Florida Department of Environmental Protection
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3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

December 9, 2011

The Honorable Mike Haridopolos, President
Florida Senate
409 The Capital
404 South Monroe Street
Tallahassee, FL 32399-1100

The Honorable Dean Cannon, Speaker
Florida House of Representatives
420 The Capital
402 South Monroe Street
Tallahassee, FL 32399-1300

Re: Legislative ratification of amendments to chapters 62-302 and 62-303, F.A.C. (numeric nutrient standards)

Dear President Haridopolos and Speaker Cannon:

In accordance with section 120.541(3), F.S., the Florida Department of Environmental Protection (Department) submits the enclosed amendments to chapters 62-302 and 62-303, F.A.C., to the Florida Legislature for ratification during the 2012 legislative session.

The approved rules and amendments set limits on the amount of phosphorus and nitrogen, also known as nutrients, allowed in Florida's waters. The Department based these rules on more than a decade of research and data collection, and designed them to ensure water quality, protect public health and preserve well-balanced aquatic ecosystems throughout Florida.

The rules address the complexity of Florida's various aquatic ecosystems by focusing on site-specific analyses of each water body. This allows us to better account for the many natural factors that influence the effect nutrients have on aquatic plants and animals, and find the most appropriate nutrient levels for each individual waterbody.

Additionally, the approved rules are more cost effective than the federal rules while affording the same level of protection. While the fact remains that the economic costs associated with implementation will be significant, according to an independent

economic analysis, the approved state rules are less than half of even the lowest comparable estimates for the federal rule.

These approved rules are integral to EPA returning responsibility for setting nutrient water quality standards to the State of Florida, a goal all of us share.

The enclosed rules were approved for adoption by the Environmental Regulation Commission (ERC) on December 8, 2011. Since the ERC approved additional amendments to the rule chapters from those proposed in the Florida Administrative Weekly (FAW) on November 10, 2011, the Department must publish a Notice of Change in the FAW. The Department will submit this Notice of Change for publication in the December 23, 2011 edition of the FAW.

Pursuant to section 120.56, F.S., a petition has been filed challenging both of the proposed rule chapters. This will prevent the Department from filing the certification packages for these rules with the Department of State in early January of 2012. Currently, the Division of Administrative Hearings has scheduled the hearing on this rule challenge for January 4-6, 2012. The Department will keep you apprised of the situation.

The Department is pleased with the outcome of the ERC meeting and looks forward to working with the Florida Legislature to advance the most comprehensive nutrient pollution limitations in the nation. If you have any questions, please feel free to contact me at (850) 245-2011 or Drew Bartlett, Director of the Division of Environmental Assessment and Restoration, at (850) 245-8446.

Sincerely,

Herschel T. Vinyard Jr.
Secretary

HTV/jf

Enclosures

CHAPTER 62-302
SURFACE WATER QUALITY STANDARDS

62-302.200 Definitions.

As used in this chapter:

(1) “Acute t~~T~~oxicity” shall mean a concentration greater than one-third (1/3) of the amount lethal to 50 percent of the test organisms in 96 hours (96 hr LC_{50}) for a species protective of the indigenous aquatic community for a substance not identified in paragraph 62-302.500(1)(c), F.A.C., or for mixtures of substances, including effluents.

(2) "Annual a~~A~~verage f~~F~~low" is the long-term harmonic mean flow of the receiving water, or an equivalent flow based on generally accepted scientific procedures in waters for which such a mean cannot be calculated. For waters for which flow records have been kept for at least the last three years, "long-term" shall mean the period of record. For all other waters, "long-term" shall mean three years (unless the Department finds the data from that period not representative of present flow conditions, based on evidence of land use or other changes affecting the flow) or the period of records sufficient to show a variation of flow of at least three orders of magnitude, whichever period is less. For nontidal portions of rivers and streams, the harmonic mean (Q_{hm}) shall be calculated as

$$Q_{hm} = \frac{n}{\frac{1}{Q_1} + \frac{1}{Q_2} + \frac{1}{Q_3} + \frac{1}{Q_4} + \ldots + \frac{1}{Q_n}},$$

in which each Q is an individual flow record and n is the total number of records. In lakes and reservoirs, the annual average flow shall be based on the hydraulic residence time, which shall be calculated according to generally accepted scientific procedures, using the harmonic mean flows for the inflow sources. In tidal estuaries and coastal systems or tidal portions of rivers and streams, the annual average flow shall be determined using methods described in EPA publication no. 600/6-85/002b pages 142 - 227, incorporated by reference in paragraph 62-4.246(9)(k), F.A.C., or by other generally accepted scientific procedures, using the harmonic mean flow for any freshwater inflow. If there are insufficient data to determine the harmonic mean then the harmonic mean shall be estimated by methods as set forth in the EPA publication Technical Support Document for Water Quality-Based Toxics Control (March 1991), incorporated by reference in paragraph 62-4.246(9)(d), F.A.C., or other generally accepted scientific procedures. In situations with seasonably variable effluent discharge rates, hold-and-release treatment systems, and effluent-dominated sites, annual average flow shall mean modeling techniques that calculate long-term average daily concentrations from long-term individual daily flows and concentrations in accordance with generally accepted scientific procedures.

(3) No change.

(4) “Biological Health Assessment” shall mean one of the following aquatic community-based biological evaluations: Stream Condition Index (SCI), Lake Vegetation Index (LVI), or Shannon-Weaver Diversity Index.

(5) ~~(4)~~ “Chronic t~~T~~oxicity”

(a) through (b) No change.

(6) ~~(5)~~ No change.

(7) ~~(6)~~ “Compensation p~~P~~oint for p~~P~~hotosynthetic a~~A~~ctivity” shall mean the depth at which one percent of the light intensity at the surface remains unabsorbed. The light intensities at the surface and subsurface shall be measured simultaneously by irradiance meters such as Kahlsico Underwater Irradiameter (Model No. 268 WA 310), or other device having a comparable spectral response.

(8) ~~(7)~~ No change.

(9) ~~(8)~~ "Designated u~~U~~se" shall mean the present and future most beneficial use of a body of water as designated by the Environmental Regulation Commission by means of the Classification system contained in this Chapter.

(10) ~~(9)~~ “Dissolved m~~M~~etal” shall mean the metal fraction that passes through a 0.45 micron filter.

(11) ~~(10)~~ "Effluent l~~L~~imitation" shall mean any restriction established by the Department on quantities, rates or concentrations of chemical, physical, biological or other constituents which are discharged from sources into waters of the State.

(12) ~~(11)~~ "Exceptional e~~E~~cological s~~S~~ignificance" shall mean that a waterbody ~~water body~~ is a part of an ecosystem of unusual value. The exceptional significance may be in unusual species, productivity, diversity,

ecological relationships, ambient water quality, scientific or educational interest, or in other aspects of the ecosystem's setting or processes.

(13) ~~(12)~~ "Exceptional r~~R~~ecreational s~~S~~ignificance" shall mean unusual value as a resource for outdoor recreation activities. Outdoor recreation activities include, but are not limited to, fishing, boating, canoeing, water skiing, swimming, scuba diving, or nature observation. The exceptional significance may be in the intensity of present recreational usage, in an unusual quality of recreational experience, or in the potential for unusual future recreational use or experience.

(14) ~~(13)~~ "Existing u~~U~~ses" shall mean any actual beneficial use of the waterbody ~~water body~~ on or after November 28, 1975.

(15) ~~(14)~~ "IC25"or "Inhibition Concentration 25%" shall mean the concentration of toxicant that causes a 25% reduction in a biological response such as biomass, growth, fecundity, or reproduction in the test population when compared to the control population response.

(16) "Lake" shall mean, for purposes of interpreting the narrative nutrient criterion in paragraph 62-302.530(47)(b), F.A.C., a lentic fresh waterbody with a relatively long water residence time and an open water area that is free from emergent vegetation under typical hydrologic and climatic conditions. Aquatic plants, as defined in subsection 62-340.200(1), F.A.C., may be present in the open water. Lakes do not include springs, wetlands, or streams (except portions of streams that exhibit lake-like characteristics, such as long water residence time, increased width, or predominance of biological taxa typically found in non-flowing conditions).

(17) "Lake Vegetation Index (LVI)" shall mean a Biological Health Assessment that measures lake biological health in predominantly freshwaters using aquatic and wetland plants, performed and calculated using the Standard Operating Procedures for the LVI in the document titled *LVI 1000: Lake Vegetation Index Methods* (DEP-SOP-003/11 LVI 1000) and the methodology in *Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer* (DEP-SAS-002/11), both dated 10-24-11, which are incorporated by reference herein. Copies of the documents may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

(18) ~~(15)~~ "Man-induced conditions which cannot be controlled or abated" shall mean conditions that have been influenced by human activities, and

(a) through (b) No change.

(c) cannot be restored or abated by physical alteration of the waterbody ~~water body~~, or there is no reasonable relationship between the economic, social and environmental costs and the benefits of restoration or physical alteration.

(19) ~~(16)~~ "Natural b~~B~~ackground" shall mean the condition of waters in the absence of man-induced alterations based on the best scientific information available to the Department. The establishment of natural background for an altered waterbody may be based upon a similar unaltered waterbody, ~~or on~~ historical pre-alteration data, paleolimnological examination of sediment cores, or examination of geology and soils. When determining natural background conditions for a lake, the lake's location and regional characteristics as described and depicted in the U.S. Environmental Protection Agency document titled Lake Regions of Florida (EPA/R-97/127, dated 1997, U.S. Environmental Protection Agency, National Health and Environmental Effects Research Laboratory, Corvallis, OR), which is incorporated by reference herein, shall also be considered. The lake regions in this document are grouped according to ambient total phosphorus and total nitrogen concentrations in the following lake zones:

(a) The TP1 phosphorus zone consists of the USEPA Lake Regions 65-03, and 65-05.

(b) The TP2 phosphorus zone consists of the USEPA Lake Regions 75-04, 75-09, 75-14, 75-15 and 75-33.

(c) The TP3 phosphorus zone consists of the USEPA Lake Regions 65-01, 65-02, 75-01, 75-03, 75-05, 75-11, 75-12, 75-16, 75-19, 75-20, 75-23, 75-24, 75-27, 75-32 and 76-03.

(d) The TP4 phosphorus zone consists of the USEPA Lake Regions 65-04, 75-02, 75-06, 75-08, 75-10, 75-13, 75-17, 75-21, 75-22, 75-26, 75-29, 75-31, 75-34, 76-01and 76-02.

(e) The TP5 phosphorus zone consists of the USEPA Lake Regions 75-18, 75-25, 75-35, 75-36 and 76-04.

(f) The TP6 phosphorus zone consists of the USEPA Lake Regions 65-06, 75-07, 75-28, 75-30 and 75-37.

(g) The TN1 phosphorus zone consists of the USEPA Lake Region 65-03.

(h) The TN2 phosphorus zone consists of the USEPA Lake Regions 65-05 and 75-04.

(i) The TN3 phosphorus zone consists of the USEPA Lake Regions 65-01, 65-02, 65-04, 75-01, 75-02, 75-03, 75-09, 75-11, 75-15, 75-20, 75-23, 75-33 and 76-03.

(j) The TN4 phosphorus zone consists of the USEPA Lake Regions 65-06, 75-05, 75-06, 75-10, 75-12, 75-13, 75-14, 75-16, 75-17, 75-18, 75-19, 75-21, 75-22, 75-24, 75-26, 75-27 and 75-29, 75-31, 75-32, 75-34 and 76-02.

(k) The TN5 phosphorus zone consists of the USEPA Lake Regions 75-07,75-08, 75-25, 75-28, 75-30, 75-35, 75-36, 75-37, 76-01 and 76-04.
The Lake Regions document may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

(20) ~~(17)~~ "Nuisance s~~S~~pecies" shall mean species of flora or fauna whose noxious characteristics or presence in sufficient number, biomass, or areal extent may reasonably be expected to prevent, or unreasonably interfere with, a designated use of those waters.

(21) ~~(18)~~ "Nursery a~~A~~rea of i~~I~~ndigenous a~~A~~quatic l~~L~~ife" shall mean any bed of the following aquatic plants, either in monoculture or mixed: Halodule wrightii, Halophila spp., Potamogeton spp. (pondweed), Ruppia maritima (widgeon-grass), Sagittaria spp. (arrowhead), Syringodium filiforme (manatee-grass), Thalassia testudinum (turtle grass), or Vallisneria spp. (eel-grass), or any area used by the early-life stages, larvae and post-larvae, of aquatic life during the period of rapid growth and development into the juvenile states.

(22) "Nutrient" shall mean total nitrogen (TN), total phosphorus (TP), or their organic or inorganic forms.

(23) "Nutrient response variable" shall mean a biological variable, such as chlorophyll *a*, biomass, or structure of the phytoplankton, periphyton or vascular plant community, that responds to nutrient load or concentration in a predictable and measurable manner. For purposes of interpreting paragraph 62-302.530(47)(b), F.A.C., dissolved oxygen (DO) shall also be considered a nutrient response variable if it is demonstrated for the waterbody that DO conditions result in biological imbalance and the DO responds to a nutrient load or concentration in a predictable and measurable manner.

(24) "Nutrient Threshold" shall mean a concentration of nutrients that applies to a Nutrient Watershed Region and is derived from a statistical distribution of data from reference or benchmark sites. Nutrient Thresholds are only applied to streams as specified in paragraph 62-302.531(2)(c), F.A.C.

(25) "Nutrient Watershed Region" shall mean a drainage area over which the nutrient thresholds in paragraph 62-302.531(2)(c), F.A.C., apply.

(a) The Panhandle West region consists of the Perdido Bay Watershed, Pensacola Bay Watershed, Choctawhatchee Bay Watershed, St. Andrew Bay Watershed, and Apalachicola Bay Watershed.

(b) The Panhandle East region consists of the Apalachee Bay Watershed, and Econfina/Steinhatchee Coastal Drainage Area.

(c) The North Central region consists of the Suwannee River Watershed and the "stream to sink" region in Alachua, Marion and Levy Counties that is affected by the Hawthorne Formation.

(d) The West Central region consists of the Peace, Myakka, Hillsborough, Alafia, Manatee, Little Manatee River Watersheds, Sarasota/Lemon Bay Watershed and small, direct Tampa Bay tributary watersheds south of the Hillsborough River Watershed.

(e) The Peninsula region consists of the Waccasassa Coastal Drainage Area, Withlacoochee Coastal Drainage Area, Crystal/Pithlachascotee Coastal Drainage Area, small, direct Tampa Bay tributary watersheds west of the Hillsborough River Watershed, small, direct Charlotte Harbor tributary watersheds south of the Peace River Watershed, Caloosahatchee River Watershed, Estero Bay Watershed, Imperial River Watershed, Kissimmee River/Lake Okeechobee Drainage Area, Loxahatchee/St. Lucie Watershed, Indian River Watershed, Daytona/St. Augustine Coastal Drainage Area, St. John's River Watershed, Nassau Coastal Drainage Area, and St. Mary's River Watershed.

(f) The South Florida region consists of those areas south of the Peninsula region, such as the Cocohatchee River Watershed, Naples Bay Watershed, Rookery Bay Watershed, Ten Thousand Islands Watershed, Lake Worth Lagoon Watershed, Southeast Coast – Biscayne Bay Watershed, Everglades Watershed, Florida Bay Watershed, and the Florida Keys.
A map of the Nutrient Watershed Regions, dated October 17, 2011, is incorporated by reference herein and may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

(19) through (21) renumber (26) through (28) No change.

(29) ~~(22)~~ "Predominantly f~~F~~resh w~~W~~aters" shall mean surface waters in which the chloride concentration ~~at the surface~~ is less than 1,500 milligrams per liter or specific conductance is less than 4,580 µmhos/cm.

(30) ~~(23)~~ "Predominantly m~~M~~arine w~~W~~aters" shall mean surface waters in which the chloride concentration ~~at the surface~~ is greater than or equal to 1,500 milligrams per liter or specific conductance is greater than or equal to 4,580 µmhos/cm.

(24) through (26) renumber (31) through (33) No change.

(34) ~~(27)~~ "Special Waters" shall mean water bodies designated in accordance with Rule 62-302.700, F.A.C., by the Environmental Regulation Commission for inclusion in the Special Waters Category of Outstanding Florida Waters, as contained in Rule 62-302.700, F.A.C. A Special Water may include all or part of any waterbody ~~water body~~.

(35) "Spring vent" shall mean a location where groundwater flows out of a natural, discernable opening in the ground onto the land surface or into a predominantly fresh surface water.

(36) "Stream" shall mean, for purposes of interpreting the narrative nutrient criterion in paragraph 62-302.530(47)(b), F.A.C., under paragraph 62-302.531(2)(c), F.A.C., a predominantly fresh surface waterbody with perennial flow in a defined channel with banks during typical climatic and hydrologic conditions for its region within the state. During periods of drought, portions of a stream channel may exhibit a dry bed, but wetted pools are typically still present during these conditions. Streams do not include:

(a) non-perennial water segments where fluctuating hydrologic conditions, including periods of desiccation, typically result in the dominance of wetland and/or terrestrial taxa (and corresponding reduction in obligate fluvial or lotic taxa), wetlands, ~~or~~ portions of streams that exhibit lake characteristics (e.g., long water residence time, increased width, or predominance of biological taxa typically found in non-flowing conditions) or tidally influenced segments that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions; or

(b) ditches, canals and other conveyances, or segments of conveyances, that are man-made, or predominantly channelized or predominantly physically altered and;

1. are primarily used for water management purposes, such as flood protection, stormwater management, irrigation, or water supply; and

2. have marginal or poor stream habitat or habitat components, such as a lack of habitat or substrate that is biologically limited, because the conveyance has cross sections that are predominantly trapezoidal, has armored banks, or is maintained primarily for water conveyance.

(37) "Stream Condition Index (SCI)" shall mean a Biological Health Assessment that measures stream biological health in predominantly freshwaters using benthic macroinvertebrates, performed and calculated using the Standard Operating Procedures for the SCI in the document titled *SCI 1000: Stream Condition Index Methods* (DEP-SOP-003/11 SCI 1000) and the methodology in *Sampling and Use of the Stream Condition Index (SCI) for Assessing Flowing Waters: A Primer* (DEP-SAS-001/11), both dated 10-24-11, which are incorporated by reference herein. Copies of the documents may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400. For water quality standards purposes, the Stream Condition Index shall not apply in the South Florida Nutrient Watershed Region.

(38) ~~(28)~~ "Surface w~~W~~ater" means water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused. Water from natural springs shall be classified as surface water when it exits from the spring onto the earth's surface.

(39) "Total Maximum Daily Load" (TMDL) for an impaired waterbody or waterbody segment shall mean the sum of the individual wasteload allocations for point sources and the load allocations for nonpoint sources and natural background. Prior to determining individual wasteload allocations and load allocations, the maximum amount of a pollutant that a waterbody or water segment can assimilate from all sources without exceeding water quality standards must first be calculated. A TMDL shall include either an implicit or explicit margin of safety and a consideration of seasonal variations.

(40) ~~(29)~~ "Total r~~R~~ecoverable m~~M~~etal" shall mean the concentration of metal in an unfiltered sample following treatment with hot dilute mineral acid.

(41) ~~(30)~~ No change.

(42) ~~(31)~~ "Water quality standards" shall mean standards composed of designated present and future most beneficial uses (classification of waters), the numerical and narrative criteria, including Site Specific Alternative Criteria, applied to the specific water uses or classification, the Florida anti-degradation policy, and the moderating provisions, such as variances, mixing zone rule provisions, or exemptions. ~~contained in this rule and in Chapter 62-4, adopted pursuant to Chapter 403, F.S.~~

(43) ~~(32)~~ No change.

(44) ~~(33)~~ "Zone of mMixing" or "mMixing zZone" shall mean a volume of surface water containing the point or area of discharge and within which an opportunity for the mixture of wastes with receiving surface waters has been afforded.

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 403.021, 403.031, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088, 403.502, 403.802 FS. History - New 05-29-90, Amended 2-13-92, Formerly 17-302.200, Amended 1-23-95, 5-15-02, 4-2-08, - -11.

62-302.530 Table: Surface Water Quality Criteria.

The following table contains both numeric and narrative surface water quality criteria to be applied except within zones of mixing. The left-hand column of the Table is a list of constituents for which a surface water criterion exists. The headings for the water quality classifications are found at the top of the Table, and the classification descriptions for the headings are specified in subsection 62-302.400(1), F.A.C. Applicable criteria lie within the Table. The individual criteria should be read in conjunction with other provisions in water quality standards, including Rule 62-302.500, F.A.C. The criteria contained in Rule 62-302.500, F.A.C., also apply to all waters unless alternative or more stringent criteria are specified in Rule 62-302.530, F.A.C. Unless otherwise stated, all criteria express the maximum not to be exceeded at any time. In some cases, there are separate or additional limits, which apply independently of the maximum not to be exceeded at any time. For example, annual average (denoted as "annual avg." in the Table) means the maximum concentration at average annual flow conditions (see subsection 62-302.200(2), F.A.C.). Numeric interpretations of the narrative nutrient criterion in paragraph 62-302.530 (47)(b), F.A.C., shall be expressed as spatial averages and applied over a spatial area consistent with their derivation. In applying the water quality standards, the Department shall take into account the variability occurring in nature and shall recognize the statistical variability inherent in sampling and testing procedures. The Department's assessment methodology, set forth in Chapter 62-303, F.A.C., accounts for such natural and statistical variability when used to assess ambient waters pursuant to sections 305(b) and 303(d) of the Federal Clean Water Act.

(1) through (70) No change.

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804 FS. Law Implemented 403.021, 403.061, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History–New 1-28-90, Formerly 17-3.065, Amended 2-13-92, 6-17-92, Formerly 17-302.540, 17-302.550, 17-302.560, 17-302.570, 17-302.580, Amended 4-25-93, Formerly 17-302.530, Amended 1-23-95, 1-15-96, 5-15-02, 7-19-04, 12-7-06, 8-5-10, - -11.

62-302.531 Numeric Interpretations of Narrative Nutrient Criteria.

(1) The narrative water quality criteria for nutrients in paragraphs 62-302.530(47)(a) and (b), F.A.C., applies to all Class I, Class II, and Class III waters.

(2) The narrative water quality criterion for nutrients in paragraph 62-302.530(47)(b), F.A.C., shall be numerically interpreted for both nutrients and nutrient response variables in a hierarchical manner as follows:

(a) Where a site specific numeric interpretation of the criterion in paragraph 62-302.530(47)(b), F.A.C., has been established by the Department, this numeric interpretation shall be the primary interpretation. If there are multiple interpretations of the narrative criterion for a waterbody, the most recent interpretation established by the Department shall apply. A list of the site specific numeric interpretations of paragraph 62-302.530(47)(b), F.A.C., may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

1. The primary site specific interpretations are as follows:

a. Total Maximum Daily Loads (TMDLs) adopted under Chapter 62-304, F.A.C., that interpret the narrative water quality criterion for nutrients in paragraph 62-302.530(47)(b), F.A.C., for one or more nutrients or nutrient response variables;

b. Site specific alternative criteria (SSAC) for one or more nutrients or nutrient response variables as established under Rule 62-302.800, F.A.C.;

c. Estuary-specific numeric interpretations of the narrative nutrient criterion established in Rule 62-302.532, F.A.C.; or

d. Other site specific interpretations for one or more nutrients or nutrient response variables that are formally established by rule or final order by the Department, such as a Reasonable Assurance Demonstration pursuant to

Rule 62-303.600, F.A.C., or Level II Water Quality Based Effluent Limitations (WQBEL) established pursuant to Rule 62-650.500, F.A.C. To be recognized as the applicable site specific numeric interpretation of the narrative nutrient criterion, the interpretation must establish the total allowable load or ambient concentration for at least one nutrient that results in attainment of the applicable nutrient response variable that represents achievement of the narrative nutrient criterion for the waterbody. A site specific interpretation is also allowable where there are documented adverse biological effects using one or more Biological Health Assessments, if information on chlorophyll *a* levels, algal mats or blooms, nuisance macrophyte growth, and changes in algal species composition indicate there are no imbalances in flora and a stressor identification study demonstrates that the adverse biological effects are not due to nutrients.

2. For the primary site specific interpretations in subparagraph 62-302.531(2)(a)1., F.A.C., the notice of rulemaking or other public notice shall state that the Department is establishing a site specific interpretation for the receiving waterbody, and offer an opportunity for a public meeting and public comment.

(b) If site specific numeric interpretations, as described in paragraph 62-302.531(2)(a), F.A.C., above, have not been established for a waterbody, but there is an established, quantifiable cause-and-effect relationship between one or more nutrients and nutrient response variables linked to a value that protects against an imbalance in the natural populations of the aquatic flora or fauna, then the numeric values for the nutrients or nutrient response variables, set forth in this paragraph (2)(b), shall be the applicable interpretations. Absent a numeric interpretation as established in paragraph 62-302.531(2)(a), F.A.C., site specific numeric interpretations are established as follows:

1. For lakes, the applicable numeric interpretations of the narrative nutrient criterion in paragraph 62-302.530(47)(b), F.A.C., for chlorophyll *a* are shown in the table below. The applicable interpretations for TN and TP will vary on an annual basis, depending on the availability of chlorophyll *a* data and the concentrations of nutrients and chlorophyll *a* in the lake, as described below. The applicable numeric interpretations for TN, TP, and chlorophyll *a* shall not be exceeded more than once in any consecutive three year period.

a. If there are sufficient data to calculate the annual geometric mean chlorophyll *a* and the mean does not exceed the chlorophyll *a* value for the lake type in the table below, then the TN and TP numeric interpretations for that calendar year shall be the annual geometric means of lake TN and TP samples, subject to the minimum and maximum limits in the table below. However, for lakes with color > 40 PCU in the West Central Nutrient Watershed Region, the maximum TP limit shall be the 0.49 mg/L TP streams threshold for the region; or

b. If there are insufficient data to calculate the annual geometric mean chlorophyll *a* for a given year or the annual geometric mean chlorophyll *a* exceeds the values in the table below for the lake type, then the applicable numeric interpretations for TN and TP shall be the minimum values in the table below.

Long Term Geometric Mean Lake Color and Alkalinity	Annual Geometric Mean Chlorophyll *a*	Minimum calculated numeric interpretation		Maximum calculated numeric interpretation	
		Annual Geometric Mean Total Phosphorus	Annual Geometric Mean Total Nitrogen	Annual Geometric Mean Total Phosphorus	Annual Geometric Mean Total Nitrogen
> 40 Platinum Cobalt Units	20 µg/L	0.05 mg/L	1.27 mg/L	0.16 mg/L[1]	2.23 mg/L
≤ 40 Platinum Cobalt Units and > 20 mg/L $CaCO_3$	20 µg/L	0.03 mg/L	1.05 mg/L	0.09 mg/L[1]	1.91 mg/L
≤ 40 Platinum Cobalt Units and ≤ 20 mg/L $CaCO_3$	6 µg/L	0.01 mg/L	0.51 mg/L	0.03 mg/L[1]	0.93 mg/L

[1] For lakes with color > 40 PCU in the West Central Nutrient Watershed Region, the maximum TP limit shall be the 0.49 mg/L TP streams threshold for the region.

c. For the purpose of subparagraph 62-302.531(2)(b)1., F.A.C., color shall be assessed as true color and shall be free from turbidity. Lake color and alkalinity shall be the long-term geometric mean, based on a minimum of ten data points over at least three years with at least one data point in each year. If insufficient alkalinity data are

available, long-term geometric mean specific conductance values shall be used, with a value of <100 micromhos/cm used to estimate the 20 mg/L $CaCO_3$ alkalinity concentration until such time that alkalinity data are available.

2. For spring vents, the applicable numeric interpretation of the narrative nutrient criterion in paragraph 62-302.530(47)(b), F.A.C., is 0.35 mg/L of nitrate-nitrite ($NO_3 + NO_2$) as an annual geometric mean, not to be exceeded more than once in any three calendar year period.

(c) For streams, if a site specific interpretation pursuant to paragraph 62-302.531(2)(a) or (2)(b), F.A.C., has not been established, biological information shall be used to interpret the narrative nutrient criterion in combination with Nutrient Thresholds. The narrative nutrient criterion in paragraph 62-302.530(47)(b), F.A.C., shall be interpreted as being achieved in a stream segment where information on chlorophyll *a* levels, algal mats or blooms, nuisance macrophyte growth, and changes in algal species composition indicates there are no imbalances in flora or fauna, and either**:**

1. the average score of at least two temporally independent SCIs performed at representative locations and times is 40 or higher, with neither of the two most recent SCI scores less than 35, or

2. the nutrient thresholds set forth in the table below are achieved.

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold[1]	Total Nitrogen Nutrient Threshold[1]
Panhandle West	0.06 mg/L	0.67 mg/L
Panhandle East	0.18 mg/L	1.03 mg/L
North Central	0.30 mg/L	1.87 mg/L
Peninsular	0.12 mg/L	1.54 mg/L
West Central	0.49 mg/L	1.65 mg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

[1]These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

(3) Except for data used to establish historical chlorophyll *a* levels, chlorophyll *a* data assessed under this Chapter shall be measured according to the DEP document titled "Applicability of Chlorophyll *a* Methods" (DEP-SAS-002/10), dated October 24, 2011, which is incorporated by reference herein. Copies of the chlorophyll *a* document may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400. Chlorophyll *a* data collected after [effective date] shall be corrected for or free from the interference of phaeophytin.

(4) The loading of nutrients from a waterbody shall be limited as necessary to provide for the attainment and maintenance of water quality standards in downstream waters.

(5) To qualify as temporally independent samples, each SCI shall be conducted at least three months apart. SCIs collected at the same location less than three months apart shall be considered one sample, with the mean value used to represent the sampling period.

(6) To calculate an annual geometric mean for TN, TP, or chlorophyll *a*, there shall be at least four temporally-independent samples per year with at least one sample taken between May 1 and September 30 and at least one sample taken during the other months of the calendar year. To be treated as temporally-independent, samples must be taken at least one week apart.

(7) The numeric interpretation of the narrative nutrient criterion shall be applied over a spatial area consistent with its derivation.

(a) For numeric interpretations based on paragraph 62-302.531(2)(a), F.A.C., the spatial application of the numeric interpretation is as defined in the associated order or rule.

(b) For lakes covered under subparagraph 62-302.531(2)(b)1., F.A.C., the numeric interpretation shall be applied as a lake-wide or lake segment-wide average.

(c) For spring vents covered under subparagraph 62-302.531(2)(b)2., F.A.C., the numeric interpretation shall be applied in the surface water at or above the spring vent.

(d) For streams covered under paragraph 62-302.531(2)(c), F.A.C., the spatial application of the numeric interpretation shall be determined by relative stream homogeneity and shall be applied to waterbody segments or aggregations of segments as determined by the site-specific considerations.

(8) Load-based or percent reduction-based nutrient TMDLs or Level II Water Quality Based Effluent Limitations (WQBELs) pursuant to Chapter 62-650, F.A.C., do not need to be converted into concentration-based nutrient TMDLs or WQBELs to be used as the basis for the numeric interpretation of the narrative criterion. For percent reduction-based nutrient TMDLs, the associated allowable load or concentration is the numeric interpretation of the narrative criterion for the waterbody.

(9) The Commission adopts rules 62-302.200(4), .200(16)-(17), .200(22)-(25), .200(35)-(37), .200(39), 62-302.531, and 62-302.532(3), F.A.C., to ensure, as a matter of policy, that nutrient pollution is addressed in Florida in an integrated, comprehensive and consistent manner. Accordingly, these rules shall be effective only if EPA approves these rules in their entirety, concludes rulemaking that removes federal numeric nutrient criteria in response to the approval, and determines, in accordance with 33 U.S.C. § 1313(c)(3), that these rules sufficiently address EPA's January 14, 2009 determination. If any provision of these rules is determined to be invalid by EPA or in any administrative or judicial proceeding, then the entirety of these rules shall not be implemented.

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804 FS. Law Implemented 403.021, 403.061, 403.067, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History – New - -11.

62-302.532 Estuary-Specific Numeric Interpretations of the Narrative Nutrient Criterion.

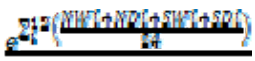
(1) Estuary-specific numeric interpretations of the narrative nutrient criterion in paragraph 62-302.530(47)(b), F.A.C., are in the table below. The concentration-based estuary interpretations are open water, area-wide averages. The interpretations expressed as load per million cubic meters of freshwater inflow are the total load of that nutrient to the estuary divided by the total volume of freshwater inflow to that estuary.

Estuary	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
(a) Clearwater Harbor/St. Joseph Sound	Annual geometric mean values not to be exceeded more than once in a three year period. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
1. St.Joseph Sound	0.05 mg/L	0.66 mg/L	3.1 µg/L
2. Clearwater North	0.05 mg/L	0.61 mg/L	5.4 µg/L
3. Clearwater South	0.06 mg/L	0.58 mg/L	7.6 µg/L
(b) Tampa Bay	Annual totals for nutrients and annual arithmetic means for chlorophyll a, not to be exceeded more than once in a three year period. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
1. Old Tampa Bay	0.23 tons/million cubic meters of water	1.08 tons/million cubic meters of water	9.3 µg/L
2. Hillsborough Bay	1.28 tons/million cubic meters of water	1.62 tons/million cubic meters of water	15.0 µg/L
3. Middle Tampa Bay	0.24 tons/million cubic meters of water	1.24 tons/million cubic meters of water	8.5 µg/L
4. Lower Tampa Bay	0.14 tons/million cubic meters of	0.97 tons/million cubic meters of	5.1 µg/L

	water	water	
5. Boca Ciega North	0.18 tons/million cubic meters of water	1.54 tons/million cubic meters of water	8.3 µg/L
6. Boca Ciega South	0.06 tons/million cubic meters of water	0.97 tons/million cubic meters of water	6.3 µg/L
7. Terra Ceia Bay	0.14 tons/million cubic meters of water	1.10 tons/million cubic meters of water	8.7 µg/L
8. Manatee River Estuary	0.37 tons/million cubic meters of water	1.80 tons/million cubic meters of water	8.8 µg/L
(c) Sarasota Bay	Annual geometric mean values for nutrients and annual arithmetic means for chlorophyll a, not to be exceeded more than once in a three year period. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
1. Palma Sola Bay	0.26 mg/L	0.93 mg/L	11.8 µg/L
2. Sarasota Bay	0.19 mg/L	See paragraph 62-302.532(3)(i), F.A.C.	6.1 µg/L
3. Roberts Bay	0.23 mg/L	0.54 mg/L	11.0 µg/L
4. Little Sarasota Bay	0.21 mg/L	0.60 mg/L	10.4 µg/L
5. Blackburn Bay	0.21 mg/L	0.43 mg/L	8.2 µg/L
(d) Charlotte Harbor/Estero Bay	Annual arithmetic mean values for nutrients and annual arithmetic means for chlorophyll a, not to be exceeded more than once in a three year period. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
1. Dona and Roberts Bay	0.18 mg/L	0.42 mg/L	4.9 µg/L
2. Upper Lemon Bay	0.26 mg/L	0.56 mg/L	8.9 µg/L
3. Lower Lemon Bay	0.17 mg/L	0.62 mg/L	6.1 µg/L
4. Charlotte Harbor Proper	0.19 mg/L	0.67 mg/L	6.1 µg/L
5. Pine Island Sound	0.06 mg/L	0.57 mg/L	6.5 µg/L
6. San Carlos Bay	0.07 mg/L	0.56 mg/L	3.5 µg/L
7. Tidal Myakka River	0.31 mg/L	1.02 mg/L	11.7 µg/L
8. Matlacha Pass	0.08 mg/L	0.58 mg/L	6.1 µg/L
9.Estero Bay (including Tidal Imperial River)	0.07 mg/L	0.63 mg/L	5.9 µg/L
(e) Tidal Cocohatchee River/Ten Thousand Islands	Annual geometric means that shall not be exceeded more than once in a three year period		
1. Tidal Cocohatchee River	0.057 mg/L	0.47 mg/L	5.8 µg/L
2. Collier Inshore	0.032 mg/L	0.25 mg/L	3.1 µg/L
3. Rookery Bay/Marco Island	0.046 mg/L	0.30 mg/L	4.9 µg/L
4. Naples Bay	0.045 mg/L	0.57mg/L	4.3 µg/L
5. Inner Gulf Shelf	0.018 mg/L	0.29 mg/L	1.6 µg/L
6. Middle Gulf Shelf	0.016 mg/L	0.26 mg/L	1.4 µg/L
7. Outer Gulf Shelf	0.013 mg/L	0.22 mg/L	1.0 µg/L
8. Blackwater River	0.053 mg/L	0.41 mg/L	4.1 µg/L
9. Coastal Transition Zone	0.034 mg/L	0.61 mg/L	3.9 µg/L

10. Gulf Islands	0.038 mg/L	0.44 mg/L	3.4 µg/L
11. Inner Waterway	0.033 mg/L	0.69 mg/L	5.2 µg/L
12. Mangrove Rivers	0.021 mg/L	0.71 mg/L	3.7 µg/L
13. Ponce de Leon	0.024 mg/L	0.52 mg/L	3.0 µg/L
14. Shark River Mouth	0.022 mg/L	0.75 mg/L	2.2 µg/L
15. Whitewater Bay	0.026 mg/L	0.82 mg/L	4.1 µg/L
(f) Florida Bay	Annual geometric means that shall not be exceeded more than once in a three year period		
1. Central Florida Bay	0.019 mg/L	0.99 mg/L	2.2 µg/L
2. Coastal Lakes	0.045 mg/L	1.29 mg/L	9.3 µg/L
3. East Central Florida Bay	0.007 mg/L	0.65 mg/L	0.4 µg/L
4. Northern Florida Bay	0.010 mg/L	0.68 mg/L	0.8 µg/L
5. Southern Florida Bay	0.009 mg/L	0.64 mg/L	0.8 µg/L
6. Western Florida Bay	0.015 mg/L	0.37 mg/L	1.4 µg/L
(g) Florida Keys	Annual geometric means that shall not be exceeded more than once in a three year period		
1. Back Bay	0.009 mg/L	0.25 mg/L	0.3 µg/L
2. Backshelf	0.011 mg/L	0.23 mg/L	0.7 µg/L
3. Lower Keys	0.008 mg/L	0.21 mg/L	0.3 µg/L
4. Marquesas	0.008 mg/L	0.21 mg/L	0.6 µg/L
5. Middle Keys	0.007 mg/L	0.22 mg/L	0.3 µg/L
6. Oceanside	0.007 mg/L	0.17 mg/L	0.3 µg/L
7. Upper Keys	0.007 mg/L	0.18 mg/L	0.2 µg/L
(h) Biscayne Bay	Annual geometric means that shall not be exceeded more than once in a three year period		
1. Card Sound	0.008 mg/L	0.33 mg/L	0.5 µg/L
2. Manatee Bay – Barnes Sound	0.007 mg/L	0.58 mg/L	0.4 µg/L
3. North Central Inshore	0.007 mg/L	0.31 mg/L	0.5 µg/L
4. North Central Outer-Bay	0.008 mg/L	0.28 mg/L	0.7 µg/L
5. Northern North Bay	0.012 mg/L	0.30 mg/L	1.7 µg/L
6. South Central Inshore	0.007 mg/L	0.48 mg/L	0.4 µg/L
7. South Central Mid-Bay	0.007 mg/L	0.35 mg/L	0.2 µg/L
8. South Central Outer-Bay	0.006 mg/L	0.24 mg/L	0.2 µg/L
9. Southern North Bay	0.010 mg/L	0.29 mg/L	1.1 µg/L

(i) Sarasota Bay	For TN, the annual geometric mean target is calculated from monthly arithmetic mean color by region and season. Annual geometric means that shall not be exceeded more than once in a three year period. The Sarasota Bay regions are defined as north (Manatee County) and south (Sarasota County). The wet season for Sarasota Bay is defined as July through October and the dry season is defined as all other months of the year. The seasonal region targets are calculated using monthly color data and shall be calculated as follows: NW_i=Ln[(13.35-(0.32*CN_i))/3.58] ND_i=Ln[(10.39-(0.32*CN_i))/3.58] SW_i=Ln[(8.51-(0.32*CS_i))/3.58] SD_i=Ln[(5.55-(0.32*CS_i))/3.58] Where, NW_i is the TN target for i^{th} month calculated for the north region during the wet season ND_i is the TN target for i^{th} month calculated for the north region during the dry

	season SW_i is the TN target for i^{th} month calculated for the south region during the wet season SW_i is the TN target for i^{th} month calculated for the south region during the dry season CN_i is the arithmetic mean color during the i^{th} month within the north region CS_i is the arithmetic mean color during the i^{th} month within the south region The annual TN target is calculated as the geometric mean of all monthly regional and season targets as follows:  Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.

(j) Clam Bay (Collier County)	No more than 10 percent of the individual Total Phosphorus (TP) or Total Nitrogen (TN) measurements shall exceed the respective TP Upper Limit or TN Upper Limit.	
	TP Upper Limit (mg/L) = $e^{(-1.06256-0.0000328465*\text{Conductivity }(\mu S))}$	TN Upper Limit (mg/L) = 2.3601 – 0.0000268325*Conductivity (µS)

(2) Estuarine and marine areas are delineated in the eight maps of the Florida Marine Nutrient Regions, all dated October 19, 2011, which are incorporated by reference. Copies of these maps may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

(3) The Department shall establish by rule or final order estuary specific numeric interpretations of the narrative nutrient criteria for TN and TP for Perdido Bay, Pensacola Bay (including Escambia Bay), St. Andrews Bay, Choctawhatchee Bay, and Apalachicola Bay by June 30, 2013, subject to the provisions of Chapter 120, F.S. The Department shall establish by rule or final order the estuary specific numeric interpretation of the narrative nutrient criteria for TN and TP for the remaining estuaries by June 30, 2015, subject to the provisions of Chapter 120, F.S.

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804 FS. Law Implemented 403.021, 403.061, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History – New - -11.

62-302.800 Site Specific Alternative Criteria.

(1) Type I Site Specific Alternative Criteria: A waterbody ~~water body~~, or portion thereof, may not meet a particular ambient water quality criterion specified for its classification, due to natural background conditions or man-induced conditions which cannot be controlled or abated. In such circumstances, and upon petition by an affected person or upon the initiation by the Department, the Secretary may establish a site specific alternative water quality criterion when an affirmative demonstration is made that an alternative criterion is more appropriate for a specified portion of waters of the state. Public notice and an opportunity for public hearing shall be provided prior to issuing any order establishing alternative criteria.

(a) The affirmative demonstration required by this section shall mean a documented showing that the proposed alternative criteria would exist due to natural background conditions or man-induced conditions which cannot be controlled or abated. Such demonstration shall be based upon relevant factors which include:

1. A description of the physical nature of the specified waterbody ~~water body~~ and the water pollution sources affecting the criterion to be altered.

2. through 4. No change.

(b) No change.

(2) Type II Site Specific Alternative Criteria: In accordance with the procedures set forth below, affected persons may petition the Department, or the Department may initiate rulemaking, to adopt an alternative water quality criterion for a specific waterbody ~~water body~~, or portion thereof, on the basis of site-specific reasons other than those set forth above in subsection 62-302.800(1), F.A.C. The Department shall process any such petition as follows:

(a) through (c)1. No change.

2. In making the demonstration required by this paragraph (c), the petition shall include an assessment of aquatic toxicity, except on a showing that no such assessment is relevant to the particular criterion. The assessment of aquatic toxicity shall show that physical and chemical conditions at the site alter the toxicity or bioavailability of the compound in question and shall meet the requirements and follow the Indicator Species procedure set forth in *Water Quality Standards Handbook* (December 1983), a publication of the United States Environmental Protection Agency, incorporated here by reference. If, however, the Indicator Species Procedure is not applicable to the proposed site-specific alternative criterion, the petitioner may propose another generally accepted scientific method or procedure to demonstrate with equal assurance that the alternative criterion will protect the aquatic life designated use of the waterbody ~~water body~~.

3. through 7. No change.

(d) The provisions of this subsection do not apply to criteria contained in Rule 62-302.500, F.A.C., or criteria that apply to:

1. Biological Integrity (subsection 62-302.530(10), F.A.C.).

2. B.O.D. (subsection 62-302.530(11), F.A.C.).

~~3. Nutrients.~~

3. ~~4.~~ Odor (subsections 62-302.500(1), 62-302.530(21), 62-302.530(48), and paragraphs 62-302.530 (49)(b) and 62-302.530(52)(a), F.A.C.).

4. ~~5.~~ Oils and Greases (subsection 62-302.530(49), F.A.C.).

5. ~~6.~~ Radioactive Substances (subsection 62-302.530(57), F.A.C.).

6. ~~7.~~ Substances in concentrations that injure, are chronically toxic to, or produce adverse physiological or behavioral response in humans, animals, or plants (subsection 62-302.530(61), F.A.C.).

7. ~~8.~~ Substances, other than nutrients, in concentrations that result in the dominance of nuisance species (subsection 62-302.200(20), F.A.C.).

8. ~~9.~~ Total Dissolved Gases (subsection 62-302.530(66), F.A.C.).

9. ~~10~~ No change.

(e) through (f) No change.

(3) Type III Site Specific Alternative Criteria (SSAC) for Nutrients: Upon petition by an affected person or upon initiation by the Department, the Department shall establish, by Secretarial Order, site specific numeric nutrient criteria when an affirmative demonstration is made that the proposed criteria achieve the narrative nutrient criteria in paragraph 62-302.530(47)(b), F.A.C., and are protective of downstream waters. Public notice and an opportunity for public hearing shall be provided prior to adopting any order establishing alternative criteria under this subsection.

(a) The Department shall establish a Type III SSAC if all of the following conditions are met:

1. The petitioner demonstrates that the waterbody achieves the narrative nutrient criteria in paragraph 62-302.530(47)(b), F.A.C.

a. For streams, such a demonstration shall require:

i. information on chlorophyll *a* levels, algal mats or blooms, nuisance macrophyte growth, and changes in algal species composition indicating that there is not an imbalance in flora, and

ii. at least two temporally independent SCIs, conducted at a minimum of two spatially-independent stations representative of the waterbody or water segment for which a SSAC is requested, with an average score of 40 or higher, with neither of the two most recent SCI scores less than 35.

b. For lakes, such a demonstration shall require:

i. information on chlorophyll *a* levels, algal mats or blooms indicating that there is not an imbalance in flora or fauna, and

ii. at least two temporally independent LVIs, with an average score of 43 or above.

c. SCIs and LVIs collected at the same location less than three months apart shall be considered to be one sample, with the mean value used to represent the sampling period. SCIs and LVIs shall be conducted during the

water quality sampling period described in subparagraph 62-302.800(3)(a)2, F.A.C. There shall be a minimum of two assessments per station or lake, with at least one assessment conducted during the final year.

2. The petitioner provides sufficient data to characterize water quality conditions, including temporal variability, that are representative of the biological data used to support the SSAC. The water quality data shall be collected in the same waterbody segment as the biological monitoring stations and at a frequency and duration consistent with the study design concepts described in the document titled *Development of Type III Site Specific Alternative Criteria (SSAC) for Nutrients* (DEP-SAS-004/11), dated October 24, 2011, which is incorporated by reference herein. Copies of this document may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400. Water quality data associated with extreme climatic conditions, such as floods, droughts, and hurricanes, shall be excluded from the analysis.

3. Demonstration of downstream protection by one of the following methods:

a. Downstream waters are attaining water quality standards related to nutrient conditions pursuant to Chapter 62-303, F.A.C.; or

b. If the downstream waters do not attain water quality standards related to nutrient conditions:

i. The nutrients delivered by the waterbody subject to the Type III SSAC meet the allocations of a downstream TMDL; or

ii. The nutrients delivered by the waterbody are shown to provide for the attainment and maintenance of water quality standards in downstream waters.

(b) The SSAC shall be established at a level representative of nutrient loads or concentrations that have been demonstrated to be protective of the designated use by maintaining balanced, natural populations of aquatic flora and fauna. This demonstration shall take into account natural variability by using statistical methods appropriate to the data set, as described in *Development of Type III Site Specific Alternative Criteria (SSAC) for Nutrients* (DEP-SAS-004/11).

(3) through (4) renumber (4) through (5) No change.

(6) ~~(5)~~ Type II s~~S~~ite specific alternative criteria apply to the water bodies, or portions of the water bodies, listed below. For dissolved oxygen site specific alternative criteria, normal daily and seasonal fluctuations above the levels listed in the table below shall be maintained. For site specific alternative criteria with seasonal limits, the generally applicable criteria in Rule 62-302.530, F.A.C., apply at other times of the year.

(a) through (d) No change.

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 403.021, 403.061, 403.087, 403.088, 403.141, 403.161, 403.502 FS. History–Formerly 17-3.05(4), Amended 3-1-79, 10-2-80, 2-1-83, Formerly 17-3.031, Amended 6-17-92, Formerly 17-302.800, Amended 5-15-02, 1-9-06, 6-28-06, 12-7-06, 8-5-07, 8-5-10, - -11.

CHAPTER 62-303
IDENTIFICATION OF IMPAIRED SURFACE WATERS

PART I
GENERAL

62-303.150 Relationships ~~Between~~ Among Planning, Study and Verified Lists.

(1) The Department shall follow the methodology in Part II ~~Rule 62-303.300, F.A.C.,~~ to develop a planning list and Part III to develop a study list pursuant to Section 403.067(2), F.S. As required by Section 403.067(2), F.S., the planning list and the study list shall not be used in the administration or implementation of any regulatory program. The planning list~~, and~~ shall be submitted to EPA for informational purposes only. Waters on this planning list will be assessed pursuant to Section ~~subsection~~ 403.067(3), F.S., as part of the Department's watershed management approach. During this assessment, the Department shall determine whether the waterbody ~~water body~~ is impaired and whether the impairment is due to pollutant discharges using the methodology in Part IV ~~III~~. In cases where a waterbody on the planning list is determined to be impaired but the Department cannot determine the cause of the impairment, the waterbody shall be placed on a study list for further analysis to determine the causative pollutant(s) or other factors contributing to the impairment. The study list also addresses increasing nutrient trends in waterbodies. The Department shall only place a waterbody on the verified list if pollutant loading or concentrations cause or contribute to nonattainment of water quality standards. The resultant verified list of impaired waters, which is the list of waters for which TMDLs will be developed by the Department pursuant to Section ~~subsection~~ 403.067(4), F.S., will be adopted by Secretarial Order and will be subject to challenge under Sections 120.569 and 120.57, F.S. Once adopted, the list will be submitted to the EPA pursuant to paragraph 303(d)(1) of the Federal Clean Water Act ~~CWA~~.

(2) Consistent with state and federal requirements, opportunities for public participation, including workshops, meetings, and periods to submit comments on draft lists, will be provided as part of the development of planning, study, and verified lists.

Rulemaking ~~Specific~~ Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History–New 6-10-02, Repromulgated 1-2-07, Amended - -11.

62-303.200 Definitions.

As used in this chapter:

(1) "Biological Health Assessment" ~~"Bioassessment"~~ shall mean one of the following aquatic community-based biological evaluations: Stream Condition Index (SCI), ~~a~~ ~~BioRecon,~~ Lake Vegetation ~~Condition~~ Index (LVI), or Shannon-Weaver Diversity Index ~~Stream Condition Index~~.

(2) "BioRecon" shall mean a biological assessment that measures stream health in predominantly freshwaters using benthic macroinvertebrates, performed and calculated using the Standard Operating Procedures (SOP) for the BioRecon in the document titled *BRN 1000: Biological Reconnaissance Field Method* (DEP-SOP-003/01 BRN 1000), dated 10-24-11, which is incorporated by reference herein. Copies of the SOP may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400. ~~evaluation conducted in accordance with standard operating procedures (SOPs) FT 3000, FS 7410, and LT 7100, as promulgated in Rule 62-160.800 F.A.C.~~

(3) "Clean techniques" shall mean those applicable field sampling procedures and analytical methods referenced in "Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, July 1996, USEPA, Office of Water, Engineering and Analysis Division, Washington, D.C.," which is incorporated by reference. Copies of the procedures and methods may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

(4) through (6) No change.

(7) "Impaired water" shall mean a waterbody ~~water body~~ or waterbody ~~water body~~ segment that does not meet its applicable water quality standards as set forth in Chapters 62-302 and 62-4, F.A.C, as determined by the methodology in Part IV ~~III~~ of this chapter, due in whole or in part to discharges of pollutants from point or nonpoint sources.

(8) "Lake" shall mean a lentic fresh waterbody with a relatively long water residence time and an open water area that is free from emergent vegetation under typical hydrologic and climatic conditions. Aquatic plants, as defined in subsection 62-340.200(1), F.A.C., may be present in the open water. Lakes do not include springs, wetlands, or streams (except portions of streams that exhibit lake-like characteristics, such as long water residence time, increased width, or predominance of biological taxa typically found in non-flowing conditions).

(9)~~(8)~~ "Lake Vegetation Index (LVI)" shall mean a Biological Health Assessment that measures lake biological health in predominantly freshwaters using aquatic and wetland plants, performed and calculated using the Standard Operating Procedures for the LVI in the document titled *LVI 1000: Lake Vegetation Index Methods* (DEP-SOP-003/11 LVI 1000) and the methodology in *Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer* (DEP-SAS-002/11), both dated 10-24-11, which are incorporated by reference herein. Copies of the documents may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

~~"Lake Condition Index" shall mean the benthic macroinvertebrate component of a biological evaluation conducted following the procedures outlined in "Development of Lake Condition Indexes (LCI) for Florida," Florida Department of Environmental Protection, July, 2000, which is incorporated by reference.~~

(9) through (10) renumber (10) through (11) No change.

(12) "Nutrient" shall mean total nitrogen (TN), total phosphorus (TP), or their organic or inorganic forms.

(13) "Nutrient response variable" shall mean a biological variable, such as chlorophyll *a*, biomass, or structure of the phytoplankton, periphyton or vascular plant community, that responds to nutrient load or concentration in a predictable and measurable manner. For purposes of interpreting paragraph 62-302.530(47)(b), F.A.C., Dissolved oxygen (DO) shall also be considered a nutrient response variable if it is demonstrated for the waterbody that DO conditions result in biological imbalance and the DO responds to a nutrient load or concentration in a predictable and measurable manner.

(14) "Nutrient Watershed Region" shall mean a drainage area over which the nutrient thresholds in paragraph 62-302.531(2)(c), F.A.C., apply.

(a) The Panhandle West region consists of the Perdido Bay Watershed, Pensacola Bay Watershed, Choctawhatchee Bay Watershed, St. Andrew Bay Watershed, and Apalachicola Bay Watershed.

(b) The Panhandle East region consists of the Apalachee Bay Watershed, and Econfina/Steinhatchee Coastal Drainage Area.

(c) The North Central region consists of the Suwannee River Watershed and an area in Alachua County stream to sink region affected by the Hawthorne Formation.

(d) The West Central region consists of the Peace, Myakka, Hillsborough, Alafia, Manatee, Little Manatee River Watersheds, Sarasota/Lemon Bay Watershed and small, direct Tampa Bay tributary watersheds south of the Hillsborough River Watershed.

(e) The Peninsula region consists of the Waccasassa Coastal Drainage Area, Withlacoochee Coastal Drainage Area, Crystal/Pithlachascotee Coastal Drainage Area, small, direct Tampa Bay tributary watersheds west of the Hillsborough River Watershed, small, direct Charlotte Harbor tributary watersheds south of the Peace River Watershed, Caloosahatchee River Watershed, Estero Bay Watershed, Imperial River Watershed, Kissimmee River/Lake Okeechobee Drainage Area, Loxahatchee/St. Lucie Watershed, Indian River Watershed, Daytona/St. Augustine Coastal Drainage Area, St. John's River Watershed, Nassau Coastal Drainage Area, and St. Mary's River Watershed.

(f) The South Florida region consists of those areas south of the Peninsula region, such as the Cocohatchee River Watershed, Naples Bay Watershed, Rookery Bay Watershed, Ten Thousand Islands Watershed, Lake Worth Lagoon Watershed, Southeast Coast – Biscayne Bay Watershed, Everglades Watershed, Florida Bay Watershed, and the Florida Keys.

A map of the Nutrient Watershed Regions is incorporated by reference herein and may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

(11) through (12) renumber (15) through (16) No change.

(17)~~(13)~~ "Physical alterations" shall mean human-induced changes to the physical structure of the waterbody ~~water body~~.

(14) through (16) renumber (18) through (20) No change.

(21) “Predominantly fresh waters” shall mean surface waters in which the chloride concentration is less than 1,500 milligrams per liter or specific conductance is less than 4,580 µmhos/cm.

(22)~~(17)~~ “Predominantly marine waters” shall mean surface waters in which the chloride concentration ~~at the surface~~ is greater than or equal to 1,500 milligrams per liter or specific conductance is greater than or equal to 4,580 µmhos/cm.

(18) through (19) renumber (23) through (24) No change.

(25) "Shannon-Weaver Diversity Index" shall mean: negative summation (from i=1 to s) of $(n_i/N) \log_2 (n_i/N)$ where s is the number of species in a sample, N is the total number of individuals in a sample, and n_i is the total number of individuals in species i.

(26) ~~(20)~~ No change.

(27) “Spring vent” shall mean a location where groundwater flows out of a natural, discernable opening in the ground onto the land surface or into a predominantly fresh surface water.

(28) ~~(21)~~ “Stream” shall mean a ~~free-flowing,~~ predominantly fresh surface waterbody ~~water~~ that flows in a defined channel with banks. ~~and includes rivers, creeks, branches, freshwater sloughs, and other similar water bodies.~~ Streams do not include wetlands or portions of streams that exhibit lake characteristics (e.g., long water residence time, increased width, and predominance of biological taxa typically found in non-flowing conditions).

(29) ~~(22)~~ “Stream Condition Index (SCI)” shall mean a Biological Health Assessment that measures stream biological health in predominantly freshwaters using benthic macroinvertebrates, performed and calculated using the Standard Operating Procedures for the SCI in the document titled *SCI 1000: Stream Condition Index Methods* (DEP-SOP-003/11 SCI 1000) and the methodology in *Sampling and Use of the Stream Condition Index (SCI) for Assessing Flowing Waters: A Primer* (DEP-SAS-001/11), both dated 10-24-11, which are incorporated by reference herein. Copies of the documents may be obtained from the Department’s internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400. For water quality standards purposes, the Stream Condition Index shall not apply in the South Florida Nutrient Watershed Region. ~~evaluation conducted in accordance with SOPs FT 3000, FS 7420, and LT 7200, as promulgated in Rule 62-160.800, F.A.C.~~

(30) “Study list” shall mean the list of surface waters or segments, as identified in Rule 62-303.390, F.A.C., that do not attain surface water quality standards, but the cause of nonattainment is unknown and requires further study to identify the cause of nonattainment, or exhibit a clear adverse trend in nutrients or nutrient response variables where a site specific numeric interpretation has not been established pursuant to paragraph 63-302.531(2)(a), F.A.C.

(31) ~~(23)~~ No change.

(32) ~~(24)~~ “Total M~~m~~aximum D~~d~~aily L~~l~~oad” (TMDL) for an impaired waterbody ~~water body~~ or waterbody ~~water body~~ segment shall mean the sum of the individual wasteload allocations for point sources and the load allocations for nonpoint sources and natural background. Prior to determining individual wasteload allocations and load allocations, the maximum amount of a pollutant that a waterbody ~~water body~~ or waterbody segment can assimilate from all sources without exceeding water quality standards must first be calculated. A TMDL shall include either an implicit or explicit margin of safety and a consideration of seasonal variations.

~~(25) “Trophic State Index” or “TSI” means the trophic state index for lakes, which is based on lake chlorophyll a, Total Nitrogen, and Total Phosphorus levels, and is calculated following the procedures outlined on pages 86 and 87 of the State’s 1996 305(b) report, which are incorporated by reference.~~

(26) through (27) renumber (33) through (34) No change.

(35) ~~(28)~~ “Water quality standards” shall mean standards composed of designated present and future most beneficial uses (classification of waters), the numerical and narrative criteria, including Site Specific Alternative Criteria, applied to the specific water uses or classification, the Florida antidegradation policy, and the moderating provisions, such as variances, mixing zone rule provisions, or exemptions. ~~(mixing zones, site-specific alternative criteria, and exemptions) contained in Chapter 62-302, F.A.C., and in Chapter 62-4, F.A.C., adopted pursuant to Chapter 403, F.S.~~

(36) ~~(29)~~ “Water segment” shall mean a portion of a waterbody ~~water body~~ that the Department will assess and evaluate for purposes of determining whether a TMDL will be required. Water segments previously evaluated as part of the Department’s 1998 305(b) Report are depicted in the map titled “Water Segments of Florida,” which is incorporated by reference.

(37) ~~(30)~~ No change.

Rulemaking ~~Specific~~ Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History - New 6-10-02, Amended 6-5-06, 12-11-06, - -11.

PART II
THE PLANNING LIST

62-303.310 Evaluation of Aquatic Life Use Support.

A Class I, II, or III water shall be placed on the planning list for assessment of aquatic life use support (propagation and maintenance of a healthy, well-balanced population of fish and wildlife) if, based on sufficient quality and quantity of data, it:

(1) No change.

(2) Does not meet B~~b~~iological Health A~~a~~ssessment thresholds for its waterbody ~~water body~~ type as outlined in Rule 62-303.330, F.A.C., or

(3) Exceeds nutrient impairment thresholds as outlined in Rule 62-303.350, F.A.C.

Rulemaking ~~Specific~~ Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History - New 6-10-02, Amended 12-11-06, - -11.

62-303.330 Biological Assessment.

(1) No change.

(2) Biological Health Assessments ~~Bioassessments~~ used to evaluate predominantly fresh water ~~assess~~ streams and lakes under this rule shall include ~~BioRecons,~~ the Stream Condition Index (SCI) ~~Indices (SCIs)~~, ~~and~~ the Lake Vegetation Index (LVI), and the Shannon-Weaver Diversity Index. ~~the benthic macroinvertebrate component of the Lake Condition Index (LCI), which only applies to clear lakes with a color less than 20 platinum cobalt units~~. BioRecons can also be used to evaluate predominantly fresh water streams under this rule. Because these Biological Health Assessment ~~bioassessment~~ procedures require specific training and expertise, persons conducting a BioRecon, SCI or LVI ~~the bioassessments~~ must comply with the quality assurance requirements of Chapter 62-160, F.A.C. (including adherence to *Sampling and Use of the Stream Condition Index (SCI) for Assessing Flowing Waters: A Primer* (DEP-SAS-001/11), which was incorporated by reference in subsection 62-303.200(29), F.A.C., and *Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer* (DEP-SAS-002/11), which was incorporated by reference in subsection 62-303.200(9), F.A.C.), attend at least eight hours of Department ~~sanctioned~~ field training~~,~~ and pass a Department ~~sanctioned~~ field audit that verifies the sampler follows the applicable SOPs, as set forth in Chapter 62-160, F.A.C., before their Biological Health Assessment ~~bioassessment~~ data will be considered valid for use under this rule.

(3) A water segment shall be included on the planning list if it meets any of the following conditions: ~~Water segments with at least one failed bioassessment or one failure of the biological integrity standard, subsection 62-302.530(11), F.A.C., shall be included on the planning list for assessment of aquatic life use support.~~

(a) One of the two most recent Shannon-Weaver Diversity Index (subsection 62-302.530(10), F.A.C.) scores is less than 75 percent of the value from an appropriate control site.

(b) One of the two most recent Stream Condition Index scores is:

1. A score of < 35; or

2. A 20 point reduction from the historic maximum value if the historic maximum value SCI is above 64.

(c) One of the two most recent BioRecon scores is ≤ 4.

(d) One of the two most recent Lake Vegetation Index scores is:

1. A score < 43; or

2. A 20 point reduction from the historic maximum value if the historic maximum value LVI is above 78.

~~(a) In streams, the bioassessment shall be either an SCI or a BioRecon. Failure of a bioassessment for streams consists of a "poor" or "very poor" rating on the Stream Condition Index, or a "fail" rating on the BioRecon.~~

~~(b) Failure for lakes consists of a "poor" or "very poor" rating on the Lake Condition Index.~~

(4) The "historic maximum value" shall be the highest mean of any three consecutive, temporally independent Stream Condition Index (SCI) scores or Lake Vegetation Index (LVI) scores at the same location that are collected prior to the most recent sample being considered for evaluation with this provision. To qualify as temporally independent samples, each Biological Health Assessment shall be conducted at least three months apart. Biological Health Assessments collected at the same water segment less than three months apart shall be considered one sample, with the mean value used to represent the sampling period.

(5)~~(4)~~ Other information relevant to the biological health ~~integrity~~ of the water segment, including toxicity tests and information about alterations in the type, nature, or function of a waterbody, shall also be considered when assessing aquatic life use support.

Rulemaking ~~Specific~~ Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History - New 6-10-02, Amended 12-11-06, - -11.

62-303.350 Assessments of Numeric Interpretations of Narrative Nutrient Criteria.

(1) The nutrient impairment thresholds identified in Rules 62-303.351 through 62-303.354, F.A.C., ~~Trophic state indices (TSIs) and annual mean chlorophyll a values~~ shall be the primary means for assessing whether a water should be assessed further for nutrient impairment. Other information indicating an imbalance in flora or fauna due to nutrient enrichment, such as ~~including, but not limited to,~~ algal blooms or mats, excessive nuisance macrophyte growth, decrease in the distribution (either in density or areal coverage) of submerged aquatic vegetation, adverse changes in algal species composition ~~richness~~, and excessive diel oxygen swings, shall also be considered for placing waters on the planning list.

(2) To be used to determine whether a waterbody should be assessed further for nutrient enrichment,

(a) Data must meet the requirements of subsections (2)-(4), (7), and (8) in Rule 62-303.320, F.A.C.;

(b) To calculate an annual geometric mean for TN, TP or chlorophyll *a*, there shall be at least four temporally-independent samples per year with at least one sample collected between May 1 and September 30 and at least one sample collected during the other months of the calendar year. To be treated as temporally-independent, samples must be collected at least one week apart; and ~~At least one sample from each season shall be required in any given year to calculate a Trophic State Index (TSI) or an annual mean chlorophyll a value for that year (for purposes of this chapter, the four seasons shall be January 1 through March 31, April 1 through June 30, July 1 through September 30, October 1 through December 31),~~

~~(c) If there are multiple chlorophyll a or TSI values within a season, the average value for that season shall be calculated from the individual values and the four quarterly values shall be averaged to calculate the annual mean for that calendar year,~~

~~(d) For data collected after the effective date of this rule, individual TSI values shall only be calculated when the nitrogen, phosphorus, and chlorophyll data were collected at the same time and location,~~

~~(e) If there are insufficient data used to calculate a TSI or an annual mean chlorophyll a value in the planning period, but there are data from at least four consecutive seasons, the mean TSI or mean chlorophyll a value for the consecutive seasons shall be used to assess the waterbody,~~

~~(f) There must be annual means from at least four years when evaluating the change in TSI over time pursuant to subsection 62-303.352(3), F.A.C., and~~

(c) ~~(g)~~ To be assessed under this chapter ~~rule~~, except for data used to establish historical chlorophyll *a* levels, chlorophyll *a* data shall be determined using Department-approved methods as measured according to the DEP document titled, "Applicability of Chlorophyll *a* Methods" (DEP-SAS-002/10), dated October 24, 2011, incorporated by reference herein. Copies of the chlorophyll *a* document may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400. Chlorophyll *a* data shall be corrected for or free from the interference of pheophytin. ~~chlorophyll a data collected after the effective date of this rule shall be corrected chlorophyll a, except for data used to establish historical chlorophyll a levels. Corrected chlorophyll a is the calculated concentration of chlorophyll a remaining after the chlorophyll degradation product, phaeophytin a, has been subtracted from the uncorrected chlorophyll a measurement.~~

~~(3) When comparing changes in chlorophyll a or TSI values to historical levels, historical levels shall be based on the lowest five-year average for the period of record. To calculate a five year average, there must be annual means from at least three years of the five-year period.~~

Rulemaking ~~Specific~~ Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History - New 6-10-02, Amended 12-11-06, - -11.

62-303.351 Nutrients in Freshwater Streams.

A stream or stream segment shall be included on the planning list for nutrients if: ~~the following biological imbalances are observed:~~

(1) The applicable numeric interpretation of the narrative nutrient criterion established in subsection 62-302.531(2), F.A.C., is exceeded;

(2) For streams meeting the definition in subsection 62-302.200(36), F.A.C., the nutrient thresholds in subparagraph 62-302.531(2)(c)3., F.A.C., are exceeded and insufficient Biological Health Assessment data are available to fully assess achievement of the nutrient provisions in subparagraph 62-302.531(2)(c)2., F.A.C.;

(3) ~~(1)~~ Algal mats or blooms are present in sufficient quantities to pose a nuisance or hinder reproduction of a threatened or endangered species;~~, or~~

(4) ~~(2)~~ Annual geometric mean chlorophyll a concentrations are greater than 20 ug/l; or ~~if data indicate annual mean chlorophyll a values have increased by more than 50 percent over historical values for at least two consecutive years.~~

(5) There is a statistically significant increasing trend in the annual geometric means at the 95 percent confidence level in TN, TP or chlorophyll *a* over the planning period using a Mann's one-sided, upper-tail test for trend, as described in Nonparametric Statistical Methods by M. Hollander and D. Wolfe (1999 ed.), pages 376 and 724, which are incorporated by reference herein. Copies of these pages may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs.htm or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

Rulemaking ~~Specific~~ Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History - New 6-10-02, Repromulgated 1-2-07, Amended - -11.

62-303.352 Nutrients in Freshwater Lakes.

~~For the purposes of evaluating nutrient enrichment in lakes, TSIs shall be calculated based on the procedures outlined on pages 86 and 87 of the State's 1996 305(b) report, which are incorporated by reference.~~ Lakes or lake segments shall be included on the planning list for nutrients if:

(1) The numeric interpretation of the narrative nutrient criterion established in subsection 62-302.531(2), F.A.C., is exceeded; ~~For lakes with a mean color greater than 40 platinum cobalt units, the annual mean TSI for the lake exceeds 60, unless paleolimnological information indicates the lake was naturally greater than 60, or~~

(2) Algal mats or blooms are present in sufficient quantities to pose a nuisance or hinder reproduction of a threatened or endangered species; or ~~For lakes with a mean color less than or equal to 40 platinum cobalt units, the annual mean TSI for the lake exceeds 40, unless paleolimnological information indicates the lake was naturally greater than 40, or~~

(3) There is a statistically significant increasing trend in the annual geometric means at the 95 percent confidence level in TN, TP, or chlorophyll *a* over the planning period using a Mann's one-sided, upper-tail test for trend, as described in Nonparametric Statistical Methods by M. Hollander and D. Wolfe (1999 ed.), pages 376 and 724, which were incorporated by reference in subsection 62-303.351, F.A.C. ~~For any lake, data indicate that annual mean TSIs have increased over the assessment period, as indicated by a positive slope in the means plotted versus time, or the annual mean TSI has increased by more than 10 units over historical values. When evaluating the slope of mean TSIs over time, the Department shall require at least a five unit increase in TSI over the assessment period and use a Mann's one-sided, upper-tail test for trend, as described in Nonparametric Statistical Methods by M. Hollander and D. Wolfe (1999 ed.), pages 376 and 724 (which are incorporated by reference), with a 95 percent confidence level.~~

Rulemaking ~~Specific~~ Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History - New 6-10-02, Amended 12-11-06, - -11.

62-303.353 Nutrients in Estuaries and Open Coastal Waters.

Estuaries, estuary segments, or open coastal waters shall be included on the planning list for nutrients if:

(1) The numeric interpretation of the narrative nutrient criterion established in subsection 62-302.531(2), F.A.C., is exceeded; or

(2) T~~t~~heir annual geometric mean chlorophyll a for any year is greater than 11 ug/l, ~~or if data indicate annual mean chlorophyll a values have increased by more than 50 percent over historical values for at least two consecutive years.~~

(3) Algal mats or blooms are present in sufficient quantities to pose a nuisance or hinder reproduction of a threatened or endangered species, or

(4) There is a statistically significant increasing trend in the annual geometric means at the 95 percent confidence level in TN, TP, or chlorophyll *a* over the planning period using a Mann's one-sided, upper-tail test for trend as described in Nonparametric Statistical Methods by M. Hollander and D. Wolfe (1999 ed.), pages 376 and 724, which were incorporated by reference in subsection 62-303.351(5), F.A.C..

Rulemaking ~~Specific~~ Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History–New 6-10-02, Amended 12-11-06, - -11.

62-303.354 Nitrate-nitrite in Freshwater Spring Vents.

A spring vent in predominantly fresh waters shall be included on the planning list for nitrate-nitrite if:

(1) The numeric interpretation of the narrative nutrient criterion established in subsection 62-302.531(2), F.A.C., is exceeded;

(2) Algal mats or blooms are present in sufficient quantities to pose a nuisance or hinder reproduction of a threatened or endangered species; or

(3) There is a statistically significant increasing trend in the annual geometric means at the 95 percent confidence level in nitrate-nitrite over the planning period using a Mann's one-sided, upper-tail test for trend.

Rulemaking Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History – New - -11.

PART III
THE STUDY LIST

62-303.390 The Study List.

(1) The Study List contains waters where evidence indicates nonattainment of water quality standards, but the Department does not have enough information to determine the causative pollutant(s) and therefore cannot determine the appropriate remedy, and waters where a site specific numeric interpretation has not been established pursuant to paragraph 63-302.531(2)(a), F.A.C., and there is a clear adverse trend in nutrients or nutrient response variables. Causes of nonattainment can include excess pollutant loading or concentrations, habitat or hydrologic alterations, or natural conditions. Waters that do not attain water quality standards due to natural conditions pursuant to paragraph 62-303.420(1)(b), F.A.C., shall not be added to the Study List. To conform to the expectations of Section 303(d) of the Federal Clean Water Act and federal regulations at 40 C.F.R. 130.7(b), waters and associated parameters indentified in the Study List will be submitted to EPA as water quality limited segments. However, pursuant to paragraph 403.067(2)(a), F.S., the Study List cannot be used in the administration or implementation of any regulatory program. A TMDL shall not be established for a waterbody placed on the Study List pursuant to subsection 62-303.390(2), F.A.C., until such time as it is placed on the verified list pursuant to Part IV of this Chapter.

(2) A Class I, II, or III water shall be placed on the study list if:

(a) For waters with a statistically-significant increasing trend in TN, TP, nitrate-nitrite, or chlorophyll *a* pursuant to subsections 62-303.351(5), 62-303.352(3), 62-303.353(2), or 62-303.354(3), F.A.C., the Department confirms there is:

1. A statistically-significant (at the 95 percent confidence level) temporal trend in the annual geometric means after controlling for or removing the effects of confounding variables, such as climatic and hydrologic cycles, seasonality, quality assurance issues, and changes in analytical methods or method detection limits; and

2. A reasonable expectation that the water will become impaired within 10 years, taking into consideration the current concentrations of nutrients or nutrient response variables and the slope of the trend.

(b) A waterbody segment does not achieve the Biological Health Assessment provisions in Rule 62-303.430, F.A.C., but a cause has not been identified;

(c) A waterbody segment is verified as not meeting the dissolved oxygen criterion pursuant to Part IV of this Chapter, but a cause has not been identified;

(d) A waterbody segment where pollution control mechanisms are in place or planned that meet the requirements of Rule 62-303.600, F.A.C., except that there is uncertainty when water quality standards will be attained and the waterbody segment requires additional study; or

(e) For streams meeting the definition in subsection 62-302.200(36), F.A.C., the nutrient thresholds in subparagraph 62-302.531(2)(c)3., F.A.C., are exceeded based on data from the last 7.5 years and insufficient

Biological Health Assessment, chlorophyll *a*, or other response variable data are available to fully assess achievement of the nutrient provisions in paragraph 62-302.531(2)(c), F.A.C. A TMDL shall not be established for the waterbody prior to the collection of additional response variable data and the conclusion of the next assessment cycle.

(3) Waters that fall under paragraph 62-303.390(2)(a), F.A.C., and do not have a site specific numeric interpretation of the narrative pursuant to paragraph 62-302.351(2)(a), F.A.C., shall be removed from the Study List upon development of a site-specific interpretation of the narrative nutrient criteria for the waterbody. Those waters subject to a site specific interpretation of the narrative that meet the provisions of subparagraph 62-303.390(2)(a)1., F.A.C., will be reevaluated by the Department to determine whether adjustments are necessary to provide for the attainment and maintenance of water quality standards in downstream waterbodies.

(4) For waters that fall under paragraph 62-303.390(2)(b), F.A.C., above, a stressor identification study shall be conducted to identify the causative pollutant(s) or other factor(s) responsible for nonattainment. A stressor identification study includes collection and analysis of physical, chemical, and biological data necessary to determine the causative pollutant(s) or other factor(s) causing nonattainment.

(5) It is the Department's goal to collect the additional data needed for waters on the Study List as part of its watershed management approach, with the data collected during either the same cycle that the water is initially listed on the study list or during the subsequent cycle.

Rulemaking Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History – New - -11.

PART IV ~~III~~
THE VERIFIED LIST

62-303.420 Aquatic Life-Based Water Quality Criteria Assessment.

(1) No change.

(a) No change.

(b) If the Department has information suggesting that the values not meeting the dissolved oxygen (DO) criterion are due to natural background conditions, ~~including information about the in-stream concentrations of TN, TP, and BOD relative to comparable reference waters for waterbodies with values below the DO criterion,~~ it is the Department's intent to support that conclusion through the use of Biological Health Assessment ~~bioassessment~~ procedures referenced in Rule 62-303.330, F.A.C. The waterbody ~~water body~~ or segment shall not be included on the verified list for DO ~~the parameter of concern~~ if two or more temporally independent Biological Health Assessments ~~bioassessments~~ indicate the waterbody supports the protection and maintenance of a healthy, well-balanced population of fish and wildlife. ~~are conducted and no failures are reported.~~ In addition, the Biological Health Assessments shall be conducted in the same waterbody segment, or for streams, in the adjacent downstream waterbody segment where the water quality samples were taken. These Biological Health Assessments shall be conducted on the same day or after the water quality samples were collected. ~~To be treated as independent bioassessments, they must be conducted at least two months apart, within the assessed segment downstream of where the samples were measured, and after the samples were measured.~~

(2) No change.

(3) If the waterbody ~~water~~ was placed on the planning list based on worst case values used to represent multiple samples taken during a four-day period, the Department shall evaluate whether the worst case value should be excluded from the analysis pursuant to subsections (4) and (5). If the worst case value should not be used, the Department shall then re-evaluate the data following the methodology in subsection 62-303.420(2), F.A.C., using the more representative worst case value or, if all valid values are below acutely toxic levels, the median value.

(4) If the waterbody ~~water~~ was listed on the planning list based on samples that do not meet water quality criteria for metals, the metals data shall be excluded if it is determined that the quality assurance requirements of subsection 62-303.320(8), F.A.C., were not met or that the sample was not collected and analyzed using clean techniques, if the use of clean techniques is appropriate. The Department shall re-evaluate the remaining valid data using the methodology in subsection 62-303.420(2), F.A.C., excluding any data that cannot be validated.

(5) through (7) No change.

Rulemaking ~~Specific~~ Authority 403.061, 403.067 FS. Law Implemented 403.021(11), 403.062, 403.067 FS. History - New 6-10-02, Amended 12-11-06, - -11.

62-303.430 Biological Impairment.

(1) All Biological Health Assessments ~~bioassessments~~ used to list a water on the verified list shall be conducted and interpreted in accordance with Chapter 62-160, F.A.C., including Department-approved Standard Operating Procedures and the Department documents, *Sampling and Use of the Stream Condition Index (SCI) for Assessing Flowing Waters: A Primer* (DEP-SAS-001/11), which was incorporated by reference in subsection 62-303.200(29), F.A.C., and *Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer* (DEP-SAS-002/11), which was incorporated by reference in subsection 62-303.200(9), F.A.C. To be used for placing waters on the verified list, any Biological Health Assessments ~~bioassessments~~ conducted before the adoption of applicable SOPs for such Biological Health Assessments ~~bioassessments~~ as part of Chapter 62-160, F.A.C., shall substantially comply with the subsequent SOPs. Biological Health Assessments conducted during conditions inconsistent with the applicable primer shall be excluded from the assessment.

(2) If the water was listed on the planning list based on Biological Health Assessment ~~bioassessment~~ results, the water shall be determined to be biologically impaired if any of the following conditions occur:

(a) The average score of at least two temporally independent Biological Health Assessments is below 40 for the SCI or if either of the two most recent SCI scores is less than 35, or 43 for the LVI. If there are only two Biological Health Assessments and the difference between the two scores is greater than 20 points, then an additional SCI or LVI shall be required and the average of all three scores shall be used.

(b) The historic maximum SCI value, as defined in subsection 62-303.330(4), F.A.C., is above 64 and the average of the two most recent independent SCI scores is 20 or more points below the historic maximum value.

(c) The historic maximum value LVI, as defined in subsection 62-303.330(4), F.A.C., is above 78 and the average of the two most recent independent LVI scores is 20 or more points below the historic maximum value. ~~there were two or more failed bioassessments within the five years preceding the planning list assessment. If there were less than two failed bioassessments during the last five years preceding the planning list assessment, the Department will conduct an additional bioassessment. If the previous failed bioassessment was a BioRecon, then an SCI will be conducted. Failure of this additional bioassessment shall constitute verification that the water is biologically impaired.~~

(d) The average score of at least two temporally independent Shannon-Weaver Diversity Indices is less than 75 percent of the average score from an appropriate control site, pursuant to subsection 62-302.530(10), F.A.C.

(3) If the water was listed on the planning list based on BioRecon data, two or more temporally independent SCIs shall be conducted. If the water segment was listed on the planning list based on other information specified in subsection ~~rule~~ 62-303.330(4), F.A.C., indicating biological impairment, two or more temporally independent Biological Health Assessments appropriate for the waterbody type shall be conducted ~~the Department will conduct a bioassessment~~ in the waterbody segment~~, conducted in accordance with the methodology in Rule 62-303.330, F.A.C.,~~ to verify whether the water is impaired. If available, the Department shall consider other scientifically credible biological assessment methods in predominantly marine waters to verify that the water is biologically impaired. Results from these biological assessments shall be evaluated in accordance with subsection 62-303.430(2), F.A.C., as applicable. ~~For streams, the bioassessment shall be an SCI. Failure of this bioassessment shall constitute verification that the water is biologically impaired.~~

(4) If a waterbody was listed on the planning list based on failure of the Shannon-Weaver Diversity Index under subsection 62-302.530(10), F.A.C., a minimum of two Biological Health Assessments shall be conducted in accordance with the methodology in Rule 62-303.330, F.A.C., to verify whether the water is impaired. If an SCI or LVI is not applicable for the waterbody type, then the Biological Health Assessment shall be the Shannon-Weaver Diversity Index or other scientifically credible method.

(5) ~~(4)~~ Following verification that a waterbody is biologically impaired, a waterbody ~~water~~ shall be included on the verified list for biological impairment if:

(a) through (b)1. No change.

2. If there is not a numeric criterion for the specified pollutant(s) in Chapter 62-302, F.A.C., an identification of the specific factors that reasonably demonstrate how the particular pollutant(s) are associated with the observed biological effect. If the numeric interpretation of the narrative nutrient criterion in paragraph 62-302.531(2)(c), F.A.C., is exceeded, then nutrients shall be identified as the causative pollutant unless a stressor identification study links the adverse biological effects to causal factor(s) other than nutrients.

(6) If a waterbody is verified as biologically impaired, but a causative pollutant has not been identified, the waterbody shall be included on the study list.

Rulemaking ~~Specific~~ Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History - New 6-10-02, Amended 12-11-06, - -11.

62-303.450 Assessments of Numeric Interpretations of Narrative Nutrient Criteria.

(1) A stream or estuary ~~A water~~ shall be placed on the verified list for impairment due to nutrients if it exceeds the chlorophyll *a* thresholds in subsection 62-303.351(4), F.A.C., or subsection 62-303.353(1), F.A.C., more than once in any consecutive three year period, and there are sufficient data from the last 7.5 ~~five~~ years ~~preceding the planning list assessment~~, combined with historical data (if needed to establish historical chlorophyll *a* ~~a~~ levels ~~or historical TSIs~~), to meet the data sufficiency requirements of subsection 62-303.350(2), F.A.C. If there are insufficient data, additional data shall be collected as needed to meet the requirements. Once these additional data are collected, the Department shall determine if there is sufficient information, including paleoecological data, to develop a site-specific chlorophyll *a* threshold that better reflects conditions beyond which an imbalance in flora or fauna occurs in the water segment. If there is sufficient information, the Department shall re-evaluate the data using the site-specific thresholds. If there is insufficient information, the Department shall re-evaluate the data using the thresholds provided in subsections ~~Rules~~ 62-303.351(4) and 62-303.353(1) ~~-.353~~, F.A.C., for streams~~, lakes,~~ and estuaries and verify impairment if there is more than one exceedance in any consecutive three year period ~~, respectively~~. In any case, the Department shall limit its analysis to the use of data collected during the last 7.5 ~~five~~ years ~~preceding the planning list assessment and the additional data collected in the second phase~~. If alternative thresholds are used for the analysis, the Department shall provide the thresholds for the record and document how the alternative threshold better represents conditions beyond which an imbalance in flora or fauna is expected to occur.

(2) If the waterbody was listed on either the planning or study list for nutrient enrichment based on other information indicating an imbalance in flora or fauna, as provided in subsections 62-303.350(1), 62-303.351(3), 62-303.352(2), or 62-303.353(2), F.A.C., the Department shall verify the imbalance before placing the water on the verified list for impairment due to nutrients and shall provide documentation supporting the imbalance in flora or fauna.

(3) If the waterbody was listed on the planning list based on subsections 62-303.351(1), 62-303.352(1), 62-303.353(1), or 62-303.354(1), F.A.C., upon confirming the imbalance of flora or fauna based on the last 7.5 years of data, the Department shall place the waterbody on the verified list for exceedances of the narrative nutrient criteria in paragraph 62-302.530(47)(b), F.A.C.

(4) If the waterbody was listed on the study list for an adverse trend in nutrient response variables pursuant to paragraph 62-303.390(2)(a), F.A.C., the Department shall analyze the potential risk of nonattainment of the narrative nutrient criteria at paragraph 62-302.530(47)(b), F.A.C. This analysis shall take into consideration the current concentrations of nutrient response variables, the slope of the trend, and the potential sources of nutrients (natural and anthropogenic). If there is a reasonable expectation that the waterbody will become impaired within 5 years, the Department shall place the waterbody on the verified list to develop a TMDL that establishes a numeric interpretation pursuant to paragraph 62-302.531(2)(a), F.A.C.

(5) ~~(3)~~ The thresholds for impairment due to nutrients in paragraph 62-302.531(2)(c) and subsections 62-303.351(4) and 62-303.353(1), F.A.C.,~~used under this section~~ are not required to be used during development of wasteload allocations or TMDLs where a site-specific interpretation of the narrative nutrient criterion in paragraph 62-302.530(47)(b), F.A.C., is established.

(6) When assessing waters for nutrient impairment, the Department shall evaluate whether the data were collected under extreme climatic conditions, such as floods, droughts, and hurricanes. When assessing estuary specific numeric interpretations of the narrative nutrient criterion in Rule 62-302.532, F.A.C., the Department shall also evaluate whether the current ambient monitoring network is representative of the network that was the basis for the numeric interpretation of the narrative nutrient criterion in Rule 62-302.532, F.A.C. The Department will consider this information when developing the final verified list and shall not list waters as impaired based solely on extreme climatic conditions or changes in the monitoring network.

Rulemaking ~~Specific~~ Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History - New 6-10-02, Amended 12-11-06, - -11.

PART V ~~IV~~
MISCELLANEOUS PROVISIONS

62-303.710 Format of Verified List and Verified List Approval.

(1) through (2) No change.

(3) For waters impaired for dissolved oxygen, the Department shall identify the pollutants causing or contributing to the impairment and list both the pollutant and dissolved oxygen on the verified list. If the factor(s) causing the impairment cannot be identified, the water shall be placed on the study list.

(4) through (7) No change.

Rulemaking ~~Specific~~ Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History–New 6-10-02, Amended 12-11-06, - -11.

62-303.720 Delisting Procedure.

(1) Waters on planning or study lists developed under this chapter that are verified to not be impaired during development of the verified list shall be removed from the State's planning or study list. Once a waterbody segment is verified to not be impaired pursuant to Part IV ~~III~~ of this chapter, the data used to place the waterbody on the planning or study list shall not be the sole basis for listing that waterbody segment on future planning lists.

(2) Waterbody segments shall be removed from the State's verified list only after adoption ~~completion~~ of a TMDL, a Department determination that pollution control programs provide reasonable assurance that water quality standards will be attained pursuant to Rule 62-303.600 F.A.C., ~~for all pollutants causing impairment of the segment~~ or upon demonstration that the waterbody meets the water quality standard that was previously established as not being met.

(a) No change.

(b) For waters listed due to failure to meet aquatic life use support based on biological data, the waterbody shall be delisted when the two most recent independent Biological Health Assessments indicate the waterbody is no longer impaired pursuant to subsection 62-303.430(2), F.A.C. ~~the segment passes two independent follow-up bioassessments and there have been no failed bioassessments for at least one year~~. The follow-up tests must meet the following requirements:

1. For streams, the new data must be ~~may be two BioRecons or any combination of BioRecons and~~ SCIs unless the SCI is not appropriate for the waterbody type, in which case the new data shall consist of the Shannon-Weaver Diversity Index.

2. The Biological Health Assessments ~~bioassessments~~ must be conducted during similar conditions (same seasons and general flow conditions) under which the previous Biological Health Assessments ~~bioassessments~~ used to determine impairment were collected.

3. through (i) No change.

(j) For waters listed based on nutrient impairment, the waterbody shall be delisted if it does not meet the listing thresholds in Rule 62-303.450, F.A.C., for three consecutive years, or it is demonstrated to not exceed the narrative nutrient criteria at paragraph 62-302.530(47)(b), F.A.C., pursuant to the provisions of subsection 62-303.450(3), F.A.C.

(k) No change.

(l) For waters listed based on paragraph 62-303.420(7)(b), F.A.C., or subsection 62-303.470(3), F.A.C., the waterbody shall be delisted if the Department determines the waterbody is no longer impaired, based on scientifically credible and compelling information comparable in quantity and quality to the information used to make the initial listing decision. Any determinations to delist waters based on this provision shall be documented, and the documentation shall include the basis for the decision.

Table 4. No change.

(m) No change.

(n) For waterbodies listed on the verified list, the water shall be delisted from the verified list and added to the study list when subsequent analysis demonstrates that the cause of the impairment was incorrect or otherwise demonstrates that a TMDL is not appropriate.

(3) No change.

Rulemaking ~~Specific~~ Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History–New 6-10-02, Amended 12-11-06, 9-4-07, - -11.