STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

FLORIDA WILDLIFE FEDERATION, INC.; SIERRA CLUB, INC.; CONSERVANCY OF SOUTHWEST FLORIDA, INC.; ENVIRONMENTAL CONFEDERATION OF SOUTHWEST FLORIDA, INC.; AND ST. JOHNS RIVERKEEPER, INC.,

Petitioners,

v. CASE NO. 11- _____

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION,

Respondent.
_____/

PETITION TO INVALIDATE EXISTING AND PROPOSED RULES OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Pursuant to section 120.56, Florida Statutes, the Florida Wildlife Federation, Inc.; the Sierra Club, Inc.; the Conservancy of Southwest Florida, Inc.; the Environmental Confederation of Southwest Florida, Inc.; and St. Johns Riverkeeper, Inc. respectfully petition to invalidate certain existing and proposed rules of the Florida Department of Environmental Protection. The existing rule establishes an "imbalance criterion" for the purpose of determining whether the quality of Florida's Class I, Class II, and Class III waters, and the beneficial uses made of those waters, are being harmed by phosphorus and nitrogen nutrients found in urban and agricultural fertilizers, animal and human wastes, and other sources. The imbalance rule is enumerated 62-302.530(47)(b) and reads:

> In no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural populations of fauna or flora.

The proposed rules implement the imbalance criterion and set forth how the Florida Department of Environmental Protection ("FDEP") will determine that the imbalance criterion has been violated and under what circumstances corrective actions must be taken. Those proposed rules are contained in Chapter 62-302, Florida Administrative Code ("Surface Water Quality Standards Rules") and Chapter 62-303, Florida Administrative Code ("Identification of Impaired Surface Waters Rule").

Petitioners challenge the existing and proposed rules because, contrary to FDEP's claims, the rules are not designed to protect state waters from the adverse impacts of nutrient over-enrichment. Instead, these rules go so far as to prevent a finding of impairment due to nutrients until the waterbody is covered with nutrient-fueled toxic blue-green algae (cyanobacteria). Copies of the challenged rules are attached to the petition as Exhibits A, B, and C. In support of this petition, petitioners state:

I. IDENTIFICATION OF THE PARTIES

1. Florida Wildlife Federation ("the Federation") is a Florida not-for-profit corporation with its principal place of business at 2545 Blairstone Pines Drive, Tallahassee, Florida, 32314. It is a membership-based organization with approximately 14,000 members throughout Florida. The organization's mission includes the preservation, management, and improvement of Florida's water resources and its fish and wildlife habitat. The Federation has a long history of representing its members in administrative, state, and federal litigation brought to preserve and protect Florida's rivers, lakes, estuaries, and coastal waters.

2. Sierra Club, Inc. ("Sierra Club") is a non-profit public benefit corporation with its principal place of business in San Francisco, California. Sierra Club consists of members living throughout the state and around the nation. There are approximately 30,000 members living in

the State of Florida. The Sierra Club represents the interests of its members in state and federal litigation, public policy advocacy, administrative proceedings, and before state, local, and federal lawmakers. The Sierra Club is very involved in advocacy regarding issues related to preserving wetlands, improving water quality, and stopping factory farm runoff. All of these activities support Sierra Club's mission to explore, enjoy, and protect the wild places of the earth and educate and enlist humanity to protect and restore the quality of the natural and human environment.

3. The Conservancy of Southwest Florida, Inc. ("the Conservancy") is a Florida non-profit corporation with its primary place of business in Naples, Florida. There are approximately 6,000 Conservancy members residing throughout Florida. The Conservancy is a grassroots organization devoted to protecting the land, water, and wildlife of Southwest Florida. The Conservancy works to protect both the quality and quantity of Southwest Florida's water resources through scientific research, education, advocacy, monitoring, litigation, and preservation.

4. The Environmental Confederation of Southwest Florida ("ECOSWF") is a Florida non-profit corporation with its primary place of business in Sarasota, Florida. ECOSWF has approximately 50 members consisting of other organizations and individuals living in Southwest Florida. ECOSWF is a regional coalition which focuses its efforts on protecting the conservation interests of Southwest Florida, including Charlotte, Collier, DeSoto, Lee, Manatee, and Sarasota Counties. ECOSWF accomplishes its goals through active stewardship of Southwest Florida's wildlife, water, soil and air, through citizen participation and education, through legal challenges aimed at preserving Florida's waters, and by its support of preservation and conservation of land and waters.

5. St. Johns Riverkeeper, Inc. ("Riverkeeper") is a Florida non-profit membership-based corporation with its primary place of business in Jacksonville, Florida. Riverkeeper is dedicated to the protection, preservation, and restoration of the ecological integrity of the St. Johns River watershed for current users and future generations. Riverkeeper monitors the environmental quality of the St. Johns River and its tributaries. It has over 1,000 members who use and enjoy the waters of the St. Johns River for boating, fishing, and observing birds and other wildlife in the St. Johns River watershed. Riverkeeper organizes regular boat trips for its members and citizens to learn more about the river and how they can participate in its management.

II. DATE OF PUBLICATION OF PROPOSED ACTION

6. The notice of intent to issue the proposed rules was published by FDEP on November 10, 2011. This petition is filed within twenty-one (21) days from the date of this notice and thus is timely filed pursuant to section 120.56(2)(a), Florida Statutes.

III. PETITIONERS' SUBSTANTIAL INTERESTS

7. Chapter 403, Florida Statutes, states:

> (1) The pollution of the air and waters of this state constitutes a menace to public health and welfare; creates public nuisances; is harmful to wildlife and fish and other aquatic life; and impairs domestic, agricultural, industrial, recreational, and other beneficial uses of air and water.
>
> (2) It is declared to be the public policy of this state to conserve the waters of the state and to protect, maintain, and improve the quality thereof for public water supplies, for the propagation of wildlife and fish and other aquatic life, and for domestic, agricultural, industrial, recreational, and other beneficial uses and to provide that no wastes be discharged into any waters of the state without first being given the degree of treatment necessary to protect the beneficial uses of such water.
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> * * * * *
>
> (5) It is hereby declared that the prevention, abatement, and control of the pollution of the air and waters of this state are affected with a public interest, and the provisions of this

> act are enacted in the exercise of the police powers of this state for the purpose of protecting the health, peace, safety, and general welfare of the people of this state.
>
> (6) The Legislature finds and declares that control, regulation, and abatement of the activities which are causing or may cause pollution of the air or water resources in the state and which are or may be detrimental to human, animal, aquatic, or plant life, or to property, or unreasonably interfere with the comfortable enjoyment of life or property be increased to ensure conservation of natural resources; to ensure a continued safe environment; to ensure purity of air and water; to ensure domestic water supplies; to ensure protection and preservation of the public health, safety, welfare, and economic well-being; to ensure and provide for recreational and wildlife needs as the population increases and the economy expands; and to ensure a continuing growth of the economy and industrial development.

§ 403.021, Fla. Stat.

8. Consistent with its statutory mandate, FDEP has found that excessive nutrients are a severe water quality problem and that its policy is to protect sensitive waters from further nutrient pollution and to preserve those waters with existing low nutrient concentrations:

> 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.

Ch. 62-302.300(13).

9. The subject of the challenged rules is nutrient water quality criteria which must support the safe use of Florida's surface waters for potable water supply, for recreational uses, for shellfish propagation, and for the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. The challenged rules are the means by which the state shall determine whether it has failed its statutory duty to protect, maintain, and improve water quality as it relates to nutrients, and thus the rule implements Chapter 403.

10. Because each of the Petitioners' general scope of interest and activity is the protection, preservation, and enhancement of Florida's waters and the habitat and recreational uses those waters support, the subject of the challenged rules is within each of the Petitioners' general scope of interest and activity.

11. A substantial number of the members of the Federation, of the Sierra Club, of the Conservancy, of ECOSWF, and of Riverkeeper use and enjoy waters throughout the state for a variety of purposes, including, but not limited to, wading, walking, swimming, canoeing, sailing, sport boating, wildlife observation, photography, personal and commercial research, sport and commercial fishing, and collecting aquatic life for personal and commercial consumption.

12. Those members' ability to use Florida waters for these purposes is being substantially affected by the imbalance criterion ("in no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural fauna and flora") – and will be substantially affected by the proposed rules which implement that criterion – because the imbalance criterion sets the level of violation at the point at which harm to recreational uses of the waters has already occurred, as evidenced by increasing numbers of nutrient-fueled toxic blue-green algae outbreaks and other algae outbreaks in rivers, lakes, springs, and estuaries which substantially and adversely affect the members use and enjoyment of Florida's waters.

13. Blue-green algae (also known as cyanobacteria) produce "dermatoxins" that can create severe dermatitis and are known tumor promoters; "neurotoxins" which interfere with nerve cell function; and "hepatotoxins" which attack the liver. Exposure to blue-green algal toxins ("cyanotoxins") through ingestion, dermal contact or inhalation can cause rashes, skin and eye irritation, allergic reactions, gastrointestinal upset, serious illness, and even death.

14. Cyanotoxins can contaminate drinking water supplies, endanger public health, and result in the shutdown of drinking water plants that rely on surface water bodies as their drinking water source.

15. FDEP has admitted that the frequency and severity of toxic blue-green algae outbreaks is increasing in Florida lakes, rivers, streams, reservoirs, estuaries, and coastal waters and that excessive nutrients are the cause of these outbreaks.

16. From mid-July to mid-October 2005, major portions of the St. Johns River suffered a toxic blue-green algae outbreak which was dubbed "The Green Monster" for the fluorescent green slime created on the surface of the water. Toxin levels were recorded at 50 – 140 times above the World Health Organization's suggested recreational limits and many people reported respiratory problems, raw throats, and irritated eyes. Another outbreak in 2010 contaminated over 100 miles of the River and produced a 100-mile-long fish kill in which the fish died from internal bleeding linked to cyanotoxins.

17. From mid-August to mid-October 2005, almost the entirety of the Caloosahatchee River in Southwest Florida suffered a massive toxic blue-green algae outbreak following excessive releases of nutrient laden water from Lake Okeechobee. Beginning in mid-June 2008, another toxic blue-green algae outbreak occurred north of the Franklin Lock on the Caloosahatchee River. The Olga Drinking Water Treatment Plant, which obtains its source water from the Caloosahatchee and which provides drinking water for 30,000 people, was forced to shut down as a result of this outbreak. Toxic blue-green algae outbreaks also occurred in the summers of 2010 and 2011. In 2011, the Olga Drinking Water Treatment Plant again had to be shut down and the River, which smelled like an open septic tank, was posted with signs reading:

WARNING: ALGAE ALERT – STAY OUT OF WATER. NO DRINKING BY HUMANS OR ANIMALS. NO EATING FISH. The signs also warned against fishing and swimming.

18. From August through September 2005, the St. Lucie River and estuary suffered a massive toxic blue-green algae outbreak that also was linked to releases of nutrient polluted and algae-ridden waters from Lake Okeechobee. Toxin levels in the St. Lucie River and estuary during this bloom were 300 times above drinking water limits recommended by the World Health Organization, and 60 times above suggested recreational limits.

19. Florida's estuaries and coastal waters have been similarly plagued with outbreaks of various types of algae stimulated by nutrient over-enrichment, including both microscopic algae that become so thick that they discolor the water, and noxious visible "macroalgae," which overgrow coral reef ecosystems and block the light that beneficial seagrasses need to survive.

20. Scientists have also reported on the presence of neurotoxic cyanotoxins, at concentrations ranging up to levels that are considered to present a long-term human health hazard, in Florida Bay, Biscayne Bay, and the Caloosahatchee River. These neurotoxins are capable of concentrating or "biomagnifying" up the food chain, entering the human diet, and potentially triggering neurodegenerative diseases such as Amyotrophic Lateral Sclerosis (ALS) and Alzheimer's.

21. Because the imbalance criterion is reactive, *i.e.*, an imbalance in flora and fauna has to occur *before* the criterion is violated, the state's waters repeatedly have experienced unchecked increases in forms of nitrogen pollution, especially a form of nitrogen called nitrate, that have fueled toxic algae outbreaks to the point that a substantial number of Florida's springs and spring runs are now covered with thick algal mats of *Lyngbya wollei* (*Plectonema wollei*).

This organism is a type of blue-green algae known to produce neurotoxins, dermatoxins, and other toxins that can cause severe neurological and dermatological damage in humans.

22. From June 2006 through August 2006, three visitors to Wakulla Springs, once hailed as the "crown jewel" of North Florida, reported skin irritations after swimming in the spring. One of the visitors experienced burning and itching after coming out of the water and the other two broke out in rashes, all thought to be caused by elevated levels of cyanotoxins from *Lyngbya wollei*. According to the Florida Department of Health's Harmful Algal Bloom Illness-Related Surveillance System, seven more incidents at Wakulla Springs were reported between 2007 and 2011. Between June 2002 and August 2006, over 20 similar incidents were reported at Ichetucknee Springs, located northwest of Fort White. According to the Florida Department of Health's surveillance system, another 20 incidents were reported at Ichetucknee Springs between 2007 and 2011. Similar incidents were reported in seven other springs around the state during the 2007 to 2011 time period.

23. Petitioners' members' ability to use and enjoy Florida waters for the purposes set forth in paragraphs 10 to 14 have been substantially affected by the imbalance criterion which has allowed the partial or complete degradation of many of the waters that they use and (used to) enjoy, and will be substantially more adversely affected by the proposed rules that implement this imbalance criterion because those rules perpetuate the harms caused by the imbalance criterion.

24. For example, the proposed rules require nutrient pollution in springs, rivers, lakes, and estuaries to increase to the point where the nutrient-stimulated algae have reached nuisance levels or hinder reproduction of threatened or endangered species before restoration will be required. At that point, "restoration," if it occurs at all, is a decades-long process exemplified by

the continued degraded state of Lake Okeechobee, which has been the subject of decades of "restorative" actions which have, as yet, accomplished virtually no improvement in water quality in the Lake. The Lake has become known for huge outbreaks of toxic cyanobacteria.

25. The State's inability to restore water quality in Lake Okeechobee has also resulted in the increased degradation of its downstream waters including the now toxic algae-ridden St. Lucie and Caloosahatchee Rivers.

26. Petitioners and their respective members who use and enjoy these water bodies and coastal areas, and other rivers, lakes, springs, and coastal waters around the state which are adversely affected by nutrient pollution, have been, are being, and will continue to be substantially affected and increasingly affected unless the imbalance criterion and the proposed rules which implement that criterion are declared invalid.

IV. DISPUTED ISSUES OF MATERIAL FACT

27. Whether the nutrient imbalance criterion ("in no case shall nutrient concentrations of a water body be altered so as to cause an imbalance in natural populations of flora and fauna") protects all Class I, Class II, and Class III designated uses of Florida's fresh and estuarine waters from the harms caused by pollution from inadequately treated sewage, fertilizers, and manure.

28. Whether the proposed rules' implementation of the imbalance criterion protects all Class I, Class II, and Class III designated uses of Florida's fresh and estuarine waters from the harms caused by pollution from inadequately treated sewage, fertilizers, and manure.

29. Whether nutrient pollution due to inadequately treated sewage, fertilizers, and manure causes and contributes to algae outbreaks in Florida's fresh and estuarine waters.

30. Whether algae outbreaks adversely affect the use of Florida's fresh and estuarine waters for recreation by making waters unsuitable for swimming, wading, boating, canoeing, and

aesthetic enjoyment derived from viewing due to algal toxins (and the fear of such toxins) that can cause minor to severe skin rashes and respiratory impacts, and algal hepatotoxins and neurotoxins that can cause serious human disease and even death.

31. Whether blue-green algae outbreaks adversely affect the use of Florida's fresh and estuarine waters for recreation by making waters unsuitable for swimming, wading, boating, canoeing, and aesthetic enjoyment derived from viewing due to the fact that the algae can produce a smell like decaying meat, vomit, or an open septic tank.

32. Whether toxic algae outbreaks fueled by nutrient pollution adversely affect the use of Florida's fresh and estuarine waters for recreational fishing because they kill fish either directly through algal toxins, or indirectly by suppressing the amount of dissolved oxygen in the water necessary to support fish.

33. Whether toxic algae outbreaks adversely affect the use of Florida's fresh and estuarine waters for recreational fishing because algal toxins in aerosol form can cause adverse respiratory impacts.

34. Whether blue-green algae outbreaks (both toxic and nontoxic) adversely affect the use of Florida's Class I waters for potable water supplies by creating taste-and-odor problems in the water supply.

35. Whether toxic blue-green algae outbreaks adversely affect the use of Florida's Class I waters for potable water supplies because they contaminate finished drinking water with algal toxins.

36. Whether blue-green algae outbreaks (both toxic and nontoxic) adversely affect the use of Florida's Class I waters for potable water supplies because they contribute to production of disinfection byproducts that have been linked to cancers.

37. Whether toxic blue-green algae outbreaks adversely affect the use of Florida's Class I waters for potable water supplies by forcing the shutdown of drinking water plants.

38. Whether toxic blue-green algae outbreaks adversely affect the use of Florida's Class I waters for potable water supplies by increasing treatment costs.

39. Whether a criterion which requires that algae have proliferated in a waterbody to nuisance levels before a violation is found prevents impairment of the designated use of Florida's fresh and estuarine waters for recreation including boating, swimming, wading, and aesthetic enjoyment derived from viewing.

40. Whether a criterion which requires that algae have proliferated in a waterbody to nuisance levels before a violation is found prevents impairment of freshwaters of the state for public water supplies.

41. Whether FDEP failed to consider the impacts of nutrients on recreational uses when interpreting the imbalance criterion.

42. Whether FDEP failed to consider the impacts of nutrients on potable water supply uses when interpreting the imbalance criterion.

43. Whether FDEP has failed to consider the impacts of toxins created by nutrient-fueled algae outbreaks when interpreting the imbalance criterion.

44. Whether a "site specific numeric interpretation" of the imbalance criterion which fails to set numeric criteria for nutrients (such as total phosphorus or total nitrogen) that can be measured at a point source discharge point for regulatory purposes, is capable of preventing the impairment of fresh and estuarine waters of the state for public water supplies, for the propagation of fish and wildlife, and for recreational uses.

45. Whether FDEP's means of measuring compliance with numeric interpretations of the narrative standard (establishment of an annual geometric mean that needs to be met only two out of three years) prevents impairment of recreational uses of the water given that toxic algae outbreaks occur intermittently but can render the water body totally unusable for recreation during that time period.

46. Whether FDEP's means of measuring compliance with numeric interpretations of the imbalance criterion (establishment of an annual geometric means based on four data points that must be met only two out of three years) prevents impairment of water supply uses of the water body.

47. Whether FDEP's means of measuring an adverse trend in nutrient levels prevents impairment of recreational uses of a waterbody where the trend analysis relies on annual geometric means based on four data points.

48. Whether FDEP's means of measuring an adverse trend in nutrient levels prevents impairment of designated uses by nutrients where the waterbody only fails the adverse trend test if it is confirmed that it also fails the imbalance criterion.

49. Whether FDEP's means of measuring compliance with numeric levels of nutrients ("thresholds") prevents impairment of designated uses by nutrients where the waterbody only fails the numeric levels if it is confirmed that it also fails the imbalance criterion.

50. Whether a numeric interpretation of the imbalance criterion for springs protects public health or prevents impairment of recreational uses where the numeric interpretation of the imbalance criterion would encourage growth of the blue-green alga *Lyngbya wollei* from which more than 70 biologically active compounds have been isolated, many of which are toxic and/or carcinogenic and therefore inhibit recreational use of the resource.

51. Whether a numeric interpretation of the imbalance criterion for springs protects public health and prevents impairment of recreational uses where the numeric criteria adopted by FDEP would limit growth of a nontoxic alga (*Vaucheria*) but would exceed the level at which maximum growth of a toxic blue-green alga (*Lyngbya wollei*) occurs.

52. Whether the Stream Condition Index (a biological assessment that examines only macroinvertebrates (*e.g.*, insects, insect larva, snails, aquatic worms)) is a valid means of determining whether recreational uses of streams are being met or whether they have been impaired by nutrients, wherein the examination of macroinvertebrates can indicate a stream is "healthy" but the stream is actually infested with toxic algae.

53. Whether the Stream Condition Index is a scientifically valid tool to determine whether a waterbody is violating nutrient criteria where FDEP has made no attempt to determine the relationship between this index and numeric nutrient thresholds.

54. Whether the Stream Condition Index is a scientifically valid tool to determine whether a waterbody is violating nutrient criteria where the index is poorly correlated with nutrient pollution.

55. Whether the choice of a Stream Condition Index score of 40 as evidence that the stream is not impaired (by nutrients or other stressors) is scientifically valid where that value conflicts with the recommendations of many of the index's developers.

56. Whether the Stream Condition Index score of 40 will result in a high number of streams appearing to "pass" a nutrient water quality test when the streams are, in fact, actually impaired.

57. Whether the Lake Vegetation Index, a biological assessment that subjectively examines only vegetation in a lake, is a scientifically valid means of determining site-specific numeric criteria for nutrients.

58. Whether a waterbody that is given a "healthy" evaluation with a high Lake Vegetation Index can actually be failing to support its designated uses due to nutrient pollution.

59. Whether the proposed rules protect Florida's turbid and shaded surface waters from degradation by nutrient pollution when only photosynthetic organisms (algae, vegetation) are considered as response variables and whether FDEP's failure to consider heterotrophic eubacteria as a response variable protects recreational uses in these waters.

60. Whether averaging of data over the course of a year to determine compliance is a scientifically valid way of determining compliance with nutrient criteria where the primary impairment caused by the nutrients is from algae outbreaks which are generally seasonal or more short-term in nature.

61. Whether averaging of data over the course of a year, with only one sample required during the season when most algae outbreaks occur, is a scientifically valid way of determining compliance with nutrient criteria.

62. Whether the exclusion of observational or numeric data obtained during droughts and floods is a scientifically valid way of determining whether recreational uses are being impaired by nutrients where waterbodies are more susceptible to toxic algae outbreaks during droughts, and where toxic algae outbreaks are stimulated by extreme rain events that wash high levels of nutrients into the waterbody, and where droughts and floods are typical conditions in Florida.

63. Whether it can take decades to restore a waterbody that has reached the point where it fails the imbalance criterion.

64. Whether many of Florida's estuaries suffer from repeated and continuing algae outbreaks fueled by nutrient pollution, rather than maintaining "healthy" levels of suspended algal biomass as chlorophyll *a*.

65. Whether many of Florida's estuaries are currently receiving substantial, anthropogenic nutrient pollution inputs; whether FDEP's use of recent water quality data as "reference period" conditions is scientifically valid as reference conditions; whether these estuaries are in fact meeting their designated uses with respect to maintaining healthy water-column microalgal chlorophyll *a*; and whether maintaining existing nutrient conditions is protective.

66. Whether the proposed rules protect estuaries from harmful algal overgrowth when only the abundance of phytoplankton (that is, the water-column chlorophyll concentration of the suspended microscopic algae) is considered in response to nutrient pollution.

67. Whether the proposed rules protect the downstream uses of waters from nutrients delivered by upstream waters where FDEP relies solely upon the imbalance criterion which has been shown to be wholly ineffective in preventing the adverse affects of nutrient pollution.

68. Whether there are distinct rainy and dry seasons in the part of Florida incorporated within the boundaries of the Southwest Florida Water Management District and the western part of the South Florida Water Management District.

69. Whether many streams in this region historically experienced periods of no flow during the extended October to April dry season.

70. Whether streams in this region now also experience periods of no flow during the dry season as a result of groundwater depletion caused by extraction for public water supplies, phosphate mining, and flood irrigation for agriculture.

71. Whether streams which flow during only the rainy season of the year support aquatic life that is adapted to that environment and support recreational uses such as boating, fishing, and swimming.

72. Whether such streams are the receiving waters from regulated discharges of pollutants resulting from phosphate mining.

73. Whether these streams deliver substantial loads of nutrients to downstream waters including estuaries during the wet season.

74. Whether these streams are now defined as "intermittent" streams under FDEP's proposed rules such that they would no longer have to meet any water quality criteria for nutrients.

75. Whether the "special protection" statutorily mandated for Florida's Outstanding Florida Waters was provided where the rules set nutrient criteria for these waters, and determine how nutrient impairment will be determined for these waters, without acknowledging they are Outstanding Florida Waters and without setting the criteria at the historic baseline nutrient conditions of these waters.

76. Whether the "special protection" statutorily mandated for Florida's Outstanding Florida Waters was provided where the rules set nutrient criteria for these waters without even acknowledging that the level to which they must be restored is their historic baseline nutrient conditions.

77. Whether the data used to remove a waterbody from the list of impaired waters is equivalent to the data required to place a waterbody on that list where there is no requirement that data be collected to conduct a trend analysis to determine whether the waterbody is in fact no longer impaired.

V. ULTIMATE FACTS WARRANTING REVERSAL

The Existing Nutrients Rule (the Imbalance Criterion) Has Resulted in the Degradation and Impairment of Florida Waters By Urban and Agricultural Fertilizers and Animal and Human Wastes

78. In 1979, FDEP found that nutrient pollution was a severe water quality problem impacting Florida's waters:

> 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.

Ch. 62-302.300(13).

79. The nutrient imbalance criterion that FDEP adopted in 1979 was intended to address this problem.

80. In 2001, over 20 years later, an FDEP employee testified that nutrients are "probably the most widespread and pervasive cause of environmental disturbance in Florida" and that they represent "the biggest challenge [that needs to be] overcome in protecting aquatic systems."

81. As of 2008, FDEP reported to the United States Environmental Protection Agency ("EPA") that in Florida over 1000 miles of streams are impaired (failing to meet their designated uses), 1000 miles of rivers and streams, 350,000 acres of lakes, and 900 square miles of estuaries are impaired (failing to meet their designated uses for recreation, fishing, potable water supply, aquatic life support) as a result of nutrients.

82. In 2008, FDEP also reported to EPA that "a relatively new issue of concern with regards to Florida water quality is the presence of the toxigenic blue-green algae called cyanobacteria and their production of cyanotoxins."

83. According to FDEP:

> Freshwater harmful algal blooms (HABs) are increasing in frequency, duration, and magnitude and therefore may be a significant threat to surface drinking water resources and recreational areas. Abundant populations of blue-green algae, some of them potentially toxigenic, have been found statewide in numerous lakes and rivers. In addition, measured concentrations of cyanotoxins—a few of them of above the suggested guideline levels—have been reported in finished water from some drinking water facilities.

84. According to FDEP numerous types of potentially toxigenic blue-green algae are found in Florida water bodies:

> Potentially toxigenic cyanobacteria have been found statewide, including river and stream systems such as the St. Johns, Caloosahatchee, Peace, and Kissimmee Rivers. The Cyanobacteria Survey Project (1999–2001), managed by the Harmful Algal Bloom Task Force at FMRI (now the Florida Fish and Wildlife Research Institute), indicated that the species of *Microcystis, Anabaena,* and *Cylindrospermopsis* were dominant, while *Aphanizomenon, Planktothrix, Oscillatoria,* and *Lyngbya* were also observed statewide but not as frequently. Cyanotoxins (microcystins, cylindrospermopsin, and anatoxin-a) were also found statewide. A quota of 25 samples was collected in each water management district.

85. Also according to FDEP, nutrients are a contributing cause of algae outbreaks which occur under typical Florida hydrological and climatological conditions:

> Blooms of cyanobacteria are due, in most part, to high nutrient loads; slow-moving waters; and hot, humid, and stagnant conditions. Cyanotoxins are naturally produced chemicals that can cause liver, brain, and skin toxicity. Several cyanotoxins, namely microcystins and the lyngbyiatoxins, have been implicated as tumor promoters (Williams, April 14, 2004). Cyanobacteria were on the EPA's 1998 Contaminant Candidate List (CCL), which is used to prioritize research and make regulatory determinations. Since the CCL was developed, the EPA has placed a number of the microcystin toxins on its "Unregulated Contaminant Monitoring Rule – List 3" for a more detailed investigation into these toxins' occurrence and health impacts. Although no formal decision has been made to date, this nationwide monitoring would take place after 2005.

86. This degradation of Florida waters occurred because the nutrient imbalance criterion, which requires a showing of impairment of designated uses before the criterion is deemed violated, has not and cannot protect Florida's waters from the adverse impacts of nutrient pollution or prevent the impairment of recreational, water supply, and aquatic life support uses of Florida's Class I, Class II, and Class III waters as a result of nutrient pollution.

Florida's Failure to Protect the Designated Uses of Florida's Waters from the Adverse Impacts of and the Impairment By Nutrient Pollution

87. State establishment of water quality standards is a requirement of the Clean Water Act.

88. First, a state must designate the use or uses of a waterbody; second, it must establish water quality criteria which must be designed to determine which waterbodies are safe enough to support their designated use.

89. Third, if a waterbody is failing to support its designated uses, the state must compile a list identifying waterbodies that are "impaired," *i.e.*, not safe enough to use as designated, and must establish a pollutant loading limit that would effectively restore water quality to the point that all designated uses are attained.

90. This action is part of a sequence of enforcement actions that were brought to compel FDEP to fulfill the obligations which flow from its delegation as the state entity empowered and obligated to carry out the duties and obligations set forth in the Clean Water Act.

91. In 1998, an enforcement action was brought against the United States Environmental Protection Agency ("EPA") in federal court which asserted that because FDEP had wholly failed to comply with its obligations with regard to impaired waters that the Clean Water Act imposed upon EPA the mandatory duty to carry out this Clean Water Act obligation.

92. A Consent Decree was entered in that case which set a priority of establishing restorative pollutant loading limits for waterbodies known to be severely degraded by nutrient pollution such as Lake Okeechobee and its northern tributaries.

93. In response to this enforcement action, the State of Florida finally elected to develop its own impaired waters program.

94. Despite the development of this program it became evident over the course of the next decade that nutrient pollution related problems were accelerating – not diminishing.

95. That fact produced a second enforcement action against EPA.

96. As with Clean Water Act impaired waters obligations, states are obligated to establish water quality criteria at levels that will safely support the waterbody's designated uses. Should EPA determine that the state's criteria fails to meet this necessary requirement of the Clean Water Act, then EPA is obligated to establish the criteria itself, unless the State establishes the criteria first.

97. The second action sought to compel EPA to develop a numeric nutrient criterion (with specific numeric limits on concentrations of nutrients beyond which a violation of water quality criteria would occur) to replace Florida's narrative nutrient criterion (the imbalance criterion) so that Florida would have a preventative – rather than simply a restorative – program.

98. The second action was based on EPA's determination in the Clean Water Action Plan of 1998 that nutrient pollution was a severe and increasing water quality problem and that narrative nutrient criteria (like Florida's imbalance criterion) was a fundamental cause of the states' failure to address this problem. The Plan required states to develop numeric limits with definable limits to replace the ineffective narrative nutrient criteria by 2004 or else EPA would set the limits for them.

99. Ultimately, that legal action resulted in a settlement agreement in which EPA agreed to carry out its Clean Water Act obligation establish numeric nutrient criteria for Florida's freshwaters within 15 months unless the state set numeric nutrient limits first.

100. When it became evident that legal actions taken by governmental and private entities to prevent EPA from complying with the settlement agreement and developing numeric nutrient criteria for Florida state waters were failing, the state decided to develop the criteria themselves. Hence, this rulemaking.

101. However, what FDEP has *not* done is adopt numeric nutrient criteria which set clear limits beyond which a violation has taken place and beyond which impairment occurs. Instead, it has created a labyrinthine maze with a series of escape hatches that allow nutrient pollution to continue unabated unless there is proof that the imbalance criterion has been violated as evidenced by nuisance algae outbreaks.

The Proposed Rules Do Not Establish Nutrient Water Quality Criteria That Protect State Waters from the Adverse Effects of Nutrient Pollution

102. The proposed rules do not replace the imbalance criterion; they "implement" the imbalance criterion which has been proven to be wholly ineffective in preventing degradation of waters from nutrient pollution from both point sources such as sewage treatment plants and municipal stormwater systems and non-point sources such as agricultural runoff.

103. The proposed rules require waterbodies to be degraded by nutrients to the point where they are infested with toxic algae blooms before a finding can be made that the waterbody is impaired by nutrients.

104. The proposed rules substantially rely upon biological indices for determining violations of nutrient water quality criteria and impairment due to nutrient pollution even though those indices have little correlation with nutrient pollution and can produce a finding that a

waterbody is healthy when in fact it is impaired – as evidenced by growths of toxic blue-green algae and other alga.

105. The proposed rules use scientifically invalid measures of compliance with numeric interpretations of the imbalance criterion because the primary impairments are caused by nutrient fueled algae outbreaks which are seasonal in nature and abetted by droughts and floods yet the rules measure compliance and impairment with yearly averages of data and exclude observational and numeric data obtained during times when algae outbreaks are most likely to occur.

106. The proposed rules assume current conditions in Florida's estuaries represent "healthy" conditions despite the fact that many of Florida's estuaries suffer from repeated and continuing algae outbreaks which are fueled by significant, and in some cases substantial, anthropogenic nutrient pollution inputs.

107. The proposed rules assume that Outstanding Florida Waters can have nutrient criteria identical to non-Outstanding Florida Waters and ignore the fact that compliance and impairment in Outstanding Florida Waters must be measured against historic nutrient baseline conditions.

108. The proposed rules allow degradation by nutrient pollution to the point where it is highly questionable, based on the experiences with Lake Apopka and Lake Okeechobee, whether the waterbody can ever be restored to the point where it supports all of its designated uses.

VI. EXISTING AND PROPOSED RULES ALLEGED TO BE INVALID AND GROUNDS FOR THEIR INVALIDITY

109. Existing rule 62-302.530(47)(b) is an invalid exercise of delegated legislative authority because:

a. The rule is arbitrary and capricious because it illogically and irrationally attempts to protect Florida's Class I, Class II, and Class III waters from adverse impacts of nutrient pollution with a criterion which is reactive rather preventative, *i.e.,* by the time there is evidence the criterion has been violated or the designated uses impaired, the harm the criterion is supposedly design to prevent has already occurred.

b. The rule is arbitrary and capricious because it is no longer supported by necessary facts in that since the time the criterion was adopted the overwhelming evidence is that the rule has utterly failed to fulfill its purpose which was to protect Florida's waters from the adverse impacts of nutrient pollution.

c. The rule contravenes section 403.021(2), Florida Statutes, which requires the protection, maintenance, and improvement of the quality of Florida's waters for public water supplies, for propagation of fish and wildlife, and for recreational beneficial uses because the imbalance criterion fails to prevent impairment of these designated uses as a result of excessive nutrient pollution.

d. The rule contravenes section 403.021(10), Florida Statutes, which requires that FDEP ensure that existing and potential drinking water resources are free from harmful quantities of contaminants because the imbalance criterion allows the proliferation of nutrient fueled toxic blue-green algae blooms that produce cyanotoxins that contaminate drinking water supplies before the water is deemed impaired for nutrient pollution.

110. Proposed rule 62-302.200(36) which defines "streams" for the purpose of interpreting the narrative nutrient criterion (the imbalance criterion) and which excludes "intermittent" streams from the protections afforded by ambient water quality criteria is an invalid exercise of delegated legislative authority because:

a. The proposed rule modifies and contravenes section 403.061(11), Florida Statutes, because the statutory definition of “waters” includes “all waters or bodies of waters” which includes waters that flow in streams during the rainy season of the year, and section 403.61(11), Florida Statutes, which obligates FDEP to set ambient water quality criteria for the state as a whole or for any part thereof, does not authorize FDEP to exclude types of waters from the protections afforded by the protections of ambient water quality criteria.

b. The proposed rule is arbitrary and capricious because it is irrational and not supported by logic or necessary facts in that waters that flow during the rainy season of the year are used by aquatic life and wildlife and by the public for recreational uses and those designated uses are not being protected if FDEP fails to establish water quality criteria designed to support those uses.

c. The proposed rule is arbitrary and capricious because it is irrational, and not supported by logic or necessary facts in that waters that flow during the rainy season of the year are just as subject to nutrient pollution as waters that flow year round and, like year round waters, can deliver a substantial nutrient load to downstream waters.

111. Proposed rules 62-302.531(2)(b)&(c), 62-302.800, 62-302.531(6), 62-302.532, 62-302.531(1) and 62-302.531(1) are invalid exercises of delegated legislative authority because:

a. Proposed rule 62-302.531(1) applies the narrative criteria which is for reasons stated in paragraph 109, an invalid exercise of delegated legislative authority.

b. The proposed rules contravene section 403.021(11), Florida Statutes, which requires water quality standards to be reasonably established and applied to take into account the variability occurring in nature and to recognize the statistical variability

inherent in sampling and testing procedures because the measure of compliance for numeric criteria is based on averaging of data with as little as four data points per year, fail to recognize that algae outbreaks are seasonal in nature, and fail to require that measurements be taken when adverse impacts such as algae outbreaks are most likely to occur.

c. The proposed rules are arbitrary and capricious because compliance with numeric criteria is measured by compliance in only two out of three years based on annual geometric means of as few as four data points which is inadequate to assure that designated beneficial uses are protected as required by section 403.021(2), Florida Statutes.

112. Proposed rules 62-302.531(2)(b)&(c), 62-302.800, 62-302.531(6), 62-302.532, 62-302.531(1) and 62-302.531(1) are invalid exercises of delegated statutory authority because they contravenes section 403.021(2), Florida Statutes which require FDEP to protect, maintain, and restore the quality of Florida's waters.

113. Proposed rules 62-302.531(2)(b)&(c), 62-302.800, 62-302.531(6), 62-302.532, 62-302.531(1) and 62-302.531(1) are arbitrary and capricious and contravene section 403.021(2), Florida Statutes, because they rely upon biological indices for determining violations of nutrient water quality criteria due to nutrient pollution even though those indices have little correlation with nutrient pollution and can produce a finding that a waterbody is healthy when in fact it is impaired – as evidenced by growths of toxic blue-green algae and other alga.

114. Proposed rules 62-302.531(2)(b)&(c), 62-302.800, 62-302.531(6), 62-302.532, 62-302.531(1) and 62-302.531(1) are arbitrary and capricious because they use scientifically invalid measures of compliance with numeric interpretations of the imbalance criterion because

the primary adverse impacts are caused by nutrient fueled algae outbreaks, which are seasonal in nature and abetted by droughts and floods, yet the rules measure compliance and impairment with yearly averages of data and exclude observational and numeric data obtained during times when algae outbreaks are most likely to occur.

115. The proposed rules set out in 62-302.532 are arbitrary and capricious and contravene section 403.021(2), Florida Statutes, because they assume current conditions in Florida's estuaries represent "healthy" conditions despite the fact that many of Florida's estuaries suffer from repeated and continuing algae outbreaks which are fueled by significant, and in some case substantial, anthropogenic nutrient pollution inputs.

116. Proposed rules 62-302.531(2)(b)&(c), 62-302.800, 62-302.531(6), 62-302.532, 62-302.531(1) and 62-302.531(1) are arbitrary and capricious and contravene section 403.061(27), Florida Statutes, because they assume that Outstanding Florida Waters can have nutrient criteria identical to non-Outstanding Florida Waters and ignore the fact that compliance and impairment in Outstanding Florida Waters must be measured against historic nutrient baseline conditions.

117. Proposed rules 62-302.531(2)(b)&(c), 62-302.800, 62-302.531(6), 62-302.532, 62-302.531(1) and 62-302.531(1) are arbitrary and capricious and contravene section 403.021(2), Florida Statutes because they allow degradation by nutrient pollution to the point where it is highly questionable, based on the experiences with Lake Apopka and Lake Okeechobee, whether the waterbody can ever be restored to the point where it supports all of its designated beneficial uses.

118. Proposed rule 62-302.531(2)(b) is arbitrary and capricious and contravenes section 403.021(2), Florida Statutes, because:

a. The springs criteria are so high as to allow the growth of toxic algae; and,

b. The springs criteria do not protect public health and/or protect the springs' most sensitive use which is human recreational use.

119. Proposed rules 62-303.330, 62-303.350, 62-303.351, 62-303.352, 62-303.353 and 62-303.354 are arbitrary and capricious and contravene section 403.021(2), Florida Statutes, because:

a. They rely entirely on the narrative criteria which is, for the reasons set out in paragraph 109, arbitrary and capricious and contrary to section 403.021(2);

b. They use an arbitrary and capricious sequence of biological assessments which require irrationally stringent proof of impairment and nutrient pollution causation.

c. They require the use of the geometric mean which is a scientifically invalid method of locating central tendency in data sets of the character contemplated by the proposed rules and which systematically understates true pollution levels.

d. They exclude consideration of events that are associated with toxic algae outbreaks such as droughts which concentrate pollutants and floods or hurricanes which transport large amounts of pollutants from sources that would not reach the receiving waters under normal conditions.

e. They allow algae to develop to the point that they become a "nuisance" instead of protecting the beneficial use for recreation.

120. Proposed rule 62-303.390 is arbitrary and capricious and contravenes section 403.021(11), Florida Statutes, section 403.021(1), Florida Statutes and section 403.021(2), Florida Statutes, because:

a. It excludes “confounding” variables which are part of the natural variations that the statute requires to be considered under the statute.

b. It requires the use of the geometric mean which is irrational for the reason explained in paragraph 119(c).

c. The processes of the Study list prevent the listing as impaired of waters that are not meeting their designated beneficial uses.

d. When a site specific criterion is established, the rule requires only consideration of the effects on downstream waters and not the effect on the waterbody itself.

121. Proposed rule 62-303.430 is arbitrary and capricious and contravenes section 403.021(2), Florida Statutes, because:

a. The required biological assessments are not valid indicators of the suitability of the waterbody to meet its designated use because they fail to consider human recreational uses.

b. Even when a waterbody fails all the biological assessments, it cannot be placed on the verified list without an additional determination that the waterbody violates the narrative standard, which standard is invalid for the reasons set out in paragraph 109 above.

122. Proposed rule 62-303.450 is arbitrary and capricious and contravenes section 403.021(2), Florida Statutes and section 403.021(11), Florida Statutes, because:

a. The chlorophyll *a* measurement standard fails to identify macro-algae outbreaks which are not detected using that test.

b. The use of the narrative imbalance standard is invalid for the reasons set out in paragraph 109 above.

c. The data requirements are irrationally stringent in that they will prevent the verification of impairment in numerous waterbodies that are not suitable for their designated beneficial uses.

d. The requirement of the use of the geometric mean is invalid for the reasons set out in paragraph 119(c).

e. The exclusion of data from droughts, floods and hurricanes is invalid for the reasons set out in paragraph 119(d).

123. Proposed rule 62-303.710 is arbitrary and capricious and contravenes section 403.021(2), Florida Statutes, and section 403.021(11), Florida Statutes, because the data required to remove a waterbody from the verified list is irrationally less than the data necessary to place a waterbody on the verified list.

VII. STATEMENT OF RELIEF SOUGHT

Petitioners respectfully request that the administrative law judge enter a final order determining that Rule 62-302.530(47)(b) and the proposed rules as set forth above are an invalid exercise of delegated legislative authority.

Dated December 1, 2011

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62-302.530 Table: Surface Water Quality Criteria.

The following table contains both numeric and narrative surface water quality criteria to be applied except within zones of mixing. The left-hand column of the Table is a list of constituents for which a surface water criterion exists. The headings for the water quality classifications are found at the top of the Table, and the classification descriptions for the headings are specified in subsection 62-302.400(1), F.A.C. Applicable criteria lie within the Table. The individual criteria should be read in conjunction with other provisions in water quality standards, including Rule 62-302.500, F.A.C. The criteria contained in Rule 62-302.500, F.A.C., also apply to all waters unless alternative or more stringent criteria are specified in Rule 62-302.530, F.A.C. Unless otherwise stated, all criteria express the maximum not to be exceeded at any time. In some cases, there are separate or additional limits, which apply independently of the maximum not to be exceeded at any time. For example, annual average (denoted as "annual avg." in the Table) means the maximum concentration at average annual flow conditions (see subsection 62-302.200(2), F.A.C.). 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

Parameter	Units	Class I	Class II	Class III and Class III-Limited (see Note 4)		Class IV	Class V
				Predominantly Fresh Waters	Predominantly Marine Waters		
(1) Alkalinity	Milligrams/L as $CaCO_3$	Shall not be depressed below 20		Shall not be depressed below 20		$\leq$ 600	
(2) Aluminum	Milligrams/L		$\leq$ 1.5		$\leq$ 1.5		
(3) Ammonia (un-ionized)	Milligrams/L as NH_3	$\leq$ 0.02		$\leq$ 0.02			
(4) Antimony	Micrograms/L	$\leq$ 14.0	$\leq$ 4,300	$\leq$ 4,300	$\leq$ 4,300		
(5)(a) Arsenic (total)	Micrograms/L	$\leq$ 10	$\leq$ 50	$\leq$ 50	$\leq$ 50	$\leq$ 50	$\leq$ 50
(5)(b) Arsenic (trivalent)	Micrograms/L measured as total recoverable Arsenic		$\leq$ 36		$\leq$ 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 shall not exceed a median value of 14 with not more than 10% of the samples exceeding 43, nor exceed 800 on any one day.	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	≤ 1					
(8) Benzene	Micrograms/L	≤ 1.18	≤ 71.28 annual avg.	≤ 71.28 annual avg.	≤ 71.28 annual avg.		
(9) Beryllium	Micrograms/L	≤ 0.0077 annual avg.	≤ 0.13 annual avg.	≤ 0.13 annual avg.	≤ 0.13 annual avg.	≤ 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) Biological Integrity	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 natural substrate samples, taken with 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 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 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					≤ 0.75	
(13) Bromates	Milligrams/L		≤ 100		≤ 100		
(14) Bromine (free molecular)	Milligrams/L		≤ 0.1		≤ 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 fluctua-tions shall be maintained.		In predominantly marine waters, not increased more than 10% above normal back-ground. 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 Section 62-302.200(4), 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 irriga-tion, 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).	$Cu \leq e^{(0.8545[\ln H]-1.702)}$	≤ 3.7	$Cu \leq e^{(0.8545[\ln H]-1.702)}$	≤ 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.	$\leq 1,580$ annual avg.	$\leq 1,580$ annual avg.	$\leq 1,580$ 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	Shall not be less than 5.0. Normal daily and seasonal fluctuations above this level shall be maintained.	Shall not average less than 5.0 in a 24-hour period and shall never be less than 4.0. Normal daily and seasonal fluctuations above these levels shall be maintained.	Shall not be less than 5.0. Normal daily and seasonal fluctuations above these levels shall be maintained.	Shall not average less than 5.0 in a 24-hour period and shall never be less than 4.0. Normal daily and seasonal fluctuations above these levels shall be maintained.	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 maintained.

(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 Section 62-302.500, F.A.C.)							
(34) "General Criteria" (see Section 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	≤ 4.3 annual avg.	≤ 360 annual avg.	≤ 360 annual avg.	≤ 360 annual avg.		
(35)(b)2. Halomethanes (individual): Chlorodibromo-methane	Micrograms/L	≤ 0.41 annual avg.	≤ 34 annual avg.	≤ 34 annual avg.	≤ 34 annual avg.		
(35)(b)3. Halomethanes (individual): Chloroform	Micrograms/L	≤ 5.67 annual avg.	≤ 470.8 annual avg.	≤ 470.8 annual avg.	≤ 470.8 annual avg.		
(35)(b)4. Halomethanes (individual): Chloromethane (methyl chloride)	Micrograms/L	≤ 5.67 annual avg.	≤ 470.8 annual avg.	≤ 470.8 annual avg.	≤ 470.8 annual avg.		
(35)(b)5. Halomethanes (individual): Dichlorobromomethane	Micrograms/L	≤ 0.27 annual avg.	≤ 22 annual avg.	≤ 22 annual avg.	≤ 22 annual avg.		
(36) Hexachlorobutadiene	Micrograms/L	≤ 0.45 annual avg.	≤ 49.7 annual avg.	≤ 49.7 annual avg.	≤ 49.7 annual avg.		
(37) Imbalance (see Nutrients)							
(38) Iron	Milligrams/L	≤ 1.0	≤ 0.3	≤ 1.0	≤ 0.3	≤ 1.0	

(39) Lead	Micrograms/L See Notes (1) and (3).	Pb ≤ $e^{(1.273[\ln H]-4.705)}$;	≤ 8.5	Pb ≤ $e^{(1.273[\ln H]-4.705)}$;	≤ 8.5	≤ 50	≤ 50
(40) Manganese	Milligrams/L		≤ 0.1				
(41) Mercury	Micrograms/L	0.012	0.025	0.012	0.025	≤ 0.2	≤ 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 ≤ $e^{(0.846[\ln H]+0.0584)}$	≤ 8.3	Ni ≤ $e^{(0.846[\ln H]+0.0584)}$	≤ 8.3	≤ 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	≤ 0.019 annual avg.; 0.08 max	≤ 0.063 annual avg.; 0.16 max	≤ 0.063 annual avg.; 0.08 max	≤ 0.063. annual avg.; 0.16 max		
(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	$\leq$ 30 max; $\leq$ 0.28 annual avg; $\leq e^{(1.005[pH]-5.29)}$	$\leq$ 7.9	$\leq$ 30 max; $\leq$ 8.2 annual avg; $\leq e^{(1.005[pH]-5.29)}$	$\leq$ 7.9	$\leq$ 30	
(52)(c) 4. Phenolic Compound: 2,4,6-trichlorophenol	Micrograms/L	$\leq$ 2.1 annual avg.	$\leq$ 6.5 annual avg.	$\leq$ 6.5 annual avg.	$\leq$ 6.5 annual avg.	$\leq$ 6.5 annual avg.	
(52)(c) 5. Phenolic Compound: 2,4-dinitrophenol	Milligrams/L	$\leq$ 0.0697 See Note (2).	$\leq$ 14.26 See Note (2).	$\leq$ 14.26 See Note (2).	$\leq$ 14.26 See Note (2).	$\leq$ 14.26 See Note (2).	
(52)(c) 6. Phenolic Compound: Phenol	Milligrams/L	$\leq$ 0.3	$\leq$ 0.3	$\leq$ 0.3	$\leq$ 0.3	$\leq$ 0.3	$\leq$ 0.3
(53) Phosphorus (Elemental)	Micrograms/L		$\leq$ 0.1		$\leq$ 0.1		
(54) Phthalate Esters	Micrograms/L	$\leq$ 3.0		$\leq$ 3.0			
(55) Polychlorinated Biphenyls (PCBs)	Micrograms/L	$\leq$ 0.000044 annual avg.; 0.014 max	$\leq$ 0.000045 annual avg.; 0.03 max	$\leq$ 0.000045 annual avg.; 0.014 max	$\leq$ 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 Section 62-302.500(1)(c)	≤ 0.07	See Minimum criteria in Section 62-302.500(1)(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 Section 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 for photosynthetic activity	Shall not be reduced by more than 10% as compared to the natural background value.	Shall not be reduced by more than 10% as compared to the natural background value.	Shall not be reduced by more than 10% as compared to the natural background value.	Shall not be reduced by more than 10% as compared to the natural background value.		
(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 ≤ $e^{(0.8473[\ln H]+0.884)}$	≤ 86	Zn ≤ $e^{(0.8473[\ln H]+0.884)}$	≤ 86	≤ 1,000	≤ 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, 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.

Notice of Proposed Rule

DEPARTMENT OF ENVIRONMENTAL PROTECTION

RULE NO.: RULE TITLE:

62-302.200: Definitions

62-302.530: Table: Surface Water Quality Criteria

62-302.531: Numeric Interpretations of Narrative Nutrient Criteria

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

62-302.800: Site Specific Alternative Criteria

PURPOSE AND EFFECT: The proposed rules establish numeric interpretations of the narrative surface water quality criterion for nutrients in paragraph 62-302.530(47)(b), F.A.C., for streams, lakes, spring vents, and specific estuaries in Southwest and South Florida. These interpretations, which are Florida water quality standards, are intended to fully protect the designated use of surface waters. A new type of Site Specific Alternative Criteria (Type III) is also established that is specifically tailored to address nutrients and nutrient response variables.

SUMMARY: The Department is amending Chapter 62-302, F.A.C., to establish numeric interpretations of the narrative surface water criterion for nutrients in paragraph 62-302.530(47)(b), F.A.C. The proposed amendments establish numeric interpretations in a hierarchy, as follows: 1) site specific interpretations (e.g., Total Maximum Daily Loads (TMDL), Site Specific Alternative Criteria), 2) interpretations based on cause-and-effect relationships between nutrients and biological response, 3) reference-based interpretations within nutrient watershed regions combined with biological information, and 4) the existing narrative criterion, which will continue to apply to all waters, including those that do not fall under one of the hierarchical levels above. Numeric interpretations are established for: 1) lakes (based on color and alkalinity), 2) spring vents, and 3) streams (based on stream nutrient watershed regions). In addition, estuary specific nutrient standards are established for a number of south Florida estuaries, including Clearwater Harbor/St. Joseph Sound, Tampa Bay, Sarasota Bay, Charlotte Harbor, Tidal Cocohatchee River/Ten Thousand Islands, Florida Bay, Florida Keys, and Biscayne Bay. A new Type III Site Specific Alternative Criterion is established that is specific to nutrients and nutrient response variables. The Department has also identified a list of previously adopted TMDLs that constitute a numeric interpretation of the narrative nutrient criterion under Rule 62-302.531, F.A.C., which list may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/wqssp or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

OTHER RULES INCORPORATING THIS RULE: Chapter 62-302, Rule 62-302.200, Rule 62-302.530, and Rule 62-302.800, F.A.C., are referenced by the following rules: Rules 18-2.021, 62-4.160, 62-4.240, 62-4.241, 62-4.242, 62-4.246, 62-25.001, 62-25.025, 62-25.030, 62-25.080, 62-29.050, 62-40.120, 62-40.210, 62-45.070, 62-110.106, 62-113.200, 62-301.100, 62-302.200, 62-302.300, 62-302.400, 62-302.500, 62-302.520, 62-302.530, 62-302.540, 62-302.700, 62-302.800, 62-303.100, 62-303.200, 62-303.320, 62-303.330, 62-303.370, 62-303.400, 62-303.430, 62-304.310, 62-304.335, 62-304.500, 62-312.050, 62-312.310, 62-312.340, 62-312.400, 62-312.816, 62-312.819, 62-312.825, 62-330.100, 62-330.200, 62-340.700, 62-341.215, 62-341.486, 62-341.490, 62-341.494, 62-346.050, 62-346.051, 62-346.301, 62-348.200, 62-520.200, 62-520.520, 62-528.610, 62-528.630, 62-600.120, 62-600.200, 62-600.300, 62-600.400, 62-600.430, 62-600.440, 62-600.500, 62-600.520, 62-610.200, 62-610.300, 62-610.310, 62-610.554, 62-610.555, 62-610.650, 62-610.670, 62-610.810, 62-610.820, 62-610.830, 62-610.850, 62-610.860, 62-611.110, 62-611.200, 62-611.450, 62-611.500, 62-611.600, 62-611.650, 62-611.700, 62-620.320, 62-620.400, 62-620.610, 62-620.620, 62-620.800, 62-621.303, 62-624.800, 62-625.300, 62-625.400, 62-640.400, 62-650.300, 62-660.300, 62-673.340, 62-673.610, 62-701.200, 62-701.300, 62-709.500, 62-711.540, 62-761.200, 62-762.201,

62-770.200, 62-771.100, 62-777.150, 62-777.170, 62-780.200, 62-782.200, 62-785.200, 62B-49.008, 62B-49.012, and 62C-16.0051, F.A.C.

EFFECT ON THOSE OTHER RULES: The proposed amendments for streams, lakes and spring vents are designed to protect state waters from the adverse effects of nutrient over-enrichment and are intended to replace federal standards adopted by EPA for the State of Florida. The above rules, which cover a variety of regulatory programs, reference and implement Florida's water quality standards in Chapter 62-302, F.A.C.

SUMMARY OF STATEMENT OF ESTIMATED REGULATORY COSTS AND LEGISLATIVE RATIFICATION: The Agency has determined that this will have an adverse impact on small business or likely increase directly or indirectly regulatory costs in excess of $200,000 in the aggregate within one year after the implementation of the rule. A SERC has been prepared by the agency. In November 2010, the U.S. Environmental Protection Agency (EPA) promulgated numeric nutrient criteria for Florida's waters. The Florida Department of Environmental Protection's (FDEP) proposed numeric nutrient criteria are intended to replace EPA's rule. Recent reports on the EPA rule estimated that annual implementation costs could range from $135.5 million to $4.7 billion. Using information from these estimates with assumptions consistent with the proposed FDEP rules, FDEP estimates that costs associated with the proposed FDEP rules would be at or below the lower end of the estimates for the existing EPA rule. Although the ultimate costs associated with the proposed FDEP rules are anticipated to be significantly lower than those applicable to the existing EPA rule, it is clear that the those costs will directly or indirectly increase regulatory costs in excess of $200,000 in the aggregate in Florida within 1 year after the implementation of the proposed FDEP rule when compared with existing state rules only.

The Agency has determined that the proposed rule is expected to require legislative ratification based on the statement of estimated regulatory costs or if no SERC is required, the information expressly relied upon and described herein: Based on the economic analysis conducted in preparation of its statement of estimated regulatory cost, the Department has determined that the proposed rule is likely to increase regulatory costs, including any transactional costs, in excess of $1 million in the aggregate within 5 years after implementation of the rule.

Any person who wishes to provide information regarding a statement of estimated regulatory costs, or provide a proposal for a lower cost regulatory alternative must do so in writing within 21 days of this notice.

RULEMAKING AUTHORITY: 403.061, 403.062, 403.087, 403.088, 403.504, 403.704, 403.804, 403.805 FS.

LAW IMPLEMENTED: 403.021, 403.031, 403.061, 403.062, 403.067, 403.085, 403.086, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.504, 403.702, 403.708, 403.802 FS.

A HEARING WILL BE HELD AT THE DATE, TIME AND PLACE SHOWN BELOW:

DATE AND TIME: Thursday, December 8, 2011, 9:00 a.m.

PLACE: Tallahassee City Commission Chambers, 300 S. Adams Street, Tallahassee, Florida 32301

Pursuant to the provisions of the Americans with Disabilities Act, any person requiring special accommodations to participate in this workshop/meeting is asked to advise the agency at least 5 days before the workshop/meeting by contacting: Eric Shaw at (850)245-8429 or the below information. If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, 1(800)955-8771 (TDD) or 1(800)955-8770 (Voice).

THE PERSON TO BE CONTACTED REGARDING THE PROPOSED RULE IS: Eric Shaw, Department of Environmental Protection, Bureau of Assessment and Restoration Support, MS 6511, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, (850)245-8429 or e-mail: eric.shaw@dep.state.fl.us. Copies of the draft rule as well as further information also may be obtained from the Department's internet site at: http://www.dep.state.fl.us/water/wqssp/nutrients/index.htm. (OGC No. 11-1488)

THE FULL TEXT OF THE PROPOSED RULES IS:

62-302.200 Definitions.

As used in this chapter:

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

(2) “Annual aAverage fFlow” 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 (Qhm) shall be calculated as

$$Qhm = \frac{\text{.....n.....,}}{\frac{1}{Q1} + \frac{1}{Q2} + \frac{1}{Q3} + \frac{1}{Q4} + \ldots + \frac{1}{Qn}}$$

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

(3) No change.

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

(5)~~(4)~~ “Chronic tToxicity”

(a) through (b) No change.

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

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

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

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

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

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

(12)(~~11~~) "Exceptional e~~E~~cological s~~S~~ignificance" shall mean that a waterbody ~~water body~~ is a part of an ecosystem of unusual value. The exceptional significance may be in unusual species, productivity, diversity, ecological relationships, ambient water quality, scientific or educational interest, or in other aspects of the ecosystem's setting or processes.

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

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

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

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

(17) "Lake Vegetation Index (LVI)" shall mean a Biological Health Assessment that measures lake biological health in predominantly freshwaters using aquatic and wetland plants, performed and calculated using the Standard Operating Procedures for the LVI (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*'s internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

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

(a) through (b) No change.

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

(19)(~~16~~) "Natural b~~B~~ackground" shall mean the condition of waters in the absence of man-induced alterations based on the best scientific information available to the Department. The establishment of natural background for an altered waterbody may be based upon a similar unaltered waterbody or on historical pre-alteration data.

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

(21)(~~18~~) "Nursery a~~A~~rea of i~~I~~ndigenous a~~A~~quatic l~~L~~ife" shall mean any bed of the following aquatic plants, either in monoculture or mixed: Halodule wrightii, Halophila spp., Potamogeton spp. (pondweed), Ruppia maritima

(widgeon-grass), Sagittaria spp. (arrowhead), Syringodium filiforme (manatee-grass), Thalassia testudinum (turtle grass), or Vallisneria spp. (eel-grass), or any area used by the early-life stages, larvae and post-larvae, of aquatic life during the period of rapid growth and development into the juvenile states.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(36) "Stream" shall mean, for purposes of interpreting the narrative nutrient criterion in paragraph 62-302.530(47)(b), F.A.C., 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 non-perennial water segments, wetlands, or portions of streams that exhibit lake characteristics (e.g., long water residence time, increased width, or predominance of biological taxa typically found in non-flowing conditions).

(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 (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*'s internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400. For water quality standards purposes, the Stream Condition Index shall not apply in the South Florida Nutrient Watershed Region.

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

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

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

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

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

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

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

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

62-302.530 Table: Surface Water Quality Criteria.

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

(1) through (70) No change.

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

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 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.

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

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

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

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

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

Long Term Geometric Mean Lake Color and Alkalinity	Annual Geometric Mean Chlorophyll *a*	Minimum calculated numeric interpretation		Maximum calculated numeric interpretation	
		Annual Geometric Mean Total Phosphorus	Annual Geometric Mean Total Nitrogen	Annual Geometric Mean Total Phosphorus	Annual Geometric Mean Total Nitrogen
> 40 Platinum Cobalt					

Units	20 µg/L	0.05 mg/L	1.27 mg/L	0.16 mg/L[1]	2.23 mg/L
≤ 40 Platinum Cobalt Units and > 20 mg/L $CaCO_3$	20 µg/L	0.03 mg/L	1.05 mg/L	0.09 mg/L[1]	1.91 mg/L
≤ 40 Platinum Cobalt Units and ≤ 20 mg/L $CaCO_3$	6 µg/L	0.01 mg/L	0.51 mg/L	0.03 mg/L[1]	0.93 mg/L

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

c. For the purpose of subparagraph 62-302.531(2)(b)1., F.A.C., color shall be assessed as true color and shall be free from turbidity. Lake color and alkalinity shall be the long-term geometric mean, based on a minimum of ten data points over at least three years with at least one data point in each year. If insufficient alkalinity data are available, long-term geometric mean specific conductance values shall be used, with a value of <100 micromhos/cm used to estimate the 20 mg/L $CaCO_3$ alkalinity concentration until such time that alkalinity data are available.

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

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

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

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

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

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

(3) Except for data used to establish historical chlorophyll *a* levels, chlorophyll *a* data assessed under this Chapter shall be measured according to the DEP document titled "Applicability of Chlorophyll *a* Methods" (DEP-SAS-002/10), 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 or by writing to the Florida

Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400. Chlorophyll *a* data collected after [effective date] shall be corrected for or free from the interference of phaeophytin.

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

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

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

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

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

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

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

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

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

(9) Rule 62-302.531, F.A.C., shall not be implemented until it is approved in its entirety pursuant to 40 C.F.R. § 131.21 and 33 U.S.C. § 1313(c). If any provision of Rule 62-302.531, F.A.C., is later determined invalid, then the entirety of Rule 62-302.531, F.A.C., 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 _____.

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

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

Estuary	Total Phosphorus	Total Nitrogen	Chlorophyll *a*
(a) Clearwater Harbor/St. Joseph Sound	Annual geometric mean values not to be exceeded more than once in a three year period		

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		
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		
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		
1. Dona and Roberts Bay	0.18 mg/L	0.42 mg/L	4.9 µg/L
2. Upper Lemon Bay	0.26 mg/L	0.56 mg/L	8.9 µg/L
3. Lower Lemon Bay	0.17 mg/L	0.62 mg/L	6.1 µg/L
4. Charlotte Harbor Proper	0.19 mg/L	0.67 mg/L	6.1 µg/L
5. Pine Island Sound	0.06 mg/L	0.57 mg/L	6.5 µg/L
6. San Carlos Bay	0.07 mg/L	0.56 mg/L	3.5 µg/L
7. Tidal Myakka River	0.31 mg/L	1.02 mg/L	11.7 µg/L
8. Matlacha Pass	0.08 mg/L	0.58 mg/L	6.1 µg/L
9. Estero Bay (including Tidal Imperial River)	0.07 mg/L	0.63 mg/L	5.9 µg/L

(e) Tidal Cocohatchee River/Ten Thousand Islands	Annual geometric means that shall not be exceeded more than once in a three year period		
1. Tidal Cocohatchee River	0.057 mg/L	0.47 mg/L	5.8 µg/L
2. Collier Inshore	0.032 mg/L	0.25 mg/L	3.1 µg/L
3. Rookery Bay/Marco Island	0.046 mg/L	0.30 mg/L	4.9 µg/L
4. Naples Bay	0.045 mg/L	0.57 mg/L	4.3 µg/L
5. Inner Gulf Shelf	0.018 mg/L	0.29 mg/L	1.6 µg/L
6. Middle Gulf Shelf	0.016 mg/L	0.26 mg/L	1.4 µg/L
7. Outer Gulf Shelf	0.013 mg/L	0.22 mg/L	1.0 µg/L
8. Blackwater River	0.053 mg/L	0.41 mg/L	4.1 µg/L
9. Coastal Transition Zone	0.034 mg/L	0.61 mg/L	3.9 µg/L
10. Gulf Islands	0.038 mg/L	0.44 mg/L	3.4 µg/L
11. Inner Waterway	0.033 mg/L	0.69 mg/L	5.2 µg/L
12. Mangrove Rivers	0.021 mg/L	0.71 mg/L	3.7 µg/L
13. Ponce de Leon	0.024 mg/L	0.52 mg/L	3.0 µg/L
14. Shark River Mouth	0.022 mg/L	0.75 mg/L	2.2 µg/L
15. Whitewater Bay	0.026 mg/L	0.82 mg/L	4.1 µg/L
(f) Florida Bay	Annual geometric means that shall not be exceeded more than once in a three year period		
1. Central Florida Bay	0.019 mg/L	0.99 mg/L	2.2 µg/L
2. Coastal Lakes	0.045 mg/L	1.29 mg/L	9.3 µg/L
3. East Central Florida Bay	0.007 mg/L	0.65 mg/L	0.4 µg/L
4. Northern Florida Bay	0.010 mg/L	0.68 mg/L	0.8 µg/L
5. Southern Florida Bay	0.009 mg/L	0.64 mg/L	0.8 µg/L
6. Western Florida Bay	0.015 mg/L	0.37 mg/L	1.4 µg/L
(g) Florida Keys	Annual geometric means that shall not be exceeded more than once in a three year period		
1. Back Bay	0.009 mg/L	0.25 mg/L	0.3 µg/L
2. Backshelf	0.011 mg/L	0.23 mg/L	0.7 µg/L
3. Lower Keys	0.008 mg/L	0.21 mg/L	0.3 µg/L
4. Marquesas	0.008 mg/L	0.21 mg/L	0.6 µg/L
5. Middle Keys	0.007 mg/L	0.22 mg/L	0.3 µg/L
6. Oceanside	0.007 mg/L	0.17 mg/L	0.3 µg/L
7. Upper Keys	0.007 mg/L	0.18 mg/L	0.2 µg/L
(h) Biscayne Bay	Annual geometric means that shall not be exceeded more than once in a three year period		
1. Card Sound	0.008 mg/L	0.33 mg/L	0.5 µg/L
2. Manatee Bay Barnes Sound	0.007 mg/L	0.58 mg/L	0.4 µg/L
3. North Central Inshore	0.007 mg/L	0.31 mg/L	0.5 µg/L
4. North Central Outer-Bay	0.008 mg/L	0.28 mg/L	0.7 µg/L
5. Northern North Bay	0.012 mg/L	0.30 mg/L	1.7 µg/L

6. South Central Inshore	0.007 mg/L	0.48 mg/L	0.4 µg/L
7. South Central Mid-Bay	0.007 mg/L	0.35 mg/L	0.2 µg/L
8. South Central Outer-Bay	0.006 mg/L	0.24 mg/L	0.2 µg/L
9. Southern North Bay	0.010 mg/L	0.29 mg/L	1.1 µg/L

(i) Sarasota Bay	For TN, the annual geometric mean target is calculated from monthly arithmetic mean color by region and season. Annual geometric means that shall not be exceeded more than once in a three year period. The Sarasota Bay regions are defined as north (Manatee County) and south (Sarasota County). The wet season for Sarasota Bay is defined as July through October and the dry season is defined as all other months of the year. The seasonal region targets are calculated using monthly color data and shall be calculated as follows: NW_i=Ln[(13.35-(0.32*CN_i))/3.58] ND_i=Ln[(10.39-(0.32*CN_i))/3.58] SW_i=Ln[(8.51-(0.32*CS_i)/3.58] SD_i=Ln[(5.55-(0.32*CS_i))/3.58] Where, NW_i is the TN target for i^{th} month calculated for the north region during the wet season ND_i is the TN target for i^{th} month calculated for the north region during the dry season SW_i is the TN target for i^{th} month calculated for the south region during the wet season SW_i is the TN target for i^{th} month calculated for the south region during the dry season CN_i is the arithmetic mean color during the i^{th} month within the north region CS_i is the arithmetic mean color during the i^{th} month within the south region The annual TN target is calculated as the geometric mean of all monthly regional and season targets as follows: $e^{\sum_i^{12}\left(\frac{NWi+NDi+SWi+SDi}{24}\right)}$

(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) = $e^{(-1.06256- 0.0000328465*\text{Conductivity (µS)})}$	TN Upper Limit (mg/L) = 2.3601 – 0.0000268325*Conductivity (µS)

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

(3) The Department shall establish by rule or final order estuary specific numeric interpretations of the narrative nutrient criteria for TN and TP for Perdido Bay, Pensacola Bay (including Escambia Bay), St. Andrews Bay,

Choctawhatchee Bay, and Apalachicola Bay by June 30, 2013, subject to the provisions of Chapter 120, F.S. The Department shall establish by rule or final order the estuary specific numeric interpretation of the narrative nutrient criteria for TN and TP for the remaining estuaries by June 30, 2015, subject to the provisions of Chapter 120, F.S. This subsection 62-302.532(3), F.A.C., shall not be implemented until Rule 62-302.531, F.A.C., is approved in its entirety pursuant to 40 C.F.R. § 131.21 and 33 U.S.C. § 1313(c). If any provision of Rule 62-302.531, F.A.C., is later determined invalid, then this subsection 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, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History– New _____.

62-302.800 Site Specific Alternative Criteria.

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

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

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

2. through 4. No change.

(b) No change.

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

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

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

3. through 7. No change.

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

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

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

~~3. Nutrients.~~

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

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

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

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

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

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

9.~~10~~ No change.

(e) through (f) No change.

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

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

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

a. For streams, such a demonstration shall require:

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

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

b. For lakes, such a demonstration shall require:

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

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

c. SCIs and LVIs collected at the same location less than three months apart shall be considered to be one sample, with the mean value used to represent the sampling period. SCIs and LVIs shall be conducted during the water quality sampling period described in subparagraph 62-302.800(3)(a)2, F.A.C. There shall be a minimum of two assessments per station or lake, with at least one assessment conducted during the final year.

2. The petitioner provides sufficient data to characterize water quality conditions, including temporal variability, that are representative of the biological data used to support the SSAC. The water quality data shall be collected in the same waterbody segment as the biological monitoring stations and at a frequency and duration consistent with the study design concepts described in the document titled *Development of Type III Site Specific Alternative Criteria (SSAC) for Nutrients* 's internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511,

Tallahassee, FL 32399-2400. Water quality data associated with extreme climatic conditions, such as floods, droughts, and hurricanes, shall be excluded from the analysis.

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

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

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

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

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

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

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

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

(a) through (d) No change.

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

NAME OF PERSON ORIGINATING PROPOSED RULE: Drew Bartlett
NAME OF AGENCY HEAD WHO APPROVED THE PROPOSED RULE: Herschel T. Vinyard, Jr.
DATE PROPOSED RULE APPROVED BY AGENCY HEAD: November 1, 2011
DATE NOTICE OF PROPOSED RULE DEVELOPMENT PUBLISHED IN FAW: May 20, 2011

Notice of Proposed Rule

DEPARTMENT OF ENVIRONMENTAL PROTECTION

RULE NO.: RULE TITLE:

62-303.150: Relationship Between Planning and Verified Lists

62-303.200: Definitions

62-303.310: Evaluation of Aquatic Life Use Support

62-303.330: Biological Assessment

62-303.350: Interpretation of Narrative Nutrient Criteria

62-303.351: Nutrients in Streams

62-303.352: Nutrients in Lakes

62-303.353: Nutrients in Estuaries and Open Coastal Waters

62-303.354: Nitrate-nitrite in Freshwater Spring Vents

62-303.390: The Study List

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

62-303.430: Biological Impairment

62-303.450: Interpretation of Narrative Nutrient Criteria

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

62-303.720: Delisting Procedure

PURPOSE AND EFFECT: The proposed rule revisions, which are water quality standards, provide for the assessment of the numeric interpretations of the narrative surface water quality criterion for nutrients that are proposed for adoption in Chapter 62-302, F.A.C. The numeric interpretations are applied as spatial averages, depending on waterbody type, consistent with their derivations.

SUMMARY: The Department is amending Chapter 62-303, F.A.C., to revise impairment thresholds and establish assessment methodologies for numeric interpretations of the narrative surface water criterion for nutrients in paragraph 62-302.530(47)(b), F.A.C. The proposed rule revisions also establish a new list type (Study List).

OTHER RULES INCORPORATING THIS RULE: Chapter 62-303 and Rules 62-303.100, 62-303.150, 62-303.200, 62-303.310, 62-303.330, 62-303.350, 62-303.351, 62-303.352. 62-303.353, 62-303.354, 62-303.390, 62-303.420, 62-303.430, 62-303.450, 62-303.710, 62-303.720, F.A.C., are referenced by the following rules: Rules 62-302.530, 62-303.100, 62-303.150, 62-303.200, 62-303.300, 62-303.310, 62-303.320, 62-303.330, 62-303.350, 62-303.351, 62-303.352, 62-303.353, 62-303.360, 62-303.370, 62-303.380, 62-303.400, 62-303.410, 62-303.420, 62-303.430, 62-303.450, 62-303.460, 62-303.470, 62-303.480, 62-303.600, 62-303.700, 62-303.710, 62-303.720, 62-303.810, 62-304.100, 62-305.200, and 62-672.780, F.A.C.

EFFECT ON THOSE OTHER RULES: This rulemaking does not have any direct effect on Rule 62-301.530, F.A.C. Rule 62-302.530, F.A.C., simply notes that Chapter 62-303, F.A.C., is the Department's assessment methodology, and accounts for natural and statistical variability when assessing ambient waters pursuant to sections 305(b) and 303(d) of the Federal Clean Water Act. All of the rules listed for Chapter 62-303, F.A.C., are simply cross-rule references within the chapter, and this rulemaking takes into account the interconnection between rule sections for the planning, study, and verified lists. This rulemaking affects Rule 62-304.100, F.A.C., because it affects which waters are listed on the verified list for nutrient impairment. The Department is responsible for developing and adopting by rule in Chapter 62-304, F.A.C., Total Maximum Daily Loads (TMDLs) and their allocations for waters that have been verified to be impaired by a pollutant pursuant to Chapter 62-303, F.A.C. This rulemaking also affects Rule 62-305.200, F.A.C., because it establishes when nutrients are identified as a "pollutant of concern." Rule 62-305.200, F.A.C., refers to Chapter 62-303, F.A.C., in the definition for "pollutant of concern," which means

"the pollutant or pollutants that have been identified as causing the impairment of a water body pursuant to the process set forth in Chapter 62-303, F.A.C." This rulemaking also affects Rule 672.780, F.A.C., which requires that operating plans for new or increased discharges from phosphogypsum stack systems identify "any impaired waters and parameters included on a verified list, determined in accordance with Chapter 62-303, F.A.C., for any water body or water body segment existing at or downstream of the proposed new or increased discharge."

SUMMARY OF STATEMENT OF ESTIMATED REGULATORY COSTS AND LEGISLATIVE RATIFICATION: The Agency has determined that this will have an adverse impact on small business or likely increase directly or indirectly regulatory costs in excess of $200,000 in the aggregate within one year after the implementation of the rule. A SERC has been prepared by the agency. In November 2010, the U.S. Environmental Protection Agency (EPA) promulgated numeric nutrient criteria for Florida's waters. The Florida Department of Environmental Protection's (FDEP) proposed numeric nutrient criteria are intended to replace EPA's rule. Recent reports on the EPA rule estimated that annual implementation costs could range from $135.5 million to $4.7 billion. Using information from these estimates with assumptions consistent with the proposed FDEP rules, FDEP estimates that costs associated with the proposed FDEP rules would be at or below the lower end of the estimates for the existing EPA rule. Although the ultimate costs associated with the proposed FDEP rules are anticipated to be significantly lower than those applicable to the existing EPA rule, it is clear that the those costs will directly or indirectly increase regulatory costs in excess of $200,000 in the aggregate in Florida within 1 year after the implementation of the proposed FDEP rule when compared with existing state rules only.

The Agency has determined that the proposed rule is expected to require legislative ratification based on the statement of estimated regulatory costs or if no SERC is required, the information expressly relied upon and described herein: Based on the economic analysis conducted in preparation of its statement of estimated regulatory cost, the Department has determined that the proposed rule is likely to increase regulatory costs, including any transactional costs, in excess of $1 million in the aggregate within 5 years after implementation of the rule.

Any person who wishes to provide information regarding a statement of estimated regulatory costs, or provide a proposal for a lower cost regulatory alternative must do so in writing within 21 days of this notice.

RULEMAKING AUTHORITY: 403.061, 403.067 FS.

LAW IMPLEMENTED: 403.021(11), 403.062, 403.067 FS.

A HEARING WILL BE HELD AT THE DATE, TIME AND PLACE SHOWN BELOW:

DATE AND TIME: Thursday, December 8, 2011, 9:00 a.m.

PLACE: Tallahassee City Commission Chambers, 300 S. Adams Street, Tallahassee, Florida 32301

Pursuant to the provisions of the Americans with Disabilities Act, any person requiring special accommodations to participate in this workshop/meeting is asked to advise the agency at least 5 days before the workshop/meeting by contacting: Eric Shaw at (850)245-8429 or the below information. If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, 1(800)955-8771 (TDD) or 1(800)955-8770 (Voice).

THE PERSON TO BE CONTACTED REGARDING THE PROPOSED RULES IS: Eric Shaw, Department of Environmental Protection, Bureau of Assessment and Restoration Support, MS 6511, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, (850)245-8429 or e-mail: eric.shaw@dep.state.fl.us. Copies of the draft rule as well as further information also may be obtained from the Department's internet site at: http://www.dep.state.fl.us/water/wqssp/nutrients/index.htm. (OGC No. 11-1489)

THE FULL TEXT OF THE PROPOSED RULES IS:

PART I

GENERAL

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

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

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

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

62-303.200 Definitions.

As used in this chapter:

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

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

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

(4) through (6) No change.

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

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

(9)~~(8)~~ “Lake Vegetation Index (LVI)” shall mean a Biological Health Assessment that measures lake biological health in predominantly freshwaters using aquatic and wetland plants, performed and calculated using the Standard Operating Procedures for the LVI (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*’s internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400. ~~“Lake Condition Index” shall mean the benthic macroinvertebrate component of a biological evaluation conducted following the procedures outlined in “Development of Lake Condition Indexes (LCI) for Florida,” Florida Department of Environmental Protection, July, 2000, which is incorporated by reference.~~

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

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

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

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

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

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

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

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

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

Augustine Coastal Drainage Area, St. John's River Watershed, Nassau Coastal Drainage Area, and St. Mary's River Watershed.

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

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

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

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

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

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

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

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

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

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

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

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

(29)~~(22)~~ "Stream Condition Index (SCI)" shall mean a Biological Health Assessment that measures stream biological health in predominantly freshwaters using benthic macroinvertebrates, performed and calculated using the Standard Operating Procedures for the SCI (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*'s internet site at http://www.dep.state.fl.us/water/wqssp/swq-docs or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400. For water quality standards purposes, the Stream Condition Index shall not apply in the South Florida Nutrient Watershed Region. ~~evaluation conducted in accordance with SOPs FT 3000, FS 7420, and LT 7200, as promulgated in Rule 62-160.800, F.A.C.~~

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

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

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

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

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

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

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

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

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

PART II

THE PLANNING LIST

62-303.310 Evaluation of Aquatic Life Use Support.

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

(1) No change.

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

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

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

62-303.330 Biological Assessment.

(1) No change.

(2) Biological Health Assessments ~~Bioassessments~~ used to evaluate predominantly fresh water ~~assess~~ streams and lakes under this rule shall include ~~BioRecons,~~ the Stream Condition Index (SCI) ~~Indices (SCIs)~~, ~~and~~ the Lake Vegetation Index (LVI), and the Shannon-Weaver Diversity Index. ~~the benthic macroinvertebrate component of the Lake Condition Index (LCI), which only applies to clear lakes with a color less than 20 platinum cobalt units~~.

BioRecons can also be used to evaluate predominantly fresh water streams under this rule. Because these Biological Health Assessment ~~bioassessment~~ procedures require specific training and expertise, persons conducting a BioRecon, SCI or LVI ~~the bioassessments~~ must comply with the quality assurance requirements of Chapter 62-160, F.A.C. (including adherence to *Sampling and Use of the Stream Condition Index (SCI) for Assessing Flowing Waters: A Primer* (DEP-SAS-001/11), which was incorporated by reference in subsection 62-303.200(10), F.A.C., and *Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer* (DEP-SAS-002/11), which was incorporated by reference in subsection 62-303.200(30), F.A.C.), attend at least eight hours of Department ~~sanctioned~~ field training~~,~~ and pass a Department ~~sanctioned~~ field audit that verifies the sampler follows the applicable SOPs, as set forth in Chapter 62-160, F.A.C., before their Biological Health Assessment ~~bioassessment~~ data will be considered valid for use under this rule.

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

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

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

1. A score of < 35; or

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

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

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

1. A score < 43; or

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

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

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

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

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

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

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

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

changes in algal species composition ~~richness~~, and excessive diel oxygen swings, shall also be considered for placing waters on the planning list.

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

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

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

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

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

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

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

(c)~~(g)~~ To be assessed under this chapter ~~rule~~, except for data used to establish historical chlorophyll *a* levels, chlorophyll *a* data shall be determined using Department-approved methods as measured according to the DEP document titled, "Applicability of Chlorophyll *a* Methods" (DEP-SAS-002/10), 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 or by writing to the Florida Department of Environmental Protection, Standards and Assessment Section, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400. Chlorophyll *a* data shall be corrected for or free from the interference of pheophytin. ~~chlorophyll a data collected after the effective date of this rule shall be corrected chlorophyll a, except for data used to establish historical chlorophyll a levels. Corrected chlorophyll a is the calculated concentration of chlorophyll a remaining after the chlorophyll degradation product, phaeophytin a, has been subtracted from the uncorrected chlorophyll a measurement.~~

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

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

62-303.351 Nutrients in Freshwater Streams.

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

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

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

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

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

(5) There is a statistically significant increasing trend in the annual geometric means at the 95 percent confidence level in TN, TP or chlorophyll *a*'s one-sided, upper-tail test for trend, as described in Nonparametric Statistical Methods by M. Hollander and D. Wolfe (1999 ed.), pages 376 and 724, which are incorporated by reference herein.

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

62-303.352 Nutrients in Freshwater Lakes.

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

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

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

(3) There is a statistically significant increasing trend in the annual geometric means at the 95 percent confidence level in TN, TP, or chlorophyll *a*'s one-sided, upper-tail test for trend.~~'s one-sided, upper-tail test for trend, as described in Nonparametric Statistical Methods by M. Hollander and D. Wolfe (1999 ed.), pages 376 and 724 (which are incorporated by reference), with a 95 percent confidence level.~~

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

62-303.353 Nutrients in Estuaries and Open Coastal Waters.

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

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

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

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

(4) There is a statistically significant increasing trend in the annual geometric means at the 95 percent confidence level in TN, TP, or chlorophyll *a*'s one-sided, upper-tail test for trend.

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

62-303.354 Nitrate-nitrite in Freshwater Spring Vents.

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

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

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

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

Rulemaking Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History–New_____.

PART III

THE STUDY LIST

62-303.390 The Study List.

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

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

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

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

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

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

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

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

(e) For streams meeting the definition in subsection 62-302.200(36), F.A.C., the nutrient thresholds in subparagraph 62-302.531(2)(c)3., F.A.C., are exceeded based on data from the last 7.5 years and insufficient Biological Health Assessment, chlorophyll *a*, or other response variable data are available to fully assess achievement of the nutrient provisions in paragraph 62-302.531(2)(c), F.A.C. A TMDL shall not be established for the waterbody prior to the collection of additional response variable data and the conclusion of the next assessment cycle.

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

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

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

Rulemaking Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History–New_____.

PART IV ~~III~~

THE VERIFIED LIST

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

(1) No change.

(a) No change.

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

(2) No change.

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

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

(5) through (7) No change.

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

62-303.430 Biological Impairment.

(1) All Biological Health Assessments ~~bioassessments~~ used to list a water on the verified list shall be conducted and interpreted in accordance with Chapter 62-160, F.A.C., including Department-approved Standard Operating Procedures and the Department documents, *Sampling and Use of the Stream Condition Index (SCI) for Assessing Flowing Waters: A Primer* (DEP-SAS-001/11), which was adopted by reference in subsection 62-303.200(10), F.A.C., and *Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer* (DEP-SAS-002/11), which was adopted by reference in subsection 62-303.200(30), F.A.C. To be used for placing waters on the verified list, any Biological Health Assessments ~~bioassessments~~ conducted before the adoption of applicable SOPs for such Biological Health Assessments ~~bioassessments~~ as part of Chapter 62-160, F.A.C., shall substantially comply with the subsequent SOPs. Biological Health Assessments conducted during conditions inconsistent with the applicable primer shall be excluded from the assessment.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

thresholds are used for the analysis, the Department shall provide the thresholds for the record and document how the alternative threshold better represents conditions beyond which an imbalance in flora or fauna is expected to occur.

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

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

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

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

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

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

PART V ~~IV~~

MISCELLANEOUS PROVISIONS

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

(1) through (2) No change.

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

(4) through (7) No change.

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

62-303.720 Delisting Procedure.

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

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

(a) No change.

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

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

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

3. through (i) No change.

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

(k) No change.

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

Table 4. No change.

(m) No change.

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

(3) No change.

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

NAME OF PERSON ORIGINATING PROPOSED RULE: Drew Bartlett
NAME OF AGENCY HEAD WHO APPROVED THE PROPOSED RULE: Herschel T. Vinyard, Jr.
DATE PROPOSED RULE APPROVED BY AGENCY HEAD: November 1, 2011
DATE NOTICE OF PROPOSED RULE DEVELOPMENT PUBLISHED IN FAW: May 20, 2011