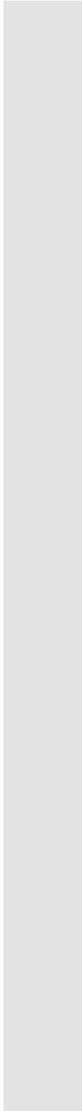


Distributed Wastewater Treatment Systems Giving the Septic Industry Another Option

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Association



All materials in this presentation represent the speaker's opinions and do not reflect the opinions of NOWRA.





**Uses proven OSTDS
Technologies for treatment &
dispersal**



**Requires specific levels of
advanced treatment**



**Centrally operated and
managed - continuously**
Cloud based monitoring

Key Elements

Sound familiar?



EPA Guidelines for Management of Onsite/Decentralized Wastewater Systems

Why are the Guidelines needed?

The performance of onsite and other decentralized wastewater systems is a national issue of great concern. Nationally, states have reported in their 1998 lists of polluted waters that designated uses are not being met for 5,281 waterbodies because of pathogens and that 4,773 waterbodies are impaired by nutrients. Onsite systems are often significant contributors of pathogens and nutrients. Onsite/decentralized wastewater treatment systems serve approximately 25 percent of the U.S. population and 40 percent of new development. The U.S. Bureau of the Census has indicated that at least 10 percent of onsite systems have stopped working, and some communities report failure rates as high as 70 percent. State agencies report that these failing systems are the third most common source of groundwater contamination.



In the 1997 *Response to Congress on Use of Decentralized Wastewater Treatment Systems*, EPA determined that with the technology now available, adequately managed decentralized systems can protect public health and the environment as well as provide long-term solutions for the nation's wastewater needs. The report also cited five major barriers to increasing the use of decentralized wastewater treatment systems, including the lack of adequate management (i.e., site selection, design, installation, and operation and maintenance).

What are onsite/decentralized systems?

Onsite/decentralized wastewater treatment systems, commonly called "septic systems," treat sewage from homes and businesses that are not connected to a centralized wastewater treatment plant. Decentralized treatment systems include individual onsite septic systems, cluster systems, and alternative wastewater treatment technologies like constructed wetlands, recirculating sand filters, mound systems, and ozone disinfection systems.

What are the Guidelines?

The *Guidelines for Management of Onsite/Decentralized Wastewater Systems* (Guidelines) are a set of recommended practices needed to raise the level of performance of onsite/decentralized wastewater systems through improved management programs. Five separate model programs are presented as a progressive series. Management requirements of wastewater systems become more rigorous as the system technologies become more complex or as the sensitivity of the environment increases. Each of the model programs share the common goal of protecting human health and the environment. Each model approach includes program elements and program activities needed to achieve the management objectives. The Guidelines address the sensitivity of the environment in the community and the complexity of the system used. The five model management programs are

1. System inventory and awareness of maintenance needs
2. Management through maintenance contracts
3. Management through operating permits
4. Utility operation and maintenance
5. Utility ownership and management

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More specifically...

So why all
the fuss now?

Communities still see OSTDS as “2nd class”

OSTDS are NOT equally funded

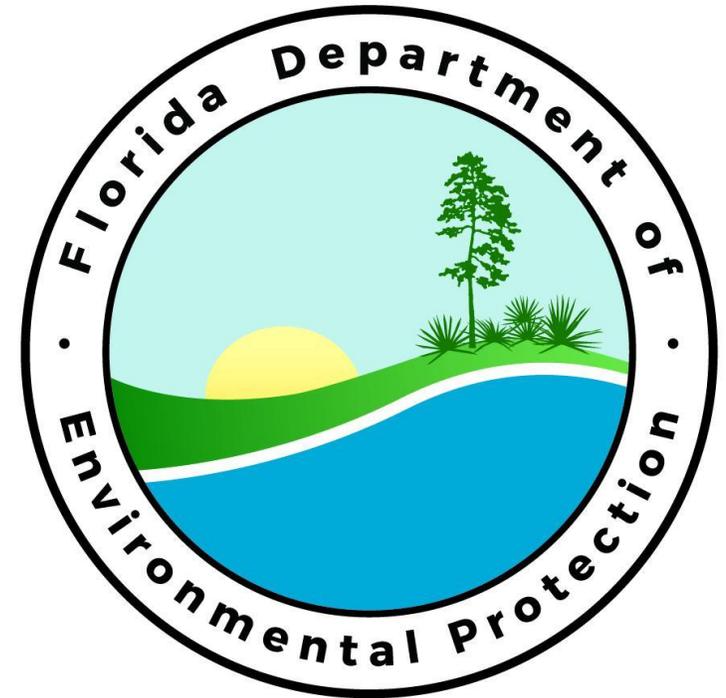
In Florida... This gives us an option to overcome both discussion points

Florida's Regulatory Definition

A Distributed Wastewater Treatment System (DWTS) is a category of "Domestic Wastewater Treatment Facility," consisting of multiple individual Distributed Wastewater Treatment Units (DWTU), each of which are "Treatment Works" that treat domestic waste to secondary treatment standards, and all of which are

- (1) commonly owned,
- (2) wirelessly networked together and individually (remotely) controllable (e.g. though a SCADA system),
- (3) operated and maintained by licensed wastewater operators, and
- (4) subject to the standard inspection, monitoring and reporting requirements in Chapter 62-600, F.A.C.

(2020 FDEP working definition)



Comparison between OSTDS & DWTS Permitting

OSTDS

- One CHD permits covers one property
- Treatment standards are determined by “allowances” needed
- Sampling required based off “allowances” given

DWTS

- One DWTS permit covers the entire utility service area
- “Advanced Secondary Treatment (or equivalent) performance standards
- Monthly sampling and lab testing for 10% of deployed units



Comparison between OSTDS & DWTS Funding

OSTDS

- Currently only eligible for “Springs” funding in 9 counties.
 - Repairs only

DWTS

- Treated like “Centralized Sewer”
 - Various pockets of funding available depending on location/needs of community.





Leading the REVOLUTION in
Wastewater Treatment

A special thanks for the
following FL example of a
DWTS project.



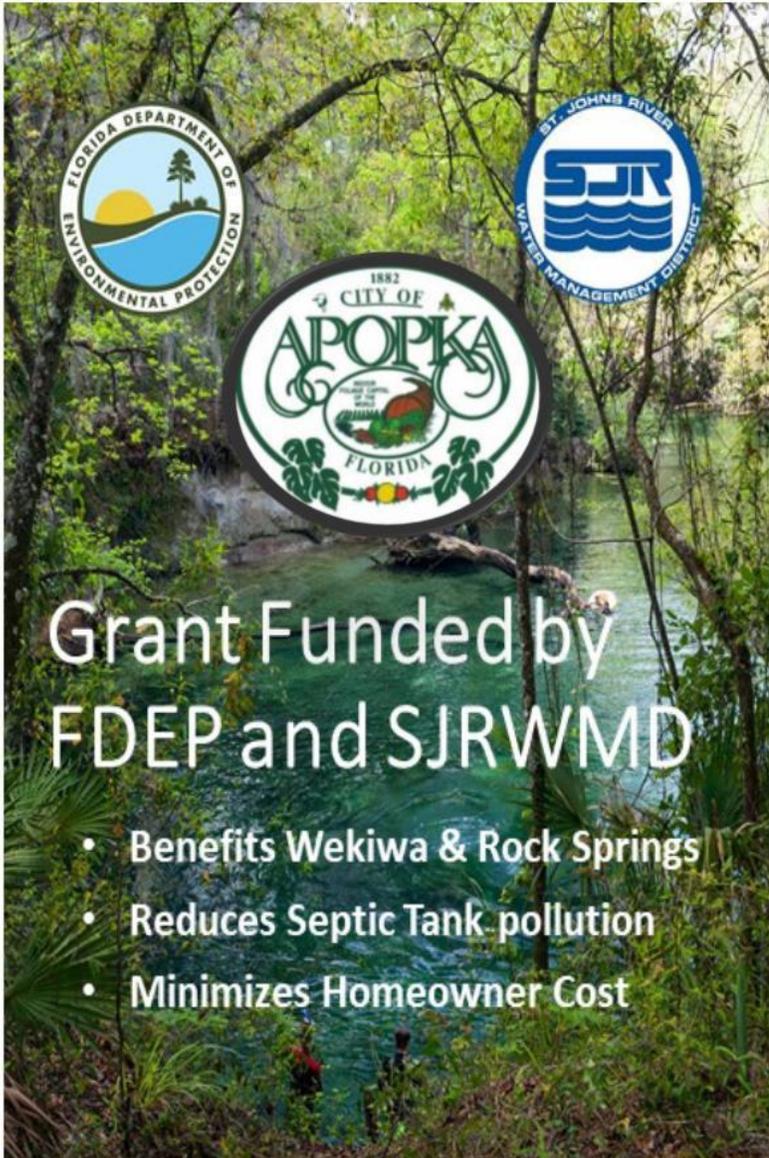
CASE STUDY: SEPTIC TO DISTRIBUTED SEWER PROGRAM, CITY OF APOPKA, FL (NOV 2020)

GOVERNMENT SUPPORT:

- ❑ \$2M in total grant funding available (approx. 175 installations)
- ❑ Service provided by the City of Apopka
- ❑ Treatment units installed and maintained by the City Utility Department
- ❑ Only feasible option to provide sewer services to the community

PUBLIC SUPPORT:

- ❑ Incentive-based, “First-come, First-served” program
- ❑ Community engaged through flyer campaign, dedicated City webpage
- ❑ Town Hall meeting, positive media coverage
- ❑ 30 Homeowners signed up in first 30 days
- ❑ First installations in March 2021



Site Inspection

Electrical
Connections

Drainfield
Repair
(Optional)

Abandon
Septic Tank

Install DWTU

Commissioning

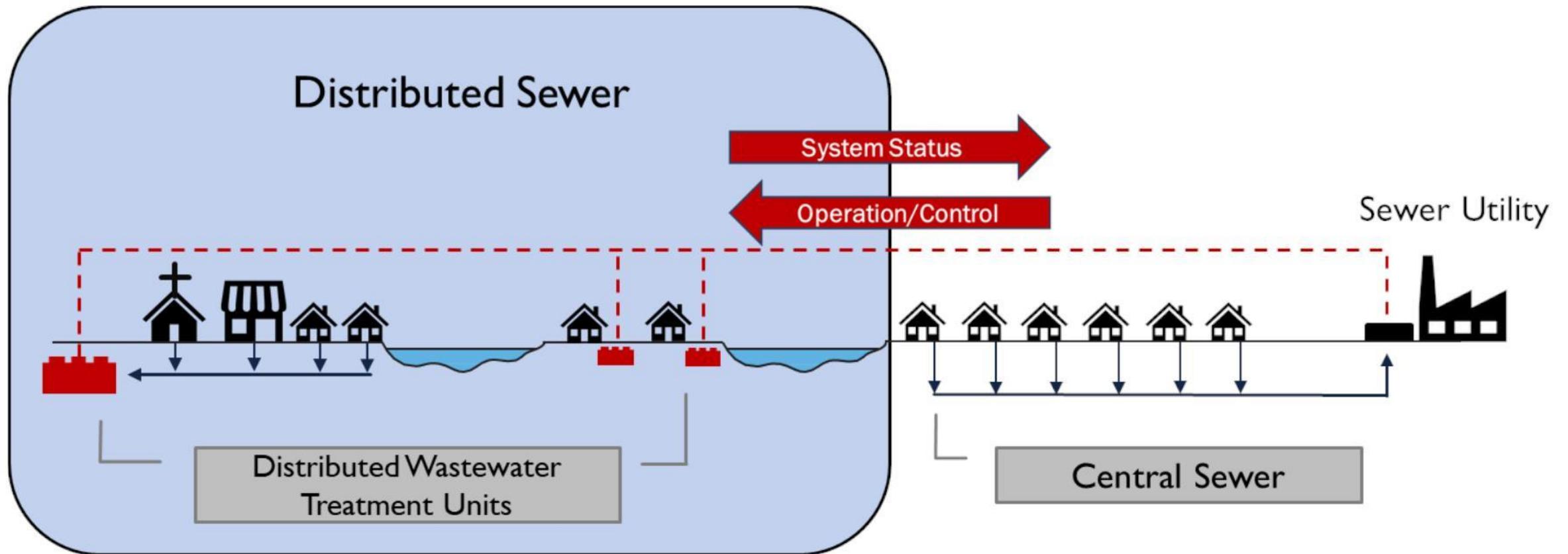
Site
Restoration
(Sod)

Ongoing
Service by
Utility

Regulatory
Oversight by
FDEP

SEPTICTO DISTRIBUTED SEWER CONVERSION PROCESS

DISTRIBUTED SEWER DECENTRALIZED TREATMENT WITH CENTRALIZED CONTROL



What's next...

more manufacturers must take the next steps to make this “mainstream”.

Why & How ??

This takes away the argument of no development of new or upgrading of existing systems utilizing OSTDS.

IT'S FUNDED!!!!!!!!!!!!!!!!!!!!

Remember the 3 elements...

- **Uses proven OSTDS Technologies for treatment & dispersal**
 - WE HAVE MORE THAN 1 TECHNOLOGY THAT MEETS THIS DEFINITION!!!
- **Requires specific levels of advanced treatment**
 - MOST OF THE TECHNOLOGIES WE HAVE NOW MEET/EXCEED THE BASIC REQUIREMENTS OF ADVANCED TREATMENT
- **Centrally operated and managed – continuously**
 - WE HAVE MORE THAN 1 TECHNOLOGY THAT MEETS THIS DEFINITION

WE CAN DO THIS TOGETHER...IT'S TIME TO CHANGE THE NARRATIVE!!!

The background features a repeating pattern of question marks inside speech bubbles, rendered in a dark teal color against a slightly lighter teal background. The speech bubbles are arranged in a staggered, overlapping grid. On the far left, there is a vertical cyan bar, and on the far right, there is a vertical light blue bar.

QUESTIONS/COMMENTS?

THANKS FOR ATTENDING &
PARTICIPATING