
Duck River	Mile 221.3 to 244.0	X	X	X	X	X	X			
Duck River	Mile 244.0 to 248.6 (Normandy Dam)	X		X	X	X	X		X	
Duck River	Mile 248.6 to 266.5	X	X	X	X	X	X			
Garrison Fork Creek	Mile 0.0 to 2.7	X	X	X	X	X	X			
Garrison Fork Creek	Mile 2.7 to 3.3		X	X	X	X	X			
Garrison Fork Creek	Mile 3.3 to Origin	X	X	X	X	X	X			
Duck River	Mile 266.5 to 268.5		X	X	X	X	X			
Duck River	Mile 268.5 to Origin	X	X	X	X	X	X			
Little Duck River	Mile 0.0 to Origin	X	X	X	X	X	X			
All other surface waters named and unnamed in the Duck River Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

0400-40-04-.06 ELK RIVER BASIN (INCLUDING SHOAL CREEK).

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Shoal Creek	Tenn-Ala State Line (Mile 20.6) to Mile 56.9	X	X	X	X	X	X			
Clack Branch	Mile 0.0 to Origin		X	X	X	X	X			
Loretto Branch	Mile 0.0 to Origin		X	X	X	X	X			
Little Shoal Creek	Mile 0.0 to Origin		X	X	X	X	X			
Shoal Creek	Mile 56.9 to Origin (Jct of B. Dry Branch & Beeler Fk)		X	X	X	X	X		X	
Factory Creek	Mile 0.0 to Origin	X		X	X	X	X		X	
Chisholm Creek	Mile 0.0 to Origin			X	X	X	X		X	
Crowson Creek	Mile 0.0 to Origin			X	X	X	X			X
Elk River	Tenn-Ala State Line (Mile 33.6) to 36.3	X	X	X	X	X	X	X		
Elk River	Mile 36.3 to 90.5	X	X	X	X	X	X			
Richland Creek	Mile 0.0 to 20.0		X	X	X	X	X			
Buchannan Creek	Mile 0.0 to Origin			X	X	X	X			
Richland Creek	Mile 20.0 to 23.3			X	X		X			
Richland Creek	Mile 23.3 to Origin	X	X	X	X	X	X			
Pigeon Roost Creek	Mile 0.0 to Origin		X	X	X	X	X			
Robertson Fork	Mile 0.0 to Origin		X	X	X	X	X			
Town Creek	Mile 0.0 to Origin		X	X	X	X	X			
Holland Creek	Mile 0.0 to Origin		X	X	X	X	X			
Elk River	Mile 90.5 to 119.0	X	X	X	X	X	X			
Mulberry Creek	Mile 0.0 to Origin		X	X	X	X	X			
East Fork Mulberry Cr.	Mile 0.0 to 11.1		X	X	X	X	X			
East Fork Mulberry Cr.	Mile 11.1 to Origin	X	X	X	X	X	X			
Spring Branch	Mile 0.0 to Origin	X	X	X	X	X	X			
Elk River	Mile 119.0 to 133.3 (Tims Ford Dam)	X	X	X	X	X	X		X	
Elk River	Mile 133.3 to Origin	X	X	X	X	X	X			
Beans Creek	Mile 0.0 to Origin		X	X	X	X	X			
Factory Branch	Mile 0.0 to Origin		X	X	X	X	X			
Mathias Branch	Mile 0.0 to Origin		X	X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Hurricane Creek	Mile 0.0 to Origin		X	X	X	X	X			
Boiling Fork Creek	Mile 0.0 to Origin	X	X	X	X	X	X			
Wagner Creek	Mile 0.0 to Origin	X	X	X	X	X	X			
Rock Creek	Mile 0.0 to Origin		X	X	X	X	X			
Rollins Creek	Mile 0.0 to 2.5	X	X	X	X	X	X			
Rollins Creek	Mile 2.5 to Origin			X	X	X	X			
Mud Creek	Mile 0.0 to Origin		X	X	X	X	X			
Caldwell Creek	Mile 0.0 to Origin		X	X	X	X	X			
All other surface waters named and unnamed in the Elk River Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

0400-40-04-.07 LOWER TENNESSEE RIVER BASIN (INCLUDING CONASAUGA RIVER).

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Tennessee River	Tenn-Ala State Line (Mile 416.5) to the POT Light (Mile 448.0)	X	X	X	X	X	X	X		
Unnamed Tributary	At Tenn. River Mile 417.5; Mile 0.0 to Origin			X	X	X	X			
Battle Creek	Mile 0.0 to 17.3 (Martin Spring)	X	X	X	X	X	X		X	
Swedens Creek	Mile 0.0 to Origin			X	X	X	X		X	
Big Fiery Gizzard	Mile 0.0 to 4.5			X	X	X	X			
Little Fiery Gizzard	Mile 0.0 to Origin			X	X	X	X			
Unnamed Trib.	At Little Fiery Gizzard Mile 0.6; Mile 0.0 to Origin			X	X	X	X			
Big Fiery Gizzard	Mile 4.5 to 5.5			X	X	X	X		X	
Big Fiery Gizzard	Mile 5.5 to Origin			X	X	X	X			
Battle Creek	Mile 17.3 to Origin	X	X	X	X	X	X			
Sequatchie River	Mile 0.0 to 3.5	X	X	X	X	X	X	X		

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Little Sequatchie River	Mile 0.0 to confluence of Sawmill Creek			X	X	X	X			
Little Sequatchie River	Confluence of Sawmill Creek to confluence of Grays Creek		X	X	X	X		X		
Little Sequatchie River	Confluence of Grays Creek to Origin			X	X	X	X			
Pocket Creek	Mile 0.0 to Origin			X	X	X	X		X	
Clifty Creek	Mile 0.0 to Origin			X	X	X	X			
Sewanee Creek	Mile 0.0 to 4.0			X	X	X	X			
Sewanee Creek	Mile 4.0 to Origin	X		X	X	X	X			
Holywater Creek	Mile 0.0 to Origin	X		X	X	X	X			
Scott Creek	Mile 0.0 to Origin	X		X	X	X	X			
Coops Creek	Mile 0.0 to Origin			X	X	X	X			
Sequatchie River	Mile 41.0 to 43.9			X	X	X	X			
Sequatchie River	Mile 43.9 to 74.0	X	X	X	X	X	X			
Sequatchie River	Mile 74.0 to 78.4			X	X	X	X			
Sequatchie River	Mile 78.4 to 105.9	X	X	X	X	X	X			
Sequatchie River	Mile 105.9 to 108.9	X	X	X	X	X	X		X	
Sequatchie River	108.8 to Origin			X	X	X	X			
Tennessee River	Mile 448.0 to 460.6 (Chattanooga Creek)		X	X	X	X	X	X		
Shoal Creek	Mile 0.0 to Origin			X	X	X	X			
Unnamed Tributary	At Tenn. River Mile 458.7; Mile 0.0 to Origin			X	X	X	X			
Lookout Creek	Mile 0.0 to Georgia-Tenn State Line		X	X	X	X	X			
Black Creek	Mile 0.0 to Origin			X	X	X	X			
Chattanooga Creek	Mile 0.0 to Georgia-Tenn State Line		X	X	X	X	X			
Tennessee River	Mile 460.6 to 499.4 (Hiwassee)	X	X	X	X	X	X	X		
Citico Creek	Mile 0.0 to Origin			X	X	X	X			
South Chickamauga Creek	Mile 0.0 to Georgia-Tenn State Line		X	X	X	X	X			
Friar Branch	Mile 0.0 to Origin			X	X	X	X			
West Chickamauga Creek	Mile 0.0 to Georgia-Tenn State Line		X	X	X	X	X			
Spring Creek	Mile 0.0 to Georgia-Tenn State Line		X	X	X	X	X			
Mackey Branch	Mile 0.0 to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Ryall Springs Br.	Mile 0.0 to Origin			X	X	X	X			
Unnamed Tributary	At Tenn. River Mile 469.2; Mile 0.0 to Origin			X	X	X	X			
North Chickamauga Creek	Mile 0.0 to 13.2			X	X	X	X			
Unnamed Tributary	At N. Chickamauga Creek Mile 0.7; Mile 0.0 to Origin			X	X	X	X			
North Chickamauga Creek	Mile 13.2 to 15.0			X	X	X	X		X	
North Chickamauga Creek	Mile 15.0 to Origin			X	X	X	X			
Wolftever Creek	Mile 0.0 to Origin			X	X	X	X			
Sale Creek	Mile 0.0 to Origin			X	X	X	X			
Roaring Creek	Mile 0.0 to Origin			X	X	X	X			
Brush Creek	Mile 0.0 to Origin			X	X	X	X			
Hiwassee River	Mile 0.0 to 23.9	X	X	X	X	X	X	X		
Candies Creek	Mile 0.0 to Origin			X	X	X	X			
South Mouse Creek	Mile 0.0 to Origin			X	X	X	X			
Chatata Creek	Mile 0.0 to Origin			X	X	X	X			
Little Chatata Cr.	Mile 0.0 to Origin			X	X	X	X			
Chestuee Creek	Mile 0.0 to Origin			X	X	X	X			
Middle Creek	Mile 0.0 to 1.9			X	X	X	X			
Middle Creek	Mile 1.9 to Origin	X		X	X	X	X			
Ocoee River	Mile 0.0 to Benton Station Bridge	X	X	X	X	X	X		X	
Ocoee River	Benton Station Bridge to mile 17.0	X	X	X	X	X	X			
Sylco Creek	Mile 0.0 to Origin			X	X	X	X		X	
Dutch Creek	Mile 0.0 to Origin			X	X	X	X		X	
Greasy Creek	Mile 0.0 to Origin			X	X	X	X			
Rock Creek	Mile 0.0 to Origin			X	X	X	X		X	
Clear Creek	Mile 0.0 to Origin			X	X	X	X		X	
Ocoee River	Mile 17.0 to Ocoee #3 Powerhouse		X	X	X	X	X			
Caney Creek (East Fork)	Mile 0.0 to Origin			X	X	X	X		X	
Big Creek	Mile 0.0 to Origin			X	X	X	X			X
Goforth Creek	Mile 0.0 to Origin			X	X	X	X		X	

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Ocoee River	Ocoee #3 Powerhouse to Rock Creek		X	X	X	X	X		X	
Rock Creek	Mile 0.0 to Origin			X	X	X	X		X	
Ocoee River	Rock Creek to Mile 37.9 (Georgia-Tenn State Line)		X	X	X	X	X			
Rough Creek	Mile 0.0 to Origin			X	X	X	X			X
West Fork Rough Creek	Mile 0.0 to Origin			X	X	X	X			X
North Potato Creek	Mile 0.0 to North Carolina-Tenn State Line			X	X	X	X			
Burra Creek	Mile 0.0 to 1.5			X	X	X	X			
Brush Creek	Mile 0.0 to Origin	X	X	X	X	X	X			
Belcher Creek	Mile 0.0 to Origin			X	X	X	X			
Deweese Creek	Mile 0.0 to Origin	X		X	X	X	X			
Conasauga Creek	Mile 0.0 to Cog Hill Mill Dam			X	X	X	X		X	
Conasauga Creek	Cog Hill Mill Dam to Ruralville Mill			X	X	X	X			
Cane Creek	Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	Mile 0.0 to Origin			X	X	X	X			
Crockett Spring Cr	Mile 0.0 to Origin			X	X	X	X			
Conasauga Creek	Ruralville Mill to Origin			X	X	X	X		X	
Gee Creek	Mile 0.0 to Origin			X	X	X	X			X
Spring Creek	Mile 0.0 to Origin			X	X	X	X			
Yellow Creek	Mile 0.0 to Origin			X	X	X	X		X	
Big Lost Creek	Mile 0.0 to Origin			X	X	X	X		X	
Little Lost Creek	Mile 0.0 to Origin			X	X	X	X		X	
Smith Creek	Mile 0.0 to Origin			X	X	X	X		X	
Wolf Creek	Mile 0.0 to Origin			X	X	X	X			X
Turtletown Creek	Mile 0.0 to N. Carolina Line			X	X	X	X		X	
Brushy Creek	Mile 0.0 to N. Carolina Line			X	X	X	X		X	
Coker Creek	Joe Brown Highway to Origin			X	X	X	X		X	
Hiwassee River	Mile 23.9 to 34.4	X	X	X	X	X	X	X		
North Mouse Creek	Mile 0.0 to 10.0	X	X	X	X	X	X			
Spring Creek	Mile 0.0 to 18.7		X	X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Spring Creek	Mile 18.7 to Origin			X	X	X	X			
Dry Valley Creek	Mile 0.0 to Origin			X	X	X	X			
North Mouse Creek	Mile 10.0 to 30.1		X	X	X	X	X			
Little North Mouse Cr.	Mile 0.0 to 4.1			X	X	X	X			
Little North Mouse Cr.	Mile 4.1 to Origin			X	X	X	X			
North Mouse Creek	Mile 30.1 to Origin			X	X	X	X			
Oostanaula Creek	Mile 0.0 to 26.0	X	X	X	X	X	X			
Oostanaula Creek	Mile 26.0 to 28.0		X	X	X	X	X			
Oostanaula Creek	Mile 28.0 to 33.8		X	X	X	X	X			
Oostanaula Creek	Mile 33.8 to 37.5	X	X	X	X	X	X			
Oostanaula Creek	Mile 37.5 to Origin			X	X	X	X			
Hiwassee River	Mile 34.4 to 64.9 (North Carolina Line)	X	X	X	X	X	X		X	
All other surface waters named and unnamed in the Lower Tennessee River Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

0400-40-04-.08 UPPER TENNESSEE RIVER BASIN.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Tennessee River	Mile 499.4 (Hiwassee) to 567.8 (Clinch)	X	X	X	X	X	X	X		
Richland Creek	Mile 0.0 to Origin		X	X	X	X	X			
Little Richland Creek	Mile 0.0 to Origin		X	X	X	X	X			
Broyles Branch	Mile 0.0 to Origin		X	X	X	X	X			
Piney River	Mile 0.0 to 5.5		X	X	X	X	X	X		
Piney River	Mile 5.5 to 6.5 (U.S. Hwy. 27 Bridge)	X	X	X	X	X	X			
Piney River	Mile 6.5 to Origin		X	X	X	X	X			
Town Creek	Mile 0.0 to Origin		X	X	X	X	X			
Whites Creek	Mile 0.0 to 5.1			X	X	X	X	X		
Whites Creek	Mile 5.1 to Origin			X	X	X	X			
Black Creek	Mile 0.0 to Origin			X	X	X	X			
Caney Creek	Mile 0.0 to Origin			X	X	X	X			
Post Oak Creek	Mile 0.0 to Origin			X	X	X	X			
Cardiff Creek	Mile 0.0 to Origin			X	X	X	X			
Clear Creek	Mile 0.0 to 3.0			X	X	X	X		X	
Tennessee River	Mile 567.8 to 601.1	X	X	X	X	X	X	X		
Martin Branch	Mile 0.0 to Origin			X	X	X	X			
Stamp Creek	Mile 0.0 to Origin			X	X	X	X			
Greenbriar Branch	Mile 0.0 to Origin			X	X	X	X			
Hines Creek	Mile 0.0 to Origin			X	X	X	X			
Sweetwater Creek	Mile 0.0 to 9.4	X	X	X	X	X	X			
Bacon Creek	Mile 0.0 to Origin			X	X	X	X			
Sweetwater Creek	Mile 9.4 to 19.0			X	X	X	X			
Sweetwater Creek	Mile 19.0 to 21.0	X		X	X	X	X			
Sweetwater Creek	Mile 21.0 to Origin	X	X	X	X	X	X			
Unnamed Spring Branch	Mile 0.0 to Origin			X	X	X	X			
Little Tennessee River	Mile 0.0 to 19.0	X	X	X	X	X	X	X		
Fork Creek	Mile 0.0 to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Unnamed Tributary	Mile 0.0 to Origin			X	X	X	X			
Bat Creek	Mile 0.0 to Origin			X	X	X	X			
Tellico River	Mile 0.0 to 5.0	X	X	X	X	X	X	X		
Tellico River	Mile 5.0 to 28.0	X	X	X	X	X	X			
Ballplay Creek	Upper 7 miles			X	X	X	X		X	
Cane Creek	Mile 0.0 to Origin			X	X	X	X		X	
Tellico River	Mile 28.0 to 41.0	X		X	X	X	X		X	
Wildcat Creek	Mile 0.0 to Origin			X	X	X	X		X	
Turkey Creek	Mile 0.0 to Origin			X	X	X	X		X	
Bald River	Mile 0.0 to Origin			X	X	X	X			X
Kirkland Creek	Mile 0.0 to Origin			X	X	X	X			X
Henderson Creek	Mile 0.0 to Origin			X	X	X	X			X
Barrett Branch	Mile 0.0 to Origin			X	X	X	X			X
Service Branch	Mile 0.0 to Origin			X	X	X	X			X
Brookshire Branch	Mile 0.0 to Origin			X	X	X	X			X
North River	Mile 0.0 to Origin			X	X	X	X			X
Long Branch	Mile 0.0 to Origin			X	X	X	X		X	
Hemlock Branch	Mile 0.0 to Origin			X	X	X	X		X	
McNabb Creek	Mile 0.0 to Origin			X	X	X	X			X
Laurel Branch	Mile 0.0 to Origin			X	X	X	X			X
Big Cove Branch	Mile 0.0 to Origin			X	X	X	X			X
Round Mountain Br	Mile 0.0 to Origin			X	X	X	X			X
Service Tree Br	Mile 0.0 to Origin			X	X	X	X			X
Sugar Cove Br	Mile 0.0 to Origin			X	X	X	X			X
Meadow Branch	Mile 0.0 to Origin			X	X	X	X			X
Roaring Br	Mile 0.0 to Origin			X	X	X	X			X
Indian Creek	Mile 0.0 to Origin			X	X	X	X			X
Panther Branch	Mile 0.0 to Origin			X	X	X	X			X

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Tellico River	Mile 41.0 to 50.0 (TN - NC Line)	X	X	X	X	X	X			X
Sycamore Creek	Mile 0.0 to Origin			X	X	X	X			X
Rough Ridge Creek	Mile 0.0 to Origin			X	X	X	X			X
Little Tennessee River	Mile 19.0 to 30.0	X	X	X	X	X	X	X	X	
Citico Creek	Mile 4.5 to 16.0			X	X	X	X		X	
Jakes Creek	Mile 0.0 to 3.0			X	X	X	X			X
Slide Hollow	Mile 0.0 to 2.0			X	X	X	X		X	
Little Citico Creek	Mile 0.0 to 3.5			X	X	X	X			X
Jake Best Creek	Mile 0.0 to Origin			X	X	X	X			X
Doublecamp Creek	Mile 0.0 to Origin			X	X	X	X			X
Mill Branch	Mile 0.0 to Origin			X	X	X	X			X
Flint Branch	Mile 0.0 to Origin			X	X	X	X			X
Crowder Branch	Mile 0.0 to Origin			X	X	X	X			X
Citico Creek	Mile 16.0 to Origin			X	X	X	X			X
N. Fk Citico Creek	Mile 0.0 to Origin			X	X	X	X			X
Indian Valley Br	Mile 0.0 to Origin			X	X	X	X			X
South Fork Citico Creek	Mile 0.0 to Origin			X	X	X	X			X
Ike Camp Branch	Mile 0.0 to Origin			X	X	X	X			X
Falls Branch	Mile 0.0 to Origin			X	X	X	X			X
Cochran Creek	Mile 0.0 to mile 2.0			X	X	X	X		X	
Abrams Creek	Mile 0.0 to Origin			X	X	X	X			X
Panther Creek	Mile 0.0 to Origin			X	X	X	X			X
Mill Creek	Mile 0.0 to Origin			X	X	X	X			X
Bell Cove Branch	Mile 0.0 to Origin			X	X	X	X		X	
Kingfisher Creek	Mile 0.0 to Origin			X	X	X	X		X	
Buckshank Branch	Mile 0.0 to Origin			X	X	X	X		X	
Rabbit Creek	Mile 0.0 to Origin			X	X	X	X			X
Hannah Branch	Mile 0.0 to Origin			X	X	X	X			X

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Peckerwood Br	Mile 0.0 to Origin			X	X	X	X			X
Wilson Branch	Mile 0.0 to Origin			X	X	X	X		X	
Stony Branch	Mile 0.0 to Origin			X	X	X	X		X	
Arbutus Branch	Mile 0.0 to Origin			X	X	X	X		X	
Mill Creek	Mile 0.0 to Origin			X	X	X	X			X
Forge Creek	Mile 0.0 to Origin			X	X	X	X			X
Coalen Ground Br	Mile 0.0 to Origin			X	X	X	X		X	
Bower Creek	Mile 0.0 to Origin			X	X	X	X			X
Tipton Sugar Cove	Mile 0.0 to Origin			X	X	X	X		X	
Ekanneetlee Br	Mile 0.0 to Origin			X	X	X	X			X
Tater Branch	Mile 0.0 to Origin			X	X	X	X		X	
McCaulley Branch	Mile 0.0 to Origin			X	X	X	X		X	
Rowans Branch	Mile 0.0 to Origin			X	X	X	X			X
Anthony Creek	Mile 0.0 to Origin			X	X	X	X			X
Shop Creek	Mile 0.0 to Origin			X	X	X	X			X
Tabcat Creek	Mile 0.0 to Origin			X	X	X	X			X
Parson Branch	Mile 0.0 to Origin			X	X	X	X			X
Bible Creek	Mile 0.0 to Origin			X	X	X	X			X
Slickrock Creek	Tennessee portion			X	X	X	X			X
Little Slickrock Cr	Mile 0.0 to Origin			X	X	X	X			X
Little Tennessee River	Mile 30.0 to 49.7 (TN.-N.C. Line)	X	X	X	X	X	X		X	
Morgan Branch	Mile 0.0 to Origin			X	X	X	X			
Abrams Branch	Mile 0.0 to Origin			X	X	X	X			
First Creek	Mile 0.0 to Origin	X	X	X	X	X	X			
Tennessee River	Mile 601.1 to 636.6 (Little River)	X	X	X	X	X	X	X		
Town Creek	Mile 0.0 to Origin			X	X	X	X			
Gallagher Creek	Mile 0.0 to Origin			X	X	X	X			
Turkey Creek	Mile 0.0 to Origin			X	X	X	X			
Sinking Creek #1	Mile 0.0 to Origin	X	X	X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Ten Mile Creek	From Sink to Origin			X	X	X	X			
Sinking Creek #2	Mile 0.0 to Origin			X	X	X	X			
Unnamed Trib.	Mile 0.0 to Origin			X	X	X	X			
Lackey Creek	Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	Mile 0.0 to Origin			X	X	X	X			
Little River	Mile 0.0 to 33.0	X	X	X	X	X	X			
Polecat Branch	Mile 0.0 to Origin			X	X	X	X			
Stock Creek	Mile 0.0 to Origin			X	X	X	X			
McCall Branch	Mile 0.0 to Origin			X	X	X	X			
Russell's Branch	Mile 0.0 to Origin			X	X	X	X			
Pistol Creek	Mile 0.0 to Origin			X	X	X	X			
Duncan Branch	Mile 0.0 to Origin			X	X	X	X			
Culton Creek	Mile 0.0 to Origin			X	X	X	X			
Tedford Br	Mile 0.0 to Origin			X	X	X	X			
Hesse Creek	Upper 5 miles			X	X	X	X		X	
Cane Creek	Upper 2.0 miles			X	X	X	X		X	
Beard Cane Cr	Upper 1.5 miles			X	X	X	X		X	
Little River	Mile 33.0 to Origin	X		X	X	X	X			X
M. Pr. Little River	Mile 0.0 to Origin			X	X	X	X			X
W. Prong Little R.	Mile 0.0 to Origin			X	X	X	X			X
Laurel Creek	Mile 0.0 to Origin			X	X	X	X			X
Meadow Br	Mile 0.0 to Origin			X	X	X	X			X
Spruce Flats Br	Mile 0.0 to Origin			X	X	X	X			X
Sams Creek	Mile 0.0 to Origin			X	X	X	X			X
Thunderhead Pr	Mile 0.0 to Origin			X	X	X	X			X
Shut-in Cr	Mile 0.0 to Origin			X	X	X	X			X
Lynn Camp Prong	Mile 0.0 to Origin			X	X	X	X			X
Marks Creek	Mile 0.0 to Origin			X	X	X	X			X
Meigs Creek	Mile 0.0 to Origin			X	X	X	X			X

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Little Greenbriar Creek	Mile 0.0 to Origin			X	X	X	X			X
Mannis Branch	Mile 0.0 to Origin			X	X	X	X			X
Blanket Creek	Mile 0.0 to Origin			X	X	X	X			X
Shields Branch	Mile 0.0 to Origin			X	X	X	X			X
Jakes Creek	Mile 0.0 to Origin			X	X	X	X			X
Newt Prong	Mile 0.0 to Origin			X	X	X	X			X
Laurel Branch	Mile 0.0 to Origin			X	X	X	X			X
Fish Camp Prong	Mile 0.0 to Origin			X	X	X	X			X
Goshen Prong	Mile 0.0 to Origin			X	X	X	X			X
Silers Prong	Mile 0.0 to Origin			X	X	X	X			X
Rich Branch	Mile 0.0 to Origin			X	X	X	X			X
Rough Creek	Mile 0.0 to Origin			X	X	X	X			X
Meigs Post Prong	Mile 0.0 to Origin			X	X	X	X			X
Grouse Creek	Mile 0.0 to Origin			X	X	X	X			X
Tennessee River	Mile 636.6 to 638.6	X	X	X	X	X	X	X		
Tennessee River	Mile 638.6 to 640.0		X	X	X	X	X	X		
Tennessee River	Mile 640.0 to 643.4	X	X	X	X	X	X	X		
Tennessee River	Mile 643.4 to 646.4		X	X	X	X	X	X		
Tennessee River	Mile 646.4 to 652.2	X	X	X	X	X	X	X		
Knob Creek	Mile 0.0 to Origin			X	X	X	X			
Flenniken Branch	Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	Mile 0.0 to Origin			X	X	X	X			
Fourth Creek	Mile 0.0 to Origin			X	X	X	X			
Third Creek	Mile 0.0 to 4.9			X	X	X	X			
Third Creek	Mile 4.9 to Origin	X	X	X	X	X	X			
Second Creek	Mile 0.0 to Origin		X	X	X	X	X			
First Creek	Mile 0.0 to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
All other surface water named and unnamed in the Upper Tennessee River Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

0400-40-04-.09 CLINCH RIVER BASIN.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Clinch River	Mile 0.0 to 4.4 (Emory River)	X	X	X	X	X	X	X		
Emory River	Mile 0.0 to Origin	X	X	X	X	X	X			
Little Emory River	Mile 0.0 to Origin	X	X	X	X	X	X			
Middle Fork Little Emory River	Mile 0.0 to Origin			X	X	X	X			
Davis Branch	Mile 0.0 to 0.2			X	X	X	X			
Unnamed Tributary	At Emory River (Mile 16.4); Mile 0.0 to 1.0			X	X	X	X			
Crooked Fork Creek	Mile 0.0 to 4.9			X	X	X	X			
Unnamed Tributary	At Crooked Fork Creek (Mile 4.9); Mile 0.0 to Origin			X	X	X	X			
Crooked Fork Creek	Mile 4.9 to Origin	X		X	X	X	X			
Flat Fork Creek	Mile 0.0 to Origin	X		X	X	X	X		X	
Unnamed Tributary	At Flat Fork (Mile 2.3); Mile 0.0 to Origin			X	X	X	X		X	
Stockstill Creek	Mile 0.0 to Origin			X	X	X	X			
Obed River	Mile 0.0 to 40.1			X	X	X	X			
Daddy's Creek	Mile 0.0 to Origin			X	X	X	X			
Basses Creek	Mile 0.0 to Origin			X	X	X	X			
Fox Creek	Mile 0.0 to Origin			X	X	X	X			
Scantling Branch	Mile 0.0 to Origin			X	X	X	X			
Unnamed Trib.	At Scantling Branch (Mile 1.2); Mile 0.0 to Origin			X	X	X	X			
Unnamed Tributary	At Obed River (Mile 34.6); Mile 0.0 to Origin			X	X	X	X			
Obed River	Mile 40.1 to Origin	X	X	X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Unnamed Tributary	At Obed River (Mile 45.4); Mile 0.0 to Origin			X	X	X	X			
Clinch River	Mile 4.4 to 12.0 (Poplar Creek)	X	X	X	X	X	X	X		
Poplar Creek	Mile 0.0 to 0.5		X	X	X	X	X			
Poplar Creek	Mile 0.5 to Origin			X	X	X	X			
East Fork Poplar Creek	Mile 0.0 to Origin			X	X	X	X			
Bear Creek	Mile 0.0 to Origin			X	X	X	X			
Indian Creek	At Poplar Creek (Mile 14.3); Mile 0.0 to Origin			X	X	X	X			
Clinch River	Mile 12.0 to 20.0	X	X	X	X	X	X			
White Oak Creek	Mile 0.0 to Origin			X	X		X			
Melton Branch	Mile 0.0 to Origin			X	X		X			
Clinch River	Mile 20.0 to 39.6	X	X	X	X	X	X	X		
Beaver Creek	Mile 0.0 to 8.4	X	X	X	X	X	X			
Beaver Creek	Mile 8.4 to 10.4		X	X	X	X	X			
Beaver Creek	Mile 10.4 to 17.5	X	X	X	X	X	X			
Beaver Creek	Mile 17.5 to 17.9		X	X	X	X	X			
Beaver Creek	Mile 17.9 to 21.6	X	X	X	X	X	X			
Beaver Creek	Mile 21.6 to 23.6			X	X	X	X			
Beaver Creek	Mile 23.6 to 29.4	X	X	X	X	X	X			
Beaver Creek	Mile 29.4 to 31.4			X	X	X	X			
Beaver Creek	Mile 31.4 to Origin	X	X	X	X	X	X			
Unnamed Tributary	At Beaver Creek (Mile 44.1); Mile 0.0 to Origin			X	X	X	X			
Clinch River	Mile 39.6 to 41.1	X	X	X	X	X	X	X		
Scarboro Creek	Mile 0.0 to Origin			X	X	X	X			
Clinch River	Mile 41.1 to 46.7	X	X	X	X	X	X	X		
Bull Run Creek	Mile 0.0 to 1.0			X	X	X	X			
Bull Run Creek	Mile 1.0 to Origin	X		X	X	X	X			
Nelson Branch	Mile 0.0 to Origin			X	X	X	X			
Blaze Branch	At Nelson Branch (Mile 5.0); Mile 0.0 to Origin			X	X	X	X			
Clinch River	Mile 46.7 to 47.8	X	X	X	X	X	X	X		
Worthington Branch	At Clinch River (Mile 47.8); Mile 0.0 to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Clinch River	Mile 47.8 to 50.7	X	X	X	X	X	X	X		
Braden Branch	At Clinch River (Mile 50.7); Mile 0.0 to 1.7			X	X		X			
Braden Branch	Mile 1.7 to Origin			X	X	X	X			
Clinch River	Mile 50.7 to 51.1	X	X	X	X	X	X	X		
Unnamed Tributary	At Clinch River (Mile 51.1); Mile 0.0 to Origin			X	X	X	X			
Clinch River	Mile 51.1 to 61.5	X	X	X	X	X	X	X		
Clinch River	Mile 61.5 to 66.2	X	X	X	X	X	X			
Hinds Creek	At Clinch River (Mile 65.0); Mile 0.0 to Origin			X	X	X	X			
Buffalo Creek	Mile 0.0 to Origin			X	X	X	X			
Clinch River	Mile 66.2 to 79.8	X	X	X	X	X	X		X	
Cane Creek	At Clinch River (Mile 71.3); Mile 0.0 to Origin			X	X	X	X			
Blowing Spring Fork	At Cane Creek (Mile 1.9); Mile 0.0 to Origin			X	X	X	X			
Coal Creek	At Clinch River (Mile 75.0); Mile 0.0 to Origin			X	X	X	X		X	
Unnamed Tributary	At Coal Creek (Mile 8.6); Mile 0.0 to Origin			X	X	X	X			
Clinch River	Mile 79.8 to 202.1 (Virginia Stateline)	X	X	X	X	X	X			
Cove Creek	Mile 0.0 to 15.1	X	X	X	X	X	X			
Unnamed Tributary	At Cover Creek (Mile 13.7); Mile 0.0 to Origin			X	X	X	X			
Cove Creek	Mile 15.1 to 16.1		X	X	X	X	X			
Cove Creek	Mile 16.1 to Origin	X	X	X	X	X	X			
Bruce (Brush) Creek	Mile 0.0 to Origin			X	X	X	X			
Dog Creek	At Bruce Creek (Mile 0.9); Mile 0.0 to Origin			X	X	X	X			
Unnamed Trib.	At Dog Creek (Mile 2.0); Mile 0.0 to Origin			X	X	X	X			
Big Creek	At Clinch River (Mile 83.0); Mile 0.0 to 15.6	X	X	X	X	X	X			
Big Creek	Mile 15.6 to 17.6		X	X	X	X	X			
Big Creek	Mile 17.6 to Origin			X	X	X	X			
Ollis Creek	At Big Creek (Mile 20.4); Mile 0.0 to Origin	X	X	X	X	X	X			
Powell River	At Clinch River (Mile 88.8); Mile 0.0 to 115.7	X	X	X	X	X	X			
Gap Creek	At Powell River (Mile 57.7); Mile 0.0 to Origin			X	X	X	X			
Unnamed Spring Br.	From Sinkhole to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Russell Creek	At Powell River (Mile 82.4); Mile 0.0 to Origin			X	X	X	X			
Clear Creek	Mile 0.0 to 2.0			X	X	X	X		X	
White Creek	Mile 0.0 to 2.0			X	X	X	X		X	
Mill Creek	At Clinch River (Mile 98.0); Mile 0.0 to Origin			X	X	X	X			
Byram's Creek	At Mill Creek (Mile 0.5); Mile 0.0 to Origin			X	X	X	X			
Unnamed Tributary	At Byram's Creek (Mile 2.3); Mile 0.0 to Origin			X	X	X	X			
Ball Creek	Mile 0.0 to Origin	X		X	X	X	X		X	
Poorland Creek	At Clinch River (Mile 104.2); Mile 0.0 to Origin			X	X	X	X			
Dry Tributary	At Poorland Creek (Mile 2.5); Mile 0.0 to Waste Outfall			X	X		X			
Hunting Creek	At Clinch River (Mile 118.3); Mile 0.0 to Origin			X	X	X	X			
Unnamed Tributary	At Hunting Creek (Mile 2.0); Mile 0.0 to Origin			X	X	X	X			
Big War Creek	At Clinch River (Mile 164.4); Mile 0.0 to 8.0			X	X	X	X			
Flat Gap Creek	At Big War Branch (Mile 7.0); Mile 0.0 to Origin			X	X	X	X			
Big War Creek	Mile 8.0 to Origin			X	X	X	X			
North Fork Clinch River	At Clinch River (Mile 192.0); Mile 0.0 to 2.2			X	X	X	X		X	
All other surface waters named and unnamed in the Clinch River Basin, with the exception of wet weather conveyances, which have not been specifically treated shall be classified				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

0400-40-04-.10 FRENCH BROAD RIVER BASIN.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
French Broad River	Mile 0.0 to 102.2 (N. Carolina-Tenn Line)	X	X	X	X	X	X			
Hines Creek	Mile 0.0 to Origin		X	X	X	X	X			
Unnamed Tributary	At Hines Creek (Mile 1.7)			X	X		X			
Unnamed Tributary	At Hines Creek (Mile 3.7)			X	X		X			
Cement Mill Creek	Mile 0.0 to Origin		X	X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Boyds Creek	Mile 0.0 to Origin		X	X	X	X	X			
Unnamed Tributary	At Boyds Creek (Mile 9.7)			X	X		X			
Unnamed Tributary	At Boyds Creek (Mile 11.5)			X	X		X			
Little Pigeon River	Mile 0.0 to 2.9	X	X	X	X	X	X			
Gist (Guess) Creek	Mile 0.0 to Origin			X	X	X	X			
Little Pigeon River	Mile 2.9 to 4.8		X	X	X	X	X			
W. Prong Little Pigeon R.	Mile 0.0 to 4.5	X	X	X	X	X	X			
W. Prong Little Pigeon R.	Mile 4.5 to 7.9	X	X	X	X	X	X		X	
W. Prong Little Pigeon R.	Mile 7.9 to 8.8		X	X	X	X	X		X	
W. Prong Little Pigeon R.	Mile 8.8 to 13.0	X	X	X	X	X	X		X	
W. Prong Little Pigeon R.	Mile 13.0 to 14.0		X	X	X	X	X		X	
W. Prong Little Pigeon R.	Mile 14.0 to 19.0		X	X	X	X	X		X	
Dudley Creek	Mile 0.0 to Origin			X	X	X	X		X	
Little Dudley Creek	Mile 0.0 to Origin			X	X	X	X		X	
Roaring Fork Creek	Mile 0.0 to Origin			X	X	X	X			X
Baskins Creek	Mile 0.0 to Origin			X	X	X	X		X	
Norton Creek	Mile 0.0 to Origin			X	X	X	X			X
Leconte Creek	Mile 0.0 to Origin			X	X	X	X		X	
W. Prong Little Pigeon R.	Mile 19.0 to Origin	X		X	X	X	X			X
Twomile Creek	Mile 0.0 to Origin			X	X	X	X			X
Fighting Creek	Mile 0.0 to Origin			X	X	X	X			X
Sugarland Branch	Mile 0.0 to Origin			X	X	X	X			X
Big Branch	Mile 0.0 to Origin			X	X	X	X			X
Road Prong	Mile 0.0 to Origin			X	X	X	X			X
Cole Branch	Mile 0.0 to Origin			X	X	X	X			X
Alum Cave Creek	Mile 0.0 to Origin			X	X	X	X			X
Walker Camp Pr	Mile 0.0 to Origin			X	X	X	X			X
Little Pigeon River	Mile 4.8 to 20.3	X	X	X	X	X	X			
Little Pigeon River	Mile 20.3 to Origin	X		X	X	X	X		X	
E.F. Little Pigeon R.	Mile 0.0 to Origin	X	X	X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Dunn Creek	Mile 0.0 to 15.8	X	X	X	X	X	X		X	
Dunn Creek	Mile 15.8 to Origin	X	X	X	X	X	X			X
Ogle Springs Br	Mile 0.0 to Origin			X	X	X	X			
Bird Creek	Mile 0.0 to Origin			X	X	X	X			
Webb Creek	Mile 0.0 to Great Smoky Mtns Pk Boundary (Mile 5.8)			X	X	X	X		X	
Soak Ash Creek	Mile 0.0 to Origin			X	X	X	X			X
Timothy Creek	Mile 0.0 to Origin			X	X	X	X			X
Redwine Creek	Mile 0.0 to Origin			X	X	X	X			X
Noisy Creek	Mile 0.0 to Origin			X	X	X	X			X
Texas Creek	Mile 0.0 to Origin			X	X	X	X			X
Webb Creek	Great Smoky Mts boundary to origin			X	X	X	X			X
Copeland Creek	Mile 0.0 to Origin			X	X	X	X		X	
Injun Creek	Mile 0.0 to Origin			X	X	X	X		X	
Rhododendron Creek	Mile 0.0 to Origin			X	X	X	X		X	
Porters Creek	Mile 0.0 to Origin			X	X	X	X		X	
False Gap Prong	Mile 0.0 to Origin			X	X	X	X		X	
Kalanu Prong	Mile 0.0 to Origin			X	X	X	X		X	
Long Branch	Mile 0.0 to Origin			X	X	X	X		X	
Cannon Creek	Mile 0.0 to Origin			X	X	X	X		X	
Lowes Creek	Mile 0.0 to Origin			X	X	X	X		X	
Boulevard Prong	Mile 0.0 to Origin			X	X	X	X		X	
Shutts Prong	Mile 0.0 to Origin			X	X	X	X		X	
Middle Prong Little Pigeon	Mile 0.0 to Origin			X	X	X	X		X	
Ramsey Prong	Mile 0.0 to Origin			X	X	X	X		X	
Chapman Prong	Mile 0.0 to Origin			X	X	X	X		X	
Eagle Rocks Branch	Mile 0.0 to Origin			X	X	X	X		X	
Lost Prong	Mile 0.0 to Origin			X	X	X	X		X	
Buck Fork	Mile 0.0 to Origin			X	X	X	X		X	
Muddy Creek	Mile 0.0 to Origin			X	X	X	X			
Clear Creek	Mile 0.0 to Origin	X		X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
City Spring Tributary	Mile 0.0 to Origin			X	X	X	X			
Indian Creek	Mile 0.0 to Origin			X	X	X	X			
Ball Creek	Mile 0.0 to Origin			X	X	X	X			
Unnamed Tributary	At Ball Creek (Mile 2.9); Mile 0.0 to Origin			X	X		X			
Leadvale Creek	Mile 0.0 to Origin			X	X	X	X			
Clear Creek	Mile 0.0 to Origin			X	X	X	X			
Nolichucky River	Mile 0.0 to 5.3	X	X	X	X	X	X			
Long Creek	Mile 0.0 to Origin			X	X	X	X			
Sinking Creek	Mile 0.0 to Origin			X	X	X	X			
Nolichucky River	Mile 5.3 to 7.7		X	X	X	X	X			
Nolichucky River	Mile 7.7 to 100.8 (N. Carolina-Tenn Line)	X	X	X	X	X	X			
Slate Creek	Mile 0.0 to Origin			X	X	X	X			
Bent Creek	Mile 0.0 to Origin			X	X	X	X			
Mud Creek	Mile 0.0 to Origin			X	X	X	X			
Williams Branch	Mile 0.0 to Origin			X	X	X	X			
Lick Creek	Mile 0.0 to 49.0		X	X	X	X	X			
Lick Creek	Mile 49.0 to Origin	X	X	X	X	X	X			
Black Creek	Mile 0.0 to Origin			X	X	X	X			
War Branch	Mile 0.0 to 0.5			X	X	X	X			
Unnamed Tributary	At Lick Creek (Mile 36.1); Mile 0.0 to Origin			X	X		X			
Little Chucky Creek	Mile 0.0 to Origin			X	X	X	X			
Mosheim Branch	Mile 0.0 to Origin			X	X	X	X			
Unnamed Trib.	At Mosheim Branch (Mile 2.0); Mile 0.0 to Origin			X	X		X			
Unnamed Tributary	At Little Chucky Creek (Mile 17.2); Mile 0.0 to Origin			X	X	X	X			
Gap Creek	Mile 0.0 to Origin			X	X	X	X			
Furness Branch	Mile 0.0 to Origin			X	X	X	X			
Cove Creek	Mile 0.0 to Origin			X	X	X	X			
Flag Branch	Mile 0.0 to Origin			X	X	X	X			
Richland Creek	Mile 0.0 to Origin		X	X	X	X	X			
Crazy Creek	Sinkhole to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Unnamed Tributary	At Crazy Creek (Mile 1.3); Mile 0.0 to 0.5			X	X	X	X			
Unnamed Tributary	Mile 0.5 to Origin			X	X		X			
Camp Creek	Mile 0.0 to Origin		X	X	X	X	X			X
Jennings Creek	Mile 0.0 to Origin			X	X	X	X			X
Dry Creek	Mile 0.0 to 1.3			X	X	X	X			
Dry Creek	Mile 1.3 to Origin			X	X	X	X			X
Davis Creek	Mile 0.0 to Origin			X	X	X	X			X
College Creek	Mile 0.0 to Origin			X	X	X	X			
Moon Creek	Mile 0.0 to Origin			X	X	X	X			
Sinking Creek	Mile 0.0 to Origin			X	X	X	X			
Little Limestone Creek	Mile 0.0 to Origin			X	X	X	X			
Horse Creek	Mile 0.0 to Origin			X	X	X	X			X
Squibb Branch	Mile 0.0 to Origin			X	X	X	X			X
Cassi Creek, East and West Fork	Mile 0.0 to Origin			X	X	X	X			X
Painter Creek	Mile 0.0 to Origin			X	X	X	X			X
Clarks Creek	Mile 0.0 to Origin			X	X	X	X			X
Devil Fork Branch	Mile 0.0 to Origin			X	X	X	X			X
Long Arm Branch	Mile 0.0 to Origin			X	X	X	X			X
Chigger Branch	Mile 0.0 to Origin			X	X	X	X			X
Dry Creek	Mile 0.0 to Origin			X	X	X	X			X
Ramsey Creek	Mile 0.0 to Origin			X	X	X	X			X
Briar Creek	Mile 0.0 to Origin			X	X	X	X			X
Straight Creek	Mile 0.0 to Origin			X	X	X	X			X
Bumpus Cove Creek	Mile 0.0 to Origin			X	X	X	X			X
Broad Shoal Creek	Mile 0.0 to Origin			X	X	X	X			X
California Creek	Mile 0.0 to Origin			X	X	X	X			X
North Indian Creek	Upstream of Erwin	X	X	X	X	X	X			X
Rock Creek	Mile 0.0 to Origin			X	X	X	X			X
Duck Creek	Mile 0.0 to Origin			X	X	X	X			X
Red Fork Creek	Mile 0.0 to Origin			X	X	X	X			X

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Clear Fork Branch	Mile 0.0 to Origin			X	X	X	X			X
South Indian Creek	Mile 0.0 to Origin			X	X	X	X			X
Mill Creek	Mile 0.0 to Origin			X	X	X	X			X
Granny Lewis Creek	Mile 0.0 to Origin			X	X	X	X			X
Lower Higgins Creek	Mile 0.0 to Origin			X	X	X	X			X
Birchfield Camp Br	Mile 0.0 to Origin			X	X	X	X			X
Big Branch	Mile 0.0 to Origin			X	X	X	X			X
Spivey Creek	Mile 0.0 to Origin			X	X	X	X			X
Coffee Ridge Cr	Mile 0.0 to Origin			X	X	X	X			X
Watts Branch	Mile 0.0 to Origin			X	X	X	X			X
Tumbling Creek	Mile 0.0 to Origin			X	X	X	X			X
Rocky Fork Creek	Mile 0.0 to Origin			X	X	X	X			X
Flint Creek	Mile 0.0 to Origin			X	X	X	X			X
Devil Fork Creek	Mile 0.0 to Origin			X	X	X	X			X
Sams Creek	Mile 0.0 to Origin			X	X	X	X			X
Upper Higgins Creek	Mile 0.0 to Origin			X	X	X	X			X
E. Fk Higgins Cr	Mile 0.0 to Origin			X	X	X	X			X
Rice Creek	Mile 0.0 to Origin			X	X	X	X			X
Jones Creek	Mile 0.0 to Origin			X	X	X	X			X
Long Branch	Mile 0.0 to Origin			X	X	X	X			X
Pigeon River	Mile 0.0 to 25.9 (Tenn-N. Car. Line)		X	X	X	X	X			
Matthew Creek	Mile 0.0 to Origin			X	X	X	X		X	
Sinking Creek	Mile 0.0 to 5.2		X	X	X	X	X			X
Sinking Creek	Mile 5.2 to Origin	X		X	X	X	X		X	
Cosby Creek	Mile 0.0 to 4.3			X	X	X	X		X	
Cosby Creek	Mile 4.3 to Origin			X	X	X	X			X
N. Fork Bogard Cr	Mile 0.0 to Origin			X	X	X	X		X	
Indian Camp Creek	Mile 0.0 to Origin			X	X	X	X			X
Mill Creek	Mile 0.0 to Origin			X	X	X	X			X
Big Creek	Mile 0.0 to Origin			X	X	X	X			X

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Gulf Fork Big Creek	Mile 0.0 to Origin			X	X	X	X			X
Trail Fork Big Creek	Mile 0.0 to Origin			X	X	X	X		X	
Dry Fork Creek	Mile 0.0 to Origin			X	X	X	X			X
Bailey Branch	Mile 0.0 to Origin			X	X	X	X		X	
Bear Branch	Mile 0.0 to Origin			X	X	X	X		X	
Laurel Fork Creek	Mile 0.0 to Origin			X	X	X	X			X
Moss Camp Creek	Mile 0.0 to Origin			X	X	X	X			X
Deep Gap Creek	Mile 0.0 to Origin			X	X	X	X			X
M. Prong Gulf Fork	Mile 0.0 to Origin			X	X	X	X			X
Laurel Creek	Mile 0.0 to Origin			X	X	X	X			X
Brown Gap Creek	Mile 0.0 to Origin			X	X	X	X			X
Tom Creek	Mile 0.0 to Origin			X	X	X	X		X	
Wolf Creek	Mile 0.0 to 2.0			X	X	X	X		X	
Wolf Creek	Mile 2.0 to Origin			X	X	X	X			X
Brush Creek	Mile 0.0 to 1.0			X	X	X	X		X	
Paint Creek	Mile 0.0 to Origin			X	X	X	X			X
All other surface waters named and unnamed in the French Broad River Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

0400-40-04-.11 HOLSTON RIVER BASIN.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Holston River	Mile 0.0 to 131.5 (Church Hill Bridge)	X	X	X	X	X	X			
Unnamed Branch	At Holston River (Mile 1.0); Mile 0.0 to Origin			X	X	X	X			
Sand Branch	Mile 0.0 to Origin			X	X	X	X			
Swan Pond Creek	Mile 0.0 to 5.0			X	X	X	X			
Pratt Branch	Mile 0.0 to Origin			X	X	X	X			
Woods Creek	Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	At Holston River (Mile 6.7); Mile 0.0 to Origin			X	X	X	X			
Maccash Branch	At Holston River (Mile 10.8); Mile 0.0 to Origin			X	X	X	X			
Roseberry Creek	Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	At Roseberry Creek (Mile 1.7); Mile 0.0 to 0.5			X	X	X	X			
Unnamed Branch	Mile 0.5 to 0.7			X	X	X	X			
Big Flat Creek	Mile 0.0 to 8.0		X	X	X	X	X			
Little Flat Creek	Mile 0.0 to Origin			X	X	X	X			
Unnamed Tributary	At L. Flat Creek (Mile 1.3); Mile 0.0 to Origin			X	X	X	X			
Big Flat Creek	Mile 8.0 to Origin			X	X	X	X			
Lyon Creek	Mile 0.0 to 0.3		X	X	X	X	X			
Lyon Creek	Mile 0.3 to 1.9		X	X	X	X	X			
Unnamed Branch	At Lyon Creek (Mile 1.9); Mile 0.0 to Origin			X	X	X	X			
Lyon Creek	Mile 1.9 to Origin			X	X	X	X			
Unnamed Branch	At Lyon Creek (Mile 2.7); Mile 0.0 to Origin			X	X	X	X			
Richland Creek	At Holston River (Mile 27.1); Mile 0.0 to Origin			X	X	X	X			
Beaver Creek	At Holston River (Mile 30.4); Mile 0.0 to Origin			X	X	X	X			
Lost Creek at New Market	Sink at Mile 1.9 to Origin			X	X	X	X			
Buffalo Creek	Below Buffalo Springs			X	X	X	X		X	
Mossy Creek	At Holston River (Mile 52.4); Mile 0.0 to 3.9	X	X	X	X	X	X			
Mossy Creek	Mile 3.9 to Origin		X	X	X	X	X		X	
Unnamed Branch	At Holston River (Mile 55.0); Mile 0.0 to Origin			X	X	X	X			
German Creek	At Holston River (Mile 70.2); Mile 0.0 to 8.1	X	X	X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
German Creek	Mile 8.1 to Origin			X	X	X	X			
Turkey Creek	At Holston River (Mile 75.2); Mile 0.0 to 1.2	X	X	X	X	X	X			
Turkey Creek	Mile 1.2 to Origin			X	X	X	X			
Spring Creek	At Holston River (Mile 76.0); Mile 0.0 to 1.2	X	X	X	X	X	X			
Spring Creek	Mile 1.2 to Origin			X	X	X	X			
Thompson Creek	Mile 0.0 to Origin			X	X	X	X			
Fall Creek	At Holston River (Mile 80.7); Mile 0.0 to 1.0	X	X	X	X	X	X			
Fall Creek	Mile 1.0 to Origin			X	X	X	X			
Poor Valley Creek	At Holston River (Mile 89.2); Mile 0.0 to 6.8	X	X	X	X	X	X			
Mooresburg Branch	Mile 0.0 to 1.6	X	X	X	X	X	X			
Mooresburg Branch	Mile 1.6 to Origin			X	X	X	X			
Poor Valley Creek	Mile 6.8 to Origin			X	X	X	X			
Beech Creek	At Holston River (Mile 108.8); Mile 0.0 to Origin			X	X	X	X			
Big Creek (Stanley Prong)	Holston River (Mile 109.1); Mile 0.0 to Origin	X	X	X	X	X	X		X	
Forgey Creek	At Holston River (Mile 116.9); Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	At Forgey Creek (Mile 1.1); Mile 0.0 to 1.0			X	X		X			
Stoney Point Creek	At Holston River (Mile 123.0); Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	At Stoney Point Creek (Mile 0.2); Mile 0.0 to Origin			X	X	X	X			
Bradley Creek	At Holston River (Mile 128.8); Mile 0.0 to Origin	X		X	X	X	X			
Holston River	Mile 131.5 to Origin (Mile 142.2)			X	X	X	X			
Alexander Creek	At Holston River (Mile 131.9); Mile 0.0 to 3.4	X	X	X	X	X	X		X	
Unnamed Branch	At Alexander Creek (Mile 3.4); Mile 0.0 to 0.3			X	X	X	X			
Alexander Creek	Mile 3.4 to Origin			X	X	X	X		X	
Smith Creek	At Holston River (Mile 135.5); Mile 0.0 to Origin			X	X	X	X			
Arnott Branch	At Holston River (Mile 137.9); Mile 0.0 to Origin			X	X	X	X			
North Fork Holston River	Mile 0.0 to 5.2 (Tenn-Virginia Line)			X	X		X			
South Fork Holston River	Mile 0.0 to 2.3		X	X	X					
Reedy Creek	Mile 0.0 to 7.1		X	X	X	X	X			
Reedy Creek	Mile 7.1 to Tenn-Virginia Line	X	X	X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
South Fork Holston River	Mile 2.3 to 5.7		X	X	X					
Horse Creek	Mile 0.0 to 1.3		X	X	X	X	X			
Horse Creek	Mile 1.3 to Origin			X	X	X	X			
Little Horse Creek	At Horse Creek (Mile 3.6); Mile 0.0 to Origin			X	X	X	X			
Dolan Branch	At Little Horse Creek (Mile 2.8); Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	At S.F. Holston River (Mile 4.0); Mile 0.0 to Origin		X	X	X	X	X			
South Fork Holston River	Mile 5.7 to 19.6	X	X	X	X	X	X		X	
Kendrick Creek	Mile 0.0 to 1.0			X	X	X	X		X	
Kendrick Creek	Mile 1.0 to Origin			X	X	X	X			
Fall Creek	Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	At S. F. Holston River (Mile 13.6); Mile 0.0 to Origin			X	X	X	X			
Sinking Creek	At S. F. Holston River (Mile 14.1); Mile 0.0 to Origin			X	X	X	X			
Ford Creek	Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	At Ford Creek (Mile 1.3); Mile 0.0 to Origin		X	X	X	X	X			
Cedar Creek	At S. F. Holston (Mile 18.0); Mile 0.0 to 2.3			X	X	X	X			
Unnamed Branch	At Cedar Creek (Mile 2.3); Mile 0.0 to Origin			X	X	X	X			
Cedar Creek	Mile 2.3 to Origin			X	X	X	X			
Watauga River	At S. F. Holston (Mile 19.6); Mile 0.0 to 15.0	X	X	X	X	X	X			
Boone's Creek	Mile 0.0 to Origin			X	X	X	X			
Knob Creek	Mile 0.0 to Origin			X	X	X	X			
Watauga River	Mile 15.0 to 16.4		X	X	X	X	X			
Brush Creek	Mile 0.0 to Origin			X	X	X	X			
Lick Creek	Mile 0.0 to Origin			X	X	X	X			
Watauga River	Mile 16.4 to 18.0	X	X	X	X	X	X		X	
Watauga River	Mile 18.0 to 25.8		X	X	X	X	X		X	
Buffalo Creek	At Watauga River (Mile 22.1); Mile 0.0 to Origin			X	X	X	X			X
Toll Branch	Mile 0.0 to 0.1			X	X	X	X			X
Toll Branch	Mile 0.1 to Origin			X	X	X	X			X
Unnamed Branch	Mile 0.2 to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Dry Creek	At Buffalo Creek (Mile 3.3); Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	At Buffalo Creek (Mile 3.0); Mile 0.0 to 0.2			X	X	X	X			
Campbell Creek	At Watauga River (Mile 25.7); Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	At Campbell Creek (Mile 1.6): Mile 0.0 to Origin			X	X	X	X			
Campbell Branch	Mile 1.6 to Origin			X	X	X	X			
Watauga River	Mile 25.8 to 55.1 (N.C.-Tenn. Line)	X	X	X	X	X	X			X
Stony Creek	Mile 0.0 to Origin			X	X	X	X			X
Little Stony Creek	Mile 0.0 to Origin			X	X	X	X			X
Pierce Branch	Mile 0.0 to Origin			X	X	X	X		X	
Bartree Branch	Mile 0.0 to Origin			X	X	X	X		X	
Mill Creek	Mile 0.0 to Origin			X	X	X	X			X
North Fork Stony Creek	Mile 0.0 to Origin			X	X	X	X			X
Upper Hinkle Branch	Mile 0.0 to Origin			X	X	X	X			
Doe River	Mile 0.0 to 21.0	X	X	X	X	X	X		X	
Laurel Fork Creek	At Doe River (Mile 7.0); Mile 0.0 to Origin			X	X	X	X			X
Little Laurel Fork	Mile 0.0 to Origin			X	X	X	X			X
Wagner Branch	Mile 0.0 to Origin			X	X	X	X			X
Simerly Creek	Mile 0.0 to Origin			X	X	X	X			X
Clarke Creek	Mile 0.0 to Origin			X	X	X	X			X
Tiger Creek	Mile 0.0 to Origin			X	X	X	X			X
Roaring Creek	Mile 0.0 to Origin			X	X	X	X			X
Georges Creek	Mile 0.0 to Origin			X	X	X	X			X
Buck Creek	At Doe River (Mile 20.9); Mile 0.0 to Origin			X	X	X	X			X
Shell Creek	Mile 0.0 to Origin			X	X	X	X			X
Hampton Creek	Mile 0.0 to Origin			X	X	X	X		X	
L. Prong Hampton Creek	Mile 0.0 to Origin			X	X	X	X			X
Sugar Hollow Creek	Mile 0.0 to Origin			X	X	X	X		X	
Hampton Creek	Mile 0.0 to Origin			X	X	X	X		X	
L. Prong Hampton Creek	Mile 0.0 to Origin			X	X	X	X			X

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Shell Creek	Mile 0.0 to Origin			X	X	X	X			X
Cove Creek	Mile 0.0 to Origin			X	X	X	X			X
Laurel Fork Creek	At Doe River (Mile 7.0); Mile 0.0 to Origin			X	X	X	X			X
Little Laurel Fork	Mile 0.0 to Origin			X	X	X	X			X
Wagner Branch	Mile 0.0 to Origin			X	X	X	X			X
Buck Creek	At Doe River (Mile 20.9); Mile 0.0 to Origin			X	X	X	X			X
Doe River	Mile 21.0 to Origin	X	X	X	X	X	X			X
Little Stony Creek	Mile 0.0 to Origin			X	X	X	X			X
Elk River	At Watauga (Mile 46.8); Mile 0.0 to 14.5 (Stateline)			X	X	X	X		X	
Black Branch	Mile 0.0 to Origin			X	X	X	X			X
Row Branch	Mile 0.0 to Origin			X	X	X	X			X
Heaton Branch	Mile 0.0 to Origin			X	X	X	X			X
Little Laurel Branch	Mile 0.0 to Origin			X	X	X	X			X
Cobb Branch	Mile 0.0 to Origin			X	X	X	X		X	
Cress Branch	Mile 0.0 to Origin			X	X	X	X			X
Roan Creek	At Watauga River (Mile 45.5); Mile 0.0 to 16.7	X	X	X	X	X	X			X
Doe Creek	At Roan Creek (Mile 10.9); Mile 0.0 to Origin			X	X	X	X			X
Spruce Branch	At Doe Creek (Mile 10.9); Mile 0.0 to Origin			X	X	X	X			
Timothy Branch	Mile 0.0 to Origin			X	X	X	X		X	
Campbell's Creek	Mile 0.0 to Origin			X	X	X	X			X
Roan Creek	Mile 16.7 to 17.7			X	X	X	X		X	
Mill Creek	Mile 0.0 to Origin			X	X	X	X			X
Stout Branch	Mile 0.0 to Origin			X	X	X	X			X
Vaught Creek	Mile 0.0 to Origin	X		X	X	X	X			X
Town Creek	At Roan Creek (Mile 17.7); Mile 0.0 to 0.2			X	X	X	X			
Town Creek	Mile 0.2 to Origin			X	X	X	X			
Furnace Creek	At Town Creek (Mile 3.0); Mile 0.0 to Origin			X	X	X	X			X
Goose Creek	At Town Creek (Mile 3.0); Mile 1.5 to Origin			X	X	X	X			X
Patrick Creek	At Goose Creek (Mile 2.6); Mile 0.0 to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Roan Creek	Mile 17.7 to Origin	X		X	X	X	X			X
Corn Creek	Mile 0.0 to Origin			X	X	X	X			X
Forge Creek	Mile 0.0 to Origin			X	X	X	X			X
Brush Fork Creek	Mile 0.0 to Origin			X	X	X	X		X	
Big Dry Run Creek	Mile 0.0 to Origin			X	X	X	X			X
Buffalo Creek	Mile 0.0 to Origin			X	X	X	X		X	
Gap Creek	Mile 0.0 to Origin			X	X	X	X		X	
South Fork Holston River	Mile 19.6 to 35.5 (above Bluff City)	X	X	X	X	X	X			
Muddy Creek	At S. F. Holston (Mile 25.5); Mile 0.0 to 2.6			X	X	X	X			
Booher Creek	At Muddy Creek (Mile 2.6); Mile 0.0 to Origin			X	X	X	X			
Muddy Creek	Mile 2.6 to Origin			X	X	X	X			
Unnamed Branch	At Muddy Creek (Mile 4.9); Mile 0.0 to Origin			X	X	X	X			
Beaver Creek	At S. F. Holston (Mile 29.6); Mile 0.0 to 9.1		X	X	X	X	X			
Back (Beck) Creek	At Beaver Creek (Mile 6.1); Mile 0.0 to Origin			X	X	X	X			
Univac Branch	At Back Creek (Mile 0.5); Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	At Beaver Creek (Mile 7.3); Mile 0.0 to Origin			X	X	X	X			
Cedar Creek	At Beaver Creek (Mile 7.9); Mile 0.0 to Origin			X	X	X	X			
Beeler Road Branch	At Cedar Creek (Mile 3.2); Mile 0.0 to Origin			X	X	X	X			
Raytheon Branch	At Beeler Road Branch (Mile 1.2); Mile 0.0 to 0.2			X	X		X			
Beaver Creek	Mile 9.1 to 15.3 (Tenn-Virginia Line)		X	X	X	X	X			
Steele Creek	At Beaver Creek (Mile 11.0); Mile 0.0 to Origin			X	X	X	X			
Indian Creek	At S. F. Holston (Mile 35.0); Mile 0.0 to Origin			X	X	X	X			
Booher Creek	At Indian Creek (Mile 3.7); Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch	At Booher Creek (Mile 0.6); Mile 0.0 to Origin			X	X	X	X			
South Fork Holston River	Mile 35.5 to South Holston Dam	X	X	X	X	X	X		X	
Unnamed Branch	At S. F. Holston (Mile 39.1); Mile 0.0 to Origin			X	X	X	X			
South Fork Holston River	South Holston Dam to mile 62.8 (Virginia Line)	X	X	X	X	X	X			
Big Creek	Mile 0.0 to Origin			X	X	X	X			X
Kendrick Creek	Mile 0.0 to Origin			X	X	X	X		X	

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Fishdam Creek	Mile 0.0 to Origin			X	X	X	X			X
Sulphur Springs Branch	Mile 0.0 to Origin			X	X	X	X			X
Sharps Creek	Mile 0.0 to Origin			X	X	X	X		X	
Little Jacobs Creek	Mile 0.0 to Origin	X		X	X	X	X			X
Jacobs Creek	At S. F. Holston (Mile 59.8); Mile 0.0 to 3.4	X	X	X	X	X	X			X
Jacobs Creek	Mile 3.4 to 3.6		X	X	X	X	X			X
Jacobs Creek	Mile 3.6 to Origin			X	X	X	X			X
Harpers Creek	Mile 0.0 to Origin			X	X	X	X			X
Rockhouse Run Creek	Mile 0.0 to Origin			X	X	X	X			X
Laurel Creek	Stateline to Origin			X	X	X	X			X
Beaverdam Creek	Stateline to Origin			X	X	X	X			X
London Bridge Br	Stateline to Origin			X	X	X	X		X	
Reservoir Branch	Mile 0.0 to Origin			X	X	X	X		X	
Stillhouse Branch	Mile 0.0 to Origin			X	X	X	X			X
Chalk Branch	Mile 0.0 to Origin			X	X	X	X			X
Chestnut Branch	Mile 0.0 to Origin			X	X	X	X			X
Haunted Hollow Br.	Mile 0.0 to Origin			X	X	X	X			X
Fagall Branch	Mile 0.0 to Origin			X	X	X	X			X
Birch Branch	Mile 0.0 to Origin			X	X	X	X			X
Parks Branch	Mile 0.0 to Origin			X	X	X	X			X
David Blevin Branch	Mile 0.0 to Origin			X	X	X	X		X	
Johnson Branch	Mile 0.0 to Origin			X	X	X	X			X
Jim Wright Branch	Mile 0.0 to Origin			X	X	X	X			X
Ledford Branch	Mile 0.0 to Origin			X	X	X	X		X	
W. Fk Beaverdam	Mile 0.0 to Origin			X	X	X	X			X
M. Fk Beaverdam	Mile 0.0 to Origin			X	X	X	X			X
E. Fk Beaverdam	Mile 0.0 to Origin			X	X	X	X			X
Lyons Branch	Mile 0.0 to Origin			X	X	X	X			X
Gentry Creek	Mile 0.0 to Origin			X	X	X	X			X

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Dry Branch	Mile 0.0 to Origin			X	X	X	X			X
Grindstone Branch	Mile 0.0 to Origin			X	X	X	X			X
Flatwood Branch	Mile 0.0 to Origin			X	X	X	X			X
Corum Branch	Mile 0.0 to Origin			X	X	X	X			X
West Fork Laurel Creek	Mile 0.0 to Origin			X	X	X	X			X
All other surface tributaries named and unnamed in the Holston River Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

0400-40-04-.12 LOWER CUMBERLAND RIVER BASIN.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Cumberland River	Mile 74.6 (Ky-Tenn Line) to 118.3 (Cummings Cr.)	X	X	X	X	X	X	X		
Saline Creek	Mile 0.0 to Hwy 120		X	X	X	X	X			
Saline Creek	Hwy 120 to Fort Campbell boundary		X	X	X	X	X		X	
Saline Creek	Fort Campbell Boundary to Origin		X	X	X	X	X			
Bear Creek	Mile 0.0 to Origin			X	X	X	X			
Long Creek	Highway 49 to Origin			X	X	X	X		X	
Elk Creek	Mile 0.0 to Origin			X	X	X	X			
Wells Creek	Mile 0.0 to Origin			X	X	X	X			
Yellow Creek	Mile 3.4 to Ruskin Cave			X	X	X	X		X	
Cumberland River	Mile 118.3 to 125.3 (Red River)	X	X	X	X	X	X	X		
Cumberland River	Mile 125.3 to 175.7 (Richland Creek)	X	X	X	X	X	X	X		
Red River	Mile 0.0 to 2.0		X	X	X	X	X	X		
Red River	Mile 2.0 to 15.0	X	X	X	X	X	X	X		
Red River	Mile 15.0 to 51.2 (Ky-Tenn Line)	X	X	X	X	X	X			
South Fork Red River	Mile 20.4 (Ky-Tenn Line) to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Big West Fork	Mile 0.0 to 14.6 (Ky-Tenn Line)		X	X	X		X	X		
Little West Fork	Mile 0.0 to 10.4		X	X	X	X	X			
Sulphur Fork	Mile 0.0 to 26.6	X	X	X	X	X	X			
Sulphur Fork	Mile 26.6 to 28.6		X	X	X	X	X			
Sulphur Fork	Mile 28.6 to Origin	X	X	X	X	X	X			
Carr Creek	Mile 0.0 to Origin			X	X	X	X			
Red River	Mile 81.0 (Ky-Tenn Line) to Origin	X	X	X	X	X	X			
Summers Branch	Mile 0.0 to Origin			X	X	X	X			
Hurricane Creek	Mile 0.0 to Origin			X	X	X	X			
Sulphur Springs Cr	Mile 0.0 to Origin			X	X	X	X			
Harpeth River	Mile 0.0 to 10.3	X	X	X	X	X	X			
Jones Creek	Mile 0.0 to Origin		X	X	X	X	X			
Town Branch	Mile 0.0 to Origin		X	X	X	X	X			
Harpeth River	Mile 10.3 to 52.8	X	X	X	X	X	X			
Trace Creek	Mile 0.0 to Origin		X	X	X	X	X			
Turnbull Creek	Mile 0.0 to Origin	X	X	X	X	X	X			
Sullivans Branch	Mile 0.0 to Origin		X	X	X	X	X			
Beaver Dam Creek	Mile to 0.0 to Origin		X	X	X	X	X			
Gin Branch	Mile 0.0 to Origin		X	X	X	X	X			
Brush Creek	Mile 0.0 to Origin		X	X	X	X	X			
Harpeth River	Mile 52.8 to 55.8		X	X	X	X	X			
Harpeth River	Mile 55.8 to 57.8		X	X	X	X	X			
Harpeth River	Mile 57.8 to 61.9 (Little Harpeth)	X	X	X	X	X	X			
Little Harpeth River	Mile 0.0 to Origin		X	X	X	X	X			
Harpeth River	Mile 61.9 to 68.3 (Cartwright Creek)		X	X	X	X	X			
Cartwright Creek	Mile 0.0 to Origin			X	X	X	X			
Harpeth River	Mile 68.3 to 79.0	X	X	X	X	X	X			
West Harpeth River	Mile 0.0 to Origin	X	X	X	X	X	X			
Harpeth River	Mile 79.0 to 85.2		X	X	X	X	X			
Spencer Creek	Mile 0.0 to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Harpeth River	Mile 85.2 to Origin	X	X	X	X	X	X			
Sycamore Creek	Mile 0.0 to 10.0	X	X	X	X	X	X			
Sycamore Creek	Mile 10.0 to Origin	X		X	X	X	X			
Marrowbone Creek	Mile 0.0 to 3.0	X	X	X	X	X	X			
Marrowbone Creek	Mile 3.0 to Origin	X		X	X	X	X			
Cumberland River	Mile 175.7 to 189.5	X	X	X	X	X	X	X		
Richland Creek	Mile 0.0 to Origin			X	X	X	X			
Whites Creek	Mile 0.0 to Origin		X	X	X	X	X			
Ewing Creek	Mile 0.0 to Origin		X	X	X	X	X			
Cumberland River	Mile 189.5 to 216.2 (Old Hickory Dam)	X	X	X	X	X	X	X		
Mill Creek	Mile 0.0 to 11.5		X	X	X	X	X			
Mill Creek	Mile 11.5 to 23.0			X	X	X	X			
Mill Creek	Mile 23.0 to Origin			X	X	X	X			
Stones River	Mile 0.0 to 6.8	X	X	X	X	X	X			
Stoners Creek	Mile 0.0 to Origin			X	X	X	X			
McCrory Creek	Mile 0.0 to Origin			X	X	X	X			
Stones River (Percy Priest Res.)	Mile 6.8 to 38.7 (Confluence-East & West Fork)	X	X	X	X	X	X			
Suggs Creek	Mile 0.0 to Origin			X	X	X	X			
Smith Springs Creek	Mile 0.0 to Origin			X	X	X	X			
Hurricane Creek	Mile 0.0 to Origin			X	X	X	X			
Stewart Creek	Mile 0.0 to Origin			X	X	X	X			
Harts Branch	Mile 0.0 to Origin			X	X	X	X			
Fall Creek & Tributaries	Mile 0.0 to Origin			X	X	X	X			
East Fork Stones River	Mile 0.0 to 44.5 (Near Woodbury)	X	X	X	X	X	X			
Bradley Creek	Mile 0.0 to Origin			X	X	X	X			
Cripple Creek	Mile 0.0 to Origin			X	X	X	X			
East Fork Stones River	Mile 44.5 to 45.2		X	X	X	X	X			
East Fork Stones River	Mile 45.2 to Origin	X	X	X	X	X	X			
West Fork Stones River	Mile 0.0 to 10.0	X	X	X	X	X	X			
Overall Creek	Mile 0.0 to Origin			X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
West Fork Stones River	Mile 10.0 to 15.2		X	X	X	X	X			
West Fork Stones River	Mile 15.2 to Origin	X	X	X	X	X	X			
Lytle Creek	Mile 0.0 to Origin			X	X	X	X			
Middle Fork Stones	Mile 0.0 to Origin	X	X	X	X	X	X			
Christmas Creek	Mile 0.0 to Origin			X	X	X	X			
Cumberland River	Mile 216.2 to 309.2 (Caney Fork River)	X	X	X	X	X	X	X		
Drakes Creek	Mile 0.0 to 4.9	X	X	X	X	X	X	X		
Drakes Creek	Mile 4.9 to Origin			X	X	X	X			
Smiths Creek	Mile 0.0 to Origin			X	X	X	X			
Cedar Creek	Mile 0.0 to 2.0	X	X	X	X	X	X	X		
Cedar Creek	Mile 2.0 to Origin			X	X	X	X			
Spencer Creek	Mile 0.0 to 2.8	X	X	X	X	X	X	X		
Spencer Creek	Mile 2.8 to Origin			X	X	X	X			
Bartons Creek	Mile 0.0 to Origin			X	X	X	X			
Sinking Creek	Mile 0.0 to Origin			X	X	X	X			
Big Goose Creek	Mile 0.0 to Origin			X	X	X	X			
Little Goose Creek	Mile 0.0 to Origin			X	X	X	X			
Round Lick Creek	Mile 0.0 to Origin			X	X	X	X			
All other surface waters named and unnamed in the Lower Cumberland River Basin (and Green River Basin), with the exception of wet weather conveyances, which have not been specifically noted shall be classified.				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

0400-40-04-.13 UPPER CUMBERLAND RIVER BASIN.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Cumberland River	Mile 309.2 to 385.5 (Ky-Tenn Line)	X	X	X	X	X	X	X		
Caney Fork River	Mile 0.0 to 25.4	X	X	X	X	X	X	X	X	
Mulherrin Creek	Mile 0.0 to Origin			X	X	X	X			
Hickman Creek	Mile 0.0 to Origin			X	X	X	X			
Smith Fork Creek	Mile 0.0 to Mile 3.0			X	X	X	X		X	
Smith Fork Creek	Mile 3.0 to Origin			X	X	X	X			
Dry Creek	Mile 0.0 to Origin			X	X	X	X		X	
Jones Fork	Mile 0.0 to Origin			X	X	X	X		X	
Caney Fork River	Mile 25.4 to Origin	X	X	X	X	X	X			
Mine Lick Creek	Mile 0.0 to 5.0	X		X	X	X	X			
Mine Lick Creek	Mile 5.0 to Origin			X	X	X	X			
Falling Water River	Mile 0.0 to 39.0	X		X	X	X	X			
Falling Water River	Mile 39.0 to Origin			X	X	X	X			
Cane Creek	Mile 0.0 to Origin			X	X	X	X			
Pigeon Roost Creek	Mile 0.0 to Origin			X	X	X	X			
Fall Creek	Mile 0.0 to Origin			X	X	X	X			
Pine Creek	Mile 2.4 to Origin			X	X	X	X		X	
Turner Branch	Mile 0.0 to 0.5			X	X	X	X		X	
Sink Creek	Mile 4.6 to Origin			X	X	X	X		X	
Collins River	Mile 0.0 to 43.0	X	X	X	X	X	X			
Mountain Creek	Mile 0.0 to 6.0			X	X	X	X		X	
Charles Creek	Mile 0.0 to 9.0			X	X	X	X		X	
Barren Fork River	Mile 0.0 to 4.5			X	X	X	X			
Barren Fork River	Mile 4.5 to Origin	X	X	X	X	X	X		X	
Hickory Creek	Mile 19.0 to 24.0			X	X	X	X		X	
W.F. Hickory C	Mile 0.0 to Origin			X	X	X	X			
Keel Branch	Mile 0.0 to Origin			X	X	X	X			
Hills Creek	Mile 0.0 to Origin			X	X	X	X		X	
Collins River	Mile 43.0 to 49.0	X		X	X	X	X		X	

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Big Creek	Mile 0.0 to 6.0	X		X	X	X	X			
Big Creek	Mile 6.0 to Origin			X	X	X	X			
Collins River	Mile 49.0 to Origin			X	X	X	X			
Caney Fork River	Mile 92.2 to Origin	X	X	X	X	X	X			
Rocky River	Mile 0.0 to 9.0	X	X	X	X	X	X			
Rocky River	Mile 9.0 to 13.0	X	X	X	X	X	X		X	
Rocky River	Mile 13.0 to Origin	X	X	X	X	X	X			
Calfkiller River	Mile 0.0 to 14.1	X	X	X	X	X	X			
Calfkiller River	Mile 14.1 to 30.8	X	X	X	X	X	X			
Town Creek	Mile 0.0 to Origin			X	X	X	X			
Calfkiller River	Mile 30.8 to Origin	X	X	X	X	X	X		X	
Cane Creek	Mile 1.0 to 8.0	X	X	X	X	X	X		X	
Falls Creek	Mile 0.0 to Origin			X	X	X	X			
Cane Creek	Mile 8.0 to Origin	X	X	X	X	X	X			
Bee Creek	Mile 0.0 to 7.3			X	X	X	X			
Bee Creek	Mile 7.3 to Origin	X		X	X	X	X			
Wilkerson Creek	Mile 0.0 to Origin			X	X	X	X			
Frey Branch	Mile 0.0 to Origin			X	X	X	X			
Roaring River	Mile 0.0 to 29.9			X	X	X	X			
Roaring River	Mile 29.9 to Origin	X		X	X	X	X			
Spring Creek	Mile 0.0 to Origin			X	X	X	X			
Bear Creek	Mile 0.0 to Origin			X	X	X	X			
Carr Creek	Mile 0.0 to 4.2			X	X	X	X			
Carr Creek	Mile 4.2 to Origin	X		X	X	X	X			
Town Creek	Mile 0.0 to Origin			X	X	X	X			
Goose Creek	Mile 0.0 to 12.0			X	X	X	X		X	
Flynns Creek	Mile 0.0 to 5.0			X	X	X	X		X	
Obey River	Mile 0.0 to 7.3	X	X	X	X	X	X		X	
Neely Creek	Mile 0.0 to Origin (3.3 miles)			X	X	X	X		X	
Wolf River	Mile 0.0 to Ky State Line		X	X	X	X	X			

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Wolf River	Ky State Line to Origin			X	X	X	X		X	
Town Creek	Mile 0.0 to Origin			X	X	X	X			
Obey River	Mile 7.3 to confluence of East and West Forks	X	X	X	X	X	X			
West Fork Obey River	Mile 0.0 to Origin			X	X	X	X			
East Fork Obey River	Mile 0.0 to Origin	X		X	X	X	X			
Buffalo Cove Creek	Mile 0.0 to Origin			X	X	X	X			
Rock Castle Creek	Mile 0.0 to Origin			X	X	X	X			
Big South Fork Cumberland River	Mile 55.5 (Ky-Tenn Line) to Origin (Mile 77.0)	X	X	X	X	X	X			
No Business Creek	Upper 4.0 miles			X	X	X	X		X	
Parch Corn Creek	Upper 1.5 miles			X	X	X	X		X	
Station Camp Creek	Upper 4.8 miles			X	X	X	X		X	
Laurel Fork Creek	Upper 4.9 miles			X	X	X	X		X	
North White Oak Creek	Upper 3.9 miles			X	X	X	X		X	
Williams Creek	Upper 7.6 miles			X	X	X	X		X	
Pine Creek	Mile 0.0 to 10.5			X	X	X	X			
Pine Creek	Mile 10.5 to Origin	X		X	X	X	X			
New River	Mile 0.0 to 15.0			X	X	X	X			
New River	Mile 15.0 to Origin	X		X	X	X	X			
Clear Fork River	Mile 0.0 to Origin			X	X	X	X			
Elk Fork Creek	Mile 1.8 (KY Line) to Origin	X		X	X	X	X			
All other surface waters named and unnamed, within the Upper Cumberland River Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

0400-40-04-.14 BARREN RIVER BASIN.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
West Fork Drakes Creek	Mile 33.0 (stateline) to Origin			X	X	X	X			
Caney Fork Creek	Mile 0.0 to Origin			X	X	X	X			
Dry Fork Creek	Mile 0.0 to Origin			X	X	X	X			
Middle Fork Drakes Creek	Mile 22.2 (stateline) to Origin	X		X	X	X	X			
Sulphur Fork Creek	Mile 9.0 (stateline) to Origin			X	X	X	X			
Dutch Creek	Mile 0.0 to Origin			X	X	X	X			
Trammel Creek	Mile 30.7 (stateline) to Origin			X	X	X	X			
Little Trammel Creek	Mile 4.7 (stateline) to Origin			X	X	X	X			
Long Creek	Mile 14.6 (stateline) to Origin			X	X	X	X			
West Fork Long Creek	Mile 0.0 to Origin			X	X	X	X			
Puncheon Creek	Mile 4.3 (stateline) to Origin			X	X	X	X			
Unnamed Tributary (Adams Spring)	Mile 0.0 to Origin	X		X	X	X	X			
Little Puncheon Creek	Mile 0.0 to Origin			X	X	X	X			
Spring Creek	Mile 0.0 to Origin	X		X	X	X	X			
Salt Lick Creek	Mile 4.7 (stateline) to mile 6.8			X	X	X	X			
Salt Lick Creek	Mile 6.8 to mile 9.9			X	X	X	X		X	
Salt Lick Creek	Mile 9.9 to Origin			X	X	X	X			
Long Fork	Mile 4.5 (stateline) Origin			X	X	X	X			
White Oak Creek	Mile 4.1 (stateline) to Origin			X	X	X	X			
Long Hungry Creek	Mile 0.0 to Origin			X	X	X	X			
Line Creek	Mile 14.2 (stateline) to Origin			X	X	X	X			
Trace Creek	Mile 0.0 to Origin			X	X	X	X			
Little Trace Creek	Mile 0.0 to Origin			X	X	X	X			
All other surface waters named and unnamed, within the Barren River Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified				X	X	X	X			

Authority: T.C.A. §§ 69-3-101 et seq. and 4-5-201 et seq.

* If a roll-call vote was necessary, the vote by the Agency on these rulemaking hearing rules was as follows:

Board Member	Aye	No	Abstain	Absent	Signature (if required)
Dr. Gary G. Bible (Oil and Gas Industry)	x				
Elaine Boyd (Commissioner's Designee, Department of Environment and Conservation)	x				
Mayor Kevin C. Davis (Counties)				x	
Dodd Galbreath (Environmental Interests)	x				
Brent Galloway Oil or Gas Property Owner	x				
Charlie R. Johnson (Public-at-large)				x	
Judy Manners (Commissioner's Designee, Department of Health)	x				
John McClurkan (Commissioner's Designee, Department of Agriculture)	x				
Frank McGinley (Agricultural Interests)				x	
Neal Whitten (Manufacturing Industry)	x				
Terry Wimberley (Municipalities)	x				
Vacant (Small Generator of Water Pollution representing Automotive Interests)					

I certify that this is an accurate and complete copy of rulemaking hearing rules, lawfully promulgated and adopted by the Board of Water Quality, Oil, and Gas on 10/17/2023, and is in compliance with the provisions of T.C.A. § 4-5-222.

I further certify the following:

Notice of Rulemaking Hearing filed with the Department of State on: 08/05/2022

Rulemaking Hearing(s) Conducted on: (add more dates). 10/04/2022

Date: October 17, 2023

Signature: [signature]

Name of Officer: Jenny Dodd

Title of Officer: Technical Secretary

Agency/Board/Commission: Board of Water Quality, Oil, and Gas

Rule Chapter Number(s): 0400-40-03 and 0400-40-04

All rulemaking hearing rules provided for herein have been examined by the Attorney General and Reporter of the State of Tennessee and are approved as to legality pursuant to the provisions of the Administrative Procedures Act, Tennessee Code Annotated, Title 4, Chapter 5.

Jonathan Skrmetti
Attorney General and Reporter

Date

Department of State Use Only

Filed with the Department of State on:

Effective on:

Tre Hargett
Secretary of State

Public Hearing Comments

One copy of a document that satisfies T.C.A. § 4-5-222 must accompany the filing.

Comment Summary

Tennesseans are actively engaged in efforts to protect our water resources, and each triennial review of water quality criteria typically results in a high volume of comments representing a wide range of interests. This rulemaking is no different: we received written and oral comments from 11 stakeholders ranging from environmental NGOs to representatives of the regulated community to the Environmental Protection Agency (EPA). These comments have been summarized and organized by topic. The most significant change made in response to these comments is that impoundments will continue to be treated in the same manner as other habitat alterations under the Antidegradation Statement. Several additional changes were made in response to EPA comments, to correct drafting errors, and to provide clarification.

General Comments Not Related to a Specific Rule Change.

1. Comment: A commenter recommends that the Board of Water Quality, Oil, and Gas (Board) audit its mitigation program to evaluate the efficacy of the program in the context of water protection in Tennessee.

   Response: The Board appreciates this comment and recognizes the importance of compensatory mitigation as a critical tool to prevent pollution associated with unavoidable impacts to streams and wetlands. However, evaluation of the effectiveness of compensatory mitigation is an implementation matter beyond the scope of this rulemaking.

2. Comment: A commenter urges the Board to assert its primary authority under the Clean Water Act to decide what level of water quality is appropriate to protect designated uses in Tennessee's waters. The EPA staff should not, through back-channel communications and informal statements of agency preference, exercise veto power over the Board's water quality standards, and avoid both public scrutiny of its decision and the statutory requirement under the Clean Water Act to identify — and defend — the criteria the EPA believes are necessary.

   Response: Under section 303(c) of the Clean Water Act (CWA), the EPA has the final authority to approve or disapprove a state's Triennial Review submission. If the EPA disapproves a state's proposal, it cannot be used for CWA purposes (such as in new or renewed NPDES permits). In addition, the EPA can promulgate its own standards in that state. The Department of Environment and Conservation (TDEC) maintains appropriate and open communication with the EPA when developing water quality criteria that meet the goals of the CWA and then must submit only new or revised standards to the EPA for review and approval or disapproval. When the EPA approves a state WQS, it becomes the applicable WQS for purposes of the CWA. The EPA's written comments on the draft rules are available to the public.

3. Comment: A commenter resubmits its comments from the most recent previous triennial review that advocate for establishing numeric nutrient criteria and opposes changes to the Anti-degradation statement in that rulemaking.

   Response: The Board responded to these comments in previous triennial review responses, and the position has not changed. The Board's prior responses adopted October 16, 2018, and effective September 11, 2019, are incorporated by reference herein.

Comments Related to a Specific Rule Change.

Rule 0400-40-03-.03 Criteria for Water Uses.

4. Comment: A commenter requests the adoption of numeric standards for nutrient pollution statewide consistent with the "A Synopsis on Developing Numeric Nutrient Criteria for Freshwaters" by Dr. JoAnn Burkholder (2018).

   Response: In 2003, the Board proposed numeric nutrient criteria based on an ecoregional reference approach. After considering comments received from the regulated community, the EPA, and others, the

narrative criterion was determined to be the best option to provide the flexibility needed moving forward. TDEC continues to develop multiple lines of evidence that can be used to apply the current narrative criteria. This includes a newly developed Tennessee Diatom Index. TDEC is working with a large nutrient stakeholder group to further consider nutrient issues in Tennessee and how to approach both criteria development and permit implementation.

5. Comment: A commenter stated that during the previous Triennial Review of Water Quality Standards, the division attempted without success to clarify its narrative criterion for nutrients. However, since the Tennessee Board of Water Quality, Oil, and Gas's responses to comments are considered part of the rulemaking process and an important way to clarify how criteria are applied, the Board's responses reiterated that TDEC followed a "weight of evidence" approach for identifying streams impaired by nutrients which incorporated not only the concentrations of the various nutrient parameters in water, but also response factors including, but not limited to, water supply impacts, stream biology that indicated dominance by nutrient tolerant species, excessive diurnal oxygen swings, and the presence of excessive algae. During the 2022 section 303(d) review process, TDEC delisted a waterbody for phosphorus and stated in the rationale that there was insufficient evidence of "biological harm." This approach seems counter to the Board's previous rulemaking position on nutrient impairment in which the wide range of ways nutrients could impact aquatic life and water supplies were considered. Since, as stated previously, the responses to Triennial Review public comments carry significant weight in the implementation of such rules, in the responses to comments for this current rulemaking, TDEC should clarify whether it continues to follow the approach described above. If it has abandoned this approach, the rulemaking process should identify what has replaced it.

   Response: The commenter is correct that TDEC continues to employ a "multiple lines of evidence" approach to applying the narrative nutrient criteria to water quality assessment. In the specific case mentioned, TDEC only had a few lines of evidence and did not have a well-documented, significant biological response. TDEC put extra effort to collect appropriate data including the use of a newly developed diatom index. These data along with more extensive continuous monitoring data throughout the watershed should provide more lines of evidence to better assess potential nutrient impairment.

Paragraph (3) of Rule 0400-40-03-.03 Fish and Aquatic Life.

6. Comment: The EPA proposes changing "2022" to "most recent" in subparagraph (3)(m) of Rule 0400-40-03-.03.

   Response: Under Tennessee's Uniform Administrative Procedures Act, the Board cannot impose mandatory requirements without public notice and comment. Therefore, for the rule to require application of a guidance document, the rule must reference a specific dated version. However, the "2022" year is incorrect and will be changed to "2021" to reflect the most current version of "Quality System Standard Operating Procedure for Macroinvertebrate Stream Surveys." The nature of the triennial review process allows for references to SOPs to be updated as needed in future rulemakings.

7. Comment: A commenter requests further explanation regarding the Board's adoption of the EPA's National Recommended Water Quality Criteria for chlorides to its Fish and Aquatic Life criteria. Is there a statewide concern about chlorides in streams? Additionally, if this is to be adopted, the proposed rules contain a typographic error for Chloride. The unit of measurement should be 860,000 and 230,000 µg/L.

   Response: TDEC applies the EPA section 304(a) of the CWA recommended criteria when a specific criterion is not included in the Tennessee Water Quality Criteria. The Board has not previously adopted criteria for Chloride because that pollutant is normally associated with saltwater ecosystems and areas with excessive road salt application. However, elevated levels of chloride, including samples that exceed the EPA's recommended criteria, have been found in Tennessee streams impacted by landfills, making this a contaminant of concern for which express numeric criteria are needed. The commenter is correct that the values in the table were in mg/l rather than µg/l. The Board has corrected this typographic error by substituting 860,000 and 230,000 µg/l.

8. Comment: A commenter supports the new numeric Fish and Aquatic Life criteria for acute and chronic effects

of chloride.

Response: The Board appreciates this comment.

9. Comment: A commenter requests a revision to coliform criteria for Fish and Aquatic Life use for the individual sample. The individual sample concentration needs to be below the maximum detectable limit.

   Response: The Board has not made the requested change. There is no requirement for individual sample concentration criteria to be below a maximum detectable limit. Criteria are established based on impacts to waters without respect to detection limits. The Board notes that the EPA recently issued guidance for determining secondary recreation E. coli criteria. The Board will consider this guidance during the next triennial review and consider updating the Fish and Aquatic Life use coliform criteria.

10. Comment: A commenter requests to establish seasonally variable site-specific dissolved oxygen criteria for the portion of the West Fork Stones River (WFSR) from River Mile 11.2 (Sinking Creek) to River Mile 4.7 to reflect natural conditions.

    Response: The Board is not making the requested change, which would constitute a significant diversion from long-standing, statewide criteria to protect fish and aquatic life. Further, the Board does not agree with the commenter's premise that the chronic dissolved oxygen criteria violations seen during the summer low flow period are a result of natural conditions. The WFSR watershed has many anthropogenic impacts throughout the watershed. These impacts include extensive and ongoing urban development, agriculture activities in the upper watershed, and at least seven low head dams upstream. Efforts should be made to improve the assimilative capacity of the WFSR by addressing runoff from urban and agricultural areas to limit nutrients as well as the potential removal of low head dams. The current dissolved oxygen criteria are protective and appropriate for this stream.

11. Comment: A commenter encouraged the Board to resist pressure to change the statewide dissolved oxygen criterion.

    Response: The Board has no plans to modify the dissolved oxygen criterion.

12. Comment: A commenter does not believe it would be appropriate to lower the dissolved oxygen criteria for the WFSR. The commenter believes the dissolved oxygen levels in the WFSR are a result of high urban areas, low flows, and karst terrain.

    Response: The Board concurs with the comment.

13. Comment: A commenter stated that with many areas of the state struggling with growth, development, and limited in-stream assimilative compacity, establishing site-specific criteria at WFSR may impact the need or requests at other locations and begin to have a cumulative impact upon our streams and reservoirs as well as species.

    Response: The Board appreciates this comment and agrees that lowering the dissolved oxygen criteria for the WFSR would establish a bad precedent and could lead to more requests to lower site-specific criteria downstream from dischargers across the state. Weakening of criteria is not the appropriate response, and efforts should be made to potentially restore water quality and assimilative compacity to the stream.

14. Comment: A commenter opines that if the EPA believes that site-specific criteria are not appropriate for the WFSR, EPA should be required to state with specificity the criteria it believes are necessary, and to support that determination with publicly reviewable data and analysis, as the Clean Water Act requires.

    Response: This comment would properly be addressed to the EPA. The Board cannot speak for that federal agency. However, the Board has considered the EPA guidance as part of the basis for its independent determination to retain its longstanding dissolved oxygen criteria. In 1997, the EPA issued a memo "Establishing Site Specific Aquatic Life Criteria Equal to Natural Background." The memo states in the policy section that "Natural background is defined as background concentration due only to non-anthropogenic sources, i.e., non-manmade sources." This guidance applies to the

WFSR watershed where multiple potential anthropogenic impacts exist throughout the drainage area. Anthropogenic sources include ongoing active development, significant impervious surface runoff, low head dams, and agriculture.

Paragraph (4) of Rule 0400-40-03-.03 Recreation.

15. Comment: A commenter is not necessarily opposed to the Board's proposed updates to the E. coli criteria to align with U.S. Environmental Protection Agency criteria, but would like to better understand the "on the ground" impacts on such a change. For example, will such a change reduce the miles of stream and river currently impaired for human contact? The commenter's support for this change is predicated upon the change actually reducing the number of miles of streams and rivers in Tennessee that are impaired for E. coli. Here in Tennessee, waters support a variety of types of water-based recreation. The commenter also supports more frequent/consistent data collection to ensure that public recreation is safe and affords high-quality experiences. The commenter requests that the Board provide a more detailed justification for these changes.

    Response: The goal of the proposed lower E. coli criterion for recreation is to be more protective of human health, and also to comply with EPA's national recommended water quality criteria. The lowering of this criterion will likely identify more streams that violate the E. coli criteria, but this does not change existing instream water quality. Rather, it will help TDEC to more appropriately identify impaired streams for additional focus.

16. Comment: A commenter suggests a change in the draft language to subparagraph (4)(f) of Rule 0400-40-03-.03 so the sentence reads as follows: "Additionally, the concentration of the E. coli group in any individual sample taken from any waterbody shall not exceed 410 cfu per 100 ml more often than in ten percent of samples during any 30-day interval."

    Response: The Board has revised the last sentence in the subparagraph to read as follows: "Additionally, the concentration of the E. coli group in any individual sample shall not exceed 410 cfu per 100 ml more often than in 10% of samples during any 30-day interval."

17. Comment: A commenter is troubled by the 20% exceedance rate for E.coli but would accept a 10% exceedance rate for E.coli.

    Response: Based on this comment and Division conversations with the EPA regarding its water quality guidance, the Board is adopting the EPA criterion of 10% exceedance for the 410 cfu per 100 ml number.

18. Comment: A commentor notes that the E. coli criterion for recreation does not follow the EPA Recreational Water Quality Criteria (RWQC) because it includes a sample size. EPA section 3.6.5 titled "Practical Considerations for Implementing State WQS based on the 2012" notes that the minimum sample size is not to be part of the criteria. The section also recommends sampling at least weekly over a 30-day period, which would result in a minimum of 4 versus 5 samples for the geometric mean. This specificity of the number of samples is also in the coliform criteria for the designated use of Fish and Aquatic Life – Rule 0400-40-03-.03(3)(l) and also needs to be revised.

    Response: The EPA 1986 Ambient Water Quality Criteria for Bacteria recommended that the geometric mean should be "based on a statistically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period)." When the Board adopted the E. coli criteria during the 1997 triennial review, it specified the minimum of 5 samples within a 30-day period, and this language is retained.

    Although the commenter is correct that the EPA's 2012 RWQC does not recommend a minimum sample size, the RWQC does note that "a larger dataset will more accurately characterize the water quality in a waterbody." At this time the Board chooses not to modify the minimum sample size because doing so would lead to fewer sampling events being considered to qualify for a geometric mean calculation.

Rule 0400-40-03-.04 Definitions.

19. Comment: Several commenters requested that the Board restore the last sentence of Rule 0400-40-03-.04(4)(a)3 regarding TDEC having discretion to determine that cumulative degradation has an insignificant effect on the resource.

    Response: The Board retains the proposed deletion in the final rule. The application of de minimis degradation using the methods specified in this definition has proven to provide a sufficient basis for the Division to make defensible and protective permitting decisions without reliance on other discretionary methods. If cumulative impacts use 10% or more of assimilative capacity, then an applicant seeking additional degradation should comply with all aspects of the Antidegradation Statement. This does not mean that additional degradation cannot be authorized (so long as it does not result in pollution), but rather that any such degradation needs to be appropriately justified.

20. Comment: The commenter requests the Board provide definitions for the following and clarify any differences between the definitions: “available assimilative capacity” and “assimilative capacity” as used in parts (4)(a)1 and 3 of Rule 0400-40-03-.04.

    Response: As used in these parts:
    - “Assimilative capacity” is the ability for pollutants to be absorbed (assimilated) by a waterbody without causing a condition of pollution and criteria violations leading to a loss of classified use.
    - The “available assimilative capacity” is the difference between the most stringent numeric criteria and the concentration in the waterbody where that concentration is less than the criterion.

21. Comment: The proposed rule on Page 18 (Rule 0400-40-03- .04(4)(a)2) appears to make a heretofore de minimis withdrawal of less than 5% of the 7Q10 inapplicable if it affects an Exceptional Tennessee Water (ETW). Further, the rule as drafted appears to subject the agricultural exemption at Rule 0400-40-07-.02 to waters that are not ETWs. The commentor has concerns if this is what the Department is attempting to do.

    Response: Agricultural withdrawals that are exempted from regulation under the Tennessee Water Quality Control Act, Tenn. Code Ann. § 69-3-120(g), remain exempt notwithstanding these rules.

    This amendment retains the 5% individual de minimis definition for withdrawals, but also allows the Division to consider whether a proposed withdrawal in streams listed as ETWs due to threatened or endangered species could otherwise negatively impact those species.

22. Comment: The commentor proposes these revisions to de minimis degradation and suggest it be broadened to include all exempt activities in the ARAP permit in the determination of a de minimis degradation for a proposed activity. Here are suggested edits to the proposed language in the highlight to the draft revision: (Strikethroughs in underlined red are strikethroughs of TDEC draft edits, and blue are recommended edits.)

    Rule 0400-40-03-.04(4)(a)3: If more than one activity described in part 1~~.~~ or 2~~.~~ of this subparagraph has been authorized ~~(including withdrawals exempted by paragraph (4) of Rule 0400-40-07-.02)~~ in a segment, and the total impact of the authorized and proposed ~~impacts uses~~ activities (including all activities authorized in Rule 0400-40-07.02) ~~is~~ uses ~~of~~ no more than 10% of the assimilative capacity, or 7Q10 low flow, ~~they~~ the activities are presumed to be de minimis, unless the activities occur in waters designated as Exceptional Tennessee Waters pursuant to part (4)(a)3 of Rule 0400-40-03-.06. ~~Where the total of the authorized and proposed impacts uses 10% of the assimilative capacity, or 7Q10 low flow, additional degradation may only be treated as de minimis if the Division finds on a scientific basis that the additional degradation has an insignificant effect on the resource.~~

    Response: The Board partially adopts the proposed amendment. The parenthetical referring to uses that predated water withdrawal regulation in the ARAP rules is not changed. This parenthetical refers to an exemption, not an authorization. However, the Board agrees that the definition for individual

and cumulative water withdrawals should be consistent and should reflect the need to protect ETWs that are listed due to threatened or endangered species. Accordingly, the final rule provides:

(4)(a)3. If more than one activity described in part 1. or 2. of this subparagraph has been authorized (including withdrawals exempted by paragraph (4) of Rule 0400-40-07-.02) in a segment, and the total of the authorized and proposed impacts uses no more than 10% of the assimilative capacity, or 7Q10 low flow, then the activities are presumed to be de minimis, unless the withdrawal may adversely affect waters designated as Exceptional Tennessee Waters pursuant to part (4)(a)3 of Rule 0400-40-03-.06.

23. Comment: Several commenters suggest the following additional changes to subsection (a) of the "de minimis degradation" definition in Tenn. R. & Regs. 0400-40-03-.04, which are explained in detail below:

(4) De Minimis degradation – Degradation of a small magnitude, as provided in this paragraph.

(a) Discharges and withdrawals

1. Subject to the limitation in part 3~~.~~ of this subparagraph, a single discharge will be considered de minimis if it uses less than five percent of the available assimilative capacity for the substance being discharged, unless the discharge occurs in waters designated as Exceptional Tennessee Waters pursuant to part (4)(a)3 of Rule 0400-40-03-.06.

(Note: Consistent with T.C.A. § 69-3-108, special consideration will be given to bioaccumulative substances to confirm the effect is de minimis, even if they ~~are~~ use less than five percent of the available assimilative capacity under this part or less than ten percent of the available assimilative capacity under part 3.)

2. Subject to the limitation in part 3. of this subparagraph, a single water withdrawal will be considered de minimis if it removes less than five percent of the 7Q10 flow of the stream, unless the withdrawal occurs in ~~may adversely affect~~ waters designated as Exceptional Tennessee Waters pursuant to part (4)(a)3 of Rule 0400-40-03-.06.

3. If more than one activity described in part 1~~.~~ or 2~~.~~ of this subparagraph has been authorized ~~(including withdrawals exempted by paragraph (4) of Rule 0400-40-07-.02)~~ in a segment, and the total impact of ~~the~~ authorized and proposed ~~impacts uses activities~~ activities (including all activities authorized in Rule 0400-40-07.02) ~~is~~ uses ~~of~~ no more than 10% of the assimilative capacity, or 7Q10 low flow, ~~they~~ the activities are presumed to be de minimis, unless the activities occur in waters designated as Exceptional Tennessee Waters pursuant to part (4)(a)3 of Rule 0400-40-03-.06. ~~Where the total of the authorized and proposed impacts uses 10% of the assimilative capacity, or 7Q10 low flow, additional degradation may only be treated as de minimis if the Division finds on a scientific basis that the additional degradation has an insignificant effect on the resource.~~

(b) Habitat alterations authorized by an Aquatic Resource Alteration Permit (ARAP) are presumed de minimis if the Division finds that the impacts, individually and cumulatively, are offset by impact avoidance, minimization, ~~and/or~~ onsite mitigation, and/or in-system mitigation provided that any mitigation include replacement of lost habitat resource values. Acceptable offset mechanisms are prioritized in the following order: avoidance, minimization, onsite mitigation, or in-system mitigation. ~~provided however, in ONRWs, the mitigation must occur within the ONRW.~~ Habitat alterations authorized by ARAPs will not be presumed de minimis where the alteration occurs in waters designated as Outstanding Natural Resource Waters or Exceptional Tennessee Waters pursuant to Rule 0400-40-03-.06.

Response: The Board partially adopts the amendments requested by the commenters:

- Part (a)1 - Concerns regarding withdrawals affecting ETWs listed due to threatened or endangered species do not apply to discharges. Water quality criteria for fish and aquatic life

are sufficiently protective, and must be applied in discharge permits in accordance with Chapters 0400-40-05 and 0400-40-10. Accordingly, the Board does not adopt this amendment.

- Part (a)1 - The Board agrees with, and adopts the proposed changes in the note regarding bioaccumulative pollutants, which should apply to both individual and cumulative discharges.
- Part (a)2 – The Board does not adopt this language. A withdrawal can adversely affect a stream segment even if it is located upstream from that segment.
- Part (a)3 – The Board partially adopts this language. Please see response to Comment 22 regarding cumulative water withdrawals.
- Subparagraph (b) – the Board declines to change the definition with respect to habitat alterations. The ARAP rules appropriately address mitigation priorities. ONRWs are appropriately protected by the current rule, which requires mitigation within the same ONRW. The proposed amendment would effectively prohibit habitat alterations in ONRWs, even alterations to improve habitat.

Rule 0400-40-03-.05 Interpretation of Criteria.

24. Comment: Regarding mixing zones, the EPA suggests adding clarifying language such as "(f) impair classified uses outside of an appropriately-sized mixing zone."

    Response: The Board agrees with the comment and recognizes that the purpose of mixing zones is to prevent impairment beyond the area of a stream in which a discharge has been fully mixed with the receiving stream. Accordingly, the Board adopts the following language for paragraph (2) of Rule 0400-40-03-.05:

    For measuring compliance with permit conditions, the effect of treated sewage or waste discharge on the receiving waters shall be considered beyond the mixing zone except as provided in this paragraph. Such mixing zones (See definition) shall be restricted in area and length; and shall not (a) prevent the free passage of fish or cause aquatic life mortality in the receiving waters; (b) contain materials in concentrations that exceed acute criteria beyond the zone immediately surrounding the outfall; (c) result in objectionable colors, odors, or other conditions; (d) result in dominance of a nuisance species; (e) endanger the public health or welfare; or (f) impair classified uses outside the mixing zone; (g) create a condition of chronic toxicity beyond the edge of the mixing zone; (h) adversely affect nursery and spawning areas; or (i) adversely affect species with special state or federal status. Mixing zones shall not apply to the discharge of bioaccumulative pollutants to waters of the state where the risk-based factors in subparagraph (4)(l) of Rule 0400-40-03-.03 are exceeded for the pollutant group.

25. Comment: The EPA recommends the insertion of the word "alone" in paragraph (7) of Rule 0400-40-03-.05 to clarify that exceedances due entirely to natural conditions will not cause the water body to be listed.

    (7) For purposes of water quality assessment, with the exception of pathogens, exceedances of water quality standards caused by natural conditions alone will not be considered the condition of ~~pollution~~ impairment.

    Response: The Board agrees with the EPA that the addition of "alone" clarifies the natural conditions provision as it applies to assessment and adopts this language. This change stresses that other anthropogenic influences must be considered in assessment, and if present would not be considered natural conditions.

Rule 0400-40-03-.06 Antidegradation Statement.

26. Comment: A commenter supports measures to ensure that habitat degradation is avoided or minimized. This includes the department's current efforts to modify the definition of de minimis degradation to consider a single withdrawal as de minimis if it removes less than five percent of the 7Q10 flow of the stream, UNLESS the withdrawal may adversely affect waters designated as Exceptional Tennessee Waters pursuant to part (4)(a)3 of Rule 0400- 40-03-.06.

    Response: The Board appreciates this comment.

27. Comment: With regard to antidegradation, the Department is attempting to narrow the field in which economic benefit could be reviewed, by adding in new language in Rule 0400-40-03-.06 requiring the important economic or social benefit be in the area "in which the waters are located." The commenter requests this language either be deleted or the following added, "as described in the application."

Response: The commenter is incorrect. The Board is simply clarifying that the requirement of subparagraph (1)(a) of Rule 0400-40-03-.06 that the impact of degradation be considered "in the area in which the waters are located" applies throughout the Antidegradation Statement. This amendment reflects the EPA regulatory requirements applicable to states established in 40 C.F.R. § 131.12, which provides (emphasis added):

> "Where the quality of the waters exceeds levels necessary to support the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State'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."

28. Comment: A commenter requested the Board consider modifying the ETW criteria to remove the criterion that a water could be listed as an ETW by being state listed as endangered or threatened.

Response: The Board declines to adopt the proposed amendment to a long-standing rule. State-listed aquatic species should be appropriately protected by rule, along with federally-listed species. However, the Board notes that ETW listing does not preclude permitting of discharges or alterations, but instead may require imposition of additional requirements or justifications.

29. Comment: A commenter requests that waterfowl management practices, projects, and areas be exempted from the proposed impoundment changes. If the intent of these changes is not to have temporary impoundments regulated, then we ask that the Board please clarify the rule.

Response: Due to extensive comments regarding impoundments, the Board declines to adopt the proposed impoundment amendments at this time.

30. Comment: A commenter suggests the following changes to the introductory text of paragraph (2) of Rule 0400-40-03-.06 and its subparagraph (a) to prevent the rule from being misunderstood or misapplied.

(2) Unavailable parameters exist where water quality is at, or fails to meet, the levels specified in water quality criteria in Rule 0400-40-03-.03, even if caused by natural conditions. In the case of an impaired criterion that is a single response variable or is derived from measurement of multiple response variables, the unavailable parameters shall be any parameter the addition of which would cause a measurable degradation of the impaired criterion ~~the agents causing water quality to be at or failing to meet the levels specified in criteria~~. For example, if the biological integrity criterion (derived from multiple response variables) is violated, the unavailable parameters shall be the pollutants causing the violation, not the response variables.

(a) In waters with unavailable parameters, new or increased discharges that would cause measurable degradation of the parameter that is unavailable shall not be authorized if the discharge would cause a measurable degradation of the impaired criterion. Nor will discharges be authorized in such waters if they cause additional loadings of unavailable parameters that are bioaccumulative or that have criteria below current method detection levels.

Response: The Board declines to adopt the proposed amendments. The application of narrative criteria requires the use of multiple lines of evidence and stress the importance of considering other response variables. The Board does not agree with the commentor's proposed changes as the Division should be able to consider all factors and data affecting the impairment to a waterbody.

31. Comment: To align the text with the intent of the rule, please amend the text to state that a parameter is "unavailable" "if any increase in that parameter would cause measurable degradation of a parameter for which the stream is impaired within the impaired segment.

    Response: The rule does not need to be amended. The rule already provides that "[u]navailable parameters exist where" criteria are violated. Water quality assessment is based on stream segments. If the segment in which a discharge is located is impaired for a particular parameter, then Rule 0400-40-03-.06 applies to that segment. However, if a downstream segment is not impaired for that parameter, then this rule does not apply to the effects of the upstream discharge in that downstream segment. The converse is also true: for example, even if the stream segment in which a discharge is located is not impaired for nutrients, any new or increased discharge of nutrients would need to comply with this rule if a downstream segment is impaired for nutrients.

32. Comment: A commenter suggests the current antidegradation language concerning unavailable parameters is appropriate and should not be changed.

    Response: The Board agrees.

33. Comment: A commenter did not understand the proposed deletion of the phrase "(or a score of 28 or 30 in subecoregion 73a)" from part (4)(a)6 of Rule 0400-40-03-.06 and wanted to know why it was being deleted.

    Response: The phrase is being deleted because the Tennessee Macroinvertebrate Index (TMI) has been updated to reflect the appropriate scoring range for the 73a ecoregion. The TMI was recalibrated in 2017 so that all ecoregions are now on the same 0-42 scale with a target score of 32.

34. Comment: The EPA proposes changing "2022" to "most recent" in part (4)(a)6 of Rule 0400-40-03-.06.

    Response: Under Tennessee's Uniform Administrative Procedures Act, the Board cannot adopt mandatory requirements by reference to external authorities without using a fixed date. The change to part (4)(a)6 of Rule 0400-40-03-.06 has not been made because it establishes a mandatory method through which the Division must establish Exceptional Tennessee Waters.

Rule 0400-40-04-.09 Use Classifications For Surface Waters

35. Comment: A Commenter requests revising or removing the designated use stream classification of "recreation" for both White Oak Creek and Melton Branch.

    Response: The Board does not agree that it would be appropriate to remove these designated uses, and accordingly has not amended the rule. White Oak Creek and Melton Branch are both waters of the state and should be afforded the same protection and available uses as all other streams.

Regulatory Flexibility Addendum

Pursuant to T.C.A. §§ 4-5-401 through 4-5-404, prior to initiating the rule making process, all agencies shall conduct a review of whether a proposed rule or rule affects small business.

(1) The type or types of small business and an identification and estimate of the number of small businesses subject to the proposed rule that would bear the cost of, or directly benefit from the proposed rule.

TDEC receives applications for individual water quality permits, and coverage under general permits, from thousands of applicants. Many of these permittees are small businesses, including property developers, construction companies, and others. Currently, there are approximately 4,114 aquatic resource alteration permit (ARAP) files that are active or for which complete applications have been received. In addition, there are 613 individual discharge permits, including 425 with E. coli limits and 9 with chloride limits. These water quality standards could affect the terms and conditions of these permits. However, the Board expects the impacts to be minimal.

(2) The projected reporting, recordkeeping, and other administrative costs required for compliance with the proposed rule, including the type of professional skills necessary for preparation of the report or record.

This rulemaking does not change preexisting reporting, recordkeeping, or other administrative requirements for compliance.

(3) A statement of the probable effect on impacted small businesses and consumers.

The impact of this rulemaking on small businesses and consumers is expected to be minimal.

(4) A description of any less burdensome, less intrusive, or less costly alternative methods of achieving the purpose and objectives of the proposed rule that may exist, and to what extent the alternative means might be less burdensome to small business.

These rules are designed to comply with requirements of the federal Clean Water Act and EPA rules in a reasonable and cost-effective manner consistent with protecting water quality.

(5) A comparison of the proposed rule with any federal or state counterparts.

These rules are based on the requirements of the federal Clean Water Act and EPA, which require states to promulgate water quality standards to include classified uses, water quality criteria, and an antidegradation statement.

(6) Analysis of the effect of the possible exemption of small businesses from all or any part of the requirements contained in the proposed rule.

Exemptions for small businesses are not authorized by the federal Clean Water Act or the Tennessee Water Quality Control Act of 1977. Anyone conducting regulated activities is subject to the applicable permitting requirements.

Impact on Local Governments

Pursuant to T.C.A. §§ 4-5-220 and 4-5-228, “On any rule and regulation proposed to be promulgated, the proposing agency shall state in a simple declarative sentence, without additional comments on the merits or the policy of the rule or regulation, whether the rule or regulation may have a projected financial impact on local governments. The statement shall describe the financial impact in terms of increase in expenditures or decrease in revenues.”

The Board does not believe that these amended rules will result in an increase in expenditures or a decrease in revenues.

Additional Information Required by Joint Government Operations Committee

All agencies, upon filing a rule, must also submit the following pursuant to T.C.A. § 4-5-226(i)(1).

(A) A brief summary of the rule and a description of all relevant changes in previous regulations effectuated by such rule;

Pursuant to the federal Clean Water Act, states are required to review their water quality standards (WQS) at least once every three years. This review is also required by Tennessee's Section 106 work plan with EPA as a condition of funding. Tennessee completed its last Triennial Review in 2019. Tennessee's water quality standards are promulgated in Rule Chapters 0400-40-03 and 0400-40-04. Water quality standards include use classifications (e.g., recreation, fish and aquatic life, drinking water); water quality criteria, which are standards (both numeric and narrative) relative to the ambient water quality of a stream (as opposed to standards for discharges); and the Antidegradation Statement, which governs determinations regarding whether and how much of a waterbody's (including a wetland's) assimilative capacity for additional discharges of pollutants or withdrawals, or habitat alterations, should be allocated to a permit applicant based on necessity and public benefit. The WQS also include definitions and interpretative rules.

Some of the changes in this rulemaking include:

- Update criteria for E.coli to reduce the allowable concentration but increase the allowable frequency of excursions. This change is intended to be consistent with EPA's national recommended water quality criteria and comparable criteria in neighboring states.
- Add numeric criteria for chlorides based on EPA's national recommended water quality criteria.
- Modify the definition of de minimis degradation as applied to water withdrawals to exclude withdrawals that may affect threatened or endangered species.
- Update cross-references to federal rules and guidance documents and make minor stylistic edits.

(B) A citation to and brief description of any federal law or regulation or any state law or regulation mandating promulgation of such rule or establishing guidelines relevant thereto;

Section 303(c) of the Clean Water Act, 33 U.S.C. § 1313(c), and EPA regulations, 40 C.F.R. § 131.20, require states to conduct a review of water quality standards, including public hearings on the subject, at least once every three years.

T.C.A. § 69-3-105(a) – (e) establish the duty of the Board of Water Quality, Oil, and Gas to promulgate water quality standards and to review these standards periodically.

(C) Identification of persons, organizations, corporations or governmental entities most directly affected by this rule, and whether those persons, organizations, corporations or governmental entities urge adoption or rejection of this rule;

Water quality standards affect permits for pollutant discharges, water withdrawals, and habitat alterations statewide, in addition to watershed planning. Accordingly, there are a wide range of people potentially affected by this rulemaking, including permittees and members of the public who use Tennessee waters.

The regulated community has generally expressed support for this rulemaking but asked the board to remove proposed antidegradation language regarding new impoundments. This language was removed in the final rule.

Some nongovernmental organizations have expressed support for this rulemaking in regard to the proposed E.coli criteria and the proposed antidegradation language on new impoundments.

(D) Identification of any opinions of the attorney general and reporter or any judicial ruling that directly relates to the rule or the necessity to promulgate the rule;

The attorney general's office and TDEC OGC found it necessary to change the proposed update from most recent to a specific year for SOP documents. Under Tennessee's Uniform Administrative Procedures Act (UAPA), the Board cannot adopt mandatory requirements by reference to external authorities without using a fixed date.

Including the fixed date even for optional methods of compliance such as this SOP is consistent with the intent of UAPA.

(E) An estimate of the probable increase or decrease in state and local government revenues and expenditures, if any, resulting from the promulgation of this rule, and assumptions and reasoning upon which the estimate is based. An agency shall not state that the fiscal impact is minimal if the fiscal impact is more than two percent (2%) of the agency's annual budget or five hundred thousand dollars ($500,000), whichever is less;

This rulemaking is not expected to affect state or local revenues.

(F) Identification of the appropriate agency representative or representatives, possessing substantial knowledge and understanding of the rule;

Jennifer Dodd, Director, Division of Water Resources
Stephanie Durman, Deputy General Counsel, Office of General Counsel
Richard Cochran, Manager, Division of Water Resources – Watershed Planning Unit

(G) Identification of the appropriate agency representative or representatives who will explain the rule at a scheduled meeting of the committees;

Blair Beaty
Legislative Director
Office of General Counsel

(H) Office address, telephone number, and email address of the agency representative or representatives who will explain the rule at a scheduled meeting of the committees; and

Office of General Counsel
Tennessee Department of Environment and Conservation
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 2nd Floor
Nashville, Tennessee 37243
(615) 253-5339
Blair.Beaty@tn.gov

(I) Any additional information relevant to the rule proposed for continuation that the committee requests.

(1) A description of the action proposed, the purpose of the action, the legal authority for the action and the plan for implementing the action.

The action proposed is the adoption of amendments to Tennessee's water quality criteria. This review is necessary to comply with the federal Clean Water Act that requires states to review their water quality standards at least once every three years. This review is also required by Tennessee's Section 106 work plan with EPA as a condition of funding. These rules are issued pursuant to T.C.A. § 69-3-105(a) – (e) that establish the duty of the Board of Water Quality, Oil, and Gas to promulgate water quality standards and to review these standards periodically.

(2) A determination that the action is the least-cost method for achieving the stated purpose.

The adoption of these rule amendments is the least-cost method for achieving the purpose of reviewing the water quality standards at least once every three years. The Board is not proposing to adopt more stringent standards than what is required by federal law.

(3) A comparison of the cost-benefit relation of the action to nonaction.

These amendments are being promulgated to comply with the federal Clean Water Act. The cost of these rules is anticipated to be minimal to both government and to other persons, including regulated entities. If the rules are not promulgated, Tennessee would not be in compliance with the Clean Water Act and

EPA could promulgate federal water quality standards for Tennessee. This could result in considerable costs to regulated entities as they may have to deal directly with EPA for updated NPDES permits. Based on this comparison, the benefits of moving forward with this rulemaking outweigh the costs.

(4) A determination that the action represents the most efficient allocation of public and private resources.

This action represents the most efficient allocation of public and private resources because the rule advances the health, safety, and welfare of Tennesseans by protecting waters of the state from pollution. The proposed amendments are not expected to affect the cost of state administration and not expected to impose new compliance costs.

(5) A determination of the effect of the action on competition.

These rule amendments are not expected to affect competition.

(6) A determination of the effect of the action on the cost of living in the geographical area in which the action would occur.

These rule amendments are not expected to affect cost of living.

(7) A determination of the effect of the action on employment in the geographical area in which the action would occur.

These rule amendments are not expected to affect employment.

(8) The source of revenue to be used for the action.

This action can be accomplished with existing resources.

(9) A conclusion as to the economic impact upon all persons substantially affected by the action, including an analysis containing a description as to which persons will bear the costs of the action and which persons will benefit directly and indirectly from the action.

This action advances the health, safety, and welfare of Tennesseans by protecting waters of the state from pollution. Tennesseans will directly or indirectly benefit from this action because of the protection given to waters of the state from pollution. This action is not expected to impose new compliance costs.