15A NCAC 02B .0224 WATER QUALITY STANDARDS FOR HIGH QUALITY WATERS

(a) High Quality Waters (HQW) are a subset of "waters with quality higher than the standards" as defined in Rule .0202(58) of this Section. This Rule shall be implemented in order to meet the requirements of Rule .0201(d) of this Section.

(b) High Quality Waters (HQW) shall include:

(1) water supply watersheds that are classified as Class WS-I or WS-II;

(2) waters classified as Class SA; and

(3) surface waters of the State that the Commission classifies as HQW upon finding that such waters are:

(A) rated excellent based on biological and physical/chemical characteristics through monitoring or special studies; or

(B) primary nursery areas (PNA) and other functional nursery areas designated by the Marine Fisheries Commission or the Wildlife Resources Commission.

(c) New or expanded wastewater discharges in High Quality Waters shall comply with the following:

(1) Discharges from new single family residences shall be prohibited. Existing subsurface systems for single family residences that fail and must discharge shall install a septic tank, dual or recirculating sand filters, disinfection, and step aeration.

(2) All new National Pollutant Discharge Elimination System (NPDES) wastewater discharges, except those for single family residences, shall comply with the following:

(A) Oxygen Consuming Wastes: Effluent limitations for oxygen consuming wastes shall be BOD_5= 5 mg/l, NH_3-N = 2 mg/l, and DO = 6 mg/l. More stringent limitations shall be set, if necessary, to ensure that the cumulative pollutant discharge of oxygen-consuming wastes does not cause the DO of the receiving water to drop more than 0.5 mg/l below background levels, and in no case below the standard. Where background information is not available, evaluations shall assume a percent saturation determined by staff to be applicable to that hydroenvironment.

(B) Total Suspended Solids: Discharges of total suspended solids (TSS) shall be limited to effluent concentrations of 10 mg/l for trout waters and HQW-classified PNAs and 20 mg/l for all other High Quality Waters.

(C) Disinfection: Alternative methods to chlorination shall be required for discharges to trout streams, except that single family residences may use chlorination if other options are not economically feasible, as determined on a case-by-case basis. Domestic discharges to SA waters shall be prohibited.

(D) Emergency Requirements: Reliable treatment designs shall be employed, such as stand-by power capability for entire treatment works, dual train design for all treatment components, or other reliable treatment designs in accordance with 15A NCAC 02H .0124.

(E) Volume: The total volume of treated wastewater for all discharges combined shall not exceed 50 percent of the total instream flow under 7Q10 conditions.

(F) Nutrients: Where nutrient overenrichment is projected to be a concern, effluent limitations shall be set for phosphorus or nitrogen, or both.

(G) Toxic substances: In cases where complex wastes (those containing or potentially containing toxicants) may be present in a discharge, a safety factor shall be applied to any chemical or whole effluent toxicity allocation. The limit for a specific chemical constituent shall be allocated at one-half of the normal standard at design conditions. Whole effluent toxicity shall be allocated to protect for chronic toxicity at an effluent concentration equal to twice that which is acceptable under design conditions. In all instances there may be no acute toxicity in an effluent concentration of 90 percent. Ammonia toxicity shall be evaluated according to EPA guidelines promulgated in "Ambient Water Quality Criteria for Ammonia - 1984"; EPA document number 440/5-85-001; NITS number PB85-227114; July 29, 1985 (50 FR 30784) or "Ambient Water Quality Criteria for Ammonia (Saltwater) - 1989"; EPA document number 440/5-88-004; NTIS number PB89-169825. This material related to ammonia toxicity is available at no cost at https://www.epa.gov/wqc/aquatic-life-criteria-ammonia and https://www.epa.gov/sites/production/files/2019-02/documents/ambient-wqc-ammonia-

saltwater-1989.pdf, and is hereby incorporated by reference including subsequent amendments and editions.

(3) All expanded NPDES wastewater discharges in High Quality Waters shall comply with Subparagraph (2) of this Paragraph, except for those existing discharges that expand with no increase in permitted pollutant loading.

(d) Development activities that require an Erosion and Sedimentation Control Plan in accordance with rules established by the NC Sedimentation Control Commission and which drain to and are within one mile of High Quality Waters (HQW) shall comply with the stormwater management rules as specified in 15A NCAC 02H .1019 (coastal county waters) or .1021 (non-coastal county waters).

(e) Waters Classified HQW with Specific Actions: Thorpe Reservoir [Little Tennessee River Basin, Index No. 2-79-23-(1)], including its tributaries, shall be managed with respect to wastewater discharges as required by Paragraph (c) of this Rule. Paragraph (d) of this Rule shall not apply to Thorpe Reservoir and its tributaries.

History Note: *Authority G.S. 143-214.1; 143-215.1; 143-215.3(a)(1);*
Eff. October 1, 1995;
Amended Eff. August 1, 1998; April 1, 1996;
Readopted Eff. November 1, 2019.