

Presented by Jennifer Gihring, FDEP
at the
Wekiva BMAP Kick-off Meeting
Friday, March 6, 2009
Lake Sylvan Park, Sanford, FL

Total Maximum Daily Load (TMDL) Program

Identify scientifically-based quantitative goals for restoration of waterbodies that do not meet State water quality standards, and implement a plan to achieve those goals.

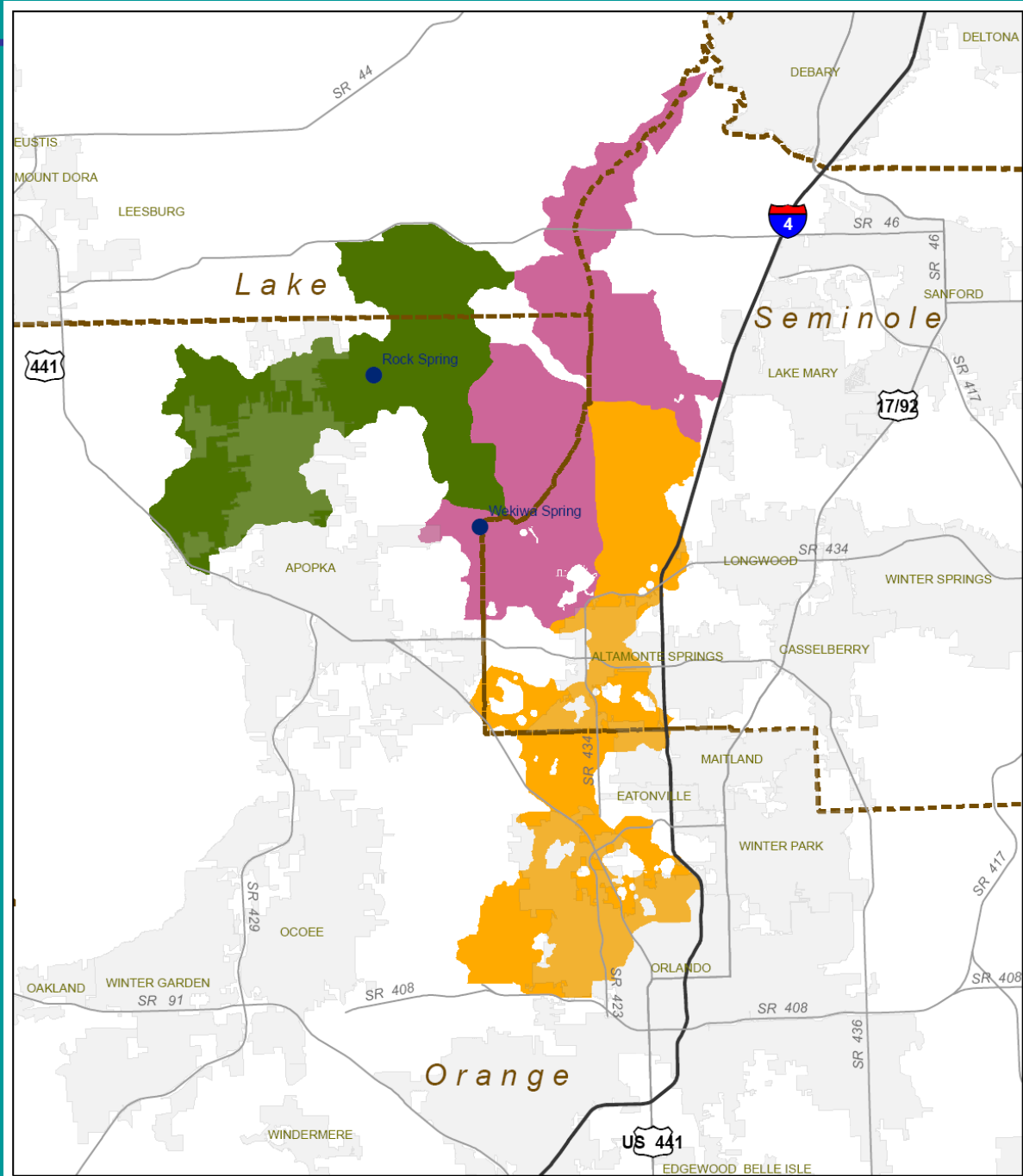
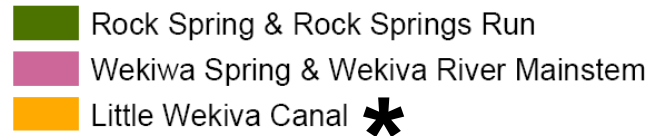
Local information and stakeholder involvement is the foundation of success

What is a TMDL?

Formal definition: TMDLs identify the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards.

Informal definition: TMDLs set numeric water quality goals to restore the health of a lake, river, stream, spring, or estuary.

Wekiva Basin Spring & Spring Run Nutrient TMDLs



TMDL Development

Specific to a waterbody and a pollutant (e.g. nitrate in Wekiwa Spring)

Steps

- **Determine “assimilative capacity” (i.e. restoration target)**
- **Calculate pollutant reductions needed to meet the target**

Based on available data and information

Water quality data – Ecological data – Land use – etc.

Wekiva Basin Nitrate & TP TMDLs

Targets (“assimilative capacity”)

- Based on studies from Wekiva, Rainbow, & Suwannee River/Springs
- Selected lowest biologically effective concentrations (conservative)
- Nitrate target=0.286 mg/L
- TP target=65 µg/L

Wekiva Basin % Reductions

% Reductions

- Calculated directly
- No water quality modeling
- Nonpoint load reductions:

Waterbody	Nitrate	TP
Wekiwa Spring	79%	64%
Upper Wekiva River	68%	61%
Lower Wekiva River	47%	57%
Rock Spring	81%	23%
Rock Spring Run	63%	58%

- The TMDL also identifies load reductions for the Yankee Lake WRF, Wekiva Hunt Club WWTF, & Altamonte Springs WRF

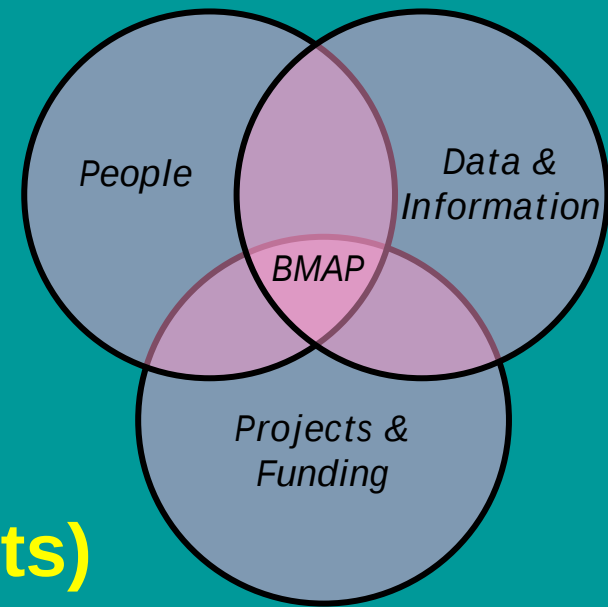
TMDL Implementation

Basin Management Action Plans (BMAPs)

- Close coordination among stakeholders.
- Integration of the best available scientific information.
- Existing and new projects.
- Critical evaluations, studies, and research.
- Adaptive management.
- Equity among stakeholders & sources.

What's in a BMAP?

- Specific water quality restoration goals
- Refined source identification
- Detailed allocations by entity
- Projects
- Monitoring (water quality & projects)
- Commitments: funding & timelines



Types of BMAP Projects

- **Structural stormwater BMPs**
- **Non-structural stormwater BMPs**
- **Improved wastewater management (OSTDS & sewer)**
- **Education and outreach**
- **Additional research & studies**
- **Changes to programs and permits**
- **Changes to local ordinances and policies**

BMAPs & Regulatory Links

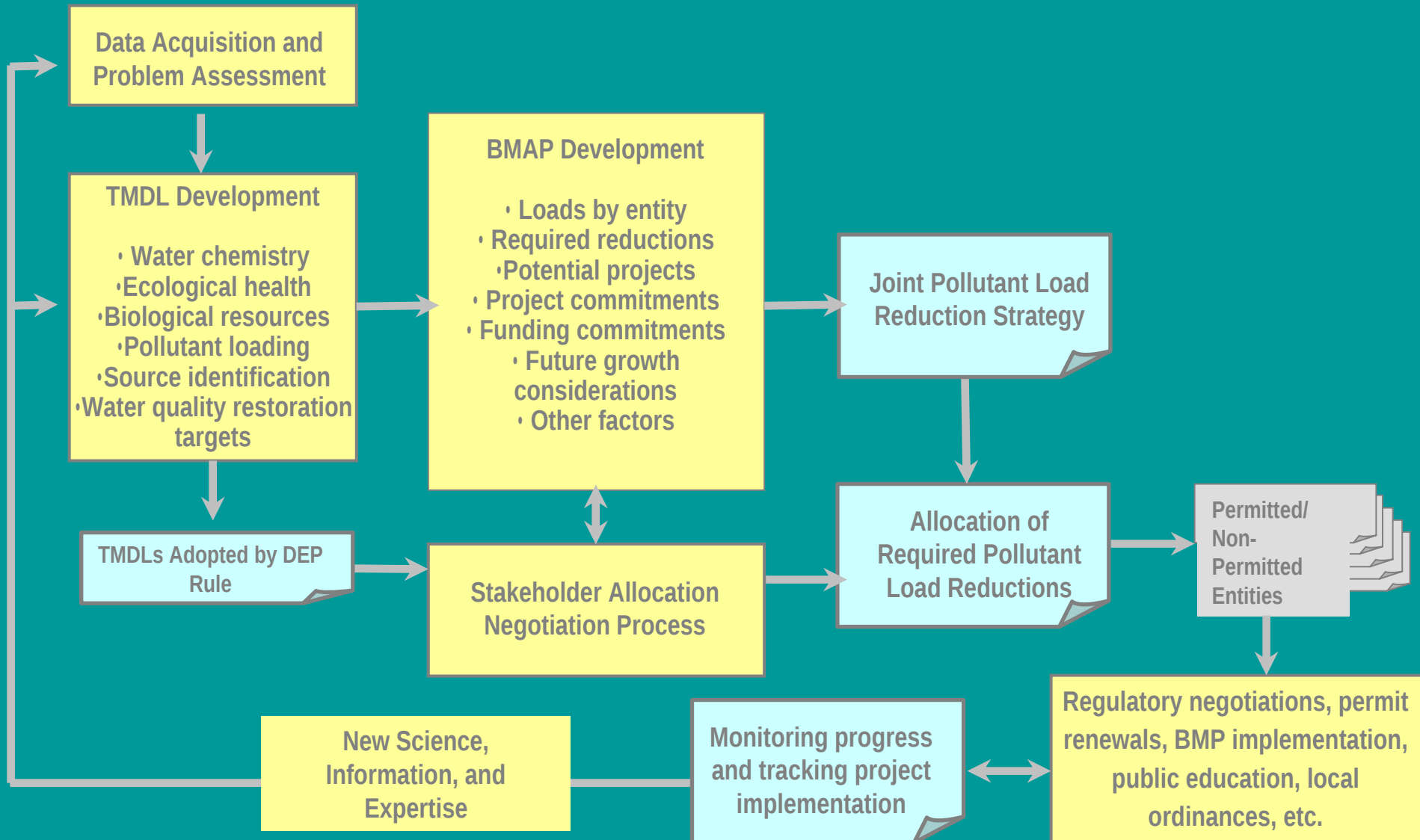
BMAPs are enforceable through

- **NPDES wastewater permits**
- **NPDES municipal stormwater (MS4) permits**

BMAPs require implementation of BMPs for non-permitted nonpoint sources (e.g. agriculture)

BMAPs are adopted by DEP Secretarial Order, but include statements of commitment from stakeholders

Reality Check – TMDL Development and Implementation is a Complicated Process



Wekiva BMAP Considerations

Groundwater

- Travel time & natural attenuation processes
- Identifying a planning area

Source Identification

- Relative magnitude
- Are detailed allocations appropriate, logical, scientifically defensible, and *necessary*?

Relationship to Other Efforts

- Wekiva River Basin Commission (Wekiva Parkway & Protection Act wastewater upgrades & stormwater master plan projects)
- (Former) Wekiva Working Group
- DOH Rulemaking