

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. Numeric values listed below for nutrient and nutrient response values do not apply to wetlands or to tidal tributaries that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions unless specifically provided by name below. 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. The numeric values listed below will be superseded if, pursuant to subsection 62-302.531(2), F.A.C., a more recent numeric interpretation of the narrative nutrient criterion in paragraph 62-302.530(47)(b), F.A.C., such as a Level II Water Quality Based Effluent Limitation (WQBEL), Site Specific Alternative Criterion (SSAC), Total Maximum Daily Load (TMDL), or Reasonable Assurance Demonstration, is established by the Department.

Estuary	Total Phosphorus	Total Nitrogen	Chlorophyll <i>a</i>
(a) Clearwater Harbor/St. Joseph Sound	Criteria expressed as annual geometric mean (AGM) values are not to be exceeded more than once in a three year period. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
1. St. Joseph Sound	0.05 mg/L as AGM	0.66 mg/L as AGM	3.1 µg/L as AGM
2. Clearwater North	0.05 mg/L as AGM	0.61 mg/L as AGM	5.4 µg/L as AGM
3. Clearwater South	0.06 mg/L as AGM	0.58 mg/L as AGM	7.6 µg/L as AGM
(b) Tampa Bay	Criteria expressed as ton/million cubic meters of water are annual totals and are not to be exceeded more than once in a three year period. Criteria expressed as annual means are arithmetic means and are not to be exceeded more than once in a three year period. For criteria expressed as the long-term average of annual means, the long-term average shall be based on data from the most recent seven-year period and shall not be exceeded. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
1. Old Tampa Bay	0.23 tons/million cubic meters of water	1.08 tons/million cubic meters of water	9.3 µg/L as annual mean
2. Hillsborough Bay	1.28 tons/million cubic meters of water	1.62 tons/million cubic meters of water	15.0 µg/L as annual mean
3. Middle Tampa Bay	0.24 tons/million cubic meters of water	1.24 tons/million cubic meters of water	8.5 µg/L as annual mean
4. Lower Tampa Bay	0.14 tons/million cubic meters of water	0.97 tons/million cubic meters of water	5.1 µg/L as annual mean
5. Boca Ciega North	0.18 tons/million cubic meters of water	1.54 tons/million cubic meters of water	8.3 µg/L as annual mean
6. Boca Ciega South	0.06 tons/million cubic meters of water	0.97 tons/million cubic meters of water	6.3 µg/L as annual mean
7. Terra Ceia Bay	0.14 tons/million cubic meters of water	1.10 tons/million cubic meters of water	8.7 µg/L as annual mean
8. Manatee River Estuary	0.37 tons/million cubic meters of water	1.80 tons/million cubic meters of water	8.8 µg/L as annual mean
9. Alafia River Estuary	0.86 mg/L as long-term average of annual means	See subsection 62-304.605(2), F.A.C.	15.0 µg/L as annual mean

(c) Sarasota Bay	Criteria expressed as annual geometric mean (AGM) values for nutrients and annual arithmetic means for chlorophyll <i>a</i> are not to be exceeded more than once in a three year period. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
1. Palma Sola Bay	0.26 mg/L as AGM	0.93 mg/L as AGM	11.8 µg/L as annual mean
2. Sarasota Bay (Total Phosphorus and Chlorophyll <i>a</i>)	0.19 mg/L as AGM	See paragraph 62-302.532(1)(i), F.A.C.	6.1 µg/L as annual mean
3. Roberts Bay	0.23 mg/L as AGM	0.54 mg/L as AGM	11.0 µg/L as annual mean
4. Little Sarasota Bay	0.21 mg/L as AGM	0.60 mg/L as AGM	10.4 µg/L as annual mean
5. Blackburn Bay	0.21 mg/L as AGM	0.43 mg/L as AGM	8.2 µg/L as annual mean
(d) Charlotte Harbor/Estero Bay	Criteria expressed as annual means are arithmetic means and are not to be exceeded more than once in a three year period. For criteria expressed as long-term averages, the long-term average shall be based on data from the most recent seven-year period and shall not be exceeded. Criteria expressed as annual geometric means (AGM) are not to be exceeded more than once in a three year period. For criteria expressed as not to be exceeded in more than 10 percent of the samples, the criteria shall be assessed over the most recent seven year period. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
1. Dona and Roberts Bay	0.18 mg/L as annual mean	0.42 mg/L as annual mean	4.9 µg/L as annual mean
2. Upper Lemon Bay	0.26 mg/L as annual mean	0.56 mg/L as annual mean	8.9 µg/L as annual mean
3. Lower Lemon Bay	0.17 mg/L as annual mean	0.62 mg/L as annual mean	6.1 µg/L as annual mean
4. Charlotte Harbor Proper	0.19 mg/L as annual mean	0.67 mg/L as annual mean	6.1 µg/L as annual mean
5. Pine Island Sound	0.06 mg/L as annual mean	0.57 mg/L as annual mean	6.5 µg/L as annual mean
6. San Carlos Bay	0.045 mg/L as long-term average	0.44 mg/L as long-term average	3.7 µg/L as long-term average
7. Tidal Myakka River	0.31 mg/L as annual mean	1.02 mg/L as annual mean	11.7 µg/L as annual mean
8. Tidal Peace River	0.50 mg/L as annual mean	1.08 mg/L as annual mean	12.6 µg/L as annual mean
9. Matlacha Pass	0.08 mg/L as annual mean	0.58 mg/L as annual mean	6.1 µg/L as annual mean
10. Estero Bay (including Tidal Imperial River)	0.07 mg/L as annual mean	0.63 mg/L as annual mean	5.9 µg/L as annual mean
11. Little Hickory Bay	0.070 mg/L as AGM	0.63 mg/L as AGM	5.9 mg/L as AGM
12. Water Turkey Bay	0.057 mg/L as AGM	0.47 mg/L as AGM	5.8 µg/L as AGM
13. Moorings Bay	0.040 mg/L, not to be exceeded in more than ten percent of the samples	0.85 mg/L, not to be exceeded in more than ten percent of the samples	8.1 µg/L as AGM
14. Upper Caloosahatchee River Estuary	0.086 mg/L as long-term average	See subsection 62-304.800(2), F.A.C.	4.2 µg/L as long-term average
15. Middle Caloosahatchee River Estuary	0.055 mg/L as long-term average	See subsection 62-304.800(2), F.A.C.	6.5 µg/L as long-term average
16. Lower Caloosahatchee River Estuary	0.040 mg/L as long-term average	See subsection 62-304.800(2), F.A.C.	5.6 µg/L as long-term average
(e) Tidal Cocohatchee River/Ten Thousand Islands	Criteria expressed as annual geometric means (AGM) not to be exceeded more than once in a three year period.		
1. Tidal Cocohatchee River	0.057 mg/L as AGM	0.47 mg/L as AGM	5.8 µg/L as AGM
2. Collier Inshore	0.032 mg/L as AGM	0.25 mg/L as AGM	3.1 µg/L as AGM
3. Rookery Bay/Marco	0.046 mg/L as AGM	0.30 mg/L as AGM	4.9 µg/L as AGM

Island			
4. Naples Bay	0.045 mg/L as AGM	0.57 mg/L as AGM	4.3 µg/L as AGM
5. Inner Gulf Shelf	0.018 mg/L as AGM	0.29 mg/L as AGM	1.6 µg/L as AGM
6. Middle Gulf Shelf	0.016 mg/L as AGM	0.26 mg/L as AGM	1.4 µg/L as AGM
7. Outer Gulf Shelf	0.013 mg/L as AGM	0.22 mg/L as AGM	1.0 µg/L as AGM
8. Blackwater River	0.053 mg/L as AGM	0.41 mg/L as AGM	4.1 µg/L as AGM
9. Coastal Transition Zone	0.034 mg/L as AGM	0.61 mg/L as AGM	3.9 µg/L as AGM
10. Gulf Islands	0.038 mg/L as AGM	0.44 mg/L as AGM	3.4 µg/L as AGM
11. Inner Waterway	0.033 mg/L as AGM	0.69 mg/L as AGM	5.2 µg/L as AGM
12. Mangrove Rivers	0.021 mg/L as AGM	0.71 mg/L as AGM	3.7 µg/L as AGM
13. Ponce de Leon	0.024 mg/L as AGM	0.52 mg/L as AGM	3.0 µg/L as AGM
14. Shark River Mouth	0.022 mg/L as AGM	0.75 mg/L as AGM	2.2 µg/L as AGM
15. Whitewater Bay	0.026 mg/L as AGM	0.82 mg/L as AGM	4.1 µg/L as AGM
(f) Florida Bay	Criteria expressed as annual geometric means (AGM) are not to be exceeded more than once in a three year period.		
1. Central Florida Bay	0.019 mg/L as AGM	0.99 mg/L as AGM	2.2 µg/L as AGM
2. Coastal Lakes	0.045 mg/L as AGM	1.29 mg/L as AGM	9.3 µg/L as AGM
3. East Central Florida Bay	0.007 mg/L as AGM	0.65 mg/L as AGM	0.4 µg/L as AGM
4. Northern Florida Bay	0.010 mg/L as AGM	0.68 mg/L as AGM	0.8 µg/L as AGM
5. Southern Florida Bay	0.009 mg/L as AGM	0.64 mg/L as AGM	0.8 µg/L as AGM
6. Western Florida Bay	0.015 mg/L as AGM	0.37 mg/L as AGM	1.4 µg/L as AGM
(g) Florida Keys	Criteria expressed as annual geometric means (AGM) are not to be exceeded more than once in a three year period.		
1. Back Bay	0.009 mg/L as AGM	0.25 mg/L as AGM	0.3 µg/L as AGM
2. Backshelf	0.011 mg/L as AGM	0.23 mg/L as AGM	0.7 µg/L as AGM
3. Lower Keys	0.008 mg/L as AGM	0.21 mg/L as AGM	0.3 µg/L as AGM
4. Marquesas	0.008 mg/L as AGM	0.21 mg/L as AGM	0.6 µg/L as AGM
5. Middle Keys	0.007 mg/L as AGM	0.22 mg/L as AGM	0.3 µg/L as AGM
6. Oceanside	0.007 mg/L as AGM	0.17 mg/L as AGM	0.3 µg/L as AGM
7. Upper Keys	0.007 mg/L as AGM	0.18 mg/L as AGM	0.2 µg/L as AGM
(h) Biscayne Bay	Criteria expressed as annual geometric means (AGM) are not to be exceeded more than once in a three year period.		
1. Card Sound	0.008 mg/L as AGM	0.33 mg/L as AGM	0.5 µg/L as AGM
2. Manatee Bay – Barnes Sound	0.007 mg/L as AGM	0.58 mg/L as AGM	0.4 µg/L as AGM
3. North Central Inshore	0.007 mg/L as AGM	0.31 mg/L as AGM	0.5 µg/L as AGM
4. North Central Outer-Bay	0.008 mg/L as AGM	0.28 mg/L as AGM	0.7 µg/L as AGM
5. Northern North Bay	0.012 mg/L as AGM	0.30 mg/L as AGM	1.7 µg/L as AGM
6. South Central Inshore	0.007 mg/L as AGM	0.48 mg/L as AGM	0.4 µg/L as AGM
7. South Central Mid-Bay	0.007 mg/L	0.35 mg/L as AGM	0.2 µg/L as AGM
8. South Central Outer-Bay	0.006 mg/L as AGM	0.24 mg/L as AGM	0.2 µg/L as AGM
9. Southern North Bay	0.010 mg/L as AGM	0.29 mg/L as AGM	1.1 µg/L as AGM
(i) Sarasota Bay	For TN, the annual geometric mean target is calculated from monthly arithmetic mean color by region and season. Annual geometric means 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:		

$$NW_i = \text{Ln}[(13.35 - (0.32 * CN_i)) / 3.58]$$

$$ND_i = \text{Ln}[(10.39 - (0.32 * CN_i)) / 3.58]$$

$$SW_i = \text{Ln}[(8.51 - (0.32 * CS_i)) / 3.58]$$

$$SD_i = \text{Ln}[(5.55 - (0.32 * CS_i)) / 3.58]$$

Where,

NW_i is the TN target for i^{th} month calculated for the north region during the wet season

ND_i is the TN target for i^{th} month calculated for the north region during the dry season

SW_i is the TN target for i^{th} month calculated for the south region during the wet season

SD_i is the TN target for i^{th} month calculated for the south region during the dry season

CN_i is the arithmetic mean color during the i^{th} month within the north region

During the wet season, CN_i shall be set to 41 PCU if the monthly arithmetic mean color is greater than 41 PCU

During the dry season, CN_i shall be set to 32 PCU if the monthly arithmetic mean color is greater than 32 PCU

CS_i is the arithmetic mean color during the i^{th} month within the south region

During the wet season, CS_i shall be set to 26 PCU if the monthly arithmetic mean color is greater than 26 PCU

During the dry season, CS_i shall be set to 16 PCU if the monthly arithmetic mean color is greater than 16 PCU

The annual TN target is calculated as the geometric mean of all monthly regional and season targets as follows:

$$e^{\frac{\sum_i^{12} (NW_i + ND_i + SW_i + SD_i)}{24}}$$

Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.

(j) Clam Bay (Collier County)	No more than 10 percent of the individual Total Phosphorus (TP) or Total Nitrogen (TN) measurements shall exceed the respective TP Upper Limit or TN Upper Limit.		
	TP Upper Limit (mg/L) = $e^{-1.06256 \cdot 0.0000328465 \cdot \text{Conductivity} (\mu\text{S})}$	TN Upper Limit (mg/L) = 2.3601 - $0.0000268325 \cdot \text{Conductivity} (\mu\text{S})$	
Estuary	Total Phosphorus	Total Nitrogen	Chlorophyll <i>a</i>
(k) Perdido Bay	Criteria expressed as annual geometric means (AGM) are not to be exceeded more than once in a three year period. For all other bay segments, the criteria shall not be exceeded in more than 10 percent of the measurements and shall be assessed over the most recent seven year period. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
1. Big Lagoon	0.036 mg/L as AGM	0.61 mg/L as AGM	6.4 µg/L
2. Upper Perdido Bay	0.102 mg/L	1.27 mg/L	11.5 µg/L
3. Central Perdido Bay	0.103 mg/L	0.97 mg/L	7.5 µg/L
4. Lower Perdido Bay	0.110 mg/L	0.78 mg/L	6.9 µg/L
(l) Pensacola Bay	For bay segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For criteria expressed as the long-term average of annual means, the long-term average shall be based on data from the most recent seven-year period and shall not be exceeded. For all other bay segments, the criteria shall not be exceeded in more than 10 percent of the measurements. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
1. Lower Escambia Bay	0.076 mg/L	0.56 mg/L as AGM	6.8 µg/L as AGM
2. East Bay	0.084 mg/L	0.83 mg/L	4.0 µg/L as AGM
3. Upper Pensacola Bay	0.084 mg/L	0.77 mg/L	6.0 µg/L as AGM
4. Lower Pensacola Bay	0.024 mg/L as AGM	0.48 mg/L as AGM	3.9 µg/L as AGM
5. Santa Rosa Sound	0.022 mg/L as AGM	0.41 mg/L as AGM	3.4 µg/L as AGM
6. Blackwater Bay	0.082 mg/L	0.61 mg/L	11.3 µg/L
7. Upper Escambia Bay and Judges Bayou	See subsection 62-304.330(10), F.A.C.	See subsection 62-304.330(10), F.A.C.	7.4 µg/L as long-term average of annual means
(m) Choctawhatchee Bay	For bay segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other bay segments, the criteria shall not be exceeded in more than 10 percent of the measurements. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
1. Alaqua Bayou	0.027 mg/L as AGM	0.41 mg/L as AGM	4.0 µg/L as AGM
2. Basin Bayou	0.019 mg/L as AGM	0.31 mg/L as AGM	4.7 µg/L
3. Boggy Bayou	0.015 mg/L as AGM	0.33 mg/L as AGM	3.0 µg/L as AGM
4. East Bay	0.027 mg/L as AGM	0.46 mg/L as AGM	4.4 µg/L as AGM
5. Garnier Bayou	0.017 mg/L as AGM	0.91 mg/L as AGM	4.0 µg/L as AGM
6. LaGrange Bayou	0.029 mg/L as AGM	0.58 mg/L as AGM	5.1 µg/L as AGM
7. Middle Bay	0.020 mg/L as AGM	0.36 mg/L as AGM	3.1 µg/L as AGM
8. Rocky Bayou	0.016 mg/L as AGM	0.33 mg/L as AGM	3.1 µg/L as AGM
9. West Bay	0.049 mg/L as AGM	0.54 mg/L as AGM	4.1 µg/L as AGM
(n) St. Andrew Bay	Criteria for all bay segments are expressed as annual geometric mean (AGM) values not to be exceeded more than once in a three year period. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		

1. East Bay	0.016 mg/L as AGM	0.33 mg/L as AGM	3.9 µg/L as AGM
2. North Bay	0.014 mg/L as AGM	0.28 mg/L as AGM	3.1 µg/L as AGM
3. St. Andrew Bay	0.019 mg/L as AGM	0.34 mg/L as AGM	3.7 µg/L as AGM
4. West Bay	0.017 mg/L as AGM	0.35 mg/L as AGM	3.8 µg/L as AGM
5. Crooked Island Sound	0.019 mg/L as AGM	0.34 mg/L as AGM	3.7 µg/L as AGM
(o) St. Joseph Bay	Criteria for all bay segments are expressed as annual geometric mean (AGM) values not to be exceeded more than once in a three year period. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
St. Joseph Bay	0.021 mg/L as AGM	0.34 mg/L as AGM	3.8 µg/L as AGM
(p) Apalachicola Bay and Alligator Harbor	For bay segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other bay segments, the criteria shall not be exceeded in more than 10 percent of the measurements and shall be assessed over the most recent seven year period. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
1. Apalachicola Bay	0.063 mg/L as AGM	0.84 mg/L as AGM	8.4 µg/L as AGM
2. St. George Sound	0.083 mg/L	0.92 mg/L	6.1 µg/L as AGM
3. East Bay	0.101 mg/L	1.12 mg/L	9.7 µg/L as AGM
4. St. Vincent Sound	0.116 mg/L	1.10 mg/L	17.4 µg/L
5. Apalachicola Offshore	0.032 mg/L	0.57 mg/L	8.2 µg/L
6. Alligator Habor	0.028 mg/L as AGM	0.42 mg/L as AGM	6.0 µg/L as AGM
Estuary	Total Phosphorus	Total Nitrogen	Chlorophyll a
(q) Loxahatchee River Estuary	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other estuary segments, the criteria shall not be exceeded in more than 10 percent of the measurements and shall be assessed over the most recent seven year period.		
1. Lower Loxahatchee	0.032 mg/L as AGM	0.63 mg/L as AGM	1.8 µg/L as AGM
2. Middle Loxahatchee	0.030 mg/L as AGM	0.80 mg/L as AGM	4.0 µg/L as AGM
3. Upper Loxahatchee	0.075 mg/L as AGM	1.26 mg/L as AGM	5.5 µg/L as AGM
4. Loxahatchee River Estuary (Southwest Fork)	0.075 mg/L as AGM	1.26 mg/L as AGM	5.5 µg/L as AGM
(r) Lake Worth Lagoon	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other estuary segments, the criteria shall not be exceeded in more than 10 percent of the measurements.		
1. Northern Lake Worth Lagoon	0.044 mg/L as AGM	0.54 mg/L as AGM	2.9 µg/L as AGM
2. Central Lake Worth Lagoon	0.049 mg/L as AGM	0.66 mg/L as AGM	10.2 µg/L
3. Southern Lake Worth Lagoon	0.050 mg/L as AGM	0.59 mg/L as AGM	5.7 µg/L as AGM
(s) Halifax River Estuary and Tomoka River Estuary	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. Criteria expressed as annual means are not to be exceeded in any year.		
1. Lower Halifax River Estuary	0.142 mg/L as AGM	0.72 mg/L as AGM	6.2 µg/L as AGM
2. Upper Halifax River Estuary	See subsection 62-304.435(5), F.A.C.	See subsection 62-304.435(5), F.A.C.	9.0 µg/L as annual mean

3. Tomoka River Estuary	0.132 mg/L as AGM	1.24 mg/L as AGM	7.2 µg/L as AGM
4. Tomoka Basin	0.105 mg/L as AGM	1.20 mg/L as AGM	7.1 µg/L as AGM
(t) Guana River/Tolomato River/Matanzas River (GTM) Estuary	Criteria for all estuary segments are expressed as annual geometric mean values (AGM) not to be exceeded more than once in a three year period.		
1. Tolomato	0.105 mg/L as AGM	0.65 mg/L as AGM	6.6 µg/L as AGM
2. North Matanzas	0.110 mg/L as AGM	0.55 mg/L as AGM	4.0 µg/L as AGM
3. South Matanzas	0.111 mg/L as AGM	0.53 mg/L as AGM	5.5 µg/L as AGM
4. Pellicer Creek Estuary	0.123 mg/L as AGM	1.10 mg/L as AGM	4.3 µg/L as AGM
(u) Nassau River Estuary	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other estuary segments, the criteria shall not be exceeded in more than 10 percent of the measurements.		
1. Ft. George River Estuary	0.107 mg/L as AGM	0.60 mg/L as AGM	5.9 µg/L as AGM
2. Lower Nassau	0.107 mg/L as AGM	0.80mg/L as AGM	17.5 µg/L
3. Middle Nassau	0.137 mg/L as AGM	0.83 mg/L as AGM	17.1 µg/L
4. Upper Nassau	0.191 mg/L as AGM	1.29 mg/L as AGM	4.7 µg/L as AGM
(v) Suwannee, Waccasassa, and Withlacoochee River Estuaries	For estuary segments with criteria expressed as single value annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For estuary segments with criteria expressed as a salinity dependent equation, the annual nutrient criteria are expressed as annual geometric means applied to individual monitoring stations by solving the applicable equation below using the annual arithmetic average salinity (AASal) in practical salinity units (PSU) for the station. The AASal shall be calculated as the annual mean of the salinity measurements for each station made in conjunction with the collection of the nutrient samples. For criteria expressed as a salinity dependent equation, no more than 10 percent of the monitoring stations within the segment shall exceed the limit (expressed as AGM) on an annual basis, more than once in a three year period.		
1. Suwannee Offshore	TP as AGM = -0.0035*AASal + 0.1402	TN as AGM = -0.0328*AASal + 1.4177	5.7 µg/L as AGM
2. Waccasassa Offshore	0.063 mg/L as AGM	0.69 mg/L as AGM	5.6 µg/L as AGM
3. Withlacoochee Offshore	TP as AGM = -0.0021*AASal + 0.0942	TN as AGM = -0.0183*AASal + 0.9720	4.9 µg/L as AGM
(w) Springs Coast (Crystal River to Anclote River)	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period.		
1. Anclote Offshore	0.014 mg/L as AGM	0.42 mg/L as AGM	1.7 µg/L as AGM
2. Anclote River Estuary	0.063 mg/L as AGM	0.65 mg/L as AGM	3.8 µg/L as AGM
3. Aripeka and Hudson Offshore	0.008 mg/L as AGM	0.45 mg/L as AGM	0.8 µg/L as AGM
4. Chassahowitzka NWR	0.015 mg/L as AGM	0.55 mg/L as AGM	2.0 µg/L as AGM
5. Chassahowitzka Offshore	0.011 mg/L as AGM	0.46 mg/L as AGM	1.5 µg/L as AGM
6. Chassahowitzka River Estuary	0.021 mg/L as AGM	0.44 mg/L as AGM	3.9 µg/L as AGM
7. Crystal Offshore	0.034 mg/L as AGM	0.40 mg/L as AGM	2.4 µg/L as AGM
8. Crystal River Estuary	0.047 mg/L as AGM	0.37 mg/L as AGM	4.4 µg/L as AGM
9. Homosassa Offshore	0.012 mg/L as AGM	0.46 mg/L as AGM	1.3 µg/L as AGM
10. Homosassa River Estuary	0.028 mg/L as AGM	0.51 mg/L as AGM	7.7 µg/L as AGM
11. Pithlachascotee Offshore	0.010 mg/L as AGM	0.47 mg/L as AGM	1.0 µg/L as AGM

12. Pithlachascotee River Estuary	0.034 mg/L as AGM	0.65 mg/L as AGM	4.0 µg/L as AGM
13. St. Martins Marsh	0.031 mg/L as AGM	0.51 mg/L as AGM	3.2 µg/L as AGM
14. Weeki Wachee Offshore	0.017 mg/L as AGM	0.54 mg/L as AGM	1.2 µg/L as AGM
15. Weeki Wachee River Estuary	0.019 mg/L as AGM	0.60 mg/L as AGM	1.9 µg/L as AGM
16. Anclote Bayou	0.063 mg/L as AGM	0.65 mg/L as AGM	3.8 µg/L as AGM
17. Kings Bay	See subsection 62-304.645(17), F.A.C.	See subsection 62-304.645(17), F.A.C.	5.7 µg/L as AGM
(x) Big Bend and Apalachee Bay	For bay segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other bay segments, the criteria shall not be exceeded in more than 10 percent of the measurements and shall be assessed over the most recent seven year period. Nutrient and nutrient response values do not apply to tidally influenced areas that fluctuate between predominantly marine and predominantly fresh waters during typical climatic and hydrologic conditions.		
1. Ochlockonee River Estuary	0.067 mg/L	0.86 mg/L	9.2 µg/L
2. Ochlockonee/Alligator Harbor Offshore	0.032 mg/L	0.57 mg/L	8.2 µg/L
3. St. Marks River Estuary	0.044 mg/L	0.70 mg/L	6.0 µg/L
4. St. Marks Offshore (includes Oyster and Dickerson Bays)	0.045 mg/L	0.63 mg/L	8.0 µg/L
5. Aucilla River Estuary	0.080 mg/L	0.89 mg/L	2.2 µg/L
6. Aucilla Offshore	0.025 mg/L	0.60 mg/L	9.5 µg/L
7. Econfina River Estuary	0.101 mg/L as AGM	1.14 mg/L as AGM	4.9 µg/L as AGM
8. Econfina Offshore	0.042 mg/L as AGM	0.65 mg/L as AGM	3.7 µg/L as AGM
9. Fenholloway River Estuary	839 lbs/day, as an annual average, based on Level II WQBEL	5,573 lbs/day, as an annual average, based on Level II WQBEL	4.6 µg/L as AGM
10. Fenholloway Offshore	0.059 mg/L as AGM	0.68 mg/L as AGM	4.1 µg/L as AGM
11. Spring Warrior Offshore	0.047 mg/L	0.67 mg/L	8.3 µg/L
12. Steinhatchee River Estuary	0.062 mg/L as AGM	0.86 mg/L as AGM	3.9 µg/L as AGM
13. Steinhatchee Offshore	0.021 mg/L as AGM	0.45 mg/L as AGM	3.3 µg/L as AGM
14. Horseshoe Beach Offshore	0.021 mg/L as AGM	0.45 mg/L as AGM	3.3 µg/L as AGM
15. Cedar Key	0.060 mg/L as AGM	0.79 mg/L as AGM	10.9 µg/L as AGM
(y) Intracoastal Waterway (ICWW)	For ICWW segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. Criteria expressed as kg/year and annual means are not to be exceeded in any year. For all other ICWW segments, the criteria shall not be exceeded in more than 10 percent of the measurements and shall be assessed over the most recent seven year period.		
1. Gulf ICWW between Choctawhatchee Bay and St. Andrew Bay	0.108 mg/L	1.13 mg/L	6.6 µg/L
2. Gulf ICWW between St.	0.108 mg/L	1.13 mg/L	6.6 µg/L

Andrew Bay and St. Joseph Bay			
3. ICWW between Roberts Bay and Lemon Bay	0.253 mg/L as AGM	0.59 mg/L as AGM	4.0 µg/L as AGM
4. Central Broward County ICWW	0.045 mg/L as AGM	0.80 mg/L as AGM	2.7 µg/L as AGM
5. North Broward County ICWW	0.059 mg/L as AGM	0.79 mg/L as AGM	3.0 µg/L as AGM
6. North Central Broward County ICWW	0.048 mg/L as AGM	0.88 mg/L as AGM	3.3 µg/L as AGM
7. South Broward County ICWW	0.043 mg/L as AGM	0.70 mg/L as AGM	2.0 µg/L as AGM
8. Palm Beach County ICWW	0.146 mg/L	1.17 mg/L	13.4 µg/L
9. ICWW between North Lake Worth Lagoon and Lower Loxahatchee River	0.035 mg/L as AGM	0.66 mg/L as AGM	4.7 µg/L as AGM
10. ICWW Palm Coast	73,142 kg/year	798,913 kg/year	4.5 µg/L as annual mean
11. ICWW from North Tolomato River to St. Johns River	0.191 mg/L as AGM	1.27 mg/L	10.2 µg/L
(z) St. Lucie Estuary	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For criteria expressed as long-term averages, the long-term average shall be based on data from the most recent seven-year period and shall not be exceeded.		
1. St. Lucie Estuary	See subsection 62-304.705(1), F.A.C.	See subsection 62-304.705(1), F.A.C.	5.9 µg/L as AGM
2. Upper North Fork St. Lucie River	See subsection 62-304.705(2), F.A.C.	See subsection 62-304.705(2), F.A.C.	6.7 µg/L as AGM
3. Lower North Fork St. Lucie River	See subsection 62-304.705(3), F.A.C.	See subsection 62-304.705(3), F.A.C.	7.4 µg/L as AGM
4. Lower South Fork St. Lucie River	See subsection 62-304.705(6), F.A.C.	See subsection 62-304.705(6), F.A.C.	6.7 µg/L as AGM
5. Upper South Fork St. Lucie River	See subsection 62-304.705(7), F.A.C.	See subsection 62-304.705(7), F.A.C.	5.0 µg/L as AGM
6. Manatee Creek	0.081 mg/L as long-term average	0.72 mg/L as long-term average	5.9 µg/L as AGM
(aa) Indian River Lagoon, Banana River Lagoon, and Mosquito Lagoon	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other estuary segments, the criteria shall not be exceeded in more than 10 percent of the measurements and shall be assessed over the most recent seven year period.		
1. Indian River Lagoon between Loxahatchee River up to and including Hobe Sound	0.021 mg/L as AGM	0.49 mg/L as AGM	2.0 µg/L as AGM
2. Indian River Lagoon between Hobe Sound and St. Lucie	0.060 mg/L as AGM	0.63 mg/L as AGM	6.9 µg/L
3. Indian River Lagoon from St. Lucie Estuary to	0.070 mg/L as AGM	0.72 mg/L as AGM	4.7 µg/L as AGM

Ft. Pierce Inlet			
4. Indian River Lagoon from Ft. Pierce Inlet to Indian River County Line	0.070 mg/L as AGM	0.72 mg/L as AGM	4.7 µg/L as AGM
5. Central Indian River Lagoon	See subsections 62-304.520(7) and (8), F.A.C.	See subsections 62-304.520(7) and (8), F.A.C.	5.9 µg/L as AGM
6. North Indian River Lagoon	See subsections 62-304.520(3)-(6), F.A.C.	See subsections 62-304.520(3)-(6), F.A.C.	6.4 µg/L as AGM
7. Sebastian River Estuary	63,991 pounds/year, not to be exceeded in any year	323,382 pounds/year, not to be exceeded in any year	5.9 µg/L as AGM
8. Banana River Lagoon	See subsections 62-304.520(9) and (10), F.A.C.	See subsections 62-304.520(9) and (10), F.A.C.	7.3 µg/L as AGM
9. Newfound Harbor	See subsection 62-304.520(11), F.A.C.	See subsection 62-304.520(11), F.A.C.	7.3 µg/L as AGM
10. Sykes Creek Estuary	See subsection 62-304.520(13), F.A.C.	See subsection 62-304.520(13), F.A.C.	7.3 µg/L as AGM
11. Mosquito Lagoon: Oak Hill to the Southern Terminus	0.034 mg/L as AGM	1.14 mg/L as AGM	2.5 µg/L as AGM
12. Mosquito Lagoon: Edgewater to Oak Hill	0.048 mg/L as AGM	0.65 mg/L as AGM	3.4 µg/L as AGM
13. Mosquito Lagoon: Ponce de Leon to Edgewater	0.049 mg/L as AGM	0.51 mg/L as AGM	4.0 µg/L as AGM
(bb) Lower St. Johns River and Tributaries (predominantly marine)	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For criteria expressed as the long-term average of annual means, the long-term average shall be based on data from the most recent seven-year period and shall not be exceeded.		
Lower St. Johns River and Tributaries (predominantly marine)	722,834 kilograms/year	See subsection 62-304.415(2), F.A.C.	5.4 µg/L as long-term average of annual means
(cc) St. Marys River	For estuary segments with criteria expressed as annual geometric means (AGM), the values shall not be exceeded more than once in a three year period. For all other estuary segments, the criteria shall not be exceeded in more than 10 percent of the measurements and shall be assessed over the most recent seven year period.		
1. Lower St. Marys River	0.181 mg/L	0.77 mg/L as AGM	12.9 µg/L
2. Middle St. Marys River	0.113 mg/L as AGM	1.12 mg/L as AGM	8.0 µg/L
3. Upper St. Marys River	0.093 mg/L as AGM	1.35 mg/L as AGM	3.0 µg/L as AGM

(2) Criteria for chlorophyll *a* in open ocean coastal waters, derived from satellite remote sensing techniques, are provided in the table below. In each coastal segment specified in the Map of Florida Coastal Segments, dated May 13, 2013 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-03017>), which is incorporated by reference herein, the Annual Geometric Mean remotely sensed chlorophyll *a* value, calculated excluding *Karenia brevis* blooms (>50,000 cells/L), shall not be exceeded more than once in a three year period. The annual geometric means provided in the table below are based on measurements using the SeaWiFS satellite. Achievement of these criteria shall be assessed only by using satellite remote sensing data that are processed in a manner consistent with the derivation of the criteria. Data selection and preparation shall be consistent with the process described in Section 1.4.3 and Section 1.4.4, pages 14 through 17, in the report titled “Technical Support Document for U.S. EPA’s Proposed Rule for Numeric Nutrient Criteria for Florida’s Estuaries, Coastal Waters, and South Florida Inland Flowing Waters, Volume 2: Coastal Waters,” U.S. Environmental Protection Agency, November 30, 2012

(<http://www.flrules.org/Gateway/reference.asp?No=Ref-03018>), the specified pages of which are incorporated by reference herein. If MODIS or MERIS satellite data are used, the data shall be normalized using the standardization factors provided in the table below, consistent with the process described in Section 1.6.3, pages 26 through 33 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-03019>), in the above referenced EPA document, the specified pages of which are incorporated herein. A copy of the Map of Florida Coastal Segments and the referenced pages from EPA's document above are available by writing to the Florida Department of Environmental Protection, Water Quality Standards Program, 2600 Blair Stone Road, MS #6511, Tallahassee, FL 32399-2400.

Coastal Segment	Annual Geometric Mean Remotely Sensed Chlorophyll <i>a</i>	MODIS Standardization Factor	MERIS Standardization Factor
1	2.45	0.54	-0.71
2	2.65	0.99	-0.07
3	1.48	0.41	-0.22
4	1.20	0.26	-0.30
5	1.09	0.15	-0.28
6	1.07	0.29	-0.01
7	1.17	0.33	-0.02
8	1.27	0.38	-0.05
9	1.09	0.20	-0.07
10	1.13	0.41	-0.07
11	1.14	0.31	-0.05
12	1.21	0.41	-0.05
13	1.53	0.50	-0.13
14	1.80	0.69	0.01
15	2.80	0.68	0.58
16	2.49	-0.14	0.27
17	3.57	0.08	1.41
18	5.62	0.50	0.03
19	4.90	0.50	0.31
20	4.33	-0.02	-0.69
21	4.06	-0.63	-1.09
22	4.54	-0.46	-0.17
23	3.40	-1.21	-0.67
24	3.41	-2.37	0.01
25	3.11	-2.84	0.05
26	3.00	-4.16	-0.36
27	3.05	-1.77	-0.81
28	3.41	-2.13	-0.61
29	4.55	-0.83	-0.74
30	4.32	-0.74	-0.04
31	3.77	-0.29	-0.90
32	4.30	0.17	-0.47
33	5.98	0.10	0.80
34	4.63	-0.77	-0.32
35	4.14	0.42	-0.83
37	1.01	0.39	0.59
38	0.26	-0.04	-0.03
39	0.27	-0.02	0.00
40	0.25	-0.03	-0.01
41	0.21	-0.06	-0.01
42	0.21	-0.03	0.03
43	0.21	-0.02	0.04
44	0.20	-0.02	0.01

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

(3) Estuarine and marine areas for the estuaries listed in subsection 62-302.532(1), F.A.C., are delineated in the maps of the Florida Estuary Nutrient Regions, dated October 2014 and October 2015 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-06050>), which are incorporated by reference herein. Copies of these maps may be obtained by writing to the Florida Department of Environmental Protection, Water Quality Standards Program, 2600 Blair Stone Road, MS #6511, Tallahassee, FL 32399-2400.

(4) To calculate an annual geometric or arithmetic 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.

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804 FS. Law Implemented 403.021(11), 403.061, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History—New 7-3-12, Amended 12-20-12, 8-1-13, 8-20-13, 6-7-15, 2-17-16

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