

Supplement 4. Nutrient Ecoregions and EPA's nutrient criteria.

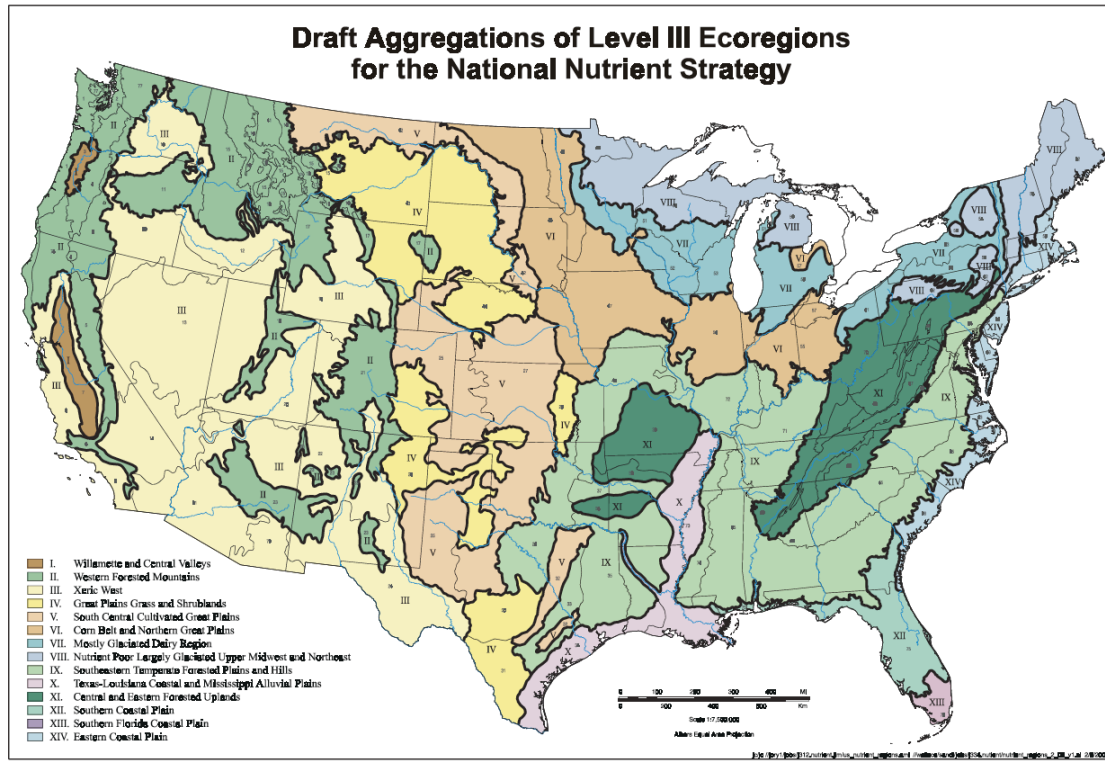


Figure 1a. Fourteen nutrient Ecoregions as delineated by Omernik (2000). Ecoregions were based on geology, land use, ecosystem type, and nutrient conditions.

United States Environmental Protection Agency, Office of Water, Ambient Water Quality Criteria Recommendations EPA 822-B-01-008, December 2001. Page 4

The URL may change, but you are likely to be able to find the document again by searching for the title above. At the time of writing this exercise the URL was:

[http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/upload/2007\\_09\\_27\\_criteria\\_nutrient\\_ecoregions\\_lakes\\_lakes\\_3-2.pdf](http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/upload/2007_09_27_criteria_nutrient_ecoregions_lakes_lakes_3-2.pdf)

The following is a summary of EPA's findings, accessible here:

[http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/upload/2007\\_09\\_27\\_criteria\\_nutrient\\_ecoregions\\_sumtable.pdf](http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/upload/2007_09_27_criteria_nutrient_ecoregions_sumtable.pdf)

**Summary Table for the Nutrient Criteria Documents**

This table presents the recommended EPA criteria for each of the aggregate nutrient ecoregions for the following parameters: Total Phosphorus, Total Nitrogen, Chlorophyll a, and Turbidity or Secchi.

**Aggregate Ecoregions for Rivers and Streams**

Parameter	Agg Ecor I	Agg Ecor II	Agg Ecor III	Agg Ecor IV	Agg Ecor V	Agg Ecor VI	Agg Ecor VII	Agg Ecor VIII	Agg Ecor IX	Agg Ecor X	Agg Ecor XI	Agg Ecor XII	Agg Ecor XIV
TP µg/L	47.00	10.00	21.88	23.00	67.00	76.25	33.00	10.00	36.56	128*	10.00	40.00	31.25
TN mg/L	0.31	0.12	0.38	0.56	0.88	2.18	0.54	0.38	0.69	0.76	0.31	0.90	0.71
Chl a µg/L	1.80	1.08	1.78	2.40	3.00	2.70	1.50	0.63	0.93	2.10	1.61	0.40	3.75
Turb FTU/ NTU	4.25	1.30 N	2.34	4.21	7.83	6.36	1.70 N	1.30	5.70	17.50	2.30 N	1.90 N	3.04

\*This value appears inordinately high and may either be a statistical anomaly or reflects a unique condition. In any case, further regional investigation is indicated to determine the sources, i.e., measurement error, notational error, statistical anomaly, natural enriched conditions, or cultural impacts.

Turb - Turbidity

Chl a - Chlorophyll a measured by Fluorometric method, unless specified. S is for Spectrophotometric and T is for Trichromatic method.

N for NTU. Unit of measurement for Turbidity.