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Webinar to Discuss Implementation of Florida's Numeric Nutrient Criteria: Impacts on Agriculture Producers

Tuesday, December 7, 2010

1:00PM-3:00PM (Eastern Standard Time)

For Further Information on the Rule

- Web Access
  - Final rule and all associated materials available at:

  www.regulations.gov, docket ID: EPA-HQ-OW-2009-0596

  or

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

- Summary of Federal rule for Florida numeric nutrient criteria
- Applicability of Clean Water Act (CWA) programs to agriculture
  - Total Maximum Daily Load (TMDL) development
  - National Pollutant Discharge Elimination System (NPDES) permits
  - §319 grants for Nonpoint Source (NPS) controls
- Summary of Florida administered programs
  - Florida's NPS management programs
  - Basin Management Action Plans (BMAPs)

Summary of the Rule

- EPA has finalized water quality standards for the state of Florida
  - These include numeric limits on the amount of phosphorus and nitrogen pollution that are allowed in Florida's lakes, rivers, streams and springs.
  - Chlorophyll a limits were also developed to monitor the effect of nitrogen and phosphorus in lakes.
- The purpose of these standards is to improve water quality and protect public health, aquatic life and the long-term recreational uses of Florida's waters, which are a critical part of the state's economy.
- The implementation of these standards will change the criteria used by several Clean Water Act (CWA) programs
  - National Pollutant Discharge Elimination System (NPDES) permitting
  - Total Maximum Daily Load (TMDL) development
  - CWA Section 303(d) listing of impaired waters

Background

- The final rule includes numeric nutrient criteria for lakes, rivers, streams and springs located outside of South Florida (the areas south of Lake Okeechobee, the Caloosahatchee River watershed to the west of Lake Okeechobee, and the St. Lucie watershed to the east of Lake Okeechobee).

- The rule applies to Florida Class I and III waters.

- Class I waters are waters with the designated use of potable water supply. Class III waters are waters with the designated uses of recreation and propagation and maintenance of a healthy, well-balanced population of fish and wildlife.

Rule for Lakes

- Definition
  - "Lake" means a slow-moving or standing body of freshwater that occupies an inland basin that is not a stream, spring, or wetland
- The rule
  - Classifies lakes into 3 groups based on color and alkalinity
  - Derives criteria from correlations between trophic transition levels of chlorophyll *a* (Chl *a*) and levels of total phosphorus (TP) and total nitrogen (TN)
  - Includes an option for the State to adjust TN and TP criteria for a particular lake within a certain range if sufficient data show the Chl *a* criterion is met
  - Applies to all Class I and III lakes in Florida

Criteria for Lakes*

Lake Color and Alkalinity	Chl-a (mg/L)	TN (mg/L)	TP (mg/L)
Colored Lakes > 40 PCU	**0.020**	**1.27** [1.27-2.23]	**0.05** [0.05-0.16]
Clear Lakes, High Alkalinity ≤ 40 PCU and Alkalinity > 20 mg/L $CaCO_3$	**0.020**	**1.05** [1.05-1.91]	**0.03** [0.03-0.09]
Clear Lakes, Low Alkalinity ≤ 40 PCU and Alkalinity ≤ 20 mg/L $CaCO_3$	**0.006**	**0.51** [0.51-0.93]	**0.01** [0.01-0.03]

* All concentrations are annual geometric means not to be surpassed more than once in a three-year period. Bracketed numbers reflect the range in which Florida can adjust the TN and TP criteria when data shows the lake is meeting the relevant Chl *a* criterion.

Rule for Streams

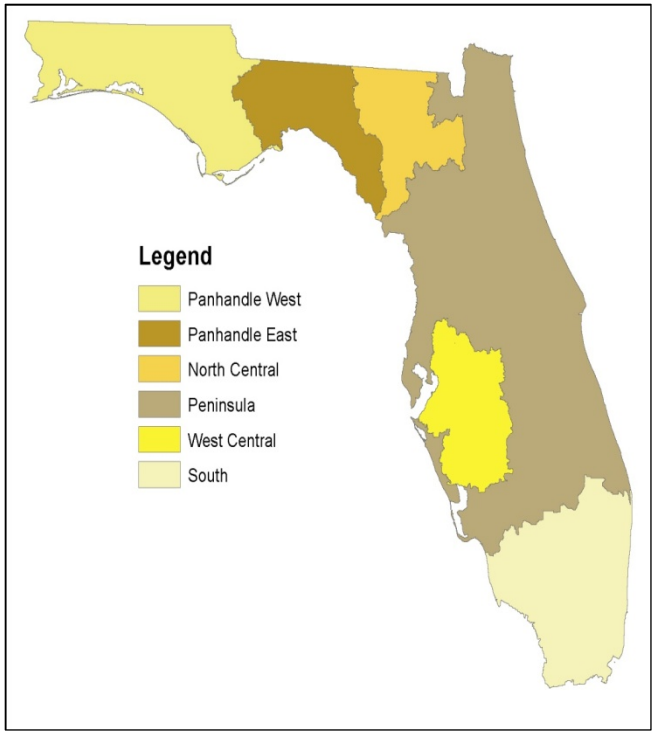
- Definition
  - "Stream" means a free-flowing, predominantly fresh surface water in a defined channel, and includes rivers, creeks, branches, canals, freshwater sloughs, and other similar water bodies
- The rule
  - Classifies streams into 5 watershed-based regions that account for geological differences throughout the State
  - Derives criteria from field data in least-disturbed streams that are not impaired for nutrient-related impacts
  - Does not apply to flowing waters in South Florida

Criteria for Rivers/Streams

Nutrient Watershed Region (NWR)	Instream Protection Value Criteria	
	TN (mg/L)	TP (mg/L)
Panhandle West	0.67	0.06
Panhandle East	1.03	0.18
West Central	1.65	0.49
Peninsula	1.54	0.12
North Central	1.87	0.30

Concentrations are annual geometric means not to be surpassed more than once in a three-year period

Map of EPA's stream classification by NWRs used in final rule.



Downstream Protection for Lakes

- Federal Regulations require water quality standards (WQS) to provide for the attainment and maintenance of WQS in downstream waters
- The final rule includes a flexible tiered approach to apply downstream protection values (DPVs) for TP and TN to a watershed to ensure protection of downstream lakes:
  - TN and or TP levels at the point of entry into the lake using BATHTUB model or alternative scientifically-defensible models such as WASP, or
  - Ambient instream levels of TN and/or TP at the point of entry into the lake where lake criteria are met in the lake, or
  - Lake criteria values for TN and/or TP at the point of entry into the lake where lake criteria are not met in the lake or lake is un-assessed

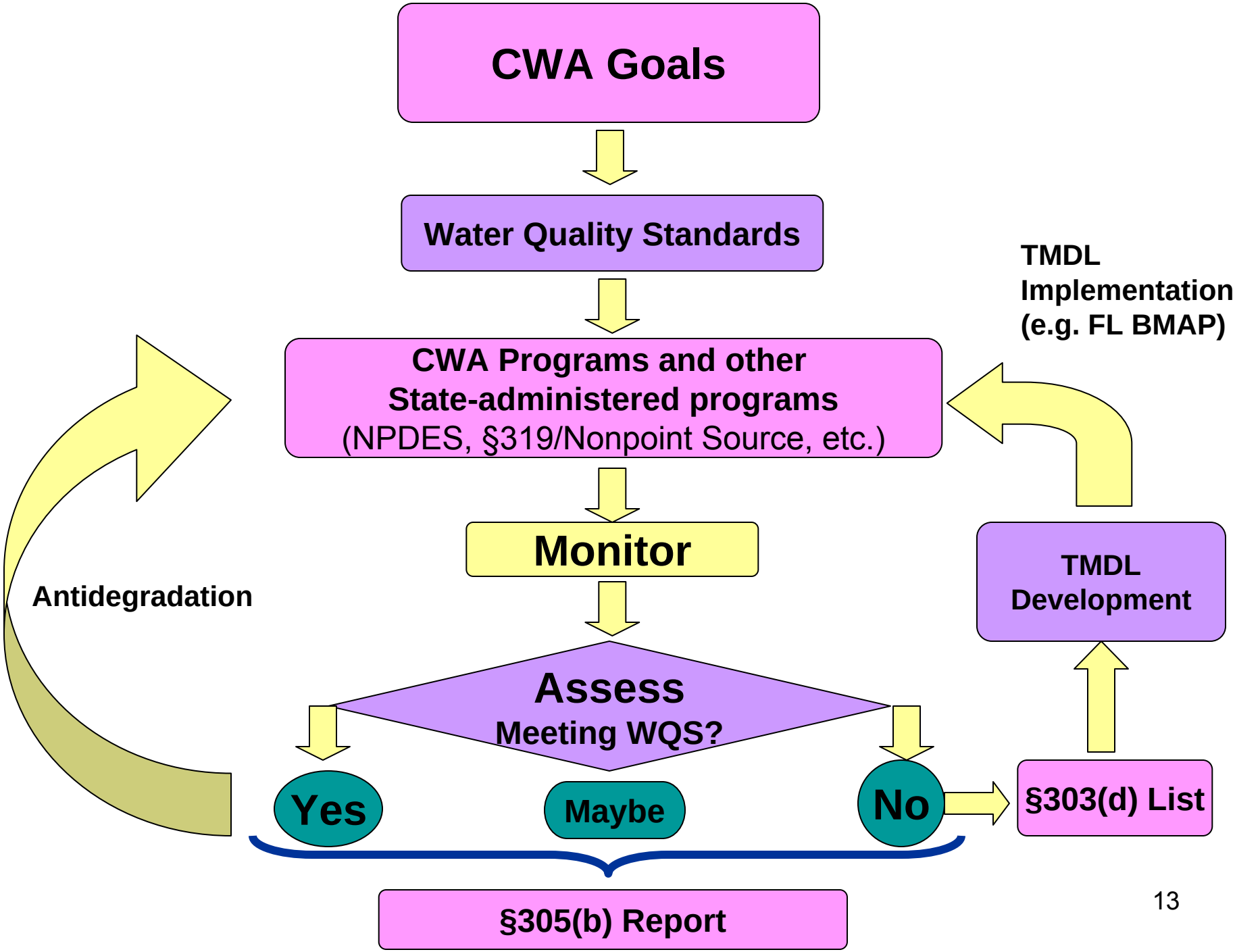
Rule for Springs

- Definition
  - "Spring" means a site at which ground water flows through a natural opening in the ground onto the land surface or into a body of surface water

- Rule
  - Establishes nitrate-nitrite criterion of 0.35 mg/L as an annual geometric mean, not to be exceeded more than once in a three-year period
  - Based on experimental laboratory data and field evaluations that document the response of nuisance algae to nitrate-nitrite concentrations

Site Specific Alternative Criteria

- Final Rule allows any entity to submit a request for site-specific alternative criteria (SSAC) with supporting rationale to EPA, based on:
  - Replicating approaches used in the rule with new data or applying to a smaller subset of waters, or
  - Conducting biological, chemical, and physical assessments, or
  - Using another scientifically defensible approach protective of the designated use
- After notice and comment, EPA may approve the SSAC for purposes of the Federal Rule



TMDLs

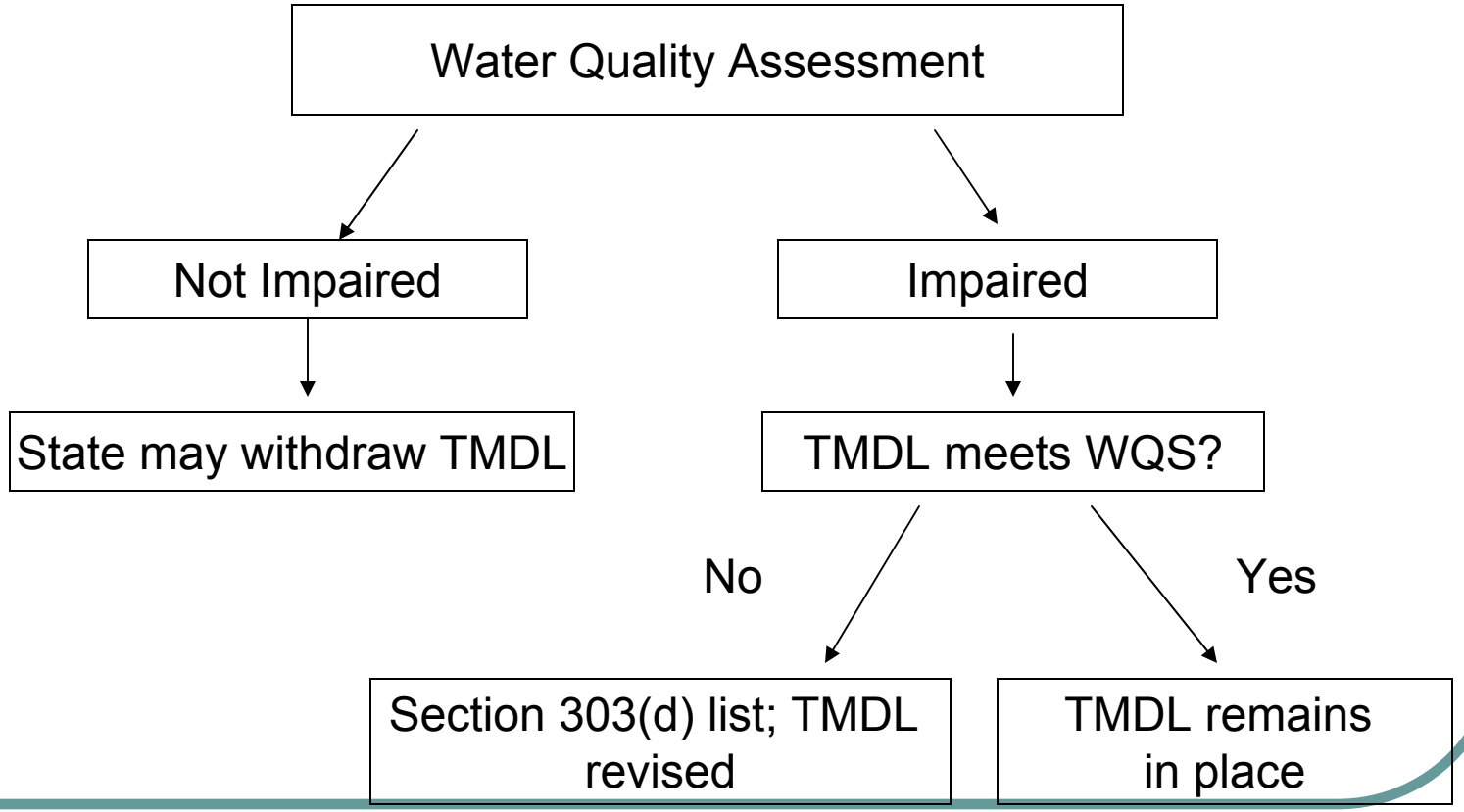
- TMDL= WLA + LA + MOS
  - **TMDL** is a water pollution control plan that determines the amount of a pollutant a waterbody can receive and still meet water quality standards.
  - **WLA** is the portion of the loading capacity allocated to wasteloads from existing and future point sources
  - **LA** is the portion of the loading capacity allocated to loads from existing and future non-point sources.
  - **MOS** is the margin of safety to account for any lack of knowledge concerning the relationship between load and wasteload allocations and water quality.

Nutrient TMDLs in Florida

- **281** EPA Approved Nutrient TMDLs
  - 135 TP TMDLs, 129 TN TMDLs, 17 Nitrate TMDLs
- **268** EPA Established Nutrient TMDLs
  - 128 TP TMDLs, 139 TN TMDLs, 1 Nitrate TMDLs
- After the effective date of the Federal rule, nutrient TMDLs must be established at levels that will meet and maintain all of the applicable criteria, including the numeric nutrient criteria and existing narrative criteria.

Evaluating Existing Nutrient TMDLs

Nutrient TMDLs established before the numeric nutrient criteria will remain in effect until a two-part evaluation occurs.



Consideration of TMDL Targets for SSACs

- The state of Florida or any other entity may decide that an existing TMDL better reflects the conditions of a specific waterbody than the newly promulgated criteria. In those cases, the state or other entity may apply for the TMDL targets to be established as SSAC.

NPDES Permitting Program

- NPDES permits regulate point sources that discharge pollutants into waters of the United States

- Clean Water Act definition of point source:
  - The term "point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation [CAFO], or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

NPDES Permitting Program

- Permits must be designed to ensure that water quality standards are attained.
- NPDES permitting authority in Florida is the Florida Department of Environmental Protection (FDEP)
- FDEP has the discretion to determine whether CAFO permits will include narrative effluent limits (e.g., best management practices (BMPs)) or numeric effluent limits.

§319 Grants for NPS Controls

- The 1987 CWA amendments established the §319 grant program.
  - Did not authorize Federal regulation nor require State regulation.
  - Required States to conduct NPS assessments and identify the categories and subcategories of NPS that adversely impact water quality.
  - Required States to establish NPS Management Programs which may include, at the State's discretion, a mix of:
    - "nonregulatory or regulatory programs for enforcement, technical assistance, financial assistance, education, training, technology transfer, and demonstration projects."
  - Provided eligibility to States with approved NPS Management Programs to receive annual grants to implement and manage such Programs

§319 Grants for NPS Controls

- §319 grants funds cannot exceed 60% of the cost incurred by States in implementing NPS Programs
- Beginning in 1999, EPA substantially increased §319 funding levels
  - Additional "incremental" funds are provided to assist States with targeting resources towards restoring impaired waters using watershed-based approaches.
  - "Base" funds are provided to implement full range of activities described in State NPS Management Programs.
- In FY2010, EPA awarded Florida $7.56 million in §319 funds
  - $3.64 million (incremental)
  - $3.92 (base)
  - Same levels as FY2009 and FY2008

Florida Coastal NPS Pollution Control Program

- The Coastal Zone Act Reauthorization Amendments (CZARA) § 6217 required states with Coastal Zone Management Programs to adopt measures for controlling NPS pollution including:
  - Enforceable policies and mechanisms for agriculture and other nonpoint pollutant sources (e.g., urban, forestry, etc.).
- The entire state of Florida was designated as a 6217 management area.
- The Florida Watershed Restoration Act of 1999 includes, among other things, enforceable controls for agriculture.
  - The Florida Department of Agriculture and Consumer Services (FDACS) administers a BMP program for agricultural producers.
- Florida's Coastal NPS Program was jointly approved by EPA/NOAA. (see http://coastalmanagement.noaa.gov/nonpoint/pro_approve.html)

Florida's Management of NPS

- Addresses several categories of NPS
  - Agriculture, silviculture, urban, onsite sewage treatment/disposal systems, hydromodification, mining, groundwater management
- Implemented cooperatively by FDEP, Florida's water management districts, FDACS, Florida Department of Health, local governments, and the public.
- Implements FDEP's goal to minimize NPS pollution from new land use activities and to reduce pollution from existing activities.
- Includes administration of the BMAP program for TMDL implementation.
- See also http://www.dep.state.fl.us/water/nonpoint/.

Florida's Management of Agriculture NPS

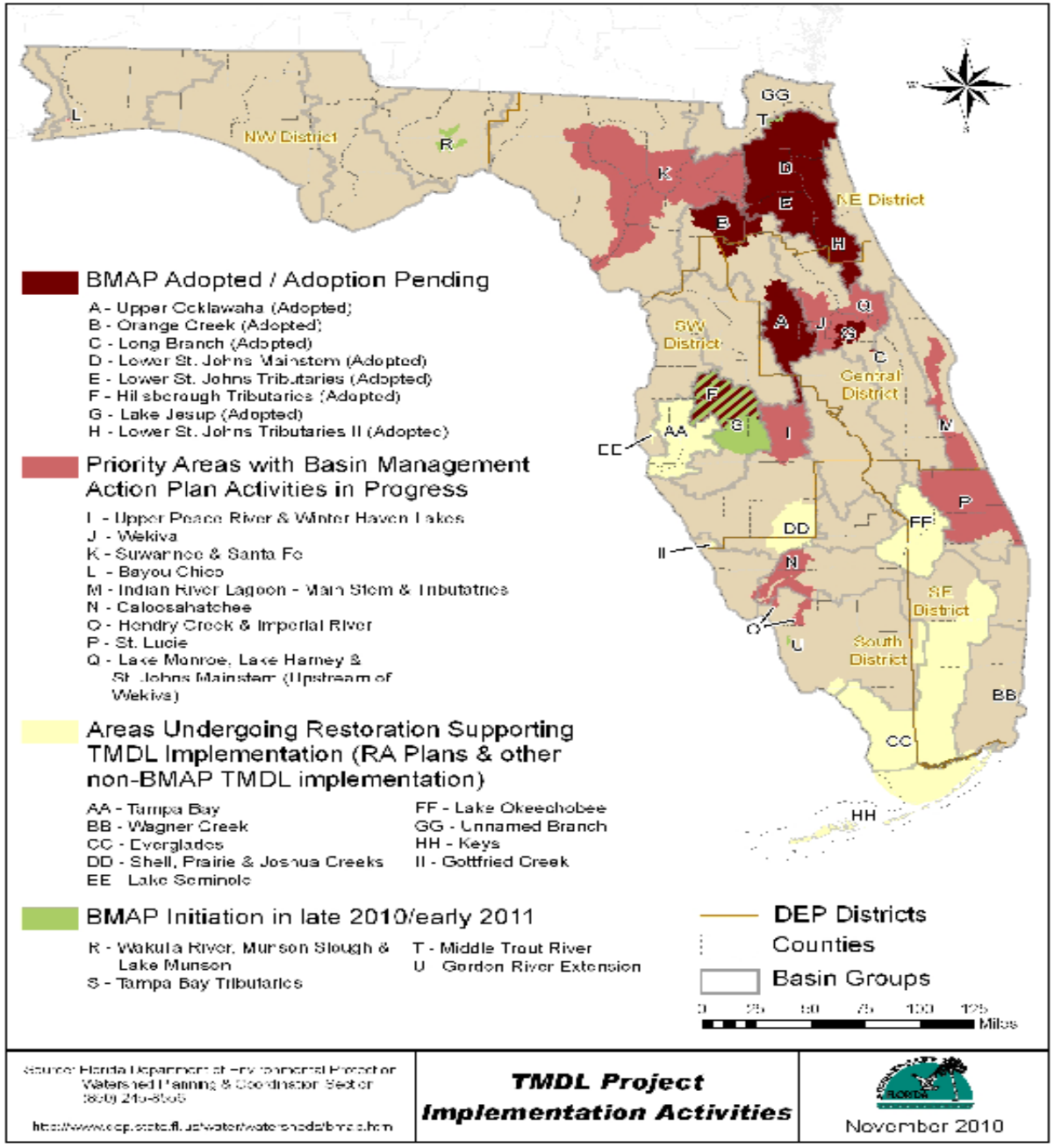
- 11 million acres of farmland in Florida are used for agriculture
  - greenhouses and nurseries, field crops, citrus, vegetables, berries and melons, other fruits and nuts, sod, dairy, cattle and calves, equine, poultry and eggs, aquaculture, & honey.
- FDEP and FDACS work in partnership to assist the agriculture sector with reducing impacts on water quality
  - development/dissemination of BMP guidance
  - cost-share funding of restoration projects using 319 grant funds
  - compliance assistance on environmental regulations
- The State works in coordination with several partners including:
  - researchers at the University of Florida and Florida Agricultural and Mechanical University, county extension offices, the USDA-NRCS, and various agricultural groups throughout the state.
- See also http://www.dep.state.fl.us/water/nonpoint/agsrc.htm

FDACS Agricultural BMP Program

- Open letter from FDACS and FDEP to Florida's agriculture industry (May 19, 2010)
  - Strongly encourages agricultural producers to enroll in the FDACS BMP program and implement BMPs consistent with that program.
  - Explains that "regardless of what numeric nutrient water quality criteria are ultimately adopted by EPA, current state law gives a presumption of compliance with water quality standards to agricultural producers who enroll in and implement FDACS-adopted BMPs."
- Enrollment in the program involves an on-site assessment to determine appropriate BMPs and submittal of a notice of intent to implement such BMPs.
- Florida rules, BMP manuals, and other documents for various agricultural sectors can be found at: http://www.floridaagwaterpolicy.com/BestManagementPractices.html

Florida BMAP Program

- FDEP administers the BMAP program as a means to restore impaired waters by reducing pollutant loadings to achieve allocations established in a TMDL.
- BMAPs are developed in coordination with local stakeholders, as they rely on local input and local commitment, and are adopted by Secretarial Order to be enforceable.
- If a BMAP is developed for a TMDL that identifies necessary pollutant reductions from agriculture, the BMAP would include strategies for agricultural BMPs or other controls.
- For details on BMAPs that have been completed or are under development, see: http://www.dep.state.fl.us/water/watersheds/bmap.htm



Additional Information

- More information about the final water quality standards for the state of Florida's lakes and flowing waters is available at:

  http://water.epa.gov/lawsregs/rulesregs/florida_index.cfm
- EPA Region 4 contact information:
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  - Mark Nuhfer, Chief
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  - Tom McGill, Chief
    - Stormwater & Nonpoint Source Section
    - mcgill.thomas@epa.gov

Question and Answer Session

- Please submit your questions through the chat function
- Link for rule:

  www.regulations.gov, docket ID: EPA-HQ-OW-2009-0596

  or

  http://water.epa.gov/lawsregs/rulesregs/florida_index.cfm
- Conference number :1-877-887-8949

  ID: 29273843