

# Florida Department of Environmental Protection



Upper Wakulla River and Wakulla Springs BMAP

## Preliminary Sufficiency of Effort Evaluation

June 25, 2013  
Steve Cioccia, FDEP





# Presentation Overview

- Sufficiency of effort approach.
- Preliminary sufficiency of effort evaluation for wastewater sources in the Priority Focus Areas (PFAs).
- Preliminary sufficiency of effort evaluation for fertilizer, agriculture, stormwater, and other strategies in the PFAs.
- Plan forward for sufficiency of effort evaluation for onsite treatment and disposal systems (OSTDS) in the PFAs.
- Review of management strategies outside the PFAs.



# Sufficiency of Effort Approach



# Sufficiency of Effort

- The Florida Department of Environmental Protection asked the stakeholders within the PFAs to provide management strategies that reduce or prevent nitrate loading.
- Stakeholders in the PFAs:
  - City of Tallahassee.
  - Florida Department of Agriculture and Consumer Services (FDACS).
  - Florida Department of Environmental Protection.
  - Florida Department of Transportation (FDOT) District 3.
  - Leon County.
  - Wakulla County.
  - Wakulla Springs State Park.
  - Recommendations from BMAP Stakeholders.

# BMAP Basin and PFAs

## Upper Wakulla River BMAP Area

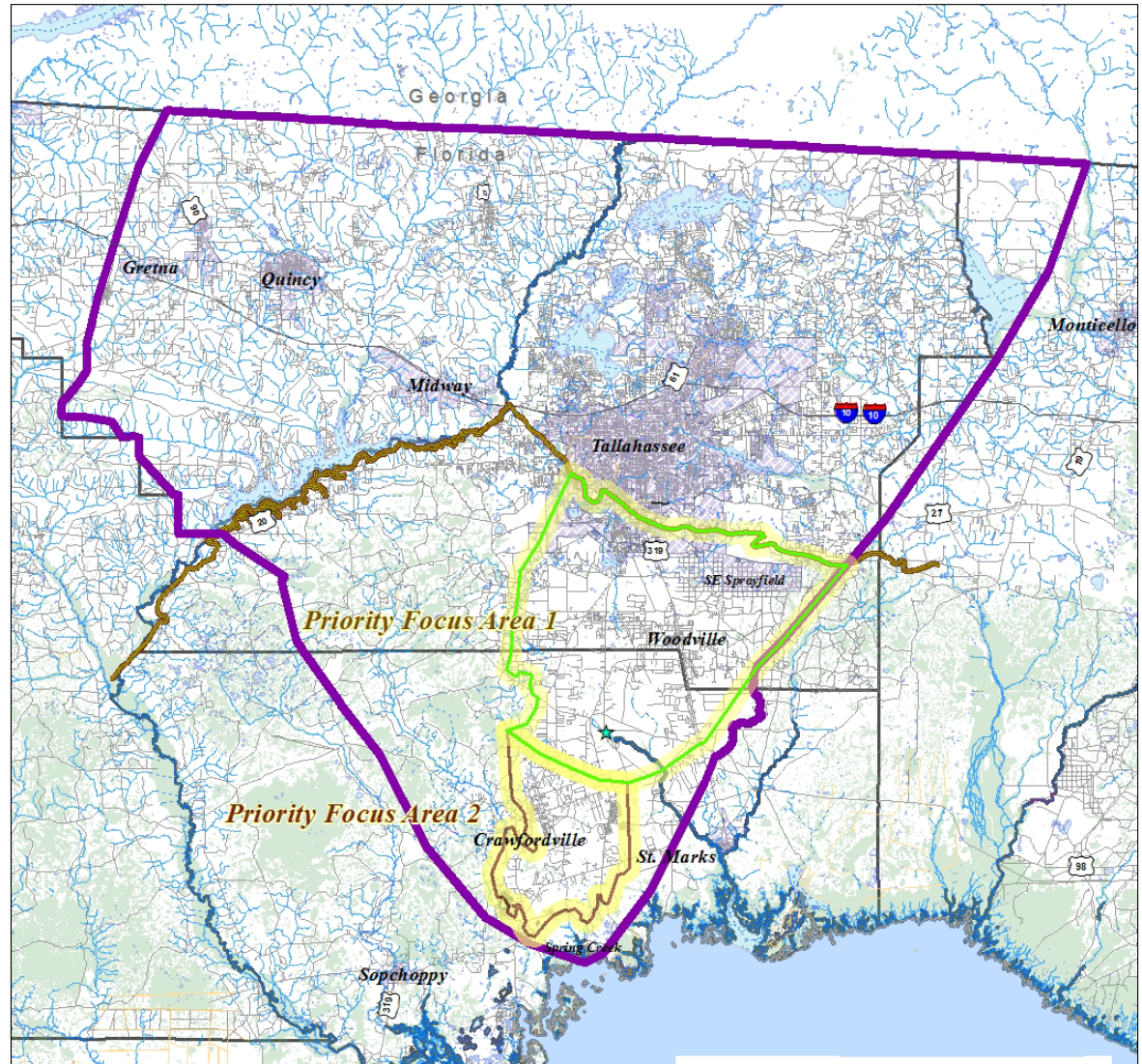
### Legend

- ★ Wakulla Spring
- PFA1
- PFA2
- UWR BMAP Boundary
- Cody\_Scarp\_Line
- TIGER 2010 Cities (Areas)
- Interstate
- Primary and US Highways
- Secondary, State and County Highways
- Local, Neighborhood, Rural or City Street
- Florida Counties with Shoreline (lines)

10

Miles

Created for Upper Wakulla Basin Management Action Plan  
Meeting 6/20/13 by Anita.Nash@dep.state.fl.us  
For questions on the BMAP please contact:  
Stephen.Cioccia@dep.state.fl.us  
This map is not to scale.



# BMAP PFAs

## Upper Wakulla River Priority Focus Areas

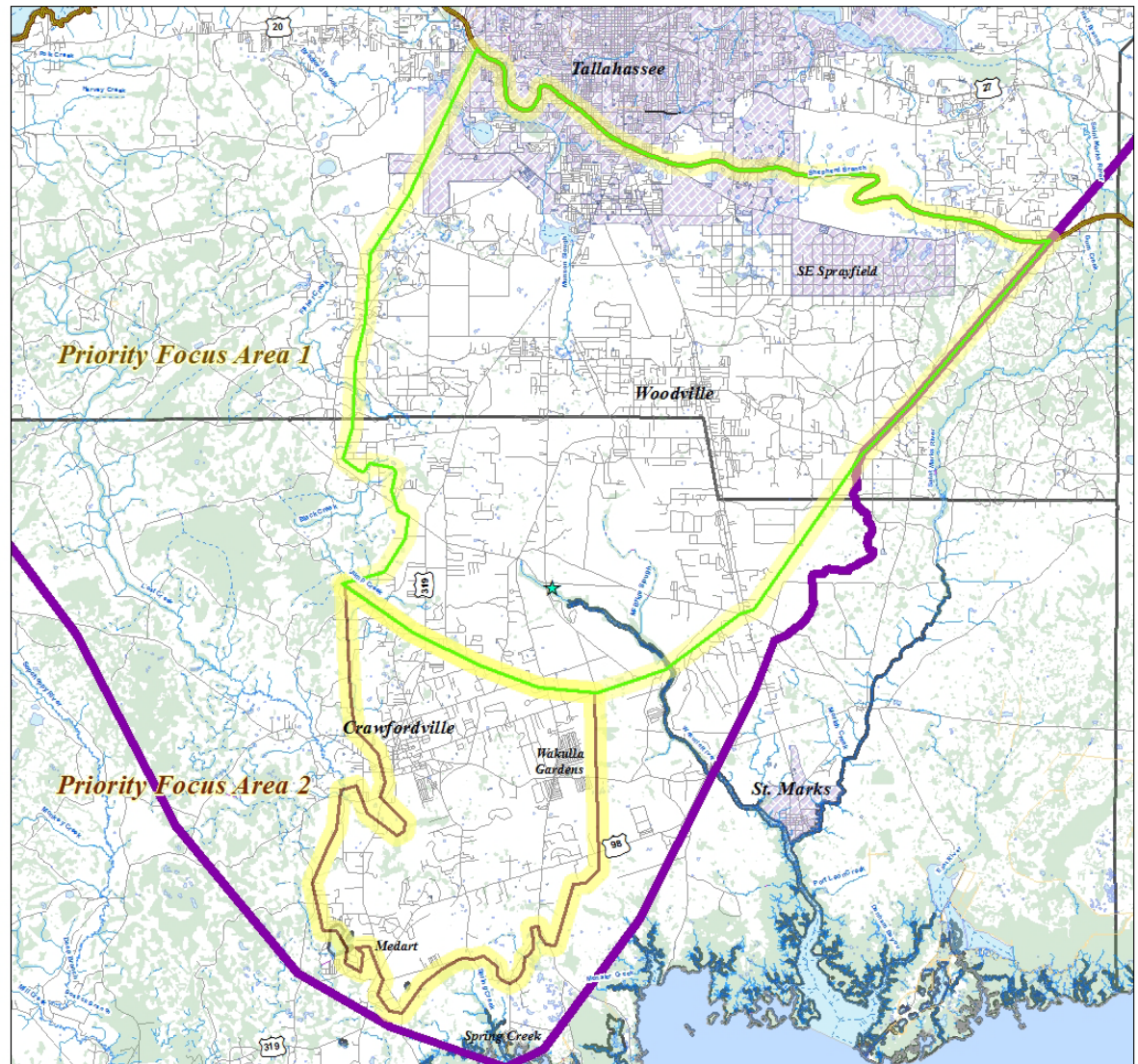
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# Sufficiency of Effort, continued

- Management strategies to address sources in the PFAs:
  - Wastewater.
  - Residential fertilizer.
  - Agricultural fertilizer and livestock.
  - Stormwater.
  - OSTDS.
- Other helpful strategies:
  - Protection measures.
  - Studies.
  - Source control.
  - Public education.



# Sufficiency of Effort, continued

- The Department compared the strategies received to each source in the PFAs.
- For the first 5-year iteration, a determination was made whether the source was sufficiently addressed by all responsible stakeholders' strategies.
- Additional information and strategies were requested to ensure sufficiency for this BMAP iteration.



# Preliminary Evaluation for Wastewater Sources in the PFAs



# Wastewater in the PFAs

- Responsible stakeholders:
  - City of Tallahassee.
  - Department of Environmental Protection.
  - Leon County.
  - Wakulla County.
- Types of strategies:
  - Upgrade wastewater treatment facilities (WWTFs) to higher treatment levels.
  - Remove/reduce biosolids application.
  - Sewer collection system inspections and repairs/upgrades.



# Wastewater Strategies

| Name                                                                   | Lead Entity         | Description                                                                                                                                                                                                                                                                                                                                                                                   | Cost          | Status                             | Estimated Reductions |
|------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------------------------|----------------------|
| Wastewater Treatment Facility Upgrade to AWT                           | City of Tallahassee | Upgrade to AWT to reduce the nitrate concentration by 75% at the spray field near Tram Road and improve the quality of reuse                                                                                                                                                                                                                                                                  | \$227,000,000 | Completed                          | 214,939 kg/yr TN     |
| Biosolids Application Elimination                                      | City of Tallahassee | Eliminated biosolids disposal in the springshed                                                                                                                                                                                                                                                                                                                                               | N/A           | Completed                          | 169,347 kg/yr TN     |
| Assessment and Rehabilitation of the Sewer Collection System           | City of Tallahassee | To date televised 380 miles of lines in the older systems (95% complete)                                                                                                                                                                                                                                                                                                                      | \$10,000,000  | Ongoing                            |                      |
| Comprehensive Plan Infrastructure Policy 1.3.6                         | Wakulla County      | Requires AWT for any WWTF or sprayfield located in the Wakulla Springs Special Planning Area                                                                                                                                                                                                                                                                                                  | N/A           | Ongoing                            | N/A                  |
| WWTF Public Access Reuse Option                                        | Wakulla County      | Proposed upgrades to WWTF for improved treatment and use of wastewater for irrigation. The current WWTF treatment requirements are for secondary treatment and the proposed expansion will provide advanced water treatment.                                                                                                                                                                  | \$1,000,000   | Advanced planning, seeking funding | N/A                  |
| Pumping Wastewater to COT                                              | Wakulla County      | Planned pumping of municipal wastewater from Wakulla County to COT Wastewater Reclamation Facility                                                                                                                                                                                                                                                                                            | \$8,054,000   | Advanced planning, seeking funding | N/A                  |
| Inspections of the Collection System                                   | Wakulla County      | Routine inspections and maintenance are done on the sewer systems throughout the county.                                                                                                                                                                                                                                                                                                      | Staff time    | Ongoing                            | N/A                  |
| Proposed Amendment to Code of Laws for Wastewater Treatment Facilities | Leon County         | Establish AWT nitrogen standard for new wastewater treatment systems for new development within the Primary Springs Protection Zone, managing systems not on central sewer, to the extent such systems will be regulated by FDEP under Florida Statutes and not regulated by the FDOH, to the extent that such proposed amendment is consistent with the laws of the state and rules of FDEP. | Staff time    | Planned                            | N/A                  |



# Package Plants

- The Department has reviewed permit information for the package plants in the PFAs.
- Significant facilities include:
  - Winco Utilities, Inc. (WWTF for Wakulla Correctional Facility), design flow = 0.495 MGD to spray field.
- Concern for significant effluent flow onto surface within area of high aquifer vulnerability and flow path to spring.
- The Department will pursue the need for aquifer protection within the permit with the Division of Water Resource Management- Domestic Waste Section.



# Wastewater Sufficiency

- The City of Tallahassee will be providing additional details about the assessment and rehabilitation of the sewer collection system.
- The Department will work with the significant package plants in the PFAs on aquifer protection strategies and improved effluent discharge options, where viable.
- These strategies sufficiently address the wastewater sources in the PFAs.



# Questions on the Wastewater Sufficiency Evaluation





# Preliminary Evaluation for Fertilizer, Agriculture, Stormwater, and Other Strategies in the PFAs



# Residential Fertilizer in the PFAs

- Responsible stakeholders:
  - City of Tallahassee.
  - FDOT District 3.
  - Leon County.
  - Wakulla County.
- Types of strategies:
  - Fertilizer management ordinance.
  - Fertilizer management education and outreach.
  - Fertilizer cessation.



# Residential Fertilizer Strategies

| Name                                                   | Lead Entity         | Description                                                                                                                              | Cost                     | Status                           |
|--------------------------------------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------|
| Fertilizer Use Ordinance                               | City of Tallahassee | Households that applied fertilizer (2007 vs. 2012) decreased 49%, level of nitrogen applied per household decreased 27%                  | N/A                      | Ongoing                          |
| Public Education for Stormwater, Fertilizer, Pet Waste | City of Tallahassee | Public education using various media resources                                                                                           | \$1,700,000 (since 2006) | Ongoing                          |
| Comprehensive Fertilizer Ordinance                     | Leon County         | Requires commercial applicators to follow a set of best management practices for the application of fertilizers.                         | Staff support            | Ongoing                          |
| Fertilizer Ordinance Modification                      | Leon County         | Consider modification to the fertilizer ordinance to reduce nitrogen application rates below the Cody Scarp, if allowable by Florida law | Staff support            | Proposed for Board Consideration |
| Education and Outreach                                 | Leon County         | Outreach through FYN, illicit discharge program, pamphlets, presentations, workshops, special events                                     |                          | Ongoing                          |
| Fertilizer Use Ordinance (2010-1)                      | Wakulla County      | Adopts Model Ordinance on Florida-Friendly Fertilizer Use on Urban Landscapes                                                            | N/A                      | Ongoing                          |
| Fertilizer Cessation                                   | FDOT District 3     | Eliminated fertilizer use for ongoing turf maintenance within the basin                                                                  | N/A                      | Ongoing                          |



# Residential Fertilizer Sufficiency

- Wakulla County will add fertilizer management education and outreach to its management strategies list.
- The Department is gathering information on fertilizer use on state agency properties to determine if these are potential sources.
- These strategies sufficiently address the residential fertilizer sources in the PFAs.



# Agriculture in the PFAs

- Responsible stakeholders:
  - City of Tallahassee.
  - FDACS.
- Types of strategies:
  - Enroll producers in appropriate best management practice (BMP) manuals.
  - Fertilizer cessation.



# Agriculture in PFA1

| Name                              | Lead Entity         | Description                                                             | Status    | Estimated Reductions |
|-----------------------------------|---------------------|-------------------------------------------------------------------------|-----------|----------------------|
| Sprayfield Fertilizer Application | City of Tallahassee | Eliminated fertilizer application on the sprayfield (in the springshed) | Completed | 61,500 kg/yr TN      |

| Land Use Code | Land Use Description                | Acres           | Enrolled Acres |
|---------------|-------------------------------------|-----------------|----------------|
| 2110          | Improved Pastures                   | 805.7           | 499.42         |
| 2120          | Unimproved Pastures                 | 13.7            |                |
| 2130          | Woodland Pastures                   | 95.31           |                |
| 3100          | Rangeland, Herbaceous (Dry Prairie) | 1,552.88        |                |
| 2140          | Row Crops                           | 1.8             | 0              |
| 2150          | Field Crops                         | 127.2           | 0              |
| 2153          | Hay Fields                          | 271.81          | 0              |
| 2400          | Nurseries and Vineyards             | 15.36           | 0              |
| 2410          | Tree Nurseries                      | 2.77            | 0              |
| 2430          | Ornamentals                         | 5.07            | 0              |
| 2510          | Horse Farms                         | 19.62           | 0              |
| 2610          | Fallow Crop Land                    | 323.26          | 0              |
| <b>Total</b>  | <b>Total</b>                        | <b>3,234.49</b> | <b>499.42</b>  |



# Agriculture in PFA2

| Land Use Code | Land Use Description                                | Acres           | Enrolled Acres |
|---------------|-----------------------------------------------------|-----------------|----------------|
| 2110          | Improved Pastures                                   | 634.58          | 809.43         |
| 2120          | Unimproved Pastures                                 | 51.48           |                |
| 2130          | Woodland Pastures                                   | 127.93          |                |
| 3100          | Rangeland, Herbaceous (Dry Prairie)                 | 480.78          | 809.43         |
| 2140          | Row Crops                                           | 31.85           | 0              |
| 2150          | Field Crops                                         | 127.63          | 0              |
| 2153          | Hay Fields                                          | 891.77          | 0              |
| 2230          | Other Groves (Pecan, Avocado, Coconut, Mango, etc.) | 19.24           | 0              |
| 2430          | Ornamentals                                         | 9.71            | 0              |
| 2510          | Horse Farms                                         | 17.67           | 0              |
| 2610          | Fallow Crop Land                                    | 149.4           | 0              |
| <b>Total</b>  | <b>Total</b>                                        | <b>2,542.06</b> | <b>809.43</b>  |



# Agriculture Sufficiency

- FDACS will enroll 80% of the PFAs agricultural acreage in BMPs during the first BMAP iteration.
- The Department determined that silviculture operations in the PFAs do not use fertilizer.
- These strategies sufficiently address the agriculture sources in the PFAs.



# Stormwater in the PFAs

- Responsible stakeholders:
  - City of Tallahassee.
  - FDOT District 3.
  - Leon County.
  - Wakulla County.
- Types of strategies:
  - Capital projects.
  - Stormwater system maintenance.
  - Florida Yards and Neighborhoods (FYN) Program.
  - Pet waste management, irrigation, and landscaping ordinances.
  - Public education and outreach.



# Stormwater Strategies

| Name                                              | Lead Entity                              | Description                                                                                                                                                                                                          | Cost                       | Status    |
|---------------------------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------|
| Pet Waste Ordinance                               | City of Tallahassee                      | 34% of dog owners began picking up after their pets.                                                                                                                                                                 | N/A                        | Ongoing   |
| Stormwater Treatment Projects                     | City of Tallahassee                      | 147 stormwater projects city-wide in the last 12 years, examples include Abbiegail Pond, Frenchtown Pond, Bond Pond, and FSU-RSF.                                                                                    | \$107,200,000              | Ongoing   |
| Enacted a Pet Waste Ordinance                     | Leon County                              | Education program to promote clean up of pet waste as a contributor to surface water pollution.                                                                                                                      | Staff support              | Completed |
| Land Development Regulations                      | Leon County                              | Adopted new minimum Countywide Environmental Regulations that exceed state stormwater standards.                                                                                                                     | Staff support              | Completed |
| Comprehensive Plan Amendments                     | Leon County/City of Tallahassee Planning | Reduced allowable development in the urban fringe down from up to 1 unit per acre to 1 unit per 3 acres. Transfer of density with no net increase in dwelling units as allowed on the Future Land Use Map permitted. | Significant staffing costs | Completed |
| Lake Henrietta Stormwater and wetland             | Leon County                              | 25 acre wet pond treating up to 1" of rainfall with an adjacent 85 acre wetland restoration for additional nutrient uptake.                                                                                          | \$9,700,000                | Completed |
| Lake Munson Erosion and Flood Protection Upgrades | Leon County                              | Removed 15 acre nutrient sediment dam in 2002, stabilized Munson slough to reduce erosion, repaired the dam for stabilization of lake hydroperiod.                                                                   | \$7,200,000                | Completed |
| Harbinwood Estates Ponds                          | Leon County                              | Constructed 2 stormwater retrofit ponds and planted/stabilized 1200 LF of channel.                                                                                                                                   | \$2,980,000                | Completed |
| Fuller Road Regional Facility                     | Leon County                              | Constructed 10 acre stormwater retrofit facility at I-10 and US 27.                                                                                                                                                  | \$800,000                  | Completed |
| Low Impact Development                            | Leon County                              | Develop low impact development incentives to reduce nitrogen loading to surface waters and groundwater.                                                                                                              | Staff time                 | Proposed  |



# Stormwater Strategies, continued

| Name                                                                                                        | Lead Entity     | Description                                                                                                                                                                                                                        | Cost         | Status   |
|-------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|
| Street Sweeping                                                                                             | Leon County     | Contract for 762 miles of street sweeping annually; removes 51.3 kg/yr of TN.                                                                                                                                                      | \$ 67,500/yr | Ongoing  |
| FYN Program                                                                                                 | Leon County     | Participation in the FYN program through the Cooperative Extension.                                                                                                                                                                | \$55,000/yr  | Ongoing  |
| Pet Waste Ordinance                                                                                         | Leon County     | Pet Waste Ordinance.                                                                                                                                                                                                               | N/A          | Ongoing  |
| Irrigation Ordinance                                                                                        | Leon County     | Irrigation Ordinance.                                                                                                                                                                                                              | N/A          | Ongoing  |
| Landscaping Ordinance                                                                                       | Leon County     | Landscaping Ordinance.                                                                                                                                                                                                             | N/A          | Ongoing  |
| Stormwater System Maintenance                                                                               | Leon County     | Stormwater system maintenance in compliance with the MS4 permit.                                                                                                                                                                   | N/A          | Ongoing  |
| Education and Outreach                                                                                      | Leon County     | Outreach through FYN, illicit discharge program, pamphlets, presentations, workshops, special events.                                                                                                                              | N/A          | Ongoing  |
| Comprehensive Plan<br>Future Land Use<br>Policies 1.2.10,<br>1.2.10.2, and 1.2.10.3 -<br>Special Area Plans | Wakulla County  | Establishes special area plans for three projects within the Wakulla Springs Basin. Requires nitrate loading analyses for development. Establish standards for stormwater, karst feature protections, landscaping, and open space. | N/A          | Ongoing  |
| Street Sweeping                                                                                             | FDOT District 3 | Contract for street sweeping of FDOT curb and gutter roads within the urbanized areas of Leon County and City of Tallahassee.                                                                                                      | N/A          | Ongoing  |
| Innovative Nitrogen Removal Technologies                                                                    | FDOT District 3 | Investigating the use of innovative nitrogen removal technologies as part of the present work program within the PFAs.                                                                                                             | N/A          | Proposed |



# Stormwater Sufficiency

- The City of Tallahassee is providing more information about its stormwater projects and ordinances.
- Leon County is providing more information about its ordinances.
- These strategies sufficiently address the stormwater sources in the PFAs.



# Other Strategies

- Participating stakeholders:
  - City of Tallahassee.
  - FDOT District 3.
  - Leon County.
  - Wakulla County.
  - Wakulla Springs State Park.
- Types of strategies:
  - Studies.
  - Aquifer protection measures.
  - Surface water protection measures.
  - Litter control.
  - Public education.



# Other Strategies, continued

| Name                                                                                        | Lead Entity                                                     | Status    |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------|
| Aquifer Vulnerability Assessment (LAVA)                                                     | Leon County                                                     | Completed |
| Lombardo Report                                                                             | Leon County, City of Tallahassee, Wakulla County                | Completed |
| Water Quality Sampling                                                                      | Leon County                                                     | Ongoing   |
| Preparation of Annual Water Quality Report                                                  | Leon County                                                     | Ongoing   |
| Woodville Recharge Aquifer Protection Study                                                 | Leon County                                                     | Completed |
| Annual Wakulla Springs Status Report                                                        | Leon County                                                     | Ongoing   |
| Wakulla County Aquifer Vulnerability Assessment                                             | Wakulla County                                                  | Completed |
| Comprehensive Plan Amendments                                                               | City of Tallahassee, Leon County                                | Completed |
| Primary Springs Protection Zone (PSPZ) Ordinance                                            | City of Tallahassee, Leon County                                | Ongoing   |
| Fred George Basin Acquisition                                                               | Blueprint for Leon County acquisition. Leon County for wetland. | Completed |
| Fred George Basin Wetland Rehydration                                                       | Leon County                                                     | Ongoing   |
| Eight Mile Pond                                                                             | Leon County                                                     | Completed |
| Aquifer Wellhead Protection Ordinance                                                       | Leon County                                                     | Completed |
| Wakulla Springs Protection Ordinance                                                        | Wakulla County                                                  | Ongoing   |
| Comprehensive Plan Future Land Use Policy 1.2.9.1 - Northeast Wakulla Sustainable Community | Wakulla County                                                  | Ongoing   |
| Ordinance 2006-58                                                                           | Wakulla County                                                  | Ongoing   |
| Comprehensive Plan Conservation Objective 12.0                                              | Wakulla County                                                  | Ongoing   |



# Other Strategies, continued

| Name                                                  | Lead Entity                | Status  |
|-------------------------------------------------------|----------------------------|---------|
| Comprehensive Plan Conservation Policy 2.3            | Wakulla County             | Ongoing |
| Comprehensive Plan Conservation Policy 12.1           | Wakulla County             | Ongoing |
| Comprehensive Plan Conservation Policy 12.2           | Wakulla County             | Ongoing |
| Comprehensive Plan Conservation Policy 13.1           | Wakulla County             | Ongoing |
| Comprehensive Plan Future Land Use Objective 13       | Wakulla County             | Ongoing |
| Comprehensive Plan Infrastructure Objective 2.5       | Wakulla County             | Ongoing |
| Groundwater Extraction Ordinance                      | Wakulla County             | Ongoing |
| Wetlands Protection. Code of Ordinances Chapter 32    | Wakulla County             | Ongoing |
| Litter Control Program                                | Leon County                | Ongoing |
| Adopt-A-Road Program                                  | Leon County                | Ongoing |
| Avoidance of Mapped Karst Caves                       | FDOT District 3            | Ongoing |
| Litter Regulations. Code of Ordinances Section 27.049 | Wakulla County             | Ongoing |
| Learning in Florida's Environment (LIFE)              | Wakulla Springs State Park | Ongoing |
| Project Learning Tree                                 | Wakulla Springs State Park | Ongoing |
| Green Guide Class                                     | Wakulla Springs State Park | Ongoing |
| Wakulla Wildlife Festival                             | Wakulla Springs State Park | Ongoing |



# Questions on the Fertilizer, Agriculture, and Stormwater Sufficiency Evaluation





# Plan Forward for the Evaluation for OSTDS in the PFAs



# OSTDS in the PFAs

- Responsible stakeholders:
  - City of Tallahassee.
  - Leon County.
  - Wakulla County.
- Types of strategies:
  - Ordinances.
  - OSTDS inspections.
  - Sewering.
  - Septic tank connection to sewer.
  - Use of higher efficiency treatment systems.
  - Public education and outreach.



# OSTDS Strategies

| Name                                                | Lead Entity                   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Cost         | Start Date | Completion Date | Status   | Estimated Reductions |
|-----------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------|-----------------|----------|----------------------|
| Sewering within the Primary Springs Protection Zone | Leon County                   | Leon County commits to this sewer system project under 2 conditions precedent, those being: (1) this project is on the final proposed project list for the 1 cent infrastructure sales tax extension; and (2) the successful passage of the necessary referendum to approve the proposed 1 cent infrastructure sales tax extension. *                                                                                                                                                                                                | \$57,900,000 | 2020*      | 2025            | Proposed | 15,187 kg/yr TN      |
| Septic Tank Inventory                               | Leon County Health Department | Budget Approval-Preparation of a GIS inventory of all the septic systems in Leon County.                                                                                                                                                                                                                                                                                                                                                                                                                                             | \$50,000     | 2013       | 2014            | Ongoing  | N/A                  |
| Septic Tank Repairs                                 | Leon County Health Department | Proposed revision to the septic tank ordinance to require repairs to have a minimum of 24-inch separation between drain field and SHWT.                                                                                                                                                                                                                                                                                                                                                                                              | Staff time   | 2013       | 2014            | Ongoing  | N/A                  |
| Septic Tank Nitrogen Removal Requirements           | Leon County Health Department | *Pending the results of DOH evaluation of passive systems, County shall: 1) Review the results of this Florida study. 2) Identify PBTS regulated under Section 381.0065 Florida Statutes, that are approved by the State of Florida for permitting and appropriate for use within Leon County. 3) Evaluate factors such as cost and operational feasibility of such PBTS. 4) Develop a proposed amendment to the Code of Laws requiring the use of appropriate PBTS for new construction within the Primary Springs Protection Zone. | Staff time   | 2015*      | 2017            | Ongoing  | N/A                  |
| Septic Tank Education                               | Leon County                   | Add educational kiosks at the Woodville Community Center to explain how septic systems work.                                                                                                                                                                                                                                                                                                                                                                                                                                         | \$2,500      | 2014       | 2015            | Proposed | N/A                  |



# OSTDS Strategies, continued

| Name                                           | Lead Entity    | Description                                                                                                                                                                                                                                                                                          | Cost         | Start Date | Completion Date | Status                                                    |
|------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------|-----------------|-----------------------------------------------------------|
| Public Education on OSTDS                      | Wakulla County | Provide citizens and officials with the best available information for decision making regarding the use of OSTDS and decentralized wastewater systems to reduce nutrients in ground water going to the springs.                                                                                     | N/A          | 2007       | 2007            | Completed                                                 |
| Comprehensive Plan Infrastructure Policy 1.3.7 | Wakulla County | Requires nitrogen reducing septic systems on parcels smaller than five acres in the Wakulla Springs Special Planning Area; within 150 feet of surface water, swallet, or other karst feature, or within 300 feet of a 1st or 2nd magnitude spring; and on all parcels less than 0.229 acres in size. | N/A          | 2012       | Ongoing         | Ongoing                                                   |
| Historical Neighborhood Sewer and Stormwater   | Wakulla County | Planned sewer and stormwater for Greiner's Addition, Magnolia Gardens, and Wakulla Gardens. Between the three subdivisions there are approximately 1,330 existing septic systems and the county estimates there are potentially 2,251 additional systems that could be installed.                    | \$36,180,300 | 10/15/2012 | N/A             | Advanced planning. Seeking funding. Possible TIF project. |
| Wakulla Springs Watershed                      | Wakulla County | Inspection and repair of old, damaged, and failing systems in the Wakulla Springs watershed area.                                                                                                                                                                                                    | \$1,380,300  | 10/15/2012 | N/A             | Advanced planning. Seeking funding                        |
| Crawfordville TIF                              | Wakulla County | Tax Increment Financing District for Crawfordville Area to fund improvements including basic infrastructure.                                                                                                                                                                                         | N/A          | 11/5/2012  | Ongoing         | Ongoing                                                   |



# Plan Forward for OSTDS

- The OSTDS evaluation is not yet complete (has not been designated as “sufficient”).
- With the reduction in loading from the wastewater sources, OSTDS are the largest source in the PFAs.
- BMAPs must address future growth in pollutant loading.
- Recommendations to address OSTDS were provided by several stakeholders.
- Addressing OSTDS loading is a priority for both the stakeholders and Department to improve water quality.



# Plan Forward for OSTDS, continued

- The Department will be talking with the responsible stakeholders about an initiative to further address OSTDS loading.
- The details of this initiative will be presented at the August BMAP meeting, after discussions with the responsible stakeholders.
- The purpose of this initiative is to identify solutions and funding to address OSTDS loading during the first BMAP iteration.



# Questions on the OSTDS Plan Forward

