United States Environmental Protection Agency
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STATE ADOPTION OF NUMERIC NUTRIENT STANDARDS (1998-2008)

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Notice

Beginning in 1998, EPA recommended in a series of policy memoranda that States accelerate the development and adoption of numeric nutrient water quality standards. These policy memoranda and other related guidance documents are designed to implement national policy. They are not regulations nor do they contain or constitute a determination that new or revised nutrient water quality standards are necessary in a particular or site-specific context to meet the requirements of the Clean Water Act. State and Tribal decision-makers retain discretion to adopt water quality standards based on other scientifically defensible approaches that may differ from the recommendations in EPA guidance.

1.0 Purpose of the Report

Nitrogen and phosphorus (or nutrient) pollution is a leading cause of water quality impairments in the U.S. As a consequence, EPA has made protecting and restoring the nation's waters from nitrogen and phosphorus pollution a top priority. This priority was most recently articulated in a memorandum[1] from EPA Assistant Administrator for Water, Benjamin Grumbles, in May 2007 to State, Great Water Body, Interstate, and authorized Tribal Water Programs.

During the past ten years, EPA has worked in partnership with States, Territories, authorized Tribes and certain River Basin Commissions to adopt numeric nutrient criteria into water quality standards. These standards are critical for preventing the harmful effects of nitrogen and phosphorus pollution in the nation's waters and for restoring water quality from the impairments caused by this pollution.

This report follows up on the commitment in the May 2007 memorandum that EPA would periodically publish a report on State progress in adopting numeric nutrient water quality standards[2]. The report focuses on progress made by the 50 States[3] in adopting numeric nutrient standards for their major waterbody types (lakes and reservoirs, rivers and streams, estuaries, and wetlands) since 1998 when EPA released its "National Strategy for the Development of Regional Nutrient Criteria"[4].

It is important to note that there are a range of innovative and effective tools and other management approaches to address nutrient pollution problems, including total maximum daily loads (TMDLs), best management practices (BMPs), trading, economic incentives, and technology-based control approaches. However, EPA believes that numeric nutrient water quality standards provide an important foundation to accelerate, guide, calibrate, and evaluate the implementation of these tools.

2.0 Scope of the Nitrogen and Phosphorus Pollution Problem

Excessive amounts of nitrogen and phosphorus in our nation's waterways are a form of pollution that leads to significant adverse ecological impacts. The effects may occur close to the sources of nitrogen and phosphorus pollution or they may be manifested downstream from the sources,

[1] Grumbles, B.H. 2007. U.S. EPA. (Memorandum to Directors of State Water Programs, Directors of Great Water Body Programs, Directors of Authorized Tribal Water Quality Standards Programs and State and Interstate Water Pollution Control Administrators on Nutrient Pollution and Numeric Water Quality Standards. May 25, 2007).

[2] Water quality standards are established by state law or regulation and include designated uses, criteria to protect uses, and anti-degradation policies. This report generally uses the terms "numeric nutrient standards" or "numeric nutrient criteria" to refer to the numeric nutrient criteria adopted into water quality standards by the States. The term water quality criteria is used in two different ways under the CWA. Under CWA section 304(a), EPA publishes recommended water quality criteria guidance that consists of scientific information such as concentrations of specific chemicals or levels of parameters in water that protect aquatic life and human health. States may use these recommended criteria as the basis for water quality criteria legally adopted as elements of State water quality standards under CWA section 303(c).

[3] The five U.S. Territories (U.S. Virgin Islands, Guam, American Samoa, Commonwealth of Northern Mariana Islands, and Commonwealth of Puerto Rico), District of Columbia, River Basin Commissions (Delaware River Basin Commission, Ohio River Valley Sanitation Commission) and authorized Tribes also develop and adopt numeric nutrient standards; however, they are not included in the report's cumulative statistics. The status of the District of Columbia's, each Territory's and River Basin Commission's progress in adopting numeric nutrient standards is noted in Appendix A (State Profiles) and Appendix C (Summary of Territory/Other Numeric Nutrient Standards Adoption: 1998 vs. 2008).

[4] U.S. EPA. 1998. National Strategy for the Development of Regional Nutrient Criteria. Office of Water, Washington, D.C. EPA 822-R-98-002.

sometimes hundreds of miles away. The well-documented adverse effects of nitrogen and phosphorus pollution include harmful algal blooms, reduced spawning grounds and nursery habitats, fish kills, oxygen-starved hypoxic or "dead" zones where fish and aquatic life can no longer survive, and public health concerns related to impaired drinking water sources and increased exposure to toxic microbes such as certain forms of cyanobacteria. Hypoxic events caused by nitrogen and phosphorus pollution have become a national concern with regular, persistent events occurring in the northern Gulf of Mexico, Chesapeake Bay, Long Island Sound, and Hood Canal in Washington State. Collectively, these effects can cause severe economic hardship for local tourist-based and fishing economies. The significance of these events has led EPA, States, and the public to come together to place a priority on public partnerships, collaboration, better science, and improved tools to reduce nutrient pollution.

As noted above, nitrogen and phosphorus pollution is the cause of significant and widespread environmental problems in many of our nation's lakes, reservoirs, rivers, streams, estuaries, and wetlands. It is identified as one of the top causes of water quality impairments in the U.S. and a persistent threat to water quality. In 2006, EPA documented[5] over 3 million acres of lakes, reservoirs, and ponds, 75,000 miles of rivers and streams, nearly 900 square miles of bays and estuaries, and over 70,000 acres of wetlands whose water quality was impaired due to nitrogen and phosphorus pollution. Forty-nine States have Clean Water Act (CWA) Section 303(d)-listed impairments for nitrogen and phosphorus pollution. States have listed over 10,000 nutrient-related impairments, with 15 States listing more than 200 nutrient-related impairments. Population growth, with its accompanying urban, suburban, and agricultural development, increases the sources and magnitude of nitrogen and phosphorus pollution.[6]

3.0 Why Numeric Nutrient Standards are Important

State water quality standards are the foundation for protecting the quality of the nation's surface waters and are the cornerstone of the water quality-based control program mandated by the CWA. Standards describe the desired condition of a waterbody and consist of three principal elements: (1) the "designated uses" of the state's waters (e.g., fishing, aquatic life, drinking water); (2) "criteria" specifying the amounts of various pollutants, in either numeric or narrative form, that may be present in those waters without impairing the designated uses; and (3) anti-degradation policies providing for protection of existing water uses and limitations on degradation of high quality waters. EPA has recommended that States adopt numeric nutrient standards. Numeric standards provide a quantitative measure for nitrogen or phosphorus, as well as other parameters. As a result, numeric nutrient standards:

- Provide measurable, objective water quality baselines against which to measure environmental progress;
- Facilitate the writing of protective National Pollution Discharge Elimination System (NPDES) permits;
- Make development of water quality targets in TMDLs faster and easier;

[5] EPA Water Quality Assessment and Total Maximum Daily Loads Information (ATTAINS) website: http://epa.gov/waters/ir/

[6] Sources of nitrogen and phosphorus pollution are typically categorized as point sources (e.g., industrial wastewater discharges, municipal sewage treatment discharges, etc.) and non-point sources (e.g., runoff from agricultural lands, range and pasture lands, suburban lawns, golf courses).

- Increase the effectiveness in evaluating success of nutrient runoff minimization programs;

- Provide quantitative targets to support trading programs;

- Support broader partnerships to employ best management practices (BMPs), land stewardship, wetlands protection, voluntary collaboration, and urban storm water runoff control strategies; and

- Identify the water quality goals being sought, and thus enhance greater public participation and a more transparent process.

4.0 Measuring Progress and Reporting Results

This report provides the status of State progress in adopting numeric nutrient criteria into water quality standards in the 10 years since EPA issued its "National Strategy for the Development of Regional Nutrient Criteria" in June 1998. That strategy recognized the growing problem of nitrogen and phosphorus pollution and laid out the expectation that all States should develop numeric standards to protect their waters from this pollution. In 2001[7], EPA reaffirmed the importance of States adopting numeric nutrient standards and encouraged each State to develop a plan to adopt standards. EPA also stated the expectation that States and EPA would mutually agree to those plans. In 2007[8], EPA reiterated its expectation that States adopt numeric nutrient standards and urged States to accelerate the pace for adoption of those standards. To be most effective, numeric nutrient standards should address causal (both total nitrogen [TN] and total phosphorus [TP]) and response (chlorophyll *a* and water clarity) variables for all waters that contribute nutrient loadings to the nation's waterways. Since 1998, EPA has completed a suite of technical tools for States to use in developing numeric nutrient criteria (i.e., technical guidance manuals for deriving criteria and eco-regional numeric nutrient criteria recommendations).

This report provides an update on State progress in adopting numeric nutrient standards. Current status is characterized in terms of numeric nutrient standards adopted by States and approved by EPA for any of EPA's recommended parameters (TN, TP, chlorophyll a, and clarity) for any waterbody type: lakes and reservoirs, rivers and streams, estuaries, and wetlands. This report describes the parameters and waterbody types for which States have adopted numeric nutrient standards and also notes incremental progress towards that goal. This includes State adoption of numeric nutrient water quality standards for one or more parameters for all of one or more waterbody types. EPA also recognizes that States have made positive, incremental steps by adopting criteria for a parameter(s) for selected waters within a waterbody type (e.g., lakes/reservoirs used for recreation versus lakes/reservoirs used solely for drinking water, segments of a river rather than all rivers/streams).

[7] Grubbs, G. 2001. U.S. EPA. (Memorandum to Directors of State Water Programs, Directors of Great Water Body Programs, Directors of Authorized Tribal Water Quality Standards Programs and State and Interstate Water Pollution Control Administrators on Development and Adoption of Nutrient Criteria into Water Quality Standards. November 14, 2001).

[8] Grumbles, B.H. 2007. U.S. EPA. (Memorandum to Directors of State Water Programs, Directors of Great Water Body Programs, Directors of Authorized Tribal Water Quality Standards Programs and State and Interstate Water Pollution Control Administrators on Nutrient Pollution and Numeric Water Quality Standards. May 25, 2007).

The report focuses on the States' adoption of numeric nutrient standards for protection against eutrophication[9] and the effects of eutrophication. The report also documents the status of each State's nutrient criteria plan. A plan, developed by the State, reflects its blueprint for developing and adopting numeric nutrient criteria into water quality standards. Nutrient criteria plans vary by State due to differences in the types of waters within the State, State priorities, and other considerations. In general, however, the plans describe the State's approach for developing numeric nutrient criteria, their process, milestones, and expected dates for the adoption of criteria into their water quality standards. Most nutrient criteria plans[10] reflect shared expectations by States and EPA for developing and adopting numeric nutrient criteria into water quality standards. This report documents which States have nutrient criteria plans, what they provide for, including the waterbodies and parameters for which criteria will be developed, and expected dates of standards adoption.

5.0 What States Have Achieved

This report is organized into two sections -- national summaries of progress and State profiles. The State profiles in Appendix A provide the status of each State's currently adopted numeric nutrient standards and plans for future development and adoption. The national summaries are aggregates of data drawn from these profiles.

National Summaries

1998 to 2008: Trends in State Adoption of Numeric Nutrient Standards

States have developed and adopted numeric nutrient standards for a range of nutrient parameters and for a range of waterbody types. Figures 1 and 2 and Table 1 depict the status of numeric nutrient standards adoption in 1998 and 2008, respectively. In 1998, six States had adopted numeric nutrient standards for at least one nutrient parameter for at least one entire waterbody type. By 2008, seven States had adopted numeric nutrient standards for at least one nutrient parameter for at least one entire waterbody type. States have made more progress in adopting numeric nutrient standards for selected waters within a waterbody type. In 1998, seven States had adopted numeric nutrient standards for one or more parameters for part of one or more waterbody types. By 2008, 18 States had adopted numeric nutrient standards for one or more parameters for part of one or more waterbody types. For more detail on State-adopted numeric nutrient standards by year and waterbody type, see Appendix B.

2008 Status of State Adoption of Numeric Nutrient Standards

The 2008 status of State numeric nutrient standards adoption by waterbody type is summarized in Table 1. As in Figures 1 and 2, the status of State adoption is differentiated on the following basis: whether a State adopted numeric nutrient standards for both causal and response

[9] The report excludes numeric nutrient standards developed to protect against the acute toxic effects of nitrogen, specifically nitrate and nitrite (NO_3 and NO_2, respectively), and phosphorus, specifically elemental phosphorus, on humans and/or livestock utilizing surface waters for drinking and source water supply. Although important, these numeric nutrient standards typically were not developed to protect against eutrophication. Eutrophication is an increase in organic carbon to an aquatic ecosystem caused by primary productivity stimulated by excess nutrients -- typically compounds containing nitrogen or phosphorus. Eutrophication can adversely affect aquatic life, recreation, and human health (e.g., toxic microbe production) uses of waters. The report also excludes numeric turbidity criteria associated with suspended sediments and which were not developed to protect against eutrophication.

[10] Nutrient criteria plans provide a guide for EPA and States to achieve the goal of numeric nutrient standard adoption. They are not legally binding on States, do not constitute criteria, nor meet the requirements of the CWA on their own.

parameters for an entire waterbody type, whether a State adopted numeric nutrient standards for one or more parameters for an entire waterbody type, whether a State has adopted numeric nutrient standards for one or more parameters for selected waters within a waterbody type, and if a State has not adopted numeric nutrient standards. State adoption of numeric nutrient standards for one or more parameters for selected waters within a waterbody type is also noted and further detailed in each State's profile in Appendix A.

Lakes/Reservoirs

- Six States have adopted numeric nutrient standards for one or more parameters for all of their lakes/reservoirs;
- Thirteen States have adopted numeric nutrient standards for one or more parameters for part of their lakes/reservoirs; and
- Thirty-one have not adopted numeric nutrient standards for their lakes/reservoirs.

Rivers/Streams

- Five States have adopted numeric nutrient standards for one or more parameters for all of their rivers/streams;
- Nine States have adopted numeric nutrient standards for one or more parameters for part of their rivers/streams; and
- Thirty-six have not adopted numeric nutrient standards for their rivers/streams.

Estuaries (for the 24 States that have estuaries)

- Three States have adopted numeric nutrient standards for one or more parameters for all of their estuaries;
- Seven States have adopted numeric nutrient standards for one or more parameters for part of their estuaries; and
- Fourteen States have not adopted numeric nutrient standards for their estuaries.

Wetlands

- No State has adopted numeric nutrient standards for one or more parameters for all of its wetlands;
- Four States have adopted numeric nutrient standards for one or more parameters for part of their wetlands;
- Forty-six States have not adopted numeric nutrient standards for their wetlands.

Status of State Nutrient Criteria Plans

Overall, an analysis of plans indicates the following:

- 46 of 50 States have plans[11] which have been reviewed by EPA and are being used to guide numeric nutrient criteria development.
- Three States (HI[12], OR, and SD) have not submitted a plan to EPA.
- One State (CA) submitted a plan to EPA in 2001, but is no longer using it to guide its numeric nutrient criteria development.

[11] Forty-three of these plans have been mutually agreed to by EPA and the State; three of these plans have not yet been mutually agreed upon.
[12] Hawaii has already adopted standards for its waterbody types.

Of the 46 State plans which EPA reviewed and States use to guide criteria development:

- 33 plans include projected adoption dates for at least one waterbody type. Of these 33 plans, and seven include at least one adoption date that has passed and have not been met. Four include adoption dates that have been met.
- 13 plans do not include projected adoption dates.

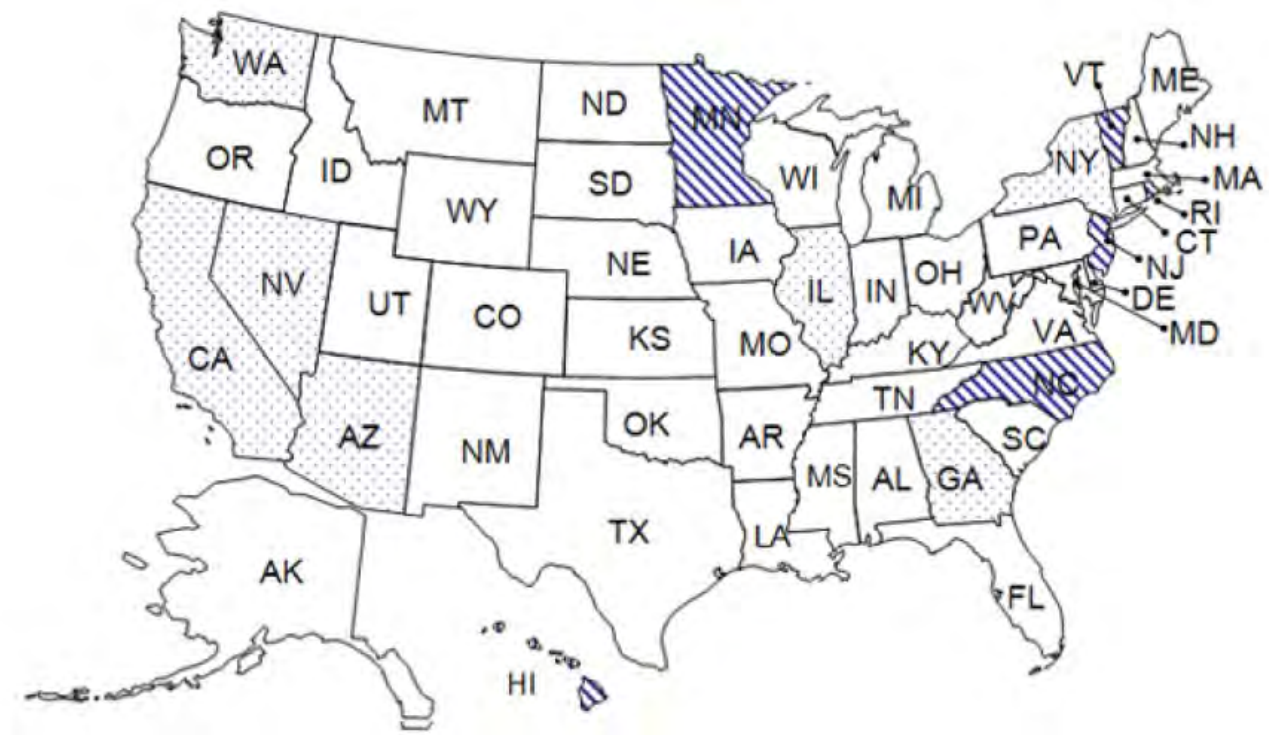
As noted previously, these plans vary considerably in terms of whether they include adoption dates for standards or interim milestone dates for achieving standards adoption. They also vary in terms of whether the original projection dates for adoption of standards have remained unchanged or have been routinely updated. For more detail on each State's plan, see Appendix A.

State Profiles

Existing numeric nutrient standards are provided in Appendix A and B. Numeric nutrient standards as of 1998 and 2008 are listed. Appendix A also includes State nutrient criteria plan information for developing and adopting numeric nutrient standards to protect against eutrophication and its effects. This information includes the date of the plan, the nutrient parameters being pursued, priority waterbodies considered for criteria adoption, and projected dates for standards adoption.

Figure 1

1998 Status of State Adoption of Numeric Nutrient Criteria into Water Quality Standards



Adopted numeric criteria for one or more parameters for at least one entire waterbody type (6 States)

Adopted numeric criteria for one or more parameters for selected individual waters in a waterbody type (7 States)

Has not adopted numeric criteria (37 States)

Figure 2

2008 Status of State Adoption of Numeric Nutrient Criteria into Water Quality Standards

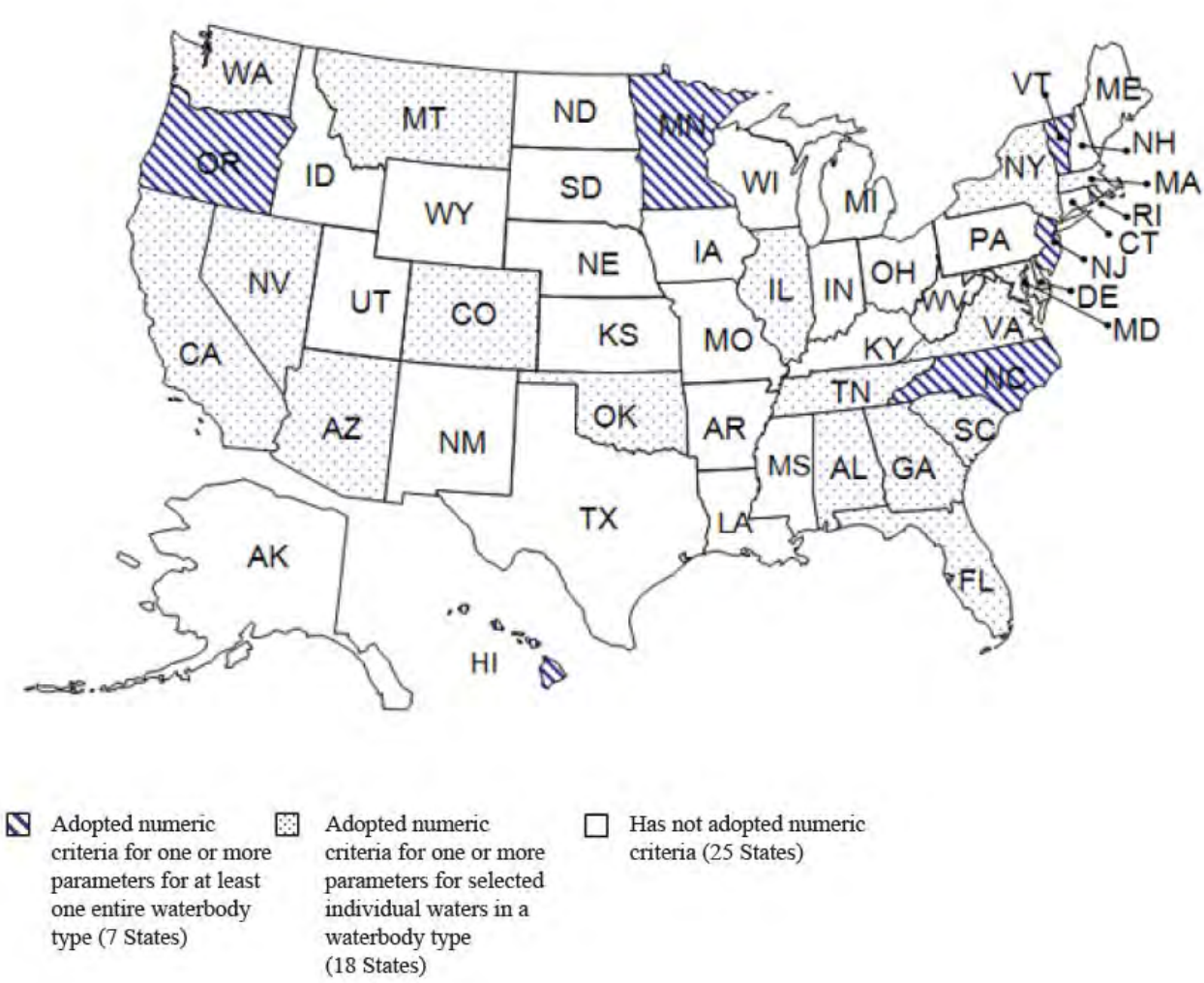


Table 1

Number of States with Adopted Numeric Nutrient Standards by Year and Waterbody Type

Numeric Nutrient Standards Status by Year	4 Parameters 4 Waterbody Types[1]	1+ Parameters 1+ Entire Waterbody Types[2]	1+ Parameters Selected Waters[3]	No Numeric Criteria[4]
1998	0	6	7	37
2008	0	7	18	25
2008 Numeric Nutrient Standards Status by Waterbody Type	**4 Parameters 4 Waterbody Types[5]**	**1+ Parameters 1+ Entire Waterbody Types[6]**	**1+ Parameters Selected Waters[7]**	**No Numeric Criteria[4]**
Lakes/Reservoirs	0	6	13	31
Rivers/Streams	0	5	9	36
Estuaries (24 eligible States)	0	3	7	14
Wetlands	0	0	4	46

[1] Adopted numeric criteria for all four parameters (TN, TP, Chlorophyll-*a*, and Clarity) for all waterbody types.
[2] Adopted numeric criteria for one or more parameters for at least one entire waterbody type.
[3] Adopted numeric criteria for one or more parameters for selected individual waters in one or more waterbody types.
[4] Has not adopted numeric criteria.
[5] Adopted numeric criteria for all four parameters for the entire waterbody type.
[6] Adopted numeric criteria for one or more parameters for the entire waterbody type.
[7] Adopted numeric criteria for one or more parameters for selected individual waters in a waterbody type. (See the State Profile for details)

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APPENDIX A:
STATE PROFILES

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Alabama

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs			◘[2]	
Rivers/Streams				
Estuaries				
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From AL Water Quality Criteria, effective December 3, 2007. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

[2] Numeric criteria for selected lakes (29 of 41 most significant lakes in AL).

Nutrient Criteria Plan

Y/N: Yes

Date: September 14, 2007 (revised)

Nutrient Parameters: Chlorophyll-*a*, TP, TN, and Secchi depth

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2011

Rivers/Streams - 2012

Estuaries - 2013

Wetlands - 2015

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/al/al_4_wqs.pdf

http://www.adem.alabama.gov/WaterDivision/WQuality/WQMainInfo.htm

N/A = Not Applicable

Alaska

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries				
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From AK Water Quality Standards, effective February 27, 2004. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: April, 2004

Nutrient Parameters: TN, TP, Chlorophyll-*a* and Secchi depth.

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2007

Rivers/Streams - After lakes

Estuaries - No date

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ak/ak_10_wqs.pdf

http://dec.alaska.gov/water/wqsar/wqs/Regulations.htm

N/A = Not Applicable

American Samoa

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs	●*	●*		●[2,] *
Rivers/Streams	●*	●*		●[2,] *
Estuaries	●*	●*	●*	●[2,] *
Wetlands	●*	●*		●[2,] *

● = Statewide ◘ = For selected waterbody

[1] From American Samoa Water Quality Standards, 1999 Revision, effective April 24, 2006. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] Clarity criteria for turbidity, TSS and light penetration depth.
*Standard present in 1998.

Nutrient Criteria Plan

Y/N: No

Date: N/A

Nutrient Parameters: TN, TP, Chlorophyll-*a*, light penetration, turbidity and TSS

Projected Date for Criteria Adoption:

Lakes/Reservoirs - N/A (standards revised April 24, 2006)

Rivers/Streams - N/A (standards revised April 24, 2006)

Estuaries - N/A (standards revised April 24, 2006)

Wetlands - N/A (standards revised April 24, 2006)

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: http://americansaoma.gov.departments.agencies/epa.htm

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/territories/american_samoa_9_wqs.pdf

N/A = Not Applicable

Arizona

Existing Numeric Water Quality Standards For Nutrients [1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs	◘[2, *]	◘[2, *]		
Rivers/Streams	◘[2, *]	◘[2, *]		◘[2, *]
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From AZDEQ Water Quality Standards, effective October 22, 2002. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

[2] TN, Nitrate, TP and turbidity for selected waters and designated uses.

*Standard present in 1998.

Nutrient Criteria Plan

Y/N: Yes

Date: April, 2008 (revised)

Nutrient Parameters: For lakes proposing TN, TP, TKN, Chlorophyll-*a*, Secchi Depth, Blue Green Algae (concentration and abundance), DO, pH

Projected Date for Criteria Adoption:

Lakes/Reservoirs - No date

Rivers/Streams - No date

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/az/az_9_wqs.pdf

http://www.azsos.gov/public_services/title_18/18-11.pdf

http://www.azdeq.gov/environ/water/standards/index.html

N/A = Not Applicable

Arkansas

Existing Numeric Water Quality Standards For Nutrients [1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From Arkansas Pollution Control and Ecology Regulation No. 2: Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas, effective January 24, 2008. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: April 14, 2008 (revised)

Nutrient Parameters: For Rivers/Streams: 72-h diurnal DO, pH, nitrite+nitrate-N, TP, ortho-phosphate as P, algal cover, periphyton thickness, algal filament length, Macroinvertebrate Biotic Metrics, Fish Biotic Metrics, Turbidity. For Lakes/Reservoirs: Chlorophyll-*a*, water clarity (Secchi depth), turbidity, nitrogen, and phosphorus.

Projected Date for Criteria Adoption:

Lakes/Reservoirs - No date

Rivers/Streams - No date

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: http://www.adeq.state.ar.us

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ar/ar_6_wqs.pdf

http://www.adeq.state.ar.us/water/regulations.htm

N/A = Not Applicable

California

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes	◘[2,3,4,5,6 , *]	◘[3,4,5,6, *]	◘[3,4,7, *]	◘[3,4,6,7,8, *]
Reservoirs	◘[2,3,5,6, *]	◘[3,5,6, *]		◘[3,6,8, *]
Rivers	◘[2,3,5,6, *]	◘[3,5,6, *]		◘[3,6,8, *]
Streams	◘[2,3,5,6, *]	◘[3,5,6, *]		◘[3,6,8,9, *]
Estuaries	◘[2,6,*]	◘[6, *]		◘[6,8, *]
Wetlands	◘[2,6, *]	◘[6, *]		◘[3,8, *]

● = Statewide ◘ = For selected waterbody

[1] State numeric nutrient criteria for drinking water/source water protection were not considered in the table. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

[2] From Water Quality Control Plan: Los Angeles Region, effective 2/25/95; Nitrate+Nitrite-N for select waterbodies.

[3] From Water Quality Control Plan for the Lahontan Region, North and South Basins, effective 10/94; Secchi depth in specific waters.

[4] Specific to Fallen Leaf Lake and Lake Tahoe in Lahontan Region.

[5] TN, TP, Nitrate-N & orthophosphate in specific waters in Lahontan Region.

[6] From Water Quality Control Plan for the San Diego Basin, effective 3/12/97: TN, TP, and Secchi depth.

[7] Eagle Lake specific in Lahontan Region for Chl-a.

[8] From Water Quality Control Plan (Basin Plan) for the CA Regional Water Quality Control Board, Central Valley Region, Fourth Edition—1998, The Sacramento River Basin and The San Joaquin River Basin, effective 9/15/98: Turbidity as NTUs: specific criteria for Folsom Lake, American River and Delta waters.

[9] From Amendment to Water Quality Control Plan for the Sacramento and San Joaquin River Basins for Deer Creek, effective 10/15/03: Turbidity as maximum 5 NTUs.

*Standard present in 1998.

Nutrient Criteria Plan

Y/N: No (but had a plan in 2001)

Date: N/A

Nutrient Parameters: N/A

Projected Date for Criteria Adoption:

Lakes/Reservoirs - N/A

Rivers/Streams - N/A

Estuaries - N/A

Wetlands - N/A

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ca/index.html

http://www.wq.water.ca.gov/owq_content/regulations.cfm

N/A = Not Applicable

Colorado

Existing Numeric Water Quality Standards For Nutrients [1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs		◘[2]		
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From CO Basic Standards and Methodologies for Surface Water, effective December 31, 2007. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

[2] For Cherry Creek Reservoir, Chatfield Reservoir, Dillon Reservoir and Segment 3 of the Blue River.

Nutrient Criteria Plan

Y/N: Yes

Date: September 26, 2002

Nutrient Parameters: TP, TN, Chlorophyll-*a*, Secchi depth or turbidity

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2010 Rulemaking hearing

Rivers/Streams - 2010 Rulemaking hearing

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/co/reg31-20051231.pdf

http://www.cdphe.state.co.us/regulations/wqccregs/wqccreg31basicstandardsforsurfacewater.pdf

N/A = Not Applicable

Commonwealth of N. Mariana

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs	●*	●[2, *]		●[3, *]
Rivers/Streams	●*	●[2, *]		●[3, *]
Estuaries	●*	●[2, *]		●[3, *]
Wetlands	●*	●[2, *]		●[3, *]

● = Statewide ◘ = For selected waterbody

[1] From Commonwealth of the Northern Mariana Islands Water Quality Standards, revised October 28, 2004. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] Includes TP and orthophosphate.
[3] Clarity as turbidity (includes total filterable suspended solids).
*Standard present in 1998.

Nutrient Criteria Plan

Y/N: No

Date: N/A

Nutrient Parameters: TN, TP and Turbidity

Projected Date for Criteria Adoption:

Lakes/Reservoirs - N/A (standards revised October 28, 2004)

Rivers/Streams - N/A (standards revised October 28, 2004)

Estuaries - N/A (standards revised October 28, 2004)

Wetlands - N/A (standards revised October 28, 2004)

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/territories/northern_mariana_9_wqs.pdf

http://www.deq.gov.mp/artdoc/Sec9art52ID133.pdf

N/A = Not Applicable

Connecticut

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries				
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From CT Water Quality Standards, effective December 17, 2002.
State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes (but plan is not mutually-agreed upon with EPA Region 1)

Date: January 20, 2005 (revised)

Nutrient Parameters: TP, Chlorophyll-*a* and Secchi depth; not considering TN at this time.

Projected Date for Criteria Adoption:

Lakes/Reservoirs - No date

Rivers/Streams - No date

Estuaries - No date

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ct/ct_1_wqs.pdf

http://www.ct.gov/dep/lib/dep/water/water_quality_standardsl/wqs.pdf

N/A = Not Applicable

Delaware

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	◘[2]	◘[2]		◘[3]
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From DE Surface Water Quality Standards as amended July 11, 2004. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

[2] For tidal portions of the stream basins of Indian River, Rehoboth Bay, and Little Assawoman Bay, controls needed to attain submerged aquatic vegetation growth season (approximately March 1 to October 31) average levels for dissolved inorganic nitrogen of 0.14 mg/L as N, for dissolved inorganic phosphorus of 0.01 mg/L as P, and for total suspended solids of 20 mg/L shall be instituted.

[3] DE has also adopted dissolved oxygen and Secchi disk criteria for its tidal Chesapeake Bay waters.

Nutrient Criteria Plan

Y/N: Yes

Date: 2004

Nutrient Parameters: TP, TN, Chlorophyll-*a*, clarity

Projected Date for Criteria Adoption:

Lakes/Reservoirs - Summer 2007

Rivers/Streams - Summer 2007

Estuaries - Summer 2007

Wetlands - Summer 2007

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/de/de_3_wqs.pdf

http://www.dnrec.state.de.us/DNREC2000/Divisions/Water/WaterQuality/Standards.htm

N/A = Not Applicable

District of Columbia

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries			◘[2]	◘[2, 3]
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From Title 21 of the District of Columbia Municipal Regulations, Chapter 11, Water Quality Standards, effective February 15, 2006. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] Apply to tidally influenced Class C waters and their designated uses. Determined by following guidelines documented in the 2003 United States Environmental Protection Agency publication: *Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and its Tidal Tributaries*, EPA-903-R-03-002, April 2003.
[3] For tidally influenced Class C waters, water clarity criteria is measured by Secchi Disc depth.

Nutrient Criteria Plan

Y/N: N/A

Date: N/A

Nutrient Parameters: Note: For the most part, nutrient criteria work for tidal waters was the adoption of the Chesapeake Bay criteria for DC's Potomac River section and the tidal Anacostia River per their October 28, 2005 Triennial Review WQS.

Projected Date for Criteria Adoption:

Lakes/Reservoirs - N/A

Rivers/Streams - N/A

Estuaries - N/A

Wetlands - N/A

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/dc/dc_3_register.pdf

http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,495456.asp

N/A = Not Applicable

Florida

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries				
Wetlands		◘[2]		

● = Statewide ◘ = For selected waterbody

[1] From FL Surface Water Quality Standards, effective October 10, 2006. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

[2] The State's TP numeric criteria for the Everglades Protection Area is not a wetland criteria per se, it is a water column value applied to a glades ecotype which includes the standing and slow flowing surface waters of a marsh system.

Nutrient Criteria Plan

Y/N: Yes

Date: September 26, 2007 (revised)

Nutrient Parameters: TP, TN, Chlorophyll-*a*

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2011

Rivers/Streams - 2011

Estuaries - No date

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.dep.state.fl.us/legal/Rules/shared/62-302/62-302.pdf

http://www.dep.state.fl.us/legal/Rules/shared/62-302/302-Table.pdf

http://www.dep.state.fl.us/water/wqssp/surface.htm

N/A = Not Applicable

Georgia

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs	◘[2,*]	◘[3,*]	◘[2,*]	
Rivers/Streams		◘[3,*]		
Estuaries				
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From GA Rules and Regulations for Water Quality Control Chapter 391-2-6, revised November, 2005. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] Numeric criteria for selected lakes.
[3] Numeric criteria for pounds per acre-foot of lake volume per year for selected streams (only streams which are tributaries to lakes in note 2).
*Standard present in 1998 for 3 (of 6) lakes in note 2.

Nutrient Criteria Plan

Y/N: Yes

Date: April, 2006

Nutrient Parameters: TP, TN, Chlorophyll-*a*, Secchi depth

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2012

Rivers/Streams - 2013

Estuaries - 2014

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ga/ga_4_wqs.pdf

http://www.georgiaepd.org/Documents/index_water.html

N/A = Not Applicable

Guam

Existing Numeric Water Quality Standards For Nutrients [1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs	●[2,*]	●[3,*]		●[4]
Rivers/Streams	●[2,*]	●[3,*]		●[4]
Estuaries	●[2,*]	●[3,*]		●[4]
Wetlands	●[2,*]	●[3,*]		●[4]

● = Statewide ◘ = For selected waterbody

[1] From Guam Water Quality Standards, 2001 Revision. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] Numeric standard for nitrate-nitrogen (NO_3-N).
[3] Numeric standard for orthophosphate (PO_4-P).
[4] Clarity criteria given as turbidity.
*Standard present in 1998.

Nutrient Criteria Plan

Y/N: No

Date: N/A

Nutrient Parameters: TN, TP, Turbidity, DO and pH

Projected Date for Criteria Adoption:

Lakes/Reservoirs - N/A (standards revised 2001)

Rivers/Streams - N/A (standards revised 2001)

Estuaries - N/A (standards revised 2001)

Wetlands - N/A (standards revised 2001)

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/territories/guam_9_wqs.pdf

http://www.guamepa.govguam.net/programs/water/

N/A = Not Applicable

Hawaii

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams	●[2,*]	●[*]		●[*]
Estuaries	●[2,*]	●[*]	●[*]	●[*]
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From HI Administrative Rules Title 11—Water Quality Standards, effective October 28, 2004. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] Includes TN and nitrate+nitrite as N.
*Standard present in 1998.

Nutrient Criteria Plan

Y/N: No

Date: N/A

Nutrient Parameters: TN, TP, Chlorophyll-*a*, turbidity (and others)

Projected Date for Criteria Adoption:

Lakes/Reservoirs - N/A

Rivers/Streams - N/A (standards revised August 31, 2004)

Estuaries - N/A (standards revised August 31, 2004)

Wetlands - N/A

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/hi/hawaii_9_wqs.pdf

http://gen.doh.hawaii.gov/sites/har/AdmRules1/11-54.pdf

N/A = Not Applicable

Idaho

Existing Numeric Water Quality Standards For Nutrients [1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	**N/A**	**N/A**	**N/A**	**N/A**
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From ID Water Quality Standards, effective June 4, 2007. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: November, 2007

Nutrient Parameters: TP, TN, Chlorophyll-*a*, periphyton, macroinvertebrates

Projected Date for Criteria Adoption:

Lakes/Reservoirs - No date

Rivers/Streams - No date

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/id/id_10_wqs.pdf

http://www.deq.state.id.us/water/data_reports/surface_water/monitoring/standards.cfm

N/A = Not Applicable

Illinois

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs		◘[2,*]		
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From IL Water Quality Criteria, effective August 9, 2006. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards. Illinois has numeric criteria for nitrogen and phosphorus for the open waters of Lake Michigan.

[2] Numeric criteria for phosphorus in any reservoir or lake with a surface area of 8.1 hectares (20 acres) or more, or in any stream at the point where it enters any such reservoir or lake.

*Standard present in 1998.

Nutrient Criteria Plan

Y/N: Yes

Date: September 6, 2006

Nutrient Parameters: Phosphorus, Chlorophyll-*a*

Projected Date for Criteria Adoption:

Lakes/Reservoirs - Winter 2009

Rivers/Streams - Winter 2009

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/il/il_5_c302.pdf

http://www.ipcb.state.il.us/SLR/IPCBandIEPAEnvironmentalRegulations-Title35.asp

N/A = Not Applicable

Indiana

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	**N/A**	**N/A**	**N/A**	**N/A**
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From IN Water Quality Standards, errata filed August 11, 1997. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards. Indiana has numeric criteria for nitrogen and phosphorus for the open waters of Lake Michigan.

Nutrient Criteria Plan

Y/N: Yes

Date: July, 2008 (revised)

Nutrient Parameters: TP, TN, Chlorophyll-*a*, turbidity, biological indices and DO

Projected Date for Criteria Adoption:

Lakes/Reservoirs - End of 2010

Rivers/Streams - End of 2010

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/in/in_5_wqs.pdf

http://www.in.gov/idem/4087.htm

N/A = Not Applicable

Iowa

Existing Numeric Water Quality Standards For Nutrients [1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From Chapter 61: IA Water Quality Standards, effective July 10, 2002.
State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: February 3, 2006

Nutrient Parameters: TP, TN, Chlorophyll-*a*, Secchi depth or turbidity

Projected Date for Criteria Adoption:

Lakes/Reservoirs - March 2007

Rivers/Streams - July 2008

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ia/ia_7_chapter61.pdf

http://www.iowadnr.com/water/standards/criteria.html

N/A = Not Applicable

Kansas

Existing Numeric Water Quality Standards For Nutrients [1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	**N/A**	**N/A**	**N/A**	**N/A**
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From Kansas Surface Water Quality Standards: Tables of Numeric Criteria, effective April 27, 2005. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes (but plan is not mutually-agreed upon with EPA Region 7)

Date: December 29, 2004

Nutrient Parameters: TP, TN, Chlorophyll-*a*

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2009

Rivers/Streams - No date

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ks/ks-wqs.pdf

http://www.kdheks.gov/water/

N/A = Not Applicable

Kentucky

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From KY Surface Water Standards, effective December 17, 2004.
State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: August 10, 2007 (revised)

Nutrient Parameters: TP, TN, Chlorophyll-*a*, Secchi depth

Projected Date for Criteria Adoption:

Lakes/Reservoirs - October 2010

Rivers/Streams - October 2010

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ky/ky-5031-200605.pdf

http://www.water.ky.gov/sw/wqstandards

N/A = Not Applicable

Louisiana

Existing Numeric Water Quality Standards For Nutrients [1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries				
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From LA Administrative Code Title 33, Part IX, Chapter 11—Surface Water Quality Standards, effective August 6, 2007. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: May 12, 2006

Nutrient Parameters: TP, TN, NO_3 (for large fast-flowing rivers)

Projected Date for Criteria Adoption:

Lakes/Reservoirs - January 2010

Rivers/Streams - January 2009 (January 2013 for big, interstate rivers)

Estuaries - No date

Wetlands - January 2009

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/la/la_6_wqs.pdf

http://deq.louisiana.gov/portal/Portals/0/planning/regs/title33/33v09.pdf

N/A = Not Applicable

Maine

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries				
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From ME 06-096 CMR 584, Surface Water Quality Criteria for Toxic Pollutants, effective October 9, 2005. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: September 19, 2005 (revised)

Nutrient Parameters: TP, TN, Chlorophyll-*a*

Projected Date for Criteria Adoption: **Note: Draft criteria have been submitted to EPA**

Lakes/Reservoirs - No date

Rivers/Streams - No date

Estuaries - No date

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/me/me_1_rule.pdf

http://www.maine.gov/dep/blwq/docstand/wd/docket/

N/A = Not Applicable

Maryland

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries				◘[2]
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From Annotated Code of Maryland Title 26 Department of the Environment, Subtitle 08 Water Pollution, Chapter 02 Water Quality. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

[2] Secchi disk clarity for waters in the Chesapeake bay drainage basin to implement guidance recommendations made by the EPA through the Chesapeake Bay Program. For the Chesapeake Bay, submerged aquatic vegetation (SAV) restoration acreage is a surrogate clarity indicator since clarity will determine the ability for SAVs to thrive and expand into known historic habitat.

Nutrient Criteria Plan

Y/N: Yes

Date: 2004

Nutrient Parameters: TP, Chlorophyll-*a*, Secchi depth

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2007

Rivers/Streams - 2007

Estuaries - Chesapeake Bay completed 2004

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/md/md-ch2-quality-20051130.pdf

http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/wqstandards/index.asp

N/A = Not Applicable

Massachusetts

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	◘[2]			
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From MA Water Quality Standards, effective March 26, 2007. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] Nitrogen criteria for selected estuaries.

Nutrient Criteria Plan

Y/N: Yes

Date: November 3, 2005 (revised)

Nutrient Parameters: TP, TN, dissolved P, Chlorophyll-*a*, filamentous algae coverage, floating plants, Secchi depth, DO

Projected Date for Criteria Adoption: **Note: Draft criteria have been submitted to EPA**

Lakes/Reservoirs - No date

Rivers/Streams - April 2007

Estuaries - No date

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ma/ma_1_wpc.pdf

http://www.mass.gov/dep/water/laws/regulati.htm

N/A = Not Applicable

Michigan

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From MI Water Quality Standards, effective January 13, 2006. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards. Michigan has numeric criteria for phosphorus for the open waters of Lake Michigan.

Nutrient Criteria Plan

Y/N: Yes

Date: March, 2007 (revised)

Nutrient Parameters: TP (will collect TN data to determine if nitrogen criteria is necessary for Michigan.) An evaluation will be made to determine if criteria for Chlorophyll-*a*, Secchi transparency or other response variables should be developed.

Projected Date for Criteria Adoption:

Lakes/Reservoirs - TBA

Rivers/Streams - TBA

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/mi/mi_5_wqs.pdf

http://www.michigan.gov/deq/0,1607,7-135-3313_3686_3728-11383--,00.html

N/A = Not Applicable

Minnesota

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs		●	●	●*
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From MN Water Quality Standards for Protection of Waters of the State dated April 1, 2008. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
*Standard present in 1998.

Nutrient Criteria Plan

Y/N: Yes

Date: July, 2008 (revised)

Nutrient Parameters: TP, Chlorophyll-*a*, Secchi depth

Projected Date for Criteria Adoption:

Lakes/Reservoirs - Adopted Spring 2008

Rivers/Streams - 2011

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/mn/7050.pdf

http://www.pca.state.mn.us/water/standards/index.html

N/A = Not Applicable

Mississippi

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries				
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From MS Water Quality Criteria for Intrastate, Interstate, and Coastal Waters, effective June 27, 2003. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: July, 2007 (revised)

Nutrient Parameters: TP, TN, Chlorophyll-*a*, turbidity

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2011

Rivers/Streams - 2011

Estuaries - 2011

Wetlands - No Date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ms/ms_4_wqs.pdf

http://www.deq.state.ms.us/mdeq.nsf/page/wmb_water_quality_standards?opendocument

N/A = Not Applicable

Missouri

Existing Numeric Water Quality Standards For Nutrients [1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From MO Rules of DNR, Division 20—Clean Water Commission, Chapter 7—Water Quality, February 29, 2008. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: July 25, 2005

Nutrient Parameters: TP, TN, Chlorophyll-*a*, Secchi depth, turbidity

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2009

Rivers/Streams - 2011

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/mo/index.html

http://www.dnr.mo.gov/env/wpp/wqstandards/index.html

N/A = Not Applicable

Montana

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams	◘[2, 3]	◘[2, 3]	◘[2, 3]	
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From MT Numeric Water Quality Standards, effective August 17, 2004. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] TN, TP and Chl-*a* criteria for selected streams.
[3] From Surface Water Quality Standards and Procedures, Sub-chapter 6, effective February 29, 2008.

Nutrient Criteria Plan

Y/N: Yes

Date: September 6, 2002

Nutrient Parameters: TP, TN, Chlorophyll-*a*, Secchi depth, $NO_{2/3}$

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2009

Rivers/Streams - No date

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.deq.state.mt.us/wqinfo/Standards/CompiledDEQ-7.pdf

http://www.deq.state.mt.us/wqinfo/standards/index.asp

N/A = Not Applicable

Nebraska

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs	†	†	†	
Rivers/Streams				
Estuaries	**N/A**	**N/A**	**N/A**	**N/A**
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From NE DEQ: Chapter 4—Standards for Water Quality, December 31, 2002. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
†TN, TP and Chl-a criteria for selected lakes/reservoirs adopted by state, but not approved by EPA.

Nutrient Criteria Plan

Y/N: Yes

Date: February, 2008

Nutrient Parameters: TP, TN, Chlorophyll-*a*

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2011

Rivers/Streams - No date

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ne/ne_7_wqs04.pdf

http://www.deq.state.ne.us/RuleAndR.nsf/pages/117-TOC

N/A = Not Applicable

Nevada

Existing Numeric Water Quality Standards For Nutrients [1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs	◘[2, 3]	◘[4, *]	◘[5, *]	◘[2, 6]
Rivers/Streams	◘[2, 3, *]	◘[4, *]		◘[2, 6]
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From NV Water Quality Regulations, effective May 15, 2007.
State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] For selected waters and uses.
[3] Includes TN and Nitrate-N, Nitrite-N and inorganic nitrogen for selected waters and uses.
[4] Includes TP and total phosphate for selected waters and uses
[5] For Lake Mead only.
[6] Includes turbidity and suspended solids.
*Standard present in 1998.

Nutrient Criteria Plan

Y/N: Yes

Date: June, 2007

Nutrient Parameters: TN, TP, Chlorophyll-*a*, Turbidity, TSS and DO

Projected Date for Criteria Adoption:

Lakes/Reservoirs - No date

Rivers/Streams - No date

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: http://ndep.nv.gov/bwqp/file/strategy_aug_07.pdf

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/nv/nv_9_wqs.pdf

http://ndep.nv.gov/bwqp/stdsw.htm

N/A = Not Applicable

New Hampshire

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries				
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From NH Surface Water Quality Regulations Chapter 1700, December 10, 1999. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: November 14, 2002

Nutrient Parameters: TP, TN, Chlorophyll-*a*, clarity

Projected Date for Criteria Adoption:

Lakes/Reservoirs - No date

Rivers/Streams - No date

Estuaries - No date

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/nh/nh_1_chapter1700.pdf

http://des.nh.gov/organization/divisions/water/wmb/swqa/index.htm

N/A = Not Applicable

New Jersey

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs	◘[2,*]	●[*]	◘[3]	◘[4,*]
Rivers/Streams	◘[2,*]	●[*]		◘[4,*]
Estuaries				◘[4,*]
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From NJ Surface Water Quality Standards, effective June, 2008.
State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] Criteria for Nitrate-N for Pinelands (PL) waters and their designated uses.
[3] Established pursuant to the TMDL Report for the non-tidal. Passaic River basin addressing phosphorus impairments dated April 28, 2008.
[4] Turbidity.
*Standard present in 1998.

Nutrient Criteria Plan

Y/N: Yes (plan is not mutually-agreed upon with EPA Region 2 and will be revised through stakeholder review)

Date: November, 2008 (revised)

Nutrient Parameters: P

Projected Date for Criteria Adoption/Refinement:

Lakes/Reservoirs - criteria existing, amendments to be adopted in 2010

Rivers/Streams - criteria existing, amendments to be adopted in 2010

Estuaries - No date

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.state.nj.us/dep/wms/bwqsa/docs/0608_SWQS.pdfhttp://www.state.nj.us/dep/wms/bwqsa/swqsdocs.html

http://www.state.nj.us/dep/wms/bwqsa/swqs.htm

N/A = Not Applicable

New Mexico

Existing Numeric Water Quality Standards For Nutrients [1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From NM Standards for Interstate and Intrastate Waters, effective December 29, 2006. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: January 20, 2006 (revised)

Nutrient Parameters: TP, TN, Chlorophyll-*a*, turbidity. Secondary variables: DO concentration, DO % saturation, pH, and AFDM.

Projected Date for Criteria Adoption:

Lakes/Reservoirs - December 2011

Rivers/Streams - Rivers = July 2010; Streams = December 2009

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/nm/nm_6_wqs.pdf

http://www.nmenv.state.nm.us/swqb/standards/index.html

N/A = Not Applicable

New York

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs	◘[2, *]	◘[3, 4, *]		
Rivers/Streams	◘[2, *]			
Estuaries				
Wetlands	◘[2, *]			

● = Statewide ◘ = For selected

[1] From NY Water Quality Standards, effective February 16, 2008. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

[2] Nitrite-N for aquatic life use.

[3] Guidance value established for classes A, AA, A-S, and B ponded waters (state regulation at 6 NYCRR 702.15).

[4] Waterbody-specific P criteria for lakes Erie, Ontario, Champlain, and NYC watershed reservoirs.

(http://www.epa.gov/glnpo/solec/94/nutrient/index.htm.#EXECUTIVE)

*Standard present in 1998.

Nutrient Criteria Plan

Y/N: Yes

Date: February 1, 2008 (revised)

Nutrient Parameters: TP, DO, pH, Chlorophyll-*a*, clarity (TN only if criterion is shown to be necessary)

Projected Date for Criteria Proposal:

Lakes/Reservoirs - guidance value for human health (water supply) and recreational use proposed in 2009; aquatic life use proposed in 2012

Rivers/Streams - guidance value for aquatic life use proposed in 2009; human health (water supply) and recreational use proposed in 2012

Estuaries - No date

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: http://www.epa.gov/waterscience/standards/wqslibrary/ny/ny_2_water_quality_reg.pdf

WQS: http://www.epa.gov/glnpo/solec/94/nutrient/index.htm.#EXECUTIVE

http://www.dec.ny.gov/chemical/23853.htmlhttp://h2o.enr.state.nc.us/csu/

N/A = Not Applicable

North Carolina

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs			●[2, *]	◘[3, *]
Rivers/Streams			●[2, *]	◘[3, *]
Estuaries			●[2, *]	◘[3, *]
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From NC Water Quality Standards, as amended effective May 1, 2007.
State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] Numeric chlorophyll-a criteria statewide for waters designated as freshwater aquatic life, saltwater aquatic life, and trout waters (Class C and SC waters).
[3] Numeric turbidity criteria (measured in Nephelometric Turbidity Units) for selected waters.
*Standard present in 1998.

Note: NC has a Nutrient Management Strategy for waters designated as "Nutrient Sensitive Waters" in order to limit the discharge of nutrients (usually nitrogen and phosphorus)

Nutrient Criteria Plan

Y/N: Yes

Date: October 25, 2005 (revised)

Nutrient Parameters: Chlorophyll-*a*

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2010

Rivers/Streams - No date

Estuaries - 2010

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/nc/

http://h2o.enr.state.nc.us/csu/

N/A = Not Applicable

North Dakota

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	**N/A**	**N/A**	**N/A**	**N/A**
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From ND Standards of Quality for Waters of the State, effective June 15, 2001. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards. North Dakota has nutrient values for Class 1 and Class 1a waters where the values are used as guidelines and are not considered numeric criteria.

Nutrient Criteria Plan

Y/N: Yes

Date: May 18, 2007

Nutrient Parameters: TP, TN, Chlorophyll-*a*, Secchi depth, DO, TSI

Projected Date for Criteria Adoption:

Lakes/Reservoirs - Year 9 (no date given)

Rivers/Streams - Year 9 (no date given)

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: http://www.epa.gov/waterscience/standards/wqslibrary/nd/index.html

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/nd/nd_8_swq.pdf

http://www.ndhealth.gov/WQ/sw/

N/A = Not Applicable

Ohio

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From OH Water Quality Standards, effective December 30, 2002. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards. Ohio has numeric nutrient criteria for the open waters of Lake Erie.

Nutrient Criteria Plan

Y/N: Yes

Date: June, 2006

Nutrient Parameters: Causal variables: NOx, NH3, TKN, TP, habitat. Response variables: turbidity, DO, Chlorophyll-*a*, fish, macroinvertebrates

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2009

Rivers/Streams - 2012

Estuaries - N/A

Wetlands - No Date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/oh/oh_5_3745-1-04_wqs.pdf

http://www.epa.state.oh.us/dsw/rules/3745-1.html

N/A = Not Applicable

Oklahoma

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs		◘[2]	◘[3]	◘[4]
Rivers/Streams		◘[2]		◘[4]
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From Oklahoma's Water Quality Standards, effective November 14, 2006. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

[2] Numeric criteria for TP in Lake Encha, Spavinaw Lake and rivers designated as "Scenic Rivers" for aesthetics and antidegradation (0.037 mg/L).

[3] Established in 2006 for selected waters.

[4] Turbidity criteria for the use of fish and wildlife propagation.

Nutrient Criteria Plan

Y/N: Yes

Date: September, 2006 (revised)

Nutrient Parameters: TP, TN, Chlorophyll-*a*

Projected Date for Criteria Adoption:

Lakes/Reservoirs - Fall 2008-Summer 2009

Rivers/Streams - Fall 2009-Summer 2010

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: http://www.owrb.ok.gov/quality/standards/standards.php

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ok/ok_6_chap45.pdf

http://www.owrb.ok.gov/quality/standards/standards.php

N/A = Not Applicable

Oregon

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes		◘[2]	●	
Reservoirs			◘[3]	
Rivers		◘[4]	●	
Streams		◘[4]	●	
Estuaries			●	
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From Water Quality Standards: Beneficial Uses, Policies, and Criteria for Oregon, effective March 2, 2004. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

[2] The total phosphorus maximum annual loading for the Clear Lake watershed may be deemed exceeded if the median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed 9 µg/L during two consecutive years.

[3] Except for ponds and reservoirs less than ten acres in surface area, marshes and saline lakes.

[4] Criteria specific to Yamhill River and its tributaries.

Nutrient Criteria Plan

Y/N: No

Date: N/A

Nutrient Parameters: N/A

Projected Date for Criteria Adoption:

Lakes/Reservoirs - N/A

Rivers/Streams - N/A

Estuaries - N/A

Wetlands - N/A

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/or/or_10_wqs.pdf

http://www.deq.state.or.us/WQ/standards/standards.htm

N/A = Not Applicable

Pennsylvania

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries				
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From PA Code, Title 25, Chapter 93, Water Quality Standards, effective February 9, 2006. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: May, 2004

Nutrient Parameters: TP, Chlorophyll-a, Secchi depth

Projected Date for Criteria Adoption:

Lakes/Reservoirs - March 2009

Rivers/Streams - September 2007

Estuaries - No date

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/pa/pa_3_code93.pdf

http://www.depweb.state.pa.us/watersupply/cwp/view.asp?a=1261&Q=449151&watersupplyNav=|30184|

N/A = Not Applicable

Puerto Rico

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs		◘[2,*]		◘[3,*]
Rivers/Streams		◘[2,*]		◘[3,*]
Estuaries				◘[3,*]
Wetlands				◘[3]

● = Statewide ◘ = For selected waterbody

[1] From PR Water Quality Standards Regulation amended March, 2003.
State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] Total phosphorus shall not exceed 1 mg/L in surface water bodies upstream from reservoirs, in segments of surface water bodies with drinking water intakes or estuarine waters except when it is demonstrated to the satisfaction of the Board that a higher value of total phosphorus in combination with prevailing nitrogen derived nutrients will not contribute to eutrophic conditions in the water body.
[3] Turbidity criteria for class SB, SC and SD waters and their designated uses.
*Standard present in 1998.

Nutrient Criteria Plan

Y/N: Yes

Date: May 13, 2008

Nutrient Parameters: TKN or TN, TP, Chlorophyll-*a*

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2010

Rivers/Streams - 2011

Estuaries - No date

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/pr/pr_2_wqs.pdf

N/A = Not Applicable

Rhode Island

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs		●*		
Rivers/Streams				
Estuaries				
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From RI Water Quality Regulations, effective January 1, 2007. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
*Standard present in 1998 (but is being reviewed at this time).

Nutrient Criteria Plan

Y/N: Yes

Date: February 1, 2002

Nutrient Parameters: TP, TN, Chlorophyll-*a*, turbidity, Secchi depth

Projected Date for Criteria Adoption:

Lakes/Reservoirs - Adopted TP criteria in 1997

Rivers/Streams - No date

Estuaries - No date

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ri/ri_1_wqr.pdf

http://www.dem.ri.gov/programs/benviron/water/quality/index.htm

N/A = Not Applicable

South Carolina

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs	◘[2]	◘[2]	◘[2]	◘[3]
Rivers/Streams				◘[3]
Estuaries				◘[3]
Wetlands				◘[3]

● = Statewide ◘ = For selected waterbody

[1] From SC Regulation 61-68 Water Classifications and Standards as amended June 25, 2004. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] Numeric nutrient criteria for lakes statewide by ecoregion (with small lakes, 40 acres or less, covered by narrative).
[3] Numeric turbidity criteria (measured in Nephelometric Turbidity Units) apply to Outstanding National Resource Waters, Outstanding Resource Waters, freshwater trout waters and shellfish harvesting waters only.

Nutrient Criteria Plan

Y/N: Yes

Date: September 27, 2007 (revised)

Nutrient Parameters: TP, TN, Chlorophyll-*a*, turbidity

Projected Date for Criteria Adoption:

Lakes/Reservoirs - No date (see existing criteria)

Rivers/Streams - 2011

Estuaries - 2011

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/sc/sc_4_wqs.pdf

http://www.scdhec.net/environment/water/regs/r61-68.pdf

N/A = Not Applicable

South Dakota

Existing Numeric Water Quality Standards For Nutrients [1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From SD Surface Water Quality, effective January 27, 1999. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: No

Date: N/A

Nutrient Parameters: N/A

Projected Date for Criteria Adoption:

Lakes/Reservoirs - N/A

Rivers/Streams - N/A

Estuaries - N/A

Wetlands - N/A

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/sd/sd_8_7451.pdf

http://www.state.sd.us/denr/DES/Surfacewater/surfacequality.htm

N/A = Not Applicable

Tennessee

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs			◘[2]	
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From TN General Water Quality Criteria Chapter 1200-4-3, effective March 27, 2008. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

[2] Chlorophyll-a criteria for Pickwick Reservoir.

Note: The State has a formalized narrative translator for wadeable streams as referenced in: http://www.state.tn.us/environment/wpc/publications/nutrient%20final.pdf

Nutrient Criteria Plan

Y/N: Yes

Date: September 20, 2007 (revised)

Nutrient Parameters: TP, TN, Chlorophyll-*a*, turbidity

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2012

Rivers/Streams - 2012

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/tn/tn_4_wqs.pdf

http://www.epa.gov/waterscience/standards/wqslibrary/tn/tn_4_4wqs.pdf

http://www.state.tn.us/environment/wpc/publications/

http://www.state.tn.us/environment/wpc/publications/nutrient%20final.pdf

N/A = Not Applicable

Texas

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries				
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From TX Surface Water Quality Standards, effective April 9, 2008. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: November 3, 2006 (revised)

Nutrient Parameters: TP, TN, Chlorophyll-*a*, solids, DO, Pheophytin-*a*, alkalinity, hardness, stream flow, conductivity, turbidity, temperature, Secchi depth

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2008

Rivers/Streams - 2011

Estuaries - 2011

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/tx/tx-wqs-20061215.pdf

http://www.tceq.state.tx.us/nav/eq/eq_swqs.html

N/A = Not Applicable

Utah

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From UT Standards of Quality for Waters of the State (2005), effective October 17, 2005. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards. Utah has "pollution indicator values" that are not considered numeric nutrient criteria.

Nutrient Criteria Plan

Y/N: Yes

Date: April 4, 2005

Nutrient Parameters: TN, TP, Chlorophyll-*a*, turbidity,

Projected Date for Criteria Adoption:

Lakes/Reservoirs - No date

Rivers/Streams - August 2008

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/ut/ut.pdf

http://www.rules.utah.gov/publicat/code/r317/r317-002.htm

N/A = Not Applicable

Vermont

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs	●[2,*]	◘[3,*]		●[*]
Rivers/Streams	●[2,*]	◘[4,*]		●[*]
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From VT Water Quality Standards, effective January 1, 2008. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] Criteria for nitrate-nitrogen.
[3] TP criteria for Lake Champlain and Lake Memphremagog.
[4] TP criteria for streams above 2,500 feet in elevation.
*Standard present in 1998.

Nutrient Criteria Plan

Y/N: Yes

Date: February 6, 2008 (revised)

Nutrient Parameters: TP, TN, Chlorophyll-*a*, turbidity

Projected Date for Criteria Adoption: **Note: Draft criteria have been submitted to EPA**

Lakes/Reservoirs - No date

Rivers/Streams - No date

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.nrb.state.vt.us/wrp/publications/wqs.pdf

http://www.nrb.state.vt.us/wrp/publications/wqs.pdf

N/A = Not Applicable

Virginia

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs		◘[2]	◘[2]	
Rivers/Streams				
Estuaries			◘[3,4]	◘[3]
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From VA Water Quality Regulations, effective September 11, 2007. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

[2] Numeric criteria for man-made lakes and reservoirs to protect aquatic life and recreational designated uses from the impacts of nutrients.

[3] Numeric criteria to protect designated uses from the impacts of nutrients and suspended sediment in the Chesapeake Bay and its tidal tributaries (adopted in 2005). For the Chesapeake Bay, submerged aquatic vegetation (SAV) restoration acreage is a surrogate clarity indicator since clarity will determine the ability for SAVs to thrive and expand into known historic habitat.

[4] Chlorophyll a criteria apply to the tidal James River (adopted in 2006).

Nutrient Criteria Plan

Y/N: Yes

Date: August, 2008 (revised)

Nutrient Parameters: TP, TN, Chlorophyll-*a*, turbidity, DO

Projected Date for Criteria Adoption:

Lakes/Reservoirs - Approved August 2007

Rivers/Streams - 2011 (wadeable) and 2012 (non-wadeable)

Estuaries - Approved June 2005, Tidal James and York River January, 2006

Wetlands - Site-specific criteria for Lake Drummond, located within the Great Dismal Swamp, were developed in August, 2007; No date for other wetlands

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/va/va_3_wqs.pdf

http://www.deq.virginia.gov/wqs/

N/A = Not Applicable

Virgin Islands

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs	N/A	N/A	N/A	N/A
Rivers/Streams	N/A	N/A	N/A	N/A
Estuaries/Coastal		●*		●*
Wetlands	N/A	N/A	N/A	N/A

● = Statewide ◘ = For selected waterbody

[1] From VI Water Quality Standards adopted in October 2004. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
*Standard present in 1998.

Nutrient Criteria Plan

Y/N: Yes

Date: October 16, 2007

Nutrient Parameters: TP, TKN

Projected Date for Criteria Adoption:

Lakes/Reservoirs - N/A

Rivers/Streams - N/A

Estuaries - FY 2016

Coastal - FY 2016

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/territories/usvi_wqs.pdf

http://www.dpnr.gov.vi/dep/pubs/index.htm

N/A = Not Applicable

Washington

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs		◘[2,*]		
Rivers/Streams		◘[3,*]		
Estuaries				
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From Water Quality Standards for Surface Waters of the State of WA, effective November 11, 1997. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.
[2] Lake-specific.
[3] Spokane River from Long Lake Dam to Nine Mile Bridge.
*Standard present in 1998.

Nutrient Criteria Plan

Y/N: Yes

Date: April, 2004

Nutrient Parameters: TP, Chlorophyll-*a*, Secchi depth

Projected Date for Criteria Adoption:

Lakes/Reservoirs - Adopted February, 1998

Rivers/Streams - No date

Estuaries - No date

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/wa/wa_10_chapter173-201a.pdf

http://www.ecy.wa.gov/programs/wq/swqs/index.html

N/A = Not Applicable

West Virginia

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs		†	†	
Rivers/Streams				
Estuaries	**N/A**	**N/A**	**N/A**	**N/A**
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] Requirements Governing Water Quality Standards (Title 47, Legislative Rule Series 2), effective July, 2008. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards. West Virginia has nitrite-N criteria for aquatic life use in warm water fish streams, trout waters and wetlands, but these are not considered nutrient criteria.

†TP and chlorophyll-a criteria have been adopted by West Virginia, but are not approved by EPA. These criteria are for all lakes with a retention time of ≥14 days, and all other lakes will be covered under future rivers/streams nutrient criteria.

Nutrient Criteria Plan

Y/N: Yes

Date: May, 2004 (revised)

Nutrient Parameters: TP, TN, Chlorophyll-*a*, Secchi depth, turbidity

Projected Date for Criteria Adoption:

Lakes/Reservoirs - January 2009

Rivers/Streams - January 2009

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/wv/wv_3_series2.pdf

http://www.wvdep.org/item.cfm?ssid=11&ss1id=747

N/A = Not Applicable

Wisconsin

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From Water Quality Standards for Wisconsin Surface Waters, Chapter NR 102, current through August, 1997. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: July, 2007 (revised)

Nutrient Parameters: For Lakes: TP, TN, Chlorophyll-*a*, Secchi depth. For Streams: TP, TN, chlorophyll-a, DO and aquatic community health.

Projected Date for Criteria Adoption:

Lakes/Reservoirs - September 2009

Rivers/Streams - September 2009

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.epa.gov/waterscience/standards/wqslibrary/wi/wi_5_nr102.pdf

http://www.dnr.state.wi.us/org/water/wm/WQS/

N/A = Not Applicable

Wyoming

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams				
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From WY Surface Water Quality Standards, effective January 25, 2002. State numeric nutrient criteria for drinking water/source water protection were not considered in the table, nor were numeric criteria for turbidity which were not developed for protection against nutrient effects. To find the status of the State's adopted numeric nutrient criteria for drinking water protection, follow the internet link below to the State's Water Quality Standards.

Nutrient Criteria Plan

Y/N: Yes

Date: April 4, 2008

Nutrient Parameters: TN, TP, Chlorophyll-*a*, Secchi depth, phytoplankton, possibly periphyton

Projected Date for Criteria Adoption:

Lakes/Reservoirs - 2013 development, 2015 stakeholder review

Rivers/Streams - 2013 development, 2015 stakeholder review

Estuaries - N/A

Wetlands - No date

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://deq.state.wy.us/wqd/wqdrules/Chapter_01.pdf

http://deq.state.wy.us/wqd/watershed/surfacestandards/index.asp

N/A = Not Applicable

Delaware River Basin Commission

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				◘[2]
Rivers/Streams				◘[2]
Estuaries				◘[3]
Wetlands				◘[2]

● = Statewide ◘ = For selected waterbody

[1] From DRBC Administrative Manual Part III Water Quality Regulations, 18 CFR Part 410 with amendments through 9/16/07.
[2] For non-tidal streams of the Delaware River Basin (those rivers, lakes and other waters that flow across or form a part of state boundaries).
[3] For Delaware River Estuary & Bay including the tidal portions of the tributaries thereof.

Nutrient Criteria Plan

Y/N: Yes (plan is not mutually-agreed upon with EPA Regions 2 and 3, and will be reviewed annually by the Delaware River Basin Commission)

Date: N/A

Nutrient Parameters: For non-tidal portion of the Delaware River: TP, TN, water clarity and biocriteria consisting of selected algal and macroinvertebrate metrics.

For Delaware Estuary: TN, TP, Chlorophyll-a, water clarity (FTU)

Projected Date for Criteria Adoption:

Lakes/Reservoirs - N/A

Rivers/Streams - N/A

Estuaries - N/A

Wetlands - N/A

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.nj.gov/drbc/regs/WQRegs_092607.pdf

N/A = Not Applicable

Ohio River Valley Water Sanitation Commission (ORSANCO)

Existing Numeric Water Quality Standards For Nutrients[1]

Waterbody Type	N	P	Chl-a	Clarity
Lakes/Reservoirs				
Rivers/Streams	◘[2,3]			
Estuaries	N/A	N/A	N/A	N/A
Wetlands				

● = Statewide ◘ = For selected waterbody

[1] From ORSANCO Pollution Control Standards for discharges to the Ohio River, 2006 Revision.
[2] Numeric nutrient criteria for ammonia, nitrite+nitrate nitrogen, and nitrite-nitrogen.
[3] Numeric nutrient criteria for the Ohio River.

Nutrient Criteria Plan

Y/N: Yes

Date: August 22, 2002 (draft-revised)

Nutrient Parameters: ammonia nitrogen, TKN, nitrate-nitrite nitrogen, TP, chlorophyll-a, turbidity, and algae sampling

Projected Date for Criteria Adoption:

Lakes/Reservoirs - N/A

Rivers/Streams - 2005-2006

Estuaries - N/A

Wetlands - N/A

Links to Nutrient Criteria Plan and Nutrient Water Quality Standards

Plan: N/A

WQS: http://www.orsanco.org/watqual/standards/stand.asp

N/A = Not Applicable

APPENDIX B:

SUMMARY OF STATE NUMERIC NUTRIENT STANDARDS ADOPTION: 1998 vs. 2008

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Numeric Water Quality Standards for Nutrients[1]				
State	**Waterbody**	**1998**	**August 2008**	**New Since 1998**
AL	L	---	Chl-a[2]	Chl-a[2]
	R	---	---	---
	E	---	---	---
	W	---	---	---
AK	L	---	---	---
	R	---	---	---
	E	---	---	---
	W	---	---	---
AZ	L	TN[2], TP[2]	TN[2], N[2,3], TP[2]	N[2,3]
	R	TN[2], TP[2], clarity[2]	TN[2], N[2,3], TP[2], clarity[2]	N[2,3]
	E	N/A	N/A	N/A
	W	---	---	---
AR	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
CA	L	TN[2], N[2,3], TP[2], P[2,6], Chl-a[2], clarity[2]	TN[2], N[2,3], TP[2], P[2,6], Chl-a[2], clarity[2]	---
	R	TN[2], N[2,3], TP[2], P[2,6], clarity[2]	TN[2], N[2,3], TP[2], P[2,6], clarity[2]	---
	E	TN[2], N[2,3], TP[2], clarity[2]	TN[2], N[2,3], TP[2], clarity[2]	---
	W	TN[2], N[2,3], TP[2], clarity[2]	TN[2], N[2,3], TP[2], clarity[2]	---
CO	L	---	TP[2]	TP[2]
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
CT	L	---	---	---
	R	---	---	---
	E	---	---	---
	W	---	---	---
DE	L	---	---	---
	R	---	---	---
	E	---	N[2,3], P[2,6], clarity[2,4]	N[2,3], P[2,6], clarity[2,4]
	W	---	---	---
FL	L	---	---	---
	R	---	---	---
	E	---	---	---
	W	---	TP[2]	TP[2]
GA	L	TN[2], TP[2], Chl-a[2]	TN[2], TP[2], Chl-a[2]	---
	R	TP[2]	TP[2]	---
	E	---	---	---
	W	---	---	---

[1] Waterbody: L = lakes/reservoirs; R = rivers/streams; E = estuaries; W = wetlands; N/A = Not Applicable (land-locked State). Parameters without a "2" superscript indicate that all waters within the selected waterbody type are covered by said parameter.
[2] Criteria for selected waters and/or uses (see State specific summaries in Appendix A).
[3] Other forms of nitrogen such as: Nitrate-N, Nitrite-N, Nitrite+Nitrate as N and/or inorganic nitrogen.
[4] Criteria developed as part of the Chesapeake Bay Program.
[5] Narrative translator.
[6] Other forms of phosphorus such as: total phosphate, orthophosphate, inorganic phosphorus and/or soluble phosphorus.
* Numeric nutrient criteria adopted by State, but not approved by EPA. (TN, TP and Chl-a for NE; TP & Chl-a for WV)

Numeric Water Quality Standards for Nutrients[1]				
State	**Waterbody**	**1998**	**August 2008**	**New Since 1998**
HI	L	---	---	---
	R	TN, N[3], TP, clarity	TN, N[3], TP, clarity	---
	E	TN, N[3], TP, Chl-a, clarity	TN, N[3], TP, Chl-a, clarity	---
	W	---	---	---
ID	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
IL	L	TP[2]	TP[2]	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
IN	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
IA	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
KS	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
KY	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
LA	L	---	---	---
	R	---	---	---
	E	---	---	---
	W	---	---	---
ME	L	---	---	---
	R	---	---	---
	E	---	---	---
	W	---	---	---
MD	L	---	---	---
	R	---	---	---
	E	---	Clarity[2,4]	Clarity[2,4]
	W	---	---	---

[1] Waterbody: L = lakes/reservoirs; R = rivers/streams; E = estuaries; W = wetlands; N/A = Not Applicable (land-locked State). Parameters without a "2" superscript indicate that all waters within the selected waterbody type are covered by said parameter.
[2] Criteria for selected waters and/or uses (see State specific summaries in Appendix A).
[3] Other forms of nitrogen such as: Nitrate-N, Nitrite-N, Nitrite+Nitrate as N and/or inorganic nitrogen.
[4] Criteria developed as part of the Chesapeake Bay Program.
[5] Narrative translator.
[6] Other forms of phosphorus such as: total phosphate, orthophosphate, inorganic phosphorus and/or soluble phosphorus.
* Numeric nutrient criteria adopted by State, but not approved by EPA. (TN, TP and Chl-a for NE; TP & Chl-a for WV)

Numeric Water Quality Standards for Nutrients[1]				
State	**Waterbody**	**1998**	**August 2008**	**New Since 1998**
MA	L	---	---	---
	R	---	---	---
	E	---	$N^{2,3}$	$N^{2,3}$
	W	---	---	---
MI	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
MN	L	Clarity	TP, Chl-a, clarity	TP, Chl-a
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
MS	L	---	---	---
	R	---	---	---
	E	---	---	---
	W	---	---	---
MO	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
MT	L	---	---	---
	R	---	TN^2, TP^2, Chl-a^2	TN^2, TP^2, Chl-a^2
	E	N/A	N/A	N/A
	W	---	---	---
NE	L	---	*	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
NV	L	TP^2, $P^{2,6}$, Chl-a^2	TN^2, $N^{2,3}$, TP^2, $P^{2,6}$, Chl-a^2, clarity^2	TN^2, $N^{2,3}$, clarity^2
	R	TN^2, $N^{2,3}$, TP^2, $P^{2,6}$	TN^2, $N^{2,3}$, TP^2, $P^{2,6}$, clarity^2	Clarity^2
	E	N/A	N/A	N/A
	W	---	---	---
NH	L	---	---	---
	R	---	---	---
	E	---	---	---
	W	---	---	---
NJ	L	$N^{2,3}$, TP, clarity^2	$N^{2,3}$, TP, Chl-a^2, clarity^2	Chl-a^2
	R	$N^{2,3}$, TP, clarity^2	$N^{2,3}$, TP, clarity^2	---
	E	Clarity^2	Clarity^2	---
	W	---	---	---

[1] Waterbody: L = lakes/reservoirs; R = rivers/streams; E = estuaries; W = wetlands; N/A = Not Applicable (land-locked State). Parameters without a "2" superscript indicate that all waters within the selected waterbody type are covered by said parameter.
[2] Criteria for selected waters and/or uses (see State specific summaries in Appendix A).
[3] Other forms of nitrogen such as: Nitrate-N, Nitrite-N, Nitrite+Nitrate as N and/or inorganic nitrogen.
[4] Criteria developed as part of the Chesapeake Bay Program.
[5] Narrative translator.
[6] Other forms of phosphorus such as: total phosphate, orthophosphate, inorganic phosphorus and/or soluble phosphorus.
* Numeric nutrient criteria adopted by State, but not approved by EPA. (TN, TP and Chl-a for NE; TP & Chl-a for WV)

Numeric Water Quality Standards for Nutrients[1]				
State	**Waterbody**	**1998**	**August 2008**	**New Since 1998**
NM	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
NY	L	N[2,3], TP[2]	N[2,3], TP[2]	---
	R	N[2,3]	N[2,3]	---
	E	---	---	---
	W	N[2,3]	N[2,3]	---
NC	L	Chl-a, clarity[2]	Chl-a, clarity[2]	---
	R	Chl-a, clarity[2]	Chl-a, clarity[2]	---
	E	Chl-a, clarity[2]	Chl-a, clarity[2]	---
	W	---	---	---
ND	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
OH	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
OK	L	---	TP[2], Chl-a[2], clarity[2]	TP[2], Chl-a[2], clarity[2]
	R	---	TP[2], clarity[2]	TP[2], clarity[2]
	E	N/A	N/A	N/A
	W	---	---	---
OR	L	---	TP[2], Chl-a	TP[2], Chl-a
	R	---	TP[2], Chl-a	TP[2], Chl-a
	E	---	Chl-a	Chl-a
	W	---	---	---
PA	L	---	---	---
	R	---	---	---
	E	---	---	---
	W	---	---	---
RI	L	TP	TP	---
	R	---	---	---
	E	---	---	---
	W	---	---	---
SC	L	---	TN[2], TP[2], Chl-a[2], clarity[2]	TN[2], TP[2], Chl-a[2], clarity[2]
	R	---	Clarity[2]	Clarity[2]
	E	---	Clarity[2]	Clarity[2]
	W	---	Clarity[2]	Clarity[2]

[1] Waterbody: L = lakes/reservoirs; R = rivers/streams; E = estuaries; W = wetlands; N/A = Not Applicable (land-locked State). Parameters without a "2" superscript indicate that all waters within the selected waterbody type are covered by said parameter.
[2] Criteria for selected waters and/or uses (see State specific summaries in Appendix A).
[3] Other forms of nitrogen such as: Nitrate-N, Nitrite-N, Nitrite+Nitrate as N and/or inorganic nitrogen.
[4] Criteria developed as part of the Chesapeake Bay Program.
[5] Narrative translator.
[6] Other forms of phosphorus such as: total phosphate, orthophosphate, inorganic phosphorus and/or soluble phosphorus.
* Numeric nutrient criteria adopted by State, but not approved by EPA. (TN, TP and Chl-a for NE; TP & Chl-a for WV)

Numeric Water Quality Standards for Nutrients[1]				
State	**Waterbody**	**1998**	**August 2008**	**New Since 1998**
SD	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
TN	L	---	Chl-a[2]	Chl-a[2]
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
TX	L	---	---	---
	R	---	---	---
	E	---	---	---
	W	---	---	---
UT	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
VT	L	N[3], TP[2], clarity	N[3], TP[2], clarity	---
	R	N[3], TP[2], clarity	N[3], TP[2], clarity	---
	E	N/A	N/A	N/A
	W	---	---	---
VA	L	---	TP[2], Chl-a[2]	TP[2], Chl-a[2]
	R	---	---	---
	E	---	Chl-a[2,4], clarity[2,4]	Chl-a[2,4], clarity[2,4]
	W	---	---	---
WA	L	TP[2]	TP[2]	---
	R	TP[2]	TP[2]	---
	E	---	---	---
	W	---	---	---
WV	L	---	*	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
WI	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---
WY	L	---	---	---
	R	---	---	---
	E	N/A	N/A	N/A
	W	---	---	---

[1] Waterbody: L = lakes/reservoirs; R = rivers/streams; E = estuaries; W = wetlands; N/A = Not Applicable (land-locked State). Parameters without a "2" superscript indicate that all waters within the selected waterbody type are covered by said parameter.
[2] Criteria for selected waters and/or uses (see State specific summaries in Appendix A).
[3] Other forms of nitrogen such as: Nitrate-N, Nitrite-N, Nitrite+Nitrate as N and/or inorganic nitrogen.
[4] Criteria developed as part of the Chesapeake Bay Program.
[5] Narrative translator.
[6] Other forms of phosphorus such as: total phosphate, orthophosphate, inorganic phosphorus and/or soluble phosphorus.
* Numeric nutrient criteria adopted by State, but not approved by EPA. (TN, TP and Chl-a for NE; TP & Chl-a for WV)

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APPENDIX C:

SUMMARY OF TERRITORY/OTHER NUMERIC NUTRIENT STANDARDS ADOPTION: 1998 vs. 2008

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Territory/ Others	Numeric Water Quality Standards for Nutrients[1]			
	Waterbody	1998	August 2008	New Since 1998
AS	L	TN, TP, clarity	TN, TP, clarity	---
	R	TN, TP, clarity	TN, TP, clarity	---
	E	TN, TP, Chl-a, clarity	TN, TP, Chl-a, clarity	---
	W	TN, TP, clarity	TN, TP, clarity	---
CN	L	TN, TP, P[2,6], clarity	TN, TP, P[2,6], clarity	---
	R	TN, TP, P[2,6], clarity	TN, TP, P[2,6], clarity	---
	E	TN, TP, P[2,6], clarity	TN, TP, P[2,6], clarity	---
	W	TN, TP, P[2,6], clarity	TN, TP, P[2,6], clarity	---
DC	L	---	---	---
	R	---	---	---
	E	---	Chl-a[2,4], clarity[2,4]	Chl-a[2,4], clarity[2,4]
	W	---	---	---
GU	L	N[3], P[6]	N[3], P[6], clarity	Clarity
	R	N[3], P[6]	N[3], P[6], clarity	Clarity
	E	N[3], P[6]	N[3], P[6], clarity	Clarity
	W	N[3], P[6]	N[3], P[6], clarity	Clarity
PR	L	TP[2], clarity[2]	TP[2], clarity[2]	---
	R	TP[2], clarity[2]	TP[2], clarity[2]	---
	E	Clarity[2]	Clarity[2]	---
	W	---	Clarity[2]	Clarity[2]
VI	L	N/A	N/A	N/A
	R	N/A	N/A	N/A
	E	TP, clarity	TP, clarity	---
	W	N/A	N/A	N/A
CBP	L	---	Clarity[2]	Clarity[2]
	R	---	Clarity[2]	Clarity[2]
	E	---	Clarity[2]	Clarity[2]
	W	---	Clarity[2]	Clarity[2]
DRBC	L	---	Clarity[2]	Clarity[2]
	R	---	Clarity[2]	Clarity[2]
	E	---	Clarity[2]	Clarity[2]
	W	---	Clarity[2]	Clarity[2]
ORSANCO	L	---	---	---
	R	---	N[2,3]	N[2,3]
	E	---	---	---
	W	---	---	---

[1] Waterbody: L = lakes/reservoirs; R = rivers/streams; E = estuaries; W = wetlands; N/A = Not Applicable (land-locked State).
[2] Criteria for selected waters and/or uses (see State specific summaries in Appendix A).
[3] Other forms of nitrogen such as: Nitrate-N, Nitrite-N, Nitrite+Nitrate as N and/or inorganic nitrogen.
[4] Criteria developed as part of the Chesapeake Bay Program.
[5] Narrative translator.
[6] Other forms of phosphorus such as: total phosphate, orthophosphate, inorganic phosphorus and/or soluble phosphorus.

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APPENDIX D:

CONTACT INFORMATION FOR EPA AND STATE NUTRIENT WATER QUALITY STAFF

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