# Restoring Wakulla Springs – Essential Next Steps



Wakulla Springs is one of the largest freshwater springs in the world. It was once clear and blue with diverse aquatic vegetation and animal life.

After decades of inadequately-managed domestic wastewater (sewage), our aquifer and Wakulla Springs are polluted - and in need of our help.

1960s – Lots of diverse vegetation

2013 – Algal mats everywhere

# Mitigating Septic Tank Pollution of Wakulla Springs

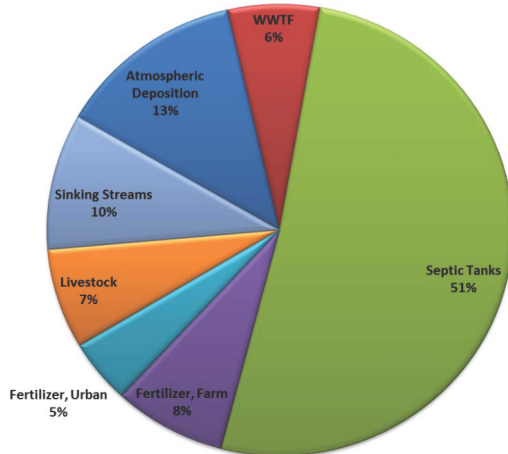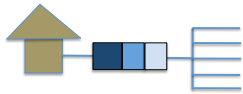## Nitrogen Source Loading Estimates for Wakulla Springs



Figure 10: Relative nitrogen loads to the UFA contributed from the nitrogen source category evaluated for the Wakulla Spring and River BMAP area

## Layouts of Wastewater Treatment Facilities

Onsite system, all components on single parcel

Cluster systems serve many parcels with shared components

Centralized system with spray field
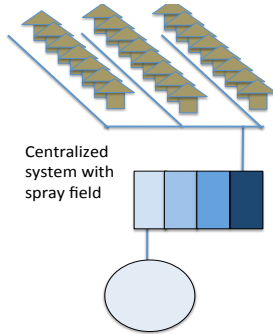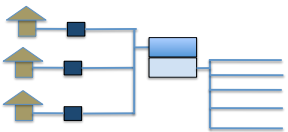


Many configurations and effective technologies are available which reduce nitrates in wastewater

Wakulla Springs and the Upper Wakulla River are "impaired waterbodies" in which ecosystems have been degraded and native aquatic plants replaced by dense mats of algae.  In 2008, the Florida Department of Environmental Protection (FDEP) determined that excess nitrates from wastewater in the Wakulla Springshed were the culprit.

The City of Tallahassee completed its Sewage Treatment Plant upgrade in 2014 which decreased nitrates from city sewage by 75%.  **Now the primary source of excess nitrates (51%) is from On Site Treatment and Disposal Systems (OSTDS), also known as septic tanks.**

By July 2018, FDEP and our local governments must adopt an OSTDS remediation plan to reduce nitrates in Wakulla Springs.

The City-County Master Water and Sewer Plan provides **only one remedy** for wastewater pollution - central sewer system extension.  It ignores the variety of sewage treatment engineering options and financing alternatives set out in the OSTDS Management Options Report prepared for our governments (Lombardo 2011). The first septic tank remediation project - the Woodville Sewer Extension - which was recently approved - is a two-decade old project from the Master Water and Sewer Plan.  It eats up much of the total funding available for our huge remediation problem.   Since Government has limited dollars for wastewater projects, **more thought should be given to a comprehensive rather than a piecemeal approach and must be based on the array of engineering and management options approved in Florida and used successfully elsewhere.**

# Essential Next Steps
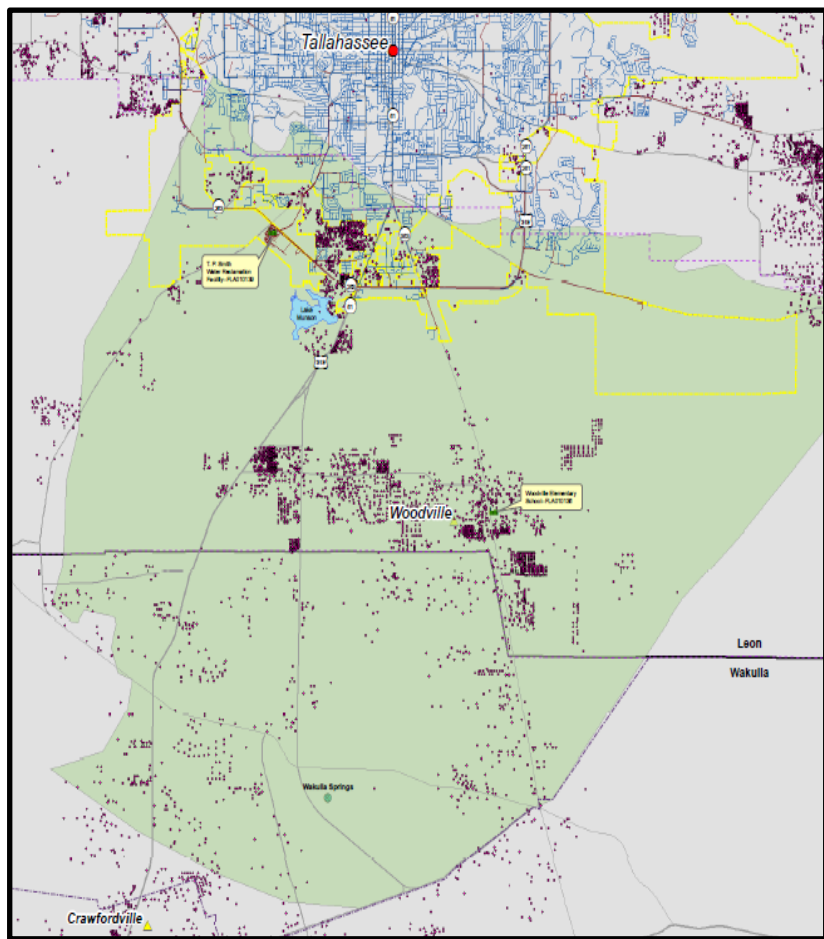


Location of OSTDS (septic tanks) within the Priority Focus Area (green) in Leon and Wakulla Counties that are the greatest source of nitrate pollution to the aquifer and springs

- By July 2017, the City and County should **adopt land development regulations** which require new development and redevelopment within the Primary Spring Protection Zone (PSPZ) to meet higher standards for reducing nitrates from OSTDS (septic tanks), as required by Conservation Element policy 4.2.5 in the Comprehensive Plan.

- In 2017, the City and County should **advance fund Sales Tax Project #26,** the Alternatives to Sewer Study. This will create a two-part wastewater management and facilities plan for unincorporated Leon County which sustainably supports existing and future development while minimizing impacts on Wakulla Spring and assuring effective and efficient use of public and private dollars.

  1. **Wastewater Facilities Plan** - Identify treatment technology options and their appropriate locations, initially within the PSPZ, that are appropriate to site conditions, existing development, and future land use policies, and that support infill development. These options include upgraded OSTDS, cluster systems of varying size and complexity, and connection to central sewer.

  2. **Wastewater Management & Financing Plan** - Develop options for an enhanced administrative structure that will implement the Wastewater Facilities Plan and provide financing for new and upgraded sewer, cluster, and on-site systems; assure successful operation and maintenance of all facilities; provide assistance to existing home and business owners; and support and expand local onsite wastewater treatment businesses.

# Create an Equitable Solution

Every one in Leon County has one source of drinking water, the aquifer. Every one needs clean drinking water and has an interest in keeping pollutants out of the aquifer. Wakulla Springs is the "canary in the coal mine" of our aquifer. Its ecological degradation is a signal that the aquifer is becoming polluted. We now know the greatest source of pollution to the aquifer is from septic tanks. There are many engineering solutions that can reduce the pollution from septic tanks. All of them benefit everyone who drinks from the aquifer. All of them can provide value to existing and future development. All of them cost money.

We need a **sustainable, equitable and comprehensive plan** that:
* Finances the cost of reducing septic tank pollution for existing and future development,
* Recognizes the cost already incurred by sewer utility customers,
* Acknowledges the financial limitations of individual households and businesses,
* Supports and expands the role of local OSTDS professionals, and
* Identifies wastewater treatment engineering solutions that support existing and future development without encouraging inappropriate density increases.

The current and ongoing cost of reducing septic tank pollution must be fairly evaluated – or else we will continue to have poorly managed wastewater treatment, Wakulla Springs and our aquifer will continue to degrade.

Sales Tax Project #26 provides a comprehensive analysis of facilities, financing, and management of septic tanks. We should undertake this task NOW and create a sustainable, environmentally sound and financially equitable solution.

# Supporting Organizations

* Wakulla Springs Alliance
* Build Great Community
* Sustainable Tallahassee
* Leon County Soil and Water Conservation District
* Apalachee Audubon Society
* Wakulla County Soil and Water Conservation District
* Members of the Leon County Sales Tax Committee: Kim Williams, Todd Sperry, Bill Peebles, Lamar Taylor
* Keep It Rural
* Sierra Club Big Bend Group