



# Florida's Numeric Nutrient Criteria: Lessons Learned

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Listing and TMDL staff



## Outline of Presentation

- ***Why Numeric Nutrient Criteria (NNC)?***
- ***NNC Development Overview***
- ***TMDL Development***
- ***Regulatory NNC Implementation***



# NNC in Florida

- Florida has adopted NNC for almost all state waters
  - Streams, lakes, springs, estuaries, and coastal waters
- As part of rulemaking, Florida
  - Integrated variety of provisions into the NNC that were designed to help with implementation, AND
  - Adopted by reference detailed document describing how NNC would be implemented in 303(d) and NPDES Programs
- Extra rulemaking steps, and included many details normally not in water quality standards
  - But worth the effort!



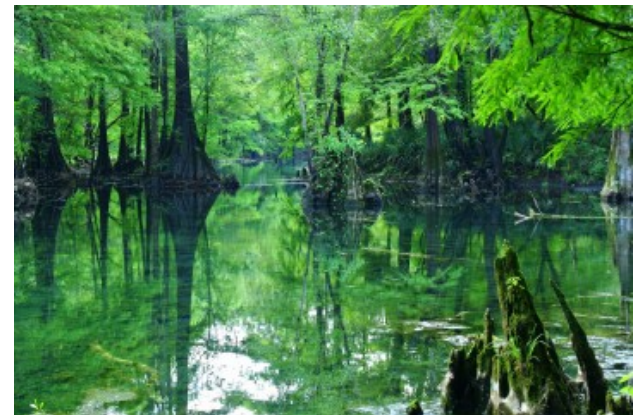
# Florida's NNC Rulemaking

- DEPs nutrient standard rules for lakes, streams, spring vents, and Southwest estuaries were unanimously adopted by ERC on Dec. 8, 2011
  - Amendment excluded canals/ditches primarily used for water management purposes and with limited habitat from definition of stream
- However, rules were challenged by several environmental groups
  - Challenged both new rule AND existing narrative nutrient criteria
- Hearing held Feb. 27- March 5, 2012, and ruling came out June 7, 2012
- Administrative Law Judge Bram Canter upheld the narrative and new rule in its entirety
  - Agreed rules do not contravene law implemented, are not arbitrary or capricious, and are not invalid exercises of delegated legislative authority
  - Concluded criteria were developed in a deliberative process and the rulemaking was “unusual in terms of time, cost, numbers of scientists involved, and the comprehensiveness of the investigations”



# Status of DEP Rulemaking

- EPA approved NNC on **November 30, 2012**
  - First set of estuary NNC are now in effect, but remaining criteria for lakes, streams, and spring vents are not yet in effect as of 2012
- On Nov. 30, 2012, EPA also re-proposed NNC for streams, and proposed NNC for estuaries, South Florida flowing waters, and coastal waters
- Required under Federal Consent Decree (CD), which also requires EPA to finalize the NNC by end of August (streams) and September (estuaries, SF flowing waters, and coastal)





# EPA Approval (Rule 62-302.531(9) F.A.C.)

- Subsection (9) states that key definitions, 62-302.531 (Numeric Interpretations of Narrative Nutrient Criteria), and 62-302.532(3) (the schedule for estuary criteria development), shall be effective only if EPA
  - Approves these rules in their entirety,
  - Concludes rulemaking that removes federal numeric nutrient criteria in response to the approval, and
  - Determines, in accordance with 33 U.S.C. § 1313(c)(3), that these rules sufficiently address EPA's January 14, 2009 determination
- However, under 2013 NNC legislation, this provision expires if EPA withdraws all federal NNC and ceases all federal nutrient rulemaking



# Path Forward

- EPA and DEP reached agreement on March 15, 2013 on a “Path Forward” for NNC development
  - If “executed,” EPA does not plan to finalize their NNC





# Path Forward

(continued)

- Adopt criteria for additional estuaries by July 1, 2013
  - Calculate interim numeric values representing current unimpaired conditions of remaining estuaries and submit them to Governor and Legislature by August
  - Submit New Estuarine NNC, Implementation Document, and interim values to EPA by August
- State legislation, which was subsequently passed, that:
  - Authorizes DEP to implement the adopted NNC consistent with the document “Implementation of Florida’s Numeric Nutrient Standards,” which was incorporated by reference in Chapter 62-302 on April 23, 2013
  - Waives ratification for any estuarine NNC adopted in 2013
  - Requires NNC for all remaining estuaries by Dec. 1, 2014, and establishes that current conditions of unimpaired waters will be the nutrient standards until NNC adopted
- EPA agreed to review the NNC and the legislatively established narrative standard, and make final decisions before Consent Decree (CD) deadline (Sept. 30, 2013)
- EPA submitted “Notice of Agreement” to federal court on April 4, 2013 indicating that
  - EPA expects to amend their January 2009 determination to narrow its scope, which would warrant modification of the CD





# NNC Effective Dates

- July 3 and December 20, 2012
  - Clearwater Harbor, Tampa Bay, Sarasota Bay, Charlotte Harbor, Caloosahatchee Estuary, Southwest Coast, Florida Bay, Florida Keys, and Biscayne Bay Para. 62-302.532(1)(a)-(p), F.A.C.
- October 27, 2014
  - Streams, lakes, spring vents and estuaries within Para. 62-302.532(1)(q)-(w), F.A.C.
  - Effective date of EPA's withdrawal of federally promulgated NNC
- November 19, 2014 – October 18, 2017
  - Big Bend, St. Mary's estuary, Indian River Lagoon, Mosquito Lagoon; Intracoastal Waterway (ICWW) segments, Upper Escambia Bay, Kings Bay, Lower St. Johns River, St. Lucie Estuary, Caloosahatchee Estuary, and small gaps between estuaries with adopted NNC. Para. 62-302.532(1)(x)-(cc), F.A.C.



# Nutrient Surface Water Quality Criteria

- Nutrients are defined in Subsection 62-302.200(22), F.A.C.,
  - *“total nitrogen (TN), total phosphorus (TP), or their organic or inorganic forms”*
- Nutrient Criteria Rules
  - Narrative nutrient criteria in Rule 62-302.530(48), F.A.C.
  - NNC for site-specific interpretations, lakes, spring vents and streams in Rule 62-302.531, F.A.C.; and
  - NNC for specific estuaries in Rule 62-302.532, F.A.C.
- Implementation Document\*
  - Subsection 62-302.300(19), F.A.C., establishes that NNC *“under Rules 62-302.531 and 62-302.532, F.A.C., shall be implemented consistent with the document titled Implementation of Florida’s Numeric Nutrient Standards, April 2013”* (Implementation Document)
  - Incorporated by reference into the rule (makes it the same as part of the rule!)
  - Available at <http://www.flrules.org/Gateway/reference.asp?No=Ref-02905>



# Summary of Proposed Concept

- Maintain the narrative nutrient criterion and numerically interpret it using best available information on a site-specific basis using a systematic, hierarchical approach
  - Narrative is the foundation for the numeric nutrient criteria
  - Narrative continues to apply even where NNC apply
- Narrative states that “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.”
- Applies to surface waters



# Hierarchical Approach

## Site-specific (Hierarchy 1)

Level II Water Quality-Based Effluent Limitations,  
Nutrient Total Maximum Daily Loads,  
Site Specific Alternative Criteria,  
Reasonable Assurance Plans, and  
Estuary-specific Criteria

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## Lakes/Springs



Stressor-Response Relationships (lakes & springs)

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## Streams



Reference-based thresholds (streams)  
combined with biological data (flora and fauna)

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## Narrative



Ditches/canals used for water conveyance,  
wetlands, non-perennial streams, tidally fluctuating areas, and  
South Florida flowing waters



# Site-Specific NNC (Hierarchy 1)

Rule 62-302.531(2)(a):

*Where a site specific numeric interpretation of the criterion in paragraph 62-302.530(48)(b), F.A.C., has been established by the Department, this numeric interpretation shall be the primary interpretation.*

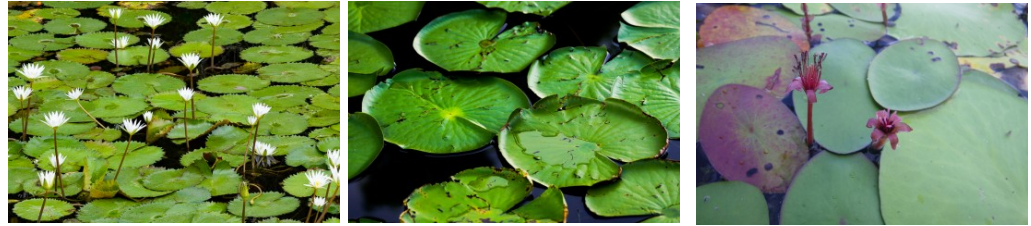
Hierarchy I site specific interpretations:

- DEP TMDLs adopted in Chapter 62-304
- Level II Water Quality Based Effluent Limits (WQBELs) (Rule 62-650.500)
- Estuary Specific Criteria (Rule 62-302.532)
- Site Specific Alternative Criteria (SSAC) (Rule 62-302.800)
- Reasonable Assurance (RA) Plans (Rule 62-303.600)





# Numeric Interpretations for Lakes



- Established chlorophyll *a*, TN and TP criteria
  - Start with target chlorophyll *a*, and then set TN and TP criteria based on statistical relationship between nutrients and chlorophyll *a*
  - Criteria vary annually depending on color and alkalinity
  - Expressed as annual geometric mean (AGM) calculated as lake-wide averages that cannot be exceeded more than once in a three-year period
  - Effluent limitations should be expressed as annual averages not to be exceeded
    - WQBEL would establish load that attains NNC (at critical conditions)



# Numeric Nutrient Criteria for Florida Lakes (62-302.531(2)(b)1, F. A. C)

Long Term Geometric Mean Lake Color and Alkalinity	AGM Chlorophyll <i>a</i>	Minimum Calculated AGM TP NNC	Minimum Calculated AGM TN NNC	Maximum Calculated AGM TP NNC	Maximum Calculated AGM TN NNC
>40 Platinum Cobalt Units	20 µg/L	0.05 mg/L	1.27 mg/L	0.16 mg/L <sup>1</sup>	2.23 mg/L
≤ 40 Platinum Cobalt Units and > 20 mg/L CaCO <sub>3</sub>	20 µg/L	0.03 mg/L	1.05 mg/L	0.09 mg/L	1.91 mg/L
≤ 40 Platinum Cobalt Units and ≤ 20 mg/L CaCO <sub>3</sub>	6 µg/L	0.01 mg/L	0.51 mg/L	0.03 mg/L	0.93 mg/L

CaCO<sub>3</sub> = Calcium carbonate

<sup>1</sup> 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

The applicable numeric interpretations for TN, TP, and chlorophyll *a* shall not be exceeded more than once in any consecutive three year period



# Nuisance Algal Mats in Springs

Silver Springs, 1950s;  
Nitrate < 0.1 mg/L, Eel grass



Weeki Wachee, 2001:  
Nitrate ~ 0.7 mg/L, Lyngbya mats







# Spring Vents



- Based on a cause-effect relationship between nitrate-nitrite and nuisance algal mats
  - Criterion established at a concentration that prevents nuisance mats from occurring (compared with natural background levels)
- Applicable numeric interpretation of the narrative nutrient criterion is 0.35 mg/L of nitrate-nitrite
  - Expressed as an annual geometric mean, not to be exceeded more than once in any three consecutive calendar year period



# Stream Definition (for NNC)

- Streams do not include: non-perennial water segments, wetlands, portions of streams that exhibit lake characteristics, or tidally influenced areas; or
- Ditches, canals and other conveyances that are man-made, or predominantly channelized or physically altered; and
  - 1) are primarily used for water management purposes, such as flood protection, stormwater management, irrigation, or water supply; and
  - 2) have marginal or poor stream habitat or habitat components, such as a lack of habitat or substrate that is biologically limited, because the conveyance has cross sections that are predominantly trapezoidal, has armored banks, or is maintained primarily for water conveyance



# NNC for Streams

- Looked extensively for cause-effect relationships between nutrients and biological responses, but they were insufficient to develop criteria
- Established numeric thresholds based on “reference approach”, but because there is no link to impairment, established broader evaluation of water chemistry and biological data (flora and fauna) to determine if a stream’s nutrient concentrations are protective of balanced flora and fauna





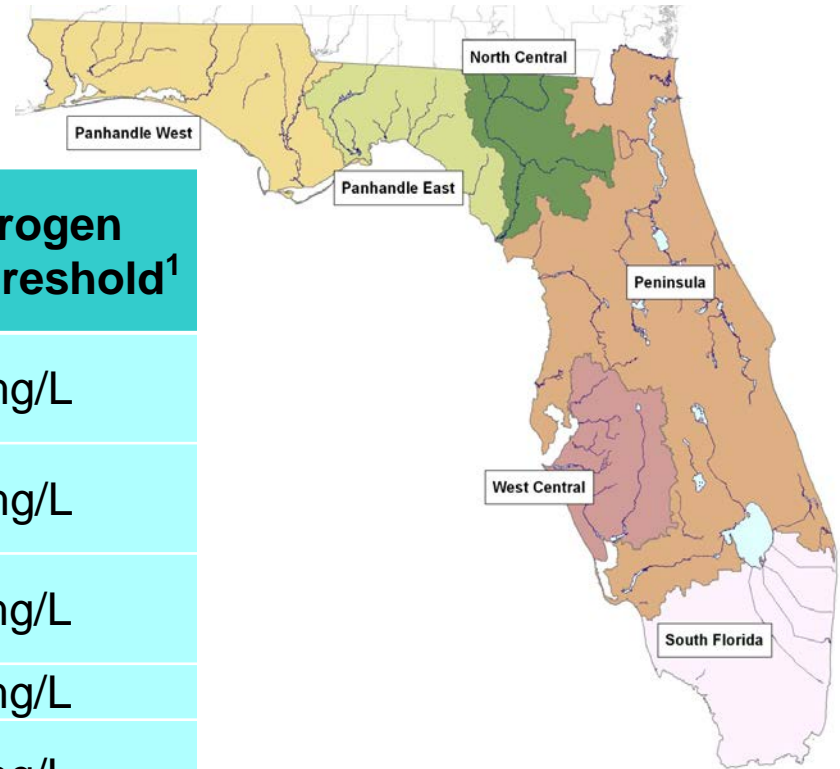
# Floral/Fauna Tools in Streams

- Floral Information
  - Linear Vegetation Survey (LVS)
    - Coefficient of Conservatism, invasive exotics
  - Rapid Periphyton Survey (RPS)
    - Thickness and extent, autecology (interpreting species information)
  - Phytoplankton chlorophyll *a* (current and trends)
  - Habitat Assessment (HA)
    - Substrate type, availability, mapping, etc.
- Fauna Information
  - Stream Condition Index (SCI)





# NNC for Florida Streams (62-302.531(2)(c)2, F.A.C.)



Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
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(48)(b), F.A.C., applies.	

<sup>1</sup>These values are annual geometric mean (AGM) concentrations not to be exceeded more than once in any three calendar year period.



# NNC in Streams Achieved IF:

**A stream is considered to be in compliance with its NNC if:**

- There are no imbalances in aquatic flora or fauna (based on chlorophyll *a* levels, algal mats or blooms, nuisance macrophyte growth, and changes in algal species composition)



**Stream Passes the Aquatic Flora Bioassessment  
and either:**

- The average score of at least two temporally independent ( $\geq 3$  months apart) Stream Condition Index (SCI) monitoring events performed at representative locations and times is 40 or higher, with neither of the two most recent SCI scores less than 35



**Stream Passes the Aquatic Fauna Bioassessment  
or:**

- TN and/or TP in the stream are less than or equal to the regional thresholds in subparagraph 62-302.531(2)(c)2., F.A.C.



**Stream TN and TP Concentrations are Sufficiently Low**



# Overall Estuary Approach

- Given the diversity of estuaries and site-specific nature of nutrient impacts in estuaries, DEP and local scientists developed estuary-specific nutrient standards
  - Rather than generally applicable standards
- Worked with local scientists, including National Estuary Programs and EPA, to reach consensus on methods and standards
- Also worked with Marine Technical Advisory Committee (MTAC) on basic methodologies





# Estuary Approach

(continued)

- Satellite imagery-based (remotely sensed) chlorophyll *a* criteria for coastal segments
  - Based on EPA’s 2012 Proposal, which based criteria on current healthy chlorophyll *a* levels (excluded data from red tide events)
- Does not include TN or TP (these waters have little to no water quality data )
- Criteria were assessed consistent with derivation (satellite based data)
  - Rule table includes “standardization factors” to use data from two other satellites (62-302.532(2) F.A.C.)

(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 ( $\geq 50,000$  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





# Lessons Learned- Hard to Plan for “Type I Error” when Deriving Reference-based NNC

- Most of Florida’s estuarine NNC based on “reference period” approach, which used 3 biological thresholds (DO, chlorophyll *a*, and light) to determine healthy years and calculated NNC using data only from those years
  - Set NNC at upper 80% prediction limit of AGMs, with no more than 1 exceedance in 3-year period
    - Goal was to maintain data distribution of healthy conditions
  - Magnitude and frequency specifically designed to limit long-term Type I error to 10%
    - Type I Error is chance of determining waterbody impaired when actually healthy



# Lessons Learned- Hard to Plan for “Type I Error” when Deriving Reference-based NNC



Photo Credit: <https://floridadep.gov/rcp/aquatic-preserve/locations/gasparilla-sound-charlotte-harbor-aquatic-preserve>

- However, some estuaries now being identified as impaired even though new data meets thresholds
  - Underestimated cumulative error from assessing multiple years and multiple parameters
- May have to revise NNC through additional rulemaking



# Adopted NNC for Estuary and Coastal Segments

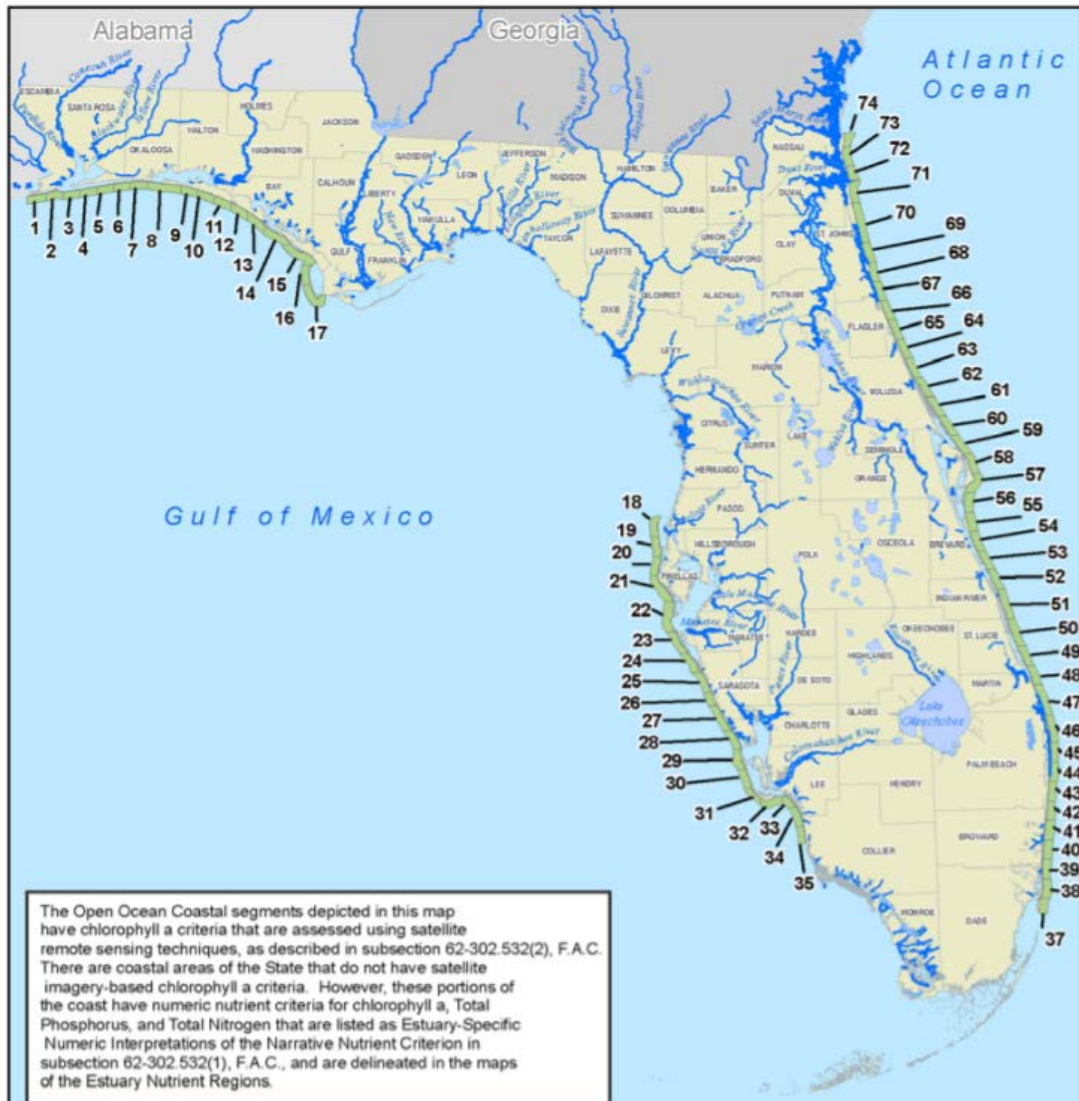
- In 2011, adopted nutrient standards for estuaries statewide 62-302.532(1)(x)-(cc) F.A.C.

**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		

(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.



The Open Ocean Coastal segments depicted in this map have chlorophyll a criteria that are assessed using satellite remote sensing techniques, as described in subsection 62-302.532(2), F.A.C. There are coastal areas of the State that do not have satellite imagery-based chlorophyll a criteria. However, these portions of the coast have numeric nutrient criteria for chlorophyll a, Total Phosphorus, and Total Nitrogen that are listed as Estuary-Specific Numeric Interpretations of the Narrative Nutrient Criterion in subsection 62-302.532(1), F.A.C., and are delineated in the maps of the Estuary Nutrient Regions.

### Florida Coastal Segments

November 2nd, 2018

Open Ocean Coastal Segments

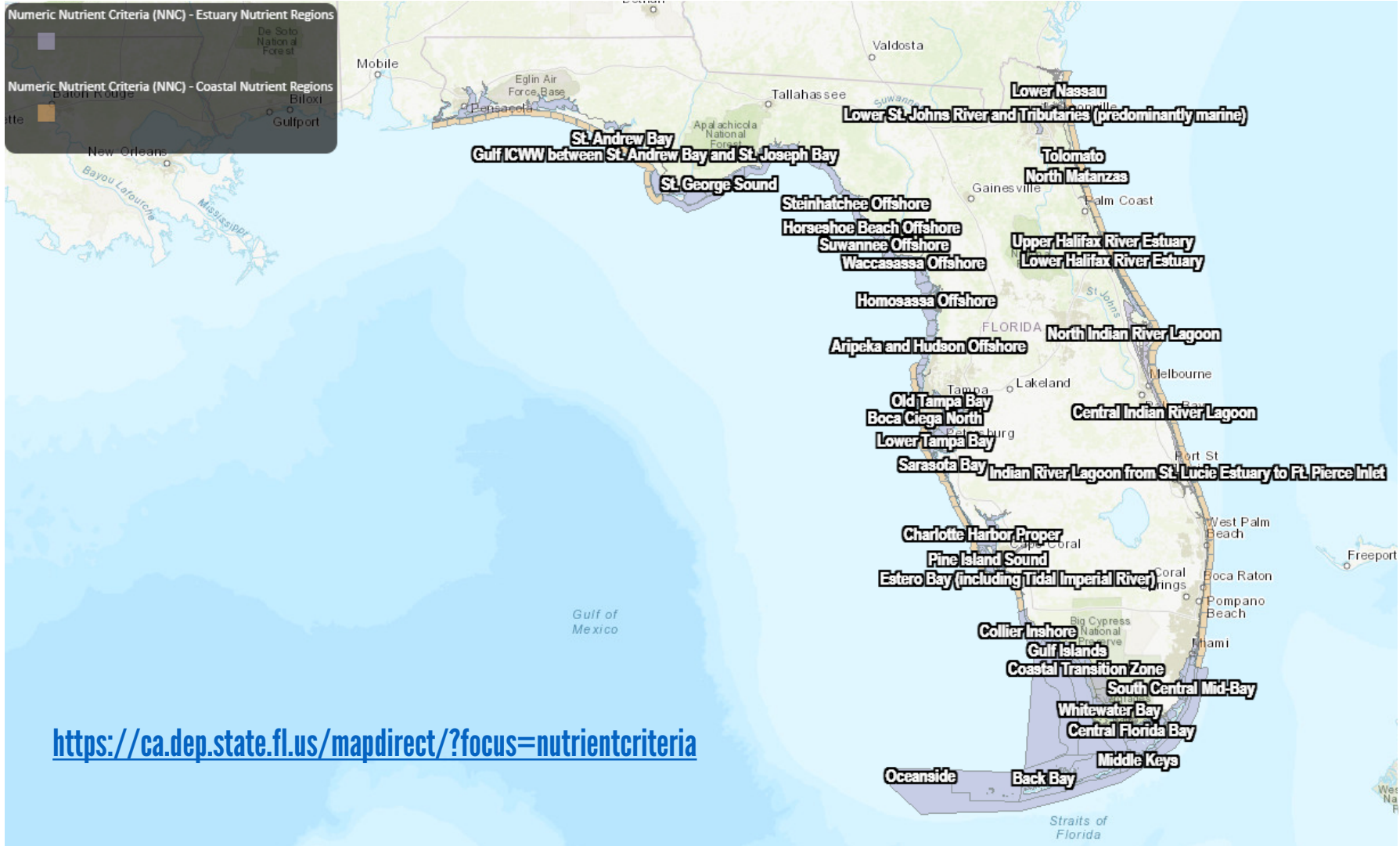




# NNC – Estuary and Coastal Nutrient Regions

**Numeric Nutrient Criteria (NNC) - Estuary Nutrient Regions**

**Numeric Nutrient Criteria (NNC) - Coastal Nutrient Regions**



<https://ca.dep.state.fl.us/mapdirect/?focus=nutrientcriteria>



# Key Implementation Provisions

- NNC rules acknowledge site-specific interpretations of narrative nutrient standard
  - Recognizes adopted nutrient TMDLs (and other site-specific interpretations), which supersede the generally applicable NNC
- Without this recognition, there would be uncertainty about which nutrient standards apply (**NNC or TMDL**)
  - Would previously adopted TMDLs have to be revised?
  - Stakeholders have invested billions to attain TMDLs and initially wanted to put TMDL implementation plans on hold during NNC development



# Key Implementation Provisions

(continued)

- Spatial Component
  - Florida rule clearly states that standards are applied as a spatial average in a waterbody, consistent with derivation
  - If silent on spatial component, NNC would be applied like other criteria, which are applied as “end of pipe”
- Huge ramifications on required treatment level and cost needed to comply
- Also big ramifications on Water Quality Credit Trading because “end of pipe” concentration-based limits could constrain trading
  - Trading works much better with load-based TMDLs



# Key Implementation Provisions

(continued)

- Use of biological information for stream criteria based on reference approach
  - Acknowledges that “reference method’ derives criteria that are not linked to impairment
  - Our rule allows bioassessment data to supersede stream nutrient (TN and TP) thresholds
- To attain nutrient standard for streams, stream must pass floral metrics (chl a, periphyton, & aquatic veg) and EITHER faunal metrics or TN and TP thresholds
  - If stream exceeds the thresholds and biological data are not available, it is placed on 303(d) List (as study list, not as impaired)





# Lessons Learned- Acknowledging TMDLs as NNC is a Pain

- For nutrient TMDLs to serve as applicable water quality standard, must be reviewed by EPA WQS staff
  - In addition to EPA TMDL staff
- This duplicative review has been time-consuming, for both DEP and EPA
- Worth the effort for nutrient TMDLs that set new interpretation of narrative (new chl *a*, TN or TP), but not TMDLs that simply implement the generally applicable nutrient standard
  - Not really a “new” standard if TMDL simply determines nutrient load that attains NNC
  - EPA requires a demonstration that generally applicable criteria protective on a site-specific basis



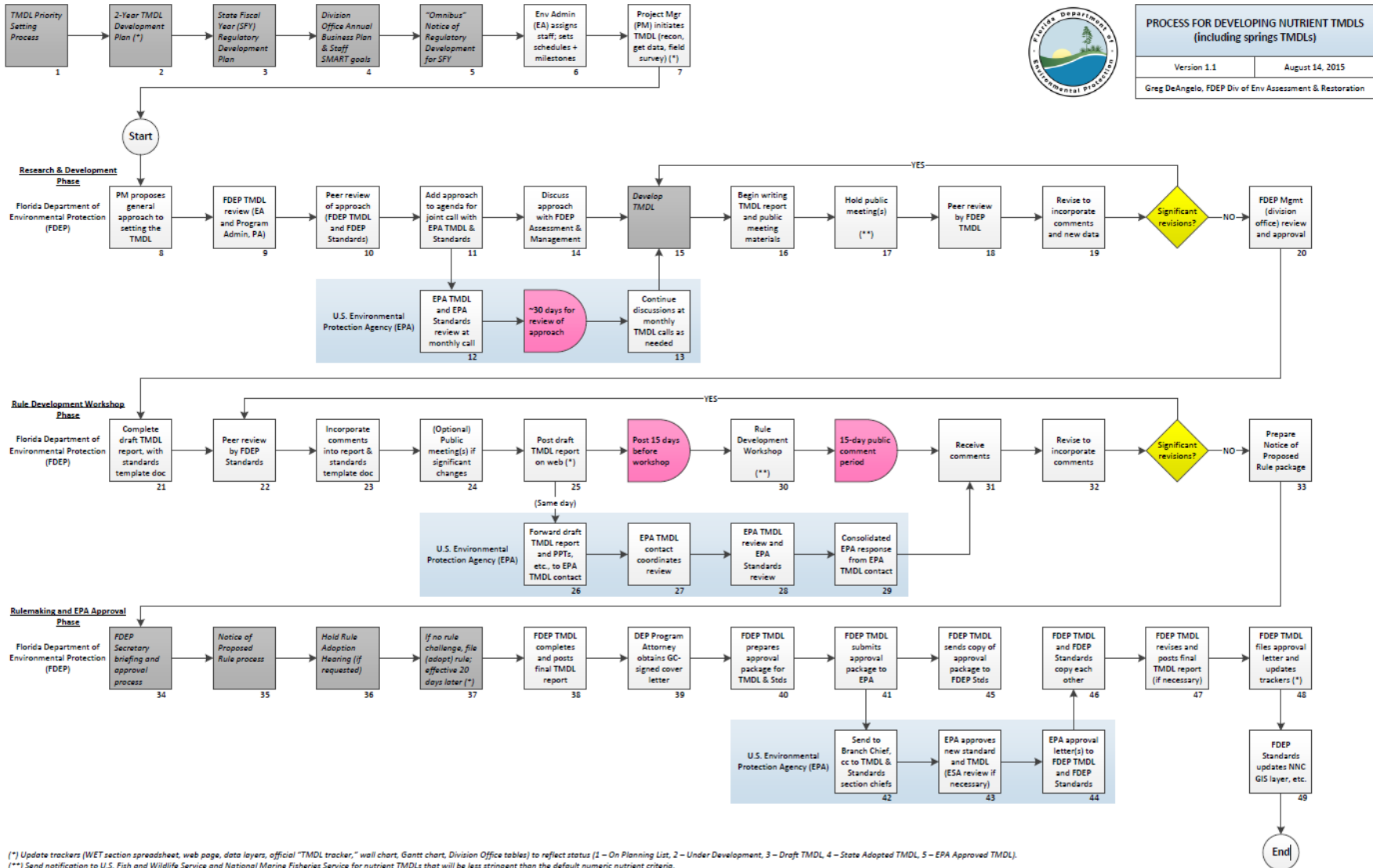
# Work with your EPA Region Staff

- 3 day retreat between TMDL, Standards, Assessment and Legal DEP/EPA staff– 02/01/16-02/03/16
- Full day webinar between TMDL and Standards DEP/EPA staff
  - *Basic Method to Develop Nutrient TMDLs for Lakes* – 10/19/16
- 2 day face to face DEP/EPA visit – 03/22/17-03/23/17
- Monthly coordination calls between Standards and TMDL staff (DEP/EPA)
- Monthly coordination calls between TMDL staff (DEP/EPA)





# Process for Developing TMDL/H1



(\*) Update trackers (WET section spreadsheet, web page, data layers, official "TMDL tracker," wall chart, Gantt chart, Division Office tables) to reflect status (1 – On Planning List, 2 – Under Development, 3 – Draft TMDL, 4 – State Adopted TMDL, 5 – EPA Approved TMDL).  
(\*\*) Send notification to U.S. Fish and Wildlife Service and National Marine Fisheries Service for nutrient TMDLs that will be less stringent than the default numeric nutrient criteria.



# TMDL Checklist

A		B	
1	<b>Enter the TMDL Project Information below:</b>		
2	Project Leader:		
3	Project Start Date:		
4	Waterbody (or Project) Name:		
5	WBID(s)#:		
6	Verified Cycle:		
7	IWR Run Used:		
8	Pollutant(s) of Concern:		
9	TMDL Fiscal Year:		
10	Dream Team Members:	TBD by Program Administrators	
11	Rule Number:		
12	OGC Case No.:		
13			
14			
15	Export the GIS Checklist -->	Export	
16			
17			
18			

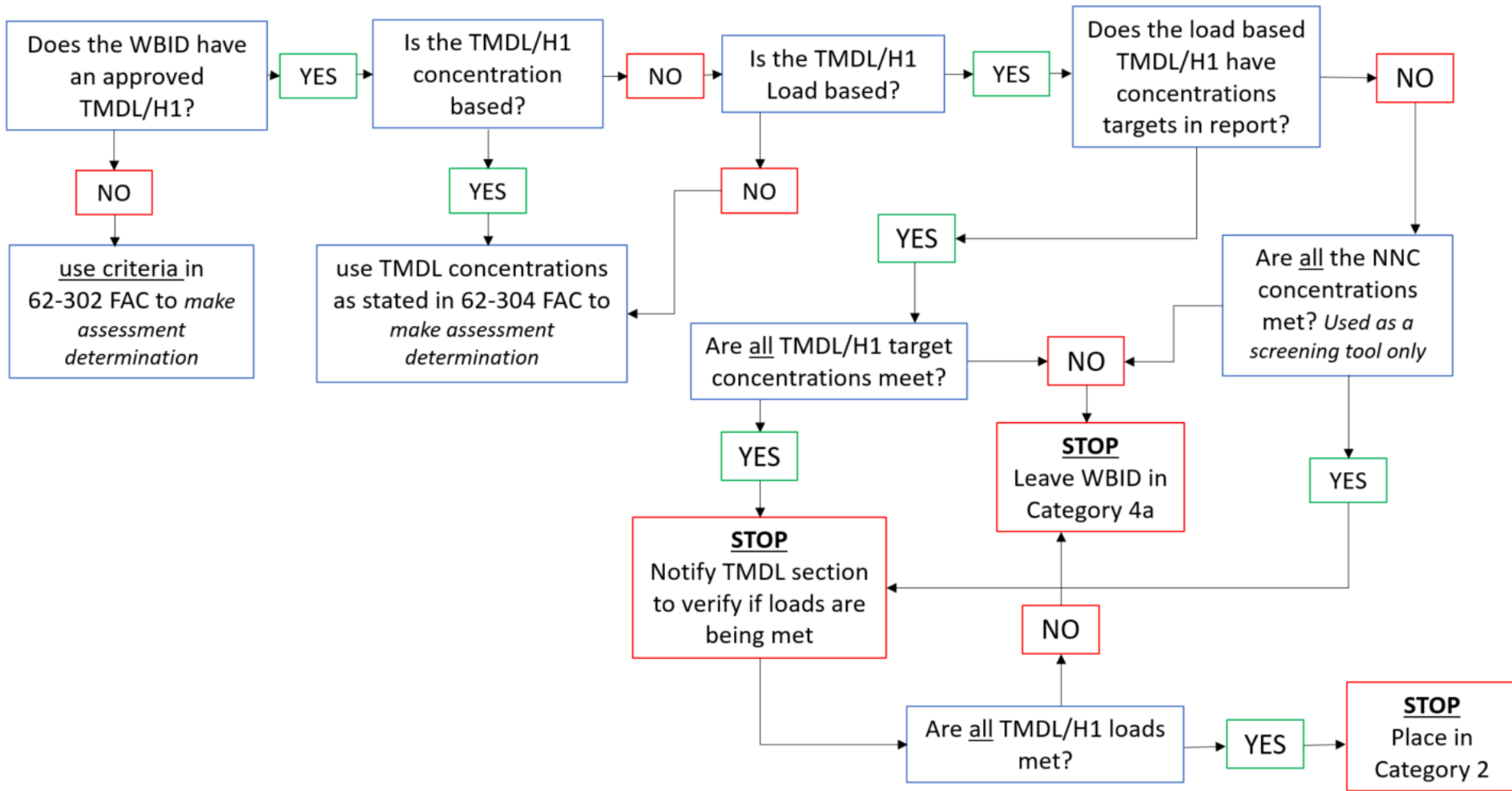
10			Development of Sampling Plan for Supplemental Data Collection	Details on collection needs (parameters needed, time needed, etc.), and QA/QC plans. Provide Program Management with a Plan of Study for approval and coordinate with ROC staff as needed for WQ sampling.
21	11	#10/14	TMDL Dream Team Meeting-2	Second meeting to discuss the proposed TMDL development approach: model selection feedback and set target.
22	12		Brief Division Director-2	To be scheduled by TMDL PA - 10 minute
23	13	#11-13	Brief EPA-2	Project Lead/TMDL Program Management to brief EPA. Use monthly call in meeting to discuss approach with EPA; <b>30 day review</b>
24	14		Prepare draft FAR Notice and GovDelivery information.	Send materials to PA for review 3 days in advance of submitting to DEP legal and Web Administrator.
25	15		PA to submit Notice and GovDelivery announcement for TMDL Approach Technical Workshop.	Draft FAR notice should be submitted to DEP legal and Web Administrator 3 days in advance of posting date for review. GovDelivery announcement should be submitted to Web Administrator 3 days in advance of posting date. The posting date for materials must be no less than 15 days (30 days preferred) before the meeting. <ul style="list-style-type: none"> <li>• CC web administrator on FAR notice submitted to DEP legal.</li> <li>• Include draft of Agenda, Draft Report, model files and reports, GovDelivery content and Stakeholder list.</li> </ul>
26	16		TMDL Approach Technical Workshop	Meeting with stakeholders to discuss approach being proposed for target setting and TMDL development.
27	17	#16	Develop TMDL and draft TMDL report	Use TMDL Report Template Document
28	18		Provide report to Technical Editor	Editorial revisions.
29	19		Statement of Estimated Regulatory Costs (SERC) analysis	Draft the SERC documentation using SERC template in conjunction with SERC calculation spreadsheet tool.
30	20	#18-22	TMDL Report Review	Send draft report to Dream Team and Program Management for review.
31	21		TMDL Dream Team Meeting-3	Meeting to discuss review comments and report revisions.
32	22	#23	Revise TMDL Report	Review and incorporate comments.
33	23		Establish date and location for Public Workshop.	Check with TMDL Program Management and local offices for meeting room availability. Reserve meeting room.
34	24		Brief Division Director-3	To be scheduled by TMDL PA. This briefing should be longer and more comprehensive than previous meetings and include details on loads, reductions, etc.
35	25		Prepare draft FAR Notice, newspaper notice, and GovDelivery information.	Send materials to PA for review 3 days in advance of submitting to DEP legal and Web Administrator.
36				

Key Steps for Consultation Between Dream Teams, DEP Division Office and EPA

Also includes state (62-304 FAC) and federal rule making process, notifications and deadlines



# TMDL/H1 Assessment Flow Chart



TMDL/H1 Assessment Flow Chart

Last modified 11/27/2018



# Permitting Process

- DEP does not plan to re-open permits to implement NNC, and instead will implement at time of permit renewal

A screenshot of the Florida Department of Environmental Protection's Business Portal homepage. The header features the DEP logo and the text "BUSINESS PORTAL". Below the header, there is a "Home" link, a search bar labeled "Search the Site:", and a "Welcome to the Florida Department of Environmental Protection's Business Portal. If you don't find what you're looking for please come back as we're continually adding to the site." section. A "I would like to:" section contains six blue buttons: "Apply" (To build, repair, operate, discharge, ... see more.), "Pay" (For fees, invoices, park reservations, ... see more.), "Sign Up" (For subscriptions, newsletters, notifications, ... see more.), "View" (Maps, data, reports, ... see more.), "Submit" (Applications for grants and rebates, AGP Admin. Correction, leave feedback, ... see more.), and "Continue" (A partially completed business transaction or reprint a receipt for a previous transaction).

- Permittees are required, at the time of permit issuance, to provide *reasonable assurance* that their effluent does not cause or contribute to nutrient impairments in:
  - the receiving waterbody and
  - downstream waterbodies



# Straight Renewal

## No New or Expanded Discharge

- If no site-specific interpretation, but receiving waters attain NNC
  - Maintain current load limit (need to evaluate further if permitted load much greater than current load); or
  - If there is no established limit (report only), determine the current load and use as the limit
- If receiving water or downstream water does not attain the applicable NNC, a TMDL or Level II WQBEL is needed
- If there already is a TMDL or WQBEL that includes a WLA for the facility,
  - Permit must implement WLA for TMDLs and Level II WQBELs, and can be expressed as load and/or concentration
- If TMDL or WQBEL not available,
  - Can renew permit with AO that provides time to determine appropriate effluent limit



# Straight Renewal No New or Expanded Discharge (continued)

- May also need an AO if there is insufficient info. to determine whether receiving water attains the NNC
  - Often the case for discharges to streams because bioassessment data needed to determine stream attains NNC
- Permit applicants responsible for providing data needed to demonstrate attains
  - Need data showing stream meets floral measures, and either SCI or stream thresholds





# Straight Renewal

## No New or Expanded Discharge

(continued)

- If only narrative criterion applies to receiving waters,
  - Narrative should have been addressed in previous permit review, and standard review practice for renewals should continue to apply
- If still attaining narrative,
  - TN and TP effluent limits will be based on current loading
  - If no load limit, maintain actual current loading or conduct Level II WQBEL
- However, in many cases, a downstream waterbody will have an applicable NNC, and need to address protection of downstream waters



# New or Expanded Discharge

- If a new or expanded discharge, a Level II WQBEL likely needed to evaluate the impacts on direct receiving water and downstream waters
- Rule 62-302.300(7), F.A.C., requires all new or expanded surface water discharges to meet antidegradation requirements



# Celebration of 1<sup>st</sup>\* TMDL/H1 EPA Approval (12/12/17)

\*Lake Bonny (09/19/17)



DEP Web.Conference02



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# For More Information

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<https://floridadep.gov/dear/water-quality-standards/content/numeric-nutrient-criteria-development> - Website

[https://floridadep.gov/sites/default/files/NNC\\_Implementation.pdf](https://floridadep.gov/sites/default/files/NNC_Implementation.pdf) – Implementation Document

<https://ca.dep.state.fl.us/mapdirect/?focus=nutrientcriteria> - NNC Tracker

<https://fdep.maps.arcgis.com/home/webmap/viewer.html?webmap=1b4f1bf4c9c3481fb2864a415fbeca77> – Interactive TMDL map

