

Nutrient Criteria for the Texas Surface Water Quality Standards
TCEQ Staff Draft Example **Updated September 26, 2005**

Underlines indicate an addition to the existing standards.
Strikeouts indicate a deletion from the existing standards.
Bold italics indicate a change from the 7/12/05 draft example.

§307.3 Definitions and Abbreviations.

(a) Definitions. ...

...

(37) Nutrient criteria - Criteria that are established to protect *surface waters* from excessive growth of aquatic plants *such as phytoplankton, floating algae and floating higher plants, attached algae, and rooted plants*. Nutrient criteria can be expressed in terms of chlorophyll *a* concentration per unit volume or area, concentration of total or soluble reactive phosphorus in water, concentration of total or inorganic nitrogen in water, or similar measures.

§307.4 General Criteria

...

(e) Nutrients. Nutrients from permitted discharges or other controllable sources shall not cause excessive growth of aquatic vegetation which impairs an existing, attainable, or designated use. Site-specific nutrient criteria, nutrient permit limitations, and/or separate rules to control nutrients in individual watersheds will be established where appropriate after notice and opportunity for public participation and proper hearing. Site-specific criteria related to nutrients and aquatic plants are listed in Appendix F of this title.

§307.7 Site-specific Uses and Criteria.

...

(b) Appropriate uses and criteria ...

...

(4) Additional criteria.

...

(E) Nutrient criteria. Criteria to preclude excessive growth of aquatic plants are intended to protect multiple uses, such as *contact and noncontact* recreation, aquatic life, and public water supplies. Nutrient criteria for specific reservoirs, expressed as concentrations of chlorophyll *a* in water, are listed in Appendix F of this title.

§307.8 Application of Standards.

...

(b) Mixing zones ...

(1) The following portions of the standards do not apply within mixing zones:

...

(I) Nutrient criteria (e.g., chlorophyll *a*)

§307.9 Determination of Standards Attainment.

...

(c) Collection and preservation of water samples.

...

(2) ... Standards for chloride, sulfate, total dissolved solids, ~~and pH, and nutrient criteria~~ are applicable to the mixed surface layer, but a single sample taken near the surface normally provides an adequate representation of these parameters.

...

(e) Sampling periodicity and evaluation.

...

(7) Nutrient criteria. Standards attainment will be based on the average of at least 10 measurements taken over a period of at least one year. In reservoirs, nutrient criteria apply to the main pool; and compliance is assessed using the mean of long term data from one or more stations that represent conditions in deep, open-water areas of the main pool adjacent to the dam.

§307.10 Appendices A - E F.

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Appendix F - Site-specific Nutrient Criteria

In the following table, nutrient criteria for selected reservoirs are specified in terms of concentrations of chlorophyll *a* in water as a measure of the density of phytoplankton (suspended microscopic algae). Nutrient criteria are expressed as averages over at least an annual period, and the criteria are applicable to the main pool of each reservoir (see §307.9 (c)(2) and §307.9(e)(7)). For reservoirs where the calculated are criteria are less than 5.00 micrograms per liter, the criteria will be considered to be 5.00 micrograms per liter.

[Criteria formulations were based on the following steps and assumptions:

- (1) Available data from 1970 through 2003.
- (2) Selected sampling stations represent the deep pool of each reservoir near the dam.
- (3) Criteria represent average conditions with an allowance for statistical variability.
- (4) Criteria are calculated as the upper confidence interval of the mean (0.01 confidence level), with the assumption that a sample size of 10 is used to assess a statistically significant departure from the mean.]