

Updates on Nutrient Standards for Lake Worth Lagoon: TMDL and NNC

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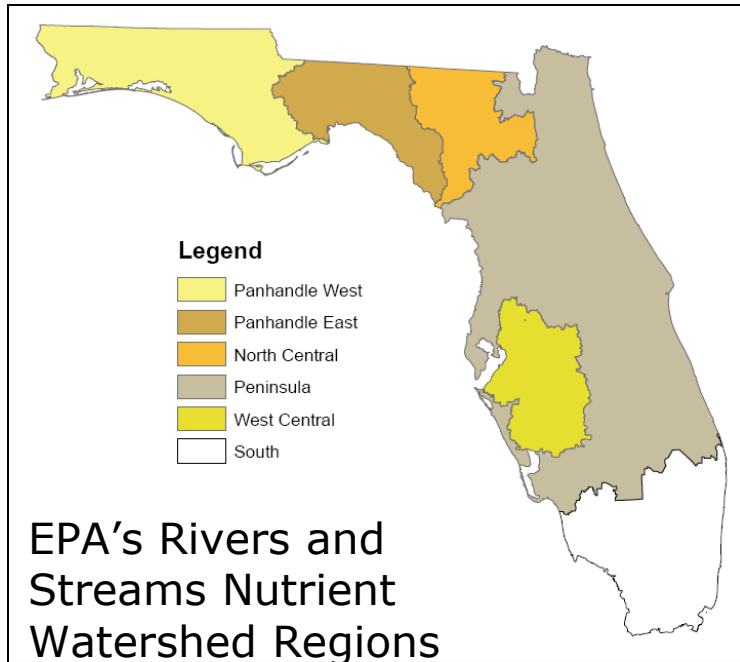
Lake Worth Lagoon Initiative - Water Resources Working Group

South Florida Water Management District Headquarters

West Palm Beach, FL

February 7, 2013

3 “Components” of Numeric Nutrient Criteria (NNC) Rulemaking in Florida



■ EPA Phase 1 rule:

- Freshwater Lakes and Springs (statewide), Rivers and Streams (in 5 of 6 regions), and DPVs*

■ EPA Phase 2 rule:

- Estuaries, Coastal Waters, South Florida Canals, and DPVs*

■ FDEP NNC rule:

- Freshwater Lakes and Springs (statewide), Rivers and Streams (portions of state), and some Estuaries:
 - Narrative rule for some waters
 - Current TMDLs become NNC

* Downstream Protection Values (DPVs) component in rules for rivers, streams, and canals that take into account lakes or estuaries

Current Status of FDEP and USEPA activities in Lake Worth Lagoon

- **DEP NNC** LWL development began with draft report and public meetings (2010):
 - Current rule (FAC 62-302) lists June 2015 deadline
- No DEP LWL TMDL; not on 2010 impaired waters list approved by EPA
- **EPA proposed NNC** for on November 30, 2012
- EPA proposed a LWL TMDL on November 30, 2012

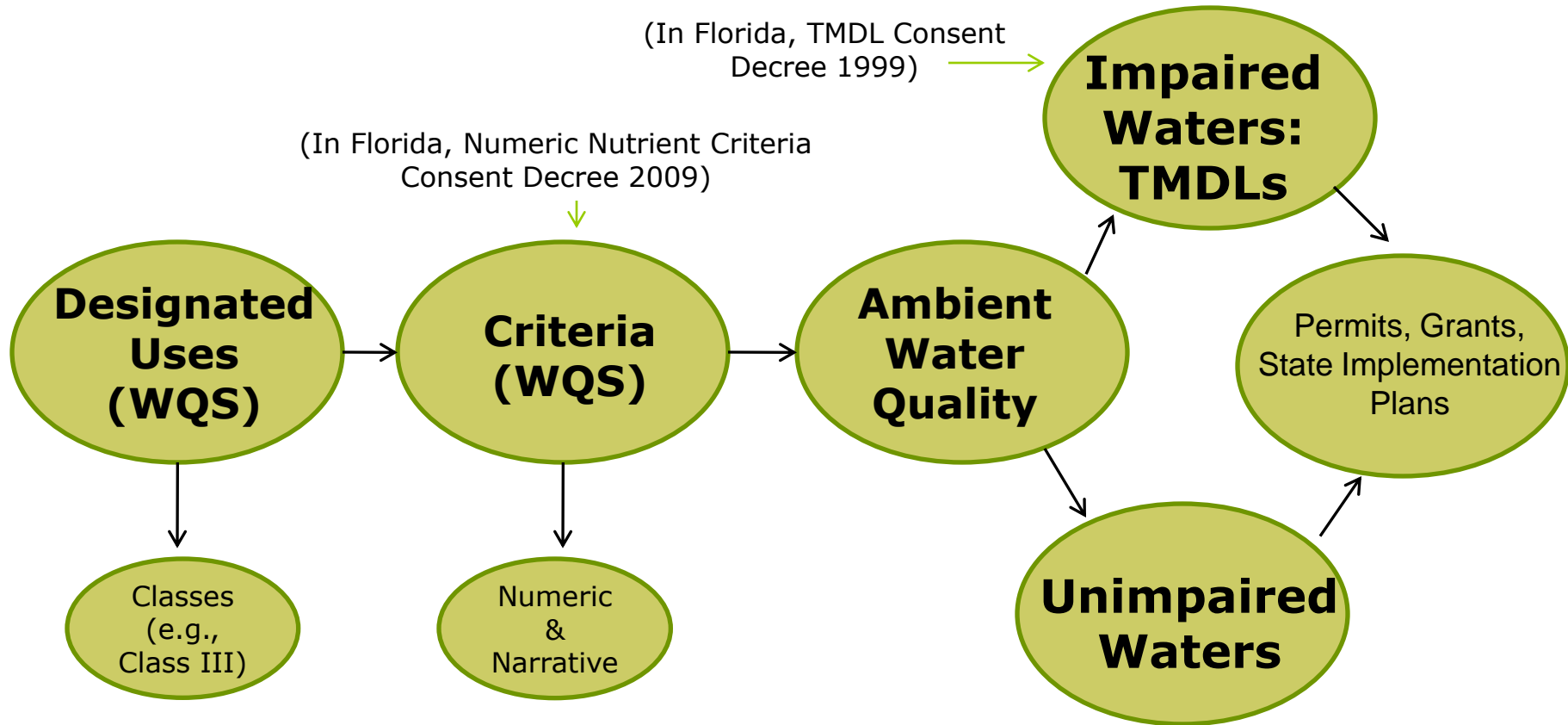
Site-Specific Information in Support of Establishing Numeric Nutrient Criteria for Lake Worth Lagoon



Division of Environmental Assessment and Restoration
Standards and Assessment Section
Florida Department of Environmental Protection
Tallahassee, FL 32399

August 19, 2010

The Federal Clean Water Act's General Framework



WQS = Water Quality Standards

Florida's Narrative Nutrient Criteria FAC 62.302.530(47)(b)

- "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."



Progress Toward Clean Water Act Adopted Numeric Nutrient Criteria



(<http://www.epa.gov/nandppolicy/progress.html>)

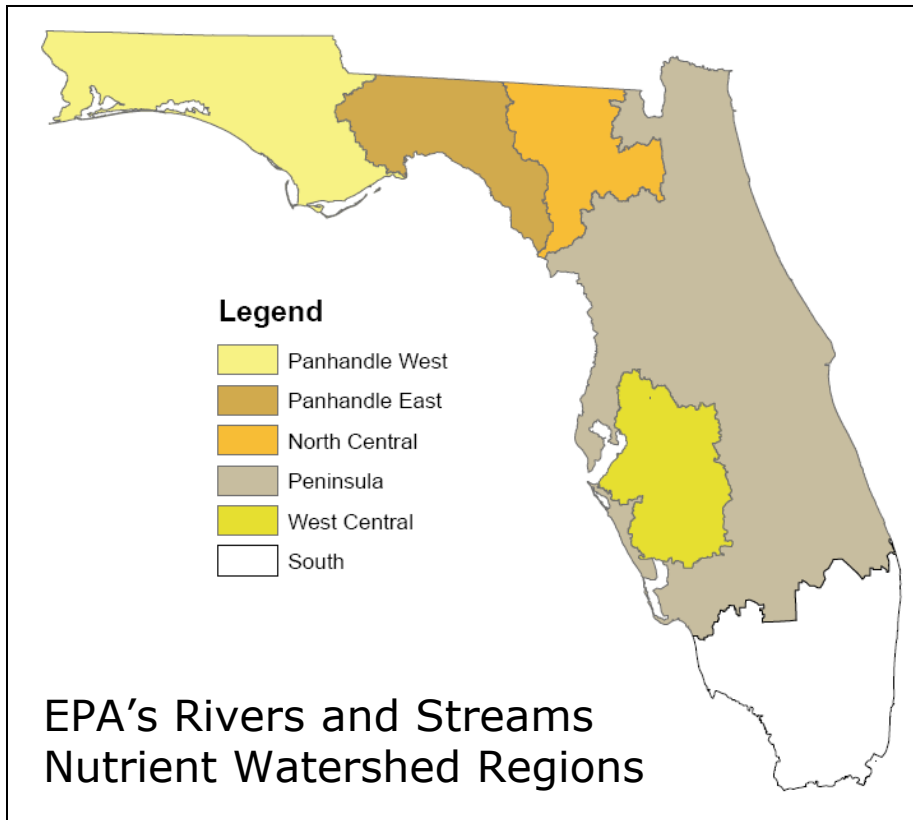
November 30, 2012: EPA's Key NNC Actions

- Approved **FDEP's NNC rule**
- Amended EPA's NNC determination letter that **Phase 1** and **Phase 2** numeric DPVs not needed (*legal processes pending*)
- Proposed **Phase 1 NNC rule for** remand portion:
 - Written Comments were due **Feb. 1**, 2013
- Proposed **Phase 2 NNC Rule Estuarine, Coastal Waters, and South Florida Canals:**
 - Written Comments are due **Feb. 19**, 2013

November 30, 2012: EPA approved FDEP NNC

- **FDEP's** Hierarchy of Site Specific Numeric Interpretation of Narrative Nutrient Criterion:
 - 1) Nutrient Site Specific Analyses (e.g., Current State Total Maximum Daily Loads)
↓
 - 2) Cause and Effect Relationships (e.g., Lakes & Springs)
↓
 - 3) Reference-based Thresholds Combined with Biological Data to Evaluate Attainment (e.g., Rivers and Streams)
↓
 - 4) Narrative standard continues where numeric interpretation is unavailable (e.g., Wetlands, Canals, Intermittent Streams, and some estuaries such as Lake Worth Lagoon)

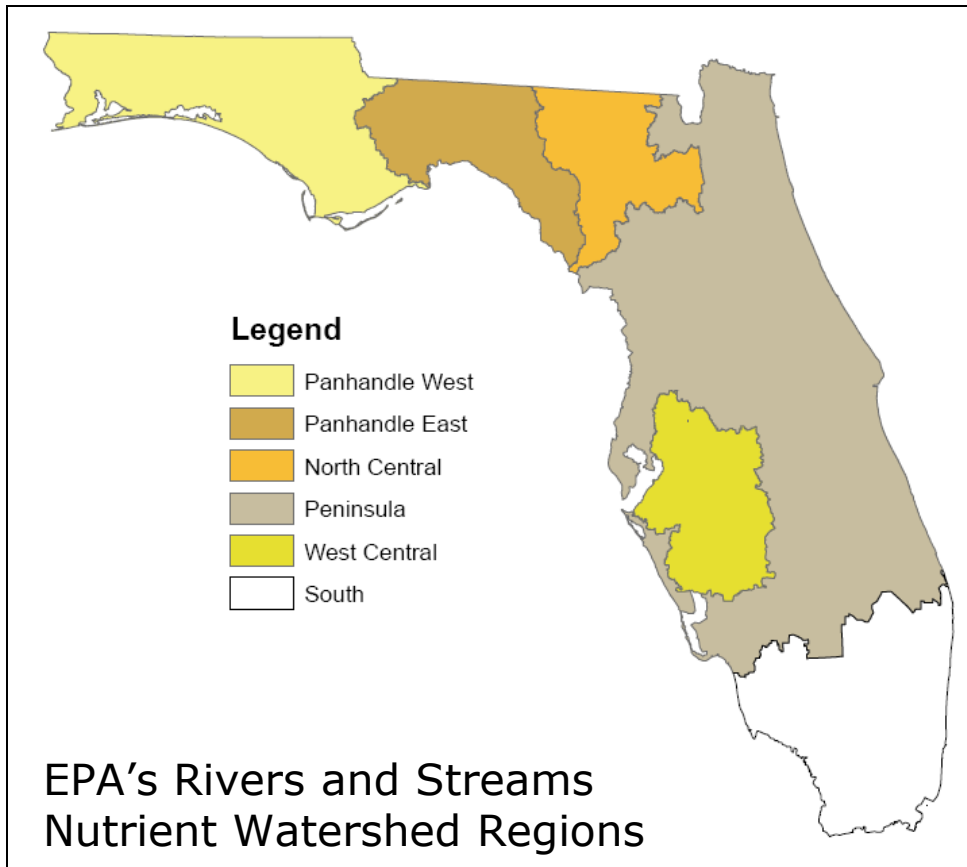
November 30, 2012: EPA's Proposed Phase 1 NNC Rule for Remanded Portions



* Downstream Protection Values component in rule for rivers, streams, and canals that take into account lakes

- Feb. 22, 2012 Federal Judge Hinkle **remanded** the following in the **EPA Phase 1** rule:
 - Rivers and Streams Criteria (in 5 of 6 regions)
 - DPVs* for flowing waters to non-impaired lakes
- Nov. 30, 2102 EPA's response to remand:
 - "Gap fills" where **FDEP's NNC** rule is narrative

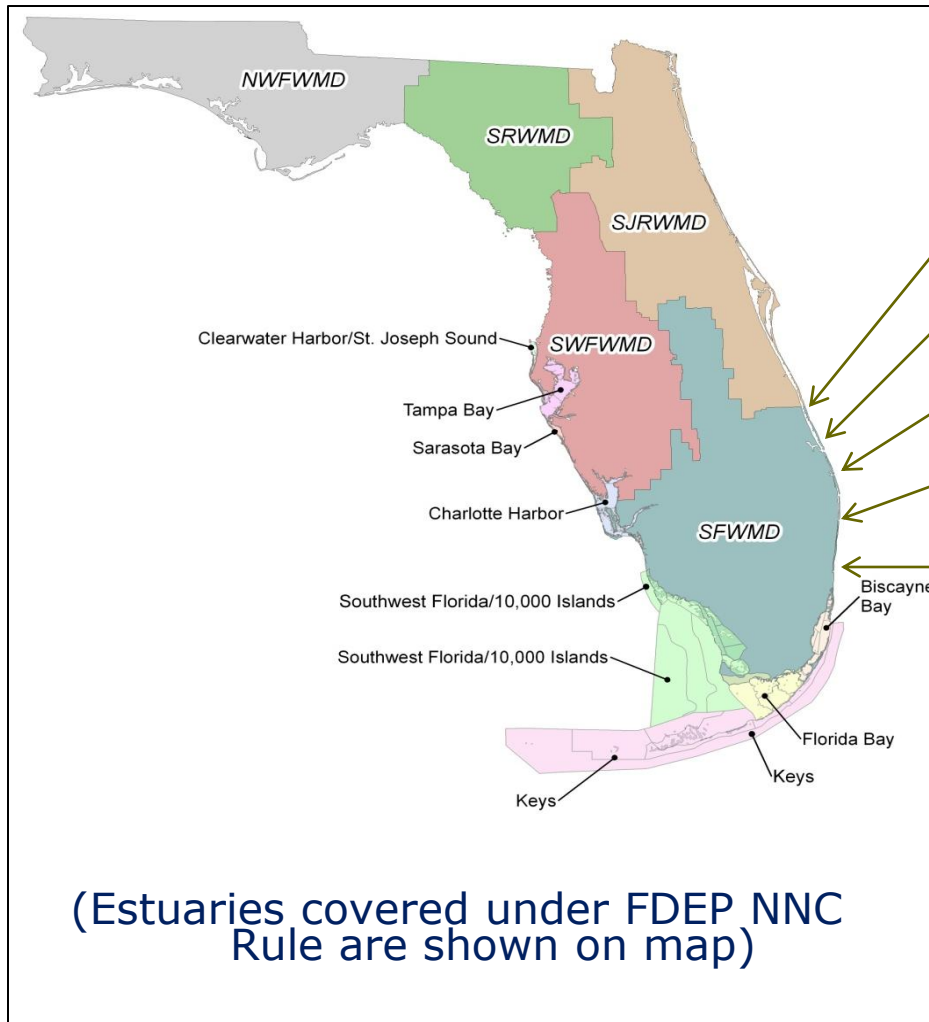
November 30, 2012: EPA's Proposed Phase 2 NNC Rulemaking



* Downstream Protection Values component in rule for rivers, streams, and canals that take into account estuaries

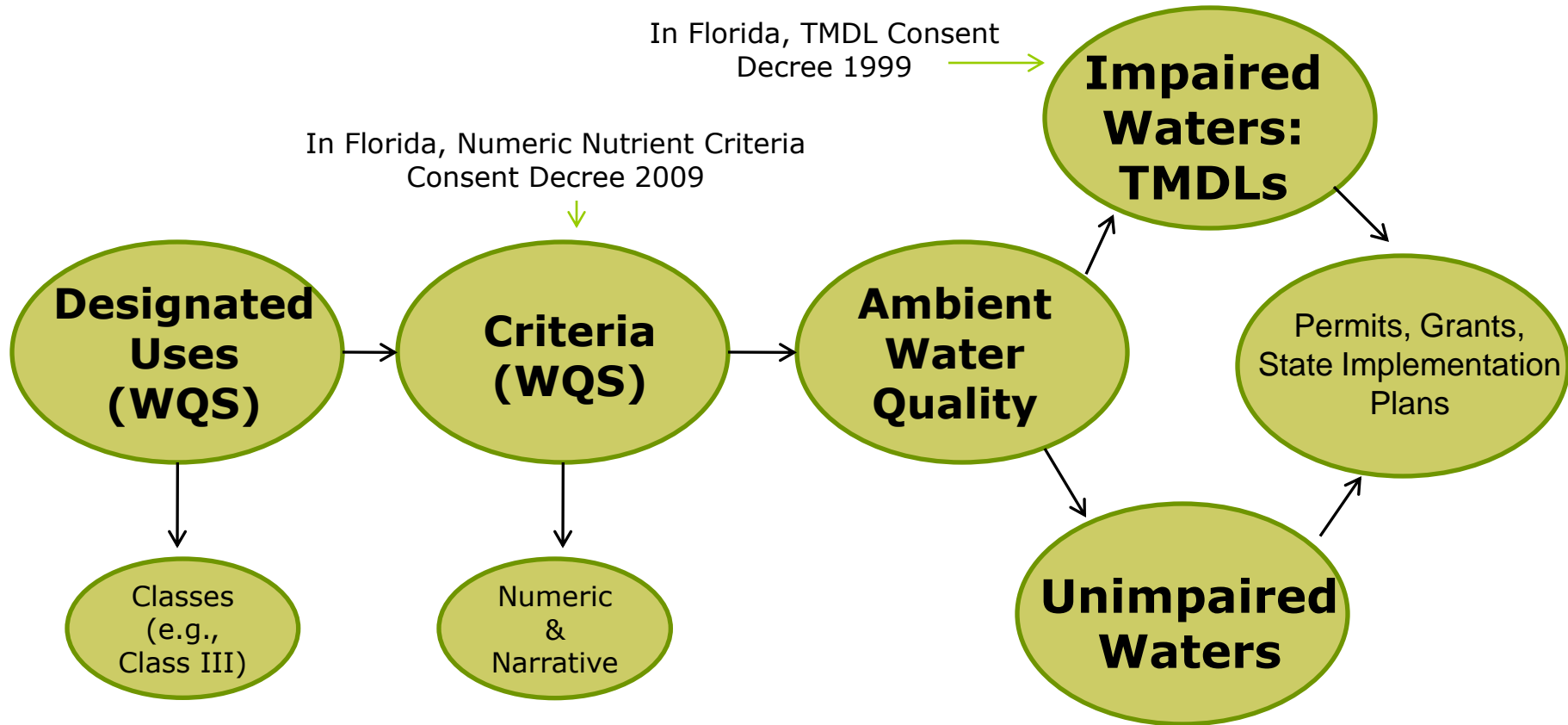
- Proposed Estuarine and Coastal Waters NNC where FDEP currently has:
 - Narrative Criteria
 - TMDLs
- South Florida flowing waters (i.e., Canals):
 - Four DPV methods at 22 "pour points"
 - Alternative NNC of 2.0 ppm Nitrogen and 52 ppb Phosphorus

November 30, 2012: Primary South Florida Estuaries in EPA's Proposed Phase 2 Rule



- Indian River Lagoon
- St. Lucie Estuary
- Loxahatchee Estuary
- Lake Worth Lagoon
- Intracoastal Waterway from Lake Worth Lagoon to Northern Biscayne Bay

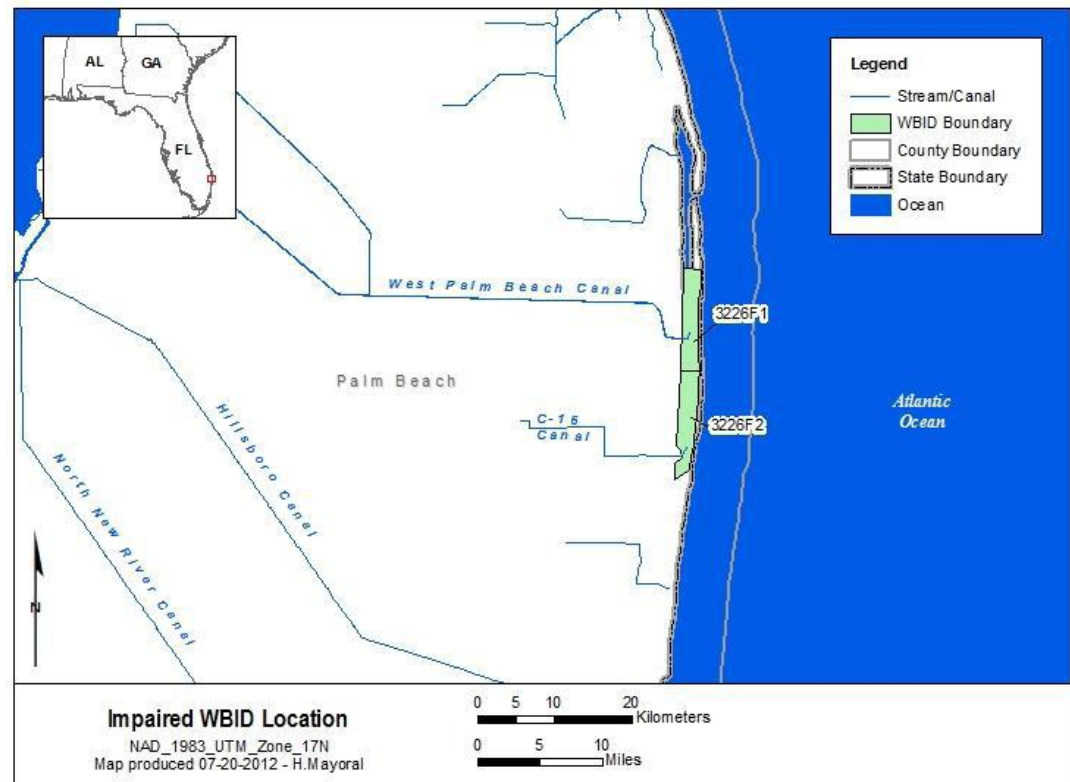
The Federal Clean Water Act's General Framework



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EPA's Proposed Lake Worth Lagoon (LWL) TMDL

- “WBIDs 3226F1 and 3226F2 are managed by SFWMD and are impaired for nutrients”
- DEP previously determined the WBIDs are unimpaired and:
 - DEP to develop NNC for LWL
 - EPA proposed NNC for LWL



(Fig. 2.1 from EPA's Proposed TMDL document)

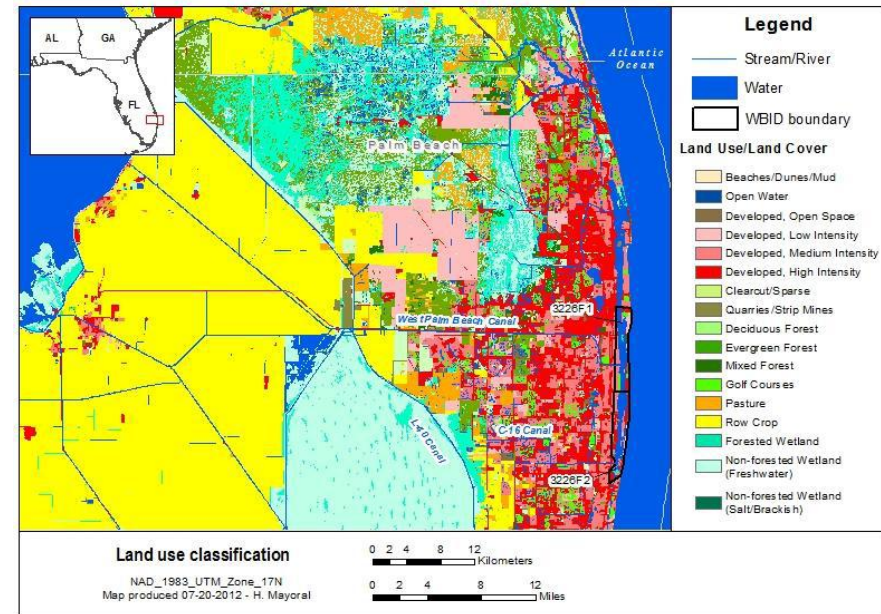
EPA's Proposed Lake Worth Lagoon (LWL) TMDL (cont.)

Watershed Descriptions:

- e.g., row crops 40% of contributing land use

Data and Model Concerns:

- Quality control (e.g., TN value over 50 milligrams per liter)
- Target and load allocation inconsistencies
- Calibration concerns
- Insufficient information on model performance



EPA's Proposed LWL TMDL (cont.)

Proposed TMDL: Lake Worth Lagoon

November 2012

- Model for TMDL seems similar as used for **proposed Phase 2 NNC**
- Comments on TMDL were due to EPA on Jan 29, 2013
- TMDL consent decree near end of original implementation schedule

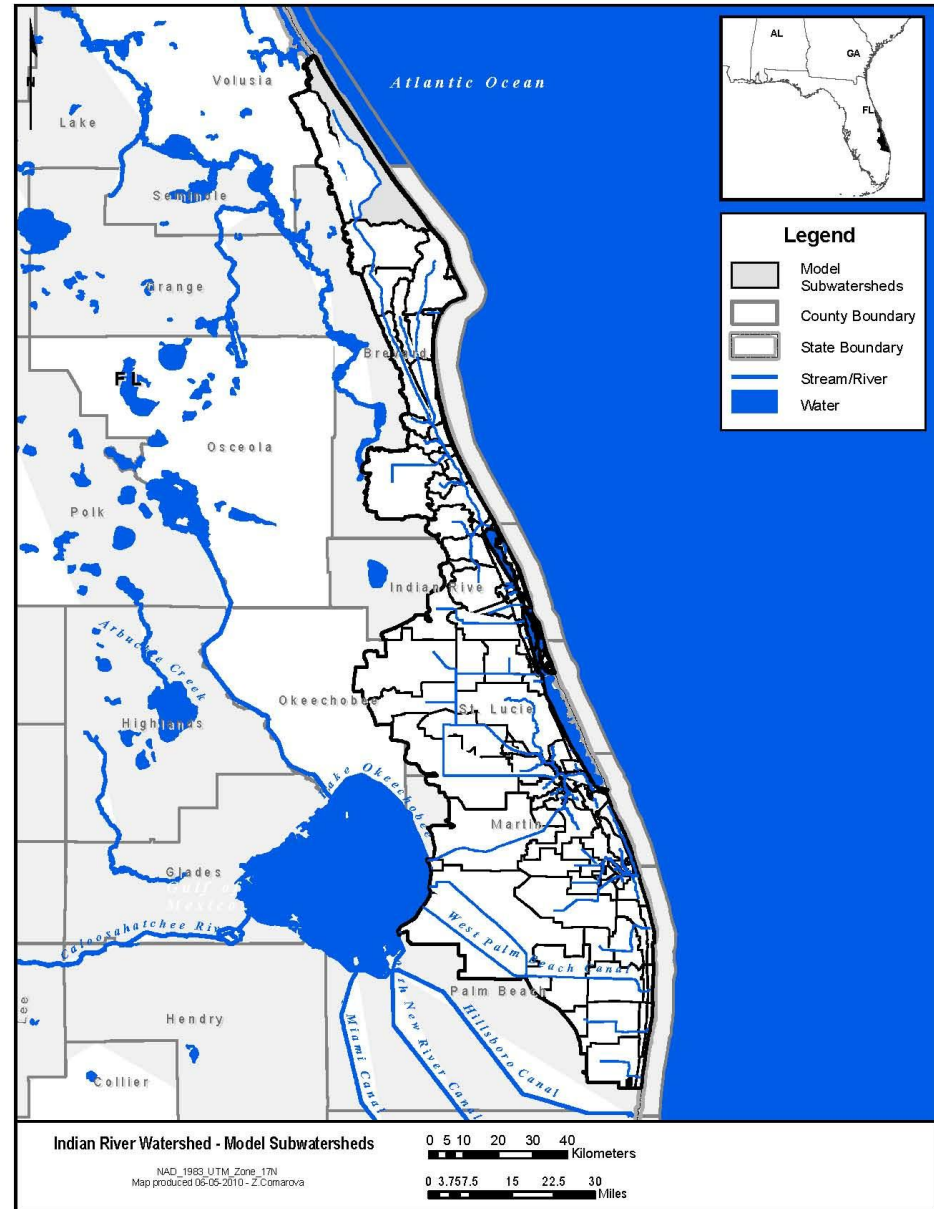


Figure 7.1 Sub-Delineated 12-Digit HUC coverage for the Indian River watershed.

Looking Forward on NNC

■ **FDEP NNC rule:**

- Environmental Regulation Commission approved the NNC for Panhandle estuaries and awaiting EPA approval
- DEP considering adopting NNC implementation document in Rule; FAC 62-302.300(19)
http://www.dep.state.fl.us/water/wqssp/nutrients/docs/nnc_implementation.pdf

■ **EPA Phase 1 rule Consent Decree deadline:**

- Final Rule currently due August 31, 2013

■ **EPA Phase 2 rule Consent Decree deadline:**

- Final Rule currently due September 30, 2013

- EPA's NNC amended determination letter legal process?

Discussion and Contact Information

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DEP's NNC website: <http://www.dep.state.fl.us/water/wqssp/nutrients/index.htm>

DEP's Impaired Waters Rule Assessment website:

<http://www.dep.state.fl.us/water/watersheds/assessment/index.htm>

EPA's Florida NNC website:

http://water.epa.gov/lawsregs/rulesregs/florida_index.cfm

EPA's Florida TMDL website: <http://www.epa.gov/region4/water/tmdl/florida/>