

31.17 NUTRIENTS

(a) Overview

This section establishes interim numeric values for phosphorus, nitrogen and chlorophyll a and also sets forth provisions regarding the use of these numeric values for the adoption of water quality standards.

(b) Interim Phosphorus Values

Table 1 Interim Total Phosphorus Values	
Lakes and Reservoirs, cold, >25 acres	25 ug/L ¹
Lakes and Reservoirs, warm > 25 acres	83 ug/L ¹
Lakes and Reservoirs, <=25 acres	RESERVED
Rivers and Streams – cold	110 ug/L ²
Rivers and Streams - warm	170 ug/L ²

¹ summer (July 1-September 30) average Total Phosphorus (ug/L) in the mixed layer of lakes (median of multiple depths), allowable exceedance frequency 1-in-5 years.
² annual median Total Phosphorus (ug/L), allowable exceedance frequency 1-in-5 years.

(c) Interim Nitrogen Values (Effective May 31, 2017)

Table 2 Interim Total Nitrogen Values	
Lakes and Reservoirs, cold, >25 acres	426 ug/L ¹
Lakes and Reservoirs, warm, > 25 acres	910 ug/L ¹
Lakes and Reservoirs, <=25 acres	RESERVED
Rivers and Streams – cold	1,250 ug/L ²
Rivers and Streams - warm	2,010 ug/L ²

¹ summer (July 1–September 30) average Total Nitrogen (ug/L) in the mixed layer of lakes (median of multiple depths), allowable exceedance frequency 1-in-5 years.
² annual median Total Nitrogen (ug/L), allowable exceedance frequency 1-in-5 years.

(d) Interim Chlorophyll a Values

Table 3 Interim Chlorophyll a Values		
Waterbody type		DUWS
Lakes and Reservoirs, cold, >25 acres	8 ug/L ^a	5 ug/L ^c
Lakes and Reservoirs, warm, > 25 acres	20 ug/L ^a	
Lakes and Reservoirs, <=25 acres	RESERVED	
Rivers and Streams – cold	150 mg/m ² ^b	
Rivers and Streams - warm	150 mg/m ² ^b	

^asummer (July 1- September 30) average chlorophyll a (ug/L) in the mixed layer of lakes (median of multiple depths), allowable exceedance frequency 1-in-5 years.
^b summer (July 1-September 30) maximum attached algae, not to exceed.
^c March 1-November 30 average chlorophyll a (ug/L) in the mixed layer of lakes (median of multiple depths), allowable exceedance frequency 1-in-5 years.

(e) Use of Interim Phosphorus and Chlorophyll a Values for Standards Adoption

Prior to May 31, 2022, the values set forth in subsection (b) and (d) above will be considered for the adoption of water quality standards for specific water bodies in Colorado in the following circumstances.

(i) Headwaters located upstream of

- (A) all permitted domestic wastewater treatment facilities discharging prior to May 31, 2012, or with preliminary effluent limits requested prior to May 31, 2012, and
- (B) any non-domestic facility subject to Regulation #85 effluent limits and discharging prior to May 31, 2012.

(ii) Discretionary Application of the Values for Direct Use Water Supply (DUWS) Lakes and Reservoirs. The Commission may determine that a numerical chlorophyll standard is appropriate for specific water bodies with this sub-classification after consideration of the following factors:

- (A) Whether the public water system using the lake or reservoir as a raw water supply experiences impacts attributed to algae on an intermittent or continual basis;
- (B) Whether there are lake or reservoir use restrictions in place that recognize the importance of the reservoir as a water supply;
- (C) Whether application of this value appropriately balances protection of all classified uses of the lake or reservoir;
- (D) Other site specific considerations which affect the need for a more protective value.

(iii) Circumstances where the Commission has determined that adoption of numerical standards is necessary to address existing or potential nutrient pollution because the provisions of Regulation #85 will not result in adequate control of such pollution.

(f) Use of Interim Nitrogen Values for Standards Adoption

After May 31, 2017 and prior to May 31, 2022, the values set forth in subsection (c) above will be considered for the adoption of water quality standards for specific water bodies in Colorado in the circumstances identified in subsection (e)(i) and (iii) above.

(g) Phase 2 Application of Numeric Standards

After May 31, 2022, the values set forth in Section (b), (c), and (d) will be considered by the Commission when applying numeric standards to individual segments. For each individual segment where numeric standards for total phosphorus, total nitrogen, and chlorophyll a have not yet been adopted, numeric standards will be adopted by the Commission where necessary to:

- (i) protect the assigned use classifications, and
- (ii) comply with the Colorado Water Quality Control Act and the Federal Act.

(h) Site-Specific Flexibility to Consider Alternatives to the Interim Values

In accordance with the preceding subsection, both before and after May 31, 2022, in considering adoption of numeric standards for specific water bodies in Colorado, the Commission may review relevant site-specific factors and conditions in determining what numeric standards are most appropriate, and may adopt standards, either more or less stringent than the 31.17(b)(c) and (d) interim values.

- (i) Where evidence demonstrates that an alternative numeric standard would be more appropriate for the protection of use classifications, the Commission may consider assigning ambient quality-based standards or site-specific criteria based standards as outlined in 31.7(1)(b)(ii-iii).
- (ii) Where it has been demonstrated that interim values are not feasible to achieve, the Commission may consider modifying the use classification as outlined in Section 31.6(2).
- (iii) Where the conditions established in Section 31.7(3)(a) are met, the Commission may consider granting a temporary modification.

31.18 Reserved.

31.19 Reserved.

31.20 STATEMENT OF BASIS AND PURPOSE (1979 ADOPTION)

These Regulations establish Basic Standards and an Antidegradation Standard (Section 3.1.11 and Section 3.1.8). They also establish a system for classifying State waters, for assigning standards and for granting temporary modifications. These Regulations do not classify State waters, nor do they assign any numeric standards except those radiological standards listed under Basic Standards. In addition, one of these Regulations is a control regulation. Section 3.1.4 makes it a violation to release pollutants into State waters without the treatment or other corrective action necessary to protect the beneficial uses of the waters, or to conduct, operate, or maintain facilities, processes, activities, or waste piles in such a way as to have any adverse effect on the beneficial or classified uses. This section gives the Colorado Water Quality Control Division greater flexibility to protect and maintain the quality of State waters. It is based on C.R.S. 1973, 25-8-102, 25-8-202(1), and 25-8-207(c).

The Colorado Water Quality Control Act requires the Commission to classify waters of the State. These regulations are intended to comply with the legislative intent as stated in C.R.S. 1973, 25-8-102(2):

"It is further declared to be the public policy of this state to conserve state waters and to protect, maintain, and improve the quality thereof for public water supplies, for protection and propagation of wildlife and aquatic life, and for domestic, agricultural, industrial, recreational, and other beneficial uses; to provide that no pollutant be released into any state waters without first receiving the treatment or other corrective action necessary to protect the legitimate and beneficial uses of such waters; to provide for the prevention, abatement, and control of new or existing water pollution; and to cooperate with other states and the federal government in carrying out these objectives."

In addition, the subject Regulations are consistent with the Federal Clean Water Act which states, in part: (Section 101(a))

"The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.....

- (1) it is the national goal that discharge of pollutants into the navigable waters be eliminated by 1985;