

Florida Department of Environmental Protection



Division of Environmental Assessment and Restoration

Prioritizing TMDL Development in Florida

Florida Stormwater Association (DEP Day)
December 10, 2014





Outline

- 303(d) Long-Term Vision
- Implementing the Prioritization Goal
- Prioritizing TMDL Development
- Current Status and Future Efforts

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Water Quality Evaluation Program, FDEP*



A Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program

What is it? How is it being implemented in Florida?



303(d) Long-Term Vision

- Developed by states and EPA
- Announced in December 2013
- Provides a framework for greater efficiency and more success in achieving water quality
- Implements Clean Water Act section 303(d)

<http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/programvision.cfm>

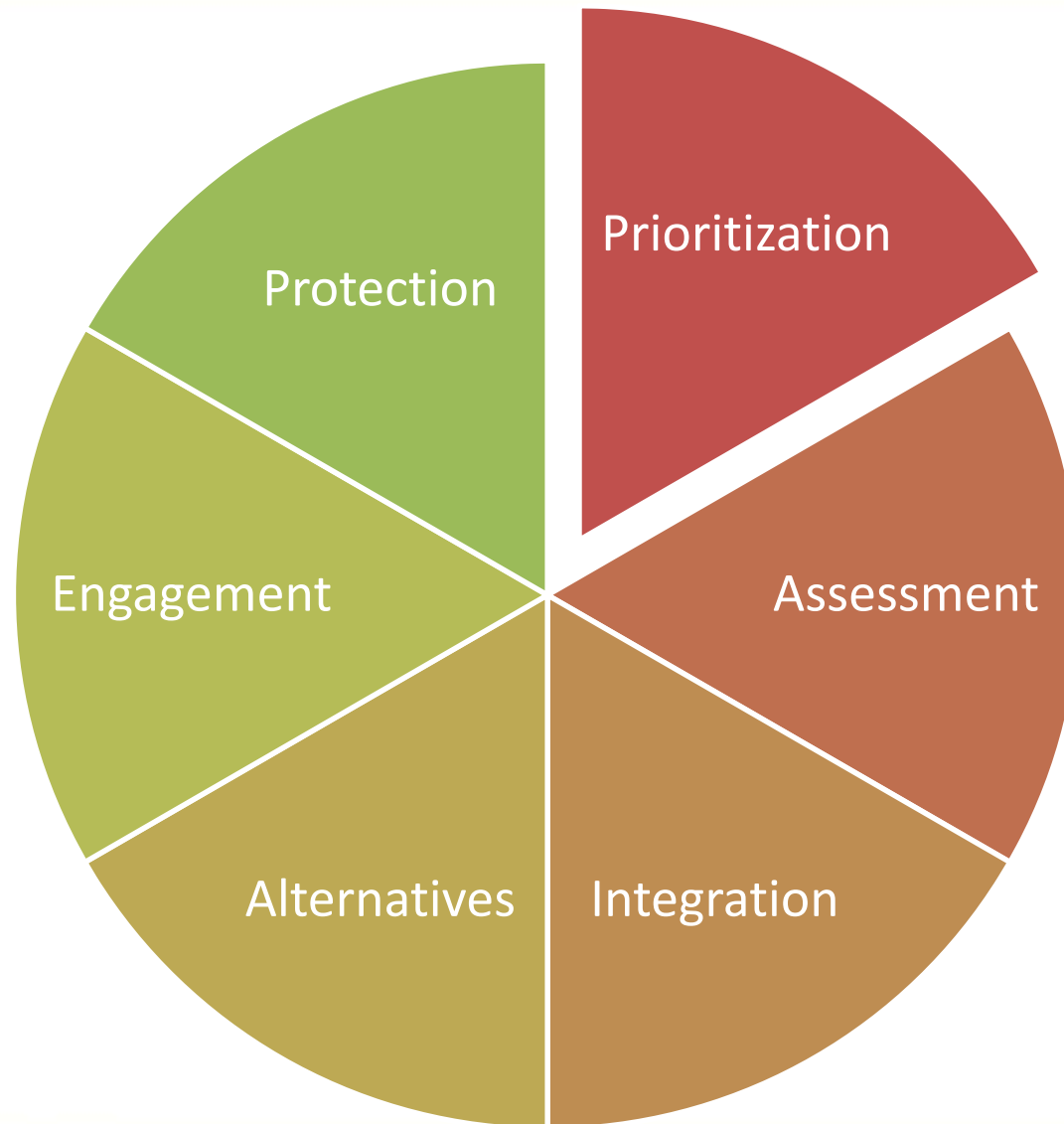


303(d) Long-Term Vision

- CWA Section 303(d) review
- States (*)
 - Develop lists of impaired waters
 - Prioritize impaired waters and establish a schedule
 - Develop Total Maximum Daily Loads (TMDLs)
 - Seasonal variations; margin of safety
- EPA
 - Approves or disapproves the 303(d) lists, TMDLs
 - Can list and develop federal TMDLs



303(d) Long-Term Vision





303(d) Long-Term Vision

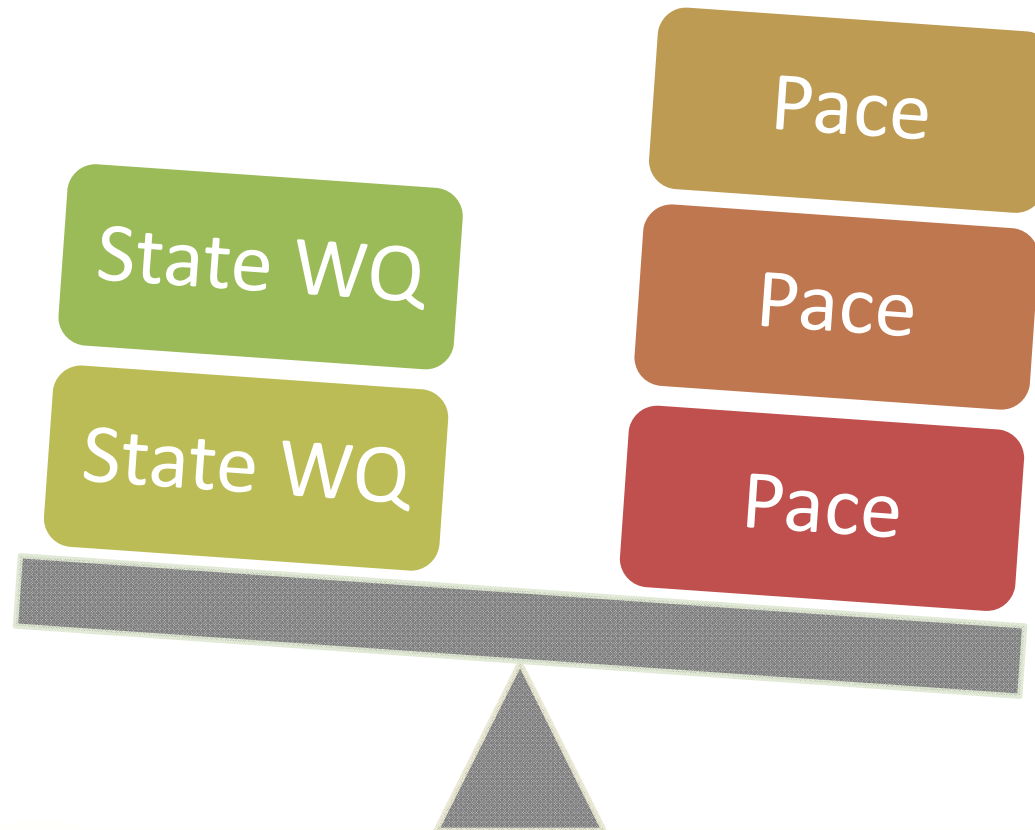
- Gaining efficiency and reorienting the program
- Achieving gains (without changing the CWA)
- Providing flexibility
- Expanding the planning horizon
- Improving collaboration



303(d) Long-Term Vision

State WQ
Priorities

Pace of TMDL
Development





303(d) Long-Term Vision

A square icon with a blue background showing water splashing.

State WQ
Priorities

A square icon with a light brown background showing black beans scattered on a wooden surface.

Pace of TMDL
Development

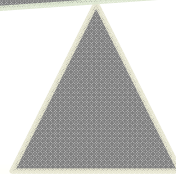
State WQ

State WQ

State WQ

Pace

Pace





303(d) Long-Term Vision

- Removes "one size fits all" expectations
- Allows states to tailor their strategies
 - Leverage local resources
 - Address local water quality goals
- Ensures accountability through new measures
 - Areas addressed by TMDLs
 - Recognition of TMDL alternatives
(reasonable assurance, nutrient management plans)
- Operates on a longer time horizon



Total Maximum Daily Loads (TMDLs)

What are they? Why are they important to restoration?



What does TMDL stand for?

- Total Maximum Daily Load

Maximum amount of a given pollutant that a waterbody can take up without causing exceedances of water quality standards.



Ok, so what does that mean?

- TMDLs are water quality restoration goals
 - Pollutant-specific loading targets
 - Derived scientifically by studying the waterbody
 - If targets met, waterbody expected to meet its criteria

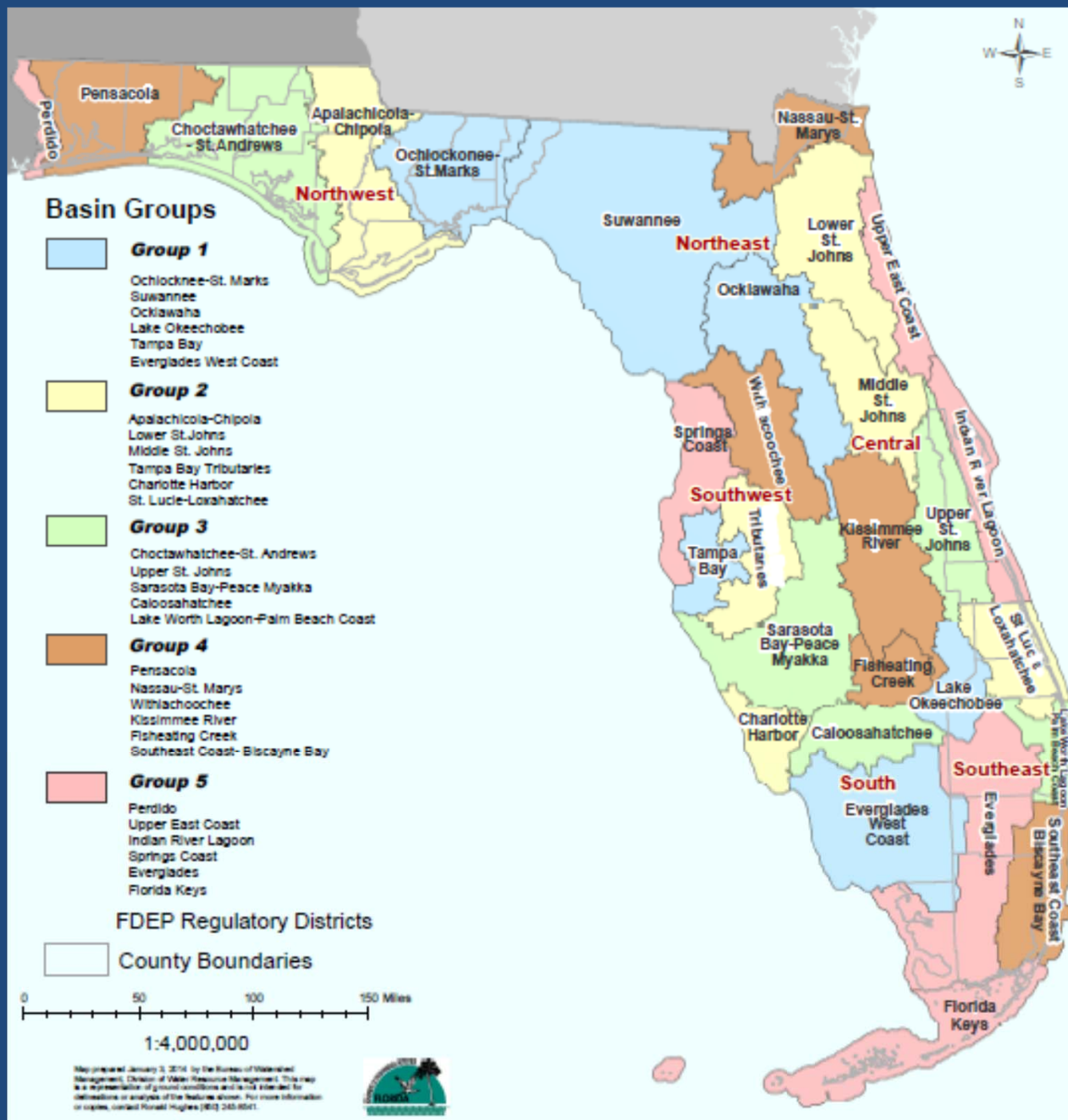


Water Quality Restoration

- Standards
- Monitoring
- Assessment
- **TMDL development**
- Basin management action plan (BMAPs)



Implemented on a rotating basin approach...





TMDL Allocation

$$\text{TMDL} \cong \sum \text{WLAs}_{\text{NPDES wastewater}} + \sum \text{WLAs}_{\text{NPDES stormwater}} + \dots$$
$$\dots + \sum \text{LAs} + \text{MOS}$$

- WLAs = wasteload allocations
- LAs = load allocations
- MOS = margin of safety



Prioritizing TMDL Development

Which TMDLs should we develop next?



Prioritizing TMDLs

- Rule 62-303.500
 - "Prioritization for TMDL Development"
 - Part of impaired waters rule (IWR)

Class I – Drinking water supplies

Class II – Shellfish propagation or harvesting

Class III – Fish consumption, recreation, well-balanced fish and wildlife

Class III Limited – Class III with limited aquatic life support and habitat

Class IV – Agricultural water supplies

Class V – Navigation, utility, and industrial uses (no current designations)



EPA Consent Decree Era

- EPA/Earthjustice consent decree (1999 – 2013*)
 - Detailed schedule for TMDL development
 - Required EPA to adopt TMDLs (if no state TMDL)
- Some decree-listed waterbodies were not "verified impaired" (so no state TMDL possible)
 - Mix of state and federal TMDLs



Post Consent Decree Era

- New approach needed
 - DEP portion of consent decree schedule completed
 - New standards for dissolved oxygen and nutrients
 - Potential changes in impaired status



Recovery Potential Screening

- EPA tool to assist in prioritizing TMDLs
 - Areas with the greatest chance of success
 - Based on analysis of various selected indicators
 - Ecological
 - Stressor
 - Social

<http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/recovery/>



Phased Approach

Phase 1

- Remove Bacteria and Mercury WBIDs

Phase 2

- Numeric Indicators

Phase 3

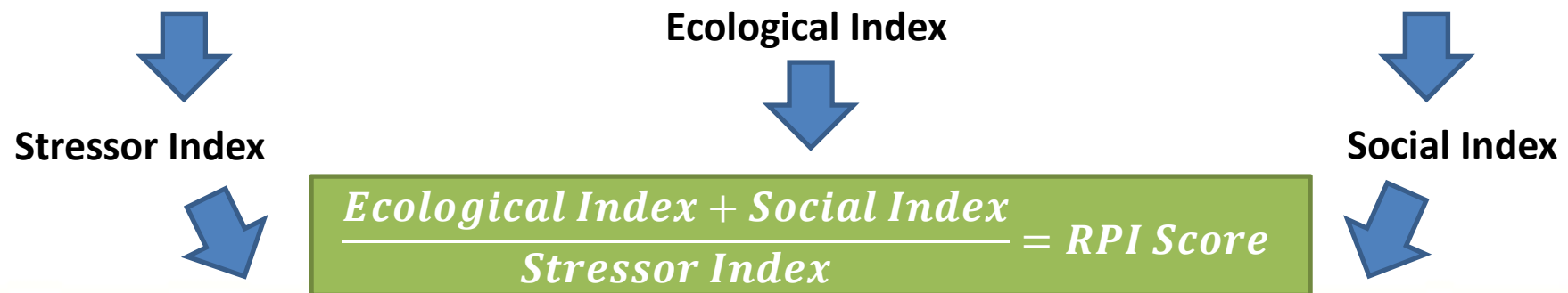
- Non-Numeric Indicators

List of Waters to Develop TMDLs






Indicators Overview

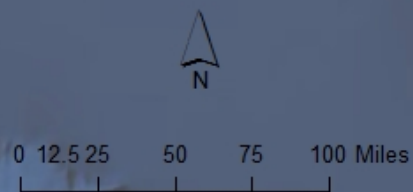
Stressor	Ecological	Social
Severity of impairment	Presence of Outstanding Florida Water (OFW)	Listing priority/age of the listing
Proximity to other impaired waterbodies	EPA/UF Watershed Index	
Number of point source outfalls		(BMAP effectiveness)
Effluent dominated waterbody		(Presence of EPA TMDL)
Number of verified listings		(Economic importance)
Number of impairment/waterbody combinations		(Likelihood of reasonable assurance plan or other approach)
Designated use		(Public access)



TMDLs In Development 2014 by Planning Unit

February 2014




-  Interstates
-  County Boundaries
-  TMDL Planning Units In Development FY14

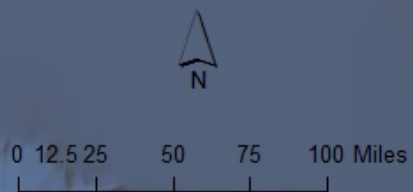


For Display only
Map content: Kevin.Petrus@dep.state.fl.us
Map copies: Janis.Morrow@dep.state.fl.us

TMDL Work Plan 2014-2016 by Planning Unit

February 2014

-  Interstates
-  County Boundaries
-  TMDL Planning Units Work Plan FY14-16



For Display only
Map content: Kevin.Petrus@dep.state.fl.us
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Public Engagement

- Series of six workshops held across the state
- Work plan, maps, other materials on the web
- Stakeholders included:
 - Agriculture (DACS and agriculture councils)
 - Transportation (DOT and contractors)
 - Municipalities
 - Environmental groups and activists
 - Local landowners
 - NPDES permit holders
 - Other concerned citizens



Stakeholder Input

- Broad support for overall approach
- Additional information used to adjust work plan
 - Municipality concern about timing of TMDL development and goals for an ongoing nutrient management plan
 - Environmental group petition to include a water body not originally on the prioritized list
 - Water management district input to take waters off list that were no longer impaired for nutrients



Current Status and Future Efforts

How will we adaptively manage TMDL development?



Current Status

- *Priority Framework Document (Aug 8, 2014)*
 - Describes last year's effort and resultant work plan
 - Draft document
 - Available online, along with TMDL work plan
- Currently implementing TMDL development plan
 - As revised
(stakeholder input, resource considerations)

<http://dep.state.fl.us/water/tmdl/>



Open TMDL Projects

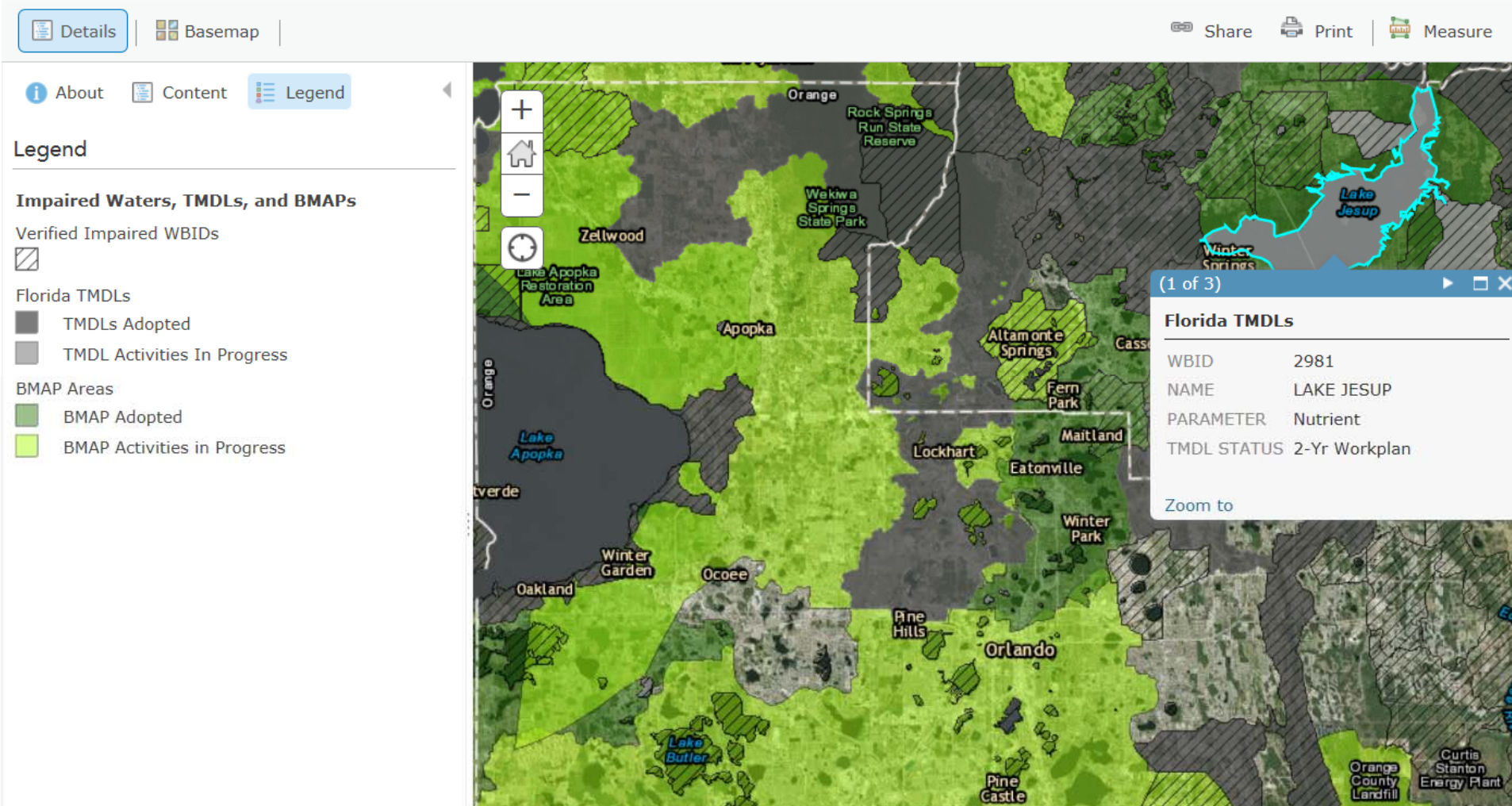
- Peace River Basin Lakes
(Lakes Deer, Hollingsworth, Bonny, and Lena)
- Homosassa and Chassahowitzka Springs
- Lakes Talquin and Tallavanna
- Central Florida Lakes
(Lakes Weir, Denham, Roberts, and Marshall)
- Crescent and Lochloosa Lakes
- Caloosahatchee River Basin
- Lake Jesup



TMDL Status – Online GIS

- Relatively new addition to FDEP online GIS tools
- Displays location of water bodies:
 - Verified impaired
 - TMDLs adopted
 - TMDLs "in progress" (i.e., open or on the 2-year plan)
 - BMAPs adopted
 - BMAPs in progress
- Click on "Impaired Waters, TMDLs, and Basin Management"

<https://fdep.maps.arcgis.com/home/>



<https://fdep.maps.arcgis.com/home/>



Future Prioritization

- Fully implementing 303(d) long-term vision includes identifying "universe" of TMDLs to complete by 2022
- Now running recovery potential screening tools again, at a larger scale and with a different focus
 - Scale – HUC8 watersheds
 - Focus – For use beyond TMDL prioritization



Values for Setting Priorities

- Efficient use of resources
- Implementation-friendly process and results
- Public action, not just education
- Encouragement of TMDL alternatives
- Highest chance of recovery
- Integrated, holistic approach



Conclusion / Summary

- FDEP vision – list of priority waters across state, where we can focus monitoring, assessment, restoration targets, and restoration plans
- Opportunities – spend resources to develop bigger models, involve more stakeholders, solve more problems in areas of highest priority
- Challenges – how to continue meeting the needs of other CWA programs and stakeholders statewide



Questions?

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