Presented below are water quality standards that are in effect for Clean Water Act purposes.

EPA is posting these standards as a convenience to users and has made a reasonable effort to assure their accuracy. Additionally, EPA has made a reasonable effort to identify parts of the standards that are not approved, disapproved, or are otherwise not in effect for Clean Water Act purposes.

CHAPTER 6-302: SURFACE WATER QUALITY STANDARDS
Effective May 19, 2015

In instances where the EPA has determined that certain provisions are not considered new or revised water quality standards, the Agency has attempted to indicate those in blue text. However, the font color indicated within this document should not be interpreted as the official position of the Agency, and primarily addresses recent reviews by the EPA. For more detailed explanations on the EPA's analysis and rationale related to decisions of new or revised water quality standards, see the Agency's historical decision documents and associated records or contact the appropriate Agency staff. Additionally, arrow boxes found in the margins of this document direct the reader to other new or revised water quality standards which are related to provisions found in Chapter 62-302, but are found in documents outside of the regulations and are generally incorporated by reference. (See Attachments A-F of this document).

CHAPTER 62-302
SURFACE WATER QUALITY STANDARDS

62-302.200 Definitions.
As used in this chapter:

(1) "Acute toxicity" shall mean a concentration greater than one-third (1/3) of the amount lethal to 50% 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 average flow" 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) "Background" shall mean the condition of waters in the absence of the activity or discharge under consideration, based on the best scientific information available to the Department.

(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) "Chronic Toxicity".

(a) For a substance without an aquatic life-based criterion in Rule 62-302.530, F.A.C., and where chronic toxicity studies evaluating the toxicity of the substance are available, or for mixtures of substances, including effluents, chronic toxicity shall mean the concentration that equals or exceeds the IC_{25} on species protective of the indigenous aquatic community; or

(b) For a substance without an aquatic life-based criterion in Rule 62-302.530, F.A.C., and where chronic toxicity studies evaluating the toxicity of the substance on species protective of the indigenous aquatic community are not available, the chronic toxicity of a substance shall be established as a concentration greater than one-twentieth (1/20) of the amount lethal to 50% of the test organisms in 96 hours (96 hr LC_{50}) for a species protective of the indigenous aquatic community.

(6) "Commission" shall mean the Environmental Regulation Commission.

(7) "Compensation point for photosynthetic activity" shall mean the depth within the water column at which one percent of the surface Photosynthetically Active Radiation remains unabsorbed. The light intensities immediately below the surface and at depth shall be measured by irradiance meters that measure the total irradiance of light between 400 and 700 nm.

(8) "Department" shall mean the Department of Environmental Protection.

(9) "Designated use" 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) "Dissolved metal" shall mean the metal fraction that passes through a 0.45 micron filter.

(11) "Effluent limitation" 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) "Exceptional ecological significance" shall mean that a waterbody 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) "Exceptional recreational significance" 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) "Existing uses" shall mean any actual beneficial use of the waterbody on or after November 28, 1975.

(15) "IC_{25}"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) "Man-induced conditions which cannot be controlled or abated" shall mean conditions that have been influenced by human activities, and

(a) Would remain after removal of all point sources,

(b) Would remain after imposition of best management practices for non-point sources, and

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

(19) "Natural background" 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, 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 nitrogen zone consists of the USEPA Lake Region 65-03.

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

(i) The TN3 nitrogen 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 nitrogen 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 nitrogen 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) "Nuisance species" 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) "Nursery area of indigenous aquatic life" 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.

(26) "Outstanding Florida Waters" shall mean waters designated by the Environmental Regulation Commission as worthy of special protection because of their natural attributes.

(27) "Outstanding National Resources Waters" shall mean waters designated by the Environmental Regulation Commission that are of such exceptional recreational or ecological significance that water quality should be maintained and protected under all circumstances, other than temporary lowering and the lowering allowed under Section 316 of the Federal Clean Water Act.

(28) "Pollution" shall mean the presence in the outdoor atmosphere or waters of the state of any substances, contaminants, noise, or man-made or man-induced alteration of the chemical, physical, biological or radiological integrity of air or water in quantities or levels which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property, including outdoor recreation.

(29) "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. Measurements for making this determination shall be taken within the bottom half of the water column.

(30) "Predominantly marine waters" shall mean surface waters in which the chloride concentration is greater than or equal to 1,500 milligrams per liter or specific conductance is greater than or equal to 4,580 µmhos/cm. Measurements for making this determination shall be taken within the bottom half of the water column.

(31) "Propagation" shall mean reproduction sufficient to maintain the species' role in its respective ecological community.

(32) "Secretary" shall mean the Secretary of the Department of Environmental Protection.

(33) "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 ni is the total number of individuals in species i.

(34) “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.

(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, 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) “Surface Water” 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) “Total recoverable metal” shall mean the concentration of metal in an unfiltered sample following treatment with hot dilute mineral acid.

(41) “Water quality criteria” shall mean elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports the present and future most beneficial uses.

(42) “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 a variances, mixing zone rule provisions, or exemptions.

(43) "Waters" shall be as defined in Section 403.031(13), F.S.

(44) "Zone of mixing" or "mixing zone" 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, 403.087, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 403.021(11), 403.031, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088, 403.502, 403.802 FS. History–New 5-29-90, Amended 2-13-92, Formerly 17-302.200, Amended 1-23-95, 5-15-02, 4-2-08, 7-3-12, 8-1-13.

Editorial Note: *Rule subsections 62-302.200(1)-(3), (5), (7), (9)-(15), (18)-(21), (29)-(30), (34), (38), (40), (42), and (44) became effective on 7-3-12, 20 days after filing the rule certification package for Florida's numeric nutrient standards. Rule subsections 62-302.200(4), (16)-(17), (22)-(25), (35)-(37), and (39) will become effective upon approval by EPA in their entirety, conclusion of rulemaking by EPA to repeal its federal numeric nutrient criterion for Florida, and EPA's determination that Florida's rules address its January 2009 determination that numeric nutrient criteria are needed in Florida.*

62-302.300 Findings, Intent, and Antidegradation Policy for Surface Water Quality.

(1) Article II, Section 7 of the Florida Constitution requires abatement of water pollution and conservation and protection of Florida's natural resources and scenic beauty.

(2) Congress, in Section 101(a)(2) of the Federal Water Pollution Control Act, as amended, declares that achievement by July 1, 1983, of water quality sufficient for the protection and propogation of fish, shellfish, and wildlife, as well as for recreation in and on the water, is an interim goal to be sought whenever attainable. Congress further states in Section 101(a)(3), that it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited.

(3) The present and future most beneficial uses of all waters of the State have been designated by the Department by means of the classification system set forth in this Chapter pursuant to Section 403.061(10), F.S. Water quality standards are established by the Department to protect these designated uses.

(4) Because activities outside the State sometimes cause pollution of Florida's waters, the Department will make every reasonable effort to have such pollution abated.

(5) Water quality standards apply equally to and shall be uniformly enforced in both the public and private sector.

(6) Public interest shall not be construed to mean only those activities conducted solely to provide facilities or benefits to the general public. Private activities conducted for private purposes may also be in the public interest.

(7) The Commission, recognizing the complexity of water quality management and the necessity to temper regulatory actions with the technological progress and the social and economic well-being of people, urges, however, that there be no compromise where discharges of pollutants constitute a valid hazard to human health.

(8) The Commission requests that the Secretary seek and use the best environmental information available when making decisions on the effects of chronically and acutely toxic substances and carcinogenic, mutagenic, and teratogenic substances. Additionally, the Secretary is requested to seek and encourage innovative research and developments in waste treatment alternatives that might better preserve environmental quality or at the same time reduce the energy and dollar costs of operation.

(9) The criteria set forth in this Chapter are minimum levels which are necessary to protect the designated uses of a water body. It is the intent of this Commission that permit applicants should not be penalized due to a low detection limit associated with any specific criteria.

(10)(a) The Department's rules that were adopted on March 1, 1979, regarding water quality standards are designed to protect the public health or welfare and to enhance the quality of waters of the State. They have been established taking into consideration the use and value of waters of the State for public water supplies, propogation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.

(b) Under the approach taken in the formulation of the rules adopted in this proceeding:

1. The Department's rules that were adopted on March 1, 1979, regarding water quality standards are based upon the best scientific knowledge related to the protection of the various designated uses of waters of the State; and

2. The mixing zone, zone of discharge, site specific alternative criteria, exemption, and equitable allocation provisions are designed to provide an opportunity for the future consideration of factors relating to localized situations which could not adequately be addressed in this proceeding, including economic and social consequences, attainability, irretrievable conditions, natural background, and detectability.

(c) This is an even-handed and balanced approach to attainment of water quality objectives. The Commission has specifically recognized that the social, economic and environmental costs may, under certain special circumstances, outweigh the social, economic and environmental benefits if the numerical criteria are enforced statewide. It is for that reason that the Commission has provided for mixing zones, zones of discharge, site specific alternative criteria, exemptions and other provisions in Chapters 62-302, 62-4, 62-600, and 62-660, F.A.C. Furthermore, the continued availability of the moderating provisions is a vital factor providing a basis for the Commission's determination that water quality standards applicable to water classes in the rule are attainable taking into consideration environmental, technological, social, economic and institutional factors. The companion provisions of Chapters 62-4, 62-600, 62-660, F.A.C., approved simultaneously with these Water Quality Standards are incorporated herein by reference as a substantive part of the State's comprehensive program for the control, abatement and prevention of water pollution.

(d) Without the moderating provisions described in subparagraph (b)2. above, the Commission would not have adopted the revisions described in (b)1. above nor determined that they are attainable as generally applicable water quality standards.

(11) Section 403.021(11), F.S., declares that the public policy of the State is to conserve the waters of the State to protect, maintain, and improve the quality thereof for public water supplies, for the propagation of wildlife, fish and other aquatic life, and for domestic, agricultural, industrial, recreational, and other beneficial uses. It also prohibits the discharge of wastes into Florida waters without treatment necessary to protect those beneficial uses of the waters.

(12) The Department shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources, and all cost-effective and reasonable best management practices for nonpoint source control. For the purposes of this rule, highest statutory and regulatory requirements for new and existing point sources are those which can be achieved through imposition of effluent limits required under Sections 301(b) and 306 of the Federal Clean Water Act (as amended in 1987) and Chapter 403, F.S. For the purposes of this rule, cost-effective and reasonable best management practices for nonpoint source control are those nonpoint source controls authorized under Chapters 373 and 403, F.S., and Department rules.

(13) The Department finds that excessive nutrients (total nitrogen and total phosphorus) constitute one of the most severe water quality problems facing the State. It shall be the Department's policy to limit the introduction of man-induced nutrients into waters of the State. Particular consideration shall be given to the protection from further nutrient enrichment of waters which are presently high in nutrient concentrations or sensitive to further nutrient concentrations and sensitive to further nutrient loadings. Also, particular consideration shall be given to the protection from nutrient enrichment of those waters presently containing very low nutrient concentrations: less than 0.3 milligrams per liter total nitrogen or less than 0.04 milligrams per liter total phosphorus.

(14) Existing uses and the level of water quality necessary to protect the existing uses shall be fully maintained and protected. Such uses may be different or more extensive than the designated use.

(15) Pollution which causes or contributes to new violations of water quality standards or to continuation of existing violations is harmful to the waters of this State and shall not be allowed. Waters having water quality below the criteria established for them shall be protected and enhanced. However, the Department shall not strive to abate natural conditions.

(16) If the Department finds that a new or existing discharge will reduce the quality of the receiving waters below the classification established for them or violate any Department rule or standard, it shall refuse to permit the discharge.

(17) If the Department finds that a proposed new discharge or expansion of an existing discharge will not reduce the quality of the receiving waters below the classification established for them, it shall permit the discharge if such degradation is necessary or desirable under federal standards and under circumstances which are clearly in the public interest, and if all other Department requirements are met. Projects permitted under Part IV of Chapter 373, F.S., shall be considered in compliance with this subsection if those projects comply with the requirements of Section 373.414(1),

F.S.; also projects permitted under the grandfather provisions of Sections 373.414(11) through (16), F.S., or permitted under Section 373.4145, F.S., shall be considered in compliance with this subsection if those projects comply with the requirements of subsection 62-312.080(2), F.A.C.

(18)(a) Except as provided in subparagraphs (b) and (c) of this paragraph, an applicant for either a general or generic permit or renewal of an existing permit for which no expansion of the discharge is proposed is not required to show that any degradation from the discharge is necessary or desirable under federal standards and under circumstances which are clearly in the public interest.

(b) If the Department determines that the applicant has caused degradation of water quality over and above that allowed through previous permits issued to the applicant, then the applicant shall demonstrate that this lowering of water quality is necessary or desirable under federal standards and under circumstances which are clearly in the public interest. These circumstances are limited to cases where it has been demonstrated that degradation of water quality is occurring due to the discharge.

(c) If the new or expanded discharge was initially permitted by the Department on or after October 4, 1989, and the Department determines that an antidegradation analysis was not conducted, then the applicant seeking renewal of the existing permit shall demonstrate that degradation from the discharge is necessary or desirable under federal standards and under circumstances which are clearly in the public interest.

(19) The implementation of numeric nutrient standards under Rules 62-302.531 and 62-302.532, F.A.C., shall be implemented consistent with the document titled "*Implementation of Florida's Numeric Nutrient Standards*," dated April 2013 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02905), which is incorporated by reference herein. Copies of this document may be obtained by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400. This document references the following documents, which are incorporated by reference in Rule 62-302.531, F.A.C. which is not yet effective – see editorial note for Rule 62-302.531, F.A.C.

See Attachment A for more details (CWA effective 6/27/13)

(a) The following documents are incorporated by reference herein and may be obtained from the address above:

1. Sampling and Use of the Stream Condition Index (SCI) for Assessing Flowing Waters: A Primer (DEP-SAS-001/11), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02906);

2. Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer (DEP-SAS-002/11), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02907);

3. SCI 1000 Stream Condition Index Methods (DEP-SOP-003/11), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02908);

4. LVI 1000 Lake Vegetation Index Methods (DEP-SOP-003/11), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02909);

5. FS 7000 General Biological Community Sampling (DEP-SOP-001/01), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02910);

6. FT 3000 Aquatic Habitat Characterization (DEP-SOP-001/01), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02911);

7. Development of Type III Site Specific Alternative Criteria (SSAC) for Nutrients, (DEP-SAS-004/11), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02912);

8. Applicability of Chlorophyll *a* Methods (DEP-SAS-002/10), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02914);

9. Map of the Nutrient Watershed Regions, dated October 17, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02915);

10. 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 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02916);

11. Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., dated July 9, 2006 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02917); and

12. Rules 62-302.200 and 62-302.400, paragraphs 62-302.530(47)(a) and (47)(b), and Rules 62-302.531, 62-302.532, 62-302.800, 62-303.100, 62-303.350, 62-303.353, 62-303.390, 62-303.450, 62-340.200, 62-620.610, 62-620.620, 62-650.400, and 62-650.500, F.A.C.

(b)The following documents, each of which is incorporated by reference herein, a re cited in Sampling and Use of the Stream Condition Index (SCI) for Assessing Flowing Waters: A Primer (DEP-SAS-001/11), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02906):

1. SCI 1000 Stream Condition Index Methods (DEP-SOP-003/11), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02908);

2. LVI 1000 Lake Vegetation Index Methods (DEP-SOP-003/11), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02909);

3. FS 7000 General Biological Community Sampling (DEP-SOP-001/01), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02910);

4. FT 3000 Aquatic Habitat Characterization (DEP-SOP-001/01), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02911);

5. Development of Type III Site Specific Alternative Criteria (SSAC) for Nutrients, (DEP -SAS-004/11), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02912); and

6. Development of Aquatic Life Use Support Attainment Thresholds for Florida's Stream Condition Index and Lake Vegetation Index (DEP-SAS-003/11), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02913).

(c)The following document, which is incorporated by reference herein, is cited in Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer (DEP -SAS-002/11), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02907): LVI 1000 Lake Vegetation Index Methods (DEP-SOP-003/11), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02909).

(d)The following documents, each of which is incorporated by reference herein, are cited in one of the Standard Operating Procedures identified above in paragraph 62-302.300(19)(a), F.A.C.

1. SCI 1000 Stream Condition Index Methods (DEP-SOP-003/11), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02908):

a.Merritt, R.W., and Cummins, K.W., An Introduction to the Aquatic Insect s of North America, Third Edition, 1996;

b.Sampling and Use of the Stream Condition Index (SCI) for Assessing Flowing Waters: A Primer (DEP-SAS-001/11), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02906); and

c.FT 3100 Stream and River Habitat Assessment (DEP-SOP-001/01), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02944).

2. LVI 1000 Lake Vegetation Index Methods (DEP-SOP-003/11), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02909):

a. Rule 62-340.450, F.A.C.; and

b. Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer (DEP-SAS-002/11), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02907).

3. FS 7000 General Biological Community Sampling (DEP-SOP-001/01), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02910): Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer (DEP-SAS-002/11), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02907).

4. FT 3000 Aquatic Habitat Characterization (DEP-SOP-001/01), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02911): FA 5720, Section 1, Training for Habitat Assessment Testing, in DEP-SOP-001/01, dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02945).

(e)The following documents, each of which is incorporated by reference herein, are cited in Development of Type III Site Specific Alternative Criteria (SSAC) for Nutrients, (DEP-SAS-004/11), dated October 24, 2011

(http://www.flrules.org/Gateway/reference.asp?No=Ref-02912), identified above in Subsection 62-302.300(19), F.A.C.

1. FT 3000 Aquatic Habitat Characterization (DEP-SOP-001/01), dated September 19, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02911);

2. Sampling and Use of the Stream Condition Index (SCI) for Assessing Flowing Waters: A Primer (DEP-SAS-001/11), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02906);

3. Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer (DEP-SAS-002/11), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02907);

4. Chapters 62-160 and 62-303, paragraphs 62-302.530(47)(b), 62-302.531(2)(a), and 62-302.531(c), and Rules 62-302.531 and 62-302.800, F.A.C.;

5. Process for Assessing Data Usability (DEP-EA 001/07), dated March 31, 2008 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02919);

6. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, U.S. Environmental Protection Agency, EPA-530/R-09-007, March 2009 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02920); and

7. Helsel, D.R. and R. M. Hirsch, Techniques of Water-Resources Investigations of the United States Geological Survey, Book 4, Hydrologic Analysis and Interpretation, Chapter A3, Statistical Methods in Water Resources, pages 80 – 81, September 2002, U.S. Geological Survey (http://www.flrules.org/Gateway/reference.asp?No=Ref-02921).

(f)The following scientific analytical methods and documents, each of which is incorporated by reference herein, are cited in Applicability of Chlorophyll *a* Methods (DEP-SAS-002/10), dated October 24, 2011 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02914), identified above in Subsection 62-302.300(19), F.A.C.

1. Method 445.0 *In Vitro* Determination of Chlorophyll *a* and Pheophytin *a* in Marine and Freshwater Algae by Fluorescence, Elizabeth J. Arar and Gary B. Collins, Revision 1.2, September 1997, National Exposure Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, OH (http://www.flrules.org/Gateway/reference.asp?No=Ref-02922);

2. Method 446.0 *In Vitro* Determination of Chlorophylls *a*, *b*, $c_1 + c_2$ and Pheopigments in Marine And Freshwater Algae by Visible Spectrophotometry, adapted by Elizabeth J. Arar, Revision 1.2, September 1997, National Exposure Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, OH (http://www.flrules.org/Gateway/reference.asp?No=Ref-02923);

3. Method 447.0 Determination of Chlorophylls *a* and *b* and Identification of Other Pigments of Interest in Marine and Freshwater Algae Using High Performance Liquid Chromatography with Visible Wavelength Detection, Elizabeth J. Arar, Version 1.0, September 1997, National Exposure Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, OH (http://www.flrules.org/Gateway/reference.asp?No=Ref-02924); and

4. Standard Methods for the Examination of Water and Wastewater, Methods H.2.b, H.3. and H.4., 1999, American Public Health Association, American Water Works Association, Water Environment Federation (http://www.flrules.org/Gateway/reference.asp?No=Ref-02925).

(g)The following rules, each of which is incorporated by reference herein, are cited in Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., dated July 9, 2006 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02917): Rules 62-4.242 and 62-4.246, F.A.C., paragraphs 62-4.244(3)(a) and (d), F.A.C., Chapters 62-160, 62-302, 62-520, 62-522, 62-528, 62-600, 62-601, 62-604, 62-610, 62-611, 62-620, 62-625, 62-640, 62-650, 62-660, 62-670, 62-671, 62-672, and 62-673, F.A.C.

Rulemaking Authority 403.061, 403.062, 403.087, 403.088, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 373.414, 403.021(11), 403.061, 403.085, 403.086, 403.087, 403.088, 403.101, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708, 403.802 FS. History–Formerly 17-3.041, Amended 1-28-90, Formerly 17-3.042, 17-302.300, Amended 12-19-94, 1-23-95, 12-26-96, 5-15-02, 12-7-06, 7-17-13.

62-302.400 Classification of Surface Waters, Usage, Reclassification, Classified Waters.

(1) All surface waters of the State have been classified according to designated uses as follows:

CLASS I	Potable Water Supplies
CLASS II	Shellfish Propagation or Harvesting
CLASS III	Fish Consumption; Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife
CLASS III-Limited	Fish Consumption; Recreation or Limited Recreation; and/or Propagation and Maintenance of a Limited Population of Fish and Wildlife
CLASS IV	Agricultural Water Supplies
CLASS V	Navigation, Utility and Industrial Use

(2) Classification of a waterbody according to a particular designated use or uses does not preclude use of the water for other purposes.

(3) The specific water quality criteria corresponding to each surface water classification are listed in Rules 62-302.500 through 62-302.540, and Rule 62-302.800, F.A.C.

(4) Water quality classifications are arranged in order of the degree of protection required, with Class I water having generally the most stringent water quality criteria and Class V the least. However, Class I, II, and III surface waters share water quality criteria established to protect fish consumption, recreation and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. For manmade lakes, canals or ditches, or streams converted to canals before November 28, 1975, considered under subsections (5) and (11) below, the Department shall evaluate the limited aquatic life support and habitat limitations of such waters, recognizing the physical and hydrologic characteristics and water management uses for which they were constructed.

(5) Class III-Limited surface waters share the same water quality criteria as Class III except for any site specific alternative criteria that have been established for the waterbody under Rule 62-302.800, F.A.C. Class III-Limited waters are restricted to waters with human-induced physical or habitat conditions that prevent attainment of Class III uses and do not include waterbodies that were created for mitigation purposes. “Limited recreation” means opportunities for recreation in the water are reduced due to physical conditions. “Limited population of fish and wildlife” means the aquatic biological community does not fully resemble that of a natural system in the types, tolerance and diversity of species present. Class III-Limited waters are restricted to:

(a) Wholly artificial waterbodies that were constructed consistent with regulatory requirements under Part I or Part IV of Chapter 373, Part I or Part III of Chapter 378, or Part V of Chapter 403, F.S.; or

(b) Altered waterbodies that were dredged or filled prior to November 28, 1975. For purposes of this section, “altered waterbodies” are those portions of natural surface waters that were dredged or filled prior to November 28, 1975, to such an extent that they exhibit separate and distinct hydrologic and environmental conditions from any waters to which they are connected.

(6) Criteria applicable to a classification are designed to maintain the minimum conditions necessary to assure the suitability of water for the designated use of the classification. In addition, applicable criteria are generally adequate to maintain minimum conditions required for the designated uses of less stringently regulated classifications. Therefore, unless clearly inconsistent with the criteria applicable, the designated uses of less stringently regulated classifications shall be deemed to be included within the designated uses of more stringently regulated classifications.

(7) Any person regulated by the Department or having a substantial interest in a surface waterbody may seek reclassification of waters of the State by filing a petition with the Department in accordance with Rule 28-103.006, F.A.C.

(8) A petition for reclassification shall reference and be accompanied by the information necessary to support the affirmative findings required in this section, as described in the DEP document titled, “Process for Reclassifying the Designated Uses of Florida Surface Waters” (DEP-SAS-001/10), dated June 2010 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02960), incorporated by reference herein. Copies of the Process document may be obtained by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

See Attachment B for more details (CWA effective 9/6/11)

(9) All reclassifications of waters of the State shall be adopted, after public notice (including notification to

affected local and regional governments and sovereign American Indian tribes) and public hearing, only upon affirmative findings by the Environmental Regulation Commission that:

(a) The proposed reclassification will establish the present and future most beneficial use of the waters;

(b) Such a reclassification is clearly in the public interest after considering public input, including consideration of input submitted by local and regional governing bodies and sovereign American Indian tribes, who represent the public interest where the waters, and affected upstream and downstream waters, are located;

(c) The proposed reclassification will not allow for the nonattainment of water quality standards in downstream waters;

(d) The demonstrations required under subsections (10)-(12) below are met as applicable; and

(e) The requirements contained in Rule 62-302.400, F.A.C., are satisfied.

(10) Reclassification of waters of the State which establishes more stringent criteria than presently established by this chapter shall be adopted, only upon additional affirmative finding by the Environmental Regulation Commission that the proposed designated use is attainable, upon consideration of environmental, technological, social, economic, and institutional factors. The assessment of attainability shall address upstream effects of reclassification.

(11) If rulemaking is initiated to reclassify a water to a less stringent classification, the petitioner or the Department shall include in the reclassification documentation appropriate and scientifically defensible water quality, biological, hydrological, and habitat studies and analyses, as well as environmental, technological, social, and economic studies, including costs to small businesses and local governments, as necessary to establish the present and future most beneficial use by demonstrating that:

(a) No existing uses are being removed and the less stringent criteria associated with the designation will not result in the nonattainment of water quality standards in downstream waters;

(b) The designated uses being removed cannot be attained by implementing effluent limits required by sections 301(b) and 306 of the Federal Clean Water Act in conjunction with implementation of cost-effective and reasonable best management requirements for nonpoint source pollution control; and

(c) One or more of the following situations occur:

1. Naturally occurring concentrations of substances prevent the attainment of the use;

2. Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met;

3. Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place;

4. Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the waterbody to its original condition or to operate such modification in a way that would result in the attainment of the use;

5. Physical conditions related to the natural features of the waterbody, such as the lack of a proper substrate, cover, flow, depth, pool, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or

6. Controls more stringent than those required by sections 301(b) and 306 of the Federal Clean Water Act would result in substantial and widespread economic and social impact.

(12) The petition for a Class III-Limited classification shall include appropriate Site Specific Alternative Criteria proposals that are protective of the most beneficial use as determined by the demonstration in subsection (9) above. Site Specific Alternative Criteria established to support the Class III-Limited designated use are restricted to numeric criteria for any or all of the following parameters: nutrients (including nutrient response variables), bacteria, dissolved oxygen, alkalinity, specific conductance, transparency, turbidity, biological integrity, or pH. Site Specific Alternative Criteria for these parameters shall not be set at levels less stringent than water quality conditions at the time of reclassification and shall not be subject to the limitations in paragraph 62-302.800(2)(d), F.A.C. Proposed site specific alternative criteria for other parameters must fully protect Class III uses.

(13) Nothing contained in subsections (8) through (12) above shall be deemed to pre-empt or prohibit the regulatory implementation, adoption, continuation or enforcement of more stringent criteria that are established by a local government through a local pollution control program.

(14) The surface waters of the State of Florida are classified as Class III – Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife, except for certain waters which are described in subsection 62-302.400(16), F.A.C. A waterbody may also be designated as an Outstanding Florida Water or an Outstanding National Resource Water. Outstanding Florida Waters and Outstanding National Resource Waters are not designated use classifications. A waterbody may also have special standards applied to it. However, notwithstanding any provision of this section, no classification action or change in designated use shall result in degradation of water quality in Outstanding Florida Waters or Outstanding National Resource Waters. Outstanding Florida Waters and Outstanding National Resource Waters are listed in Rule 62-302.700, F.A.C.

(15) Unless otherwise specified, the following shall apply:

(a) The landward extent of a classification shall coincide with the landward extent of waters of the state, as defined in Rule 62-340.600, F.A.C.

(b) Water quality classifications shall be interpreted to include associated water bodies such as tidal creeks, coves, bays and bayous. The boundaries of Class II waters shall be limited to "Predominantly Marine Waters" as defined in subsection 62-302.200(30), F.A.C.

(16) Exceptions to Class III:

(a) All secondary and tertiary canals wholly within agricultural areas are classified as Class IV and are not individually listed as exceptions to Class III. "Secondary and tertiary canals" shall mean any wholly artificial canal or ditch which is behind a control structure and which is part of a water control system that is connected to the works (set forth in Section 373.086, F.S.) of a water management district created under Section 373.069, F.S., and that is permitted by such water management district pursuant to Section 373.103, 373.413, or 373.416, F.S. Agricultural areas shall generally include lands actively used solely for the production of food and fiber which are zoned for agricultural use where county zoning is in effect. Agricultural areas exclude lands which are platted and subdivided or in a transition phase to residential use;

(b) The following listed waterbodies are classified as Class I, Class II, Class III-Limited, or Class V:

1. Alachua County – none.

2. Baker County – none.

3. Bay County

Class I

Bayou George and Creek – Impoundment to source.

Bear Creek – Impoundment to source.

Big Cedar Creek – Impoundment to source.

Deer Point Impoundment – Dam to source.

Econfina Creek – Upstream of Deer Point Impoundment.

Class II

East Bay and Tributaries – East of U.S. Highway 98 to, but excluding Wetappo Creek.

North Bay and Tributaries – North of U.S. Highway 98 to Deer Point Dam excluding Alligator Bayou and Fanning Bayous north of an east-west line through Channel Marker 3.

West Bay and Tributaries – West of North Bay (line from West Bay Point on the north to Shell Point on the South) except West Bay Creek (northwest of Channel Marker 27C off Goose Point), Crooked Creek (north of a line from Crooked Creek Point to Doyle Point), and Burnt Mill Creek (north of a line from Graze Point to Cedar Point).

4. Bradford County – none.

5. Brevard County.

Class I

St. Johns River and Tributaries – Lake Washington Dam south through and including Sawgrass Lake, Lake Hellen Blazes, to Indian River County Line.

Class II Goat Creek.

Indian River – South from a line due east of Barnes Blvd. (SR 502) to South Section Line of Section 29, T26S, R37E, Palm Shores.
Indian River – From a line from Cape Malabar northeastward through Intracoastal Waterway marker 16, to shore, then southward to S. Brevard County Line.
Indian River – N. Brevard County Line south to Florida East Coast Railroad Crossing (vicinity of Jay Jay).
Kid Creek.
Mosquito Lagoon – North Brevard County Line south to Beach Road.
Trout Creek.
Indian River – The east side of the Intracoastal Waterway from SR 405 northward, to a line from the southern point of land at the mouth of Brock Creek to Intracoastal Waterway Channel Marker 33.
Indian River – From SR 405 south to SR 528.

6. Broward County – none.
7. Calhoun County

Class I

Bear Creek.
Econfina Creek.

8. Charlotte County

Class I

Alligator Creek – North and South Prongs from headwaters to the water control structure downstream of SR 765-A.
Port Charlotte Canal System – Surface waters lying upstream of, or directly connected to, Fordham Waterway upstream of Conway Boulevard.
Prairie Creek – DeSoto County Line and headwaters to Shell Creek.
Shell Creek – Headwaters to Hendrickson Dam (east of Myrtle Slough, in Section 20, T40S, R24E).

Class II

Lemon Bay, Placida Harbor, and Tributaries – N. Charlotte County Line south to Gasparilla Sound and bounded on the east by SR 775.
Charlotte Harbor, Myakka River, and Gasparilla Sound – Waters except Peace River upstream from the northeastern point of Myakka Cutoff to the boat ramp in Ponce de Leon Park in south Punta Gorda, Catfish Creek north of N. Lat. 26º50'56", and Whidden Creek north of N. Lat. 26º 51'15".

9. Citrus County

Class II Coastal Waters – From the southern side of the Cross Florida Barge Canal southward to the Hernando County line, with the exception of Crystal River (from the southern shore at the mouth of Cedar Creek to Shell Point to the westernmost tip of Fort Island), Salt River (portion generally east and southward along the eastern edge of the islands bordering the Salt River and Dixie Bay to St. Martins River), and St. Martins River from its mouth to Greenleaf Bay.

10. Clay County – none.
11. Collier County.

Class II

Cocohatchee River.
Connecting Waterways – From Wiggins Pass south to Outer Doctors Bay.
Dollar Bay.
Inner and Outer Clam Bay.
Inner and Outer Doctors Bay.
Little Hickory Bay.
Tidal Bays and Passes – Naples Bay and south and easterly through Rookery Bay and the Ten Thousand Islands to the Monroe County Line.
Wiggins Pass.

12. Columbia County – none.
13. Dade County – none.
14. DeSoto County.

Class I

Horse Creek – From the northern border of Section 14, T38S, R23E, southward to Peace River.

Prairie Creek – Headwaters to Charlotte County Line.

15. Dixie County

Class II

Coastal Waters – From an east-west line through Stuart Point southward to the County line, excluding the mouth of the Suwannee River and its passes.

16. Duval County.

Class II

Ft. George River and Simpson Creeks – Ft. George Inlet north to Nassau Sound.

Intracoastal Waterway and Tributaries – Confluence of Nassau and Amelia Rivers south to Flashing Marker 73 thence eastward along Ft. George River to Ft. George Inlet and includes Garden Creek.

Nassau River and Creek – From the mouth of Nassau Sound, (a line connecting the northeasternmost point of Little Talbot Island to the southeasternmost tip of Amelia Island westerly to a north-south line through Seymore Point.

Pumpkinhill Creek.

17. Escambia County

Class II

Escambia Bay – Louisville and Nashville Railroad Trestle south to Pensacola Bay (Line from Emanuel Point east northeasterly to Garcon Point).

Pensacola Bay – East of a line connecting Emanuel Point on the north to the south end of the Pensacola Bay Bridge (U.S. Highway 98).

Santa Rosa Sound – East of a line connecting Gulf Breeze approach to Pensacola Beach (Bascule Bridge), and Sharp Point with exception of the Navarre Beach area from a north-south line through Channel Marker 106 to Navarre Bridge.

18. Flagler County

Class II

Matanzas River (Intracoastal Waterway) – N. Flagler County Line south to an east-west line through Fl. Marker 109.

Pellicer Creek.

19. Franklin.

Class II

Alligator Harbor – East from a line from Peninsula Point north to St. James Island to mean high water.

Apalachicola Bay – with exception of an area encompassed within a 2-mile radius from Apalachicola entrance of John Gorrie Memorial Bridge.

East Bay and Tributaries – with the exception of area encompassed within 2-mile radius from Apalachicola entrance of John Gorrie Memorial Bridge.

Gulf of Mexico – North of a line from Peninsula Point on Alligator Point to the southeastern tip of Dog Island and bounded on the east by Alligator Harbor and west by St. George Sound.

Ochlockonee Bay – From the confluence of Sopchoppy and Ochlockonee Rivers eastward to a line through the two flashing beacons marking the end of the main channel and south channel, to the shoreline south of Bald Point north to the county line.

St. George Sound – Gulf of Mexico westerly to Apalachicola Bay.

St. Vincent Sound – Apalachicola Bay to Indian Pass.

20. Gadsden County

Class I

Holman Branch – SR 270-A to source.

Mosquito Creek – U.S. Highway 90 north to Florida State Line.

Quincy Creek – SR 65 to source.

21. Gilchrist County – none.

22. Glades County.

Class I

Lake Okeechobee.

23. Gulf County.

Class II

Indian Lagoon – West of Indian Pass and St. Vincent Sound.

St. Joseph Bay – South of a line from St. Joseph Point due east, excluding an area that is both within an arc 2.9 miles from the center of the mouth of Gulf County Canal and east of a line from St. Joseph Point to the northwest corner of section 13, T8S, R11W.

24. Hamilton County – none.
25. Hardee County – none.
26. Hendry County.

Class I

Lake Okeechobee.

27. Hernando County – none.
28. Highlands County – none.
29. Hillsborough County.

Class I

Cow House Creek – Hillsborough River to source.

Hillsborough River – City of Tampa Water Treatment Plant Dam to Flint Creek.

Class II

Old Tampa Bay – Waters within Hillsborough County between SR 60 (Courtney Campbell Parkway), and Interstate 275 (Howard Frankland Bridge), to the line of mean high water.

Old Tampa Bay and Mobbly Bay – Beginning at the intersection of the north shore of SR 60 (Courtney Campbell Parkway) and Longitude 82º35'45" west, thence due north to the line of mean high water, thence westward along the line of mean high water, (except Rocky and Double Branch Creeks which are included only to SR 580), and up Channel A to a line connecting the lines of mean high water on the outer sides of the canal banks, to the county line, thence southerly along the county line to SR 60, thence along the north shore of SR 60 to the point of beginning.

Tampa Bay – Beginning at Gadsden Point, thence along a line connecting Gadsden Point and the intersection of Gadsden Point Cut and Cut "A" to a point one-half nautical mile inside said intersection, thence westward along a line one-half nautical mile inside and parallel to Gadsden Point Cut, Cut "G", Cut "J", Cut "J2", and Cut "K", to the line of mean high water, thence along the line of mean high water to the point of beginning.

Tampa Bay – Beginning at the intersection of the Hillsborough County Line and the line of mean high water, thence to the rear range marker of Cut "D", thence northerly along the line of Cut "D" range to a point one-half nautical mile inside the southern boundary of Cut "C", thence along a line one-half mile inside and parallel to Cut "C", Cut "D", and Cut "E" to a point with Latitude 27º45'40" north and Longitude 82º30'40" west, thence to a point Latitude 27º47' north and Longitude 82º27' west, thence on a true bearing of 140º to the line of mean high water, thence along the line of mean high water southward to the western tip of Mangrove Point, thence to the northwestern tip of Tropical Island, thence eastward along the line of mean high water to the eastern tip of Goat Island, thence due south to the line of mean high water, thence generally southward along the line of mean high water to the point of beginning.

Tampa Bay – Hillsborough County portion west of the Sunshine Skyway (excluding Tampa Harbor Channel) up to the line of mean high water.

30. Holmes County – none.
31. Indian River County.

Class I

St. Johns River and Tributaries – Brevard County Line south through and including Blue Cypress Lake to SR 60.

Class II Indian River – Indian River County Line south to SR 510 east of the Intracoastal Waterway channel centerline.

Indian River – SR 510 south to an east-west line from the north side of the North Relief Canal.

Indian River – From an east-west line through the northernmost point of Round Island south to county line and east of Intracoastal Waterway centerline.

32. Jackson County.

Class I

Econfina Creek – Bay County to source.

33. Jefferson County

Class II

Coastal Waters – Within the county, excluding the mouth of Aucilla River.

34. Lafayette County – none.

35. Lake County – none.

36. Lee County.

Class I

Caloosahatchee River – E. Lee County Line to South Florida Water Management District Structure 79.

Class II

Charlotte Harbor.

Matanzas Pass, Hurricane Bay, and Hell Peckish (Peckney) Bay – From San Carlos Bay to a line from Estero Island through the southernmost tip of the unnamed island south of Julies Island, northeastward to the southernmost point of land in section 27, T46S, R24E.

Matlacha Pass – Charlotte Harbor to San Carlos Bay.

Pine Island Sound – Charlotte Harbor to San Carlos Bay.

San Carlos Bay – From a line from point Ybel to Bodwitch Point northward to a line from the eastern point at the mouth of Punta Blanca Creek, southeast through the southern point of Big Shell Island to the mainland and westward to Pine Island Sound.

37. Leon County – none.

38. Levy County.

Class II

Coastal Waters and Tidal Creeks – Within the county excluding:

a. The mouth of the Suwannee River, and its passes;

b. Alligator Pass to a line connecting the seawardmost points of the islands connecting Alligator Pass with the Gulf;

c. Cedar Key area – from SR 24 bridge at the northernmost point of Rye Key, southwestward to the northernmost point of Gomez Key, then southward to the westernmost point of Seahorse Key, then along the southern shoreline of Seahorse Key to its easternmost point, then northeastward to the southernmost point of Atsena Otie Key, then northward along the eastern shoreline of Atsena Otie Key to its northeasternmost point, then northward to the southernmost point of Dog Island, northwestward to the westernmost point of Scale Key, northwestward to the boundary marker piling, then northward to the point of beginning;

d. The mouth of the Withlacoochee River.

39. Liberty County – none.

40. Madison County – none.

41. Manatee County.

Class I

Manatee River – From Rye Bridge Road to the sources thereof, including but not limited to the following tributaries: the East Fork of the Manatee River, the North Fork of the Manatee River, Boggy Creek, Gilley Creek, Poley Branch, Corbit Branch, Little Deep Branch, Fisher Branch, Ft. Crawford Creek, Webb Branch, Clearwater Branch, Craig Branch, and Guthrey Branch.

Lake Evers (Ward Lake) and Braden River – City of Bradenton Water Treatment Dam to SR 675, excluding upland cut irrigation or drainage ditches and including the following tributaries:

Tributary	Upstream Limit(s)
a. Rattlesnake Slough	Lockwood Ridge Road in Section 28, Township 35 South, Range 18 East.
b. Cedar Creek	

West Branch	Whitfield Avenue in Section 27, Township 35 South, Range 18 East.
Central Branch	Country Club Way in Section 34, Township 35 South, Range 18 East.
East Branch	To a point where an east-west line lying 1200 feet south of the section line between Sections 23 and 26 (Township 35 South, Range 18 East) crosses the tributary.
c. Cooper Creek	
West Branch (Foley Branch)	South Boundary of Section 1, Township 36 South, Range 18 East.
East Branch	East Boundary of Section 31, Township 35 South, Range 19 East.
d. Nonsense Creek	To a point where an east-west line lying 800 feet North of the section line between Sections 14 and 23 (Township 35 South, Range 18 East) crosses the creek.
e. Hickory Hamock	To a point where an east-west line lying 1000 feet South of the section line between Sections 17 and 20 (Township 35 South, Range 19 East) crosses the creek.
f. Wolf Slough	East Boundary of Section 16, Township 35 South, Range 19 East.
g. Unnamed Tributary 1	To a point where an east-west line lying 2300 feet south of the section line between Sections 21 and 28 (Township 35 South, Range 19 East) crosses the tributary.
h. Unnamed Tributary 2	East Boundary of Section 14, Township 35 South, Range 19 East.
i. Unnamed Tributary 3	West Boundary of Section 25, Township 35 South, Range 19 East.
j. Unnamed Tributary 4	To a point where a north-south line lying 200 feet East of the section line between Sections 23 and 24 (Township 35 South, Range 19 East) crosses the tributary.

Class II

Gulf and Coastal Waters of Tampa Bay – (Including, but not limited to Terra Ceia Bay, Perico Bayou, Palma Sola Bay, and Sarasota Bay), excluding waters northward of a line from the southern shore of the mouth of Little Redfish Creek northwesterly through the red marker (approximately one nautical mile away) to the county line; Manatee River upstream of a line from Emerson Pt. to Mead Pt.

Gulf Waters – North of 27°31' N. Lat.

42. Marion County – none.

43. Martin County.

Class I

Lake Okeechobee.

Class II

Great Pocket – St. Lucie River to Peck's Lake.

Indian River – N. Martin County Line south to the mouth of St. Lucie Inlet, east of the Intracoastal Waterway Channel centerline.

Loxahatchee River – West of the Florida East Coast Railroad Bridge including Southwest, Northwest, and North Forks.

44. Monroe County.

Class II

Monroe County Coastline – From Collier and Dade County Lines southward to and including that part of Florida Bay within Everglades National Park.

45. Nassau County.

Class II

Alligator Creek.

Nassau River and Creek – From the mouth of Nassau Sound (a line connecting the northeasternmost point of Little Talbot Island to the southeasternmost point of Amelia Island) westerly to Seymore Point.

South Amelia River – Nassau River north to a line from the northern shore of the mouth of Alligator Creek to the northernmost shore of Harrison Creek.

Waters between South Amelia River and Alligator Creek.

46. Okaloosa County.

Class II

Choctahatchee Bay and Tributaries – From a line from White Point southwesterly through Fl. Light Marker 2 of the Intracoastal Waterway, eastward to the county line, including East Pass.

Rocky Bayou – Choctahatchee Bay (from a line extending due east from Shirk Point) to Rocky Creek.

Santa Rosa Sound – From a north-south line through Manatee Point west to the Santa Rosa County Line.

47. Okeechobee County.

Class I

Lake Okeechobee.

48. Orange County – none.

49. Osceola County – none.

50. Palm Beach County.

Class I

Canal C-18 (freshwater portion).

City of West Palm Beach Water Catchment Area.

Clear Lake, Lake Mangonia, and the waterway connecting them.

Lake Okeechobee.

M-Canal – L-8 to Lake Mangonia.

Class II

Canal C-18 – Salinity barrier to Loxahatchee River.

Loxahatchee River – Upstream of Florida East Coast railroad bridge including Southwest, Northwest, and North Forks.

51. Pasco County – none.

52. Pinellas County.

Class II

Old Tampa Bay, Mobbly Bay and Tampa Bay – South and westward to Sunshine Skyway (SR 55), except Safety Harbor north of an east-west line through Phillipi Point.

Tampa Bay and Gulf waters – West of Sunshine Skyway (SR 55), excluding waters north of SR 682 and waters that are both west of Pinellas Bayway and north of an east-west line through the southernmost point of Pine Key.

53. Polk County – none.
54. Putnam County – none.
55. St. Johns County.

Class II

Guano River and Tributaries – From Guano Lake Dam south to Tolomato River.
Matanzas River, Intracoastal Waterway and Tributaries, excluding Treasure Beach Canal System – From Intracoastal Waterway Marker number 29, south to Flagler County Line.
Pellicer Creek.
Salt Run – Waters south of an east-west line connecting Lighthouse Park boat ramp with Conch Island.
Tolomato River (North River) and Tributaries – From a line connecting Spanish Landing to Booth Landing, south to an east-west line through Intracoastal Waterway Marker number 55.

56. St. Lucie County.

Class II

Indian River – From Middle Point south to S. St. Lucie County Line, east of Intracoastal Waterway Channel centerline.
Indian River – N. St. Lucie County Line south to an east-west line through the southern point of Fishhouse Cove.

57. Santa Rosa County.

Class II

Blackwater Bay – From a line connecting Robinson's Point to Broad River south to East Bay (line due west from Escribano Point).
East Bay and Tributaries – Blackwater Bay (line due west from Escribano Point) southerly to Pensacola Bay (line from Garcon Point on the north to Redfish Point on the south).
Escambia Bay – Louisville and Nashville Railroad Trestle south to Pensacola Bay (Line from Emanuel Point east northeasterly to Garcon Point).
Pensacola Bay – East of a line connecting Emanuel Point on the north to the south end of the Pensacola Bay Bridge (U.S. Highway 98).
Santa Rosa Sound – From a line connecting Gulf Breeze approach to Pensacola Beach, (Bascule Bridge), and Sharp Point, east to Santa Rosa/Okaloosa County line with exception of the Navarre Beach area from a north-south line through Channel Marker 106 eastward to Navarre Beach Toll Road.

58. Sarasota County.

Class I

Big Slough Canal – South to U.S. 41.
Cooper Creek (Foley Branch) upstream to the South boundary of Section 1, Township 36 South, Range 18 East.
Myakka River – From the Manatee County line southwesterly through Upper and Lower Myakka Lakes to Manhattan Farms (north line of Section 6 T39S, R20E).

Class II

Lemon Bay – From a line eastward from the northern shore of the mouth of Forked Creek south to Charlotte County Line.
Myakka River – From the western line of section 35, T39S, R20E south to Charlotte County Line.
Sarasota Bay – West of the Intracoastal Waterway Channel centerline.

59. Seminole County – none.
60. Sumter County – none.
61. Suwannee County – none.
62. Taylor County.

Class V

Fenholloway River. Repealed effective December 31, 1997.

63. Union County – none.
64. Volusia County

Class II

Indian River North, Indian River Lagoon, and Mosquito Lagoon from an east-west line through Intracoastal Waterway

Channel Marker 57 south to S. Volusia County Line.
Indian River – North of County Line.

65. Wakulla County.

Class II

Coastal Waters and Tributaries – From Jefferson County Line westward with the exception of Spring Creek and the portion of King Bay (Dickerson Bay) west and north of a line from the westernmost tip of Porter Island south to Hungry Point, and Walker Creek north of a line from Live Oak Point southwest across the Creek to the closest tip of Shell Point.

66. Walton County.

Class II

Choctawhatchee Bay and Tributaries – Except waters north of a line from Alaqua Point to Wheeler Point.

67. Washington County.

Class I

Econfina Creek.

Rulemaking Authority 403.061, 403.062, 403.087, 403.088, 403.504, 403.704, 403.804 FS. Law Implemented 403.021(11), 403.061, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.504, 403.702, 403.708 FS. History–Formerly 28-5.06, 17-3.6 , Amended and Renumbered 3-1-79, Amended 1-1-83, 2-1-83, Formerly 17-3.081, Amended 4-25-93, Formerly 17-302.400, Amended 12-26-96, 8-24-00, 12-7-06, 8-5-10, 8-1-13.

62-302.500 Surface Waters: Minimum Criteria, General Criteria.

(1) Minimum Criteria. All surface waters of the State shall at all places and at all times be free from:

(a) Domestic, industrial, agricultural, or other man-induced non-thermal components of discharges which, alone or in combination with other substances or in combination with other components of discharges (whether thermal or non-thermal):

1. Settle to form putrescent deposits or otherwise create a nuisance; or

2. Float as debris, scum, oil, or other matter in such amounts as to form nuisances; or

3. Produce color, odor, taste, turbidity, or other conditions in such degree as to create a nuisance; or

4. Are acutely toxic; or

5. Are present in concentrations which are carcinogenic, mutagenic, or teratogenic to human beings or to significant, locally occurring, wildlife or aquatic species, unless specific standards are established for such components in subsection 62-302.500(2) or Rule 62-302.530, F.A.C.; or

6. Pose a serious danger to the public health, safety, or welfare.

(b) Thermal components of discharges which, alone, or in combination with other discharges or components of discharges (whether thermal or non-thermal):

1. Produce conditions so as to create a nuisance; or

2. Do not comply with applicable provisions of Rule 62-302.520, F.A.C.

(c) Silver in concentrations above 2.3 micrograms/liter in predominently marine waters.

(d) Lindane (g-benzene hexachloride) in concentrations above 0.16 micrograms/liter in predominantly marine waters or in concentrations above 0.95 micrograms/liter in predominantly fresh waters.

(2) General Criteria.

(a) The criteria of surface water quality provided in subsection 62-302.500(2) and Rule 62-302.530, F.A.C., shall apply to all surface waters outside zones of mixing except:

1. Where inconsistent with the limitations of Section 403.061(7), F.S.; or

2. Where relief from such criteria has been granted pursuant to other applicable rules of the Department.

(b) The Department may establish a Technical Advisory Committee on request or on its own initiative, to review and advise the Department about the sufficiency and validity of data or methodologies and the need for revision of numerical surface water quality criteria established in this rule chapter. The committee shall be appointed by the Secretary and consist of professionals knowledgeable about the specific criteria to be reviewed. The committee shall be chaired by a representative of the Department and shall meet at the call of the chair. Any findings, conclusions, or

recommendations of the commmittee shall be conveyed to the Secretary and to the chair of the Commission but shall not bind the Department.

(c) Effluent limits may be established for pollutants for which analytical detection limits are higher than the established water quality criteria based upon computation of concentrations in the receiving waters. Effluent limits will be established on site-specific conditions in the context of a Department permit. Monitoring reports and permit applications shall specify the detection limits and indicate non-detectable results in such cases. Unless otherwise specified, such non-detectable results shall be accepted as demonstrating compliance for that pollutant as long as specified effluent limits are met.

(d) Criteria for metals in Rule 62-302.530 and paragraph 62-302.500(1)(c), F.A.C., are measured as total recoverable metal. However, cadmium, chromium, copper, lead, nickel, silver, and zinc may be applied as dissolved metals when, as part of a permit application, a dissolved metals translator has been established according to the procedures described in the document, "Guidance for Establishing a Metals Translator", Florida Department of Environmental Protection, December 17, 2001.

(e) A violation of any surface water quality criterion as set forth in this chapter constitutes pollution. For certain pollutants, numeric criteria have been established to protect human health from an unacceptable risk of additional cancer caused by the consumption of water or aquatic organisms. These numeric criteria are based on annual average flow conditions. However, this allowable annual average does not relieve any activity from complying with subsection 62-302.500(1), Rule 62-302.530, F.A.C., or any other provision of water quality standards.

(f) Notwithstanding the specific numerical criteria applicable to individual classes of water, dissolved oxygen levels that are attributable to natural background conditions or man-induced conditions which cannot be controlled or abated may be established as alternative dissolved oxygen criteria for a water body or portion of a water body. Alternative dissolved oxygen criteria may be established by the Secretary or a Director of District Management in conjunction with the issuance of a permit or other Department action only after public notice and opportunity for public hearing. The determination of alternative criteria shall be based on consideration of the factors described in subparagraphs 62-302.800(1)(a)1.-4. and subsections 62-302.533(3)-(4), F.A.C. Alternative criteria shall not result in a lowering of dissolved oxygen levels in the water body, water body segment or any adjacent waters, and shall not violate the minimum criteria specified in subsection 62-302.500(1), F.A.C. Daily and seasonal fluctuations in dissolved oxygen levels shall be maintained.

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804 FS. Law Implemented 403.021(11), 403.061, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History–Formerly 28-5.02, 17-3.02, Amended 10-28-78 , Amended and Renumbered 3-1-79, Amended 1-1-83, 10-4-89, Formerly 17-3.051, Amended 4-25-93, Formerly 17-302.500, Amended 1-15-96, 12-26-96, 5-15-02, 12-7-06, 8-1-13.

62-302.520 Thermal Surface Water Criteria.

All discharges or proposed discharges of heated water into receiving bodies of water (RBW) which are controlled by the State shall be subjected to a thorough study to assess the consequences of the discharge upon the environment. The State shall be divided into two general climatological zones: Peninsular Florida, which varies from tropical in nature to temperate but is modified by the peninsular configuration and is the area south of latitude 30º N (excluding Gulf and Franklin Counties): and Northern Florida which is temperate and continental and is the area above latitude 30º N plus the portions of Gulf and Franklin Counties which lie below 30º N.

(1) Heated water discharges existing on July 1, 1972:

(a) Shall not increase the temperature of the RBW so as to cause substantial damage or harm to the aquatic life or vegetation therein or interfere with beneficial uses assigned to the RBW,

(b) Shall be monitored by the discharger to ensure compliance with this rule, and

(c) If the Department, pursuant to notice and opportunity for hearing, finds by a preponderance of the evidence that a discharge has caused substantial damage, it may require conversion of such discharge to offstream cooling or approved alternate methods. In making determinations regarding such conversions, the Department may consider:

1. The nature and extent of the existing damage;

2. The projected lifetime of the existing discharge;

3. Any adverse economic and environmental (including non-water quality) impacts which would result from such conversion; and

4. Such other factors as may be appropriate.

(2) Heated water sources proposed for future discharges into RBW controlled by the State shall not increase the water temperature by more than the monthly temperature limits prescribed for the particular type and location of the RBW. New sources shall include all expansions, modifications, alterations, replacements, or repairs which result in an increased output of ten percent (10%) or more of the level of energy production which existed on the date this rule became effective. Water temperatures shall be measured by procedures approved by the Florida Department of Environmental Protection (DEP). In all cases where a temperature rise above ambient is allowed and a maximum RBW temperature is also prescribed, the lower of the two limitations shall be the control temperature.

(3) Definitions.

(a) Ambient (natural) temperature of a RBW shall mean the existing temperature of the receiving water at a location which is unaffected by man-made thermal discharges and a location which is also of a depth and exposure to winds and currents which typify the most environmentally stable portions of the RBW.

(b) Coastal waters shall be all waters in the State which are not classified as fresh waters or as open waters.

(c) A cooling pond is a body of water enclosed by natural or constructed restraints which has been approved by the Florida DEP for purposes of controlling heat dissipation from thermal discharges.

(d) An existing heat source is any thermal discharge (a) which is presently taking place, or (b) which is under construction or for which a construction or operation permit has been issued prior to the effective date of this rule.

(e) Fresh waters shall be all waters of the State which are contained in lakes and ponds, or are in flowing streams above the zone in which tidal actions influence the salinity of the water and where the concentration of chloride ions is normally less than 1500 milligrams per liter.

(f) Open water shall be all waters in the State extending seaward from the most seaward 18-foot depth contour line (three-fathom bottom depth contour) which is offshore from any island; exposed or submerged bar or reef; or mouth of any embayment or estuary which is narrowed by headlands. Contour lines shall be determined from Coast and Geodetic Survey Charts.

(g) The point of discharge (POD) for a heated water discharge shall be primarily that point at which the effluent physically leaves its carrying conduit (open or closed), and discharges into the waters of the state, or, in the event it is not practicable to measure temperature at the end of the discharge conduit, a specific point designated by the Florida DEP for that particular thermal discharge.

(h) Heated water discharges are the effluents from commercial or industrial activities or processes in which water is used for the purpose of transporting waste heat, and which constitute heat sources of one million British Thermal Units per hour (1,000,000 BTU/HR.), or greater.

(i) Blowdown shall mean the minimum discharge of recirculating cooling water for the purpose of discharging materials contained in the water, the further buildup of which could cause concentrations in amounts exceeding limits established by best engineering practice.

(j) Recirculating cooling water shall mean water which is used for the purpose of removing waste heat and then passed through a cooling system for the purpose of removing such heat from the water and then, except for blowdown, is used again to remove waste heat.

(4) Monthly and Maximum Temperature Limits.

(a) Fresh Waters – Heated water with a temperature at the POD more than 5º F higher than the ambient (natural) temperature of any stream shall not be discharged into such stream. At all times under all conditions of stream flow the discharge temperature shall be controlled so that at least two-thirds (2/3) of the width of the stream's surface remains at ambient (natural) temperature. Further, no more than one-fourth (1/4) of the cross-section of the stream at a traverse perpendicular to the flow shall be heated by the discharge. Heated water with a temperature at the POD more than 3º F higher than the ambient (natural) temperature of any lake or reservoir shall not be discharged into such lake or reservoir. Further, no heated water with a temperature above 90º F shall be discharged into any fresh waters in Northern Florida regardless of the ambient temperature of the RBW. In Peninsular Florida, heated waters above 92º F shall not be discharged into fresh waters.

(b) Coastal Waters – Heated water with a temperature at the POD more than 2º F higher than the ambient (natural) temperature of the RBW shall not be discharged into coastal waters in any zone during the months of June, July, August, and September. During the remainder of the year, heated water with a temperature at the POD more than 4º F higher than the ambient (natural) temperature of the RBW shall not be discharged into coastal waters in any zone. In addition, during June, July, August, and September, no heated water with a temperature above 92º F shall be discharged into coastal waters. Further, no heated water with a temperature above 90º F shall be discharged into coastal waters during the period October thru May.

(c) Open Waters – Heated water with a temperature at the POD up to 17º F above ambient (natural) temperature of the RBW may be discharged from an open or closed conduit into open waters under the following restraints: The surface temperature of the RBW shall not be raised to more than 97º F and the POD must be sufficient distance offshore to ensure that the adjacent coastal waters are not heated beyond the temperatures permitted in such waters.

(d) Cooling Ponds – The temperature for heated water discharged from a cooling pond shall be measured at the POD from the pond, and the temperature limitation shall be that specified for the RBW.

(5) General.

(a) Daily and seasonal temperature variations that were normal to the RBW before the addition of heat from other than natural causes shall be maintained.

(b) Recapitulation of temperature limitations prescribed above:

			COASTAL		
ZONE	STREAMS	LAKES	SUMMER	REMAINDER	OPEN
NORTH.	90º F Max.	90º F Max.	92º F Max.	90º F Max.	97º F Max.
	AM + 5º F	AM + 3º F	AM + 2º F	AM + 4º F	AM + 17º F
PENIN.	92º F Max.	92º F Max.	92º F Max.	90º F Max.	97º F Max.
	AM + 5º F	AM + 3º F	AM + 2º F	AM + 4º F	AM + 17º F

(6) Upon application on a case-by-case basis, the Department may establish a zone of mixing beyond the POD to afford a reasonable opportunity for dilution and mixture of heated water discharges with the RBW, in the following manner:

(a) Zones of mixing for thermal discharges from non-recirculated cooling water systems and process water systems of new sources shall be allowed if supported by a demonstration, as provided in Section 316(a), Public Law 92-500 and regulations promulgated thereunder, including 40 C.F.R. Part 122, by an applicant that the proposed mixing zone will assure the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in and on the body of water into which the discharge is to be made and such demonstration has not been rebutted. It is the intent of the Commission that to the extent practicable, proceedings under this provision should be conducted jointly with proceedings before the federal government under Section 316(a), Public Law 92-500.

(b) Zones of mixing for blowdown discharges from recirculated cooling water systems, and for discharges from non-recirculated cooling water systems of existing sources, shall be established on the basis of the physical and biological characteristics of the RBW.

(c) When a zone of mixing is established pursuant to this subsection 62-302.520(6), F.A.C., any otherwise applicable temperature limitations contained in Rule 62-302.520, F.A.C., shall be met at its boundary; however, the Department may also establish maximum numerical temperature limits to be measured at the POD and to be used in lieu of the general temperature limits in Rule 62-302.520, F.A.C., to determine compliance by the discharge with the established mixing zone and the temperature limits in Rule 62-302.520, F.A.C.

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804 FS. Law Implemented 403.021(11), 403.061, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History–Formerly 28-5.02, 17-3.02, Amended 10-28-70, Amended and Renumbered 3-1-79, Formerly 17-3.05, 17-3.050, 17-302.520.

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 except within established mixing zones or in accordance with site-specific effluent limitations developed pursuant to Rule 62-620.620, F.A.C. In some cases, there are separate or additional limits, which apply independently of the maximum not to be exceeded at any time. For example, the criteria for carcinogens, which are expressed as an annual average (denoted as "annual avg." in the Table), are applied as the maximum allowable annual average concentration at the long-term harmonic mean flow (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.

Criteria for Surface Water Quality Classifications							
				Class III and Class III-Limited (see Note 4)			
Parameter	Units	Class I	Class II	Predominantly Fresh Waters	Predominantly Marine Waters	Class IV	Class V
(1) Alkalinity	Milligrams/L as $CaCO_3$	Shall not be depressed below 20		Shall not be depressed below 20		≤ 600	
(2) Aluminum	Milligrams/L		≤ 1.5		≤ 1.5		
(3) Ammonia (un-ionized)	Milligrams/L as NH_3	≤ 0.02		≤ 0.02			
(4) Antimony	Micrograms/L	≤ 14.0	≤ 4,300	≤ 4,300	≤ 4,300		
(5)(a) Arsenic (total)	Micrograms/L	≤ 10	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50
(5)(b) Arsenic (trivalent)	Micrograms/L measured as total recoverable Arsenic		≤ 36		≤ 36		

(6) Bacteriological Quality (Fecal7 Coliform Bacteria)	Number per 100 ml (Most Probable Number (MPN) or Membrane Filter (MF))	MPN or MF counts shall not exceed a monthly average of 200, nor exceed 400 in 10% of the samples, nor exceed 800 on any one day. Monthly averages shall be expressed as geometric means based on a minimum of 5 samples taken over a 30 day period.	MPN or MF counts shall not exceed a median value of 14 with not more than 10% of the samples exceeding 43 (for MPN) or 31 (for MF), nor exceed 800 on any one day. To determine the percentage of samples exceeding the criteria when there are both MPN and MF samples for a waterbody, the percent shall be calculated as $100*(n_{mpn}+n_{mf})/N$, where n_{mpn} is the number of MPN samples greater than 43, n_{mf} is the number of MF samples greater than 31, and N is the total number of MPN and MF samples.	MPN or MF counts shall not exceed a monthly average of 200, nor exceed 400 in 10% of the samples, nor exceed 800 on any one day. Monthly averages shall be expressed as geometric means based on a minimum of 10 samples taken over a 30 day period.	MPN or MF counts shall not exceed a monthly average of 200, nor exceed 400 in 10% of the samples, nor exceed 800 on any one day. Monthly averages shall be expressed as geometric means based on a minimum of 10 samples taken over a 30 day period.		
(7) Barium	Milligrams/L	$\leq$ 1					
(8) Benzene	Micrograms/L	$\leq$ 1.18	$\leq$ 71.28 annual avg.	$\leq$ 71.28 annual avg.	$\leq$ 71.28 annual avg.		

(9) Beryllium	Micrograms/L	$\underline{<}$ 0.0077 annual avg.	$\underline{<}$ 0.13 annual avg.	$\underline{<}$ 0.13 annual avg.	$\underline{<}$ 0.13 annual avg.	$\underline{<}$ 100 in waters with a hardness in mg/L of $CaCO_3$ of less than 250 and shall not exceed 500 in harder waters	

(10)(a) Biological Health (Shannon-Weaver Diversity Index using Hester-Dendy type samplers)	Per cent reduction of Shannon-Weaver Diversity Index	The Index for benthic macroinvertebrates shall not be reduced to less than 75% of background levels as measured using organisms retained by a U. S. Standard No. 30 sieve and collected and composited from a minimum of three Hester-Dendy type artificial substrate samplers of 0.10 to 0.15 m^2 area each, incubated for a period of four weeks.		The Index for benthic macroinvertebrates shall not be reduced to less than 75% of established background levels as measured using organisms retained by a U. S. Standard No. 30 sieve and collected and composited from a minimum of three Hester-Dendy type artificial substrate samplers of 0.10 to 0.15 m^2 area each, incubated for a period of four weeks.			

(10) (b) Biological Health (Shannon-Weaver Diversity Index using Ekman or Ponar type samplers)	Per cent reduction of Shannon-Weaver Diversity Index	In lakes, the Index for benthic macroinvertebrates shall not be reduced to less than 75% of established background levels as measured using organisms retained by a U.S. Standard No. 30 sieve and collected and composited from a minimum of three natural substrate samples, taken with Ekman or Ponar type samplers with minimum sampling area of 225 cm^2.	The Index for benthic macroinvertebrates shall not be reduced to less than 75% of established background levels as measured using organisms retained by a U.S. Standard No. 30 sieve and collected and composited from a minimum of three natural substrate samples, taken with Ponar type samplers with minimum sampling area of 225 cm^2.	In lakes, the Index for benthic macroinvertebrates shall not be reduced to less than 75% of established background levels as measured using organisms retained by a U.S. Standard No. 30 sieve and collected and composited from a minimum of three natural substrate samples, taken with Ekman or Ponar type samplers with minimum sampling area of 225 cm^2.	The Index for benthic macroinvertebrates shall not be reduced to less than 75% of established background levels as measured using organisms retained by a U.S. Standard No. 30 sieve and collected and composited from a minimum of three natural substrate samples, taken with Ponar type samplers with minimum sampling area of 225 cm^2.		
(11) BOD (Biochemical Oxygen Demand)		Shall not be increased to exceed values which would cause dissolved oxygen to be depressed below the limit established for each class and, in no case, shall it be great enough to produce nuisance conditions.					
(12) Boron	Milligrams/L					$\leq$ 0.75	
(13) Bromates	Milligrams/L		$\leq$ 100		$\leq$ 100		
(14) Bromine (free molecular)	Milligrams/L		$\leq$ 0.1		$\leq$ 0.1		

(15) Cadmium	Micrograms/L See Notes (1) and (3).	Cd ≤ $e^{(0.7409[lnH]-4.719)}$;	≤ 8.8	Cd ≤ $e^{(0.7409[lnH]-4.719)}$;	≤ 8.8		
(16) Carbon tetrachloride	Micrograms/L	≤ 0.25 annual avg.; 3.0 max	≤ 4.42 annual avg.	≤ 4.42 annual avg.	≤ 4.42 annual avg.		
(17) Chlorides	Milligrams/L	≤ 250	Not increased more than 10% above normal background. Normal daily and seasonal fluctuations shall be maintained.		Not increased more than 10% above normal background. Normal daily and seasonal fluctuations shall be maintained.		In predominantly marine waters, not increased more than 10% above normal background. Normal daily and seasonal fluctuations shall be maintained.
(18) Chlorine (total residual)	Milligrams/L	≤ 0.01	≤ 0.01	≤ 0.01	≤ 0.01		
(19)(a) Chromium (trivalent)	Micrograms/L measured as total recoverable Chromium See Notes (1) and (3).	Cr (III) ≤ $e^{(0.819[lnH]+0.6848)}$		Cr (III) ≤ $e^{(0.819[lnH]+0.6848)}$		Cr (III) ≤ $e^{(0.819[lnH]+0.6848)}$	In predominantly fresh waters, ≤ $e^{(0.819[lnH]+0.6848)}$
(19)(b) Chromium (hexavalent)	Micrograms/L See Note (3)	≤ 11	≤ 50	≤ 11	≤ 50	≤ 11	In predominantly fresh waters, ≤ 11. In predominantly marine waters, ≤ 50
(20) Chronic Toxicity (see definition in subsection 62-302.200(5), F.A.C. and also see below, "Substances in concentrations which...")							

(21) Color, etc. (see also Minimum Criteria, Odor, Phenols, etc.)	Color, odor, and taste producing substances and other deleterious substances, including other chemical compounds attributable to domestic wastes, industrial wastes, and other wastes					Only such amounts as will not render the waters unsuitable for agricultural irrigation, livestock watering, industrial cooling, industrial process water supply purposes, or fish survival.	
(22) Conductance, Specific	Micromhos/cm	Shall not be increased more than 50% above background or to 1275, whichever is greater.		Shall not be increased more than 50% above background or to 1275, whichever is greater.		Shall not be increased more than 50% above background or to 1275, whichever is greater.	Shall not exceed 4,000
(23) Copper	Micrograms/L See Notes (1) and (3).	$Cu \leq e^{(0.8545[lnH]-1.702)}$	≤ 3.7	$Cu \leq e^{(0.8545[lnH]-1.702)}$	≤ 3.7	≤ 500	≤ 500
(24) Cyanide	Micrograms/L	≤ 5.2	≤ 1.0	≤ 5.2	≤ 1.0	≤ 5.0	≤ 5.0
(25) Definitions (see Section 62-302.200, F.A.C.)							
(26) Detergents	Milligrams/L	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
(27) 1,1-Dichloroethylene (1,1-dichloroethene)	Micrograms/L	≤ 0.057 annual avg.; ≤ 7.0 max	≤ 3.2 annual avg.	≤ 3.2 annual avg.	≤ 3.2 annual avg.		
(28) Dichloromethane (methylene chloride)	Micrograms/L	≤ 4.65 annual avg.	≤ 1,580 annual avg.	≤ 1,580 annual avg.	≤ 1,580 annual avg.		
(29) 2,4-Dinitrotoluene	Micrograms/L	≤ 0.11 annual avg.	≤ 9.1 annual avg.	≤ 9.1 annual avg.	≤ 9.1 annual avg.		

(30) Dissolved Oxygen	Milligrams/L	See Rule 62-302.533, F.A.C.				Shall not average less than 4.0 in a 24-hour period and shall never be less than 3.0.	Shall not be less than 0.3, fifty percent of the time on an annual basis for flows greater than or equal to 250 cubic feet per second and shall never be less than 0.1. Normal daily and seasonal fluctuations above these levels shall be main-tained.
(31) Dissolved Solids	Milligrams/L	≤ 500 as a monthly avg.; ≤ 1,000 max					
(32) Fluorides	Milligrams/L	≤ 1.5	≤ 1.5	≤ 10.0	≤ 5.0	≤ 10.0	≤ 10.0
(33) "Free Froms" (see Minimum Criteria in Rule 62-302.500, F.A.C.)							
(34) "General Criteria" (see Rule 62-302.500, F.A.C. and individual criteria)							
(35)(a) Halomethanes (Total trihalomethanes) (total of bromoform, chlorodibromo-methane, dichlorobromome-thane, and chloroform). Individual halomethanes shall not exceed (b)1. to (b)5. below.	Micrograms/L	≤ 80					

(35)(b)1. Halomethanes (individual): Bromoform	Micrograms/L	$\leq$ 4.3 annual avg.	$\leq$ 360 annual avg.	$\leq$ 360 annual avg.	$\leq$ 360 annual avg.		
(35)(b)2. Halomethanes (individual): Chlorodibromo-methane	Micrograms/L	$\leq$ 0.41 annual avg.	$\leq$ 34 annual avg.	$\leq$ 34 annual avg.	$\leq$ 34 annual avg.		
(35)(b)3. Halomethanes (individual): Chloroform	Micrograms/L	$\leq$ 5.67 annual avg.	$\leq$ 470.8 annual avg.	$\leq$ 470.8 annual avg.	$\leq$ 470.8 annual avg.		
(35)(b)4. Halomethanes (individual): Chloromethane (methyl chloride)	Micrograms/L	$\leq$ 5.67 annual avg.	$\leq$ 470.8 annual avg.	$\leq$ 470.8 annual avg.	$\leq$ 470.8 annual avg.		
(35)(b)5. Halomethanes (individual): Dichlorobromomethane	Micrograms/L	$\leq$ 0.27 annual avg.	$\leq$ 22 annual avg.	$\leq$ 22 annual avg.	$\leq$ 22 annual avg.		
(36) Hexachlorobutadiene	Micrograms/L	$\leq$ 0.45 annual avg.	$\leq$ 49.7 annual avg.	$\leq$ 49.7 annual avg.	$\leq$ 49.7 annual avg.		
(37) Imbalance (see Nutrients)							
(38) Iron	Milligrams/L	$\leq$ 1.0	$\leq$ 0.3	$\leq$ 1.0	$\leq$ 0.3	$\leq$ 1.0	
(39) Lead	Micrograms/L See Notes (1) and (3).	$Pb \leq e^{(1.273[\ln H]-4.705)}$;	$\leq$ 8.5	$Pb \leq e^{(1.273[\ln H]-4.705)}$;	$\leq$ 8.5	$\leq$ 50	$\leq$ 50
(40) Manganese	Milligrams/L		$\leq$ 0.1				
(41) Mercury	Micrograms/L	$\leq$0.012	$\leq$0.025	$\leq$0.012	$\leq$0.025	$\leq$ 0.2	$\leq$ 0.2
(42) Minimum Criteria (see Section 62-302.500, F.A.C.)							
(43) Mixing Zones (See Section 62-4.244, F.A.C.)							
(44) Nickel	Micrograms/L See Notes (1) and (3).	$Ni \leq e^{(0.846[\ln H]+0.0584)}$	$\leq$ 8.3	$Ni \leq e^{(0.846[\ln H]+0.0584)}$	$\leq$ 8.3	$\leq$ 100	

(45) Nitrate	Milligrams/L as N	≤ 10 or that concentration that exceeds the nutrient criteria					
(46) Nuisance Species		Substances in concentrations which result in the dominance of nuisance species: none shall be present.					
(47)(a) Nutrients		The discharge of nutrients shall continue to be limited as needed to prevent violations of other standards contained in this chapter. Man-induced nutrient enrichment (total nitrogen or total phosphorus) shall be considered degradation in relation to the provisions of Rules 62-302.300, 62-302.700, and 62-4.242, F.A.C.					
(47)(b) Nutrients		In no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural populations of aquatic flora or fauna.					
(48) Odor (also see Color, Minimum Criteria, Phenolic Compounds, etc.)	Threshold odor number		Shall not exceed 24 at 60 degrees C as a daily average.				Odor producing substances: only in such amounts as will not unreasonably interfere with use of the water for the designated purpose of this classification.
(49)(a) Oils and Greases	Milligrams/L	Dissolved or emulsified oils and greases shall not exceed 5.0	Dissolved or emulsified oils and greases shall not exceed 5.0	Dissolved or emulsified oils and greases shall not exceed 5.0	Dissolved or emulsified oils and greases shall not exceed 5.0	Dissolved or emulsified oils and greases shall not exceed 5.0	Dissolved or emulsified oils and greases shall not exceed 10.0
(49)(b) Oils and Greases		No undissolved oil, or visible oil defined as iridescence, shall be present so as to cause taste or odor, or otherwise interfere with the beneficial use of waters.					
(50) Pesticides and Herbicides							
(50)(a) 2,4,5-TP	Micrograms/L	≤ 10					
(50)(b) 2-4-D	Micrograms/L	≤ 100					
(50)(c) Aldrin	Micrograms/L	≤ .00013 annual avg.; 3.0 max	≤ .00014 annual avg.; 1.3 max	≤ .00014 annual avg.; 3.0 max	≤ .00014 annual avg.; 1.3 max		

(50)(d) Beta-hexachlorocyclohexane (b-BHC)	Micrograms/L	≤ 0.014 annual avg.	≤ 0.046 annual avg.	≤ 0.046 annual avg.	≤ 0.046 annual avg.		
(50)(e) Chlordane	Micrograms/L	≤ 0.00058 annual avg.; 0.0043 max	≤ 0.00059 annual avg.; 0.004 max	≤ 0.00059 annual avg.; 0.0043 max	≤ 0.00059 annual avg.; 0.004 max		
(50)(f) DDT	Micrograms/L	≤ 0.00059 annual avg.; 0.001 max	≤ 0.00059 annual avg.; 0.001 max	≤ 0.00059 annual avg.; 0.001 max	≤ 0.00059 annual avg.; 0.001 max		
(50)(g) Demeton	Micrograms/L	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1		
(50)(h) Dieldrin	Micrograms/L	≤ 0.00014 annual avg.; 0.0019 max	≤ 0.00014 annual avg.; 0.0019 max	≤ 0.00014 annual avg.; 0.0019 max	≤ 0.00014 annual avg.; 0.0019 max		
(50)(i) Endosulfan	Micrograms/L	≤ 0.056	≤ 0.0087	≤ 0.056	≤ 0.0087		
(50)(j) Endrin	Micrograms/L	≤ 0.0023	≤ 0.0023	≤ 0.0023	≤ 0.0023		
(50)(k) Guthion	Micrograms/L	≤ 0.01	≤ 0.01	≤ 0.01	≤ 0.01		
(50)(l) Heptachlor	Micrograms/L	≤ 0.00021 annual avg.; 0.0038 max	≤ 0.00021 annual avg.; 0.0036 max	≤ 0.00021 annual avg.; 0.0038 max	≤ 0.00021 annual avg.; 0.0036 max		
(50)(m) Lindane (g-benzene hexachloride)	Micrograms/L	See Minimum criteria in paragraph 62-302.500(1)(d), F.A.C.	See Minimum criteria in paragraph 62-302.500(1)(d), F.A.C.	See Minimum criteria in paragraph 62-302.500(1)(d), F.A.C.	See Minimum criteria in paragraph 62-302.500(1)(d), F.A.C.		
(50)(n) Malathion	Micrograms/L	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1		
(50)(o) Methoxychlor	Micrograms/L	≤ 0.03	≤ 0.03	≤ 0.03	≤ 0.03		
(50)(p) Mirex	Micrograms/L	≤ 0.001	≤ 0.001	≤ 0.001	≤ 0.001		
(50)(q) Parathion	Micrograms/L	≤ 0.04	≤ 0.04	≤ 0.04	≤ 0.04		
(50)(r) Toxaphene	Micrograms/L	≤ 0.0002	≤ 0.0002	≤ 0.0002	≤ 0.0002		
(51)(a) pH (Class I and Class IV Waters)	Standard Units	Shall not vary more than one unit above or below natural background provided that the pH is not lowered to less than 6 units or raised above 8.5 units. If natural background is less than 6 units, the pH shall not vary below natural background or vary more than one unit above natural background. If natural background is higher than 8.5 units, the pH shall not vary above natural background or vary more than one unit below background.					

(51)(b) pH (Class II Waters)	Standard Units	Shall not vary more than one unit above or below natural background of coastal waters as defined in paragraph 62-302.520(3)(b), F.A.C., or more than two-tenths unit above or below natural background of open waters as defined in paragraph 62-302.520(3)(f), F.A.C., provided that the pH is not lowered to less than 6.5 units or raised above 8.5 units. If natural background is less than 6.5 units, the pH shall not vary below natural background or vary more than one unit above natural background for coastal waters or more than two-tenths unit above natural background for open waters. If natural background is higher than 8.5 units, the pH shall not vary above natural background or vary more than one unit below natural background of coastal waters or more than two-tenths unit below natural background of open waters.					
(51)(c) pH (Class III Waters)	Standard Units	Shall not vary more than one unit above or below natural background of predominantly fresh waters and coastal waters as defined in paragraph 62-302.520(3)(b), F.A.C. or more than two-tenths unit above or below natural background of open waters as defined in paragraph 62-302.520(3)(f), F.A.C., provided that the pH is not lowered to less than 6 units in predominantly fresh waters, or less than 6.5 units in predominantly marine waters, or raised above 8.5 units. If natural background is less than 6 units, in predominantly fresh waters or 6.5 units in predominantly marine waters, the pH shall not vary below natural background or vary more than one unit above natural background of predominantly fresh waters and coastal waters, or more than two-tenths unit above natural background of open waters. If natural background is higher than 8.5 units, the pH shall not vary above natural background or vary more than one unit below natural background of predominantly fresh waters and coastal waters, or more than two-tenths unit below natural background of open waters.					
(51)(d) pH (Class V Waters)	Standard Units	Not lower than 5.0 nor greater than 9.5 except certain swamp waters which may be as low as 4.5.					
(52)(a) Phenolic Compounds: Total		Phenolic compounds other than those produced by the natural decay of plant material, listed or unlisted, shall not taint the flesh of edible fish or shellfish or produce objectionable taste or odor in a drinking water supply.					
(52)(b) Total Chlorinated Phenols and Chlorinated Cresols	Micrograms/L	1. The total of all chlorinated phenols, and chlorinated cresols, except as set forth in (c)1. to (c)4. below, shall not exceed 1.0 unless higher values are shown not to be chronically toxic. Such higher values shall be approved in writing by the Secretary. 2. The compounds listed in (c)1. to (c)6. below shall not exceed the limits specified for each compound.					1. The total of the following Phenolic compounds shall not exceed 50: a) Chlorinated phenols; b) Chlorinated cresols; and c) 2,4-dinitrophenol.
(52)(c) 1. Phenolic Compound: 2-chlorophenol	Micrograms/L	$\leq$ 120	< 400 See Note (2).	< 400 See Note (2).	< 400 See Note (2).	< 400 See Note (2).	

(52)(c) 2. Phenolic Compound: 2,4-dichlorophenol	Micrograms/L	< 93 See Note (2).	< 790 See Note (2).	< 790 See Note (2).	< 790 See Note (2).	< 790 See Note (2).	
(52)(c) 3. Phenolic Compound: Pentachlorophenol	Micrograms/L	≤ 30 max; ≤ 0.28 annual avg; ≤ $e^{(1.005[pH]-5.29)}$	≤ 7.9	≤ 30 max; ≤ 8.2 annual avg; ≤ $e^{(1.005[pH]-5.29)}$	≤ 7.9	≤ 30	
(52)(c) 4. Phenolic Compound: 2,4,6-trichlorophenol	Micrograms/L	≤ 2.1 annual avg.	≤ 6.5 annual avg.	≤ 6.5 annual avg.	≤ 6.5 annual avg.	≤ 6.5 annual avg.	
(52)(c) 5. Phenolic Compound: 2,4-dinitrophenol	Milligrams/L	≤ 0.0697 See Note (2).	≤ 14.26 See Note (2).	≤ 14.26 See Note (2).	≤ 14.26 See Note (2).	≤ 14.26 See Note (2).	
(52)(c) 6. Phenolic Compound: Phenol	Milligrams/L	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3
(53) Phosphorus (Elemental)	Micrograms/L		≤ 0.1		≤ 0.1		
(54) Phthalate Esters	Micrograms/L	≤ 3.0		≤ 3.0			
(55) Polychlorinated Biphenyls (PCBs)	Micrograms/L	≤ 0.000044 annual avg.; 0.014 max	≤ 0.000045 annual avg.; 0.03 max	≤ 0.000045 annual avg.; 0.014 max	≤ 0.000045 annual avg.; 0.03 max		

(56)(a) Polycyclic Aromatic Hydrocarbons (PAHs). Total of: Acenaphthylene; Benzo(a)anthracene; Benzo(a)pyrene; Benzo(b)fluoran-thene; Benzo-(ghi)perylene; Benzo(k)fluoranthene; Chrysene; Dibenzo-(a,h)anthracene; Indeno(1,2,3-cd)pyrene; and Phenanthrene	Micrograms/L	≤ 0.0028 annual avg.	≤ 0.031 annual avg.	≤ 0.031annual avg.	≤ 0.031 annual avg.		
(56)(b)1. (Individual PAHs): Acenaphthene	Milligrams/L	< 1.2 See Note (2).	< 2.7 See Note (2).	< 2.7 See Note (2).	< 2.7 See Note (2).		
(56)(b)2. (Individual PAHs): Anthracene	Milligrams/L	< 9.6 See Note (2).	< 110 See Note (2).	< 110 See Note (2).	< 110 See Note (2).		
(56)(b)3. (Individual PAHs): Fluoranthene	Milligrams/L	< 0.3 See Note (2).	< 0.370 See Note (2).	< 0.370 See Note (2).	< 0.370 See Note (2).		
(56)(b)4. (Individual PAHs): Fluorene	Milligrams/L	< 1.3 See Note (2).	< 14 See Note (2).	< 14 See Note (2).	< 14 See Note (2).		
(56)(b)5. (Individual PAHs): Pyrene	Milligrams/L	< 0.96 See Note (2).	< 11 See Note (2).	< 11 See Note (2).	< 11 See Note (2).		
(57)(a) Radioactive substances (Combined radium 226 and 228)	Picocuries/L	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5

(57)(b) Radioactive substances (Gross alpha particle activity including radium 226, but excluding radon and uranium)	Picocuries/L	≤ 15	≤ 15	≤ 15	≤ 15	≤ 15	≤ 15
(58) Selenium	Micrograms/L	≤ 5.0	≤ 71	≤ 5.0	≤ 71		
(59) Silver	Micrograms/L See Note (3).	≤ 0.07	See Minimum criteria in paragraph 62-302.500(1)(c), F.A.C.	≤ 0.07	See Minimum criteria in paragraph 62-302.500(1)(c), F.A.C.		
(60) Specific Conductance (see Conductance, Specific, above)							
(61) Substances in concentrations which injure, are chronically toxic to, or produce adverse physiological or behavioral response in humans, plants, or animals		None shall be present.					
(62) 1,1,2,2-Tetrachloroethane	Micrograms/L	≤ 0.17 annual avg.	≤ 10.8 annual avg.	≤ 10.8 annual avg.	≤ 10.8 annual avg.		
(63) Tetrachloroethylene (1,1,2,2-tetrachloroethene)	Micrograms/L	≤ 0.8 annual avg., ≤ 3.0 max	≤ 8.85 annual avg.	≤ 8.85 annual avg.	≤ 8.85 annual avg.		
(64) Thallium	Micrograms/L	< 1.7	< 6.3	< 6.3	< 6.3		
(65) Thermal Criteria (See Rule 62-302.520)							

(66) Total Dissolved Gases	Percent of the saturation value for gases at the existing atmospheric and hydrostatic pressures	≤ 110% of saturation value	≤ 110% of saturation value	≤ 110% of saturation value	≤ 110% of saturation value		
(67) Transparency	Depth of the compensation point within the water column for photosynthetic activity	The annual average value shall not be reduced by more than 10% as compared to the natural background value. Annual average values shall be based on a minimum of three samples, with each sample collected at least three months apart.	The annual average value shall not be reduced by more than 10% as compared to the natural background value. Annual average values shall be based on a minimum of three samples, with each sample collected at least three months apart.	The annual average value shall not be reduced by more than 10% as compared to the natural background value. Annual average values shall be based on a minimum of three samples, with each sample collected at least three months apart.	The annual average value shall not be reduced by more than 10% as compared to the natural background value. Annual average values shall be based on a minimum of three samples, with each sample collected at least three months apart.		
(68) Trichloroethylene (trichloroethene)	Micrograms/L	≤ 2.7 annual avg., ≤ 3.0 max	≤ 80.7 annual avg.	≤ 80.7 annual avg.	≤ 80.7 annual avg.		
(69) Turbidity	Nephelometric Turbidity Units (NTU)	≤ 29 above natural background conditions	≤ 29 above natural background conditions	≤ 29 above natural background conditions	≤ 29 above natural background conditions	≤ 29 above natural background conditions	≤ 29 above natural background conditions

(70) Zinc	Micrograms/L See Notes (1) and (3).	$Zn \leq e^{(0.8473[lnH]+0.884)}$	$\leq$ 86	$Zn \leq e^{(0.8473[lnH]+0.884)}$	$\leq$ 86	$\leq$ 1,000	$\leq$ 1,000

Notes**:** (1) "ln H" means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is < 25 mg/L and set at 400 mg/L if actual hardness is > 400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see paragraph 62-302.500(2)(d), F.A.C. (4) Class III-Limited waters have at least one Site Specific Alternative Criterion as established under Rule 62-302.800, F.A.C.

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804 FS. Law Implemented 403.021(11), 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, 7-3-12, 8-1-13.

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	1.91 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	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**:**

See Attachment D for more details on floral components (CWA effective 11/30/12)

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 [7-3-12] 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 subsections 62-302.200(4), 62-302.200(16)-(17), 62-302.200(22)-(25), 62-302.200(35)-(37), 62-302.200(39), Rule 62-302.531, and subsection 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 7-3-12.

Editorial Note: *Rule 62-302.531 will become effective upon approval by EPA in its entirety, conclusion of rulemaking by EPA to repeal its federal numeric nutrient criterion for Florida, and EPA's determination that Florida's rules address its January 2009 determination that numeric nutrient criteria are needed in Florida.*

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. Nutrient and nutrient response values do not apply to wetlands or to tidal tributaries that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions. The

In addition to the listed estuary & coastal criteria, see Attachment D for Governor's report waters and criteria as well as information from Senate Bill 1808. (CWA effective 9/26/13)

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 water	0.97 tons/million cubic meters of water	5.1 µg/L
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. Tidal Peace River	0.50 mg/L	1.08 mg/L	12.6 ug/L
9. Matlacha Pass	0.08 mg/L	0.58 mg/L	6.1 µg/L
10. 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
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 SD_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: $\exp\left(\frac{\sum_{i}^{12} NWi+NDi+SWi+SDi}{24}\right)$ 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)	
Estuary	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
(k) Perdido Bay	For bay segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other bay segments, the criteria shall not be exceeded in more than 10 percent of the measurements. 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. Big Lagoon	0.036 mg/L as AGM	0.61 mg/L as AGM	6.4 µg/L
2. Upper Perdido Bay	0.102 mg/L	1.27 mg/L	11.5 µg/L
3. Central Perdido Bay	0.103 mg/L	0.97 mg/L	7.5 µg/L
4. Lower Perdido Bay	0.110 mg/L	0.78 mg/L	6.9 µg/L
(l) Pensacola Bay	For bay segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other bay segments, the criteria shall not be exceeded in more than 10 percent of the measurements. 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. Lower Escambia Bay	0.076 mg/L	0.56 mg/L as AGM	6.8 µg/L as AGM
2. East Bay	0.084 mg/L	0.83 mg/L	4.0 µg/L as AGM
3. Upper Pensacola Bay	0.084 mg/L	0.77 mg/L	6.0 µg/L as AGM
4. Lower Pensacola Bay	0.024 mg/L as AGM	0.48 mg/L as AGM	3.9 µg/L as AGM
5. Santa Rosa Sound	0.022 mg/L as AGM	0.41 mg/L as AGM	3.4 µg/L as AGM
6. Blackwater Bay	0.082 mg/L	0.61 mg/L	11.3 µg/L
(m) Choctawhatchee Bay	For bay segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other bay segments, the criteria shall not be exceeded in more than 10 percent of the measurements. 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. Alaqua Bayou	0.027 mg/L as AGM	0.41 mg/L as AGM	4.0 µg/L as AGM
2. Basin Bayou	0.019 mg/L as AGM	0.31 mg/L as AGM	4.7 µg/L
3. Boggy Bayou	0.015 mg/L as AGM	0.33 mg/L as AGM	3.0 µg/L as AGM
4. East Bay	0.027 mg/L as AGM	0.46 mg/L as AGM	4.4 µg/L as AGM
5. Garnier Bayou	0.017 mg/L as AGM	0.91 mg/L as AGM	4.0 µg/L as AGM
6. LaGrange Bayou	0.029 mg/L as AGM	0.58 mg/L as AGM	5.1 µg/L as AGM
7. Middle Bay	0.020 mg/L as AGM	0.36 mg/L as AGM	3.1 µg/L as AGM
8. Rocky Bayou	0.016 mg/L as AGM	0.33 mg/L as AGM	3.1 µg/L as AGM
9. West Bay	0.049 mg/L as AGM	0.54 mg/L as AGM	4.1 µg/L as AGM
(n) St. Andrew Bay	Criteria for all bay segments are expressed as 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. East Bay	0.016 mg/L	0.33 mg/L	3.9 µg/L
2. North Bay	0.014 mg/L	0.28 mg/L	3.1 µg/L
3. St. Andrew Bay	0.019 mg/L	0.34 mg/L	3.7 µg/L
4. West Bay	0.017 mg/L	0.35 mg/L	3.8 µg/L

(o) St. Joseph Bay	Criteria for all bay segments are expressed as 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.		
St. Joseph Bay	0.021 mg/L	0.34 mg/L	3.8 µg/L
(p) Apalachicola Bay	For bay segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other bay segments, the criteria shall not be exceeded in more than 10 percent of the measurements. 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. Apalachicola Bay	0.063 mg/L as AGM	0.84 mg/L as AGM	8.4 µg/L as AGM
2. St. George Sound	0.083 mg/L	0.92 mg/L	6.1 µg/L as AGM
3. East Bay	0.101 mg/L	1.12 mg/L	9.7 µg/L as AGM
4. St. Vincent Sound	0.116 mg/L	1.10 mg/L	17.4 µg/L
(q) Loxahatchee River Estuary	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other estuary segments, the criteria shall not be exceeded in more than 10 percent of the measurements.		
1. Lower Loxahatchee	0.032 mg/L as AGM	0.63 mg/L as AGM	1.8 µg/L as AGM
2. Middle Loxahatchee	0.030 mg/L as AGM	0.80 mg/L as AGM	4.0 µg/L as AGM
3. Upper Loxahatchee	0.075 mg/L as AGM	1.26 mg/L as AGM	5.5 µg/L as AGM
(r) Lake Worth Lagoon	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other estuary segments, the criteria shall not be exceeded in more than 10 percent of the measurements.		
1. Northern Lake Worth Lagoon	0.044 mg/L as AGM	0.54 mg/L as AGM	2.9 µg/L as AGM
2. Central Lake Worth Lagoon	0.049 mg/L as AGM	0.66 mg/L as AGM	10.2 µg/L
3. Southern Lake Worth Lagoon	0.050 mg/L as AGM	0.59 mg/L as AGM	5.7 µg/L as AGM
(s) Halifax River Estuary	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period.		
Lower Halifax River Estuary	0.142 mg/L as AGM	0.72 mg/L as AGM	6.2 µg/L as AGM
(t) Guana River/Tolomato River/Matanzas River (GTM) Estuary	Criteria for all estuary segments are expressed as annual geometric mean values not to be exceeded more than once in a three year period.		
1. Tolomato	0.105 mg/L as AGM	0.65 mg/L as AGM	6.6 µg/L as AGM
2. North Matanzas	0.110 mg/L as AGM	0.55 mg/L as AGM	4.0 µg/L as AGM
3. South Matanzas	0.111 mg/L as AGM	0.53 mg/L as AGM	5.5 µg/L as AGM
(u) Nassau River Estuary	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other estuary segments, the criteria shall not be exceeded in more than 10 percent of the measurements.		
1. Ft. George River Estuary	0.107 mg/L as AGM	0.60 mg/L as AGM	5.9 µg/L as AGM
2. Lower Nassau	0.107 mg/L as AGM	0.80mg/L as AGM	17.5 µg/L
3. Middle Nassau	0.137 mg/L as AGM	0.83 mg/L as AGM	17.1 µg/L
4. Upper Nassau	0.191 mg/L as AGM	1.29 mg/L as AGM	4.7 µg/L as AGM

(v) Suwannee, Waccasassa, and Withlacoochee River Estuaries	For estuary segments with criteria expressed as single value annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For estuary segments with criteria expressed as a salinity dependent equation, the annual nutrient criteria are expressed as annual geometric means applied to individual monitoring stations by solving the applicable equation below using the annual arithmetic average salinity (AASal) in practical salinity units (PSU) for the station. The AASal shall be calculated as the annual mean of the salinity measurements for each station made in conjunction with the collection of the nutrient samples. For criteria expressed as a salinity dependant equation, no more than 10 percent of the monitoring stations within the segment shall exceed the limit (expressed as AGM) on an annual basis, more than once in a three year period.		
1. Suwannee Offshore	TP as AGM = -0.0035*AASal + 0.1402	TN as AGM = -0.0328*AASal + 1.4177	5.7 µg/L as AGM
2. Waccasassa Offshore	0.063 mg/L as AGM	0.69 mg/L as AGM	5.6 µg/L as AGM
3. Withlacoochee Offshore	TP as AGM = -0.0021*AASal + 0.0942	TN as AGM = -0.0183*AASal + 0.9720	4.9 µg/L as AGM
(w) Springs Coast (Crystal River to Anclote River)	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period.		
1. Anclote Offshore	0.014 mg/L as AGM	0.42 mg/L as AGM	1.7 µg/L as AGM
2. Anclote River Estuary	0.063 mg/L as AGM	0.65 mg/L as AGM	3.8 µg/L as AGM
3. Aripeka and Hudson Offshore	0.008 mg/L as AGM	0.45 mg/L as AGM	0.8 µg/L as AGM
4. Chassahowitzka NWR	0.015 mg/L as AGM	0.55 mg/L as AGM	2.0 µg/L as AGM
5. Chassahowitzka Offshore	0.011 mg/L as AGM	0.46 mg/L as AGM	1.5 µg/L as AGM
6. Chassahowitzka River Estuary	0.021 mg/L as AGM	0.44 mg/L as AGM	3.9 µg/L as AGM
7. Crystal Offshore	0.034 mg/L as AGM	0.40 mg/L as AGM	2.4 µg/L as AGM
8. Crystal River Estuary	0.047 mg/L as AGM	0.37 mg/L as AGM	4.4 µg/L as AGM
9. Homosassa Offshore	0.012 mg/L as AGM	0.46 mg/L as AGM	1.3 µg/L as AGM
10. Homosassa River Estuary	0.028 mg/L as AGM	0.51 mg/L as AGM	7.7 µg/L as AGM
11. Pithlachascotee Offshore	0.010 mg/L as AGM	0.47 mg/L as AGM	1.0 µg/L as AGM
12. Pithlachascotee River Estuary	0.034 mg/L as AGM	0.65 mg/L as AGM	4.0 µg/L as AGM
13. St. Martins Marsh	0.031 mg/L as AGM	0.51 mg/L as AGM	3.2 µg/L as AGM
14. Weeki Wachee Offshore	0.017 mg/L as AGM	0.54 mg/L as AGM	1.2 µg/L as AGM
15. Weeki Wachee River Estuary	0.019 mg/L as AGM	0.60 mg/L as AGM	1.9 µg/L as AGM

(2) Criteria for chlorophyll *a* in open ocean coastal waters, derived from satellite remote sensing techniques, are provided in the table below. In each coastal segment specified in the Map of Florida Coastal Segments, dated May 13, 2013 (http://www.flrules.org/Gateway/reference.asp?No=Ref-03017), which is incorporated by reference herein, the Annual Geometric Mean remotely sensed chlorophyll *a* value, calculated excluding *Karenia brevis* blooms (>50,000 cells/L), shall not be exceeded more than once in a three year period. The annual geometric means provided in the

table below are based on measurements using the SeaWiFS satellite. Achievement of these criteria shall be assessed only by using satellite remote sensing data that are processed in a manner consistent with the derivation of the criteria. Data selection and preparation shall be consistent with the process described in Section 1.4.3 and Section 1.4.4, pages 14 through 17, in the report titled "Technical Support Document for U.S. EPA's Proposed Rule for Numeric Nutrient Criteria for Florida's Estuaries, Coastal Waters, and South Florida Inland Flowing Waters, Volume 2: Coastal Waters," U.S. Environmental Protection Agency, November 30, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-03018), the specified pages of which are incorporated by reference herein. If MODIS or MERIS satellite data are used, the data shall be normalized using the standardization factors provided in the table below, consistent with the process described in Section 1.6.3, pages 26 through 33 (http://www.flrules.org/Gateway/reference.asp?No=Ref-03019), in the above referenced EPA document, the specified pages of which are incorporated herein. A copy of the Map of Florida Coastal Segments and the referenced pages from EPA's document above are available by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

Coastal Segment	Annual Geometric Mean Remotely Sensed Chlorophyll *a*	MODIS Standardization Factor	MERIS Standardization Factor
1	2.45	0.54	-0.71
2	2.65	0.99	-0.07
3	1.48	0.41	-0.22
4	1.20	0.26	-0.30
5	1.09	0.15	-0.28
6	1.07	0.29	-0.01
7	1.17	0.33	-0.02
8	1.27	0.38	-0.05
9	1.09	0.20	-0.07
10	1.13	0.41	-0.07
11	1.14	0.31	-0.05
12	1.21	0.41	-0.05
13	1.53	0.50	-0.13
14	1.80	0.69	0.01
15	2.80	0.68	0.58
16	2.49	-0.14	0.27
17	3.57	0.08	1.41
18	5.62	0.50	0.03
19	4.90	0.50	0.31
20	4.33	-0.02	-0.69
21	4.06	-0.63	-1.09
22	4.54	-0.46	-0.17
23	3.40	-1.21	-0.67
24	3.41	-2.37	0.01
25	3.11	-2.84	0.05
26	3.00	-4.16	-0.36
27	3.05	-1.77	-0.81
28	3.41	-2.13	-0.61
29	4.55	-0.83	-0.74
30	4.32	-0.74	-0.04
31	3.77	-0.29	-0.90
32	4.30	0.17	-0.47
33	5.98	0.10	0.80
34	4.63	-0.77	-0.32
35	4.14	0.42	-0.83
37	1.01	0.39	0.59

38	0.26	-0.04	-0.03
39	0.27	-0.02	0.00
40	0.25	-0.03	-0.01
41	0.21	-0.06	-0.01
42	0.21	-0.03	0.03
43	0.21	-0.02	0.04
44	0.20	-0.02	0.01
45	0.21	-0.04	0.02
46	0.26	-0.05	-0.01
47	0.58	-0.10	0.03
48	1.09	0.03	0.09
49	1.48	0.39	0.36
50	1.85	0.21	0.32
51	1.72	0.23	0.31
52	1.73	0.05	0.58
53	1.87	0.00	0.47
54	1.66	-0.13	0.31
55	1.60	0.18	0.71
56	2.12	0.11	0.39
57	2.83	0.44	0.84
58	2.63	0.09	0.40
59	2.34	0.06	0.33
60	2.17	0.07	0.29
61	2.01	-0.20	-0.06
62	1.93	0.18	-0.11
63	1.90	-0.69	-0.20
64	2.13	-0.79	-0.20
65	1.96	-0.72	-0.13
66	1.95	-0.85	-0.40
67	2.06	-0.33	-0.53
68	2.51	-0.47	-0.08
69	2.86	-0.60	-0.22
70	2.88	-1.39	-0.32
71	3.62	-2.00	-0.38
72	3.80	-1.38	-0.40
73	3.94	-0.28	-0.49
74	4.36	-0.16	-1.17

(3) Estuarine and marine areas for the Southwest and South Florida estuaries listed in paragraphs 62-302.532(1)(a)-(j), F.A.C., are delineated in the eight maps of the Florida Marine Nutrient Regions, dated May 13, 2013 (http://www.flrules.org/Gateway/reference.asp?No=Ref-03020), which are incorporated by reference. Estuarine and marine areas for the Panhandle estuaries listed in paragraphs 62-302.532(1)(k)-(p), F.A.C., are delineated in the six maps of the Florida Marine Nutrient Regions, dated October 1, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-03021), which are incorporated by reference. Estuarine and marine areas for the estuaries listed in paragraphs 62-302.532(1)(q)-(w), F.A.C., are delineated in the seven maps of the Florida Marine Nutrient Regions, dated May 13, 2013 (http://www.flrules.org/Gateway/reference.asp?No=Ref-03022), which are incorporated by reference herein. Copies of these maps may be obtained by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS #6511, Tallahassee, FL 32399-2400.

(4) 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(11), 403.061, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History–New 7-3-12, Amended 12-20-12, 8-1-13, 8-20-13.

Editorial Note: Paragraphs 62-302.532(1)(a)-(j) became effective on 7-3-12, and paragraphs 62-302.532(1)(k)-(p) became effective on 12-20-12, 20 days after filing the rule certification packages for these numeric nutrient criteria. In accordance with Section 4 of 2013-71, Laws of Florida, and subsection 62-302.531(9), F.A.C., paragraphs 62-302.532(1)(q)-(w), subsections 62-302.532(2) and (4), and the maps delineating these Florida Marine Nutrient Regions in subsection 62-302.532(3) will become effective upon approval by EPA in their entirety, conclusion of rulemaking by EPA to repeal its federal numeric nutrient criterion for Florida, and EPA's determination that Florida's rules address its January 2009 determination that numeric nutrient criteria are needed in Florida.

62-302.533 Dissolved Oxygen Criteria for Class I, Class II, Class III, and Class III-Limited Waters.

(1) Class I, Class III predominantly freshwaters, and Class III-Limited predominantly freshwaters.

(a) No more than 10 percent of the daily average percent dissolved oxygen (DO) saturation values shall be below the following values:

1. 67 percent in the Panhandle West bioregion,

2. 38 percent in the Peninsula and Everglades bioregions, or

3. 34 percent in the Northeast and Big Bend bioregions. A map of the bioregions is contained in *SCI 1000: Stream Condition Index Methods* (DEP-SOP-003/11 SCI 1000) (http://www.flrules.org/Gateway/reference.asp?No=Ref-02959), which is incorporated by reference in Rule 62-160.800, F.A.C.

(b) For lakes, the daily average DO level shall be calculated as the average of measurements collected in the upper two meters of the water column at the same location on the same day. For all other freshwaters, the daily average freshwater DO level shall be calculated as the average of all measurements collected in the water column at the same location and on the same day.

(c) In the portions of the Suwannee, Withlacoochee (North), and Santa Fe Rivers utilized by the Gulf Sturgeon, and in the portions of the Santa Fe and New Rivers utilized by the Oval Pigtoe Mussel, DO levels shall not be lowered below the baseline distribution such that there is 90 percent confidence that more than 50 percent of measurements are below the median of the baseline distribution or more than 10 percent of the daily average values are below the 10^{th} percentile of the baseline distribution for the applicable waterbody.

(d) In the portions of the St. Johns River utilized by the Shortnose or Atlantic Sturgeon, the DO shall not be below 53 percent saturation during February and March. During other times of the year, the criteria specified in paragraph 62-302.533(1)(a), F.A.C., shall apply.

(e) The baseline distributions and maps showing the specific areas utilized by the Gulf Sturgeon and the Oval Pigtoe Mussel are provided in Appendix I of the "*Technical Support Document for the Derivation of Dissolved Oxygen Criteria to Protect Aquatic Life in Florida's Fresh and Marine Waters*" (DEP-SAS-001/13), dated March 2013 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02955), which is incorporated by reference herein. Copies of Appendix I 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.

See Attachment E for maps, distributions, and information regarding endangered species listed in (c), (d), and (e).

(2) Class II, Class III predominantly marine waters, and Class III-Limited predominantly marine waters.

(a) Minimum DO saturation levels shall be as follows:

1. The daily average percent DO saturation shall not be below 42 percent saturation in more than 10 percent of the values;

2. The seven-day average DO percent saturation shall not be below 51 percent more than once in any twelve week period; and

3. The 30-day average DO percent saturation shall not be below 56 percent more than once per year.

(b) To calculate a seven-day average DO percent saturation, there shall be a minimum of three full days of diel data collected within the seven-day period, or a minimum of ten grab samples collected over at least three days within that seven-day period, with each sample measured at least four hours apart.

(c) To calculate a 30-day average DO percent saturation, there shall be a minimum of three full days of diel data with at least one day of data collected in three different weeks of the 30-day period, or grab samples collected from a minimum of ten different days of the 30-day period.

(d) A full day of diel data shall consist of 24 hours of measurements collected at a regular time interval of no longer than one hour.

(3) If it is determined that the natural background DO saturation in the waterbody (including values that are naturally low due to vertical stratification) is less than the applicable criteria stated above, the applicable criteria shall be 0.1 mg/l below the DO concentration associated with the natural background DO saturation level.

(4) For predominately marine waters, a decrease in magnitude of up to 10 percent from the natural background condition is allowed if it is demonstrated that sensitive resident aquatic species will not be adversely affected using the procedure described in the DEP document titled Appendix H of the "*Technical Support Document for the Derivation of Dissolved Oxygen Criteria to Protect Aquatic Life in Florida's Fresh and Marine Waters: Determination of Acceptable Deviation from Natural Background Dissolved Oxygen Levels in Fresh and Marine Waters*" (DEP-SAS-001/13), dated March 2013 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02956), which is incorporated by reference herein. Copies of Appendix H 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.

(5) Ambient DO levels above the minimum criteria specified in subsections 62-302.533(1) and (2), F.A.C., shall be maintained in accordance with and subject to Rules 62-302.300 and 62-4.242, F.A.C. Ambient DO levels will be considered to have declined, for purposes of this subsection if, after controlling for or removing the effects of confounding variables, such as climatic and hydrologic cycles, quality assurance issues, and changes in analytical methods, a waterbody segment is shown to have a statistically significant decreasing trend in DO percent saturation or an increasing trend in the range of daily DO fluctuations at the 95 percent confidence level using the one-sided Seasonal Kendall test for trend, as described in Helsel, D.R. and R.M. Hirsch, 2002, Statistical Methods in Water Resources, USGS, pages 338 through 340 (http://www.flrules.org/Gateway/reference.asp?No=Ref-02957), which is incorporated by reference herein, or an alternative statistically valid trend at a one-sided confidence level of 95 percent. It must be demonstrated that the data satisfy all statistical assumptions of any alternative method used, including residual distribution, variance, and shape of relationship.

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804 FS. Law Implemented 403.021(11), 403.061, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History–New 8-1-13.

62-302.540 Water Quality Standards for Phosphorus Within the Everglades Protection Area.

(1) Purpose and Scope.

(a) The purpose of this rule is to implement the requirements of the Everglades Forever Act by utilizing the powers and duties granted the Department under the Act and other applicable provisions of Chapters 373 and 403, F.S., to establish water quality standards for phosphorus, including a numeric phosphorus criterion, within the EPA.

(b) The water quality standards adopted by this rule include all of the following elements:

1. A numerical interpretation of the Class III narrative nutrient criterion for phosphorus;

2. Establishment of moderating provisions for permits authorizing discharges into the EPA in compliance with water quality standards, including the numeric phosphorus criterion; and

3. A method for determining achievement of the numeric phosphorus criterion, which takes into consideration spatial and temporal variability, natural background conditions and confidence in laboratory results.

(2) Findings.

(a) The Legislature, in adopting the Everglades Forever Act, recognized that the EPA must be restored both in terms of water quantity and water quality.

(b) Best Management Practices (BMPs) have reduced phosphorus loads from the Everglades Agricultural Area to the EPA by more than twice the amount required by existing rules. Stormwater Treatment Areas (STAs) have reduced phosphorus concentrations to less than the goal of 50 ppb established in the Everglades Forever Act.

(c) While a significant percentage of the EPA currently meets the numeric phosphorus criterion, further efforts are required to achieve the criterion in the remaining impacted areas of the EPA.

(d) Even as water quality continues to improve, restoration will be a long-term process because of historic phosphorus accumulations found in sediments within impacted areas. This phosphorus can diffuse back into the water column, a phenomenon the Department recognizes as reflux.

(e) The Basin-Specific Feasibility Studies completed by the District considered environmental factors, implementation cost, scheduling, and technical factors in evaluating measures to reduce phosphorus levels entering the EPA. These studies and other information provided to the Commission show that:

1. At this time, chemical treatment technology is not cost-effective for treating discharges entering the EPA and poses the potential for adverse environmental effects.

2. Optimization of the existing STAs, in combination with BMPs, is currently the most cost-effective and environmentally preferable means to achieve further phosphorus reductions to the EPA, and to restore impacted areas. The effectiveness of such measures should be determined and maximized prior to requiring additional measures. Optimization shall take into consideration viable vegetative technologies, including Periphyton-based STAs that are found to be cost-effective and environmentally acceptable.

(f) The District and the Department recognize that STA and BMP optimization requires a sustained commitment to construct, implement, stabilize and measure phosphorus reduction benefits.

(g) The Comprehensive Everglades Restoration Plan (CERP) contains projects that will affect the flows and phosphorus levels entering the EPA. Achievement of water quality standards for water quality projects required under the Everglades Forever Act can be most effectively and efficiently attained when integrated with CERP projects.

(h) The Long-Term Plan constitutes a comprehensive program to optimize the STAs and BMPs to achieve further phosphorus reductions and thereby accomplish implementation of Best Available Phosphorus Reduction Technology (BAPRT).

(i) It is the intent of the Commission that implementation of this rule will fulfill commitments made by the State of Florida to restore and maintain water quality in the EPA, while, at the same time, fulfill the States obligations under the Settlement Agreement to achieve the long-term phosphorus concentration levels and discharge limits established in that Agreement for the Loxahatchee National Wildlife Refuge (Refuge) and the Everglades National Park (Park).

(j) Establishment of the numeric phosphorus criterion, based upon analyses conducted primarily in freshwater open water slough systems, assumed that preservation of the balance of the native flora and fauna in these open water slough systems would protect other communities of native vegetation in the EPA. Further research should be conducted in other habitat types to further evaluate the natural variability in those habitat types.

(k) The Commission has received substantial testimony regarding mercury and its impact on the EPA. The Commission encourages all interested parties to continue research efforts on the effects of mercury.

(l) The Commission finds that this rule must incorporate a flexible approach towards the application of the numeric phosphorus criterion for phosphorus in order to guide the implementation of phosphorus reductions in the Everglades Protection Area. Chapter 403, F.S., the Everglades Forever Act and U.S. Environmental Protection Agency regulations set forth at 40 CFR Part 131 include general policies that authorize such flexibility under appropriate circumstances, including those described in paragraphs (c) through (h) and (k) above. The Commission has exercised this authority by including in this rule both a numeric interpretation of the phosphorus criterion and the various other standard setting provisions of this rule, including the permitting and moderating provisions.

(3) Definitions.

(a) “Best Available Phosphorus Reduction Technology” (BAPRT) shall be as defined by Section 373.4592(2)(a), F.S. BMPs shall maintain and, where practicable, improve upon the performance of urban and agricultural source controls in reducing overall phosphorus levels. Agricultural BMPs within the Everglades Agricultural Area and the C-139 Basin shall be in accordance with Chapters 40E-61 and 40E-63, F.A.C. STA phosphorus reductions shall be improved through implementation of optimization measures as defined by Section 373.4592(2)(l), F.S. BAPRT may include measures intended to reduce phosphorus levels in discharges from a single basin or sub-basin, or a program designed to address discharges from multiple basins.

(b) “Long-Term Plan” shall be as defined by Section 373.4592(2)(j), F.S.

(c) The “Everglades Protection Area” or “EPA” shall mean Water Conservation Areas 1 (Refuge), 2A, 2B, 3A and 3B, and the Everglades National Park.

(d) “Impacted Areas” shall mean areas of the EPA where total phosphorus concentrations in the upper 10 centimeters of the soils are greater than 500 mg/kg.

(e) “District” shall mean the South Florida Water Management District.

(f) “Optimization” shall be as defined by Section 373.4592(2)(l), F.S.

(g) “Settlement Agreement” shall mean the Settlement Agreement entered in Case No. 88-1886-Civ-Hoeveler, United States District Court for the Southern District of Florida, as modified by the Omnibus Order entered in the case on April 27, 2001.

(h) “Technology-based Effluent Limitation” or “TBEL” shall be as defined in Section 373.4592(2)(p), F.S.

(i) “Unimpacted Areas” shall mean those areas which are not “Impacted Areas”.

(4) Phosphorus Criterion.

(a) The numeric phosphorus criterion for Class III waters in the EPA shall be a long-term geometric mean of 10 ppb, but shall not be lower than the natural conditions of the EPA, and shall take into account spatial and temporal variability. Achievement of the criterion shall be determined by the methods in this subsection. Exceedences of the provisions of this subsection shall not be considered deviations from the criterion if they are attributable to the full range of natural spatial and temporal variability, statistical variability inherent in sampling and testing procedures or higher natural background conditions.

(b) Water Bodies. Achievement of the phosphorus criterion for waters in the EPA shall be determined separately in impacted and unimpacted areas in each of the following water bodies: Water Conservation Areas 1, 2 and 3, and the Everglades National Park.

(c) Achievement of Criterion in Everglades National Park. Achievement of the phosphorus criterion in the Park shall be based on the methods as set forth in Appendix A of the Settlement Agreement unless the Settlement Agreement is rescinded or terminated. If the Settlement Agreement is no longer in force, achievement of the criterion shall be determined based on the method provided for the remaining EPA. For the Park, the Department shall review data from inflows into the Park at locations established pursuant to Appendix A of the Settlement Agreement and shall determine that compliance is achieved if the Department concludes that phosphorus concentration limits for inflows into the Park do not result in a violation of the limits established in Appendix A.

(d) Achievement of the Criterion in WCA-1, WCA-2 and WCA-3.

1. Achievement of the criterion in unimpacted areas in each WCA shall be determined based upon data from stations that are evenly distributed and located in freshwater open water sloughs similar to the areas from which data were obtained to derive the phosphorus criterion. Achievement of the criterion shall be determined based on data collected monthly from the network of monitoring stations in the unimpacted area. The water body will have achieved the criterion if the five year geometric mean averaged across all stations is less than or equal to 10 ppb. In order to provide protection against imbalances of aquatic flora or fauna, the following provisions must also be met:

a. The annual geometric mean averaged across all stations is less than or equal to 10 ppb for three of five years;

b. The annual geometric mean averaged across all stations is less than or equal to 11 ppb; and

c. The annual geometric mean at all individual stations is less than or equal to 15 ppb. Individual station analyses are representative of only that station.

2. Achievement of the criterion shall be determined based on data collected monthly from the network of monitoring stations in the impacted area. Impacted Areas of the water body will have achieved the criterion if the five year geometric mean averaged across all stations is less than or equal to 10 ppb. In order to provide protection against imbalances of aquatic flora or fauna, the following provisions must also be met:

a. The annual geometric mean averaged across all stations is less than or equal to 10 ppb for three of five years;

b. The annual geometric mean averaged across all stations is less than or equal to 11 ppb; and

c. The annual geometric mean at all individual stations is less than or equal to 15 ppb. Individual station analyses are representative of only that station.

If these limits are not met, no action shall be required, provided that the net improvement or hydropattern restoration provisions of subsection (6) below are met. Notwithstanding the definition of Impacted Area in subsection (3),

individual stations in the network shall be deemed to be unimpacted for purposes of this rule if the five-year geometric mean is less than or equal to 10 ppb and the annual geometric mean is less than or equal to 15 ppb.

(e) Adjustment of Achievement Methods. The Department shall complete a technical review of the achievement methods set forth in this subsection at a minimum of five year intervals and will report to the ERC on changes as needed. Data will be collected as necessary at stations that are evenly distributed and representative of major natural habitat types to further define the natural spatial and temporal variability and natural background of phosphorus concentrations in the EPA. As a part of the review, the Department may propose amendments to the achievement method provisions of this rule to include:

1. A hydrologic variability algorithm in a manner similar to the Settlement Agreement; and

2. Implementing adjustment factors that take into account water body specific variability, including the effect of habitat types.

The hydrologic variability evaluation shall be based on data from at least one climatic drought cycle and data reflecting the average interior stage of the water body on the dates of sample collection.

(f) Data Screening. Data from each monitoring station shall be evaluated prior to being used for the purposes of determining achievement of the criterion. Data shall be excluded from calculations for the purpose of determining achievement of the criterion if such data:

1. Do not comply with the requirements of Chapter 62-160, F.A.C.; or

2. Are excluded through the screening protocol set forth in the *Data Quality Screening Protocol*; or

3. Were collected from sites affected by extreme events such as fire, flood, drought or hurricanes, until normal conditions are restored; or

4. Were affected by localized activities caused by temporary human or natural disturbances such as airboat traffic, authorized (permitted or exempt) restoration activities, alligator holes, or bird rookeries.

5. Were sampled in years where hydrologic conditions (e.g., rainfall amount, water levels and water deliveries) were outside the range that occurred during the period (calendar years 1978 – 2001) used to set the phosphorus criterion.

(5) Long-Term Compliance Permit Requirements for Phosphorus Discharges into the EPA.

(a) In addition to meeting all other applicable permitting criteria, an applicant must provide reasonable assurance that the discharge will comply with state water quality standards as set forth in this section.

(b) Discharges into the EPA shall be deemed in compliance with state water quality standards upon a demonstration that:

1. Phosphorus levels in the discharges will be at or below the phosphorus criterion set forth in this rule; or

2. Discharges will not cause or contribute to exceedences of the phosphorus criterion in the receiving waters, the determination of which will take into account the phosphorus in the water column that is due to reflux; or

3. Discharges will comply with moderating provisions as provided in this rule.

(c) Discharges into the Park must not result in a violation of the concentration limits established for the Park in Appendix A of the Settlement Agreement as determined through the methodology set forth in subsection (4).

(d) Discharge limits for permits allowing discharges into the EPA shall be based upon TBELs established through BAPRT and shall not require water quality based effluent limitations through 2016. Such TBELs shall be applied as effluent limitations as defined in subsection 62-302.200(10), F.A.C.

(6) Moderating Provisions. The following moderating provisions are established for discharges into or within the EPA as a part of state water quality standards applicable to the phosphorus criterion set forth in this rule:

(a) Net Improvement in Impacted Areas.

1. Until December 31, 2016, discharges into or within the EPA shall be permitted using net improvement as a moderating provision upon a demonstration by the applicant that:

a. The permittee will implement, or cause to be implemented, BAPRT, as defined by Section 373.4592(2)(a), F.S., and further provided in this section, which shall include a continued research and monitoring program designed to reduce outflow concentrations of phosphorus; and

b. The discharge is into or within an impacted area.

2. BAPRT shall use an adaptive management approach based on the best available information and data to develop

and implement incremental phosphorus reduction measures with the goal of achieving the phosphorus criterion. BAPRT shall also include projects and strategies to accelerate restoration of natural conditions with regard to populations of native flora or fauna.

3. For purposes of this rule, the Long-Term Plan shall constitute BAPRT. The planning goal of the Long-Term Plan is to achieve compliance with the criterion set forth in subsection (4) of this rule. Implementation of BAPRT will result in net improvement in impacted areas of the EPA. The Initial Phase of the Long-Term Plan shall be implemented through 2016. Revisions to the Long-Term Plan shall be incorporated through an adaptive management approach including a Process Development and Engineering component to identify and implement incremental optimization measures for further phosphorus reductions.

4. The Department and the District shall propose amendments to the Long-Term Plan as science and environmental conditions warrant. The Department shall approve all amendments to the Long-Term Plan.

5. As part of the review of permit applications, the Department shall review proposed changes to the Long-Term Plan identified through the Process Development and Engineering component of the Long-Term Plan to evaluate changes necessary to comply with this rule, including the numeric phosphorus criterion. Those changes which the department deems necessary to comply with this rule, including the numeric phosphorus criterion, shall be included as conditions of the respective permit or permits for the structures associated with the particular basin or basins involved. Until December 31, 2016, such permits shall include technology-based effluent limitations consistent with the Long-Term Plan.

(b) Hydropattern Restoration. Discharges into or within unimpacted areas of the EPA shall be permitted for hydropattern restoration purposes upon a demonstration by the applicant that:

1. The discharge will be able to achieve compliance with the requirements of sub-subparagraph (6)(a)1.a. above;

2. The environmental benefits of establishing the discharge clearly outweigh the potential adverse impacts that may result in the event that phosphorus levels in the discharge exceed the criterion; and

3. The discharge complies with antidegradation requirements.

(c) Existing Moderating Provisions. Nothing in this rule shall eliminate the availability of moderating provisions that may otherwise exist as a matter of law, rule or regulation.

(7) Document Incorporated by Reference. The following document is referenced elsewhere in this section and is hereby incorporated by reference:

Data Quality Screening Protocol, dated 7-15-04.

(8) Contingencies. In the event any provision of this rule is challenged in any proceeding, the Commission shall immediately be notified. In the event any provision of this rule:

(a) Is determined to be invalid under applicable laws; or

(b) Is disapproved by the U.S. Environmental Protection Agency under the Clean Water Act, the Department shall bring the matter back before the Commission at the earliest practicable date for reconsideration.

Rulemaking Authority 373.043, 373.4592, 403.061 FS. Law Implemented 373.016, 373.026, 373.4592, 403.021(11), 403.061, 403.201 FS. History– New 7-15-04, Amended 5-25-05.

62-302.700 Special Protection, Outstanding Florida Waters, Outstanding National Resource Waters.

(1) It shall be the Department policy to afford the highest protection to Outstanding Florida Waters and Outstanding National Resource Waters. No degradation of water quality, other than that allowed in subsections 62-4.242(2) and (3), F.A.C., is to be permitted in Outstanding Florida Waters and Outstanding National Resource Waters, respectively, notwithstanding any other Department rules that allow water quality lowering.

(2) A complete listing of Outstanding Florida Waters and Outstanding National Resource Waters is provided in subsections (9) and (10). Outstanding Florida Waters generally include the following surface waters (unless named as Outstanding National Resource Waters):

(a) Waters in National Parks, Preserves, Memorials, Wildlife Refuges and Wilderness Areas;

(b) Waters in the State Park System and Wilderness Areas;

(c) Waters within areas acquired through donation, trade, or purchased under the Environmentally Endangered Lands Bond Program, Conservation and Recreation Lands Program, Land Acquisition Trust Fund Program, and Save

Our Coast Program;

(d) Rivers designated under the Florida Scenic and Wild Rivers Program, federal Wild and Scenic Rivers Act of 1968 as amended, and Myakka River Wild and Scenic Designation and Preservation Act;

(e) Waters within National Seashores, National Marine Sanctuaries, National Estuarine Research Reserves, and certain National Monuments;

(f) Waters in Aquatic Preserves created under the provisions of Chapter 258, F.S.;

(g) Waters within the Big Cypress National Preserve;

(h) Special Waters as listed in paragraph 62-302.700(9)(i), F.A.C.; and

(i) Certain Waters within the Boundaries of the National Forests.

(3) Each water body demonstrated to be of exceptional recreational or ecological significance may be designated as a Special Water.

(4) The following procedure shall be used in designating an Outstanding National Resource Water as well as any Special Water:

(a) Rulemaking procedures pursuant to Chapter 120, F.S., shall be followed;

(b) At least one fact-finding workshop shall be held in the affected area;

(c) All local county or municipal governments and state legislators whose districts or jurisdictions include all or part of the water shall be notified at least 60 days prior to the workshop in writing by the Secretary;

(d) A prominent public notice shall be placed in a newspaper of general circulation in the area of the proposed water at least 60 days prior to the workshop; and

(e) An economic impact analysis, consistent with Chapter 120, F.S., shall be prepared which provides a general analysis of the impact on growth and development including such factors as impacts on planned or potential industrial, agricultural, or other development or expansion.

(5) The Commission may designate a water of the State as a Special Water after making a finding that the waters are of exceptional recreational or ecological significance and a finding that the environmental, social, and economic benefits of the designation outweigh the environmental, social, and economic costs.

(6) The Commission may designate a water as an Outstanding National Resource Water after making all of the following findings:

(a) That the waters are of such exceptional recreational or ecological significance that water quality should and can be maintained and protected under all circumstances other than temporary degradation and the lowering allowed by Section 316 of the Federal Clean Water Act; and

(b) That the level of protection afforded by the designation as Outstanding National Resource Waters is clearly necessary to preserve the exceptional ecological or recreational significance of the waters; and

(c) That the environmental, social, and economic benefits of the designation outweigh the environmental, social, and economic costs.

(7) The policy of this section shall be implemented through the permitting process pursuant to Rule 62-4.242, F.A.C.

(8) For each Outstanding Florida Water listed under subsection 62-302.700(9), F.A.C., the last day of the baseline year for defining the existing ambient water quality (paragraph 62-4.242(2)(c), F.A.C.) is March 1, 1979, unless otherwise indicated. Where applicable, Outstanding Florida Water boundary expansions are indicated by date(s) following "as mod." under subsection 62-302.700(9), F.A.C. For each Outstanding Florida Water boundary which expanded subsequent to the original date of designation, the baseline year for the entire Outstanding Florida Water, including the expansion, remains March 1, 1979, unless otherwise indicated.

(9) Outstanding Florida Waters:

(a) Waters within National Parks and National Memorials.

National Park or National Memorial	County
1. Biscayne National Park (as mod. 5-14-86, 8-8-94)	Dade
2. Dry Tortugas	Monroe

National Park (10-4-90)	
3. Everglades National Park (as mod. 8-8-94)	Monroe/Dade/ Collier
4. Fort Caroline National Memorial (8-8-94)	Duval

(b) Waters within National Wildlife Refuges.

Wildlife Refuge	County
1. Archie Carr (8-8-94)	Indian River/Brevard
2. Caloosahatchee	Lee
3. Cedar Keys (as mod. 5-14-86, 4-19-88)	Levy
4. Chassahowitzka (as mod. 5-14-86, 4-19-88)	Citrus/Hernando
5. Chinsegut	Hernando
6. Crocodile Lake (12-1-82; as mod. 5-14-86, 4-19-88, 8-8-94)	Monroe
7. Crystal River (5-14-86; as mod. 10-4-90)	Citrus
8. Egmont Key	Hillsborough
9. Florida Panther (10-4-90; as mod. 8-8-94)	Collier
10. Great White Heron (as mod. 5-14-86, 4-19-88)	Monroe
11. Hobe Sound (as mod. 5-14-86, 4-19-88, 8-8-94)	Martin
12. Island Bay	Charlotte
13. J. N. "Ding" Darling (as mod. 5-14-86, 4-19-88, 8-8-94)	Lee
14. Key West	Monroe
15. Lake Woodruff (as mod. 8-8-94)	Volusia/Lake
16. Lower Suwannee (12-1-82; as mod. 8-8-94)	Dixie/Levy
17. Loxahatchee	Palm Beach
18. Matlacha Pass (as mod. 8-8-94)	Lee
19. Merritt Island	Volusia/Brevard
20. National Key Deer (as mod. 5-14-86, 4-19-88, 10-4-90, 8-8-94)	Monroe
21. Okefenokee (Florida Portion)	Baker
22. Passage Key	Manatee
23. Pelican Island (as mod. 8-8-94)	Indian River
24. Pine Island (as mod. 8-8-94)	Lee
25. Pinellas	Pinellas
26. St. Johns (including Bee Line Unit) (as mod. 5-14-86, 4-19-88)	Brevard
27. St. Marks (as mod. 10-4-90, 8-8-94)	Jefferson/Wakulla/ Taylor
28. St. Vincent (including Pig Island Unit)	Franklin/Gulf

(c) Waters within State Parks, State Wildlife Parks, and State Recreation Areas.

State Park or State Recreation Area	County
1. Amelia Island State Recreation Area (5-14-86)	Nassau
2. Anastasia State Recreation Area (as mod. 4-19-88)	St. Johns
3. Avalon State Recreation Area (4-19-88; as mod. 8-8-94)	St. Lucie
4. Bahia Honda State Park (as mod. 5-14-86)	Monroe
5. Bear Creek State Recreation Area (12-1-82)	Gadsden
6. Big Lagoon State Recreation Area (12-1-82; as mod. 5-14-86, 8-8-94)	Escambia
7. Big Talbot Island State Park (5-14-86; as mod. 4-19-88, 8-8-94)	Duval
8. Bill Baggs Cape Florida State Recreation Area	Dade
9. Blackwater River State Park	Santa Rosa
10. Blue Springs State Park	Volusia

11. Bulow Creek State Park (5-14-86; as mod. 4-19-88)	Flagler/Volusia
12. Caladesi Island State Park	Pinellas
13. Cayo Costa State Park (12-1-82; as mod. 5-14-86, 4-19-88, 10-4-90, 8-8-94)	Lee
14. Collier-Seminole State Park	Collier
15. Dead Lakes State Recreation Area	Gulf
16. De Leon Springs State Recreation Area (5-14-86; as mod. 10-4-90)	Volusia
17. Delnor-Wiggins Pass State Recreation Area (12-1-82)	Collier
18. Don Pedro Island State Recreation Area (5-14-86; as mod. 4-19-88)	Charlotte
19. Dr. Julian G. Bruce St. George Island State Park (12-1-82)	Franklin
20. Edward Ball Wakulla Springs State Park (4-19-88)	Wakulla
21. Falling Waters State Recreation Area	Washington
22. Faver-Dykes State Park	St. Johns
23. Florida Caverns State Park (as mod. 8-8-94)	Jackson
24. Fort Clinch State Park (as mod. 4-19-88, 8-8-94)	Nassau
25. Fort Cooper State Park (12-1-82)	Citrus
26. Fort Pierce Inlet State Recreation Area (12-1-82; as mod. 5-14-86)	St. Lucie
27. Fred Gannon Rocky Bayou State Recreation Area	Okaloosa
28. Gamble Rogers Memorial State Recreation Area at Flagler Beach	Flagler
29. Gasparilla Island State Recreation Area (5-14-86; as mod. 4-19-88, 10-4-90)	Lee
30. Grayton Beach State Recreation Area (as mod. 4-19-88)	Walton
31. Guana River State Park (5-14-86; as mod. 4-19-88)	St. Johns
32. Henderson Beach State Recreation Area (5-14-86)	Okaloosa
33. Highlands Hammock State Park (as mod. 8-8-94)	Highlands/Hardee
34. Hillsborough River State Park	Hillsborough
35. Homosassa Springs State Wildlife Park (10-4-90)	Citrus
36. Honeymoon Island State Recreation Area (12-1-82; as mod. 5-14-86)	Pinellas
37. Hontoon Island State Park	Volusia/Lake
38. Hugh Taylor Birch State Recreation Area	Broward
39. Ichetucknee Springs State Park	Columbia/ Suwannee
40. John D. McArthur Beach State Park (12-1-82)	Palm Beach
41. John Pennekamp Coral Reef State Park (as mod. 5-14-86, 4-19-88)	Monroe
42. John U. Lloyd Beach State Recreation Area	Broward
43. Jonathan Dickinson State Park	Martin
44. Lake Arbuckle State Park (5-14-86)	Polk
45. Lake Griffin State Recreation Area	Lake
46. Lake Kissimmee State Park	Polk
47. Lake Louisa State Park (12-1-82)	Lake
48. Lake Manatee State Recreation Area (12-1-82)	Manatee
49. Lake Rousseau State Recreation Area (12-1-82)	Citrus/Levy/Marion
50. Lake Talquin State Recreation Area (12-1-82; as mod. 5-14-86)	Leon
51. Little Manatee River State Recreation Area (12-1-82)	Hillsborough
52. Little Talbot Island State Park	Duval
53. Long Key State Recreation Area	Monroe
54. Lovers Key State Recreation Area (5-14-86)	Lee
55. Manatee Springs State Park (as mod. 10-4-90)	Levy
56. Mike Roess Gold Head Branch State Park (as mod. 5-14-86, 4-19-88, 8-8-94)	Clay

57. Myakka River State Park	Manatee/Sarasota
58. North Peninsula State Recreation Area (5-14-86; as mod. 4-19-88, 10-4-90)	Volusia
59. Ochlockonee River State Park	Wakulla
60. O'Leno State Park (as mod. 5-14-86)	Alachua/Columbia
61. Oleta River State Recreation Area (12-1-82)	Dade
62. Oscar Scherer State Park (as mod. 8-8-94)	Sarasota
63. Peacock Springs State Recreation Area (4-19-88)	Suwannee
64. Perdido Key State Recreation Area (12-1-82)	Escambia
65. Ponce de Leon Springs State Recreation Area	Holmes/Walton
66. Port Charlotte Beach State Recreation Area (12-1-82)	Charlotte
67. Rose Sink (addition to Ichetucknee Springs State Park) (1-9-05)	Columbia
68. St. Andrews State Recreation Area (as mod. 5-14-86, 4-19-88)	Bay
69. Sebastian Inlet State Recreation Area	Indian River/Brevard
70. Silver River State Park (4-19-88; as mod. 10-4-90, 8-8-94)	Marion
71. Suwannee River State Park (as mod. 10-4-90)	Hamilton/Madison/
72. Three Rivers State Recreation Area	Jackson
73. T. H. Stone Memorial St. Joseph Peninsula State Park	Gulf
74. Tomoka State Park	Volusia
75. Torreya State Park	Liberty
76. Wekiwa Springs State Park (as mod. 4-19-88)	Orange/Seminole

(d) Waters within State Ornamental Gardens, State Botanical Sites, State Historic Sites, and State Geological Sites.

State Ornamental Gardens, State Botanical Site, State Historic Site, or State Geological Site	County
1. Alfred B. Maclay State Gardens	Leon
2. Devils Millhopper State Geological Site (10-4-90)	Alachua
3. Eden State Gardens	Walton
4. Fort Zachary Taylor State Historic Site (10-4-90)	Monroe
5. Indian Key State Historic Site (10-4-90)	Monroe
6. Key Largo Hammock State Botanical Site (5-14-86)	Monroe
7. Koreshan State Historic Site (10-4-90)	Lee
8. Lignumvitae Key State Botanical Site (5-14-86)	Monroe
9. Marjorie Kinnan Rawlings State Historic Site (10-4-90)	Alachua
10. Natural Bridge Battlefield State Historic Site (10-4-90)	Leon
11. Paynes Creek State Historic Site (10-4-90)	Hardee
12. Ravine State Gardens	Putnam
13. San Marcos de Apalachee State Historic Site (10-4-90)	Wakulla
14. Washington Oaks State Gardens (as mod. 5-14-86)	Flagler
15. Windley Key Fossil Reef State Geological Site (10-4-90)	Monroe

(e) Waters within State Preserves, State Underwater Archaeological Preserves, and State Reserves.

State Preserve or State Reserve	County
1. Anclote Key State Preserve (12-1-82)	Pasco/Pinellas
2. Cape St. George State Reserve (12-1-82)	Franklin
3. Cedar Key Scrub State Reserve (12-1-82; as mod. 4-19-88)	Levy
4. Charlotte Harbor State Reserve (as mod. 4-19-88)	Charlotte

5. Crystal River State Reserve (5-14-86; as mod. 4-19-88)	Citrus
6. Fakahatchee Strand State Preserve (12-1-82; as mod. 5-14-86, 4-19-88, 10-4-90, 8-8-94)	Collier
7. Haw Creek State Preserve (12-1-82)	Flagler/Putnam/ Volusia
8. Lower Wekiva River State Reserve (12-1-82)	Lake/Seminole
9. Nassau Valley State Reserve (12-1-82)	Duval/Nassau
10. Paynes Prairie State Preserve (as mod. 10-4-90, 8-8-94)	Alachua
11. Prairie-Lakes State Preserve	Osceola
12. River Rise State Preserve (12-1-82; as mod. 8-8-94)	Alachua/Columbia
13. Rock Springs Run State Reserve (5-14-86; as mod. 4-19-88)	Orange
14. San Felasco Hammock State Preserve (12-1-82; as mod. 5-14-86, 4-19-88)	Alachua
15. San Pedro State Underwater Archaeological Preserve (10-4-90)	Monroe
16. Savannas State Reserve (12-1-82; as mod. 5-14-86, 10-4-90, 8-8-94)	Martin/St. Lucie
17. St. Lucie Inlet State Preserve (12-1-82)	Martin
18. Waccasassa Bay State Preserve (12-1-82; as mod. 4-19-88)	Levy
19. Weedon Island State Preserve (12-1-82)	Pinellas
20. William Beardell Tosohatchee State Reserve (12-1-82)	Orange

(f) Waters within Areas Acquired through Donation, Trade, or Purchased Under the Environmentally Endangered Lands Bond Program, Conservation and Recreation Lands Program, Land Acquisition Trust Fund Program, and Save Our Coast Program.

Program Area	County
1. Andrews Tract (5-14-86; as mod. 4-19-88, 8-8-94)	Levy
2. Apalachicola Bay (8-8-94)	Franklin
3. Barefoot Beach (12-1-82)	Collier
4. Beker Tracts (10-4-90)	
5. Big Bend Coastal Tract (4-19-88; as mod. 10-4-90)	Dixie/Taylor
6. Big Shoals (4-19-88)	Hamilton
7. B.M.K. Ranch (8-8-94)	Lake/Orange
8. Bower Tract (5-14-86; as mod. 4-19-88)	Hillsborough
9. Caravelle Ranch (8-8-94)	Putnam
10. Carlton Half-Moon Ranch (8-8-94)	
11. Catfish Creek (8-8-94)	Polk
12. Chassahowitzka Swamp (5-14-86; as mod. 4-19-88, 8-8-94)	Hernando/Citrus
13. Coupon Bight (10-4-90; as mod. 8-8-94)	Monroe
14. Crystal River (10-4-90)	Citrus
15. Curry Hammock (8-8-94)	Monroe
16. Deering Hammock/Estate (5-14-86; as mod. 4-19-88, 8-8-94)	Dade
17. East Everglades (5-14-86)	Dade
18. Econfina River (8-8-94)	Taylor
19. Emerson Point (8-8-94)	Manatee
20. Escambia Bay Bluffs (5-14-86)	Escambia
21. Estero Bay (8-8-94)	Lee
22. Florida First Magnitude Springs (8-8-94)	Levy
23. Ft. George Island (10-4-90)	Duval
24. Ft. Mose (8-8-94)	St. Johns
25. Ft. San Luis (5-14-86; as mod. 8-8-94)	Leon
26. Gateway (5-14-86)	Pinellas
27. Gills Tract (8-8-94)	Pasco

28. Green Turtle Beach (4-19-88)	St. Lucie
29. Guana River (5-14-86; as mod. 4-19-88)	St. Johns
30. Homosassa Reserve/Walker Tract (8-8-94)	Citrus
31. Indian River North Beach (5-14-86)	Indian River
32. ITT/Hammock (5-14-86)	Dade
33. Josslyn Island (10-4-90)	Lee
34. Levy County Forest/Sandhills (8-8-94)	Levy
35. Letchworth Mounds (8-8-94)	Jefferson
36. Lower Econlockhatchee (8-8-94)	Seminole
37. Martin County Tracts (5-14-86)	Martin
38. Mashes Sands (5-14-86)	Wakulla
39. Miami Rockridge Pinelands (8-8-94)	Dade
40. Milton to Whiting Field (8-8-94)	Santa Rosa
41. North Beach (5-14-86)	Broward
42. North Key Largo Hammock (5-14-86; as mod. 4-19-88, 10-4-90, 8-8-94)	Monroe
43. Placid Lakes (8-8-94)	Highlands
44. Point Washington (8-8-94)	Walton
45. Port Bougainville (10-4-90)	Monroe
46. Rainbow River/Springs (8-8-94)	Marion
47. Rookery Bay (10-4-90; as mod. 8-8-94)	Collier
48. Rotenberger (as mod. 4-19-88, 8-8-94)	Palm Beach
49. Saddle Blanket Lakes Scrub (8-8-94)	Polk
50. Save Our Everglades (10-4-90; as mod. 8-8-94)	Collier
51. Sea Branch (8-8-94)	Martin
52. Seminole Springs/Woods (8-8-94)	Lake
53. Snake Warrior Island (Oaks of Miramar) (8-8-94)	Broward
54. Spring Hammock (4-19-88; as mod. 10-4-90)	Seminole
55. Spruce Creek (4-19-88; as mod. 8-8-94)	Volusia
56. St. Martins River (8-8-94)	Citrus
57. Stark Tract (10-4-90)	Volusia
58. Stoney-Lane (10-4-90)	Citrus
59. Surfside Additions (5-14-86)	St. Lucie
60. Three Lakes/Prairie Lakes (as mod. 8-8-94)	Osceola
61. Topsail Hill (8-8-94)	Walton
62. Upper Black Creek (8-8-94)	Clay
63. Volusia Water Recharge Area	Volusia
64. Wacissa/Aucilla Rivers (10-4-90)	Jefferson/Taylor
65. Wekiva River Buffers (8-8-94)	Seminole
66. Westlake (5-14-86; as mod. 4-19-88)	Broward
67. Wetstone/Berkovitz (8-8-94)	Pasco
68. Withlacoochee Tracts (12-1-82)	Sumter

(g) Waters within National Seashores.

National Seashores	County
1. Canaveral	Brevard/Volusia
2. Gulf Islands	Escambia/Santa Rosa

(h) Waters within State Aquatic Preserves.

Aquatic Preserves	County
1. Alligator Harbor	Franklin
2. Apalachicola Bay	Franklin

3. Banana River (as mod. 8-8-94)	Brevard
4. Big Bend Seagrasses	Wakulla/Taylor/ Jefferson/Dixie/ Levy

except for the following areas:

a. Keaton Beach, Taylor County – Begin at 29º 49' 50" N. Lat., 83º 35' 24" W. Long.; then west to 29º 49' 45", 83º 35' 50"; then south to 29º 49' 04", 83º 35' 48"; then east to 29º 49' 04", 83º 35' 24"; then north to the point of beginning.

b. Steinhatchee, Taylor County – Begin at 29º 40' 35", 83º 22' 10"; then west to 29º 40' 35", 83º 23' 10"; then north to 29º 41', 83º 23' 10"; then west to 29º 41', 83º 24' 10"; then south to the Taylor County-Dixie County boundary; then eastward along the boundary to 29º 39' 55", 83º 22' 10"; then north to the point of beginning.

c. Suwannee, Dixie County – Begin at 29º 20' 30", 83º 08' 10"; then west to 29º 20' 30", 83º 08' 25"; then south to 29º 20'05", 83º 08' 25"; then southwesterly along SR 349 to 29º 19' 51", 83º 08' 35"; then west to 29º 19' 51", 83º 08' 45"; then southwesterly to 29º 19' 40", 83º 09' 12"; then south to 29º 19' 30", 83º 09' 12"; then northeasterly to 29º 19' 39", 83º 08' 53"; then southeasterly to 29º 19' 25", 83º 08' 41"; then southwesterly to 29º 19' 20", 83º 08' 49"; then southeasterly to 29º 19' 14", 83º 08' 41"; then northeasterly along the bank of the Suwannee River to and along the bank of Demory Creek to 29º 19' 45", 83º 08' 10"; then north to the point of beginning.

d. Cedar Key unincorporated airport area, Levy County – Begin at 29º 08' 26", 83º 03' 17"; then south to 29º 07' 34", 83º 03' 17", then northeasterly to 29º 07' 48", 83º 02' 33"; beginning northerly and tracing the corporate limit of Cedar Key to the point of beginning.

e. Cedar Key unincorporated causeway area, Levy County – That portion of Section 20 lying within 1000 feet of the centerline of SR 24 and lying north of a line 500 feet northeast of and parallel to the northern corporate limit of Cedar Key.

f. Cedar Key channel, Levy County – Begin at 29º 08' 58", 83º 01' 17"; then west to 29º 08' 58", 83º 01' 24"; then south to 29º 08' 05", 83º 01' 26"; then northeasterly to 29º 08' 08", 83º 01' 17"; then northerly to the point of beginning.

g. Keaton Beach navigation channel, Taylor County – Begin at 29º 49' 02", 83º 35' 30"; then west to 29º 49' 02", 83º 37' 58"; then south to 29º 48' 45", 83º 37' 58"; then east to 29º 48' 45", 83º 35' 30"; then north to the point of beginning.

h. Keaton Beach local channels, Taylor County – Begin at 29º 49' 01", 83º 35' 38"; then southeast to 29º 48' 55", 83º 35' 15"; then northeast to 29º 48' 59", 83º 35' 13"; then northwest to 29º 49' 06", 83º 35' 36"; then southwest to the point of beginning. (10-29-86)

5. Biscayne Bay (Cape Florida)	Dade/Monroe
6. Biscayne Bay (Card Sound) (12-1-82)	Dade/Monroe
7. Boca Ciega Bay	Pinellas
8. Cape Haze	Charlotte/Lee
9. Cape Romano-Ten Thousand Islands	Collier
10. Cockroach Bay	Hillsborough
11. Coupon Bight	Monroe
12. Estero Bay (as mod. 4-19-88)	Lee
13. Fort Clinch State Park	Nassau
14. Fort Pickens State Park	Santa Rosa/Escambia
15. Gasparilla Sound-Charlotte Harbor (as mod. 10-4-90)	Charlotte/Lee
16. Guana River Marsh (8-8-94)	St. Johns
17. Indian River Malabar to Vero Beach	Brevard/Indian River
18. Indian River Malabar to Vero Beach (additions), except those Indian River portions of Sebastian Creek and Turkey Creek upstream of U.S. Highway 1 (1-26-88)	Brevard/Indian River
19. Indian River Vero Beach to Ft. Pierce (as mod. 10-4-90)	Indian River/St. Lucie
20. Jensen Beach to Jupiter Inlet (as mod. 10-4-90)	Martin/Palm Beach/St. Lucie
21. Lake Jackson	Leon

22. Lemon Bay (4-19-88; as mod. 10-4-90)	Charlotte/Sarasota
23. Lignumvitae Key	Monroe
24. Loxahatchee River-Lake Worth Creek (as mod. 8-8-94)	Martin/Palm Beach
25. Matlacha Pass	Lee
26. Mosquito Lagoon	Volusia/Brevard
27. Nassau River-St. Johns River Marshes	Nassau/Duval
28. North Fork, St. Lucie	St. Lucie/Martin
29. Oklawaha River (10-4-90)	Marion
30. Pellicer Creek	St. Johns/Flagler
31. Pine Island Sound	Lee
32. Pinellas County	Pinellas
33. Rainbow Springs (4-19-88)	Marion
34. Rocky Bayou State Park	Okaloosa
35. Rookery Bay (12-1-82; as mod. 11-24-87, 7-11-91)	Collier
36. St. Andrews State Park	Bay
37. St. Joseph Bay	Gulf
38. St. Martins Marsh (as mod. 8-8-94)	Citrus
39. Terra Ceia (5-22-86)	Manatee
40. Tomoka Marsh	Volusia/Flagler
41. Wekiva River (12-1-82)	Lake/Orange/ Seminole
42. Wekiva River Addition, except that portion of the St. Johns River between Interstate Highway 4 and the Wekiva River confluence (12-28-88)	Lake/Seminole/Volusia
43. Yellow River Marsh	Santa Rosa

(i) Special Waters.

1. Apalachicola River except for the following areas:

a. From a point 50 feet north of the northern boundary of the Jackson County Port Authority Slip, and including the slip itself, downstream to a point about four-tenths of a mile downstream, and specifically identified by navigation mile 103 on the 1982 U.S. Geological Survey Quadrangle Map of Sneads, Florida; and

b. From 850 feet downstream of the U.S. Army Corps of Engineers Blountstown Navigation Gage in Calhoun County, north to a point approximately 2,700 feet upstream of the Gage, and specifically identified by the line passing through 30º25'45" N. Lat. and 85º1'35"W. Long.; and 30º25'38"N. Lat. and 85º1'20" W. Long. (12-11-84).

2. Aucilla River.

3. Blackwater River.

4. Butler Chain of Lakes – consisting of Lake Butler, Lake Down, Wauseon Bay, Lake Louise, Lake Palmer (also known as Lake Isleworth), Lake Chase, Lake Tibet, Lake Sheen, Pocket Lake, Fish Lake, and the waterways which connect these lakes (3-1-84), and Lake Blanche and its connecting waterway (2-18-87).

5. Chassahowitzka River System including: Potter, Salt, Baird, Johnson, Crawford, Ryle, and Stevenson Creeks, and other tributaries to the Chassahowitzka River; but excluding artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (1-5-93).

6. Chipola River.

7. Choctawhatchee River.

8. Clermont Chain of Lakes – consisting of Lake Louisa (also known as Lake Louise), Lake Susan, Lake Crescent, Lake Minnehaha, Lake Winona, Lake Palatlakaha, Lake Hiawatha, Lake Minneola, Lake Wilson, Lake Cook, Cherry Lake, Lake Hunt, Lake Stewart, Lake Lucy, Lake Emma, and the waterways that interconnect Clermont Chain of Lakes (5-28-86).

9. Crooked Lake in Polk County including the area known as Little Crooked Lake and the connecting waterway between these waterbodies; less however, artificial waterbodies, defined as any waterbody created by dredging, or

excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (4-9-87).

10. Crystal River, including Kings Bay (2-1-83).

11. Econlockhatchee River System – consisting of the Econlockhatchee River and the following tributaries:

a. Little Econlockhatchee River upstream to Michaels Dam in Jay Blanchard Park; and

b. Mills Creek upstream to Mills Lake; and

c. Southerly branch of Mills Creek upstream to Fort Christmas Road in Section 2, Township 22 South, Range 32 East; and

d. Silcox Branch (branch of Mills Creek) upstream to Lake Pickett; and

e. Long Branch upstream to the eastern section line of Section 34, Township 22 South, Range 32 East; and

f. Hart Branch upstream to the Old Railroad Grade in Section 18, Township 23 South, Range 32 East; and

g. Cowpen Branch upstream to the southernmost bifurcation of the creek in Section 20, Township 23 South, Range 32 East; and

h. Green Branch upstream to the western section line of Section 29, Township 23 South, Range 32 East; and

i. Turkey Creek upstream to Weewahootee Road in Section 5, Township 24 South, Range 32 East, and to the west section lines of Section 5, Township 24 South, Range 32 East, and Section 32, Township 23 South, Range 32 East; and

j. Little Creek upstream to the eastern section line of Section 22, Township 24 South, Range 32 East; and

k. Fourmile Creek upstream to the southern line of the NE 1{2} of Section 28, Township 24 South, Range 32 East; and

l. Econlockhatchee River Swamp upstream to State Road 532;

m. But excluding all other tributaries and artificial water bodies, defined as any water body created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (6-18-92).

12. Estero Bay Tributaries including: Hendry Creek to State Road 865, Big Bayou, Mullock Creek to U.S. 41 (State Road 45); Mud Creek; Estero River (north and south branches) to I-75 Halfway Creek to State Road 41; Spring Creek to Business Route 41 (State Road 887, old State Road 41), and the unnamed south branch of Spring Creek in Sections 20 and 29; Imperial River to the eastern line of Section 31, Range 26 East, Township 47 South, Oak Creek, and Leitner Creek; except for Tenmile Canal and any artificial water bodies, defined as any water body created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (10-4-90).

13. Florida Keys, including channels as defined in subsection 62-312.020(4), F.A.C., and described as follows: Commence at the northeasterly most point of Palo Alto Key and run due north to a point at the center of the channel of Broad Creek as the point of beginning, thence due east to the eastern boundary of the jurisdictional waters of the State of Florida, thence meander southerly along said eastern boundary to a point due south of the westernmost point of the island of Key West; thence westerly, northerly and easterly along the arc of a curve three leagues distant from the westernmost point of the island of Key West to a point due north of the island of Key West; thence northeasterly three leagues distant from the most northerly land of the Florida Keys to the intersection with the boundary of the Everglades National Park; thence southeasterly, northeasterly and northwesterly along the boundary of the Everglades National Park to the intersection with the Dade County-Monroe County line; thence northeasterly and easterly along the Dade County-Monroe County line to the point of beginning; less however, three areas:

a. Key West Sewage Outfall, being a circle 150 feet in radius from the point of discharge located at approximately 24º 32' 13" N. Latitude and 81º 48' 55" W. Longitude; and

b. Stock Island Power Plant Mixing Zone; being a circle 150 feet in radius from the end of the power plant discharge canal; and

c. Artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (5-8-85).

14. Hillsborough River from Fletcher Avenue (State Road 582A) in Hillsborough County upstream to the Withlacoochee River Overflow in Pasco County, and the following tributaries:

a. Crystal Springs; and

b. Blackwater Creek westward of the Hillsborough – Polk County line; and

c. Cypress Creek, Thirteenmile Run eastward of Livingston Avenue, and Big Cypress Swamp upstream to and including the Cypress Creek Wellfield, as delineated in the maps entitled "Cypress Creek OFW Boundary Maps," incorporated herein by reference; and

d. Trout Creek upstream to Bruce B. Downs Boulevard (State Road 581);

e. But excluding all other tributaries as well as the proposed transportation corridor, which crosses Cypress Creek in Section 21, Township 27 South, Range 19 East, as identified in the Adopted 2010 Long Range Transportation Plan of the Metropolitan Planning Organization, dated May 26, 1993.

f. A copy of the maps referenced in subparagraph c. above may be obtained from the Department of Environmental Protection, Bureau of Surface Water Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 (4-12-95).

15. Homosassa River System including: Halls River, Turtle, Otter, Battle, and Price Creeks, and other tributaries to the Homosassa River; but excluding artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (1-5-93).

16. Kingsley Lake and Black Creek (North Fork) downstream to the northern line of Section 23, Township 5 South, Range 23 East, including all tributaries along this segment of Black Creek (11-8-90).

17. Lake Disston – Specifically including Lake Disston plus contiguous wetlands within the following areas: Township 14 South, Range 29 East, Sections 21, 20, 19, 18, 17, 16, 9, 8 and 7 in Flagler County; and Township 14 South, Range 28 East, Sections 13 and 24 in Volusia County except:

a. Artificial water bodies defined as any water body created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C.; and

b. Any natural water bodies connected by artificial water bodies to the above-described system (4-4-01).

18. Lake Powell, Phillips Inlet, and all tributaries to Lake Powell as bounded by the following described line: Begin at the Northwest corner of Section 26, Township 2 South, Range 18 West; thence East to the Northwest corner of Section 29, Township 2 South, Range 17 West; thence South to the Northwest corner of the SW 1/4 of Section 29, Township 2 South, Range 17 West; thence East to the West line of Section 27, Township 2 South, Range 17 West, thence South to the mean high water line of the Gulf of Mexico; thence meander Northwest along the mean high water line to the West line of Section 35, Township 2 South, Range 18 West; thence North to the point of beginning (8-18-91).

19. Lemon Bay estuarine system – from Boca Grande Causeway northward to approximately two thousand feet northwest of the mouth of Alligator Creek, specifically identified as the East line of Section 31, Township 39 South, Range 19 East, including Placida Harbor, Gasparilla Pass, Kettle Harbor, Bocilla Lagoon, Bocilla Pass, Knight Pass, Stump Pass, Lemon Bay, Buck Creek upstream to County Road 775, Oyster Creek upstream to County Road 775, Ainger (Rock) Creek upstream to County Road 775, and Godfrey (Godfried, Gottfried) Creek upstream to County Road 775; but excluding:

a. Alligator Creek, Forked Creek, Lemon Creek, and all other tributaries; and

b. Artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (4-29-86).

20. Little Manatee River – from its mouth to the western crossing of the river by S.R. 674, including Hayes, Mill and Bolster Bayous, but excluding South Fork, Ruskin Inlet and all other tributaries (10-1-82).

21. Lochloosa Lake (including Little Lochloosa Lake, Lochloosa Lake Right Arm, and Lochloosa Creek upstream to County Road 20A) (12-15-87).

22. Myakka River between State Road 771 (El Jobean Bridge) and the Charlotte-Sarasota County line, except for artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (4-19-88).

23. Ochlockonee River.

24. Oklawaha River between the eastern line of Section 36, Township 15 South, Range 23 East, and Eureka Lock

and Dam, including Turkey Creek, Strouds Creek, Dead River (the water body so named near Gores Landing), Cedar Creek, and Fish Creek, but excluding Marshall Swamp, the Dead River (the water body so named exiting Marshall Swamp), and all other tributaries (12-20-89).

25. Orange Lake up to the U.S. Highway 301 bridge, the River Styx up to Camps Canal, and Cross Creek (4-9-87).

26. Perdido River.

27. Rainbow River, including Indian Creek, but excluding all other tributaries (1-17-85).

28. Santa Fe River System – consisting of the Santa Fe River, Lake Santa Fe, Little Lake Santa Fe, Santa Fe Swamp, Olustee Creek, and the Ichetucknee River below S.R. 27, but excluding all other tributaries (8-16-84).

29. Sarasota Bay estuarine system – generally extending from Venice north to the Hillsborough-Manatee County line and specifically described as follows: Commence at the northern tip of Anna Maria Island and follow a line running to the southern tip of Egmont Key until intersecting the boundary between Hillsborough and Manatee Counties; thence run easterly and northeasterly along the county boundary until intersecting the Intracoastal Waterway; thence proceed southerly until intersecting a line between the southern tip of Mullet Key and the western tip of Snead Island; thence proceed southeasterly along said line to the western tip of Snead Island; thence to De Soto Point; and thence westerly and southerly including all of the Sarasota Bay estuarine system southward to the northernmost U.S. Highway Business Route 41 bridge over the Intracoastal Waterway in Venice, including Anna Maria Sound, Passage Key Inlet, Perico Bayou, Palma Sola Bay, Longboat Pass, Sarasota Bay, New Pass, Big Sarasota Pass, Roberts Bay, Little Sarasota Bay, Dryman Bay, Blackburn Bay, Lyons Bay, Venice Inlet, Dona Bay upstream to the U.S. Highway 41 bridge, and Roberts Bay upstream to the U.S. Highway 41 bridge; less however, the following areas:

a. All tributaries, including Palma Sola Creek, Bowlees Creek, Whitaker Bayou, Hudson Bayou, Phillippi Creek, Catfish Creek, North Creek, South Creek, Shakett Creek, Curry Creek; and

b. A circle 1500 feet in radius from the mouth of Whitaker Bayou; and

c. A circle 1500 feet in radius from the mouth of Phillippi Creek; and

d. Artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (4-29-86).

e. The designation shall not affect the consideration by the Department of an application for Site Specific Alternative Criteria for the discharge of the City of Bradenton's Municipal Sewage Treatment Plant being built under Department of Environmental Protection Construction Permit No. DC41-81224. The application will be processed under the regulations of the Department existing on February 18, 1986.

30. St. Marks River – except that part between Rattlesnake Branch and the confluence of the St. Marks and Wakulla Rivers.

31. Shoal River.

32. Silver River (Marion County) (4-9-87).

33. Spruce Creek upstream to State Road 40A, and the following tributaries:

a. Unnamed tributary upstream to the Southern section line of Section 4, Township 17 South, Range 33 East; and

b. Unnamed tributary upstream to the Northern section line of Section 20, Township 16 South, Range 33 East; and

c. Unnamed tributary upstream to the Northern section line of Section 23, Township 16 South, Range 32 East (right fork), and to the Western line of the NE 1/4 of Section 27, Township 16 South, Range 32 East; and

d. Unnamed tributary upstream to the Western section line Section 35, Township 16 South, Range 32 East; and

e. Strickland Bay; and Turnbull Bay and Turnbull Creek upstream to the Northwestern section line of Section 43, Township 17 South, Range 33 East; and

f. Murray Creek upstream to the Town of Ponce Inlet municipal limits; and

g. Waters east from U.S. Highway 1 following the northerly and southerly municipal limits of the Town of Ponce Inlet to its intersection with the western boundary of the Intracoastal Waterway and including Rose Bay upstream to Nova Road (State Road 5A);

h. But excluding all other tributaries (7-11-91).

34. Suwannee River.

35. Tomoka River upstream to Interstate Highway 4; and the following tributaries:

a. Priest Branch upstream to the Western and Southern section lines of Section 6, Township 15 South, Range 32 East; and

b. Little Tomoka River and its tributaries as bounded by the following described line: Begin at the Southwestern point of confluence between the Tomoka River and the Little Tomoka River; thence meander upstream along the Little Tomoka River to the Western section line of Section 25, Township 14 South, Range 31 East; thence South to the Southwest corner of Section 25, Township 14 South, Range 31 East; thence West to the Southwest corner of Section 28, Township 14 South, Range 31 East; thence North to the Northwest corner of Section 28, Township 14 South, Range 31 East; thence East to the West section line of Section 25, Township 14 South, Range 31 East; thence South to the Northern shore of the Little Tomoka River; thence meander easterly to the confluence with the Tomoka River; thence South to the point of beginning; and

c. Groover Branch upstream to the Northern section line of Section 24, Township 14 South, Range 31 East; and

d. Misner's Branch upstream to the Northern section line of Section 29, Township 14 South, Range 32 East; and

e. Thompson Creek and Strickland Creek upstream to the Northern section line of Section 40, Township 14 South, Range 32 East;

f. But excluding all other tributaries (7-11-91).

36. Wacissa River.

37. Wakulla River.

38. Weekiwachee Riverine and Spring System – consisting of the Weekiwachee Springs and River, Mud Springs and River, Jenkins Creek, Salt Spring and Creek, the Weekiwachee Swamp, and all tributaries and contiguous wetlands within the following sections: Township 23 South, Range 17 East, Sections 2-9; Township 22 South, Range 17 East, Sections 20, 21, and 27-35, together with that portion of Section 19 that is southerly of CR 550 (Cortez Blvd.); Township 22 South, Range 16 East, Sections 25 and 36; including any and all waters, and wetlands contiguous to the tributaries located southerly of the north line of Section 25, Township 22 South, Range 16 East and westerly projection thereof and easterly of the west line of Section 36, Township 22 South, Range 16 East and northerly projection thereof, and easterly of a line through latitude 28º 32' 52" North, longitude 82º 39' 23" West, and through latitude 28º 31' 47" North, longitude 82º 39' 52" West (North American Datum of 1983). This OFW excludes artificial waters defined as any water body created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (12-11-03).

39. Wekiva River System – consisting of the Wekiva River, Rock Springs Run and its tributary Sulphur Spring, the Little Wekiva River south to its confluence with the southernmost run of Sanlando Springs, Black Water Creek and Swamp (up to Lake Dorr), Lake Norris, Seminole Springs and Creek, Seminole Swamp, Sulphur Spring and Run, and Messant Spring and Creek, but excluding all other tributaries (12-28-88).

40. Wiggins Pass Estuarine Area and the Cocohatchee River System – the estuarine and marine waters from the Lee/Collier County line southward through and including Water Turkey Bay to 50 feet north of S.R. 846 (Bluebill Ave.) 1995 right-of-way; the Cocohatchee River downstream from 50 feet west of U.S. 41 1995 right-of-way; and Wiggins Pass; but excluding maintenance dredging as authorized by Section 403.813(1)(f), F.S., in the following areas:

a. Wiggins Pass from the Gulf of Mexico eastward for 200 linear feet (as measured from the southwestern point of Little Hickory Island);

b. The channel (South Channel, Vanderbilt Channel), that connects Wiggins Pass with Vanderbilt Lagoon through Water Turkey Bay; and

c. East Channel (for purposes of this designation described as the East Channel from its confluence with South Channel to Vanderbilt Drive, including all waters surrounding the spoil islands known as Conklin Point and Island Marina) (7-16-96).

41. Withlacoochee Riverine and Lake System, including:

a. The Withlacoochee River downstream of State Road 33 in Lake County to eastern section line of Section 33, Township 16 South, Range 18 East; and

b. The lower Withlacoochee River, from the Gulf of Mexico to the Cross Florida Barge Canal By-Pass Spillway, but not including that portion of the river between Lake Rousseau and the Cross Florida Barge Canal; and

c. The Little Withlacoochee River; and

d. Jumper Creek downstream of State Road 35, including Jumper Creek Swamp; and

e. Gum Springs, Gum Slough (Dead River), and Gum Swamp; and

f. Lake Panasoffkee, Outlet River, Little Jones Creek, Big Jones Creek, and Rutland Creek; and

g. Shady (Brook, Panasoffkee) Creek downstream of State Road 468, including Warm Spring Hammock; and

h. Lake Tsala Apopka; and

i. But excluding all other tributaries and artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (4-10-89); and

(j) Waters within Rivers Designated Under the Florida Scenic and Wild Rivers Program, Federal Wild and Scenic Rivers Act of 1968 as amended, and Myakka River Wild and Scenic Designation and Preservation Act

River Segment	County
1. Loxahatchee National Wild and Scenic River Segment (5-14-86)	Martin/Palm Beach
2. Myakka Florida Wild and Scenic River Segment (5-14-86)	Sarasota
3. Wekiva Florida Scenic and Wild River Segment (12-1-82)	Lake/Seminole

(k) Waters within National Preserves

National Preserve	County
1. Big Cypress National Preserve (as mod. 5-14-86, 4-19-88, 8-8-94)	Collier/Dade/ Monroe
2. Timucuan Ecological and Historic Preserve (8-8-94)	Duval

(l) Waters within National Marine Sanctuaries

Marine Sanctuary	County
1. Key Largo	Monroe
2. Looe Key (12-1-82)	Monroe

(m) Waters within National Estuarine Research Reserves

National Estuarine Research Reserve	County
1. Apalachicola (12-1-82; as mod. 5-14-86, 4-19-88)	Franklin/Gulf
2. Rookery Bay (as mod. 5-14-86, 4-19-88)	Collier

(n) Certain Waters within the Boundaries of the National Forests

National Forest	County
1. Apalachicola	Wakulla/Leon/ Franklin

a. Sopchoppy River (9-1-82)

b. Big Dismal Sink (9-1-82)

2. Ocala	Putnam/Marion/ Lake

a. Alexander Springs (9-1-82)
b. Alexander Springs Creek (9-1-82)
c. Juniper Springs (9-1-82)
d. Juniper Creek (9-1-82)
e. Salt Springs (9-1-82)
f. Salt Springs Run (9-1-82)
g. Lake Dorr (9-1-82)
h. Lake Kerr (9-1-82)
i. Little Lake Kerr (9-1-82)

3. Osceola	Baker/Columbia

a. Deep Creek (9-1-82)
b. Robinson Creek (9-1-82)
c. Middle Prong – St. Marys River (9-1-82)
d. Ocean Pond (9-1-82)
e. Falling Creek (9-1-82)

(10) Outstanding National Resource Waters:

(a) The Commission designates the following waters as Outstanding National Resource Waters:

1. Biscayne National Park, as described in the document entitled "Outstanding National Resource Waters Boundary Description and Map for Biscayne National Park", dated June 15, 1989, herein adopted by reference.

2. Everglades National Park, as described in the document entitled "Outstanding National Resource Waters Boundary Description and Map for Everglades National Park", dated June 15, 1989, herein adopted by reference.

(b) It is the intent of the Commission that water bodies designated as Outstanding National Resource Waters shall be protected and maintained to the extent required by the federal Environmental Protection Agency. Therefore, the designations set forth in paragraph 62-302.700(10)(a), F.A.C., shall not be effective until the Florida Legislature enacts legislation specifically authorizing protection and maintenance of Outstanding National Resource Waters to the extent required by the federal Environmental Protection Agency pursuant to 40 C.F.R. 131.12.

(c) It is also the intent of the Commission to utilize the Surface Water Improvement and Management Act planning process, as outlined in Section 373.451, F.S., and Chapter 62-43, F.A.C., to establish the numerical standards for water quality parameters appropriate for Everglades and Biscayne National Parks' status as outstanding National Resource Waters.

(d) The baseline for defining the existing ambient water quality (paragraph 62-4.242(2)(c), F.A.C.) in Outstanding National Resource Waters is a five year period from March 1, 1976 to March 1, 1981, unless otherwise indicated.

Rulemaking Authority 403.061, 403.087, 403.088, 403.804, 403.805 FS. Law Implemented 403.021(11), 403.061, 403.062, 403.087, 403.088, 403.101, 403.141, 403.182, 403.502, 403.702, 403.708 FS. History–New 3-1-79, Amended 8-10-80, 8-24-82, 9-30-82, 11-30-82, 2-1-83, 6-1-83, 3-1-84, 8-16-84, 12-11-84, 1-17-85, 5-8-85, 4-29-86, 5-14-86, 5-22-86, 5-28-86, 10-29-86, 2-18-87, 4-9-87, 11-24-87, 12-15-87, 1-26-88, 4-19-88, 12-28-88, 4-10-89, 9-13-89, 10-4-89, 12-20-89, 1-28-90, Formerly 17-3.041, Amended 10-4-90, 11-8-90, 7-11-91, 8-18-91, 12-11-91, 6-18-92, 1-5-93, 8-8-94, Formerly 17-302.700, Amended 1-23-95, 4-3-95, 4-12-95, 7-16-96, 4-4-01, 12-11-03, 1-9-06, 12-7-06.

62-302.800 Site Specific Alternative Criteria.

(1) Type I Site Specific Alternative Criteria: A waterbody, 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 and the water pollution sources affecting the criterion to be altered.

2. A description of the historical and existing water quality of the parameter of concern including, spatial, seasonal, and diurnal variations, and other parameters or conditions which may affect it. Conditions in similar water bodies may be used for comparison.

3. A description of the historical and existing biology, including variations, which may be affected by the parameter of concern. Conditions in similar water bodies may be used for comparison.

4. A discussion of any impacts of the proposed alternative criteria on the designated use of the waters and adjoining waters.

(b) The Secretary shall specify, by order, the site specific criteria for the parameters which the Secretary determines to have been demonstrated by the preponderance of competent substantial evidence to be more appropriate.

(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, 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) No later than 60 days after receipt of a petition, the Department shall review the petition and notify the petitioner of whether the petition is sufficiently complete to enable the Department to evaluate the proposed site-specific alternative criterion under subparagraph (c) below. If the petition is not sufficiently complete, the Department shall request the submittal of additional information. The Department shall review any additional information within 60 days of receipt from the applicant and may then request only that information reasonably needed to clarify or answer new questions directly related to the additional information, unless the Department shows good cause for not having requested the information previously.

(b) Petitions deemed complete by the Department shall be processed under subparagraph (c). For any petition not deemed complete, if the petitioner believes that additional information requested by the Department under subparagraph (a) is not necessary to the Department's evaluation, the Department, at the petitioner's request, shall proceed to process the petition under subparagraph (c) below.

(c) The Department shall initiate rulemaking for the Commission to consider approval of the proposed alternative criterion as a rule if the petitioner meets all the requirements of this subparagraph and its subparts. The petitioner must demonstrate that the proposed criterion would fully maintain and protect human health, existing uses, and the level of water quality necessary to protect human health and existing and designated beneficial uses. If the petition fails to meet any of these requirements (including the required demonstration), the Department shall issue an order denying the petition. In deciding whether to initiate rulemaking or deny the petition, the Department shall evaluate the petition and other relevant information according to the following criteria and procedures:

1. The petition shall include all the information required under subparagraphs (1)(a)1.-4. above.

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.

3. The demonstration shall also include a risk assessment that determines the human exposure and health risk associated with the proposed alternative criterion, except on a showing that no such assessment is relevant to the

particular criterion. The risk assessment shall include all factors and follow all procedures required by generally accepted scientific principles for such an assessment, such as analysis of existing water and sediment quality, potential transformation pathways, the chemical form of the compound in question, indigenous species, bioaccumulation and bioconcentration rates, and existing and potential rates of human consumption of fish, shellfish, and water. If the results of the assessments of health risks and aquatic toxicity differ, the more stringent result shall govern.

4. The demonstration shall include information indicating that one or more assumptions used in the risk assessment on which the existing criterion is based are inappropriate at the site in question and that the proposed assumptions are more appropriate or that physical or chemical characteristics of the site alter the toxicity or bioavailability of the compound. Such a variance of assumptions, however, shall not be a ground for a proposed alternative criterion unless the assumptions characterize a factor specific to the site, such as bioaccumulation rates, rather than a generic factor, such as the cancer potency and reference dose of the compound. Man-induced pollution that can be controlled or abated shall not be deemed a ground for a proposed alternative criterion.

5. The petition shall include all information required for the Department to complete its economic impact statement for the proposed criterion.

6. For any alternative criterion more stringent than the existing criterion, the petition shall include an analysis of the attainability of the alternative criterion.

7. No later than 180 days after receipt of a complete petition or after a petitioner requests processing of a petition not found to be complete, the Department shall notify the petitioner of its decision on the petition. The Department shall publish in the Florida Administrative Weekly either a notice of rulemaking for the proposed alternative criterion or a notice of the denial of the petition, as appropriate, within 30 days after notifying the petitioner of the decision. A denial of the petition shall become final within 14 days unless timely challenged under Section 120.57, F.S.

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

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

6. 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. Substances, other than nutrients, in concentrations that result in the dominance of nuisance species (subsection 62-302.530(20), F.A.C.).

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

9. Any criterion or maximum concentration based on or set forth in paragraph 62-4.244(3)(b), F.A.C.

(e) Despite any failure of the Department to meet a deadline set forth in this subsection (2), the grant of an alternative criterion shall not become effective unless approved as a rule by the Commission.

(f) Nothing in this rule shall alter the rights afforded to affected persons by Chapter 120, F.S.

(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).

(4) The Department shall modify permits of existing sources affected in a manner consistent with the Secretary's Order.

(5) Additional relief from criteria established by this Chapter may be provided through exemption pursuant to Rule 62-4.243, F.A.C., or variances as provided for by Rule 62-110.104, F.A.C.

(6) Type II site 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.

See Attach-ment G for SSACs adopted by Secretarial Order (Type I)

Water Body and Class		Site Specific Alternative Criteria		County(s)
(a) Marine portions of the lower St. Johns River and its tributaries between Julington Creek and the mouth of the river. Class III.		Dissolved Oxygen not less than a minimum concentration of 4.0 mg/L, and a Total Fractional Exposure not greater than 1.0 over an annual		Duval/Clay/St. Johns

		evaluation period as defined by the following equation: $\left(\text{Total Fractional Exposure}\right) = \frac{\text{Daysbetween } 4.0 - < 4.2 \text{ mg/L}}{16 \text{ day Max}} + \frac{\text{Daysbetween } 4.2 - < 4.4 \text{ mg/L}}{21 \text{ day Max}} +$ $\frac{\text{Daysbetween } 4.4 - < 4.6 \text{ mg/L}}{30 \text{ day Max}} + \frac{\text{Daysbetween } 4.6 - < 4.8 \text{ mg/L}}{47 \text{ day Max}} + \frac{\text{Daysbetween } 4.8 - < 5.0 \text{ mg/L}}{55 \text{ day Max}}$ where the number of days in an interval is based on the daily average Dissolved Oxygen concentration.		
(b) Discharge wetlands at the Orange County Eastern Water Reclamation Facility. Class III.		pH of not greater than 8.5 standard units.		Orange
(c) Fenholloway River from river mile -0.1 to river mile 3.5. Class III.		The annual average compensation depth for photosynthetic activity for phytoplankton shall not be decreased greater than 44.3 percent from background conditions as determined by an annual average compensation depth of at least 0.66 meters at river mile 0.53 (station F06). This value must be based on a minimum of 12 measurements during times when the average flow at Cooey Island Bridge at river mile 7.15 measures less than 200 cubic feet per second.		Taylor
(d) Fenholloway River coastal waters (Apalachee Bay) as spatially defined by the coordinates (83° 49' 29.95" W, 29° 59' 38.70" N), (83° 45' 3.61" W, 29° 57' 22.10" N), (83° 47' 23.50" W, 29° 54' 5.01" N), and (83° 51' 45.47" W, 29° 56' 25.71" N). Class III.		The average of the growing season (May 1 – October 31) average light (as photosynthetically active radiation between 400 and 700 nm) at 1 m depth at stations F10 (83° 47' 6.60" W, 29° 57' 4.20" N) and F11 (83° 48' 27.00" W, 29° 57' 38.40" N) shall be 36 percent or more of surface values based on a minimum of 12 measurements and will only apply during years in which the growing season average flow at Hampton Springs Bridge (USGS gage 02325000 near Perry) is less than or equal to 60 cubic feet per second (after subtracting flows from permitted point sources).		Taylor

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 403.021(11), 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, 7-3-12, 8-1-13.

ATTACHMENT A

The EPA concluded that the following bold text from the March 2013 Implementation Document constitutes new or revised WQS:

"The Hierarchical Approach" Section

RPS Decision Key

1. **Were environmental conditions associated with the RPS samples representative of the typical conditions of the system? (*e.g.*, flow between 10th and 90th percentile of long term discharge, light penetration characteristic of system, sampling location representative of waterbody segment, etc).**
   1a. Yes, proceed to couplet 2.
   1b. No. Collect additional RPS samples at representative locations and during representative conditions, and return to couplet 1.

2. **Results of two temporally independent RPS samplings show that RPS rank 4-6 is 25% or less?**
   2a. Yes. Evidence that the waterbody *achieves the algal mat component of floral measures* (other components must still be evaluated). If RPS rank 4-6 results are between 20% to 25%, then algal species composition will also be evaluated (see algal species composition decision key).
   2b. No, evidence that the *nutrient standard at 62-302.531(2)(c) is not achieved*.

Algal Species Composition Decision Key

1. **Were environmental conditions associated with the RPS samples and algal taxonomic collections representative of the typical conditions of the system? (*e.g.*, flow between 10th and 90th percentile of long term discharge, light penetration characteristic of system, sampling location representative of waterbody segment, etc.).**
   1a. No. Collect additional RPS samples and algal taxonomic composition samples at representative locations and during representative conditions, and return to couplet 1.
   1b. If Yes, see couplet 2.

2. **Results of two temporally independent RPS samplings show that RPS rank 4-6 is 20% or less?**
   2a. Yes. Evidence that the waterbody *achieves the algal species composition component of floral measures* (other components must still be evaluated).
   2b. If No, see couplet 3.

3. **Do dominant taxa[1] of algal community include taxa known to be nutrient enrichment indicators? (see list above and references in Appendix).**
   3 a. Yes. Evidence that the *nutrient standard at Rule 62-302.531(2)(c) is not achieved*.
   3b. No. This is evidence that the waterbody *achieves the algal species composition component of floral measures* (other components must still be evaluated).

The Department will evaluate those dominant species that individually constitute approximately 10% or more of the community.

Where the RPS 4-6 coverage is greater than 20%, an evaluation of the algal species composition (identifying the five most dominant taxa) is also conducted to provide additional information whether there is no imbalance of flora.

Changes in algal species composition (through an analysis of autecological information) are also evaluated using the latest scientific references for algal species. The Department maintains a list of the scientific references used in this evaluation.

For example, nutrient enriched Florida springs are typically characterized by an abundance of one or more of the following taxa: *Lyngbya wollei, Oscillatoria* sp., *Aphanothece* sp., *Phormidium* sp., *Vaucheria* sp., *Spirogyra* sp., *Cladophora sp., Rhizoclonium* sp., *Dichotomosiphon* sp., *Hydrodiction* sp., *Enteromorpha* sp., and *Chaetomorpha* sp. Other algal indicators of nutrient enrichment from the literature include: *Anabaena* sp., *Euglena* sp., *Chlamydomonas* sp., *Scenedesmus* sp., *Chlorella* sp., *Rhopalodia* spp., *Gomphonema* spp., *Cosmarium* sp., *Nitzschia* spp., *Navicula* spp., *and Stigeoclonium* sp. Dominance of such taxa at a stream where the RPS rank 4-6 >20% would be evidence that the NNC is not achieved.

As another example of this approach, the Everglades TP criterion was largely based on observed shifts in the dominant algal taxa from those characteristic of reference conditions (*e.g., Scytonema* sp., *Schizothrix* sp.) to taxa indicative of nutrient enriched conditions (*e.g., Gomphonema parvulum, Navicula minima, Nitzschia amphibia, Nitzschia palea, Oscillatoria* sp., *Rhopalodia gibba, Scenedesmus* sp., *Anabaena* sp., *Cosmarium* sp., and *Lyngbya wollei).*

LVS Decision Key

1. **Were environmental conditions associated with the LVS samples representative of the typical conditions of the system (*e.g.*, flow between 10th and 90th percentile of long term discharge, light penetration characteristic of system, sampling location representative of waterbody segment, etc.).**
   1a. No. Collect additional LVS samples at representative locations and during representative conditions, and return to couplet 1.
   1b. Yes, proceed to couplet 2.

2. **Given that invasive exotic species can occur even in the absence of nutrient impacts**

and that aquatic plant management practices can also affect LVS results, is there evidence the LVS results can be linked to anthropogenic nutrient inputs?
2a. Yes, proceed to couplet 3.
2b. No. The LVS results are inconclusive and other lines of floral evidence should be used.

3. **Results of two temporally independent LVS samplings show that C of C score is ≥ 2.5 and the frequency of occurrence of FLEPPC exotic taxa is ≤ 25%?**
   3a. Yes. Evidence that the waterbody *achieves the nuisance macrophyte growth component of floral measures* (other components must still be evaluated).
   3b. No. Evidence that the *nutrient standard at 62-302.531(2)(c) is not achieved*.

If there is <2 m^2 of vascular plant coverage present in a 100 m stream reach, there are no floral imbalances attributable to aquatic plants.

Chlorophyll/Algal Bloom Decision Key

1. **Were environmental conditions associated with the chlorophyll samples representative of typical conditions for the system? (*e.g.*, flow between 10th and 90th percentile of long term discharge, light penetration characteristic of system, sampling location representative of waterbody segment, etc.).**
   1a. No. Collect additional chlorophyll samples at representative locations and during representative conditions, and return to couplet 1.
   1b. If Yes, see couplet 2.

2. **Annual geometric mean chlorophyll ≤ 3.2 ug/L?**
   2a. Yes. Evidence that the waterbody *achieves the chlorophyll a/algal bloom component of floral measures* (other components must still be evaluated).
   2b. If No, see couplet 3.

3. **Annual geometric mean chlorophyll ≥20 ug/L more than once in a three year period?**
   3a. Yes. The *narrative nutrient standard at 62-302.531(2)(c) is not achieved*.
   3b. No, annual geometric mean chlorophyll is between 3.2 and 20 ug/L, see couplet 4.

4. **After considering site specific factors that affect chlorophyll concentrations, such as system morphology, water residence time, or consistency with other functionally similar reference sites, can it be documented that the chlorophyll *a* values represent a healthy well balanced phytoplankton community?**
   4a. Yes. Evidence that the waterbody *achieves the chlorophyll a/algal bloom component of floral measures.*
   4b. No. Evidence that the *nutrient standard at 62-302.531(2)(c) is not achieved.*
   4c. Inconclusive because of insufficient contemporaneous data from other functionally similar reference sites. Waterbody will be placed on the Study List if either of the TN or TP thresholds were exceeded.

If all floral measures are achieved, a stream meets the floral component of a healthy, well balanced aquatic system, because it is within the minimally disturbed Benchmark stream condition. However, if any one [of] these floral measures indicates an imbalance, then the stream does not attain the NNC.

"Basic Information Needs for Distinguishing Flowing Waters under 62-302.200(36)" Section

In implementing water quality standards and evaluating whether a particular waterbody meets the provisions of 62-302.200(36)(a) or (b) F.A.C., the Department will provide public notice and request information relevant to the application of water quality standards, including the purpose of the waterbody such as flood protection, stormwater management, irrigation, water supply, navigation, boat access to an adjacent waterbody, or frequent recreational use relevant to 62-302.200(36)(b)1. F.A.C. The Department will consider all relevant information in implementing water quality standards and maintain the administrative records of such decisions, which are available to the public.

"General Information" Section

Until a Class I or III stream segment is identified as meeting the provisions in Rule 62-302.200(36)(a) or (b), F.A.C., the criteria in Rule 62-302.531(2)(c), F.A.C., will apply. Interested parties wishing to distinguish the characteristics of a waterbody with respect to provisions in Rule 62-302.200(36), F.A.C., may provide the Department with the applicable information set forth in the stream definition.

A clear delineation of the geographic boundaries of the segment in question is necessary so that the Department knows exactly where applicable criteria apply.

For waters that meet the definition of 62-302.200(36)(a) or (b) F.A.C., the Department shall follow the Impaired Waters Rule at 62-303 F.A.C.

"Non-Perennial Water Segments" Section

To identify whether a segment is a non-perennial water segment, the biological information identified below will be evaluated by the Department. Other methods that provide this demonstration with similar accuracy will be accepted by the Department if they are a means to predicting the resulting biological conditions discussed below.

[T]he presence of certain facultative or facultative-wetland herbaceous species within the stream bed can be a valid indication that the stream is non-perennial, as these taxa may require moist or saturated conditions to germinate and grow, but would not tolerate the inundation of a perennially flowing stream. Examples of these taxa include, grasses such as *Chasmanthium latifolium* and *Tripsacum dactyloides*, sedges such as *Cyperus esculentus* and *Cyperus retrorsus*, forbs such as *Cuphea cartagenensis*, *Bidens pilosa*, and *Sphagneticola trilobata*, and ferns such as

***Woodwardia virginica* and *Thelypteris* spp. (see complete lists of obligate wetland, facultative wetland and facultative taxa in Chapter 62-340, F.A.C.).** *[The lists of obligate wetland, facultative wetland and facultative taxa in Chapter 62-340 are considered new or revised WQS in their entirety although they are not repeated here]*. **During a habitat assessment or Linear Vegetation Survey conducted during a site visit, the presence of facultative and facultative wetland herbaceous vascular plant taxa in the channel bed would be an indicator that the system is non-perennial.**

The Department has compiled lists of taxa to assist with distinguishing perennial from non-perennial streams/wetland systems (Tables 8 and 9). *[Tables 8 and 9 are considered new or revised WQS in their entirety although they are not repeated here]*.

The presence of long-lived aquatic species (benthic macroinvertebrates that require water for their entire life cycle) is another reliable method to determine if a stream is more characterized by perennial flow or wetland/terrestrial conditions. A list of long-lived taxa is included in DEP SOP SCI 2100. *[The list of long-lived taxa included in DEP SOP SCI 2100 are considered new or revised WQS in their entirety although they are not repeated here]*. **For purposes of establishing segments that are excluded from the stream definition, the Department shall evaluate the taxa that occur in the segment, as well as the vascular plant information described above.**

<u>"Tidally Influenced Segments" Section</u>

Tidally influenced segments are those that fluctuate (daily, weekly, or seasonally) between predominantly marine and predominantly fresh waters during typical climactic and hydrologic conditions.

Typical hydrologic conditions exclude periods of high rainfall or drought that would create flow conditions well outside of average annual flow conditions.

<u>"Water Management Conveyances" Section (only the bolded text below is considered to be new or revised)</u>

The following information will be used in identifying segments meeting the requirements in Rule 62-302.200(36)(b):

Delineation
Only those sections that meet the requirements in Rule 62-302.200(36)(b), F.A.C., are eligible to retain the narrative nutrient criteria. **A map of the applicable areas for review must clearly delineate the upstream and downstream extent of the artificial conveyance.**

Primary Water Management Purpose
Information must show that the current purpose of the man-made or physically altered conveyance is primarily water management such as flood protection, stormwater management, irrigation, or water supply. Relevant documentation can

include photographic evidence, funding authorizations, operational protocols, local agreements, permits, memoranda of understanding, contracts, or other records that indicate how the conveyance is operated and maintained, and must verify that the design or maintenance of the conveyance allows the conveyance to currently function in a manner consistent with the primary water management purpose. The phrase "primarily used for water management purposes" in Rule 62-302.200(36)(b)1., F.A.C., does not include use for navigation or boat access to an adjacent waterbody, or frequent recreational activities. The purpose of the design of the conveyance in conjunction with the purpose of any subsequent alterations or maintenance is evaluated to help differentiate whether its primary function is navigation, boat access to adjacent waterbodies, or frequent recreational activities; versus flood protection, stormwater management, irrigation, or water supply. If available information provided by the public, in response to public notice and request for information, or otherwise known by the Department, demonstrates that the segment is commonly used for navigation, boat access, or other frequent recreational activities such as swimming or boating, then the primary purpose is not water management and the department will apply the nutrient standards in Rule 62-302.531(2) F.A.C. Freshwater finger canals dug during the construction of neighborhoods designed to create homes with boat access to waterbodies are an example of a navigation or access as a primary purpose.

Physical Alteration that Limits Habitat

The definition at Rule 62-302.200(36)(b)2., F.A.C., outlines that the conveyance must have marginal or poor stream habitat or habitat components that limit biological function because the conveyance has cross sections that are predominantly trapezoidal, has armored banks, or is maintained primarily for water conveyance. Photographic evidence of these limitations can demonstrate the habitat condition of the conveyance. Also, **Standard Operating Procedures for conducting stream Habitat Assessments have been adopted by the Department in DEP SOP FT 3000. In order to qualify under Rule 62-302.200(36)(b)2., F.A.C., the overall Habitat Assessment score must score either marginal or poor.**

The Habitat Assessment procedures include long-established criteria that can be used to demonstrate physical alterations in a system, and can provide information verifying that ongoing maintenance activities are associated with perpetuating those physical alterations. The lack of substrate and degree of artificial channelization are part of the definition and components of the Habitat Assessment scoring system, and a Habitat Assessment score must be completed by an individual with demonstrated proficiency (as per DEP SOP 3000) to indicate that the definition related to the segment's modification is met. **If there are different segments within the conveyance that exhibit different features, a Habitat Assessment is needed for each segment.** The Department will conduct a Habitat Assessment if one was not previously conducted.

To ensure adequate water volume delivery, routine maintenance activities associated with conveyances used for water management purposes often involve removal of aquatic substrate (*e.g.*, woody debris, aquatic and wetland vegetation), dredging of sediments,

and/or removal of riparian trees. **If the Substrate Diversity and Availability and Artificial Channelization metrics in the Habitat Assessment score in the Poor category, then one can conclude that the conveyance is predominantly altered and is being maintained in a manner to serve the primary purpose for water management.** The overall habitat assessment may not rank as Poor due to other factors, but a primary factor being considered in the definition is the alteration and the maintenance of the conveyance. **If the Substrate Diversity and Availability or Artificial Channelization scores are currently in the marginal range due to lack of maintenance of the conveyance at the time the assessment was completed, the Department will evaluate whether there is a maintenance program with a schedule to demonstrate that the conveyance is still being maintained for its primary water management purpose. If the overall Habitat Assessment score is other than poor or marginal, the conveyances would not meet the definition.**

ATTACHMENT B

The following provisions of the Process for Reclassifying the Designated Uses of Florida Surface Waters, FDEP, June 2010, DEP-SAS-001/10 document were determined to be new or revised water quality standards.

Page iv:

Attainable use: The present and future most beneficial use that can reasonably be attained in a waterbody. In this document, the attainable use is determined by conducting the reclassification process described in this document, which evaluates whether the use is established and whether protective criteria can practicably be met. "Attainable uses" are, at a minimum, the uses (based on the State's system of water use classifications) that can be achieved (1) when effluent limits under sections 301(b)(l)A) and (B) and section 306 of the Federal Clean Water Act are imposed on point source dischargers and (2) when cost-effective and reasonable best management practices are imposed on nonpoint source dischargers.

Highest attainable use: Used synonymously with the term "attainable use." EPA's "Vision for the Water Quality Standards Programs," states that *"[e]ach waterbody in the United States will have a clear, appropriately comprehensive suite of standards that defines its highest attainable uses and the water quality required to support the uses."*

Natural Surface Waters: Waterbodies that, in their undisturbed state, originally were all or part of the Atlantic Ocean, Gulf of Mexico; a bay, bayou, sound, estuary, or lagoon, including natural channels and natural tributary thereto; a river, stream, or natural tributary thereto; a natural lake; and any natural wetland connected to any of the above waters.

Page 1:
If a use has been changed, DEP must review that use change every three years during the Triennial Review of State water quality standards (Triennial Review) to ensure that the waterbody cannot attain a Class III default use.

Page 3:
For example, drinking water consumption would be considered a use if proper permits (both consumptive use permits and permits for public drinking water systems) have been issued for community consumption and water quality is sufficient for the use, but would not be considered a use in the case of incidental use by individuals consuming the water without treatment.

Page 7:
The petition shall describe the geographic boundaries of the portion of the waterbody to be reclassified, and take into account any permitting requirements for existing permitted entities upstream. For addition of a drinking water use, the boundaries shall include the upstream extent necessary to protect the drinking water supply. For addition of shellfishing use, the boundaries are typically the area of shellfishing use.

For a waterbody to be considered for reclassification as a drinking water source (Class I), the petitioner must show that the water quality meets the Class I criteria in Rule 62-302.530, F.A.C., or can meet them after conventional treatment.

Page 19:
To downgrade a use to Class III-Limited for recreation, the petitioner must show that full body contact recreation is precluded due to sufficiently shallow water or some other condition, and also must provide information showing that human recreational use is limited. The EPA Water Quality Handbook allows for physical factors, such as depth, to be considered for reclassification purposes, as long as additional use related information is also considered. Naturally ephemeral or intermittent flows would generally not provide sufficient depths or persistence of water for primary contact use recreation. If a waterbody is less than 0.5 meter deep on average during normal flows and less than 1 meter deep in pools, it is not likely that full contact recreation (*i.e.*, swimming) is possible. The general unavailability of water, coupled with the physical limitations to exposure of mucus membranes in such waters, is strong evidence that full body contact is neither existing nor attainable.

The petitioner must also propose defensible site specific bacteria criteria to protect incidental contact with the water. However, EPA does not currently support revisions of the fecal coliform criteria, and any SSAC for limited recreational use must be based on *E. coli* or *Enterococci*.

Page 21:
If water quality of an aquatic system has not been sufficient from November 28, 1975 to the present to support as diverse an aquatic community as associated with its designated use, it is likely that the water quality in the waterbody still supports or has supported some other, presumably less diverse community of organisms, and this community should be protected by any new designated use.

Page 29:
Whether a waterbody is publicly or privately owned, responsible entities can be point or nonpoint sources. Attainment of water quality standards is not limited to controls placed on point sources. Water quality standards apply to nonpoint sources despite the fact that there may be no direct implementation mechanisms for some nonpoint sources, except for nonpoint sources addressed in Basin Management Plans associated with TMDLs. Although pollution control approaches used by nonpoint sources may differ substantially from approaches typically employed by point sources, analysis of the ensuing economic impacts still depends on whether the entity providing the pollution is privately or publicly owned.

Page 31:
All sources of impairment to a waterbody must be addressed in the UAA. However, the emphasis on each source of impairment might differ, depending on the amount of impairment contributed by each source. If a single cause of impairment completely overshadows the effects of smaller sources, and modeling indicates that remediating the smaller sources of impairment would not result in a measurable increase in water quality, then the petitioner does not need to consider the costs to remediate for the smaller source for purposes of the economic analysis.

As stated earlier, the time period for determining economic impacts influences the outcome of the analysis. DEP recommends that, in general, a longer time frame of 10-15 years be used in the analysis to allow for technological advances and/or increasing economic growth in the local area to be considered when calculating future attainability, unless the petitioner can justify the use of a shorter time period.

ATTACHMENT C

In addition to the regulations contained in 62-302 and the provisions which were determined to be new or revised water quality standards in Attachment A, the following excerpts are from the SCI Primer, a document incorporated by reference into the State rule that relates to the floral metrics for streams. The bold text represents the portions of the text that EPA reviewed and approved as new or revised water quality standards on November 30, 2012.

Nuisance macrophyte growth (From SCI Primer Section 2.7.4 (page 23))

> **[I]f a stream exhibits a C of C score of >2.5 and a frequency of occurrence of FLEPCC exotics is <25% of the total plant occurrences, this would be considered an indication of no imbalance of flora.**

Presence of algal mats (From SCI Primer Section 2.7.3 (page 22))

> **[I]f a stream exhibits RPS rank 4-6 percent coverage** between the mean percent observed at these minimally disturbed and healthy sites (6-8%) and the associated 90th percentile values **(25**-32**%), this would be considered an indication of no imbalance of flora.**

Changes in algal species composition (From SCI Primer Section 2.7.3 (page 22))

> **[I]f the percentage of sampled points with a thickness rank of 4-6 is 20% or greater, the biologist collects a composite sample of the dominant groups of periphyton in the stream segment for lab identification of the dominant algal taxa. If autecological information is available for the dominant taxa, this is also qualitatively evaluated.**

Algal blooms and Chlorophyll a levels (From SCI Primer Section 2.7.5 (page 24))

> **An unacceptable phytoplankton bloom would consist of a situation where an algal species, whose noxious characteristics or presence in sufficient number, biomass, or areal extent may reasonably be expected to prevent, or unreasonably interfere with, the designated use of the waterbody.**
>
> **DEP evaluates the autecological information for the dominant bloom species, in conjunction with the associated chlorophyll a and the persistence of the bloom, as a line of evidence when assessing imbalances of flora.**
>
> **If a stream exhibits annual geometric mean chlorophyll concentrations** between the mean observed at these minimally disturbed and healthy sites (2.0-2.1µg/L) and the associated 90th percentile values **(3.2**-3.5**µg/L), this would be considered a clear indication of no imbalance of flora.**

ATTACHMENT D

Information Overview of Revisions to Florida's Water Quality Standards in Chapter 2013-71, Laws of Florida (Senate Bill 1808) (an act relating to numeric nutrient criteria). Only the bold underlined text below is the new or revised water quality standard.

The EPA reviewed Chapter 2013-71 and determined that most of the legislation does not constitute new or revised water quality standards. Section 1 simply describes the powers and duties of the Department. This section is informational and/or redundant to FDEP's existing EPA-approved water quality standards. Section 2 reiterates that the Department may implement its adopted nutrient standards for streams, springs, lakes, and estuaries by using the State's document titled "Implementation of Florida's Numeric Nutrient Standards." Section 3 provides that subsection 62-302.531(9) shall stand repealed and deleted once the EPA withdraws all federal NNC for Florida waters. Section 4 provides that the adoption of estuarine rules in 2013 is subject to subsection 62-302.531(9) and that such rules are exempt from ratification. These provisions do not constitute new or revised water quality standards. They do not establish or revise designated uses for any waters or criteria protecting those uses. They also do not establish or revise any antidegradation policies for Florida waters. Complete wording of the rule can be found at http://laws.flrules.org/2013/71.

Section 5 of Chapter 2013-71 states:
The Department of Environmental Protection shall establish by rule or final order the estuary specific numeric interpretations of the narrative nutrient criterion for total nitrogen, total phosphorus, and chlorophyll a for any estuaries not already subject to the department's numeric nutrient criteria, and establish chlorophyll a interpretations of the narrative nutrient criterion for non-estuarine coastal waters by December 1, 2014, subject to the provisions of chapter 120, Florida Statutes. **The water quality standard pursuant to s. 403.061(11), Florida Statutes, for total nitrogen, total phosphorus, and chlorophyll a in estuaries, and chlorophyll a in non-estuarine coastal waters, shall be the current conditions of those unimpaired waters, accounting for climactic and hydrologic cycles, until such time as a numeric interpretation of the narrative water quality criterion for nutrients is established by rule or final order.** The Department of Environmental Protection shall submit a report to the Governor, the President of the Senate, and the Speaker of the House of Representatives by August 1, 2013, conveying the status of establishing numeric interpretations of the narrative nutrient criterion pursuant to this section and including the department's calculation of the numeric values that represent the current conditions of those unimpaired waters as stated in this section for those estuaries and non-estuarine coastal waters without numeric interpretations of the narrative nutrient criterion established by rule or final order as of the date of the report.

Much of Section 5 of Chapter 2013-71 sets out due dates for specific FDEP actions to establish estuarine and coastal numeric interpretations of the state's narrative nutrient criteria and was determined to not constitute new or revised water quality standards. However, a portion of Section 5 does establish a new or revised narrative WQS for certain Florida estuarine and coastal waters. That narrative WQS provides that the WQS for TN, TP, and chl *a* for the specified waters shall be the current conditions of those unimpaired waters, until such time as FDEP establishes a numeric interpretation of the state's narrative nutrient criteria by rule or final order.

The legislation also directs FDEP to send a report to the Governor and the legislature that includes the Department's calculation of the numeric values that represent the current conditions of the waters subject to the legislative narrative WQS.

The EPA has determined that the provisions in Section 5 related to the new narrative are new or revised water quality standards because those provisions express or establish the desired condition for the affected waters and mandate how that desired condition will be established for those waters in the future. This part of Section 5 provides a narrative water quality standard for those estuaries that have not been covered by FDEP's promulgated NNC. The narrative standard directs FDEP to establish numeric nutrient criteria at the current condition of unimpaired waters. Such criteria are inherently protective of the designated uses of these waters, since the unimpaired status of the waters indicates that the uses are being met. For waters in the Report to the Governor that have been listed as impaired, FDEP used a reference condition period approach (using data from unimpaired years) or a modeling approach to determine NNC for unimpaired conditions.

Specific values approved as part of the Governor's Report can be found in EPA's September 26, 2013 decision document (which follows next).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

SEP **26** 2013

Mr. Tom Frick
Director
Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection
Mail Station 3000
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Frick:

The United States Environmental Protection Agency has completed its review of Amendments to Florida's Rule 62-302.532, F.A.C. (Numeric Nutrient Criteria (NNC) for Florida's Panhandle and 2013 Estuaries) and Chapter 2013-71, Laws of Florida (Senate Bill 1808). The NNC for Florida's Panhandle and 2013 Estuaries were considered and approved for adoption by the Florida Environmental Regulation Commission (ERC) at public hearings held on November 13, 2012 and June 20, 2013, respectively. Chapter 2013-71, Laws of Florida (Senate Bill 1808) was duly adopted during the 2013 Florida legislative session and took effect upon approval by the Govemor on May 30, 2013. The EPA received three submittals that contained the revisions to the State's surface water quality standards in letters from Matthew Z. Leopold, General Counsel of Florida Department of Environmental Protection, to A. Stanley Meiburg, Acting Regional Administrator, U.S. EPA Region 4, dated July 31, 2013, (Florida's Panhandle and 2013 Estuaries) and dated August 1, 2013, (Chapter 2013-71, Laws of Florida (Senate Bill 1808)), certifying that the amendments were duly adopted pursuant to state law.

As laid out in the enclosed decision document, titled *Decision Document of the United States Environmental Protection Agency Determination Under § 303(c) of the Clean Water Act Review of Amendments to Florida's Rule 62-302.532, F.A.C. (Numeric Nutrient Criteria for Florida's Panhandle and 2013 Estuaries) and Chapter 2013-71, Laws of Florida (Senate Bill 1808),* the EPA is approving all three submittals that contain the revisions to surface water quality standards. These revisions include estuary-specific numeric interpretations of Florida's narrative nutrient criterion and also establish a narrative water quality criterion for certain estuaries and coastal waters.

In addition to the EPA's review pursuant to Section 303 of the Clean Water Act, Section 7(a)(2) of the Endangered Species Act (ESA) requires federal agencies, in consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services), to ensure that their actions are not likely to jeopardize the continued existence of federally listed species or result in the destruction or adverse modification of designated critical habitat of such species. The Agency's decision to approve the NNC for Florida's Panhandle and 2013 Estuaries and Chapter 2013-71, Laws of Florida (Senate Bill 1808) is subject to the results of consultation under section 7 of the ESA. The Agency will notify FDEP of the results of the section 7 consultation upon completion of the action.

We would like to commend you and your staff for your continued efforts in environmental protection for the State of Florida. Should you have any questions regarding the EPA's action today, please contact me at (404) 562-9345 or have a member of your staff contact Ms. Lauren Petter, Florida Water Quality Standards Coordinator at (404) 562-9272.

Sincerely,

James D. Giattina
Director
Water Protection Division

Enclosure

cc: Mr. Matthew Z. Leopold, FDEP

Decision Document of
United States Environmental Protection Agency Determination
Under § 303(c) of the Clean Water Act
Review of Amendments to Florida's Rule 62-302.532, F.A.C.
(Numeric Nutrient Criteria for Florida's Panhandle and 2013 Estuaries) and
Chapter 2013-71, Laws of Florida (Senate Bill 1808)

INTRODUCTION

On July 31, 2013 and August 1, 2013, Florida Department of Environmental Protection (FDEP or Department) submitted new or revised water quality standards for review by the U.S. Environmental Protection Agency (the EPA or the Agency) pursuant to section 303(c) of the Clean Water Act (CWA or Act). FDEP submitted two packages on July 31, 2013, which included new or revised water quality standards (WQS) set out in Chapter 62-302 of the Florida Administrative Code (F.A.C.), specifically in two sets of amendments to section 62-302.532, F.A.C. These submittals include estuary-specific numeric interpretations of Florida's narrative nutrient criterion. The August 1, 2013, submittal contained new or revised WQS established in Chapter 2013-71, Laws of Florida, which is legislation enacted by the Florida legislature that establishes a narrative water quality criterion for certain estuaries and coastal waters. The August I, 2013, submittal also contains FDEP's August 1, 2013 Report to the Governor and Legislature (Report to the Governor or Report), as required by the terms of Chapter 2013-71. As described more fully below, where the EPA has determined that the amendments to Chapter 62-302, F.A.C., legislation and Report to the Governor are, themselves, new or revised water quality standards,[1] the EPA has reviewed and is approving today such water quality standards pursuant to section 303(c) of the CWA.

Clean Water Act Requirements

Section 303 of the CWA, 33 U.S.C. § 1313, requires states to establish water quality standards and to submit any new or revised standards to the EPA for review and approval or disapproval. The EPA's implementing regulations require states to adopt water quality criteria that protect the designated use. See 40 C.F.R. 131.I l(a). Such criteria must be based on a sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. Id. For waters with multiple use designations, the criteria shall support the most sensitive use. Id. In addition, the EPA's regulations require that in establishing criteria, a state shall consider water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of water quality standards of downstream waters. See 40 C.F.R. 131.IO(b).

A state's submission of water quality criteria must include (1) the methods used and analyses conducted to support water quality standards revisions, (2) water quality criteria sufficient to

[1] EPA has provided FAQs on "What is a New or Revised Water Quality Standard Under CWA 303(c)(3)?" at http://water.epa.gov/scitech/swguidance/standards/cwa303faq.cfm. The link provides detailed information of such analysis.

protect the designated uses and (3) a certification by the State Attorney General or other appropriate legal authority within the state that the water quality standards were duly adopted pursuant to state law. See 40 C.F.R. 131.6.

In addition to the EPA's review pursuant to section 303 of the CWA, section 7(a)(2) of the Endangered Species Act (ESA) requires federal agencies, in consultation with the Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS), to ensure that their actions are not likely to jeopardize the continued existence of federally listed species or result in the destruction or adverse modification of designated critical habitat of such species. With regard to consultation activities for section 7 of the ESA, the EPA Region 4 has concluded that the Agency's action to approve the numeric nutrient criteria (NNC) provisions contained in the July 31, 2013 and August 1, 3013, submittals would either have no effect or would not likely adversely affect the threatened and endangered species or their critical habitat. The EPA's decision to approve the NNC provisions is subject to the results of consultation under section 7 of the ESA with the FWS and NMFS. By approving the standards "subject to the results of consultation," the EPA retains its discretion to take appropriate action if the consultation identifies deficiencies in the standards requiring remedial action by the EPA. The EPA will notify Florida of the results of the section 7 consultation upon completion of the consultation process.

Florida's New and Revised Water Quality Standards Submission

The two sets ofrevisions addressed by amendments to section 62-302.532, F.A.C., were approved for adoption by the Florida Environmental Regulation Commission (ERC) at separate public hearings on November 13, 2012 and June 20, 2013. The new or revised narrative WQS contained in Chapter 2013-71, Laws of Florida, were enacted by the Florida legislature during the 2013 legislative session pursuant to State law, and the numeric calculations contained in the Report to the Governor were developed by FDEP as directed in that State legislation. All of the WQS revisions addressed in this decision were then submitted to the EPA in three letters, two letters dated July 31, 2013, and one letter dated August 1, 2013, from Matthew Z. Leopold, General Counsel for FDEP, to A. Stanley Meiburg, Acting Regional Administrator of the EPA's Region 4 Office. The General Counsel certified that the new or revised WQS revisions set out in section 62-302.532 were duly adopted pursuant to existing Florida law. The General Counsel also certified that Chapter 2013-71, Laws of Florida, was duly enacted by the Florida legislature and that the numeric calculations contained in the Report to the Governor were developed by FDEP as required by Chapter 2013-71.

The July 31, 2013 submittal, titled Numeric Nutrient Criteria for Florida's Panhandle Estuaries, includes the State-adopted rules establishing NNC for total nitrogen (TN), total phosphorus (TP) and chlorophyll *a* (chl a) within six named estuarine areas located in the Panhandle region of Florida.

The July 31, 2013 submittal, titled Numeric Nutrient Criteria for 2013 Florida Estuaries, includes the State-adopted rules establishing NNC for TN, TP and chl *a* within seven named estuarine areas (covering 32 segments) located on the east and west coast of Florida. In addition, NNC based on remotely sensed chl *a* were established for coastal offshore waters.

The August 1, 2013 submittal, titled Chapter 2013-71, Laws of Florida (Senate Bill 1808) (an act relating to numeric nutrient criteria), includes FDEP-derived NNC for TN, TP and chl *a* for 48 various estuarine and coastal (offshore) areas located throughout the State, as required by Chapter 2013-71, Laws Of Florida.

BACKGROUND

On November 30, 2012, the EPA approved amendments to FDEP's water quality standards, set out in Chapters 62-302 and 62-303, F.A.C., that established NNC for lakes, springs and flowing waters, as well as several estuaries (Tampa Bay, Sarasota Bay, Charlotte Harbor and Clearwater Harbor/St. Joseph South) and marine waters of South Florida. The revisions also established procedures for developing site-specific alternative criteria.

On November 30, 2012, in order to comply with the requirements of the Consent Decree in *Florida Wildlife Federation v. Jackson,* No. 4:08cv324 (N.D. Fla.), the EPA proposed NNC for Class I and/or III inland flowing waters where coverage was uncertain under FDEP's nutrient rules, as well as default numeric downstream protection values (DPVs) for unimpaired lakes. The EPA also proposed NNC for those Florida estuarine and coastal waters not covered by FDEP's nutrient rules, as well as numeric DPVs for estuaries and South Florida waters. The EPA previously promulgated NNC for lakes and springs in Florida, as well as numeric DPVs for impaired lakes.

The Agency's overall goal continues to be State adoption of NNC. In order to meet that goal, the EPA and FDEP worked together to develop an Agreement in Principle, dated March 14, 2013, that included FDEP's commitment to submit by August 1, 2013, NNC for the remaining estuarine and coastal waters not covered by the existing FDEP nutrient rules. To cover the remaining estuarine and coastal waters, FDEP submitted the three water quality criteria documents referenced above along with site specific estuarine criteria under hierarchy 1 of the current state NNC rule. These submittals complete the actions FDEP committed to undertake to have state NNC in place for all Florida estuarine and coastal waters.

GENERAL INFORMATION AND APPROACHES

For each set of coastal waters and for each estuarine system, FDEP derived NNC using system-specific approaches based on the classification and segmentation results for each system. The technical approaches FDEP used to derive the coastal and estuarine criteria are summarized below.

Coastal Waters

FDEP classified Florida's coastal waters into three main areas: the Florida Panhandle, West Florida Shelf and Atlantic Coast. FDEP considered physical factors, the optical properties of the coastal areas, water quality characteristics and the jurisdictional limits of the CWA (i.e., three nautical mile seaward limit) to further refine these three areas, resulting in 74 segments. A detailed description of FDEP's data screening process and a map of the coastal waters are

provided in the FDEP's Technical Support Document (TSD) (FDEP, "Technical Support Document: Remotely Sensed Chlorophyll *a* Criteria for Selected Florida Coastal Waters," July 2013).

Routine sampling of water quality parameters is not typically conducted in Florida's open coastal waters and conventional monitoring data is sparse. In establishing NNC for coastal waters, FDEP relied heavily on the substantial amount of chl *a* data available from satellite remote sensing (chlRs *a),* together with available chl *a* field observations for satellite validation. FDEP also considered data related to harmful algal species such as *Karenia brevis* to flag algal bloom events.

FDEP determined that at most times Florida coastal waters appear to be supporting balanced natural populations of aquatic flora and fauna. This determination was based on a review of CWA section 303(d) listings for nutrients, chl *a* and DO; identification of coastal segments adjacent to listed estuarine segments; consultation of available scientific literature; and evaluation of satellite data trends. Areas not representing reference conditions were removed from consideration. After ensuring that the resulting dataset was representative of reference condition times and locations in the coastal waters, FDEP calculated criteria as the 90th percentile' of the annual geometric means of chlRs *a* values over the 1998-2009 period in each coastal segment.

FDEP did not derive numeric TN and TP criteria for Florida's coastal waters due to lack of sufficient field monitoring data for TN and TP. Although it would be a more reliable indicator to include TN and TP in combination with chl *a,* the EPA believes that the chl *a* criteria should protect these Florida waters until FDEP can develop numeric TN and TP criteria because chl *a* can be a sensitive biological parameter that would serve as a signal to the State that nutrient pollution is creating an imbalance in the natural populations of aquatic flora and fauna in Florida's offshore coastal waters. As more data become available relevant to these coastal waters, the EPA will encourage the State to derive numeric criteria for those additional parameters.

EPA Analysis

FDEP's approach for development of coastal criteria was essentially identical to the reference condition approach which the EPA developed and used for its proposed coastal criteria (FR Vol. 77, No. 243, p. 74942 and 74947). FDEP's conclusion that designated uses are generally being supported in Florida's open coastal waters (with specific exclusions of data where uses were not), is consistent with the EPA's conclusion in development of its proposed coastal criteria.2 FDEP used data from waters that support balanced natural populations of aquatic flora and fauna. Substantial data available from satellite remote sensing were used in conjunction with available field monitoring data in a scientifically defensible and reliable way to derive chl *a* criteria protective of coastal waters. Using this approach, FDEP was able to identify numeric chl *a* criteria concentrations that protect the designated uses and avoid any adverse change in natural populations of aquatic flora or fauna in Florida's coastal waters.

[2] EPA, 2012, Technical Support Document for US EPA's Proposed Rule for Numeric Nutrient Criteria for Florida's estuaries, Coastal Waters, and South Florida Inland Flowing Waters; Volume 2: Coastal Waters, pp. 17-18.

Estuaries

The FDEP submittals addressed in this document include NNC for estuaries covered in the Panhandle submittal, the 2013 estuaries submittal and the Report to the Governor. The estuarine criteria were established through a combination of (I) new criteria in section 62-302.532, (2) Total Maximum Daily Load (TMDLs) submitted as hierarchy 1 site specific interpretations of Florida's narrative nutrient criteria pursuant to 62-302.531(2)(a) l[3] and (3) FDEP's calculation of the numeric values that represent the current conditions of certain estuaries, as directed by the legislature in Chapter 2013-71.

FDEP used the Impaired Waters Rule (IWR) Run 47 database to identify available data from a range of sampling sites in Florida's estuaries. The State also analyzed additional data submitted by local experts and organizations which could be confirmed to meet FDEP's quality assurance/quality control rules. FDEP sub-divided each estuarine system into segments based on physical factors and long-term average salinity gradients. FDEP then analyzed available data to determine whether current conditions in each estuarine segment were protecting the most sensitive designated uses. As part of that analysis, FDEP determined whether estuarine segments were currently or had been previously identified on the state's 303(d) impaired waters list as impaired for nutrients or dissolved oxygen (DO). FDEP developed TMDLs for those waters currently listed as impaired for nutrients or QO and those TMDLs were submitted as site-specific interpretations of the narrative nutrient criterion for those waters.[4] If FDEP determined the reference condition approach was appropriate for a waterbody that had been identified as impaired in the past, FDEP did not use data from the years when, or specific areas where, the waterbody was considered impaired.

EPA Analysis

For estuarine criteria development FDEP assembled reliable, vetted, representative data. Using data from the State's IWR database ensured that such data were generated according to the State's requirements for collection and analysis. In a few cases where FDEP utilized data that were not in the IWR database, that data also had to meet similar requirements. Additional quality control checks were applied and data from known impaired areas or periods of time were systematically removed. To provide further assurance that the data were representative of estuarine use support, further screening thresholds were selected and applied to all data used. For this data screening process, FDEP used current applicable state criteria and the same nutrient sensitive indicator values which the EPA identified as protective endpoints in development of its proposed estuarine criteria (FR Vol. 77, No. 243, p. 74942). The EPA concluded that these were reasonable practices for selecting and screening the data used in criteria development.

[3] Hierarchy I site specific interpretations have been addressed in separate decision documents for Lower St. Johns River Marine waters, Caloosahatchee Estllary, St. Lucie Estuary, Indian River/Banana River Lagoons and Suwannee /Santa Fe Rivers and associated springs.

[4] For one impaired water, the St. Marys Estuary, work on the TMDL was not completed at the time of this submittal. Therefore, FDEP relied on the reference approach for that water.

Biological Endpoints

FDEP considered biological endpoints that would indicate that an estuarine segment was meeting its designated use during a particular period of time and therefore, data from that period of time were considered to represent reference conditions. As discussed below, the endpoints included seagrass (colonization depth and water clarity, as well as coverage and extent), DO concentration and/or percent saturation, and chl *a* concentration. These three endpoints are sensitive indicators of nutrient pollution, indicative of the health of the system as a whole and representative of conditions that protect aquatic life and recreation uses. FDEP considered this biological endpoint evaluation to validate that the reference condition approach was appropriate for a given water segment.

Healthy populations of seagrasses serve as widely recognized indicators of biological integrity in estuarine systems and in tum, of balanced natural populations of aquatic flora and fauna. Whether waters are maintaining seagrasses can be measured by water clarity, as it relates to light levels sufficient to maintain historic depth of seagrass colonization. FDEP determined that when an average value of 20 percent of the sunlight that strikes the water's surface (incident light) reaches the bottom of the water column (to the depth of seagrass colonization), sufficient light is available to maintain seagrasses. FDEP determined that ensuring 20 percent of incident light at the surface would also support the reference depth of colonization. Therefore, where both coverage information for historic or recent seagrass presence was available and a depth of seagrass target could be determined[5], water clarity (Ko) targets based on Secchi depth measurements were required to achieve 20 percent of surface light at the mean depth of the deep edge of seagrass beds. More detail on FDEP's application of the seagrass indicator can be found in each estuary-specific TSD[6].

Maintenance of aquatic life as measured by the sufficiency of DO to maintain aquatic life is a well-known indicator of the health of estuarine and coastal biological communities. To determine whether current conditions in a given estuary met the DO endpoint, FDEP looked at whether DO levels were attaining the state DO water quality criterion. FDEP recently revised its DO criteria and those revisions were approved by the EPA on September 9, 2013. FDEP assessed attainment of this biological endpoint against the new DO criteria. More detail on both the existing Florida DO criteria and FDEP's analysis can be found in FDEP's TSD, "Derivation of Dissolved Oxygen Criteria to Protect Aquatic Life in Florida's Fresh and Marine Waters," March 2013.

Maintenance of balanced algal populations as measured by chl *a* levels is an important sensitive biological endpoint because of its responsiveness to nutrient pollution, integral role in aquatic food webs, well-established use as an integrative measure of aquatic ecosystem condition and correlation with changes in floral composition and subsequent faunal response. Chl *a* was used

[5] Seagrass has not been known to occur on the Atlantic coast of Florida north of Mosquito Lagoon, (i.e., the Halifax, GTM, St. Johns, Nassau, and St. Marys estuaries), as well as in a few scattered segments of Gulf Coast estuaries, and therefore, no depth of seagrass targets were developed for these areas, (EPA, 2012. Technical Support Document for US EPA's Proposed Rule for Numeric Nutrient Criteria for Florida's estuaries, Coastal Waters, and South Florida Inland Flowing Waters, and Hagy (in review)). Consequently, FDEP was unable to apply seagrass health as a screen in those specific areas.

[6] For example see Numeric Nutrient Criteria for the Loxahatchie River Estuary, beginning on page 21. July 2013

as the endpoint measure of balanced algal populations because elevated chl *a* concentrations resulting from nitrogen and phosphorus pollution alter the trophic state of estuarine and coastal waters. Elevated chl *a* concentrations not only increase algal turbidity affecting seagrass health and cause excess biomass which depresses or depletes DO but also can indicate an increase in the frequency and magnitude of algal blooms. FDEP chose a chl *a* concentration of 20 µg/L, not to be exceeded more than 10 percent of the time, as the water quality target to define a threshold of nuisance algal blooms. Thus, chl *a* concentrations that exceed this water quality threshold in a given estuarine water are indicative of an imbalance in natural populations of aquatic flora and fauna. More detail on FDEP's application of the chl *a* indicator can be found in each estuary-specific TSD[7].

EPA Analysis

To screen data for use support conditions associated with healthy seagrass, FDEP used a percent light at seagrass colonization depth equivalent to the use support endpoint used by the EPA in its proposal of estuarine criteria (FR Vol. 77, No. 243, p. 74943). For maintenance of healthy seagrass growth and reproduction, the EPA considers achievement of 20% of the surface light at the bottom of the water column to be protective of seagrass communities. This endpoint is supported by scientific studies and ensures protection of designated uses.[8]

To screen data for use support conditions associated with the sufficiency of DO to maintain aquatic life, FDEP used its revised DO criteria which were approved by the EPA on September 9, 2013. DO levels are well-known indicators of estuarine biological community health. Aquatic animals including fish, benthic macroinvertebrates and zooplankton require adequate levels of DO to survive and grow. For the same reasons that were the basis of the EPA's approval, the EPA concludes that use of this endpoint is based upon sound science and results in values that are protective of the designated uses.

To screen data for use support conditions associated with balanced algal populations, FDEP used a chl *a* level and frequency of occurrence equivalent to the use support endpoint used by the EPA in its proposal of estuary criteria (FR Vol. 77, No. 243, p. 74943). The EPA considers a chl *a* concentration of 20 µg/L, not to be exceeded more than 10 percent of the time, to be indicative of balanced algal populations. (FR Vol. 77, No. 243, p. 74945). The use of chl *a* as an indicator of balanced algal populations has a long history of use in aquatic ecology as a measure of phytoplankton biomass and production. FDEP's use of this endpoint is scientifically defensible and will ensure protection of designated uses.

Analytical Methodologies

FDEP used three analytical approaches to derive TN, TP and chl *a* NNC for the estuaries included in these submittals. In most of the estuaries, FDEP used distributional statistics to

[7] For example see Numeric Nutrient Criteria for the Loxahatchie River Estuary, beginning on page 26. July 2013
[8] Dixon, L.K. and Leverone, J.R. 1995. Light Requirements of *Thalassia testudinium* in Tampa Bay, FL; and Janicki, A.J., and D.L. Wade. 1996. Estimating critical external nitrogen loads for the Tampa Bay estuary: An empirically based approach to setting management targets. Technical Publication 06-96. Prepared for Tampa Bay National Estuary Program, St. Petersburg, FL, by Coastal Environmental, Inc., St. Petersburg, FL.

derive TN, TP, and chl *a* concentrations that reflect reference conditions that support balanced natural populations of aquatic flora and fauna. In the Suwannee Sound and Withlacoochee River estuaries, FDEP used an empirical analysis that considered the effects of salinity on nutrients. In portions of the Big Bend estuarine area and other waters included in the Report to the Governor, FDEP used mechanistic models to determine protective concentrations of TN, TP and chl *a* linked to biological endpoints.

a) Distributional Statistics Approach

For most of the estuaries, FDEP used distributional statistics in a modification of the EPA's reference condition approach to establish criteria. Distributional statistics are used to set the magnitude of criteria at a level that would protect a majority of the sensitive aquatic organisms inhabiting the system. FDEP called this methodology a reference condition site/period approach. Where insufficient historical data were available, FDEP further distinguished between a "reference period" and "reference site" approach.

Where a reference period approach was used, criteria were derived based on data from a time period when the waterbody or segment was shown to be biologically healthy and protecting the most sensitive designated uses. A reference site approach was used where there were insufficient data to use the reference period approach and FDEP demonstrated that an adjacent or upstream site with protective criteria was functionally similar to a given estuarine segment. Criteria from such sites, therefore, would similarly protect uses in the downstream or adjacent estuarine segment. Assuming the current conditions protect designated uses of the waterbody and absent sufficient data to demonstrate a stressor-response relationship, distributional statistics are used to set criteria at a level that will maintain the current data distribution, accounting for natural temporal variability.

For each estuarine segment, a dataset of spatially averaged annual geometric means was assembled from data screened as above. Where at least 8 years of data were available, FDEP selected the upper 80 percent prediction limit of the spatially averaged annual geometric means as a criteria magnitude annual geometric mean, with a frequency and duration of not more than one annual geometric mean exceeding the limit in a 3-year period. For those segments with less than 8 years of data (a minimum considered sufficient to support the calculation of an annual geometric mean), but having at least 30 total samples, an alternative statistical method was used in which the upper 90 percent prediction limit of the individual samples was chosen as a criterion to be applied as a single sample value not to be exceeded in more than 10 percent of the samples. Both the primary method of annual geometric mean derivation and the alternative method deriving a single sample maximum are considered statistically valid and commonly used in combination as acceptable practices to address situations where the amount of data is limited.

EPA Analysis

FDEP's use of distributional statistics (referred to as reference period or reference site approach by FDEP) can be considered a modification of the reference approach described in the EPA's

peer reviewed nutrient guidance.[9] For each estuarine segment considered, FDEP established by the process described above a filtered dataset from existing historical data that was representative of conditions of use support over time and upon each dataset FDEP conducted statistically valid analyses to derive criteria that are based on sound science and are protective of the designated uses. For an example of how FDEP applied this approach, see "Numeric Nutrient Criteria for Loxahatchee River Estuary" (FDEP, July 2013).

b) Empirical Analysis

For the Suwannee Sound and Withlacoochee River Estuaries, FDEP took into account confounding factors introduced by highly variable, natural flushing rates in these systems, which result in significant freshwater inflows at times and wide variations in residence time. FDEP developed an analytical approach to account for the natural spatial and temporal variability in nutrient levels related to the fluctuating influence of freshwater. FDEP used salinity as a surrogate for the river flow and freshwater inputs, since salinity is inversely related to freshwater inflows. Where a strong relationship was observed between salinity and nutrient concentrations, FDEP used that relationship as the basis for the alternate criteria rather than a single value criterion that might prove to be overprotective or under protective for these systems.

FDEP screened data using the same methodology described for the distributional statistics approach discussed above. Annual average salinity and annual geometric mean nutrient concentrations were determined for each station for years in which all of the biological endpoints described above were achieved. FDEP then calculated a linear regression to determine the expected relationship between salinity and TN and TP concentrations in each segment.

For segments where there was a strong linear relationship between salinity and nutrient concentrations, FDEP utilized summary statistics of $r^2 \geq 0.5$ and $p < 0.05$ to determine the strength of the relationship to establish TN and TP criteria as a salinity dependent equation, calculated for each monitoring station within the segment. For segments subject to the salinity dependent NNC equation, no more than 10 percent of the monitoring stations within the segment shall exceed the limit (expressed as annual geometric means) on an annual basis, more than once in a three-year period.

EPA Analysis

FDEP used the empirical analysis approach in estuaries where highly variable natural flushing rates made the above described distributional statistics approach inappropriate. For estuary segments with a strong relationship between salinity and nutrient concentrations FDEP's approach takes into account the observed variation and provides criteria that more accurately reflect the physical-chemical interactions of these segments.[10] This approach is scientifically defensible and results in criteria that are protective of the designated uses of these segments under the observed variable conditions.

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[9] USEPA. 2001. *Nutrient Criteria Technical Guidance Manual: Estuarine and Coastal Marine Waters.* EPA-822-B-01-003. U.S. Environmental Protection Agency, Office of Water, Washington, DC; chapter 6&7.

[10] Technical Support Document: Derivation of Numeric Nutrient Criteria for Suwannee Sound, Waccasassa, and Withlacoochee Estuaries (FDEP, July 2013).

c) Mechanistic Modeling

Where FDEP used a modeling approach to derive NNC, the Load Simulation Program in C++ (LSPC) watershed model with the integrated Hydrologic Simulation Program Fortran (HSPF) algorithm was used to estimate the quantity of water and pollutants associated with runoff from rain events associated with the contributing watershed of the estuary. Estuarine hydrodynamics were simulated using the Environmental Fluids Dynamic Code (EFDC). In select systems, the hydrodynamic model was linked to the Water Quality Analysis Simulation Program (WASP7) to simulate eutrophication effects. This information was then used in the hydrodynamic model to simulate rates of eutrophication.

The hydrodynamic model was not linked with the water quality model in areas like the Big Bend because the spatial domain of the model was too large. Rather, watershed loadings were based on the most recent land cover information and simulated for the 1997-2009 period. Hydrodynamic and water quality modeling of estuarine conditions simulated the 2002-2009 period. Chl *a*, TN and TP concentrations in surface model cells were aggregated into daily, volume weighted averages, which were then used to calculate annual geometric means for assessment against the biological screening endpoints. This response-based modeling approach identified the point at which nutrient pollution adversely impacts the endpoints. FDEP then established NNC at levels that protect against these adverse effects and support a healthy biological community. This method was adapted for waterbodies where low landuse intensity indicated that DO was naturally low and therefore not an applicable biological endpoint.

EPA Analysis

FDEP used a modeling approach in estuaries where either the available data and/or the existing conditions were not suitable for distributional or empirical analysis. The models used by FDEP were applications of the same models used by the EPA in its proposal of estuarine criteria (FR Vol. 77, No. 243, p. 74949). These models are peer reviewed and widely used, having been successfully applied for water quality management purposes to many watersheds throughout the southeastern United States and Florida. Based on the extensive use of these models for similar applications and their acceptance in the scientific community, the EPA has determined that use of these models by FDEP will result in criteria that are scientifically defensible and protective of designated uses.

Consideration of Recreational Uses

For waters with multiple use designations, water quality criteria must support the most sensitive use. 40 C.F.R. 131.ll(a). FDEP concluded that the "Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife" component of its Class III designated use is more sensitive to nutrients than human recreational use (or any other applicable designated use) and therefore, criteria derived at levels that protect the more sensitive aquatic life use in marine waters of the State will inherently provide protection for the less sensitive recreational use. The seagrass and DO biological screening thresholds used by FDEP primarily identify conditions that protect healthy biological communities. The chl *a* screening threshold protects

Florida's aquatic life use and also protects recreational uses by protecting against algal blooms of excessive degree and duration.

EPA'S DECISION

Each of FDEP's water quality standards revisions is addressed in detail below along with the EPA's analysis and conclusions.

Numeric Nutrient Criteria for Florida Panhandle Estuaries

Overview of Revisions to Chapter 62-302[11] - Numeric Nutrient Criteria for Florida Panhandle Estuaries

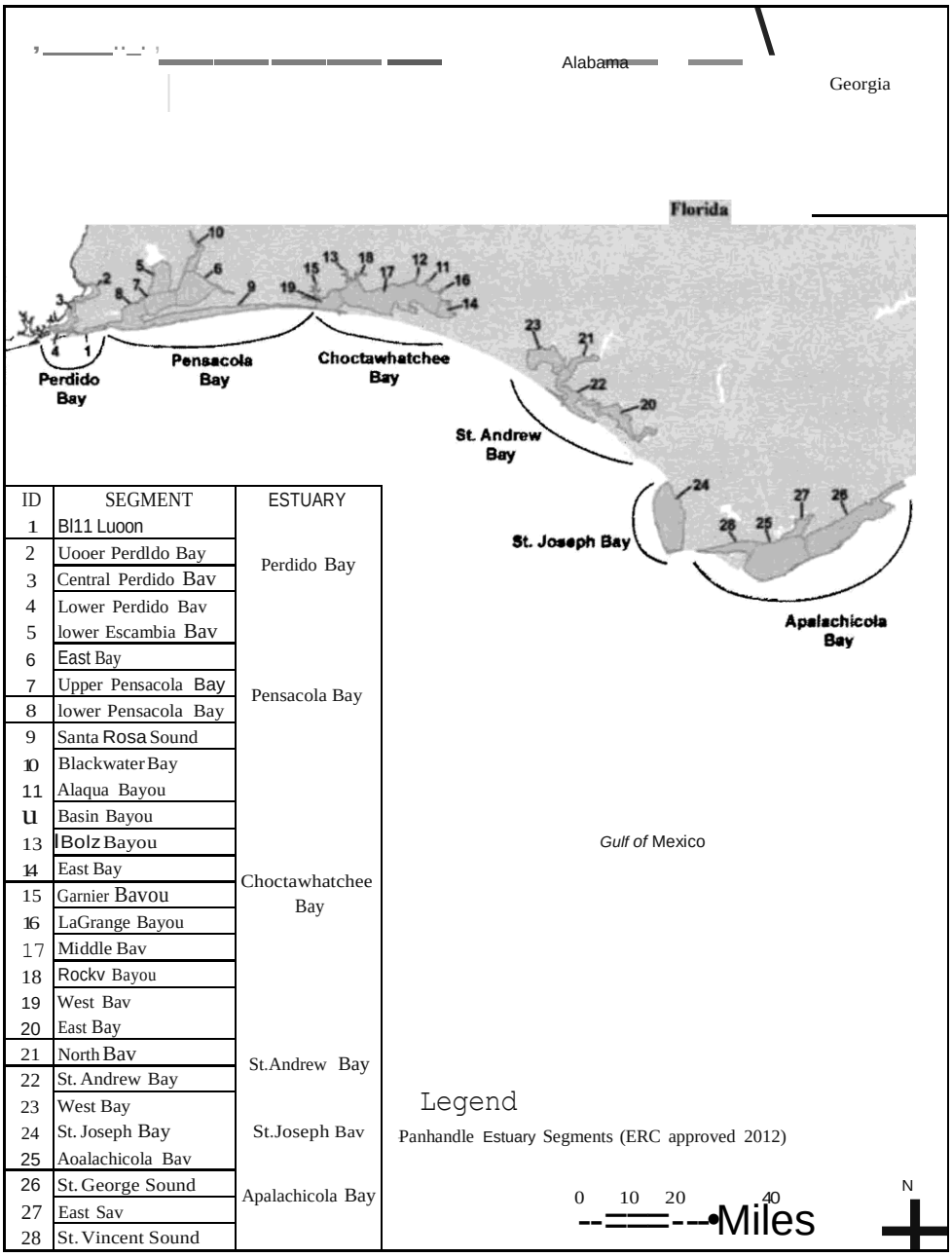
Section 62-302.532 was initially added to the Florida Administrative Code as part of the State's nutrient rule, which was adopted by the ERC on December 8, 2011 and approved by the EPA on November 30, 2012. At that time section 62-302.532 included NNC for nine named estuarine and marine water areas of South and Southwest Florida that were addressed in three subsections: (1) a table of estuary-specific values for TN, TP and chl *a* to serve as numeric interpretations of paragraph 62-302.530(47)(b) of the State's existing narrative criteria for nutrients, which the EPA considers to be NNC, (2) reference to maps showing the specific spatial application of those criteria values and (3) a general schedule for future planned adoptions.

The revisions in the Panhandle submittal are primarily additions to section 62-302.532 in the form of NNC for an additional six estuarine areas in the Panhandle region. More detailed summaries of the revisions are set out below in the section by section analysis. For the additional six estuarine areas covered by these revisions, the State subdivided each system into segments and then used a common overall approach to develop criteria for TN, TP and chi *a*. The resulting criteria for each estuarine system were then added to the existing table in subsection 62-302.532(l).

Subsection 62-302.532(1)

The introductory language in subsection 62-302.532(1), which was unchanged in this submittal, is followed by a table which sets out the criteria values for specific estuarine areas. The Panhandle estuaries submittal adds paragraphs (k) through (p) to the table, setting out criteria values for six additional estuarine areas divided into segments. The text of these new paragraphs has been set out in the sections discussing each estuarine area or segment below. See Figure 1 for a map of the estuaries covered in this submittal.

[11] Unless otherwise stated, all rule and subsection citations are to provisions in the Florida Administrative Code.



ID	SEGMENT	ESTUARY
1	Bl11 Luoon	
2	Uooer Perdldo Bay	Perdido Bay
3	Central Perdido Bav	
4	Lower Perdido Bav	
5	lower Escambia Bav	
6	East Bay	
7	Upper Pensacola Bay	Pensacola Bay
8	lower Pensacola Bay	
9	Santa Rosa Sound	
10	Blackwater Bay	
11	Alaqua Bayou	
U	Basin Bayou	
13	Bolz Bayou	
14	East Bay	Choctawhatchee Bay
15	Garnier Bavou	
16	LaGrange Bayou	
17	Middle Bav	
18	Rockv Bayou	
19	West Bav	
20	East Bay	
21	North Bav	St.Andrew Bay
22	St. Andrew Bay	
23	West Bay	
24	St. Joseph Bay	St.Joseph Bav
25	Aoalachicola Bav	
26	St. George Sound	Apalachicola Bay
27	East Sav	
28	St. Vincent Sound	

Figure 1 - Florida Panhandle Estuaries

Paragraph (k) Perdido Bay (further subdivided into subparagraphs (k)l. through 4.)

The Perdido Bay estuary is located at the western extreme of the Florida Panhandle region and is contiguous with the Alabama border. Perdido Bay and its major freshwater tributary, the Perdido River, are interstate waters that form the boundary between Alabama and Florida. Further description of the Perdido Bay estuary, as well as a detailed description of the methodology used

to calculate criteria for this area, can be found in FDEP's document "Numeric Nutrient Criteria for Perdido Bay" (FDEP, July 2013).

To derive criteria for the estuary, the State followed the general methodology outlined in the summary of approaches above. Segmentation of the estuary resulted in four segments based on salinity and physical characteristics of the estuary (i.e., Big Lagoon, Upper Perdido Bay, Central Perdido Bay, and Lower Perdido Bay) that were considered separately for criteria development. Review of the available water quality data ensured that data from any areas and/or any time periods of use impairment were excluded from the development of the NNC. For a summary of data excluded by this process, see Table D-1 in "Numeric Nutrient Criteria for Perdido Bay" (FDEP, July 2013). The data were further screened using the biological endpoints, as described in the General Information and Approaches section above. Details of the screening process for this estuary are included in Tables D-2 through D-4 in "Numeric Nutrient Criteria for Perdido Bay" (FDEP, July 2013). As a result of this process, a reference condition dataset for each segment was identified and used to derive the criteria presented in paragraph 62-302.532(1)(k).

FDEP used the distributional statistics approach with annual geometric means to calculate criteria for TP and TN for Big Lagoon. Due to a limited amount of data available, the single sample approach was used to calculate criteria for chi *a* in Big Lagoon and for TN, TP, and chl *a* for Upper Perdido Bay, Central Perdido Bay, and Lower Perdido Bay. In order to demonstrate attainment of criteria calculated as annual geometric means, the criteria values must not be exceeded more than once in any three-year period. For those criteria calculated by the single sample value approach, the values must not be exceeded in more than 10 percent of the samples.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
(k) Perdido Bay	For bay segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year 12eriod. For all other bay segments, the criteria shall not be exceeded in more than 10 12ercent of the measurements. Nutrient and nutrient response values do not aQply to tidally influenced areas that fluctuate between Qredominantly marine and oredominantlv fresh waters durin!.!: voical climatic and hvdrolo!.!:ic conditions.		
1. Bi!! La!.!:oon	0.036 m1dL as AGM	0.61 m1dL as AGM	6.4 U!r/L
2. Unner Perdido Bav	0.102 m!.!:IL	1.27 m!.!:IL	11.5 11.!!IL
3. Central Perdido Bav	0.103 m!!/L	0.97 m!!/L	7.5 U!!/L
4. Lower Perdido Bav	0.110 m!.!:IL	0.78 m!.!:IL	6.9 U!.!:/L

Paragraph (I) Pensacola Bay (further subdivided into subparagraphs (1)1. through 6.)

The Pensacola Bay estuary system is located in Escambia and Santa Rosa Counties in the Florida Panhandle. The bay is a generally high-salinity system, subject to stratification, with a half-mile-wide pass to the Gulf of Mexico. Further description of the Pensacola Bay estuary, as well as a detailed description of the methodology used to calculate criteria for this area, can be found in FDEP's document "Numeric Nutrient Criteria for Pensacola Bay" (FDEP, July 2013).

To derive criteria for the estuary, the State followed the general methodology outlined in the summary of approaches above. Segmentation of the estuary resulted in six segments based on salinity and physical characteristics of the estuary (i.e., Lower Escambia, East Bay, Upper

Pensacola Bay, Lower Pensacola Bay, Santa Rosa Sound, and Blackwater Bay) that were considered separately for criteria development. A seventh segment, North (Upper) Escambia Bay is included in the July 31, 2013 Report to the Governor and Legislature described later in this document. Review of the available water quality data ensured that data from any areas and/or any time periods of use impairment were excluded from the development of NNC. For a summary of data excluded by this process, see Table C-1 in "Numeric Nutrient Criteria for Pensacola Bay" (FDEP, July 2013). The data were further screened using the biological endpoints, as described in the General Information and Approaches section above. Details of the screening process for this estuary are included in Tables C-2 through C-9 in "Numeric Nutrient Criteria for Pensacola Bay" (FDEP, July 2013). As a result of this process, a reference condition dataset for each segment was identified and used to derive the criteria presented in paragraph 62-302.532(1)(1).

The distributional statistics approach with annual geometric means was used to calculate criteria for TP, TN, and chl *a* for Lower Pensacola Bay and Santa Rosa Sound, TN for Lower Escambia, and chl *a* for all except Blackwater Bay. Due to a limited amount of data available, the single sample approach was used to calculate criteria for TN and TP for East Bay, Upper Pensacola Bay, Santa Rosa Sound and Blackwater Bay, as well as for chl *a* in Blackwater Bay. In order to demonstrate attainment of criteria calculated as annual geometric means, the criteria values must not be exceeded more than once in any three-year period. For those criteria calculated by the single sample value approach, the values must not be exceeded in more than 10 percent of the samples.

Waterbody	Total Phosphorus	Totat Nitrogen	Chlorophyll *a*
(!) Pensacola Bay	For bay segments with criteria exgressed as annual geometric means (AGM}, the values shall not be exceeded more than once in a three year geriod. For all other bay segments, the criteria shall not be exceeded in more than 10 gercent of the measurements. Nutrient and nutrient res12onse values do not aggly to tidally influenced areas that fluctuate between 12redominantly marine and oredominantlv fresh waters durine: voical climatic and hvdroloe:ic conditions.		
I. Lower Escambia Bav	0.076 me:/L	0.56 me:/L as AGM	6.8 ue:/L as AGM
2. East Bav	0.084 m2:/L	0.83 mvL	4.0 1u>/L as AGM
3. Unner Pensacola Bav	0.084 m2:/L	0.77 m1!1L	6.0 ue:/L as AGM
4. Lower Pensacola Bav	0.024 mVL as AGM	0.48 mvL as AGM	3.9 u!!!l as AGM
5. Santa Rosa Sound	0.022 mo/L as AGM	0.41 me:/L as AGM	3.4 11Q/1 as AGM
6. Blackwater Bav	0.082 mvL	0.61 mvL	11.3 uir/L

Paragraph (m) Choctawhatchee Bay (further subdivided into subparagraphs (m)l. through 9.)

The Choctawhatchee Bay is a large estuary in Okaloosa and Walton Counties, in the Panhandle region of Florida, with a length of 26.7 miles and a width varying between 1.2 and 6.2 miles. The surface area of the bay is approximately 134.4 square miles. Further description of the Choctawhatchee Bay estuary, as well as a detailed description of the methodology used to calculate criteria for this area, can be found in FDEP's document "Numeric Nutrient Criteria for Choctawhatchee Bay" (FDEP, July 2013).

To derive criteria for the estuary, the State followed the general methodology outlined in the summary of approaches above. Segmentation of the estuary resulted in nine segments based on salinity and physical characteristics of the estuary (i.e., Alaqua Bayou, Basin Bayou, Boggy Bayou, East Bay, Garnier Bayou, LaGrange Bayou, Middle Bay, Rocky Bayou, and West Bay) that were considered separately for criteria development. Review of the available water quality data ensured that data from any areas and/or any time periods of use impairment were excluded from the development of NNC. For a summary of data excluded by this process, see Table D-1 in "Numeric Nutrient Criteria for Choctawhatchee Bay" (FDEP, July 2013). The data were further screened using the biological endpoints, as described in the General Information and Approaches section above. Details of the screening process for this estuary are included in Tables D-2 through D-4 in "Numeric Nutrient Criteria for Choctawhatchee Bay" (FDEP, July 2013). As a result of this process, a reference condition dataset for each segment was identified and used to derive the criteria presented in paragraph 62-302.532(l)(m).

The distributional statistics approach with annual geometric means was used to calculate criteria for TP, TN and chl *a* for all segments, except for chl *a* for Basin Bayou. Due to a limited amount of data available, the single sample approach was used to calculate criteria chl *a* for Basin Bayou. In order to demonstrate attainment of criteria calculated as annual geometric means, the criteria values must not be exceeded more than once in any three-year period. For those criteria calculated by the single sample value approach, the values must not be exceeded in more than 10 percent of the samples.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
{m} Choctawhatchee Bay	For bay segments with criteria ex12ressed as annual geometric means {AGM},		
	the values shall not be exceeded more than once in a three year 12eriod. For all		
	other bay segments, the criteria shall not be exceeded in more than 10 12ercent of the measurements. Nutrient and nutrient res.12onse values do not a.1212ly to		
	tidally influenced areas that fluctuate between 12redominantly marine and		
	nredominantlv fresh waters duriM vnical climatic and hvdrolo!!ic conditions.		
1. Alaaua Bavou	0.027 m!dL as AGM	0.41 m!dL as AGM	4.0 11P-IL as AGM
2. Basin Bavou	0.019 m!!/L as AGM	0.31 m!!/L as AGM	4.7 11a/L
3. Bog!!V Bavou	O.Ql5 m!dL as AGM	0.33 m!dL as AGM	3.0 11P-IL as AGM
4. East Bav	0.027 m!!/L as AGM	0.46 mg/L as AGM	4.4 *11a!L* as AGM
5. Garnier Bavou	0.017 m!dL as AGM	0.91 m!dL as AGM	4.0 11aJL as AGM
6. LaGrange Bavou	0.029 mg/L as AGM	0.58 mg/L as AGM	5.1 11a/l as AGM
7. Middle Bav	0.020 m!dL as AGM	0.36 m!dL as AGM	3.1 1 w/L as AGM
8. Rock:v Bavou	0.016 ma/L as AGM	0.33 m!dL as AGM	3.J 11g/I as AGM
9. West Bav	0.049 m!dL as AGM	0.54 m!dL as AGM	4.1 11a/L as AGM

Paragraph (n) St. Andrew Bay (further subdivided into subparagraphs (n)l. through 4.)

The St. Andrew Bay is a high-salinity estuarine system located in the Panhandle of Florida in the Gulf Coastal Lowlands physiographic region. The estuary is situated almost entirely within Bay County in northwest Florida. Further description of the St. Andrew Bay estuary, as well as a detailed description of the methodology used to calculate criteria for this area, can be found in FDEP's document "Numeric Nutrient Criteria for St. Andrew Bay" (FDEP, July 2013).

To derive criteria for the estuary, the State followed the general methodology outlined in the summary of approaches above. Segmentation of the estuary resulted in four segments based on salinity and physical characteristics of the estuary (i.e., East Bay, North Bay, St. Andrew Bay and West Bay) that were considered separately for criteria development. Review of the available water quality data ensured that data from any areas and/or any time periods of use impairment were excluded from the development of the NNC. For a summary of data excluded by this process, see Table C-1 in "Numeric Nutrient Criteria for St. Andrew Bay" (FDEP, July 2013). The data were further screened using the biological endpoints, as described in the General Information and Approaches section above. Details of the screening process for this estuary are included in Tables C-2 through C-10 in "Numeric Nutrient Criteria for St. Andrew Bay" (FDEP, July 2013). As a result of this process, a reference condition dataset for each segment was identified and used to derive the criteria presented in paragraph 62-302.532(1)(n).

The distributional statistics approach with annual geometric means was used to calculate criteria for TP, TN and chl *a* in all segments of St. Andrew Bay. In order to demonstrate achievement of criteria calculated as annual geometric means, the criteria values must not be exceeded more than once in any three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
(n} St. Andrew Bay	Criteria for all bay segments are exgressed as annual geometric mean values		
	not to be exceeded more than once in a three year geriod. Nutrient and nutrient		
	resgonse values do not aggly to tidally influenced areas that fluctuate between		
	gredominantly marine and Qredominantly fresh waters during .tYgical climatic		
	and hvdrolof.!:ic conditions.		
1. East Bav	0.016 m1IIL	0.33 mg/L	3.9 mdL
2. North Bav	0.014 mg/L	0.28 mg/L	3.1 ug/L
3. St. Andrew Bav	0.019 m2:/L	0.34 m2:/L	3.7 Uf.!:/T
4. West Bav	0.017 mg/L	0.35 mg/L	3.8 ue/L

Paragraph (o) St. **Joseph Bay**

The St. Joseph Bay estuary is a coastal lagoon in Gulf County, Florida, approximately 15 miles long and 6 miles wide at its widest point. Further description of the St. Joseph Bay estuary, as well as a detailed description of the methodology used to calculate criteria for this area, can be found in FDEP's document "Numeric Nutrient Criteria for St. Joseph Bay" (FDEP, July 2013).

To derive criteria for the estuary, the State followed the general methodology outlined in the summary of approaches above. The State concluded that segmentation of St. Joseph Bay was unnecessary because it is a coastal embayment with no riverine influence and relatively homogenous salinity. FDEP therefore treated the estuary as a single segment for criteria derivation. Review of the available water quality data ensured that data from any areas and/or any time periods of use impairment were excluded from the development of the NNC. For a summary of data excluded by this process, see Table C-1 in "Numeric Nutrient Criteria for St. Joseph Bay" (FDEP, July 2013). The data were further screened using the biological endpoints, as described in the General Information and Approaches section above. Details of the screening process for this estuary are included in Table C-2 in "Numeric Nutrient Criteria for St. Joseph

Bay" (FDEP, July 2013). As a result of this process, a reference condition dataset was identified and used to derive the criteria presented in paragraph 62-302.532(1)(0).

The distributional statistics approach with annual geometric means was used to calculate criteria for TP, TN, and chl *a* in St. Joseph Bay. In order to demonstrate achievement of criteria calculated as annual geometric means, the criteria values must not be exceeded more than once in any three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
(o} St. Josegh Bay	Criteria for all bay segments are exgressed as annual geometric mean values		
	not to be exceeded more than once in a three year geriod. Nutrient and nutrient		
	resgonse values do not aggly to tidally influenced areas that fluctuate between		
	gredominantly marine and gredominantly fresh waters during !Y12ical climatic		
	and hvdrolo£Tic conditions.		
St. Joseoh Bav_	0.021 m!l/L	0.34 m!l/L	3.8 U!l/L

Paragraph (p) Apalachicola Bay (further subdivided into subparagraphs (p)l. through 4.)

The Apalachicola Bay estuary is a dynamic estuary in the Florida Panhandle, covering approximately 229 square miles. The bay is bar-built, subtropical, and characterized by large quantities of freshwater inflows from the Apalachicola River. Further description of the Apalachicola Bay estuary, as well as a detailed description of the methodology used to calculate criteria for this area, can be found in FDEP's document "Numeric Nutrient Criteria for Apalachicola Bay" (FDEP, July 2013).

To derive criteria for the estuary, the State followed the general methodology outlined in the summary of approaches above. Segmentation of the estuary resulted in four segments based on salinity and physical characteristics of the estuary (i.e., Apalachicola Bay, St. George Sound, East Bay and St. Vincent Sound) that were considered separately for criteria development. Review of the available water quality data ensured that data from any areas and/or any time periods of use impairment were excluded from the development of the NNC. For a summary of data excluded by this process, see Table C-1 in "Numeric Nutrient Criteria for Apalachicola Bay" (FDEP, July 2013). The data were further screened using the biological endpoints, as described in the General Information and Approaches section above. Details of the screening process for this estuary are included in Tables C-2 through C-9 in "Numeric Nutrient Criteria for Apalachicola Bay" (FDEP, July 2013). As a result of this process, a reference condition dataset for each segment was identified and used to derive the criteria presented in paragraph 62-302.532(l)(p).

The distributional statistics approach with annual geometric means was used to calculate criteria for TP, TN and chl *a* for Apalachicola Bay and chi *a* for St. George Sound and East Bay. Due to a limited amount of data available, the single sample approach was used to calculate criteria for TN and TP for St. George Sound, East Bay and St. Vincent Sound, as well as for chl *a* in St. Vincent Sound. In order to demonstrate achievement of criteria calculated as annual geometric means, the criteria values must not be exceeded more than once in any three-year period, or for those criteria calculated by the single sample value approach, the values must not be exceeded in more than 10 percent of the samples.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
(Q} Agalachicola Bay	For bay segments with criteria exgressed as annual geometric means (AGM}, the values shall not be exceeded more than once in a three year 12eriod. For all other bay segments, the criteria shall not be exceeded in more than 10 12ercent of the measurements. Nutrient and nutrient res12onse values do not ag12ly to tidally influenced areas that fluctuate between gredominantly marine and oredominantlv fresh waters durirnr vnical climatic and hvdroloaic conditions.		
I . Aoalachicola Bav	0.063 mdL as AGM	0.84 mdL as AGM	8.4 11dL as AGM
2. St. Geon:re Sound	0.083 mdL	0.92 m!:!/L	6.1 u!I/L as AGM
3. East Bav	0.101 mdL	1.12 mll/L	9.7 udl as AGM
4. St. Vincent Sound	0.116 ma/L	1.10 m!I/L	J 7.4 ᴜQ'/I

Subsection 62-302.532(2)

(2) Estuarine and marine areas for the Southwest and South Florida estuaries listed in paragraphs 62-302.532(1)(a) – (j), F.A.C., are delineated in the eight maps of the Florida Marine Nutrient Regions, all dated October 19, 2011, which are incorporated by reference. Estuarine and marine areas for the Panhandle estuaries listed in paragraphs 62-302.532(l)(k) – (p), F.A.C., are delineated in the six maps of the Florida Marine Nutrient Regions, dated October l,2012, 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.

This subsection defines the specific geospatial extent of estuary areas identified by name in the table included in the previous subsection. Subsection 62-302.532(2) incorporates by reference maps of each of the named estuary areas covered by the paragraphs within Subsection 62-302.532(2). The maps include spatial delineation of the estuary sub-segments corresponding to entries in the criteria tables. Subsection 62-302.532(2) also notes that copies of these maps are available at an FDEP contact mailing address, or online website at an identified URL address. The specific additions to the text of this subsection serve to distinguish the previously covered estuarine and coastal waters from those newly covered by this rule and to incorporate by reference maps for those added waters.

EPA Action

FDEP has provided support for this rule demonstrating that the NNC adopted by the State in subsection 62-302.532(1) are based on a sound scientific rationale and will protect the uses designated by the State for the estuarine and marine waters covered by this rule. The provision in subsection 62-302.532(2) identifies the specific spatial coverage where the criteria listed in the previous section are to be applicable in order to provide protection for the subject estuarine waters. The EPA concludes that the criteria provided in the submittal for Panhandle estuaries are based on scientifically defensible methods and protect the uses designated by the State in these estuarine areas and that the provision in subsection 62-302.532(2) in conjunction with the criteria values provides protection of healthy, well-balanced biological communities in the subject

estuaries. Therefore, the revisions to subsections 62-302.532(1) and 62-302.532(2) are consistent with the CWA, 40 CFR Part 131 and the EPA's 304(a) guidance on nutrient criteria and are approved by the EPA pursuant to CWA section 303(c).

Numeric Nutrient Criteria for 2013 Florida Estuaries and Coastal Waters

Overview of Revisions to Chapter 62-302 - Numeric Nutrient Criteria for 2013 Florida Estuaries

Review of Non-substantive Revisions to Water Quality Standards

The EPA determined that the renumbering of subsection 62-302.532(3) to 62-302.532(4) was an editorial, non-substantive change to Florida's EPA-approved water quality standards. The EPA approves this editorial, non-substantive change as consistent with the CWA and the EPA's implementing regulations. The EPA notes, however, that its approval of this editorial, non-substantive change does not re-open the EPA's prior approval of the underlying substantive water quality standards.

Summary of Remaining Revisions

The revisions to section 62-302.532 in the 2013 estuary submittal are primarily additions to section 62-302.532 in the form of NNC for additional estuaries and near coastal waters. More detailed summaries of the revisions are set out below in the section by section analysis. For the additional seven estuarine areas covered by these revisions, the State subdivided each system into segments and then used a common overall approach to develop criteria for TN, TP and chl *a*. The resulting criteria for each estuarine system were then added to the existing table in Section 62-302.532(1). A different methodology was used for the near coastal waters included in the revised rule and is described in more detail in that sub-section of this document. The resulting criteria for the near coastal waters were then set out in subsection 62-302.532(2). See Figure 2 for a map of the estuaries covered in this submittal.

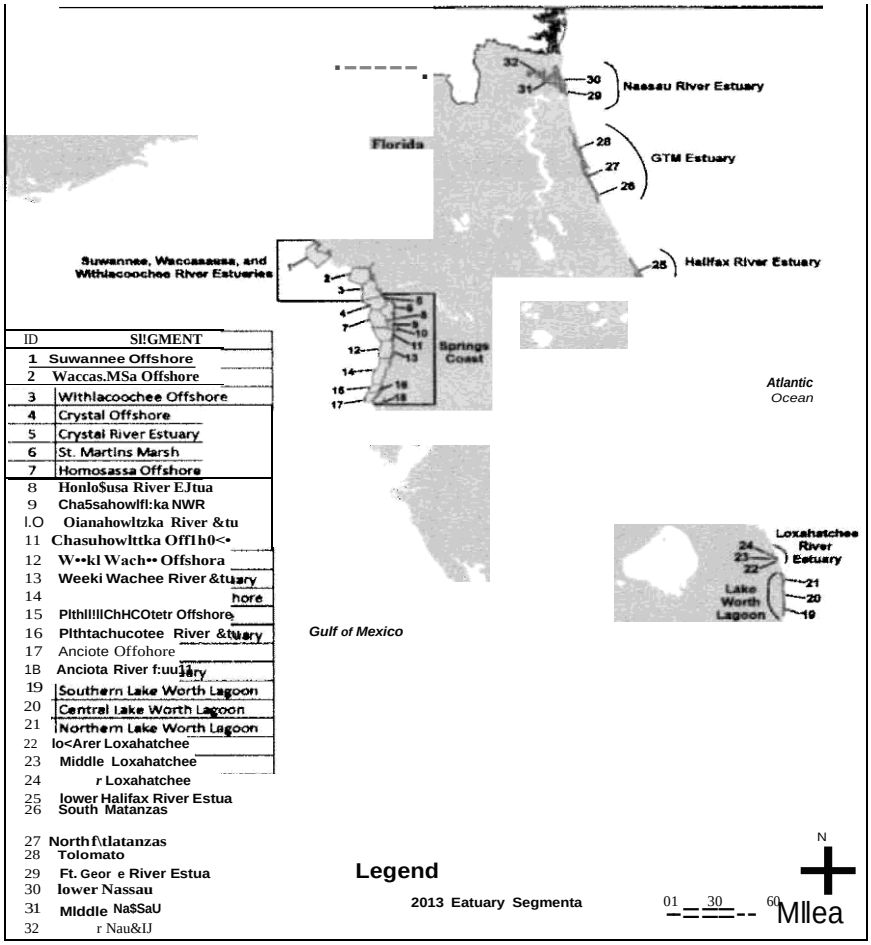


Figure 2 – 2013 Florida Estuaries

Estuary Criteria:

Subsection 62-302.532(1)

(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. Nutrient and nutrient response values do not apply to wetlands or to tidal tributaries that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions. 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.

(a)-(p) No change.[12]

[12] Although this says no change, (k)-(p) were reserved for criteria that FDEP developed for the Panhandle estuaries. These are addressed earlier in this document.

The added text in subsection 62-302.532(1) restricts the application of the estuary-specific numeric interpretations of the narrative nutrient criterion included in this subsection, clarifying that the criteria apply to open marine waters of the type used in the derivation of the values included in subsection 62-302.532(1). The excluded waterbody types, wetlands and tidally influenced waters, remain covered by the State's existing narrative nutrient criteria, as set out in paragraph 62-302.530(47)(b).

The introductory language in subsection 62-302.532(1) is followed by a table which sets out the criteria values for specific estuary areas. This submittal adds criteria values for 32 additional estuarine segments in seven new paragraphs, (q) through (w). The text of these new paragraphs has been set out in the sections discussing each estuarine area or segment below.

Paragraph (q) Loxahatchee River Estuary (further subdivided into subparagraphs (q)l. through 3.)

The Loxahatchee River Estuary covers approximately 988 acres, draining northeastern Palm Beach County and southeastern Martin County on the southeast coast of Florida. Further description of the Loxahatchee River Estuary, as well as a detailed description of the methodology used to calculate criteria for this area, can be found in FDEP's document "Numeric Nutrient Criteria for the Loxahatchee Estuary" (FDEP, July 2013).

To derive criteria for the estuary, the State followed the general methodology outlined in the summary of approaches above. Segmentation of the estuary resulted in the three segments based on salinity and physical characteristics of the estuary, (i.e., Lower, Middle, and Upper Loxahatchee), that were considered separately for criteria development. A fourth segment, the Loxahatchee River Estuary (Southwest Fork) is included in the July 31, 2013 Report to the Governor and Legislature described later in this document. Review of the available water quality data ensured that data from any areas and/or any time periods of use impairment were excluded from the development of the NNC. For a summary of data excluded by this process, see Table 3 in "Numeric Nutrient Criteria for Loxahatchee River Estuary" (FDEP, July 2013). The data were further screened using the biological endpoints, as described in the General Information and Approaches section above. Details of the screening process for this estuary are included in Tables 6 through 9 in "Numeric Nutrient Criteria for Loxahatchee River Estuary," (FDEP July 2013). As a result of this process, a reference condition dataset for each segment was identified and used to derive the criteria presented in paragraph 62-302.532(1)(q).

The distributional statistics approach with annual geometric means was used to calculate criteria for TN, TP and chl *a* in all segments except for chl *a* in the Upper Loxahatchee. Due to a limited amount of data available, the single sample approach was used to calculate criteria for chl *a* in the Upper Loxahatchee segment. In order to demonstrate achievement of criteria calculated as annual geometric means, the criteria values must not be exceeded more than once in any three-year period. For the Upper Loxahatchee chl *a* criterion, the criterion value must not be exceeded in more than IO percent of the samples.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
{g) Loxahatchee River Estuary	For estum segments with criteria exQressed as annual geometric means (AGM}, the values shall not be exceeded more than once in a three year Qeriod. For all other estuary segments, the criteria shall not be exceeded in more than 10 oercent of the measurements.		
1. Lower Loxahatchee	0.032 mg/L as AGM	0.63 mg/L as AGM	1.8 u g/L as AGM
2. Middle Loxahatchee	0.030 mQ:/L as AGM	0.80 mvL as AGM	4.0 11P!L as AGM
3. Uooer Loxahatchee	0.075 mg/L as AGM	1.26 mg/L as AGM	5.5 11a/L as AGM

Paragraph (r) Lake Worth Lagoon (further subdivided into subparagraphs (r)l. through 3.)

The Lake Worth Lagoon is a 20-mile long coastal estuary located in Palm Beach County, on the southeast coast of Florida. Further description of the Lake Worth Lagoon, as well as a detailed description of the methodology used to calculate criteria for this area, can be found in FDEP's document "Numeric Nutrient Criteria for Lake Worth Lagoon" (FDEP, July 2013).

To derive criteria for the estuary, the State followed the general methodology outlined in the summary of approaches above. Segmentation of the estuary resulted in the three segments based on salinity and physical characteristics of the estuary (i.e., Northern, Central and Southern Lake Worth Lagoon) that were considered separately for criteria development. Review of the available water quality data ensured that data from any areas and/or any time periods of use impairment were excluded from the development of the NNC. For a summary of data excluded by this process, see Table 1 in "Numeric Nutrient Criteria for Lake Worth Lagoon Estuary" (FDEP, July 2013). The data were further screened using the biological endpoints, as described in the General Information and Approaches section above. Details of the screening process for this estuary are included in Tables 3 through 6 in "Numeric Nutrient Criteria for Lake Worth Lagoon Estuary" (FDEP, July 2013). As a result of this process, a reference condition dataset for each segment was identified and used to derive the criteria presented in paragraph 62-302.532(1)(r).

The distributional statistics approach with annual geometric means was used to calculate criteria for TN, TP and chl *a* in all segments except for the Central Lake Worth Lagoon. Due to a limited amount of data available, the single sample approach was used to calculate criteria for TP, TN and chl *a* in the Central Lake Worth Lagoon segment. In order to demonstrate achievement of criteria calculated as annual geometric means, the criteria values must not be exceeded more than once in any three-year period. For the Central Lake Worth Lagoon, the criteria values must not be exceeded in more than 10 percent of the samples.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
(r) Lake Worth Lagoon	For estuaJ:Y segments with criteria ex12ressed as annual geometric means		
	(AGM}, the values shall not be exceeded more than once in a three xear 12eriod.		
	For all other estua[y segments, the criteria shall not be exceeded in more than		
	10 nercent of the measurements.		
1. Northern Lake Worth	0.044 mg[L as AGM	0.54 mg/L as AGM	2.9 f!gLL as AGM
Lagoon			
2. Central Lake Worth	0.049 mg[L as AGM	0.66 mg[L as AGM	10.2 µg/L
La1won			
3. Southern Lake Worth	0.050 mg/L as AGM	0.59 mg/L as AGM	5.7 f!gLL as AGM
Lagoon			

Paragraph (s) **Halifax River Estuary**

The Halifax River is a 25-mile long tidal estuary located on the Atlantic coast near Daytona Beach with its major ocean connection situated at Ponce de Leon Inlet. Further description of the Halifax River Estuary, as well as a detailed description of the methodology used to calculate criteria for this area, can be found in FDEP's document, "Numeric Nutrient Criteria for Halifax River Estuary" (FDEP, July 2013).

To derive criteria for the estuary, the State followed the general methodology outlined in the summary of approaches above. Segmentation of the estuary resulted in two segments based on the morphological and physical/chemical characteristics of the estuary (i.e., Upper and Lower Halifax River Estuary) that were considered separately for criteria development. Review of the available water quality data ensured that data from any areas and/or any time periods of use impairment were excluded from the development of the NNC. For a summary of data excluded by this process, see Table 1 in "Numeric Nutrient Criteria for Halifax River Estuary" (FDEP, July 2013). The data were further screened using the biological endpoints, as described in the General Information and Approaches section above. Details of the screening process for this estuary are included in Tables 3 through 4 in "Numeric Nutrient Criteria for Halifax River Estuary" (FDEP, July 2013). As a result of this process, a reference condition dataset for each segment was identified and used to derive the criteria presented in paragraph 62-302.532(l)(s).

FDEP established criteria for the Lower Halifax River in this rule revision. The other segment, the Upper Halifax River has been identified as impaired for nutrients and addressed by a TMDL, and is included in a July 31, 2013 Report to the Governor and Legislature. The EPA's analysis of the Upper Halifax River Estuary segment in the Governor's Report is included later in this decision document.

The distributional statistics approach with annual geometric means was used to calculate criteria for TN, TP and chl *a* in the Lower Halifax River Estuary segment. In order to demonstrate achievement of criteria calculated as annual geometric means, the criteria values must not be exceeded more than once in any three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
{s) Halifax River Estuary	For estuary segments with criteria ex.Qressed as annual geometric means		
	(AGM). the values shall not be exceeded more than once in a three year oeriod.		
Lower Halifax River	0.142 mg/L as AGM	0.72 mgLL as AGM	6.2 [!g/L as AGM
Estuarv			

Paragraph (t) Guana River/Tolomato River/Matanzas River (GTM) Estuary (further subdivided into subparagraphs (t)l. through 3.)

The GTM Estuary, located on the Atlantic coast near the city of St Augustine, is roughly 60 miles long. Further description of the GTM Estuary, as well as a detailed description of the methodology used to calculate criteria for this area, can be found in FDEP's document, "Numeric Nutrient Criteria for Guana River/Tolomato River/Matanzas River (GTM) Estuary" (FDEP, July 2013).

To derive criteria for the estuary, the State followed the general methodology outlined in the summary of approaches above. Segmentation of the estuary resulted in three segments based on the physical/chemical characteristics of the estuary (i.e., Tolomato, North Mantanzas, and South Mantanzas) that were considered separately for criteria development. Review of the available water quality data ensured that data from any areas and/or any time periods of use impairment were excluded from the development of the NNC. For a summary of data excluded by this process, see Table 1 in "Numeric Nutrient Criteria for Guana River/Tolomato River/Matanzas River (GTM) Estuary" (FDEP, July 2013). The data were further screened using the biological endpoints, as described in the General Information and Approaches section above. Details of the screening process for this estuary are included in Tables 3 through 6 in "Numeric Nutrient Criteria for Guana River/Tolomato River/Matanzas River (GTM) Estuary" (FDEP, July 2013). As a result of this process, a reference condition dataset for each segment was identified and used to derive the criteria presented in paragraph 62-302.532(1)(t).

The distributional statistics approach with annual geometric means was used to calculate criteria for TN, TP and chl *a* in all segments of the GTM Estuary. In order to demonstrate achievement of criteria calculated as annual geometric means, the criteria values must not be exceeded more than once in any three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
(t} Guana River/Tolomato	Criteria for all estuary segments are ex.Qressed as annual geometric mean		
River/Matanzas River (GTM) Estuarv	values not to be exceeded more than once in a three year .Qeriod.		
I. Tolomato	0.105 m12:/L as AGM	0.65 m12:/L as AGM	6.6 11 s:r/L as AGM
2. North Matanzas	0.110 mQ:/L as AGM	0.55 mir/T as AGM	4.0 11cr/1 as AGM
3. South Matanzas	0.111 m12:/L as AGM	0.53 m!!IL as AGM	5.5 1 w/L as AGM

Paragraph (u) Nassau River Estuary (further subdivided into subparagraphs (u)l. through 4.)

The Nassau River Estuary in the northeast comer of the state includes approximately 10 square miles of estuary, including the mouth of the Nassau River, South Amelia River, Sisters Creek, and Fort George River, draining approximately 464 square miles of watershed. Two natural inlets connect the Nassau River estuary to the Atlantic Ocean. Seagrasses do not naturally occur in this part of the state. This estuary system lies mainly within one or more Outstanding Florida Water (OFW) designated areas. Further description of the Nassau River Estuary, as well as a detailed description of the methodology used to calculate criteria for this area, can be found in FDEP's document, "Numeric Nutrient Criteria for Nassau River Estuary" (FDEP, July 2013).

To derive criteria for the estuary, the State followed the general methodology outlined in the summary of approaches above. Segmentation of the estuary resulted in four segments based on the physical/chemical characteristics of the estuary (i.e., Upper Nassau, Middle Nassau and Lower Nassau and Fort George River) that were considered separately for criteria development. Review of the available water quality data ensured that data from any areas and/or any time periods of use impairment were excluded from the development of the NNC. For a summary of data excluded by this process, see Table 1 in "Numeric Nutrient Criteria for Nassau River Estuary" (FDEP, July 2013). The data were further screened using the biological endpoints, as described in the General Information and Approaches section above. Details of the screening process for this estuary are included in Tables 3 through 7 in "Numeric Nutrient Criteria for Nassau River Estuary" (FDEP, July 2013). As a result of this process, a reference condition dataset for each segment was identified and used to derive the criteria presented in paragraph 62-302.532(l)(u).

The distributional statistics approach with annual geometric means was used to calculate criteria for TN and TP in all four Nassau segments and chl *a* in the Fort George River and Upper Nassau segments. Due to a limited amount of data available, the single sample approach was used to calculate criteria for chi *a* in the Lower and Middle Nassau segments. In order to demonstrate achievement of criteria calculated as annual geometric means, the criteria values must not be exceeded more than once in any three-year period. For the Lower and Middle Nassau segments, the chl *a* values must not be exceeded in more than 10 percent of the samples.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
(u) Nassau River Estuary	For estuary segments with criteria ex12ressed as annual geometric means		
	(AGM), the values shall not be exceeded more than once in a three year 12eriod.		
	For all other estum segments, the criteria shall not be exceeded in more than		
	10 nercent of the measurements.		
1. Ft. George River Estum	0.107 mgiL as AGM	0.60 mgiL as AGM	5.9 u&'.L as AGM
2. Lower Nassau	0.107 m!!:/L as AGM	0.80 midL as AGM	17.5 1w/L
3. Middle Nassau	0.137 m!!:IL as AGM	0.83 m!!:IL as AGM	17.1 11<1/L
4. Unner Nassau	0.191 m!!:/L as AGM	1.29 m!!:/L as AGM	4.7 u!!:/L as AGM

Paragraph (v) Suwannee, Waccasassa, and Withlacoochee River Estuaries (further subdivided into subparagraphs (v)l. through 3.)

The Suwannee Sound, Waccasassa and Withlacoochee River Estuaries are open, shallow estuaries in Florida's Big Bend region. These estuaries are fed by rivers with a high percentage of wetlands in their watersheds, so color and organic matter concentrations are naturally elevated and fresh water pulses can be irregular. Submersed aquatic vegetation (SAV) beds are abundant along this part of the coast. Further description of the Suwannee Sound, Waccasassa and Withlacoochee River Estuaries, as well as a detailed description of the methodology used to calculate criteria for this area, can be found in FDEP's document, "Numeric Nutrient Criteria for Suwannee Sound, Waccasassa and Withlacoochee River Estuaries" (FDEP, July 2013).

To derive criteria for this system of estuaries, the State followed the general methodology outlined in the summary of approaches above for TN, TP, and chl *a* for the Waccasassa Offshore segment and for chl *a* in the Suwannee Offshore and Withlacoochee Offshore segments. For TN and TP in Suwannee Offshore and Withlacoochee Offshore segments, the State followed an alternative method described below. Segmentation of the estuary reflected the three major riverine inputs among other water quality factors resulting in three segments based on the physical/chemical characteristics of the estuary, that were considered separately for criteria development. Review of the available water quality data ensured that data from any areas and/or any time periods of use impairment were excluded from the development of the NNC. For a summary of data excluded by this process, see Table 1 in "Numeric Nutrient Criteria for Suwannee Sound, Waccasassa and Withlacoochee River Estuary" (FDEP, July 2013). The data were further screened using the biological endpoints, as described in the General Information and Approaches section above. Details of the screening process for this estuary are included in Tables 2 through 5 in "Numeric Nutrient Criteria for Suwannee Sound, Waccasassa and Withlacoochee River Estuary" (FDEP, July 2013). As a result of this process, a reference condition dataset for each segment was identified and used to derive the criteria presented in paragraph 62-302.532(1)(v).

In the Suwannee Offshore and Withlacoochee Offshore segments, FDEP observed strong negative relationships between salinity and TN and TP and considered a single value criterion may be overprotective or under protective in these systems due to the confounding factors. For these systems, as an alternative, a salinity based approach was applied with criteria based upon upper prediction intervals, with no more than 10 percent of the station annual geometric means allowed to exceed the upper limit. Since the salinity versus nutrient relationships for the Waccasassa River estuarine segment were relatively weak and suggested factors other than salinity or freshwater inflows controlled nutrient concentrations, the primary reference condition approach was used there, as well as to derive the chl *a* criteria for all segments 9f this system.

The distributional statistics approach with annual geometric means was used to calculate criteria for TN, TP and chl *a* in the Waccasassa Offshore segment, and for chl *a* only in the Suwannee Offshore and Withlacoochee Offshore segments. The alternative salinity based approach was used to calculate criteria for TN and TP in Suwannee Offshore and Withlacoochee Offshore segments. In order to demonstrate achievement of criteria calculated as annual geometric means, the criteria values must not be exceeded more than once in any three-year period. For those

criteria calculated by the salinity based approach, no more than 10 percent of the future annual station geometric mean nutrient levels would be allowed to exceed the level predicted based on the annual average salinity. It is the EPA's expectation that, for waters using the salinity based approach, FDEP will maintain a number of stations equivalent to that on which the criteria were developed.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
(v} Suwannee, Waccasassa, and Withlacoochee River Estuaries	For estuan: segments with criteria exgressed as single value annual geometric means (AGM}, the values shall not be exceeded more than once in a three year geriod. For estuan: segments with criteria exgressed as a salini!J:: degendent eguation, the annual nutrient criteria are exgressed as annual geometric means ai:mlied to individual monitoring stations by solving the agglicable eguation below using the annual arithmetic average salini!J:: (AASal} in 12ractical salinity units (PSU} for the station. The AASal shall be calculated as the annual mean of the salini!J:: measurements for each station made in conjunction with the collection of the nutrient samgles. For criteria ex12ressed as a salini!J:: de12endant eguation, no more than 10 12ercent of the monitoring stations within the segment shall exceed the limit (exgressed as AGM) on an annual basis, more than once in a three vear oeriod.		
1. Suwannee Offshore	TP as AGM = -0.0035*AASal + 0.1402	TN as AGM = -0.0328*AASal + 1.4177	5.7 !Jgi'L as AGM
2. Waccasassa Offshore	0.063 m!dL as AGM	0.69 mo:/L as AGM	5.6 110:/L as AGM
3. Withlacoochee Offshore	TP as AGM = -0.0021 *AASal + 0.0942	TN as AGM = -0.0183*AASal + 0.9720	4.9 !Jg/L as AGM

Paragraph (w) Springs Coast (Crystal River to Anclote River) (further subdivided into subparagraphs (w)l. through 16.)

The Springs Coast on the Gulf coast of Florida, encompasses the coastal areas of Citrus, Hernando and Pasco Counties. Further description of the Springs Coast, as well as a detailed description of the methods used to calculate criteria for this area, can be found in FDEP's document "Numeric Nutrient Criteria for Springs Coast" (FDEP, July 2013).

To derive criteria for this estuarine group, the State followed the general methodology outlined in the summary of approaches above. Segmentation of this estuarine region resulted in 15 segments for criteria derivation to provide separate segments for each major river and its associated offshore areas (i.e., Crystal River Estuary, Crystal Offshore, Homosassa River Estuary, Homosassa Offshore, Chassahowitzka NWR, Chassahowitzka River Estuary, Chassahowitzka Offshore, Weeki Wachee River Estuary, Weeki Wachee Offshore, Aripeka and Hudson Offshore, Pithlachascotee River Estuary, Pithlachascotee Offshore, St. Martins Marsh, Anclote River and Anclote Offshore) that were considered separately for criteria development. Two additional segments within the region were identified and have been included in the July 31, 2013 Report to the Governor and Legislature. [13] Review of the available water quality data

[13] Kings Bay and Anclote Bayou segments were included in the Report to the Governor and Legislature. EPA is taking action on those submittals later in this decision document.

ensured that data from any areas and/or any time periods of use impairment were excluded from the development of the NNC. For a summary of data excluded by this process, see Table 1 in "Numeric Nutrient Criteria for Springs Coast Estuary" (FDEP, July 2013). The data were further screened using the biological endpoints, as described in the General Information and Approaches section above. Details of the screening process for this estuary are included in Tables 2 through 16 in "Numeric Nutrient Criteria for Springs Coast Estuary" (FDEP, July 2013). As a result of this process, a reference dataset for each segment was identified and used to derive the criteria presented in paragraph 62-302.532(1)(w).

The distributional statistics approach with annual geometric means was used to calculate criteria for TN, TP and chl *a* in all segments of the Springs Coast Estuaries. In order to demonstrate achievement of criteria calculated as annual geometric means, the criteria values must not be exceeded more than once in any three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
(w} S12rings Coast (Cn:stal River to Anclote River}	For estuan: segments with criteria ex12ressed as annual geometric means (AGM). the values shall not be exceeded more than once in a three vear neriod.		
1. Anclote Offshore	0.014 mg/L as AGM	0.42 mg/L as AGM	1.7 tH1:/L as AGM
2. Anclote River Estuarv	0.063 m!!/L as AGM	0.65 m!!/L as AGM	3.8 11i:r/L as AGM
3. AriQeka and Hudson Offshore	0.008 mgLL as AGM	0.45 mgLL as AGM	0.8 !JgLL as AGM
4. Chassahowitzka NWR	0.015 mg/L as AGM	0.55 mg/L as AGM	2.0 11.g/L as AGM
5. Chassahowitzka Offshore	0.011 mg/L as AGM	0.46 mg/L as AGM	1.5 11.S!!l as AGM
6. Chassahowitzka River Estuarv	0.021 mgLL as AGM	0.44 mg/L as AGM	3.9. !JgLL as AGM
7. Crvstal Offshore	0.034 m2:/L as AGM	0.40 mo:/L as AGM	2.4 11<J!L as AGM
8. Crvstal River Estuarv	0.047 mg/L as AGM	0.37 m!!!L as AGM	4.4 11P-/L as AGM
9. Homosassa Offshore	0.012 m!.!/L as AGM	0.46 mg/L as AGM	1.3 ""!L as AGM
10. Homosassa River Estuarv	0.028 mg/L as AGM	0.51 mgLL as AGM	7.7 [!g/L as AGM
12. Pithlachascotee Offshore	0.010 mgLL as AGM	0.47 mgLL as AGM	1.0 !JgLL as AGM
13. Pithlachascotee River Estuarv	0.034 mgLL as AGM	0.65 mgLL as AGM	4.0 !JgLL as AGM
14. St. Martins Marsh	0.031 m"/L as AGM	0.51 m2:/L as AGM	3.2 11<J/L as AGM
15. Weeki Wachee Offshore	0.017 mg/L as AGM	0.54 mg/L as AGM	1.2 11g/L as AGM
16. Weeki Wachee River Estuarv	0.019 mgLL as AGM	0.60 mgLL as AGM	1.9 [!g!L as AGM

Coastal Water Criteria:

Subsection 62-302.532(2)

(2) Criteria for·chlorophyll *a* in open ocean coastal waters, derived from satellite remote sensing techniques, are provided in the table below. In each coastal segment specified in the Map of Florida Coastal Segments, dated May 13, 2013 (http://www.flrules.org/Gateway/reference.asp?No=Ref-03017) , which is incorporated by

reference herein, the Annual Geometric Mean remotely sensed chlorophyll *a* value, calculated excluding *Karenia brevis* blooms (>50,000 cells/L), shall not be exceeded more than once in a three year period. The annual geometric means provided in the table below are based on measurements using the SeaWiFS satellite. Achievement of these criteria shall be assessed only by using satellite remote sensing data that are processed in a manner consistent with the derivation of the criteria. Data selection and preparation shall be consistent with the process described in Section 1.4.3 and Section 1.4.4, pages 14 through 17, in the report titled "Technical Support Document for U.S. EPA's Proposed Rule for Numeric Nutrient Criteria for Florida's Estuaries, Coastal Waters, and South Florida Inland Flowing Waters, Volume 2: Coastal Waters," U.S. Environmental Protection Agency, November 30, 2012 (http://www.flrules.org/Gateway/reference.asp?No=Ref-03018), the specified pages of which are incorporated by reference herein. If MODIS or MERIS satellite data are used, the data shall be normalized using the standardization factors provided in the table below, consistent with the process described in Section 1.6.3, pages 26 through 33 (http://www.flrules.org/Gateway/reference.asp?No=Ref-03019), in the above referenced EPA document, the specified pages of which are incorporated herein. A copy of the Map of Florida Coastal Segments and the referenced pages from EPA's document above are available by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

Coastal Segment	Annual Geometric Mean Remotely Sensed Chlorophyll *a*	MODIS Standardization Factor	MERIS Standardization Factor
1	2.45	0.54	-0.71
2	2.65	0.99	-0.07
3	1.48	0.41	-0.22
4	1.20	0.26	-0.30
5	1.09	0.15	-0.28
6	1.07	0.29	-0.01
7	1.17	0.33	-0.02
8	1.27	0.38	-0.05
9	1.09	0.20	-0.07
10	1.13	0.41	-0.07
11	1.14	0.31	-0.05
12	1.21	0.41	-0.05
13	1.53	0.50	-0.13
14	1.80	0.69	0.01
15	2.80	0.68	0.58
16	2.49	-0.14	0.27
17	3.57	0.08	1.41
18	5.62	0.50	0.03
19	4.90	0.50	0.31
20	4.33	-0.02	-0.69
21	4.06	-0.63	-1.09
22	4.54	-0.46	-0.17
23	3.40	-1.21	-0.67
24	3.41	-2.37	0.01
25	3.11	-2.84	0.05
26	3.00	-4.16	-0.36
27	3.05	-1.77	-0.81
28	3.41	-2.13	-0.61
29	4.55	-0.83	-0.74

30	4.32	-0.74	-0.04
31	3.77	-0.29	-0.90

32	4.30	0.17	-0.47
33	5.98	0.10	0.80
34	4.63	-0.77	-0.32
35	4.14	0.42	-0.83
37	101	0.39	0.59
38	0.26	-0.04	-0.03
39	0.27	-0.02	0.00
40	0.25	-0.03	-0.01
41	0.21	-0.06	-0.01
42	0.21	-0.03	0.03
43	0.21	-0.02	0.04
44	0.20	-0.02	0.01
45	0.21	-0.04	0.02
46	0.26	-0.05	-0.01
47	0.58	-0.10	0.03
48	109	0.03	0.09
49	1.48	0.39	0.36
50	185	0.21	0.32
51	1.72	0.23	0.31
52	173	0.05	0.58
53	1.87	0.00	0.47
54	1.66	-0. 13	0.31
55	1.60	0.18	0.71
56	2.12	0.11	0.39
57	2.83	0.44	0.84
58	2.63	0.09	0.40
59	2.34	0.06	0.33
60	2.17	0.07	0.29
61	2.01	-0.20	-0.06
62	1.93	0.18	-0.11
63	1.90	-0.69	-0.20
64	2.13	-0.79	-0.20
65	196	-0.72	-0.13
66	1.95	-0.85	-0.40
67	2.06	-0.33	-0.53
68	2.51	-0.47	-0.08
69	2.86	-0.60	-0.22
70	2.88	-1 .39	-0.32
71	3.62	-2.00	-0.38
72	380	-138	-0.40
73	3.94	-0.28	-0.49
74	4.36	-0.16	-1.17

FDEP adopted numeric criteria for "open ocean coastal waters" which correspond to waters the EPA would term coastal waters. FDEP defines open coastal waters as "gulf or ocean waters that are not classified as estuaries or open ocean waters" (Section 62-303.200, F.A.C.). FDEP relied heavily on the EPA's approach to developing criteria for coastal waters which was proposed in the December 18, 2012 Federal Register (Vol. 77, No. 243). Details regarding the FDEP's application of this approach can be found in the EPA's proposed rule and its supporting documentation, as well as the State's Technical Support Document, "Remotely Sensed Chlorophyll *a* Criteria for Selected Florida Coastal Waters," July 2013.

Coastal numeric chl *a* criteria values apply to areas in the Florida Panhandle between the Alabama border and St. Joseph Bay, the West Florida Shelf from Anclote Bay to Rookery Bay and Atlantic Coast segments from Biscayne Bay to the Georgia border. In order to demonstrate achievement of criteria calculated as annual geometric means, the criteria values may not be exceeded more than once in three years. TN and TP criteria for Florida's coastal waters were not developed because of lack of sufficient field monitoring data for TN and TP; however, the chl *a* criteria should provide protection of these waters and serve as a warning signal to the State that

excess nutrients might be causing adverse impacts to natural populations of aquatic flora and fauna. As more data become available relevant to these coastal waters, the State should consider deriving numeric criteria in the future for those additional parameters.

New subsection 62-302.532(2), which adds criteria for open coastal waters, also provides references to a map identifying the geospatial extent of the areas identified by segment number in the subsection. The map provides the specific spatial delineation of the waters addressed. Copies of the subject map are noted to be available at a contact mailing address that is provided.

Subsection 62-302.532(3)

illf±t Estuarine and marine areas for the Southwest and South Florida estuaries listed in paragraphs 62-302.532(1)(a) – G), F.A.C., are delineated in the eight maps of the Florida Marine Nutrient Regions, all dated May 13, 2013 (http://www.flrules.org/Gateway/reference.asp?No=Ref-03020) October 19, 2011, which are incorporated by reference. Estuarine and marine areas for the Panhandle estuaries listed in paragraphs 62-302.532(l)(k) -(p), F.A.C., are delineated in the six maps of the Florida Marine Nutrient Regions, dated October 1, 2012, which are incorporated by reference. Estuarine and marine areas for the estuaries listed in paragraphs 62-302.532(1)(q) – (w), F.A.C., are delineated in the seven maps of the Florida Marine Nutrient Regions, dated May 13, 2013 (http://www.flrules.org/Gateway/reference.asp?No=Ref-03022), which are incorporated by reference herein. Copies of these maps may be obtained from the Depart.ment's internet site at http://vr.vw.dep.state.fl.us/v;ater/v,'qssp/wgssp/svrq does.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.

This subsection, renumbered from 62-302.532(2) to 62-302.532(3) in this rule, defines the geospatial extent of the estuary areas identified by name in subsection 62-302.532(1). The rule incorporates by reference maps of each of the named estuarine and marine areas covered by subsection 62-302.532(1), with specific spatial delineation of the waters addressed in the paragraphs and subparagraphs set out in subsection 62-302.532(1) corresponding to entries in the criteria tables. Copies of the subject maps are noted to be available at a contact mailing address which is provided. The previous availability at a cited link and its associated URL address is being removed by this rule amendment.

EPA Action

The EPA agrees that it is appropriate to restrict the application of these criteria to the types of waters used in the derivation of the criteria values. The EPA concludes that the text added to subsection 62-302.532(1) is based on a sound scientific rationale and protects the uses designated by the State in these waters and therefore, is consistent with the CWA, 40 CFR Part 131 and the EPA's 304(a) guidance on nutrient criteria.

FDEP has demonstrated that the NNC adopted by the State in subsection 62-302.532(1) are based on a sound scientific rationale and will protect the uses designated by the State for the estuarine and coastal waters covered by this rule. The EPA agrees with FDEP that the approach for coastal waters in subsection 62-302.532(2) will protect the designated uses of coastal waters.

The provisions in subsections 62-302.532(2) and 62-302.532(3) identify the specific spatial coverage where the criteria listed in the previous section are to be applicable in order to provide protection for the subject estuarine and coastal waters. The EPA concludes that the criteria provided in the submittal for the 2013 Florida estuarine and coastal waters provided at subsections 62-302.532(1) and 62-302.532(2) are based on scientifically defensible methods and protect the uses designated by the State in these estuarine and coastal areas and that the provisions in subsections 62-302.532(2) and 62-302.532(3) in conjunction with the criteria values provide protection of healthy, well-balanced biological communities in the subject estuarine and coastal areas. Therefore, the revisions to subsections 62-302.532(1), 62-302.532(2), and 62-302.532(3) are consistent with the CWA, 40 CFR Part 131 and the EPA's 304(a) guidance on nutrient criteria and are approved by the EPA pursuant to CWA section 303(c).

Chapter 2013-71, Laws of Florida (Senate Bill 1808) (an act relating to numeric nutrient criteria)

Overview of Revisions to Florida's Water Quality Standards in Chapter 2013-71, Laws of Florida (Senate Bill 1808) (an act relating to numeric nutrient criteria)

The EPA reviewed Chapter 2013-71 and determined that most of the legislation does not constitute new or revised water quality standards. Section 1 simply describes the powers and duties of the Department. This section is informational and/or redundant to FDEP's existing EPA-approved water quality standards. Section 2 reiterates that the Department may implement its adopted nutrient standards for streams, springs, lakes, and estuaries by using the State's document titled "Implementation of Florida's Numeric Nutrient Standards." Section 3 provides that subsection 62-302.531(9) shall stand repealed and deleted once the EPA withdraws all federal NNC for Florida waters. Section 4 provides that the adoption of estuarine rules in 2013 is subject to subsection 62-302.531(9) and that such rules are exempt from ratification. These provisions do not constitute new or revised water quality standards. They do not establish or revise designated uses for any waters or criteria protecting those uses. They also do not establish or revise any antidegradation policies for Florida waters. Complete wording of the rule can be found at http://laws.flrules.org/2013/71.

Section 5 of Chapter 2013-71 states:
The Department of Environmental Protection shall establish by rule or final order the estuary specific numeric interpretations of the narrative nutrient criterion for total nitrogen, total phosphorus, and chlorophyll a for any estuaries not already subject to the department's numeric nutrient criteria, and establish chlorophyll a interpretations of the narrative nutrient criterion for non-estuarine coastal waters by December 1, 2014, subject to the provisions of chapter 120, Florida Statutes. The water quality standard pursuant to s. 403.061(11), Florida Statutes, for total nitrogen, total phosphorus, and chlorophyll a in estuaries, and chlorophyll a in non-estuarine coastal waters, shall be the current conditions of those unimpaired waters, accounting for climactic and hydrologic cycles, until such time as a numeric interpretation of the narrative water quality criterion for nutrients is established by rule or final order. The Department of Environmental Protection shall submit a report to the Governor, the President of the Senate, and the Speaker of the House of Representatives by August 1, 2013, conveying the status of

establishing numeric interpretations of the narrative nutrient criterion pursuant to this section and including the department's calculation of the numeric values that represent the current conditions of those unimpaired waters as stated in this section for those estuaries and non-estuarine coastal waters without numeric interpretations of the narrative nutrient criterion established by rule or final order as of the date of the report.

Much of Section 5 of Chapter 2013-71 sets out due dates for specific FDEP actions to establish estuarine and coastal numeric interpretations of the state's narrative nutrient criteria and was determined to not constitute new or revised water quality standards. However, a portion of Section 5 does establish a new or revised narrative WQS for certain Florida estuarine and coastal waters. That narrative WQS provides that the WQS for TN, TP and chi *a* for the specified waters shall be the current conditions of those unimpaired waters, until such time as FDEP establishes a numeric interpretation of the state's narrative nutrient criteria by rule or final order. The legislation also directs FDEP to send a report to the Governor and the legislature that includes the Department's calculation of the numeric values that represent the current conditions of the waters subject to the legislative narrative WQS.

The EPA has determined that the provisions in Section 5 related to the new narrative are new or revised water quality standards because those provisions express or establish the desired condition for the affected waters and mandate how that desired condition will be established for those waters in the future. This part of Section 5 provides a narrative water quality standard for those estuaries that have not been covered by FDEP's promulgated NNC. The narrative standard directs FDEP to establish numeric nutrient criteria at the current condition of unimpaired waters. Such criteria are inherently protective of the designated uses of these waters, since the unimpaired status of the waters indicates that the uses are being met. For waters in the Report to the Governor that have been listed as impaired, FDEP used a reference condition period approach (using data from unimpaired years) or a modeling approach to determine NNC for unimpaired conditions.

Overview of Revisions to Florida's Water Quality Standards in Report to the Governor

The Report to the Governor includes FDEP's calculations of the numeric values that represent the current conditions of those unimpaired waters which are subject to the legislative narrative WQS. Pursuant to chapter 2013-71, these calculations will serve as binding numeric interpretations of the legislatively established narrative nutrient criterion until such time as FDEP establishes, by rule or final order, estuary-specific numeric interpretations of the State's narrative nutrient criteria for those waters subject to the legislative narrative. The new or revised WQS contained in the Report are described below, with detailed descriptions for each affected waterbody included in the section by section analysis.

For the unimpaired waters covered in the Report to the Governor, FDEP utilized the distributional statistics approach (reference site or reference period approach) described in the General Information and Approaches section above. A number of marine waters in the Report to the Governor are located in the Big Bend area of Florida. For these waters, FDEP applied a water quality simulation model to determine unimpaired conditions and to develop NNC. FDEP used both the hydrodynamic and water quality components of a surface water modeling system to simulate hydrodynamics and water quality conditions. Mechanistic modeling was also used for

TMDL development for some estuaries. The reductions specified by the TMDLs will result in the support of a healthy, well-balanced community and provide for recreation in and on the water. See Figure 3 for a map of the estuaries covered in this submittal.

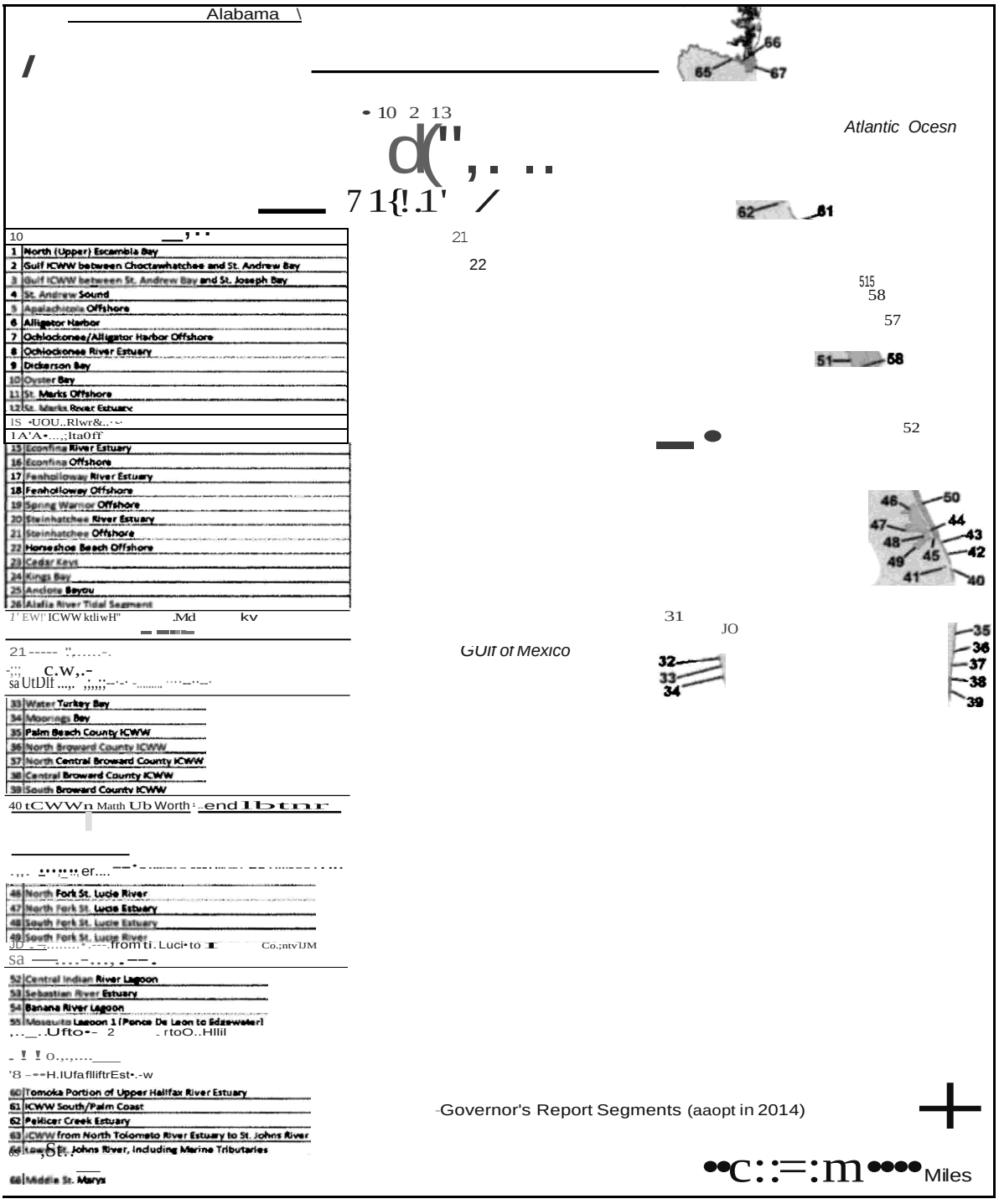


Figure 3 – Chapter 2013-71, Laws of Florida (Senate Bill 1808) Governor's Report Waterbodies North (Upper) Escambia Bay (Pensacola Bay Estuary)

Florida adopted numeric interpretations of the nutrient narrative for the majority of Pensacola Bay in November 2012. The Report to the Governor establishes interpretations for the remaining Upper Escambia Bay Segment, North Escambia Bay, based on 2013 Total Maximum Daily Load analyses.[14] The waterbody is located in the far western extent of the Florida Panhandle and was listed as impaired for nutrients based on chl *a* annual averages exceeding the historical minimum by at least 50 percent in 2 consecutive years.

To derive NNC for North (Upper) Escambia Bay, FDEP used mechanistic modeling. The Report to the Governor states that North (Upper) Escambia Bay would meet seagrass bed depth targets (20 percent light penetration at about 2 foot depth) under annual average conditions of 7.4 µg/l chl *a*. Based on mechanistic modeling conducted for the 2002-2009 period, this chl *a* concentration will be achieved with a 35 percent reduction in TP, which can be expressed as a loading of 601,345 pounds/year (lbs/yr), not to be exceeded. TN reductions were not required resulting in a criteria based on current conditions of 16,795,853 lbs/yr, not to be exceeded. The chl *a* criterion was derived based on long term annual average conditions and therefore the criteria is expressed as a long-term annual average, not to be exceeded.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
North (Upper) Escambia Bay	601,345 lbs/yr, long-term average of the annual means, not to be exceeded	16,795,853 lbs/yr, long-term average of the annual means, not to be exceeded	7.4 µg/L, long-term average of the annual means, not to be exceeded

Gulf Intracoastal Waterway between Choctawhatchee Bay and St. **Andrew Bay; and Gulf Intracoastal Waterway between St. Andrew Bay and St. Joseph Bay, Including the Gulf County Canal**

The Gulf Intracoastal Waterway between Choctawhatchee Bay and St. Andrew Bay has a maintained channel of 12 feet of depth and 125 feet of width spanning Walton and Bay Counties; and the Gulflntracoastal Waterway between St. Andrew Bay and St. Joseph Bay has a channel of 9 feet of depth and 100 feet of width and is connected to St. Joseph Bay via the Gulf County Canal.

To derive NNC for Gulflntracoastal Waterway between St. Andrew Bay and St. Joseph Bay, including the Gulf County Canal, FDEP used a reference period approach so that data was only included from years when the biological endpoint targets were met. Due to a limited amount of data available, TN and TP criteria were derived based on the 90 percent prediction interval of measured values and chl *a* values were based on the non-parametric measure of the 90^{1} h percentile of the distribution (rounded down to the nearest tenth unit) for chl *a*. These criteria also served as a reference site for the adjacent and similar Gulf Intracoastal Waterway between Choctawhatchee Bay and St. Andrew Bay. In order to demonstrate achievement of TN, TP and chl-a, the criteria values must not be exceeded more than 10 percent of the time.

[14] Gilbert, D. (2013). *Final Report Nutrient TMDLs North Escambia Bay (WBID 548AA) Judges Bayou (WBJD 493B) Bayou Chico (WBJDs 846C and 846) Dissolved Oxygen TMDL Judges Bayou (WBID 493A).* Tallahassee, FL. Retrieved from http://www.dep.state. fl.us/water/tmdl/ docs/tmdls/final/ gp4/pensaco la_donut_ final.pdf

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Gulf lntracoastal Waterway between Choctawhatchee Bay and St. Andrew Bay	0.108 mg/L, not to be exceeded more than 10% of the time	1.14 mg/L, not to be exceeded more than 10% of the time	6.6 µg/L, not to be exceeded more than 10% of the time
Gulf Intracoastal Waterway between St. Andrew Bay and St. Jose.12h Bay, Including the Gulf County Canal	0.108 mg/L, not to be exceeded more than 10% of the time	1.14 mg/L, not to be exceeded more than 10% of the time	6.6 µg/L, not to be exceeded more than 10% of the time

St. **Andrew Sound**

St. Andrew Sound is a high-salinity lagoon in Bay County. To derive NNC for St. Andrew Sound, FDEP used a reference site approach for the segment. Due to lack of nutrient data in the sound, FDEP adopted criteria based on the adjacent and similar St. Andrew Bay. Criteria were expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
St. Andrew Sound	0.019 mg/L, annual geometric mean not to be exceeded more than once in three years	0.34 mg/L, annual geometric mean not to be exceeded more than once in three years	3.7 µg/L, annual geometric mean not to be exceeded more than once in three years

Apalachicola Offshore

This high salinity, high wave energy, sandy substrate nearshore area has only scattered seagrass beds and extends across St. Vincent Island, St. George Island and Dog Island.

To derive NNC for the Apalachicola Offshore area, FDEP used a mechanistic modeling approach for the segment, using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitro.gen	Chlorophyll *a*
Apalachicola Offshore	0.043 mg/L, annual geometric mean not to be exceeded more than once in three years	0.72 mg/L, annual geometric mean not to be exceeded more than once in three years	3.9 µg/L, annual geometric mean not to be exceeded more than once in three years

Alligator Harbor

Alligator Harbor is a 4.5 mile long by 1.5 mile wide, shallow lagoon with an average depth of 13 feet, partially separated from the nearshore Gulf of Mexico by barrier sand spit. The waterbody is located in eastern Franklin County, entirely within an FDEP Aquatic Preserve and is bordered by several offshore shoal systems.

To derive NNC for Alligator Harbor, FDEP used a reference period approach for the segment. Data from 1971-2012 were used. Seagrass transparency targets could not be established due to lack of bathymetric data in this area, but the biological endpoints for DO and chl *a* were met during this period. The chl *a* criterion was based on data not corrected for pheophytin. Criteria are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	*Chi a*
Alligator Harbor	0.036 mg/L, annual geometric mean not to be exceeded more than once in three years	0.24 mg/L, annual geometric mean not to be exceeded more than once in three years	8.0 µg/L, (uncorrected) annual geometric mean not to be exceeded more than once in three years

Ochlockonee/Alligator Harbor Offshore

The Ochlockonee/Alligator Harbor Offshore area includes the portion of Apalachee Bay immediately offshore of the Alligator Harbor barrier spit, Bald Point and Ochlockonee Bay. This area is located in eastern Franklin County, and some areas have extensive offshore seagrass beds. Numeric interpretations for Ochlockonee/Alligator Harbor Offshore were developed using the mechanistic modeling approach. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Ochlockonee/ Alligator Harbor Offshore	0.042 mg/L, annual geometric mean not to be exceeded more than once in three years	0.70 mg/L, annual geometric mean not to be exceeded more than once in three years	5.1 µg/L, annual geometric mean not to be exceeded more than once in three years

Ochlockonee River Estuary (includes portions of Sopchoppy River)

Ochlockonee River Estuary is a coastal plain estuary that empties into Apalachee Bay. Its watershed includes parts of Franklin, Wakulla, Liberty, Leon and Gadsden counties in Florida and parts of Georgia. The bay is small (5.3 miles long by 1.2 miles wide), shallow, rapidly flushed, well-mixed, with extensive shoals and tidal marsh.

Numeric interpretations for Ochlockonee River Estuary were developed using the mechanistic modeling approach (Big Bend model). The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Ochlockonee River Estuary (includes portions of Sopchoppy River)	0.048 mg/L, annual geometric mean not to be exceeded more than once in three years	0.76 mg/L, annual geometric mean not to be exceeded more than once in three years	2.2 µg/L, , annual geometric mean not to be exceeded more than once in three years

Dickerson Bay

Dickerson/Levy Bay is a small (approximately 3.3 miles long and 1.0 miles wide at the widest point), shallow (average 3.3 to 6.6 foot depth) bay characterized by salt marsh, oyster bars and unconsolidated bottom. The 11 square mile watershed is in western Wakulla County. To the west is Ochlockonee Bay and to the north and east is the St. Marks Wildlife Refuge. To derive NNC for Dickerson Bay, FDEP used a mechanistic modeling approach for the segment. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Dickerson Bay	0.042 mg/L, annual geometric mean not to be exceeded more than once in three years	1.16 mg/L, annual geometric mean not to be exceeded more than once in three years	2.2 µg/L, annual geometric mean not to be exceeded more than once in three years

Oyster Bay

Oyster Bay is a shallow (average depth 6.6 feet) bay of approximately 4.0 by 2.5 miles, located within Wakulla County. The bay is dominated by salt marsh with a watershed of approximately 30 square miles with much of the land within the St. Marks National Wildlife Refuge. Criteria for Oyster Bay were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Oyster Bay	0.046 mg/L, annual geometric mean not to be exceeded more than once in three years	0.74 mg/L, annual geometric mean not to be exceeded more than once in three years	2.4 µg/L, annual geometric mean not to be exceeded more than once in three years

St. Marks Offshore

St. Marks Offshore is located in Wakulla County and is considered a segment of Apalachee Bay. The average depth ranges from 3.3 to 6.6 feet nearshore and 20 to 23 feet offshore and the segment is approximately 17 miles long and 5 miles wide. The spring-fed St. Marks River is the largest waterbody discharging into this portion of Apalachee Bay. NNC for St. Marks Offshore were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
St. Marks Offshore	0.045 mg/L, annual geometric mean not to be exceeded more than once in three years	0.74 mg/L, annual geometric mean not to be exceeded more than once in three years	1.9 µg/L, annual geometric mean not to be exceeded more than once in three years

St. Marks River Estuary (includes marine East River)

The Report to the Governor states that, "The spring-fed St. Marks River is located in Wakulla County, entering Apalachee Bay (along with the estuarine East River) near the St. Marks River Lighthouse in the St. Marks National Wildlife Refuge. The estuarine area is characterized by large expanses of *Spartina/Juncus* marsh, oyster bars and extensive seagrass beds farther offshore." NNC for St. Marks River Estuary (including marine East River) were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in three years.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
St. Marks River Estuary (includes marine East River)	0.045 mg/L, annual geometric mean not to be exceeded more than once in three years	0.69 mg/L, annual geometric mean not to be exceeded more than once in three years	1.5 µg/L, annual geometric mean not to be exceeded more than once in three years

Aucilla River Estuary

The Report to the Governor states, "The Aucilla River is partially swamp-fed and partially spring-fed (Wacissa River), entering Apalachee Bay east of the St. Marks National Wildlife Refuge. The estuarine area is characterized by large expanses of *Spartina/Juncus* marsh, oyster bars and extensive seagrass beds farther offshore." NNC for Aucilla River Estuary were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in three years.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Aucilla River Estuary	0.046 mg/L, annual geometric mean not to be exceeded more than once in three years	0.96 mg/L, annual geometric mean not to be exceeded more than once in three years	1.1 µg/L, annual geometric mean not to be exceeded more than once in three years

Aucilla Offshore

The Report to the Governor states that, "Aucilla Offshore, in Jefferson County is considered a segment of Apalachee Bay. The average depth ranges from [3.3 to 6.6 feet] nearshore and [20 to 23 feet] offshore. The segment is bounded by St. Marks Offshore to the west and the Econfina Offshore area (Taylor County) to the southeast. A large portion of the estuary is in the Big Bend Seagrass Aquatic Preserve. The Aucilla River is the largest waterbody discharging into this portion of Apalachee Bay." NNC for Aucilla Offshore were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Aucilla Offshore	0.052 mg/L, annual geometric mean not to be exceeded more than once in three years	0.95 mg/L, annual geometric mean not to be exceeded more than once in three years	2.1 µg/L, annual geometric mean not to be exceeded more than once in three years

Econfina River Estuary

The Report to the Governor states that, "The Econfina River, in Taylor County, is a minimally disturbed swamp-fed river (the headwaters consist of San Pedro Bay), entering Apalachee Bay within the Econfina River State Park. The estuarine area is characterized by large expanses of *Spartina/Juncus* marsh, oyster bars and extensive seagrass beds." NNC for Econfina River Estuary were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Econfina River Estuary	0.054 mg/L, annual geometric mean not to be exceeded more than once in three years	0.66 mg/L, annual geometric mean not to be exceeded more than once in three years	3.8 µg/L, annual geometric mean not to be exceeded more than once in three years

Econfina Offshore

The Report to the Governor states that, "Econfina Offshore, in Taylor County, is a segment of Apalachee Bay. The average depth ranges from [3.3 to 6.6 feet] nearshore and [20 to 23 feet] offshore. The segment is bounded by Aucilla Offshore to the northwest and the Fenholloway Offshore area (Taylor County) to the southeast. A large portion of the estuary is within the Big Bend Seagrass Aquatic Preserve. The Econfina River, which has long been used as a minimally disturbed reference system, is the largest waterbody discharging into this portion of Apalachee Bay." NNC for this segment were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Econfina Offshore	0.061 mg/L, annual geometric mean not to be exceeded more than once in three years	0.87 mg/L, annual geometric mean not to be exceeded more than once in three years	6.6 µg/L, annual geometric mean not to be exceeded more than once in three years

Fenholloway River Estuary

The Report to the Governor states that, "The Fenholloway River, in Taylor County, is swamp-fed (from the San Pedro Bay), entering Apalachee Bay near the terminus of Hampton Springs Road. The estuarine area is characterized by large expanses of *Spartina/Juncus* marsh, oyster bars and extensive offshore seagrass beds farther offshore." NNC for the Fenholloway River Estuary were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period. The Report to the Governor also notes that, "...a Level II WQBEL is under development for the discharge from Buckeye, Inc., and that pursuant to Rule 62-302.531(2)(a)l.d., F.A.C., the WQBEL would become the site-specific interpretation of the narrative nutrient criterion for the Fenholloway estuary."

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Fenholloway River Estuary	0.054 mg/L, annual geometric mean not to be exceeded more than once in three years	0.66 mg/L, annual geometric mean not to be exceeded more than once in three years	3.8 µg/L, annual geometric mean not to be exceeded more than once in three years

Fenholloway Offshore

The Report to the Governor states that, "Fenholloway Offshore, in Taylor County, is a segment of Apalachee Bay, southeast of Econfina Offshore, with which it shares many characteristics. A large portion of the estuary is within the Big Bend Seagrass Aquatic Preserve. The Fenholloway River is the largest waterbody discharging into this portion of Apalachee Bay." NNC for the

Fenholloway Offshore were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period. The Report to the Governor also notes that, "…a Level II WQBEL is under development for the discharge from Buckeye, Inc., and that pursuant to Rule 62-302.531(2)(a) l.d., F.A.C., the WQBEL would become the site-specific interpretation of the narrative nutrient criterion for the Fenholloway Offshore."

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Fenholloway Offshore	0.06 l mg/L, annual geometric mean not to be exceeded more than once in three years	0.87 mg/L, annual geometric mean not to be exceeded more than once in three years	6.6 µg/L, annual geometric mean not to be exceeded more than once in three years

Spring Warrior Offshore

The Report to the Governor states that, "Spring Warrior Offshore, in Taylor County, is a segment of Apalachee Bay, southeast of Fenholloway Offshore. As is typical for this part of Florida's Big Bend, this estuarine area is characterized by large expanses of *Spartina/Juncus* marsh, oyster bars, and extensive seagrass beds." NNC for Spring Warrior Offshore were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbodv	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Spring Warrior Offshore	0.070 mg/L, annual geometric mean not to be exceeded more than once in three years	0.90 mg/L, annual geometric mean not to be exceeded more than once inthree years	9.0 µg/L, annual geometric mean not to be exceeded more than once in three years

Steinhatchee River Estuary

The Report to the Governor states that, 'The Steinhatchee River, forming the boundary between Taylor and Dixie Counties, is swamp-fed, entering Deadman Bay and the Gulf of Mexico near the Town of Steinhatchee. The estuarine area is characterized by the presence of dwellings on the north shore (high ground) as well as large expanses of *Spartina/Juncus* marsh, oyster bars and extensive seagrass beds farther offshore. "NNC for the Steinhatchee River Estuary were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Steinhatchee River Estuary	0.044 mg/L, annual geometric mean not to be exceeded more than once in three years	0.77 mg/L, annual geometric mean not to be exceeded more than once in three years	1.9 µg/L, annual geometric mean not to be exceeded more than once in three years

Steinhatchee Offshore

The Report to the Governor states that, "Steinhatchee Offshore, in Taylor and Dixie Counties, is a segment of the Gulf Of Mexico Big Bend area, southeast of Spring Warrior Offshore. As is typical for this part of Florida's Big Bend, this estuarine area is characterized by large expanses of *Spartina/Juncus* marsh, oyster bars and extensive seagrass beds." NNC for Steinhatchee Offshore were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Steinhatchee Offshore	0.046 mg/L, annual geometric mean not to be exceeded more than once in three years	0.65 mg/L, annual geometric mean not to be exceeded more than once in three years	6.5µg/L, annual geometric mean not to be exceeded more than once in three years

Horseshoe Beach Offshore

The Report to the Governor states that, "Horseshoe Beach Offshore, in Dixie County, is a segment of the Gulf Of Mexico Big Bend area, south of Steinhatchee Offshore. As is typical for this part of Florida's Big Bend, this estuarine area is characterized by large expanses of *Spartina!Juncus* marsh, oyster bars and extensive seagrass beds." NNC for Horseshoe Beach Offshore were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Horseshoe Beach Offshore	0.059 mg/L, annual geometric mean not to be exceeded more than once in three years	0.78 mg/L, annual geometric mean not to be exceeded more than once in three years	5.2 µg/L, annual geometric mean not to be exceeded more than once in three years

Cedar Keys

The Report to the Governor states that, "The Cedar Keys estuary segment includes a series of small islands surrounded by protected marine waters, situated at the northern extent of the range of the black mangrove. The Cedar Keys are located approximately [12.4 miles] south of the

Suwannee River mouth, providing important fishing and shellfish production grounds for this region. Coastal waters surrounding Cedar Keys are shallow and heavily influenced by the freshwater content and volume of flow from the Suwannee River. Concentrations of total nitrogen and total phosphorus are strongly linked to salinity in these systems." NNC for the Cedar Keys were developed using the Big Bend mechanistic model. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Cedar Keys	0.060 mg/L, annual geometric mean not to be exceeded more than once in three years	0.79 mg/L, annual geometric mean not to be exceeded more than once in three years	10.9 µg/L, annual geometric mean not to be exceeded more than once in three years

Kings Bay

Kings Bay is the headwaters of Crystal River, located in northern Citrus County. It is a shallow (3.3-9.8 ft deep) 600-acre embayment. It contains approximately 70 spring vents and was historically a freshwater system but now often has specific conductance high enough (>4,580 µmhos/cm) to be considered marine. The City of Crystal River borders Kings Bay. It was added to the Verified List of impaired waters in 2012 due to nuisance algal mats (observed in 1990, 1995, 2004-2006 and 2011). FDEP is currently developing a nutrient TMDL for nitrate, TN and TP for Kings Bay. According to the Report to the Governor, which references the TMDL analyses, the chl *a* limit is based on an 11-year reference period that achieved the designated use biological endpoint targets. The TN and TP numeric interpretations are expressed as long term averages not to be exceeded, while the chlorophyll criterion is expressed as an annual geometric mean, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Kings Bay	0.033 mg/L, Jong term average, not to be exceeded	0.29 mg/L, long term average, not to be exceeded	8.4 µg/L, annual geometric mean not to be exceeded more than once in three years

Anclote Bayou

The Report to the Governor states that, "Anclote Bayou, near Tarpon Springs, is a poorly flushed tidal waterbody adjacent to the Anclote River segment and is connected to the Anclote River by narrow channels. It was verified as impaired for nutrients based on chl *a* in 2012 and a TMDL will be developed for it in the future. It has previously been listed as impaired for DO but would not have been listed under the revised marine DO criteria (> 42 percent saturation)." NNC for Anclote Bayou were developed using a reference site approach based on the adjacent and similar Anclote River segment. Criteria are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Anclote Bayou	0.063 mg/L, annual geometric mean not to be exceeded more than once in three years	0.65 mg/L, annual geometric mean not to be exceeded more than once in three years	3.8 µg/L, annual geometric mean not to be exceeded more than once in three years

Alafia River Tidal Segment

The Alafia River Tidal Segment is approximately 7.5 miles, emptying into Hillsborough Bay in Hillsborough County. The criteria were based on TMDL analyses and the Report to the Governor states that, "A Nutrient and DO TMDL was developed for the tidal segment (WBID 1621G) in 2009. The TMDL established a TN reduction of 54 percent in the ambient concentrations that existed during the 2000 to 2006 period, which is needed to achieve an annual average TN of 0.65 mg/L. The TN load from the one NPDES facility that discharges to the tidal segment was found to be less than one percent of the total load entering the lower Alafia River, and therefore, the existing TN load discharged by the facility was applied as the Wasteload Allocation. Since TP is not a limiting nutrient in this system, the existing TP concentrations were determined to be protective of designated uses. The average of the annual TP concentrations during the 2000-2006 was 0.86 mg/L and is established as the Numeric Interpretation for TP, expressed as a long-term average not to be exceeded. The analogous Numeric Interpretation for chl *a* of 15 µg/L, which is also expressed as a long-term average not to be exceeded, is based on restoration and protection of seagrass in lower Hillsborough Bay (there is no seagrass in the tidal Alafia)."

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Alafia River Tidal Segment	0.086 mg/L, long term average of annual means not to be exceeded	0.65 mg/L, long term average of annual means not to be exceeded	15.0 µg/L, long term average of annual means not to be exceeded

Gulf Intracoastal Waterway between Roberts Bay and Lemon Bay

The Gulf Intracoastal Waterway between Roberts Bay and Lemon Bay has an authorized depth of 11-12 feet, and natural habitats present are primarily mangroves. NNC for Gulf Intracoastal Waterway between Roberts Bay and Lemon Bay were developed using a reference period approach. The Report to the Governor states that the criteria "were developed using the reference period approach by only including data from years when the biological targets were met." In order to demonstrate achievement of the criteria, the annual geometric means must not be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Gulf lntracoastal Waterway between Roberts Bay and Lemon Bay	0.253 mg/L, annual geometric mean not to be exceeded more than once in three years	0.59 mg/L, annual geometric mean not to be exceeded more than once in three years	4.0 µg/L, annual geometric mean not to be exceeded more than once in three years

Caloosahatchee River Estuary/San Carlos Bay

The marine portion of the Caloosahatchee River is a mangrove dominated, tidal river that discharges into San Carlos Bay, near Sanibel Island. Criteria were based on TMDL analyses and mechanistic modeling. As explained in the Report to the Governor, "A TMDL was developed for the marine portions of the Caloosahatchee River to reduce chl *a* to a level necessary to protect seagrass photosynthesis in San Carlos Bay, which was determined to be the most nutrient-sensitive endpoint in the system. This TMDL, derived through mechanistic modeling, required a 23 percent reduction of the TN load to the Caloosahatchee Estuary (WBIDs 3240A, 3240B, and 3240C). Because TP was found to have no relationship with chl *a* in San Carlos Bay, the existing TP levels were determined to be protective of designated uses. Chl *a* targets were derived based on the reduction scenario." Criteria are expressed as long term averages, not to be exceeded.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Upper Caloosahatchee River Estuary	0.086 mg/L, long term average not to be exceeded	0.82 mg/L, long term average not to be exceeded	4.2 µg/L, long term average not to be exceeded
Middle Caloosahatchee River Estuary	0.055 mg/L, long term average not to be exceeded	0.67 mg/L, long term average not to be exceeded	6.5 µg/L, long term average not to be exceeded
Lower Caloosahatchee River Estuary	0.040 mg/L, long term average not to be exceeded	0.50 mg/L, long term average not to be exceeded	5.6 µg/L, Jong term average not to be exceeded
San Carlos Bay	0.045 mg/L, long term average not to be exceeded	0.44 mg/L, long term average not to be exceeded	3.7 µg/L, long term average not to be exceeded

Little Hickory Bay

Little Hickory Bay is located in Collier County, separated from the Gulf of Mexico by a barrier island and characterized by mangrove and tidal habitat. Protective numeric interpretations were developed Little Hickory Bay via the reference site approach, using data from the adjacent and similar Estero Bay segment. The criteria are not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Little Hickory Bay	0.070 mg/L, annual geometric mean not to be exceeded more than once in three years	0.63 mg/L, annual geometric mean not to be exceeded more than once in three years	5.9 µg/L, annual geometric mean not to be exceeded more than once in three years

Water Turkey Bay

Water Turkey Bay is designated as an Outstanding Florida Water. It is located in Collier County and consists of mangroves and tidal back bay habitat. Criteria for Water Turkey Bay were developed using a reference site approach. Criteria for Water Turkey Bay were based on the adjacent and similar Tidal Cocohatchee River. The criteria values are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Water Turkey Bay	0.057 mg/L, annual geometric mean not to be exceeded more than once in three years	0.47 mg/L, annual geometric mean not to be exceeded more than once in three years	5.8 µg/L, annual geometric mean not to be exceeded more than once in three years

Moorings Bay

Moorings Bay is a narrow mangrove dominated bay connected to the Gulf of Mexico at Doctors Pass to the south and at Clam Bay to the north. Moorings Bay tends to have high salinity (35 PSU) and relatively clear water for a mangrove dominated system (4.3 ft Secchi). NNC for Moorings Bay were developed using the reference period approach, based on the 90th percentile prediction interval of measured values. The criteria are expressed as values not to be exceeded more than 10 percent of the time.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Moorings Bay	0.129 mg/L, annual geometric mean not to be exceeded more than 10% of the time	1.01 mg/L, annual geometric mean not to be exceeded more than 10% of the time	11.3 µg/L, annual geometric mean not to be exceeded more than 10% of the time

Intracoastal Waterway between Biscayne Bay and Lake Worth Lagoon

This section of the Atlantic Intracoastal Waterway (Atlantic ICWW) extends between Biscayne Bay and Lake Worth Lagoon, with an authorized depth of 10 feet. It is was subdivided by Broward County into five units: Palm Beach County ICWW, North Broward County ICWW, North Central Broward County ICWW, Central Broward County ICWW, and South Broward County ICWW. Natural habitats present are primarily mangroves and it is connected to the Atlantic Ocean by the Port Everglades channel, Hillsboro Inlet, and the Boca Raton Inlet.

NNC for Atlantic ICWW between Biscayne Bay and Lake Worth Lagoon were developed using the reference period approach, and parameters with eight or more years of data (four observations per year) are expressed as an annual geometric mean, not to be exceeded more than once in a three-year period (see table below). For parameters with less than 8 years of data

(Northern Broward County ICWW chl *a)*, criteria are based on the 90th percentile of measured values and expressed as not to be exceeded more than 10 percent of the time.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Palm Beach County ICWW	0.137 mg/L annual geometric mean not to be exceeded more than once in three years	1.07 mg/L annual geometric mean not to be exceeded more than once in three years	14.3 µg/L not to be exceed more than 10% of the time
North Broward County ICWW	0.070 mg/L annual geometric mean not to be exceeded more than once in three years	0.89 mg/L annual geometric mean not to be exceeded more than once in three years	3.1 µg/L annual geometric mean not to be exceeded more than once in three years
North Central Broward County ICWW	0.093 mg/L annual geometric mean not to be exceeded more than once in three years	0.99 mg/L annual geometric mean not to be exceeded more than once in three years	3.6µg/L annual geometric mean not to be exceeded more than once in three years
Central Broward ICC	0.075 mg/L annual geometric mean not to be exceeded more than once in three years	0.86 mg/L annual geometric mean not to be exceeded more than once in three years	2.7µg/L annual geometric mean not to be exceeded more than once in three years
South Broward County ICWW	0.046 mg/L annual geometric mean not to be exceeded more than once in three years	0.79 mg/L annual geometric mean not to be exceeded more than once in three years	2.2µg/L annual geometric mean not to be exceeded more than once in three years

Intracoastal Waterway between north Lake Worth Lagoon and South Loxahatchee

This segment of the Atlantic ICWW extends between north Lake Worth Lagoon and south Loxahatchee, with an authorized depth of 10 feet. Natural habitats are primarily mangroves. NNC for Atlantic ICWW between north Lake Worth Lagoon and South Loxahatchee were developed using a reference period approach. For parameters with less than 7 years of data (chl *a)*, the criterion is based on the 90th percentile prediction interval of measured values and expressed as not to be exceeded in more than 10 percent of the time. Parameters with seven or more years of data (four observations per year) are expressed as annual geometric means, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
ICWW between North Lake Worth Lagoon and Lower Loxahatchee	0.036 mg/L, annual geometric mean not to be exceeded more than once in three years	0.78 mg/L, annual geometric mean not to be exceeded more than once in three years	8.7 µg/L, not to be exceeded in more than 10% of the time

Loxahatchee River Estuary and Loxahatchee River Estuary (Southwest Fork)

No spatial description of this waterbody was provided in the Report to the Governor, but its physical characteristics were described as, "Natural communities in the Southwest Fork consist primarily of mangroves and oyster beds." NNC for Loxahatchee River Estuary and Loxahatchee

River Estuary (Southwest Fork) were developed using a reference period approach. The Report to the Governor states that criteria were derived by, "...including data only from years when the biological endpoint targets were met, and are expressed as an annual geometric mean not to be exceeded more than once in a three-year period (see table below). Note that a TMDL will be developed for this area and pursuant to Rule 62-302.531(2)(a) l.d., F.A.C., the TMDL would become the site-specific interpretation of the narrative nutrient criterion for this portion of the Loxahatchee River Estuary."

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Loxahatchee River Estuary Southwest Fork	0.052 mg/L annual geometric mean not to be exceeded more than once in three years	1.08 mg/L annual geometric mean not to be exceeded more than once in three years	12.4 µg/L annual geometric mean not to be exceeded more than once in three years

Intracoastal Waterway between Loxahatchee and St. Lucie Estuaries

This segment of the Atlantic ICWW extends between the Loxahatchee River Estuary and St. Lucie Estuary, with an authorized depth of 10 feet. Natural habitats present are primarily mangroves and it has been subdivided into a southern unit (Loxahatchee to Hobe Sound) and a northern unit (Hobe Sound to St. Lucie). NNC for Atlantic ICWW between Loxahatchee and St. Lucie Estuaries were developed using a reference period approach. Criteria are expressed as annual geometric means, not to be exceeded more than once in three years.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
ICWW between Loxahatchee up to and including Hobe Sound	0.022 mg/L annual geometric mean not to be exceeded more than once in three years	0.58 mg/L annual geometric mean not to be exceeded more than once in three years	2.7 µg/L annual geometric mean not to be exceeded more than once in three years
ICWW between Hobe Sound and St. Lucie	0.066 mg/L annual geometric mean not to be exceeded more than once in three years	0.67 mg/L annual geometric mean not to be exceeded more than once in three years	5.8 µg/L annual geometric mean not to be exceeded more than once in three years

St. Lucie Estuary

The St. Lucie River estuary is located in Martin and St. Lucie Counties and empties into the Southern Indian River Lagoon and then to the Atlantic Ocean through the St. Lucie Inlet. It is hydrologically modified by extensive man-made canal networks and salinity can fluctuate between close to 0 PSU to about 30 PSU. NNC for St. Lucie Estuary were developed using TMDL modeling. According to FDEP's Report to the Governor, "The target areal nutrient loads were considered the areal nutrient loads that would result in no more than 10 percent deviation (reduction) of the depth-limit from the maximum possible seagrass depth-limit. For all the lagoon segments, the maximum possible seagrass depth-limits were determined as the median depth-limits of the deep edge of seagrass beds when GIS shapefiles of multiple years of seagrass coverage were overlaid. Using optical models developed by the Saint John River Water

Management District, a target chl *a* concentration was calculated for each segment that was based upon achieving the seagrass depth-limits. The target chl *a* concentration was estimated as the median value of the chl *a* concentrations of those segments and years. The chl *a* target of 3.1 µg/L that was previously established for the South Indian River Lagoon for seagrass protection was used to establish chl *a* targets for all the WBIDs ... by calculating the expected chl *a* for each WBID when the nutrient loading targets are achieved. These chlorophyll numeric interpretations, which were designed to protect seagrass growth and propagation in the Indian River Lagoon, would also protect any potential seagrass in each WBID." Criteria expressed as concentrations are long term means, not to be exceeded. Criteria expressed as loads are annual averages, not to be exceeded in any year.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
St. Lucie Estuary	0.081 mg/L long term mean not to be exceeded	0.72 mg/L long term mean not to be exceeded	4.3 µg/L long term mean not to be exceeded
Manatee Creek	0.081 mg/L long term mean not to be exceeded	0.72 mg/L long term mean not to be exceeded	4.3 µg/L long term mean not to be exceeded
North Fork St. Lucie River	15,765 lbs/year annual average not to be exceeded in any year	140,134 lbs/year annual average not to be exceeded in any year	3.9 µg/L long term mean not to be exceeded
North Fork St. Lucie Estuary	11,672 lbs/year annual average not to be exceeded in any year	103,747 lbs/year annual average not to be exceeded in any year	6.6 µg/L long term mean not to be exceeded
South Fork St. Lucie Estuary	2,752 lbs/year annual average not to be exceeded in any year	24,463 lbs/year annual average not to be exceeded in any year	5.6 µg/L long term mean not to be exceeded
South Fork St. Lucie River	10,178 lbs/year annual average not to be exceeded in any year	90,471 lbs/year annual average not to be exceeded in any year	3.9 µg/L long term mean not to be exceeded

Indian River Lagoon from St. Lucie Estuary to Indian River County Line

A physical and geographic description ofthis area is provided below. NNC for Indian River Lagoon from St. Lucie Estuary to Indian River County Line were developed using the distributional statistics (reference period) approach by only including data from years when the biological targets were met. The criteria are expressed as annual geometric means not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Indian River Lagoon from St. Lucie Estuary to Indian River County Line	0.067 mg/L annual geometric mean not to be exceeded more than once in three years	0.76 mg/L annual geometric mean not to be exceeded more than once in three years	5.1 µg/L annual geometric mean not to be exceeded more than once in three years

Indian River Lagoon

The Report to the Governor states that, "The Indian River Lagoon (IRL) system is a 156 mile long estuary located along the east central Florida coast area. The system includes three interconnected sub-lagoons: the Indian River Lagoon, Banana River Lagoon, and Mosquito Lagoon. Six counties are located in the natural drainage basin of the lagoon system, including, from north to south, Volusia, Brevard, Indian River, St. Lucie, Martin, and Palm Beach Counties. Circulation in the IRL is influenced by winds, freshwater inflows from tributaries and tidal exchange via direct connections to the Atlantic Ocean. Because of the long and narrow shape of the Indian River lagoon, tidal influence from the ocean attenuates quickly with the increase of distance from ocean inlets."

Load values for Indian River Lagoon for TN and TP were adopted in a 2009 TMDL based on the Pollutant Load Reduction Goal (PLRG) created by the St. Johns River Water Management District (SJRWMD). The EPA approved these loads as hierarchy 1 site specific alternative criteria on July 29, 2013.

A statistically significant relationship was not found between chl *a* and seagrass health. Therefore, chl *a* criteria were derived using a reference period approach. Criteria for TN and TP are expressed as annual average loads, not to be exceeded in any year. Criteria for chl *a* are expressed as an annual geometric means not to be exceeded more than once in three years.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
North Indian River Lagoon	56,550 lbs/year annual average loads not to be exceeded	687,045 lbs/year annual average loads not to be exceeded	5.8 µg/L annual geometric mean not to be exceeded more than once in three years
Central Indian River Lagoon	165,193 lbs/year annual average loads not to be exceeded	962,988 lbs/year annual average loads not to be exceeded	4.8 µg/L annual geometric mean not to be exceeded more than once in three years

Sebastian River Estuary

The Report to the Governor states that, "The Sebastian River is one of the tributaries that discharges into the IRL estuary, located near the Sebastian Inlet. The Sebastian River watershed occupies an area that spans the southern Brevard County and northern Indian River County." NNC for the Sebastian River Estuary were developed based on TMDL analyses. In 2013, FDEP adopted nutrient TMDLs for the Sebastian River WBIDs requiring annual average loads that should not be exceeded in any one year. Because the nutrient targets established for the Sebastian River WBIDs are to protect the seagrass communities in the Central Indian River Lagoon, the chl *a* numeric interpretation calculated for the lagoon segment (4.8 µg/L) is also applicable to the Sebastian River Estuary. This chl *a* criterion is an annual geometric mean, not to be exceeded more than once in three years, and the TP and TN criteria are annual loading limits, not to be exceeded.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Sebastian River Estuary	0.54 lbs/acre/yr annual average not to be exceeded in any one year	2.90 lbs/acre/yr, annual average not to be exceeded in any one year	4.8 µg/L annual geometric mean not to be exceeded more than once in three years

Banana River Lagoon

According to the Report to the Governor, "As one of the three interconnected sub-lagoons in the IRL Basin, the Banana River Lagoon (BRL) is located to the east of the IRL." The watershed of the BRL is completely within Brevard County and includes WBIDs 3057A, 3057B and 3057C. Municipalities located near the BRL include Cape Canaveral, Cocoa Beach, Satellite Beach and Indian Harbor Beach. The BRL joins with the IRL in areas around the Satellite Beach and north Melbourne. The sub-lagoon also interacts with the IRL and Atlantic Ocean through the Cape Canaveral Barge Canal across the Merritt Island in an east-west direction. The salinity of the sub-lagoon is about 24 - 28 PSU and is strongly influenced by evaporation."

In 2009, FDEP adopted nutrient TMDLs for TN and TP for the BRL to address the seagrass loss. TN and TP criteria are expressed as annual loads, not to be exceeded. The EPA approved these loads as hierarchy 1 site specific alternative criteria on July 29, 2103. Chlorophyll criteria for the Report to the Governor were developed using a reference period approach. The chl a criterion is expressed as an annual geometric mean, not to be exceeded more than once in a three-year period.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Banana River Lagoon	23,253 lbs/yr annual geometric mean not to be exceeded more than once in three years	291,756 lbs/yr annual geometric mean not to be exceeded more than once in three years	6.1 µg/L annual geometric mean not to be exceeded more than once in three years

Mosquito Lagoon

According to the Report to the Governor, 'The Mosquito Lagoon is another of the three sub-lagoons in the IRL system, and includes WBIDs 2824, 2924Bl , 2924B2. Its watershed spans the southern Volusia County and the northern Brevard County. Major municipalities in the Mosquito Lagoon watershed include Ponce Inlet, New Smyrna Beach, Edgewater, Ariel, Oak Hill and Shiloh. The only connection between the lagoon and Atlantic Ocean is the Ponce De Leon inlet. Tidal amplitude attenuates very quickly as the distance from the inlet increases, from about [2.3 feet] in the northern part of the lagoon to about [0.16 - 0.33] feet in the southern part of the lagoon. Over the past 20 years, the salinity of Mosquito Lagoon remained stable and high, between 30 and 35 ppt."

NNC for Mosquito Lagoon were developed using a reference period approach. No nutrient reductions were proposed in the IRL and BRL TMDLs for the Mosquito Lagoon because the seagrass communities in the southern Mosquito Lagoon were considered healthy and there were

no impairments for nutrients. The State observed decreasing nutrient trends from 1989-2008, with 2004-2008 being the lowest point for nutrient concentrations in the 20-year record. Multiple lines of evidence were used to demonstrate that the reference period data set was minimally impacted by anthropogenic nutrient loadings. FDEP calculated a chl *a* concentration target for Mosquito Lagoon segment ML 3-4 using the IRL optic model method that was very similar to what was established using the reference period method. In addition, regression models and two general models that link TN and TP targets with water residence time were used to estimate the target TN and TP concentrations. These models supported the TN and TP targets established using the reference period approach. The final criteria adopted by FDEP are based on 2004-2008 reference period and assessed as 5-year rolling averages, not to be exceeded.

Waterbod	Total Phos horus	Total Nitro en	Chloro h II *a*
ML 1 (Ponce De Leon to Edgewater)	0.055 mg/L five year average not to be exceeded during any five-year rollin avera e eriod	0.44 mg/L mg/L five year average not to be exceeded during any five-year rollin avera e eriod	2.9 µg IL five year average not to be exceeded during any five-year rolling avera e eriod
ML2 (edgewater to Oak Hill)	0.036 mg/L five year average not to be exceeded during any five-year rollin averaae eriod	0.56 mg/L mg/L five year average not to be exceeded during any five-year rollin averaae eriod	2.3 µg /L five year average not to be exceeded during any five-year rolling averaae eriod
ML3-4 (Oak Hill to the Southern Terminus)	0.027 mg/L five year average not to be exceeded during any five-year rollin avera e eriod	0.79 mg/L five year average not to be exceeded during any five-year rollin avera e eriod	2.2 µg IL five year average not to be exceeded during any five-year rolling avera e eriod

Sykes Creek Estuary

According to the Report to the Governor, 'The Sykes Creek Estuary is located in northeast Brevard County, between the Indian River Lagoon on the west and Banana River Lagoon on the east. This small, narrow tidal system drains part of the town of Merritt Island (part of WBID 3044B), with salinities fluctuating from less than 5 PSU to more than 30 PSU."

TN and TP criteria for Sykes Creek Estuary (including Newfound Harbor) were developed based on meeting the areal nutrient limits for the Banana River Lagoon. The chl *a* criterion was determined using the reference period approach. Because the nutrient targets established for the Sykes Creek – Newfound Harbor unit are to protect the seagrass communities in the Banana River, the protective chl *a* numeric interpretation calculated for the lagoon segment, which is 6.1 µg/L, is also applicable to the Sykes Creek Estuary. The TN and TP criteria are annual averages, not to be exceeded. The chl *a* criterion is an annual geometric mean, not to be exceeded more than once in three years.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Sykes Creek Estuary	3,174 lbs/year annual average not to be exceeded in one year	30,030 lbs/year annual average not to be exceeded in one year	6.1 µg/L annual geometric mean not to be exceeded more than once in three years

Upper Halifax River Estuary

As described in the Report to the Governor, "The Halifax River is a 23 mile long tidal estuary located on the Atlantic coast near Daytona Beach in Volusia County. Ponce de Leon Inlet is its major connection to the ocean and the tidal amplitude is approximately [2.3 feet]." NNC for Upper Halifax River Estuary were developed based on TMDL analyses. The TMDL requires a 9 percent reduction in TN to achieve a chl *a* annual average target of 9 µg/L or less and the corresponding allowable annual average TN and TP values are 1.13 mg/L and 0.185 mg/L. Criteria are expressed as long term annual averages, not to be exceeded.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Upper Halifax River Estuary	0.185 mg/L long term average not to be exceeded	1.13 mg/L long term average not to be exceeded	9.0 µg/L long term average not to be exceeded

Tomoka Portion of Upper Halifax Estuary

The Report to the Governor states that, "The Tomoka Basin represents the area of confluence between the Tomoka River and the Halifax River in northern Volusia County. The segment has an area of approximately 4.3 square miles. Approximately 39 percent of the segment area is water and another 39 percent is wetlands." NNC for Tomoka Portion of Upper Halifax estuary were calculated based on a reference site approach to achieve the chl *a* target for the adjacent Upper Halifax River. Criteria are annual geometric means, not to be exceeded more than once in three years.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Tomoka Portion of Upper Halifax River Estuary (Tomoka Basin)	0.105 mg/L annual geometric mean not to be exceeded more than once in three years	1.20 mg/L annual geometric mean not to be exceeded more than once in three years	7.1 µg/L annual geometric mean not to be exceeded more than once in three years

Intracoastal Waterway South/Palm Coast
(Tomoka basin to the Pellicer Creek portion of the Matanzas River Estuary)

As described in the Report to the Governor, "The segment of the Intracoastal Waterway from the Tomoka basin to Pellicer Creek is approximately [18.6 miles] long. This section of Atlantic ICWW receives freshwater inputs from the Tomoka River and Bulow Creek and is tidally flushed through the Matanzas inlet (one of the few inlets in the state that is not artificially

stabilized). Salinities in this well-flushed system are generally around 30 PSU but drop to below 25 PSU during the spring and summer wet season. Natural habitats consist primarily of salt marsh *(Spartina/Juncus)."* NNC for Intracoastal Waterway South/Palm Coast (Tomoka basin to the Pellicer Creek portion of the Matanzas River Estuary) were developed using the mechanistic modeling from the TMDL analyses. TN and TP loadings are not to be exceeded in any year. The chi *a* criterion is a long term average, not to be exceeded.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Intracoastal Waterway South/Palm Coast (Tomoka basin to the Pellicer Creek portion of the Matanzas River Estuary)	42,907 kg/year not to be exceeded in any year	408,840 kg/year not to be exceeded in any year	4.5 µg/L long term average not to be exceeded

Pellicer Creek Estuary

As described in the Report to the Governor, "Pellicer Creek is located approximately 16 miles south of St Augustine, serving as the dividing line between Flagler and St. Johns County. The creek flows east for approximately 5 miles from the crossing at US Highway 1 to its confluence with the Matanzas estuary. This area has experienced very little development, is currently classified as an Aquatic Preserve and includes a conservation area owned by the SJRWMD. Undisturbed salt marsh borders Pellicer Creek through the entire length of its estuary. Both WBIDs that make up Pellicer Creek are classified as Class II (shellfish harvesting) waters. Pellicer Creek is tidally flushed through the Matanzas Inlet (one of the few inlets in the state that is not artificially stabilized). The average depth at this site is approximately 7.5 feet with a tidal range of about 2 feet; the bottom type is muddy sand. Salinity ranged from 0.1 to 39.3 PSU during 2012."

NNC for Pellicer Creek Estuary were developed using a distributional statistics (reference period) approach. Although Upper Pellicer Creek Estuary was placed on the 1998 303(d) list for DO and nutrients, FDEP delisted the water for nutrients and subsequently determined that the water is not impaired using the new DO criteria. Criteria were developed using the reference period approach by including data only from years when the remaining biological endpoint targets were met and based on the 90 percent prediction interval of measured values. Criteria are expressed as concentrations, not to be exceeded more than 10 percent of the time.

Waterbody	Total Phosphorus	Total Nitro.gen	Chlorophyll *a*
Pellicer Creek Estuary	0.132 mg/L, not to be exceeded more than 10% of the time	1.6 mg/L not to be exceeded more than I0% of the time	5.7 µg/L not to be exceeded more than I0% of the time

Intracoastal Waterway from north Tolomato River Estuary to St. Johns River

This section of the Atlantic Intracoastal Waterway extends from north Tolomato River Estuary to the St. Johns River, with an authorized depth of 10 feet. Natural habitats are primarily salt marsh and oysters.

NNC for the Intracoastal Waterway from north Tolomato to St. Johns River were developed using a reference period approach. TP which had 7 or more years of data (four observations per year) is expressed as an annual geometric mean, not to be exceeded more than once in a three-year period and TN and chl *a* with less than 7 years of data, were based on the 90th percentile of measured values and are expressed as not to be exceeded more than 10 percent of the time.

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
ICWW from North Tolomato River Estuary to St. Johns River	0.191 mg/L annual geometric mean not to be exceeded more than once in a three-year period	1.28 mg/L not to be exceeded more than I 0% of the time	10.3 µg/L not to be exceeded more than 10% of the time

Lower St. Johns River, Including Marine Tributaries

As described in the Report to the Governor, the Lower St. Johns River (LSJR), "...flows between the mouth of the Ocklawaha River, its largest tributary and the Atlantic Ocean, encompassing a 2,750-square-mile drainage area. Within this reach, the St. Johns River is 101 miles long and has a water surface area of approximately 115 square miles. Major centers of population within the LSJR Basin include Palatka, a city of 10,700 at the southern entrance to the basin; Green Cove Springs, a city of 4,700 at the midpoint; and the Orange Park, Middleburg, and Jacksonville metropolitan area, with a population of over 1 million, in the northern portion of the basin. The LSJR is a sixth-order, darkwater river estuary, and along its length, it exhibits characteristics associated with riverine, lake and estuarine aquatic environments. The marine portion extends from the Interstate 295 Bridge north and east to the Atlantic Ocean, near Mayport."

NNC for the Lower St. Johns River, including marine tributaries were determined based on a TMDL that established the allowable loadings of TN and TP to the freshwater and marine portions of the LSJR that would restore the river. The EPA approved these loads as hierarchy 1 site specific alternative criteria on June 21, 2013. According to FDEP, "The chlorophyll numeric interpretation represents a long-term annual average based upon a TMDL scenario simulation over the 1995 through 1999 period. As such, the chlorophyll criterion is expressed as a long term annual average not to be exceeded."

Waterbody	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Lower St. Johns River, Including Marine Tributaries	412,720 kg/yr not to be exceeded	1,376,855 kg/yr not to be exceeded	5.4 µg/L long term annual average not to be exceeded

St. Marys River Estuary

As described in the Report to the Governor, "The St. Marys River Estuary is a predominately swamp-fed riverine system along the Florida-Georgia border in Northeast Florida. The system originates in the Okefenokee Swamp and is dominated by floodplains and extensive marsh systems, with no seagrass. Land use in the basin consists primarily of forest and wetlands, covering approximately 85 percent of the land area in Florida and 82 percent in Georgia. This system is significantly tidally influenced (6.6 feet tidal range) with poor drainage due to its low topography. A portion of the St. Marys River Estuary, from the Jolly River to the Atlantic Ocean, lies within state and federal managed (protected) lands. Due to the extensive floodplains and wetlands, the small amount of urban development is concentrated in the coastal area between the Amelia River and Atlantic Ocean, primarily in Fernandina Beach."

FDEP is working on a mechanistic model to generate protective numeric interpretations for the St. Marys River system. While refinement of the mechanistic model for this system is ongoing, protective numeric interpretations were developed for this report using the reference period approach by including data only from years when the biological targets were met. Parameters with seven or more years of data (four observations per year) are expressed as annual geometric means not to be exceeded more than once in a three-year period. For parameters with less than seven years of data, criteria were based on the 90 percent prediction interval of measured values and are expressed as not to be exceeded more than 10 percent of the time.

Waterbodv	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
Upper St. Marys	0.087 mg/L annual geometric mean not to be exceeded more than once in three years	1.24 mg/L mg/L annual geometric mean not to be exceeded more than once in three years	1.4 µg IL annual geometric mean not to be exceeded more than once in three years
Middle St. Marys	0.101 mg/ annual geometric mean not to be exceeded more than once in three years	1.04 mg/L annual geometric mean not to be exceeded more than once in three years	6.5 µg IL not to be exceeded in more than 10% of samples
Lower St. Marys	0.I 35 mg/L not to be exceeded in more than I0% of the time	0.95 mg/L not to be exceeded in more than 10% of the time	2.8 µg IL not to be exceeded in more than I0% of the time

EPA Action

The EPA has determined that the provisions in Section 5 of Chapter 2013-71 related to the new narrative criteria provide an appropriate approach for the waters covered by these provisions. FDEP has provided support for the criteria in the Report to the Governor, demonstrating that the NNC contained in the Report to the Governor are based on a sound scientific rationale and will protect the uses designated by the State for the estuarine and marine waters covered by this rule. The EPA concludes that the criteria provided in Section 5 of Chapter 2013-71, Laws of Florida (Senate Bill 1808) and in the submittal made pursuant to Chapter 2013-71, Laws of Florida (Senate Bill 1808) are based on scientifically defensible methods and protect the uses designated by the State in these estuarine and marine areas and, therefore, are consistent with the CWA, 40

CFR Part 131 and the EPA's 304(a) guidance on nutrient criteria. The criteria are approved by the EPA pursuant to CWA section 303(c).

Conclusion

Florida's new narrative criterion set out in Section 5 of Chapter 2013-71establishes unimpaired conditions as the narrative criterion applicable to certain estuarine and coastal (offshore) waters. As set out above, the EPA expects that unimpaired conditions will protect designated uses. As set out below, the EPA is approving FDEP' s calculation of the numeric values that represent the unimpaired conditions as protective of designated uses in those waters.

FDEP's approaches to numeric nutrient criteria derivation described above use sensitive indicators of nutrient pollution, are indicative of the health of the system as a whole and are representative of the aquatic life and the recreation use protection – consistent with the interim goal of the CWA at 101(a)(2) which, "...provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water ...". The criteria meet the requirements of 131.11(a) in that they are based on sound science and are protective of the designated uses of the waters to which they apply. FDEP's narrative criteria regarding downstream protection (62-302.531(4), F.A.C.) will apply to all waters covered in this decision document.

In accordance with section 303(c) of the CWA, the new or revised water quality standards addressed in this document are hereby approved as consistent with the CWA and 40 CFR Part 131.

SEP 2 6 2013

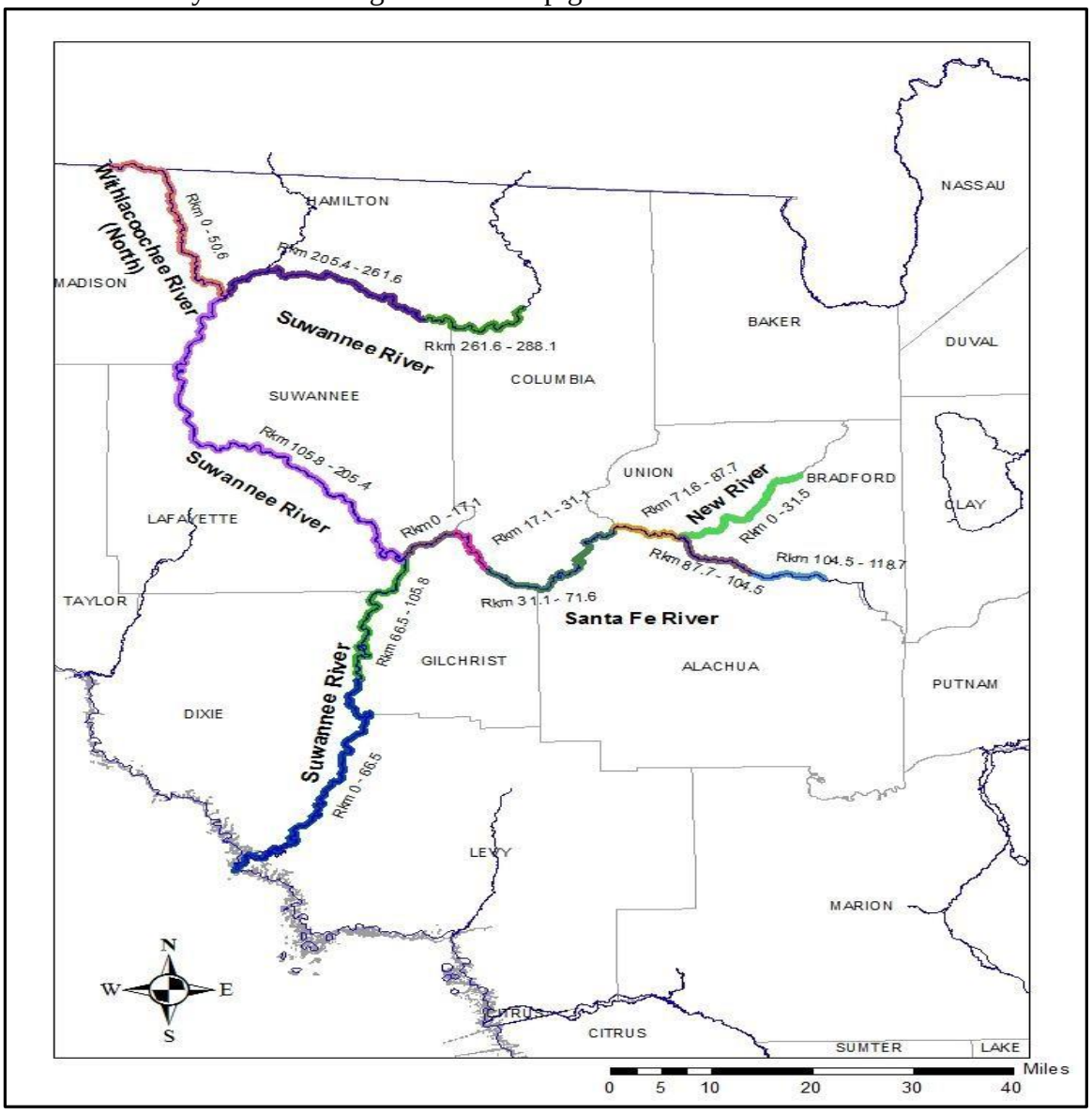
Date

Jame iattina
Director, Water Management Division

ATTACHMENT E

Information Related to Location of Endangered Species to Which Alternative DO criteria from the Regional Criteria Apply and Determining Whether DO Values Have Decreased Below the Baseline Distribution

The map below shows the portion of the Suwannee, Santa Fe, New, and Withlacoochee North Rivers utilized by the Gulf Sturgeon and oval pigtoe mussel.



To evaluate whether DO values have decreased below the baseline distribution, it is recommended that a) no more than 10 percent of the DO measurements be below the 10th percentile of the existing data distribution for that river segment, b) no more than 50 percent of the measured values to be below the median of the existing data distribution for that river

segment. The 10th percentiles and median DO values for each of the affected river segments are provided in **Table 3**.

When assessing these waters in the future, compliance with both the 10th percentile and median DO values will be evaluated using a binomial hypothesis test at the 80 percent and 90 percent confidence levels necessary to place a water segment on the Planning List and Verified Lists, respectively, for TMDL development. The use of the binomial hypothesis test is consistent with the assessment for other water quality parameters conducted under Chapter 62-303, F.A.C. The number of exceedances required to have 80 percent and 90 percent confidence that more than 10 percent of the measurements are below the applicable 10th percentile value are provided in Chapter 62-303, F.A.C., Tables 1 and 3, respectively. The number exceedances required to have 80 percent and 90 percent confidence that more than 50 percent of the measurements are below the applicable median value for sample sizes up to 419 are provided in **Table 4**.

Species	River System	River km	10th Percentile	Median
Oval Pigtoe Mussel	New River	0 - 31.5	52.5	67.7
Gulf Sturgeon	Santa Fe River	0 - 17.1	50.9	66.0
Gulf Sturgeon	Santa Fe River	17.1 - 31.1	47.6	74.0
Gulf Sturgeon	Santa Fe River	31.1 - 71.6	30.7	53.6
Oval Pigtoe Mussel	Santa Fe River	71.6 - 87.7	59.5	73.0
Oval Pigtoe Mussel	Santa Fe River	87.7 - 104.5	46.1	69.2
Oval Pigtoe Mussel	Santa Fe River	104.5 - 118.7	37.1	69.3
Gulf Sturgeon	Suwannee River	0 - 66.5	58.9	76.7
Gulf Sturgeon	Suwannee River	66.5 - 105.8	60.2	74.6
Gulf Sturgeon	Suwannee River	105.8 - 205.4	53.3	69.0
Gulf Sturgeon	Suwannee River	205.4 - 261.6	41.1	66.4
Gulf Sturgeon	Suwannee River	261.6 - 288.1	65.5	78.2
Gulf Sturgeon	Withlacoochee River	0 - 50.6	54.9	68.2

Table 3. Baseline DO conditions for portions of the Suwannee, Santa Fe, New, and Withlacoochee Rivers utilized by the Gulf Sturgeon and Oval Pigtoe Mussel. The 10th percentile and median percent DO saturation values were determined from data collected from 1991 through 2011.

Table 4. Minimum number of samples not meeting applicable median criterion needed to put a water on the planning list with 80% confidence and on verified list with 90% confidence that more than 50% of measurements are below median.

Number of Samples	*Number of exceedances required for 80% confidence that more than 50% of measurements are below median*	*Number of exceedances required for 90% confidence that more than 50% of measurements are below median*	*Number of Samples*	*Number of exceedances required for 80% confidence that more than 50% of measurements are below median*	*Number of exceedances required for 90% confidence that more than 50% of measurements are below median*
10	7	8	76	43	45
11	8	9	77	43	45
12	8	9	78	44	46
13	9	10	79	44	46
14	10	10	80	45	47
15	10	11	81	45	47
16	11	12	82	46	48
17	11	12	83	46	48
18	12	13	84	47	49
19	12	13	85	47	49
20	13	14	86	48	50
21	13	14	87	48	50
22	14	15	88	49	51
23	15	16	89	49	52
24	15	16	90	50	52
25	16	17	91	51	53
26	16	17	92	51	53
27	17	18	93	52	54
28	17	18	94	52	54
29	18	19	95	53	55
30	18	20	96	53	55
31	19	20	97	54	56
32	19	21	98	54	56
33	20	21	99	55	57
34	20	22	100	55	57
35	21	22	101	56	58
36	22	23	102	56	58
37	22	23	103	57	59
38	23	24	104	57	60
39	23	24	105	58	60
40	24	25	106	58	61
41	24	26	107	59	61
42	25	26	108	59	62
43	25	27	109	60	62
44	26	27	110	60	63
45	26	28	111	61	63
46	27	28	112	61	64
47	27	29	113	62	64
48	28	29	114	62	65
49	28	30	115	63	65
50	29	31	116	64	66
51	30	31	117	64	66
52	30	32	118	65	67
53	31	32	119	65	67
54	31	33	120	66	68
55	32	33	121	66	69
56	32	34	122	67	69
57	33	34	123	67	70
58	33	35	124	68	70
59	34	35	125	68	71
60	34	36	126	69	71
61	35	37	127	69	72
62	35	37	128	70	72
63	36	38	129	70	73
64	36	38	130	71	73
65	37	39	131	71	74
66	37	39	132	72	74
67	38	40	133	72	75
68	38	40	134	73	75
69	39	41	135	73	76
70	40	41	136	74	76
71	40	42	137	74	77
72	41	42	138	75	78
73	41	43	139	75	78
74	42	44	140	76	79
75	42	44	141	76	79

Table 4. Continued.

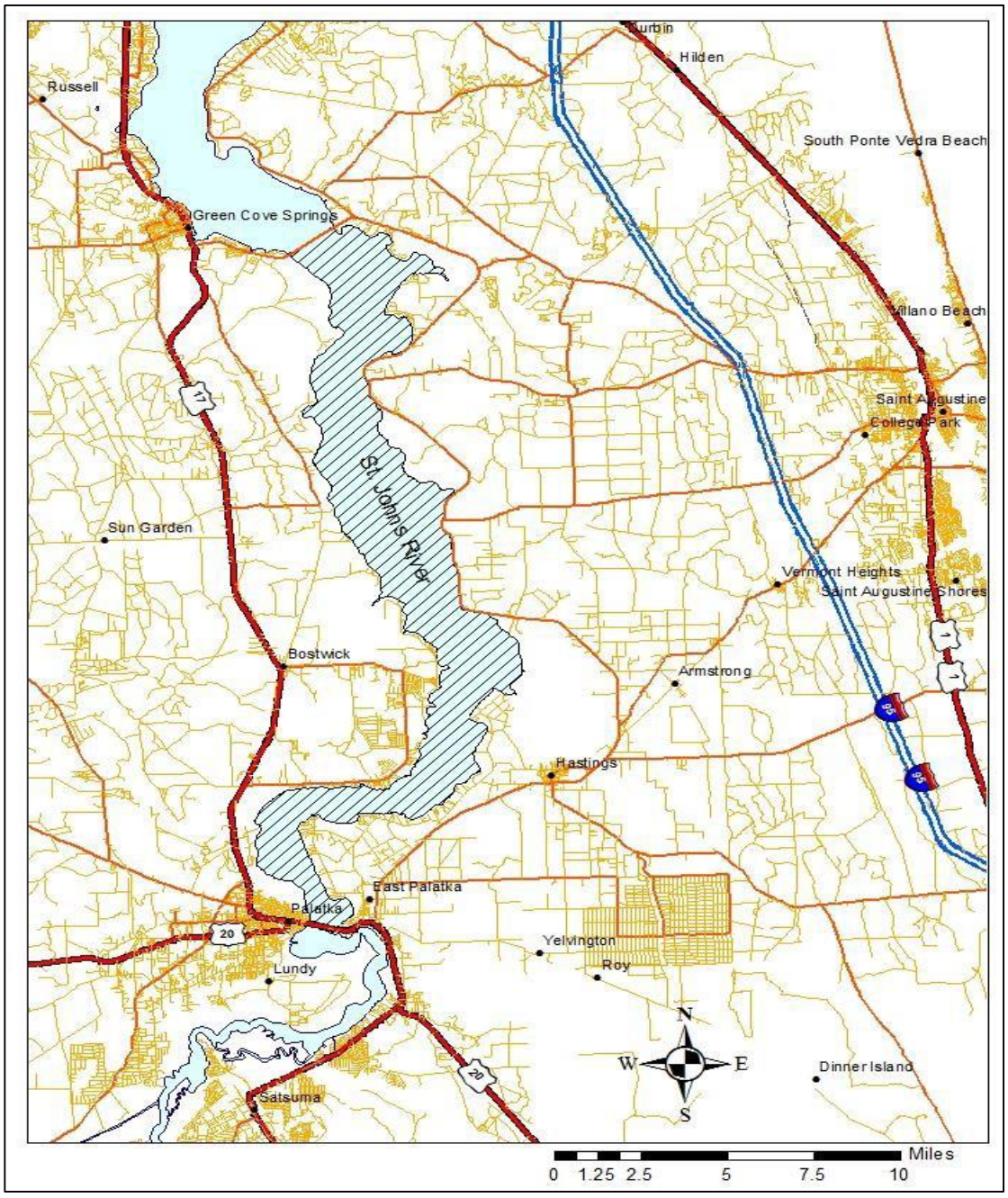
Number of Samples	*Number of exceedances required for 80% confidence that more than 50% of measurements are below median*	*Number of exceedances required for 90% confidence that more than 50% of measurements are below median*	*Number of Samples*	*Number of exceedances required for 80% confidence that more than 50% of measurements are below median*	*Number of exceedances required for 90% confidence that more than 50% of measurements are below median*
142	77	80	211	113	116
143	78	80	212	113	116
144	78	81	213	114	117
145	79	81	214	114	117
146	79	82	215	115	118
147	80	82	216	115	118
148	80	83	217	116	119
149	81	83	218	116	119
150	81	84	219	117	120
151	82	84	220	117	121
152	82	85	221	118	121
153	83	85	222	118	122
154	83	86	223	119	122
155	84	86	224	119	123
156	84	87	225	120	123
157	85	88	226	120	124
158	85	88	227	121	124
159	86	89	228	121	125
160	86	89	229	122	125
161	87	90	230	122	126
162	87	90	231	123	126
163	88	91	232	123	127
164	88	91	233	124	127
165	89	92	234	124	128
166	89	92	235	125	128
167	90	93	236	125	129
168	90	93	237	126	129
169	91	94	238	126	130
170	91	94	239	127	130
171	92	95	240	128	131
172	93	95	241	128	131
173	93	96	242	129	132
174	94	96	243	129	132
175	94	97	244	130	133
176	95	97	245	130	134
177	95	98	246	131	134
178	96	99	247	131	135
179	96	99	248	132	135
180	97	100	249	132	136
181	97	100	250	133	136
182	98	101	251	133	137
183	98	101	252	134	137
184	99	102	253	134	138
185	99	102	254	135	138
186	100	103	255	135	139
187	100	103	256	136	139
188	101	104	257	136	140
189	101	104	258	137	140
190	102	105	259	137	141
191	102	105	260	138	141
192	103	106	261	138	142
193	103	106	262	139	142
194	104	107	263	139	143
195	104	107	264	140	143
196	105	108	265	140	144
197	105	108	266	141	144
198	106	109	267	141	145
199	106	110	268	142	145
200	107	110	269	142	146
201	107	111	270	143	147
202	108	111	271	143	147
203	108	112	272	144	148
204	109	112	273	144	148
205	110	113	274	145	149
206	110	113	275	145	149
207	111	114	276	146	150
208	111	114	277	147	150
209	112	115	278	147	151
210	112	115	279	148	151

Table 4. Continued.

Number of Samples	Number of exceedances required for 80% confidence that more than 50% of measurements are below median	Number of exceedances required for 90% confidence that more than 50% of measurements are below median
280	148	152
281	149	152
282	149	153
283	150	153
284	150	154
285	151	154
286	151	155
287	152	155
288	152	156
289	153	156
290	153	157
291	154	157
292	154	158
293	155	158
294	155	159
295	156	160
296	156	160
297	157	161
298	157	161
299	158	162
300	158	162
301	159	163
302	159	163
303	160	164
304	160	164
305	161	165
306	161	165
307	162	166
308	162	166
309	163	167
310	163	167
311	164	168
312	164	168
313	165	169
314	165	169
315	166	170
316	166	170
317	167	171
318	168	171
319	168	172
320	169	172
321	169	173
322	170	173
323	170	174
324	171	175
325	171	175
326	172	176
327	172	176
328	173	177
329	173	177
330	174	178
331	174	178
332	175	179
333	175	179
334	176	180
335	176	180
336	177	181
337	177	181
338	178	182
339	178	182
340	179	183
341	179	183
342	180	184
343	180	184
344	181	185
345	181	185
346	182	186
347	182	186
348	183	187
349	183	187

Number of Samples	Number of exceedances required for 80% confidence that more than 50% of measurements are below median	Number of exceedances required for 90% confidence that more than 50% of measurements are below median
350	184	188
351	184	189
352	185	189
353	185	190
354	186	190
355	186	191
356	187	191
357	187	192
358	188	192
359	188	193
360	189	193
361	189	194
362	190	194
363	191	195
364	191	195
365	192	196
366	192	196
367	193	197
368	193	197
369	194	198
370	194	198
371	195	199
372	195	199
373	196	200
374	196	200
375	197	201
376	197	201
377	198	202
378	198	202
379	199	203
380	199	203
381	200	204
382	200	205
383	201	205
384	201	206
385	202	206
386	202	207
387	203	207
388	203	208
389	204	208
390	204	209
391	205	209
392	205	210
393	206	210
394	206	211
395	207	211
396	207	212
397	208	212
398	208	213
399	209	213
400	209	214
401	210	214
402	210	215
403	211	215
404	211	216
405	212	216
406	212	217
407	213	217
408	214	218
409	214	218
410	215	219
411	215	219
412	216	220
413	216	221
414	217	221
415	217	222
416	218	222
417	218	223
418	219	223
419	219	224

The portion of the St. Johns River between the U.S. Highway 17 Bridge in Palatka north to the Shands Bridge (U.S. Highway 16) bridge near Green Cove Springs (shown by hatching) requiring alternative DO criteria to assure potential sturgeon spawning habitat is protected.



ATTACHMENT F

Maps for the associated waterbodies listed below can be found at the following State website:

http://www.dep.state.fl.us/water/wqssp/ssac-list.htm

Water Body and Classification (with link to map of SSAC area)	**Type I Site Specific Alternative Criteria For SSACs with seasonal limits, the default criteria in Rule 62-302.530, F.A.C., apply at other times of the year.**	**County(s)**
Amelia River Segment between the northern mouth of the river and the A1A crossing. Class III.	Dissolved Oxygen of 3.2 mg/L as a minimum during low tide from July 1 through September 30, and not below 4.0 mg/L during all other conditions. The 24-hr. average shall be greater than or equal to 5.0 mg/L. Applies July 1 through Sept. 30th.	Nassau
Crystal River Canal System Portions of the Main Channel, East and West Canals. Class III.	Dissolved Oxygen of 0.1 mg/L as a minimum. Applies year round.	Citrus
Everglades Protection Area As defined in Section 373.4592(2)(i), F.S., and includes Water Conservation Areas 1, 2A, 2B, 3A, 3B, the Arthur R. Marshall National Wildlife Refuge, and Everglades National Park. Class III. **Note:** this SSAC applies to fresh waters within the described area.	Dissolved Oxygen shall be evaluated based on an algorithm that uses sample collection time and water temperature to model the observed natural sinusoidal diel cycle and seasonal variability. This model provides a lower DO limit (DOL) for an individual monitoring station and is described by the equation: $DOL_i = [- 3.70 - \{1.50 \bullet \sin(2\pi/1440 \bullet t_i) - (0.30 \bullet \sin[4\pi/1440 \bullet t_i])\} + 1/(0.0683 + 0.00198 \bullet C_i + 5.24 \bullet 10^{-6} \bullet C_i^2)] - 1.1$ Where: $\mathbf{DOL_i}$ = lower limit for the i^{th} annual DO measurement in milligrams per liter (mg/L) $\mathbf{t_i}$ = sample collection time in minutes (Eastern Standard Time) since midnight of the i^{th} annual DO measurement $\mathbf{C_i}$ = water temperature associated with the i^{th} annual DO measurement in °C	Palm Beach Broward Dade Monroe

	Compliance with the SSAC is assessed based on a comparison between the annual average measured DO concentration and the average of the corresponding DO limits specified by the above equation. Applies year round.	
Fenholloway River From river mile -0.1 to river mile 3.5. Class III(m).	Iron - No more than 10% of the iron measurements in this reach of the river shall be above 1.06 mg/L. Applies year round.	Taylor
Hillsboro Canal Tributary Belle Glade - canal receiving wastewater discharge from Sugar Cane Growers Cooperative Labor Camp #3 (NW corner Section 11, Range 37 East, Township 44 South, on NE side of Hillsboro Canal). Class IV.	Dissolved Oxygen of 2.6 mg/L annual average with 0.3 mg/L as a minimum. Applies year round.	Palm Beach
Holmes Creek From the confluence with Little Creek to the SR 277 Creek crossing. Class III.	Dissolved Oxygen of 4.0 mg/L as a minimum from June 1 through September 30.	Jackson Holmes
Myrtle Slough SSAC 1 - In sections 19, 29, 30, 31, and 32, Township 40 south, Range 24 east. SSAC 2 - Between stations 1 and 3 as identified on the image.	SSAC 1 - Dissolved Oxygen of 2.5 mg/L, applicable June through September. SSAC 2 - Dissolved Oxygen level of 1.5 mg/L annual average with normal daily, seasonal and climatic fluctuations including natural excursions to a minimum of 0.1 mg/L. Applies year round.	Charlotte
Peace Creek Canal Lake Wales SSAC –South from SR 60 to the western section line of Section 15, Township 30 South, Range 27 East. Class III. Winter Haven SSAC - Downstream from SR 60	Lake Wales SSAC - Dissolved Oxygen of 3.0 mg/L as a minimum. Applies year round. Winter Haven SSAC - Dissolved Oxygen of 3.0 mg/L, maintaining normal daily and seasonal fluctuations. Applies 3 miles downstream from SR 60 for June, July and September, and 5 miles downstream during August.	Polk

Spring Creek Headwater to River Mile 2.5. Class III.	Dissolved Oxygen of 2.5 mg/L as a minimum. Applies year round.	Taylor
Thomas Creek Including tributaries, from its headwaters to the downstream location where Thomas Creek becomes predominantly marine (1500 mg/L chloride concentration), at N 30.56603 latitude, W -81.72888 longitude. Class III (f).	Annual average Dissolved Oxygen of 2.6 mg/L, with no more than 10 percent of the individual Dissolved Oxygen measurements below 1.6 mg/L on an annual basis.	Duval Nassau
Turkey Creek (including tributaries) to the confluence with the South Prong of the St. Marys River, and the South Prong of the St. Marys River (including tributaries) from its headwaters to U.S. Route 90. Class III.	Annual average Dissolved Oxygen of 3.0 mg/L, with no more than 10% of the individual Dissolved Oxygen measurements below 1.35 mg/L on an annual basis. Applies year round.	Baker
Withlacoochee River (Northern) (River Miles 19-25). Class III.	Dissolved Oxygen of 4.0 mg/L as a minimum from June 1 through October 30.	Hamilton

Water Body and Classification	**Type II Site Specific Alternative Criteria For SSACs with seasonal limits, the default criteria in Rule 62-302.530, F.A.C., apply at other times of the year.**	**County(s)**
Fenholloway River (Transparency-Phytoplankton) From river mile -0.1 to river mile 3.5. Class III(f & m).	The annual average compensation depth for photosynthetic activity for phytoplankton shall not be decreased greater than 44.3 percent from background conditions as determined by an annual average compensation depth of at least 0.66 meters at river mile 0.53 (station F06). This value must be based on a minimum of 12 measurements during times when the average flow at Cooey Island Bridge at river mile 7.15 (USGS gage 02325532) measures less than 200 cubic feet per second. Applies year round.	Taylor

Fenholloway River (Nearshore) Coastal waters (Apalachee Bay) as spatially defined by the coordinates (83° 49' 29.95" W, 29° 59' 38.70" N), (83° 45' 3.61" W, 29° 57' 22.10" N), (83° 47' 23.50" W, 29° 54' 5.01" N), and (83° 51' 45.47" W, 29° 56' 25.71" N). Class III(m).	The average of the growing season (May 1-October 31) average light (as photosynthetically active radiation between 400 and 700m) at 1 m depth at stations F10 (83° 47' 6.60" W, 29° 57' 4.20" N) and F11 (83° 48' 27.00" W, 29° 57' 38.40" N) shall be 36 percent or more of surface values based on a minimum of 12 measurements and will only apply during years in which the growing season average flow at Hampton Springs Bridge (USGS gage 02325000 near Perry) is less than or equal to 60 cubic feet per second (after subtracting flows from permitted point sources). Applies year round.	Taylor
Orange County Eastern Water Reclamation Facility discharge wetlands. Class III(f).	PH of not greater than 8.5 standard units. Applies year round.	Orange
St. Johns River Marine portions of the Lower St. Johns River and its tributaries between Julington Creek and the mouth of the river. Class III(m).	Dissolved Oxygen not less than a minimum concentration of 4.0 mg/L, and a Total Fractional Exposure not greater than 1.0 over an annual evaluation period as defined by the following equation: Total Fractional Exposure = (Days between 4.0-<4.2 mg/L÷16 day Max) + (Days between 4.0-<4.2 mg/L÷21 day Max) + (Days between 4.0-<4.2 mg/L÷30 day Max) + (Days between 4.0-<4.2 mg/L÷47 day Max) + (Days between 4.0-<4.2 mg/L÷55 day Max) or alternate view $\left(\text{Total Fractional Exposure}\right) = \frac{\text{Days between } 4.0 - < 4.2\ \text{mg/L}}{16\ \text{day Max}} + \frac{\text{Days between } 4.2 - < 4.4\ \text{mg/L}}{21\ \text{day Max}} +$ $\frac{\text{Days between } 4.4 - < 4.6\ \text{mg/L}}{30\ \text{day Max}} + \frac{\text{Days between } 4.6 - < 4.8\ \text{mg/L}}{47\ \text{day Max}} + \frac{\text{Days between } 4.8 - < 5.0\ \text{mg/L}}{55\ \text{day Max}}$	Duval Clay St. Johns

	where the number of days in an interval is based on the daily average Dissolved Oxygen concentration. Applies year round.	