

Alafia River Basin BMAP Meeting

FDEP SW District

June 2, 2011



WELCOME

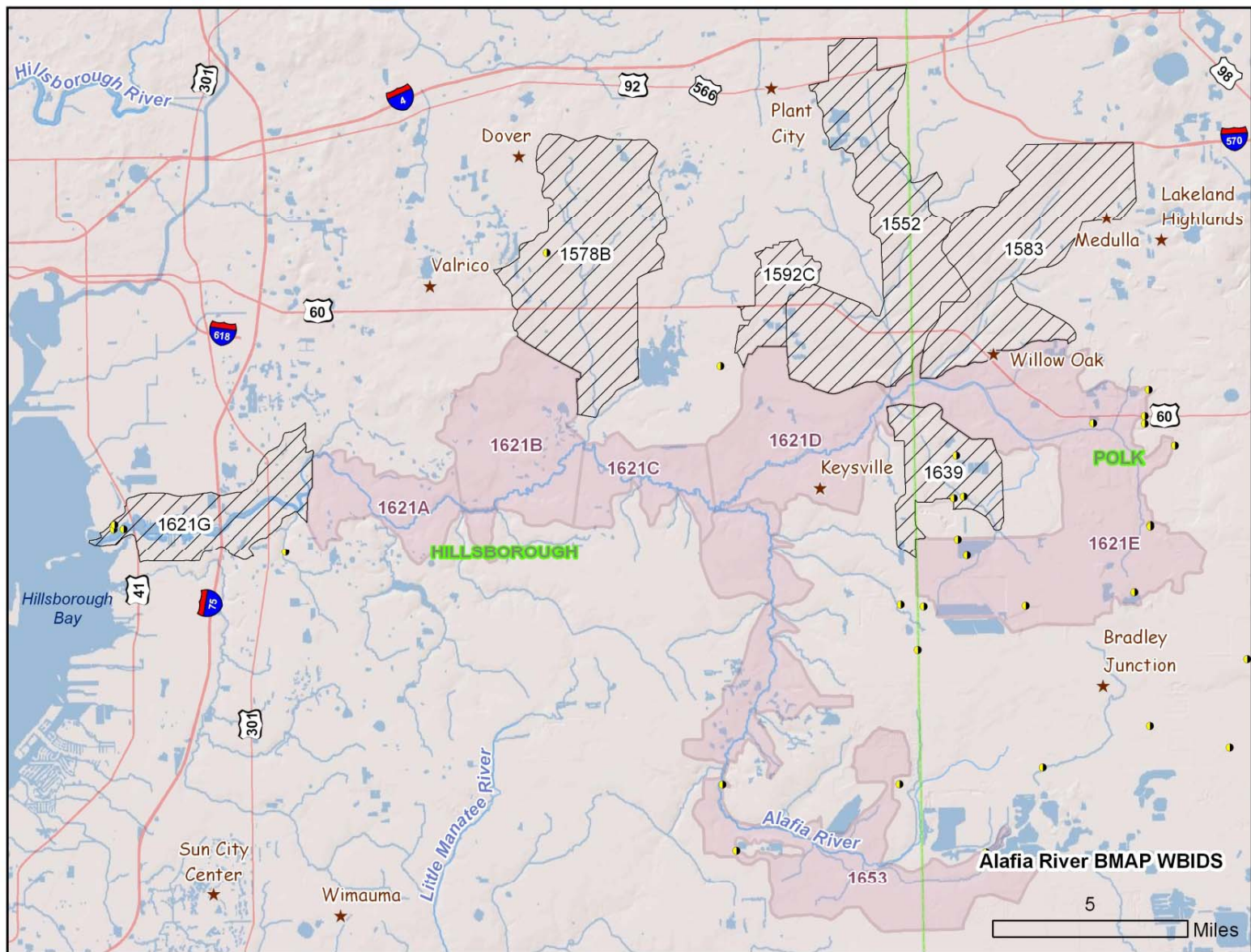


Introductions

staff supporting the BMAP

- Gerold Morrison (AMEC)
- Terry Hansen (FDEP)





Meeting Logistics

- Sign-in Sheets
- Questionnaires
- Facilities
- Agenda Review
 - Basin Management Action Plan Areas
 - Watershed Restoration Efforts
 - Total Maximum Daily Load (TMDL)
 - Basin Management Action Plan (BMAP)
 - Stakeholder Involvement
 - Timeline

Florida's Sunshine Law (Chapter 286, F.S.)

A Quick Overview



Background on Sunshine Law

- Sunshine Law is Intended to Expose the *Entire* Decision Making Process to Public Scrutiny
- Establishes a Basic Right of Access to
 - Most Meetings of Boards, Commissions and Other Governing Bodies of State and Local Governmental Agencies or Authorities
 - Applies to all Discussions and Deliberations

Background on Sunshine Law

- Applies to any gathering in which some matter on which foreseeable action will be taken by the board or commission is to be discussed
 - Meetings of Two or More Members
 - Both Formal and Casual Meetings
- Additional Information on the Attorney General's Website
 - <http://myfloridalegal.com/sunshine>

Requirements

- Meetings of Boards or Commissions Must Be Open to the Public
- Reasonable Notice of Such Meetings Must Be Given
- Minutes of the Meeting Must Be Taken

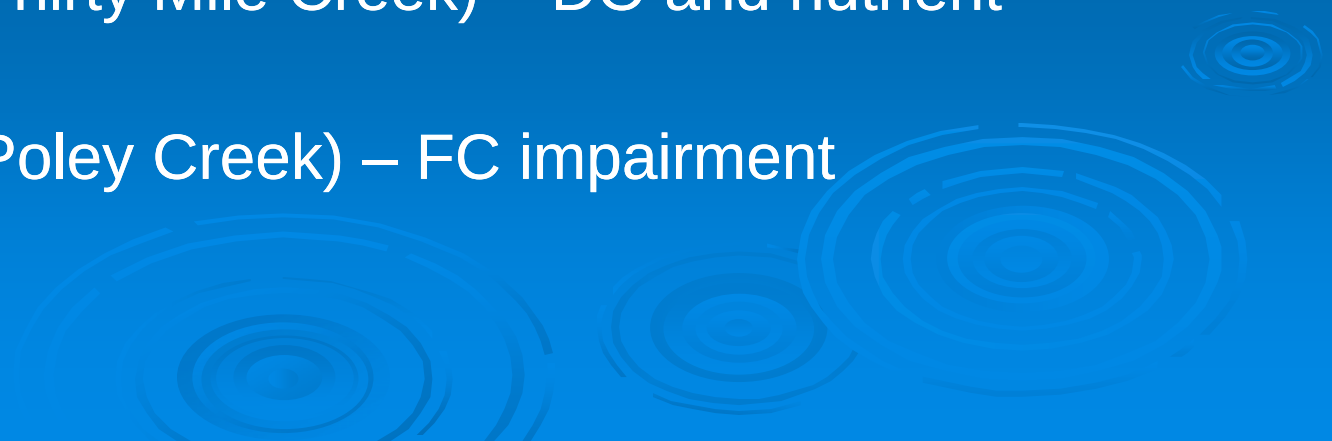
Requirements

- Fact-finding Committees are Exempt from Sunshine
- However, Committees Are Subject to Sunshine if They
 - Take Formal Action and/or
 - Provide Official Recommendations
- *The Sunshine Law is Consistent with the Transparent Nature of the BMAP Process*

What Does Sunshine Mean for This Group?

- FDEP is the Official Decision-Making Body for the BMAP
- This Group provides input to FDEP on
 - BMAP approaches
 - Implementation Schedules
 - BMAP Language
 - Commitments to FDEP on BMPs, Management Actions and Capital Projects

Alafia River Basin WBIDs

- WBID 1621G (tidal reach) – dissolved oxygen (DO) and nutrient impairments
 - WBID 1578B (Turkey Creek) – Fecal coliform (FC) impairment
 - WBID 1592C (Mustang Ranch Creek) – DO, nutrient and FC impairments
 - WBID 1552 (English Creek) – FC impairment
 - WBID 1639 (Thirty Mile Creek) – DO and nutrient impairments
 - WBID 1583 (Poley Creek) – FC impairment
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WATERSHED RESTORATION

- TMDL
- NNC
- RA Plan
- BMAP



TMDL Program

➤ Program result of

- 1972 Clean Water Act Section 303(d)
- 1999 Florida Watershed Restoration Act

➤ Process

- Data Collection and verification of waterbody as impaired
- Listing process for impaired waterbodies
- Development of TMDL
- Implementation of TMDL through BMAP

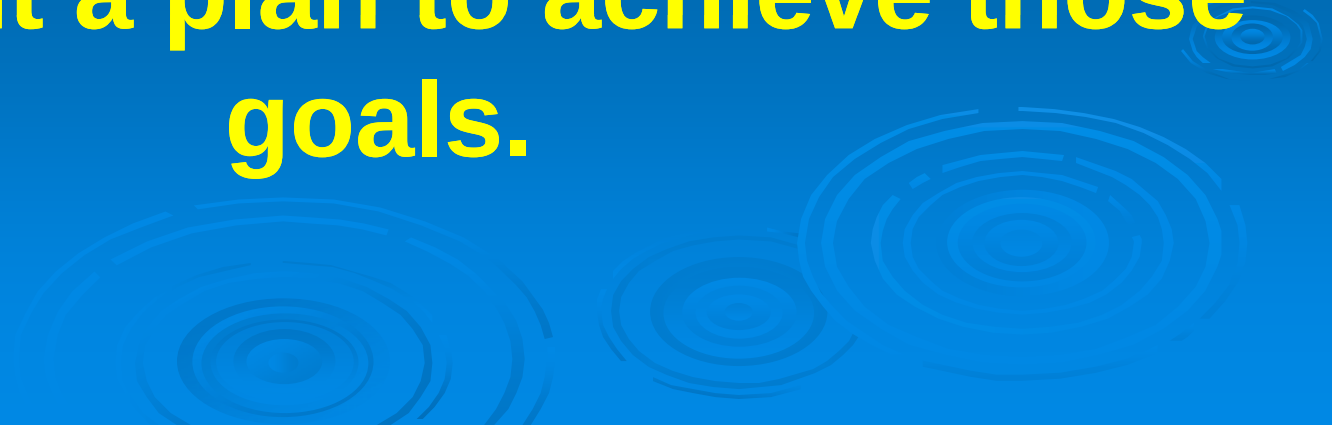
What is a TMDL?

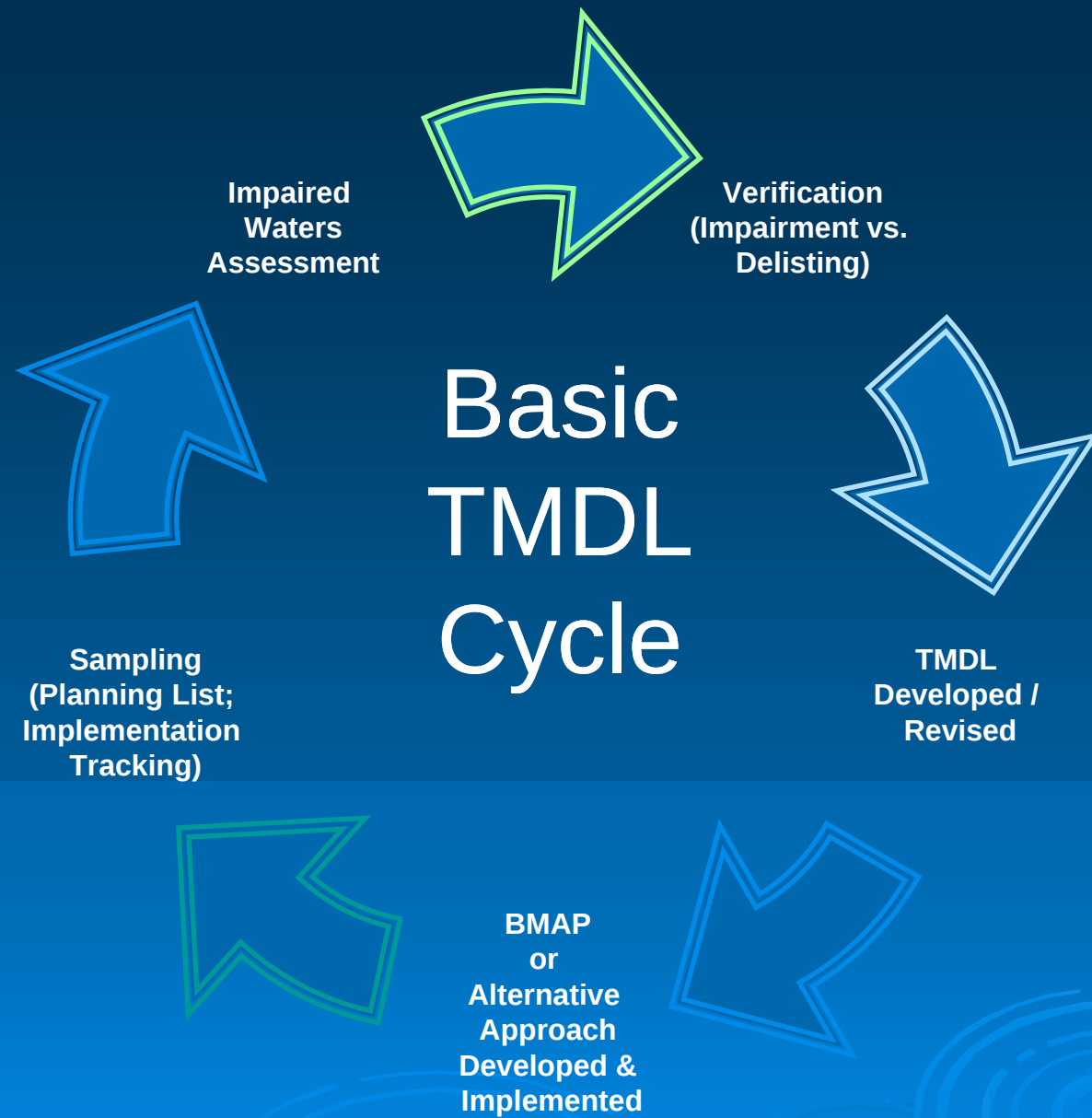
The maximum amount of a pollutant that a waterbody can receive and still meet water quality standards.



The purpose of the TMDL program...

**To 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.**



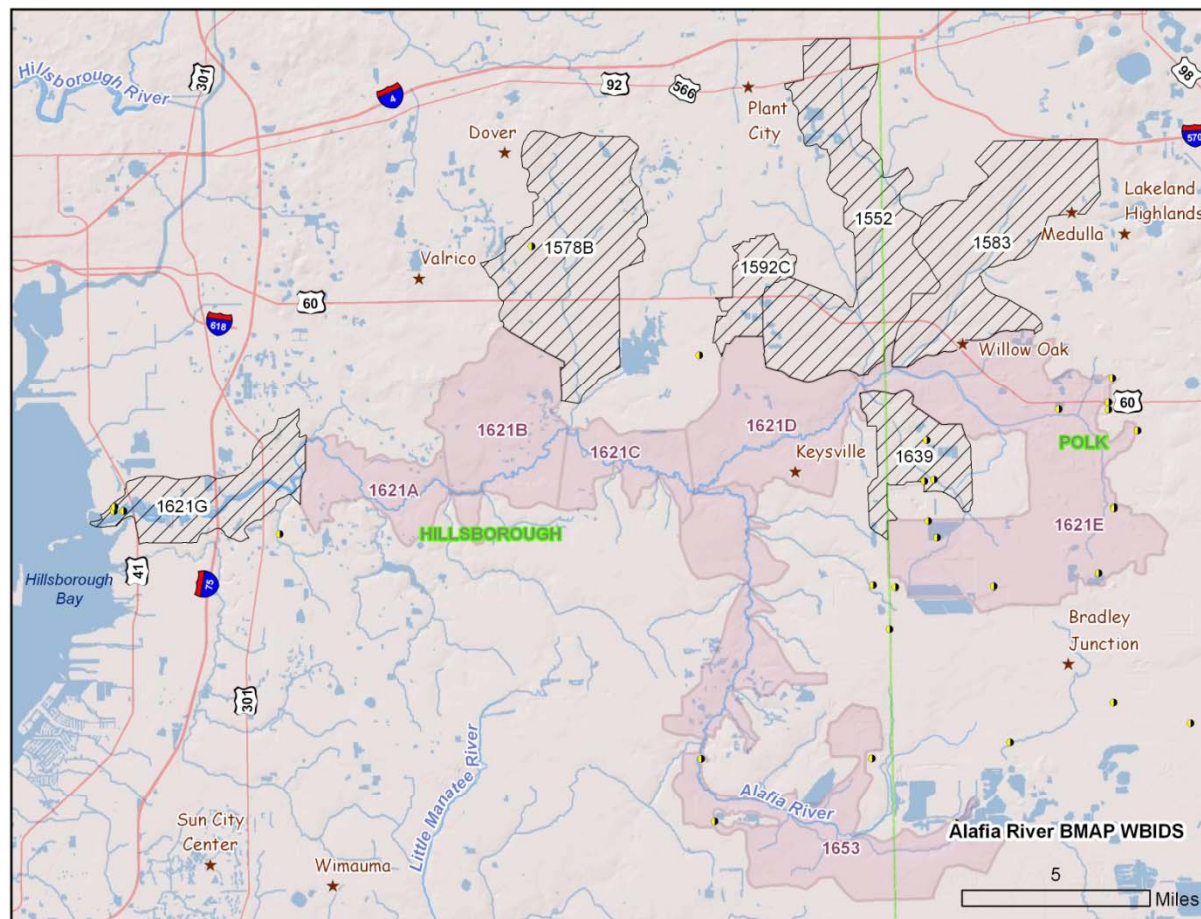


TMDL Implementation

- A Basin Management Action Plan (BMAP) is the primary tool available to implement Total Maximum Daily Loads (TMDLs)

Alafia River WBIDs

- Verified period - January 2001 through June 2008
- TMDL adopted 2009



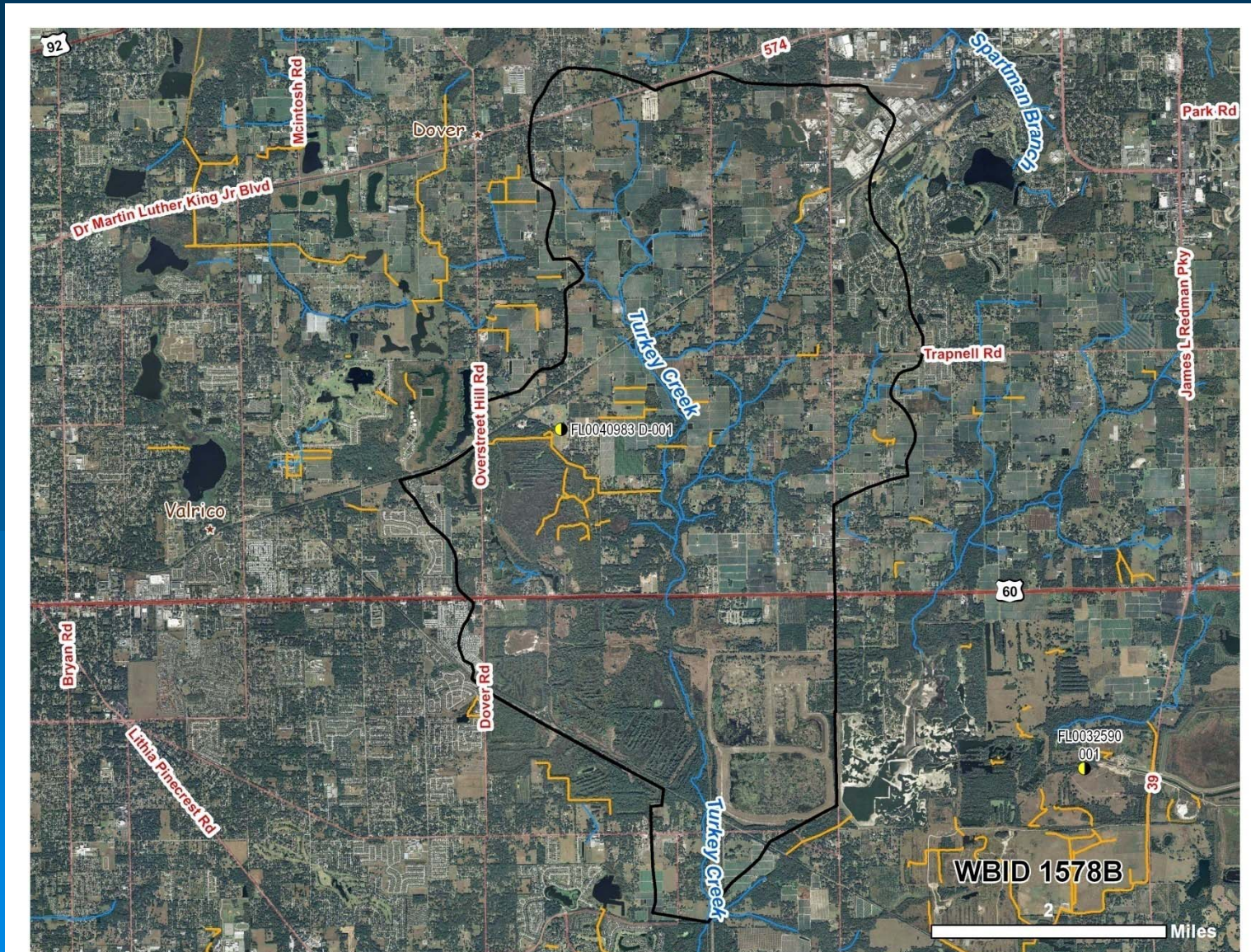
Bacterial Quality

- Numeric criteria for bacterial quality are expressed in terms of fecal coliform bacteria concentration. The water quality criterion for the protection of Class III waters, as established by Rule 62-302, F.A.C., states the following:

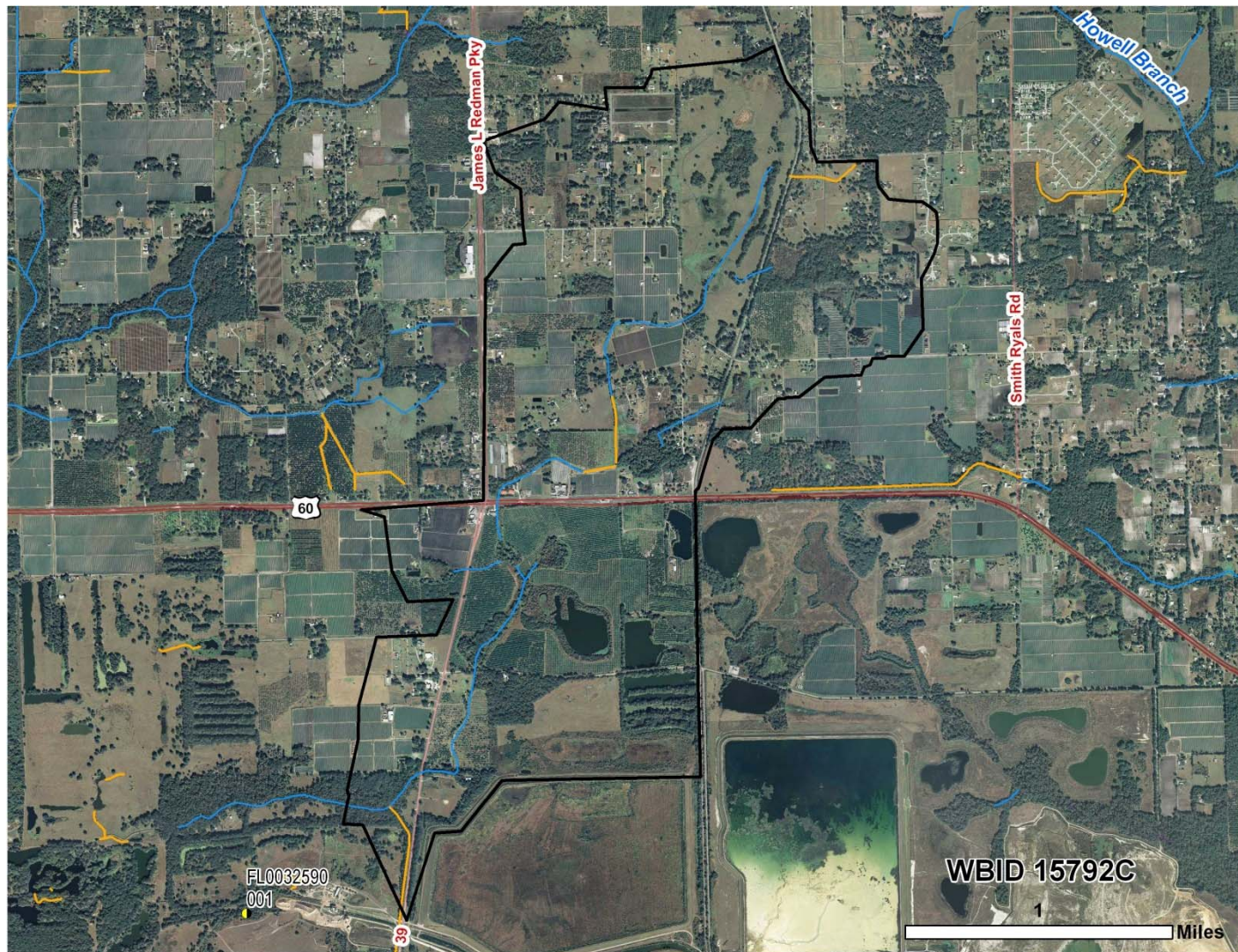
- ***Fecal Coliform Bacteria:***

The most probable number (MPN) or membrane filter (MF) counts per 100 mL of fecal coliform bacteria shall not exceed a monthly average of 200, nor exceed 400 in 10 percent of the samples, nor exceed 800 on any one day

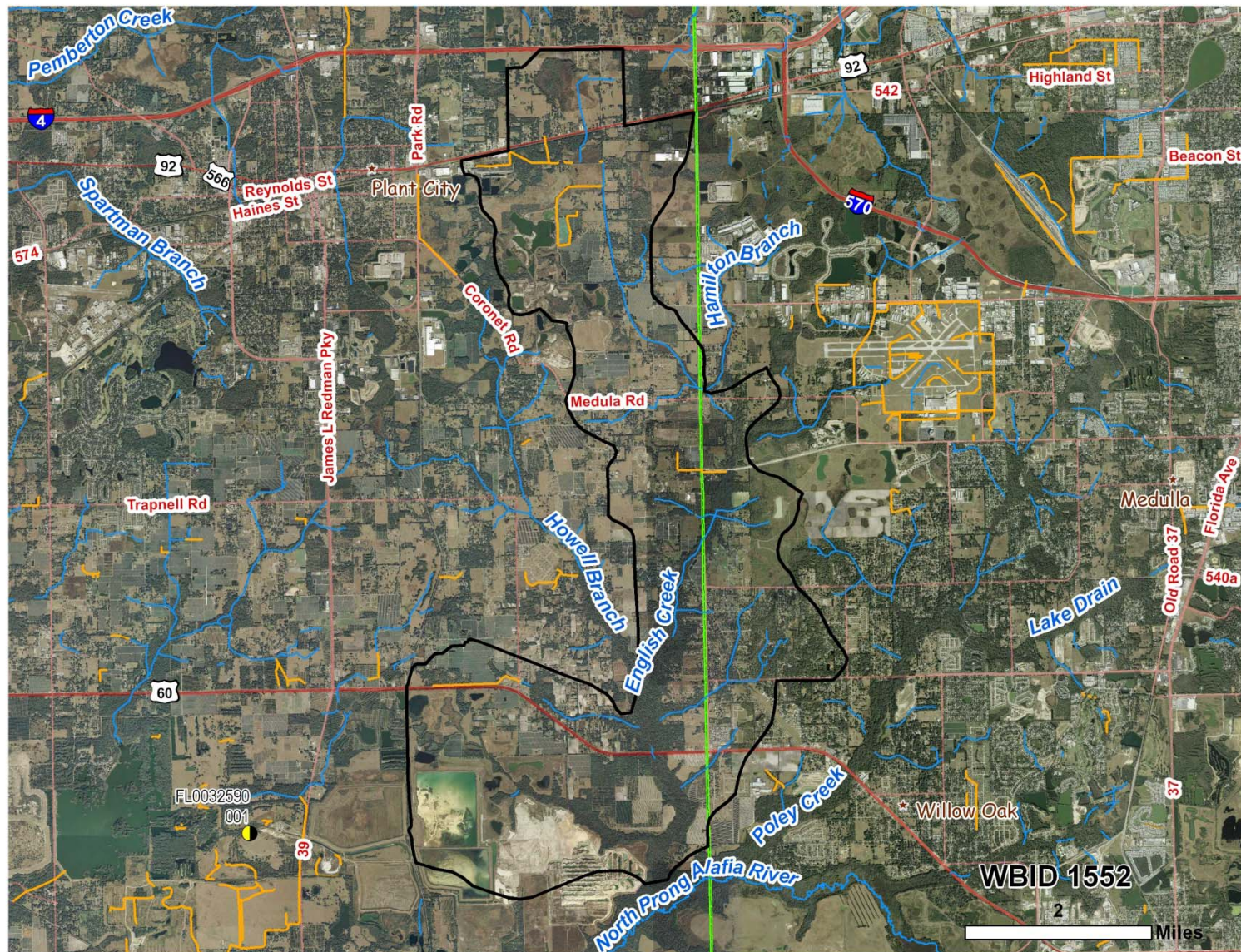
WBID 1578B (Turkey Creek) – Fecal coliform (FC)



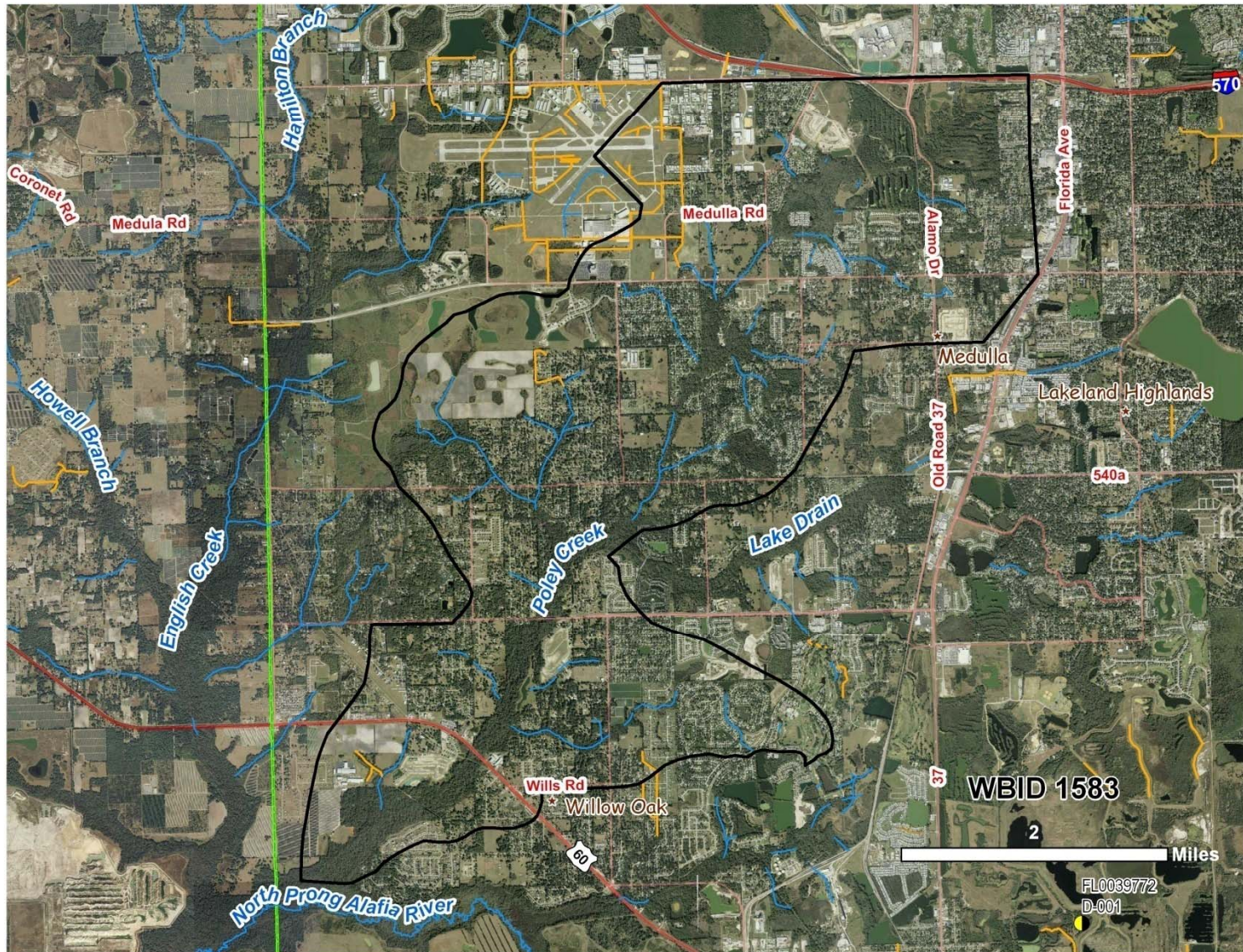
WBID 1592C (Mustang Ranch Creek) – DO, nutrient and FC impairments



WBID 1552 (English Creek) FC



WBID 1583 (Poley Creek) FC

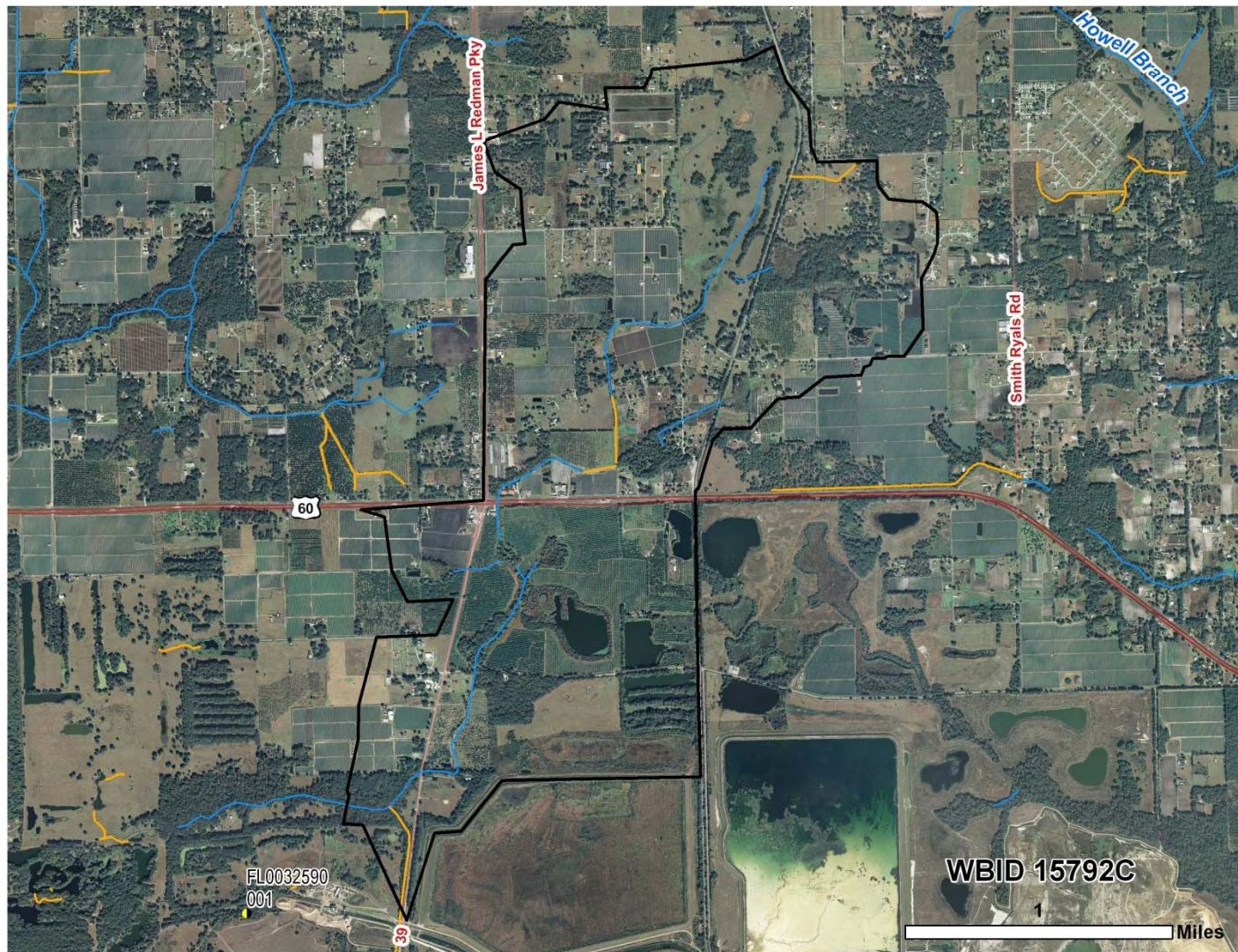


Alafia River WBIDs with Nutrient and DO impairments

- Verified Period
 - January 2001 thru June 2008
- TMDLs adopted 2009



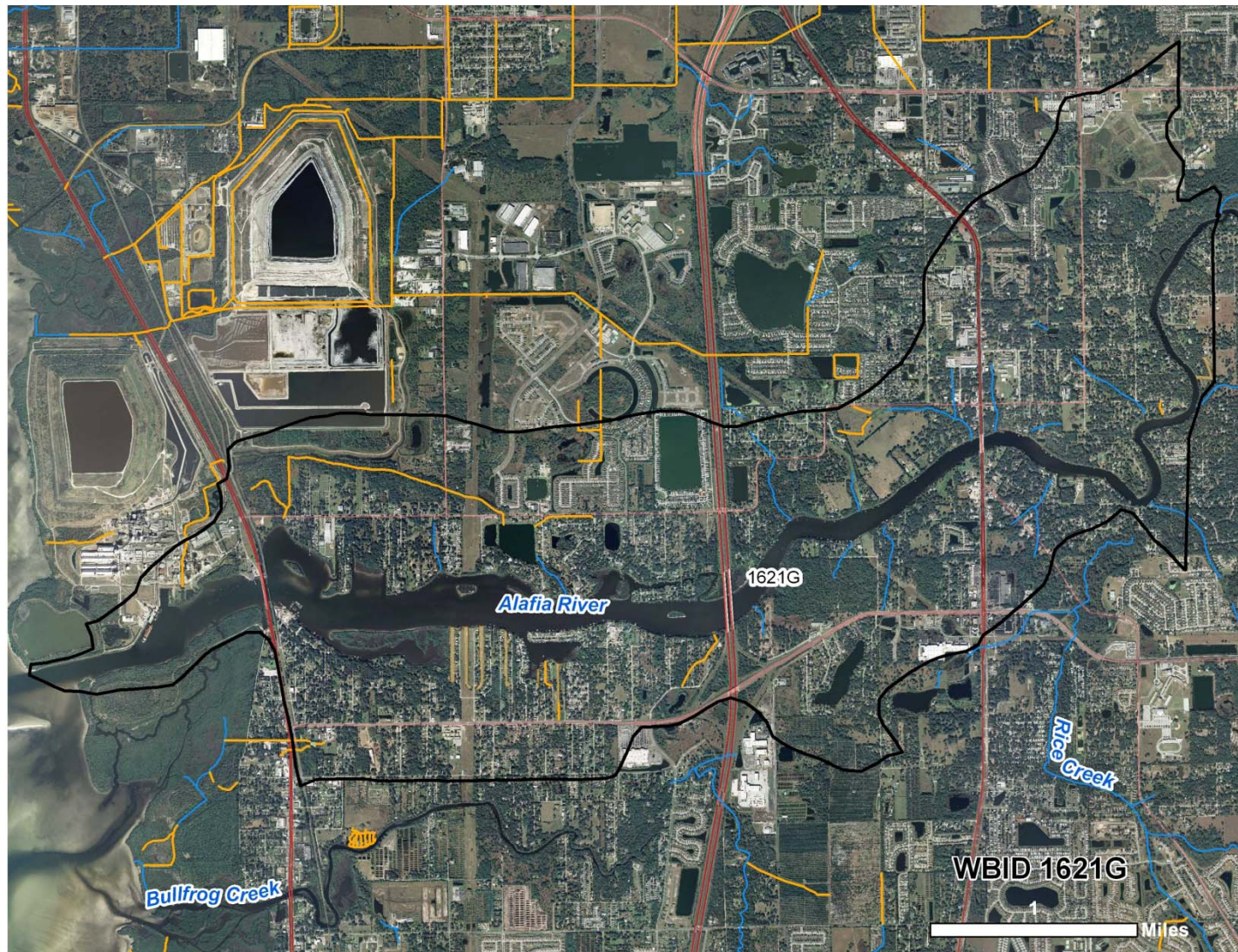
WBID 1592C (Mustang Ranch Creek) – DO, nutrient and FC impairments



WBID 1592C (Mustang Ranch Creek)

- Impairments - DO, nutrient and FC
- Agricultural & low density residential
- 45% reduction in TP to 0.415 gm/l
- 50% reduction in TN to 1.73 mg/l
- achieve DO target through nutrient reductions

WBID 1621G (tidal reach) – dissolved oxygen (DO) and nutrient impairments



Alafia River Basin WBID 1621G

- WBID 1621G Alafia River Tidal Segment
- TMDL Study Results
 - Nitrate shown to be primary factor in causing chlorophyll a exceedances in Lower Hillsborough Bay
 - DO impairment a result of excessive nitrate
 - TMDL TN = 0.065mg/l (54%)

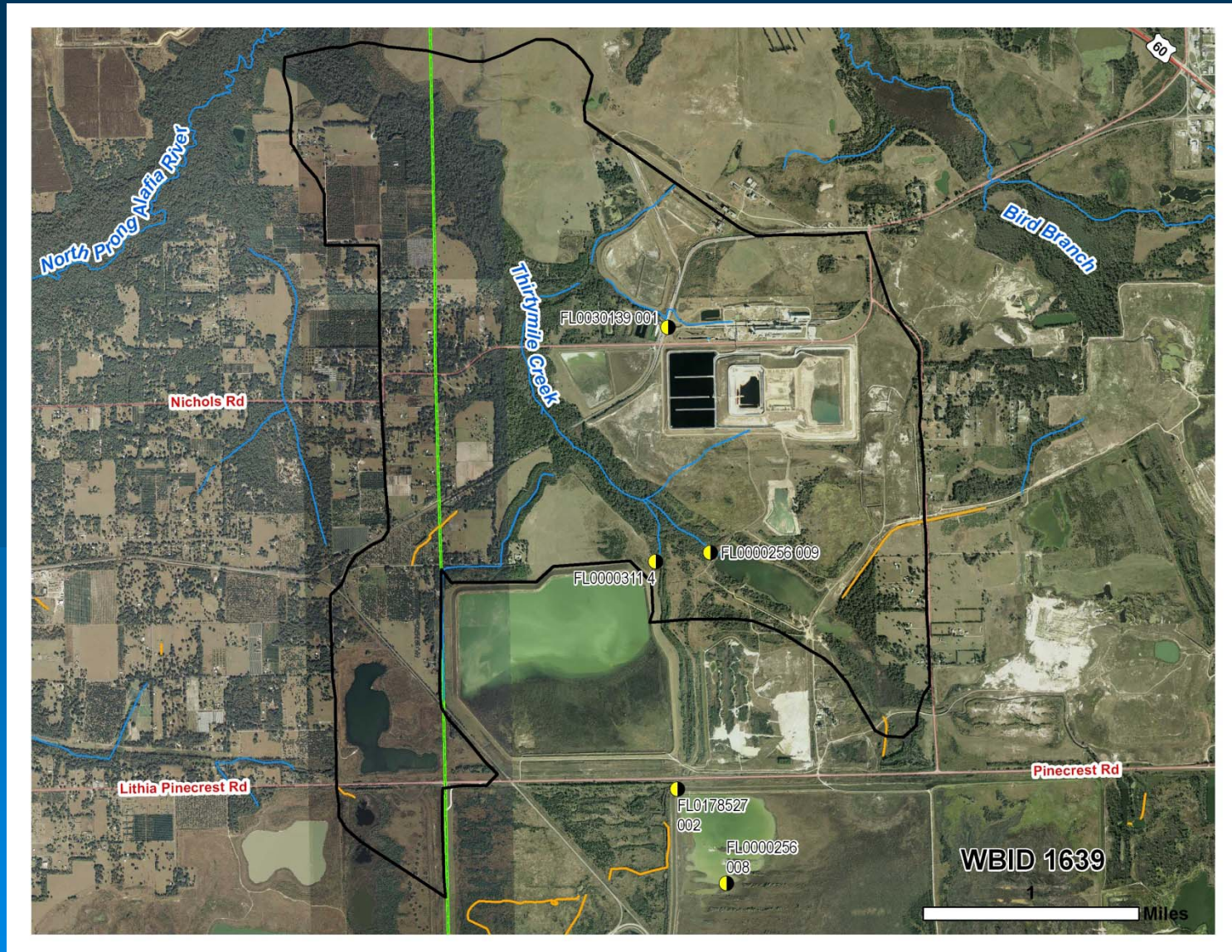
WBID 1621G TMDL Calculation

The TMDL calculation was developed using the “percent reduction” approach. For this method, the selected water quality target for TMDL development is the average of the annual average TN concentrations from the eight years when chlorophyll a in lower Hillsborough Bay was below the threshold value of 15 ug/L. The annual average TN concentrations are from the years 1997, 1999, 2000, and 2002 to 2006,

The average of these annual average (TN) values is 0.65 mg/L.



WBID 1639 (Thirty Mile Creek) – DO and nutrient impairments - TMDL adopted 2004



WBID 1639 (Thirty Mile Creek)

- Impairment - Nutrients and DO
- Watershed's an extraction area for phosphate
- TMDL 3.0 mg/l TN
- Possibly a permit issue

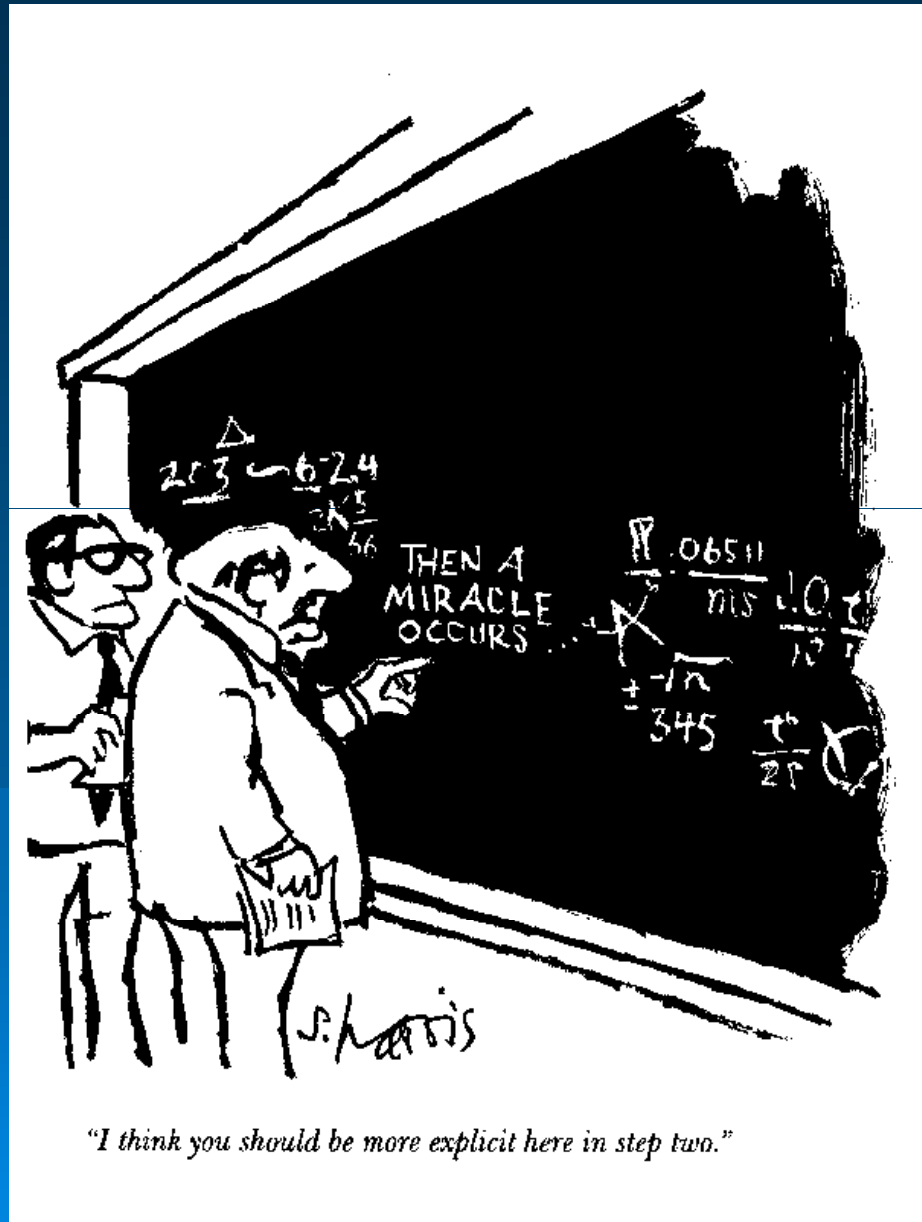


TMDL / NMC RA / NNC

- Total Maximum Daily Load (TMDL)
 - Developed by FDEP and approved by USEPA
- Nitrogen Management Consortium (NMC)
Reasonable Assurance Plan (RA)
 - Approved by FDEP and under review by USEPA
- Numeric Nutrient Criteria (NNC)
 - Proposed USEPA criteria
 - Estuarine criteria in development

Numeric Nutrient Criteria

- West Central Region (Tampa Bay)
 - Instream protective Value Criteria
 - TN 1.65 mg/l
 - TP 0.40 mg/l
- Estuarine Criteria in development
- FDEP petition



MORE INFORMATION

SSAC Contact : Russ Frydenborg Administrator, FDEP
Standards and Assessment, 2600 Blair Stone Rd.,
Tallahassee, FL 32399-2400
850 245-8063 Russel.Frydenborg@dep.state.fl.us

USEPA NNC Information:

<http://www.dep.state.fl.us/water/wqssp/nutrients/index.htm>

BREAK



Basin Management Action Plans

Why do a BMAP?



Basin Management Action Plan

The Basin Management Action Plan (BMAP) is a Restoration Plan and the process for implementing the Total Maximum Daily Load

- 403.067(7) F.S.
- Depends on watershed characteristics and the impairment

Basin Management Action Plan Basics

- BMAPs are developed collaboratively with stakeholders
- Point Sources: TMDL references in NPDES and MS4 permits provide link to BMAP
- Nonpoint Sources: BMAPs are linked to BMP implementation
- BMAPs are adopted by DEP Secretarial Order, but include statements of commitment from stakeholders

The Progression of Stakeholder Involvement



Initial effort to
get all
stakeholders
involved

Sustaining
technical effort:

- to collect and synthesize data
- identify issues to be resolved

Increasing
involvement of a
broad range of
stakeholders:

- additional staff
- elected officials
- citizens
- agricultural producers

Stakeholder Involvement

- Source Identification
- Verification/Acquisition of Current Data
- Ongoing Water Quality Improvement Efforts
- Project Information
 - Ongoing
 - Future plans
- Meetings
 - Government officials
 - Information collection for projects
 - Citizen groups
 - Local ordinance information
 - Education

Alafia River Basin Management Action Plan



BMAP Process

- Review Existing Data
- Fecal Impairments
 - Source identification
 - Decision Matrix
 - Sufficiency of Effort evaluation
- Nutrient / DO Impairments
 - Point and nonpoint source confirmation
 - Load allocations/ reductions
 - Phased process

BMAP Approach (Fecals)

➤ Fecal Impairments

- Source identification
 - Walk the Water body
 - Source identification & corrective actions
- Decision Matrix
 - “Risk” based determination on exceedances
- Sufficiency of Effort
 - Not allocation based
 - Level the Playing Field
 - All Stakeholders implementing applicable BMPs

BMAP Approach (Nutrient/DO)

➤ DO Impairments

- Met by achieving TN & TP reductions
 - No immediate plan to develop DO only projects

➤ TN & TP Impairments

- Point and Nonpoint Sources
- Level the Playing Field
 - Nonpoint - All Stakeholders implementing applicable BMPs
 - Point - Permit limits adjusted to TMDL
- Determine Load Allocations/Reductions

Strategy for Progress

➤ Iterative Process

- Solutions not instantaneous
- Phased Implementation

➤ Document current status

➤ Acquire additional information as needed

➤ Conduct Monitoring

- BMP Implementation & Adherence
- Water Quality

➤ Evaluate Progress & Refine Goals

- Response to restoration efforts

BMAP Timeline



Future Meeting Topics

➤ July Meeting

- Fecal Coliform Toolkit discussion
- Walk the Waterbody introduction
- Decision Matrix Process

➤ August Meeting

- Data update
 - Nutrient load reduction strategies
 - Project discussion
- 

What Needs to be Done Next?

➤ Identifying Interested Parties

- Who else needs to be involved?
- How to engage them in an effective process?

➤ Understanding the Basin:

- What are the issues?
- What information exists?
- Is the current information sufficient to support analysis and decision-making?
- Additional Data Collection:
 - May focus on some stakeholders more than others
 - May require additional analysis

What Needs to be Done Next?

- Nutrient & FC WBIDs
 - Collect project information
 - Determine load allocations (as needed)
- BCI/AMEC will be contacting stakeholders to:
 - update projects in RA Plan
 - Collect information on new projects

Contact Information

- Basin Coordinator terry.hansen@dep.state.fl.us
- TMDL kevin.petrus@dep.state.fl.us
- TMDL Website link
<http://www.dep.state.fl.us/water/tmdl/index.htm>
- Presentations & other Information
http://publicfiles.dep.state.fl.us/DEAR/BMAP/Tampa_Bay_Tributaries/