Water Quality Related Legislative Programs Effecting Palm Beach County

- Proposed Federal Numeric Nutrient Criteria for the State of Florida
- Florida’s TMDL Program
- Proposed Florida’s Stormwater Treatment Rule
Current Florida Narrative Nutrient Standard

- Chapter 62-302.530(48)(16), Florida Administrative Code
  “In no case shall nutrient concentrations of water be altered so as to cause an imbalance in natural population of aquatic flora and fauna”.

- This applies to Classes I, II & III
Florida relied on the narrative criteria for many years:

- Most WQ criteria are based on a toxicity threshold, evidenced by a dose - response relationship, where a specific concentration can be demonstrated harmful, and a concentration below that can be established as acceptable.

- In contrast, nutrients are present naturally in aquatic systems, and they are absolutely necessary for the proper functioning of biological communities.
Brief history of efforts to develop numeric nutrient criteria within the State of Florida

- DEP TAC
- DEP & EPA develop NNC
- DEP & EPA revise plan
- E. Plaintiffs petition to set NNC for Florida
- E. Plaintiffs filed with EPA a Notice of Intent to sue EPA
- EPA enters a Consent Decree with plaintiffs
- DEP submits its current NNC
- EPA determines that NNC should be on expedited schedule
Federal (EPA) Implementation Schedule

- **January 14, 2010** - Proposed NNC for lakes and flowing waters
- **January – February** - Proposed rule is published in the Federal Register. Public comment period lasts for 60 days
- **February 18, 2010** – Public hearing in WPB from 1-5pm and 7-10pm at the Holiday Inn Palm Beach Airport
- **October 15, 2010** – Issue date of final rule, effective date 60 days later
## Proposed EPA Criteria for Lakes

<table>
<thead>
<tr>
<th>Lake Classification</th>
<th>Chlorophyll-a (µg/L)</th>
<th>Baseline Criteria</th>
<th>Modified Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colored Lakes &gt; 40 PCU</td>
<td>20</td>
<td>1.23</td>
<td>1.23 - 2.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.050</td>
<td>0.050 - 0.157</td>
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<tr>
<td>Clear Lakes, Alkaline ≤ 40 PCU</td>
<td>20</td>
<td>1.00</td>
<td>1.00 - 1.81</td>
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<tr>
<td></td>
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<td>0.030</td>
<td>0.030 - 0.087</td>
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<td>Clear Lakes Acidic ≤ 40 PCU</td>
<td>6</td>
<td>0.500</td>
<td>0.500 - 0.900</td>
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<td></td>
<td></td>
<td>0.010</td>
<td>0.010 - 0.030</td>
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</tbody>
</table>
Canals
South
TN (mg/L) 1.6
TP (mg/L) 0.042
Chla (ug/L) 4.0

Proposed EPA NNC
January 14, 2009
## Proposed EPA Criteria for Streams/Rivers/Canals

<table>
<thead>
<tr>
<th>Nutrient Watershed Region</th>
<th>Instream Protection Value Criteria</th>
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<tbody>
<tr>
<td></td>
<td>TN (mg/L)</td>
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<tr>
<td>Panhandle</td>
<td>0.824</td>
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<tr>
<td>Bone Valley</td>
<td>1.798</td>
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<tr>
<td>Peninsula</td>
<td>1.205</td>
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<tr>
<td>North Central</td>
<td>1.479</td>
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<tr>
<td>South</td>
<td>1.6</td>
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Concentration values are based on annual geometric mean not to be surpassed more than once in a three-year period.
<table>
<thead>
<tr>
<th>Watershed</th>
<th>Site</th>
<th>Total Nitrogen mg/L</th>
<th>Total Phosphorus mg/L</th>
<th>Chlorophyll-a ug/L</th>
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<tr>
<td></td>
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</tr>
<tr>
<td>C-15</td>
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<td>1.8</td>
<td>0.259</td>
<td>19.6</td>
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<tr>
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<td>31C</td>
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<td>C15S40</td>
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<td>0.131</td>
<td>9.2</td>
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<tr>
<td>C-16</td>
<td>22</td>
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<td>0.063</td>
<td>6.6</td>
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<td>24</td>
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<td>0.062</td>
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<td>15</td>
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<td>4.4</td>
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<td>C51S155</td>
<td>1.3</td>
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<td>4.6</td>
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</table>

Values exceeding proposed EPA water quality standards TN 1.6 mg/L, TP 0.042 mg/L, chlora 4 ug/l
Implementation

- NPDES Permits (MS4, Industrial, Construction)
  - EPA will require development of programs to obtain compliance with NNC (timetable – max 20 years with phase restoration plan)
  - AWT Results in 3 mg/l TN & 1 mg/l TP (will affect reuse)

- TMDL Program
  - Program NNC expands lists of impaired waters, development of TMDLs and Basin Management Action Plans
  - Program requires pollution load reduction goals for both point source discharges and non-point source discharges
TMDLs and Palm Beach County
Brief History of TMDLs

- Required by Section 303(d) of the Federal Clean Water Act (1972)

- Florida Watershed Restoration Act (1999)
  - Defined the process for development of impaired water listing and delisting
  - Established rules for TMDL Allocation Process
What are TMDLs?

- Total Maximum Daily Load (TMDL) is the maximum amount of a given pollutant that a receiving water can assimilate without exceeding applicable water quality standards.

- TMDL
  - Waste Load Allocations (WLA) – point sources
  - Load Allocations (LA) – nonpoint sources
  - Consideration of Margin of Safety
  - Consideration of Natural Loads
• Pollution load reduction goals for both point and nonpoint sources
• Point sources are regulated through the NPDES permits
• Nonpoint sources must either implement appropriate BMP’s established by the State or conduct water quality monitoring required by the State
• Failure to implement BMP’s or water quality monitoring subject the discharger to enforcement
DEP Watershed Approach for TMDLs

• State divided into 5 groups
• Each group is assessed in 5 Phases with a rotating cycle
  - **Phase 1** – Preliminary Evaluation of water quality
  - **Phase 2** – Strategy Strategic Monitoring and Assessment to verify water quality impairments.
  - **Phase 3** – Develop and Adoption of TMDLs for waters verified as impaired
  - **Phase 4** – Development of Basin Management Action Plan (BMAP) to achieve the TMDL
  - **Phase 5** – Implementation of the BMAP and monitoring of results
Group 1 Status in PBC

- Okeechobee Basin (Cycle 2 – Phase 3 completed)
  - Adopted TMDL for Nutrients (annual load of 140 metric tons or 0.04 mg/l)
  - Developed a Lake Okeechobee Protection Plan to fulfill role of a BMAP
  - Established a goal of 2015 to achieve the TMDL
Group 2 & 3 Status in PBC

- Loxahatchee Group 2 Basin – Impaired list adopted
- January – Lake Worth Lagoon Group 3 Basin – DEP signs off on impaired list (may include 2 WBIDs with fecal coliforms and 17 WBIDs with DO and Nutrients)
- February through March – Public comment period and potential challenges to impaired list
- Summer – DEP to publicize notices on public workshops for draft TMDLs
- Fall – DEP adoption of TMDL (tentative)
Florida’s Proposed Statewide Stormwater Treatment Rule

- **Purpose**
  - Controlling the discharge of nutrients
  - Consistency among WMDs
Stormwater Treatment Rule for New and Redevelopment Projects

- Replaces SFWMD water quality requirements
- Establishes nutrient (TP and TN) performance standard as the lesser of:
  - 85% post development load;
  - Post = Pre
Stormwater Treatment Rule for New and Redevelopment Projects

• For OFWs and Impaired Waters:
  – Post = Pre

• TMDLs and BMAPs supersede the rule
  – Undeveloped lands EMC for TP is 0.055 mg/L compared to EPA NNC for TP of 0.042 mg/L

• Intends for net reduction of pollutants for urban redevelopment and retrofits
Best Management Practices to Meet Rule Requirements will Include Treatment Trains to Reduce Stormwater Volume and Pollutant Loads

- Pervious Pavement
- Green Roof
- Exfiltration Systems
- Dry Retention
- Grass Swales

All will require increased maintenance
Implementation Schedule
(as of December 21, 2009)

- Revised Applicants’ Handbook – January through February 2010
- Rule Workshops – March through April 2010
- Rule Adoption – Summer 2010
- Training Workshops – September through December 2010
- Rule Effective – October 1, 2010 or January 1, 2011
Summary - 2010 - the Year of Water Quality Legislation for Palm Beach County

- **EPA’s Numeric Nutrient Criteria for Lakes & Flowing Waters**
  - Proposed EMC (Event Mean Concentrations) - January 14, 2010
  - Public Hearing February 18, 2010 at Holiday Inn Palm Beach Gardens
  - Proposed Effective Date December 2010

- **TMDLs for Eastern Palm Beach County**
  - Proposed for DO, Nutrients and Fecal Coliform
  - Proposed Draft TMDLs – Summer 2010
  - Proposed Adoption of TMDLs – Fall 2010

- **Florida’s State Stormwater Treatment Rule for New and Redevelopment**
  - 85% Nutrient Reduction (TN&TP) or Post = Pre, whichever is less restrictive
  - Proposed Rule Adoption - Summer 2010
  - Proposed Effective Date - January 2011
Questions