

Septic Systems

Pine Island Civic Association

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Agenda

FDEP Regulatory Requirements

LCU Wastewater Service Area

Collection System and Plant Improvements to Connect Septic Systems

Countywide Wastewater Management Plan

Funding Sources– MSTBU Created by Supportive Neighborhoods

Septic System Contribution to Water Quality

Lee County Natural Resources Department Water Quality Study

Preliminary results found water quality indicators that are linked to wastewater

How are aged Septic Systems affecting surface water?

- Four feet of separation from the ground surface to the water table
- Age of Septic Systems
- Proximity to Surface Water Bodies
- Conventional septic systems do not treat nutrients
- Proper maintenance and pump out of solids

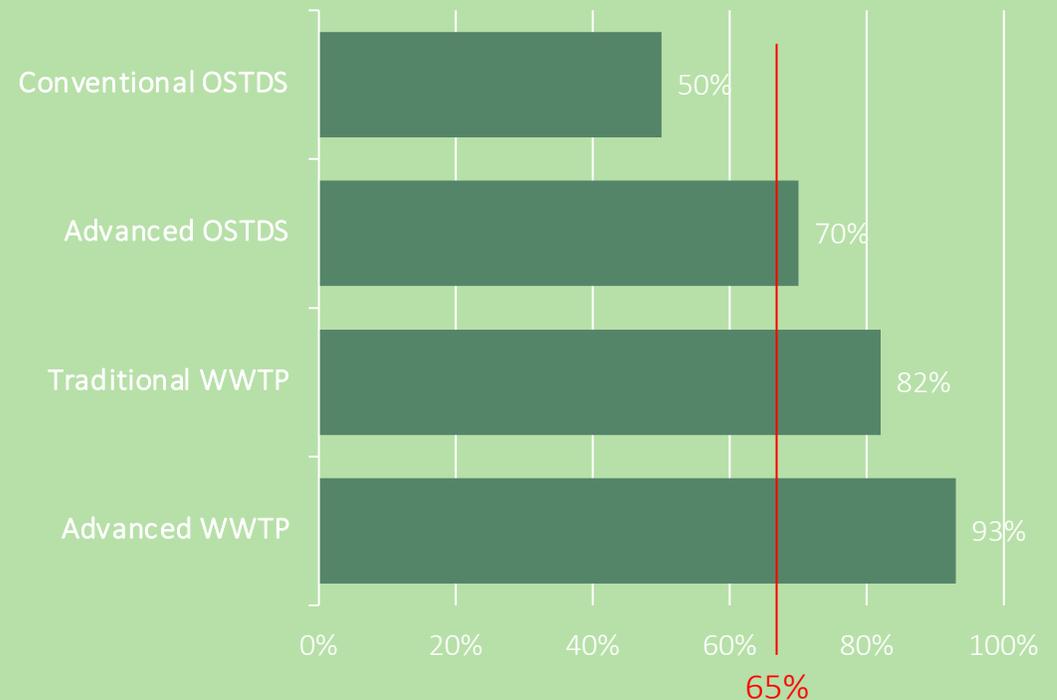
FDEP Regulatory Requirements

Advanced Treatment On-Site Treatment and Disposal Systems (OSTDS)

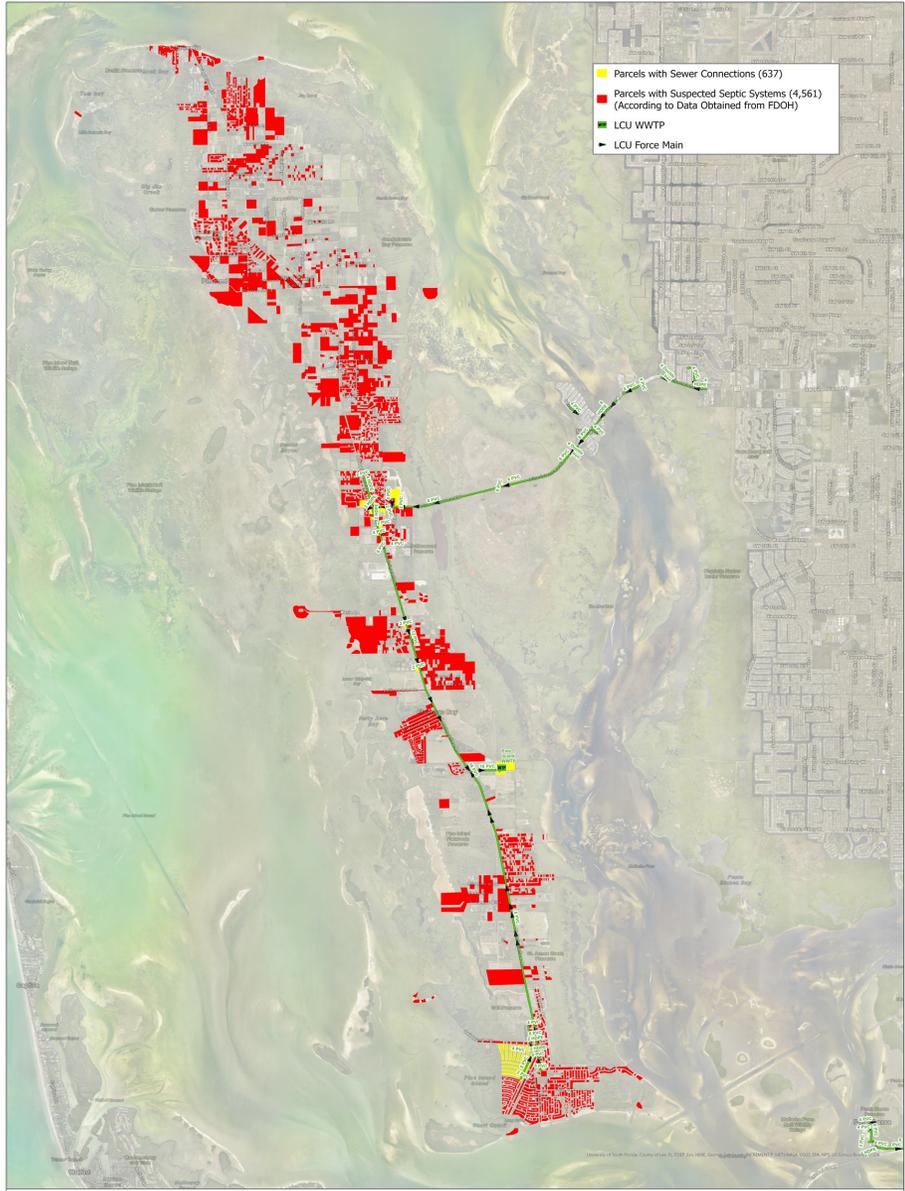
FDEP lists certified advanced treatment OSTDS alternatives that provide **greater than 65% nutrient removal** from the wastewater per National Sanitation Foundation (NSF) Standard 40, 245, and 350

FDEP gives the highest priority to connecting septic systems to central sewers

Total Nitrogen Reduction by Treatment System



Source: [NSF Standard 245](#) (Nitrogen-Reducing) Certified Aerobic Treatment Units (ATUs) in Florida (Rule 64E-6.012, Florida Administrative Code)

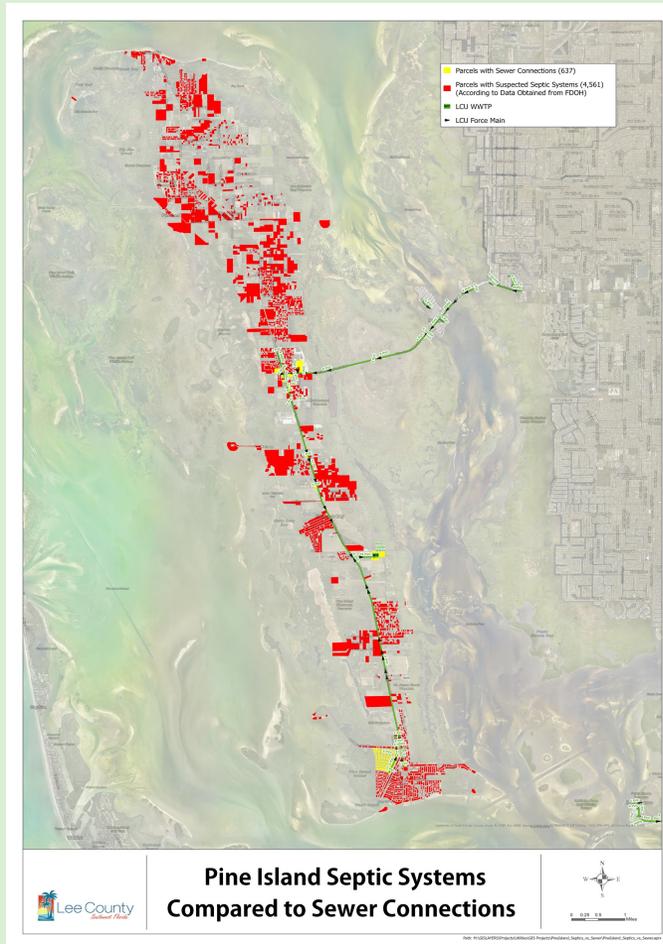


Pine Island Septic Systems Compared to Sewer Connections



0 0.25 0.5 1 Miles

LCU Wastewater Service Area



Customers:

- 800 connections to central sewer
- 5,000 estimated septic systems
- 9 private package plants

Pine Island WRF:

- Plant capacity 0.4 million gallons per day (MGD)
- Plant capacity needed to convert septic systems to central 1 to 1.5 MGD

FDEP Regulation:

- No known restriction on additional package plants or new septic systems

Collection System and Plant Improvements to Connect Septic Systems

Based on population projects through 2040, no improvements needed unless a septic conversion program is implemented

LCU is completing a project to convert the WRF to Advanced Treatment – Completed August 2026

Improvements With the Septic Conversion Program (Cost est. from 2022)

- Upsize transmission line and lift stations
- Increase plant capacity for approximately \$30-\$37.5M
- Effluent disposal for approximately \$10-\$14M
- Individual site abandonment system and connect to the central for approximately \$10,000-\$30,000

Countywide Wastewater Management Plan

Required by Caloosahatchee Estuary Basin Management Plan (BMAP) approved 2020 and requires County submit a 20-year Management Plan to convert septic systems to central

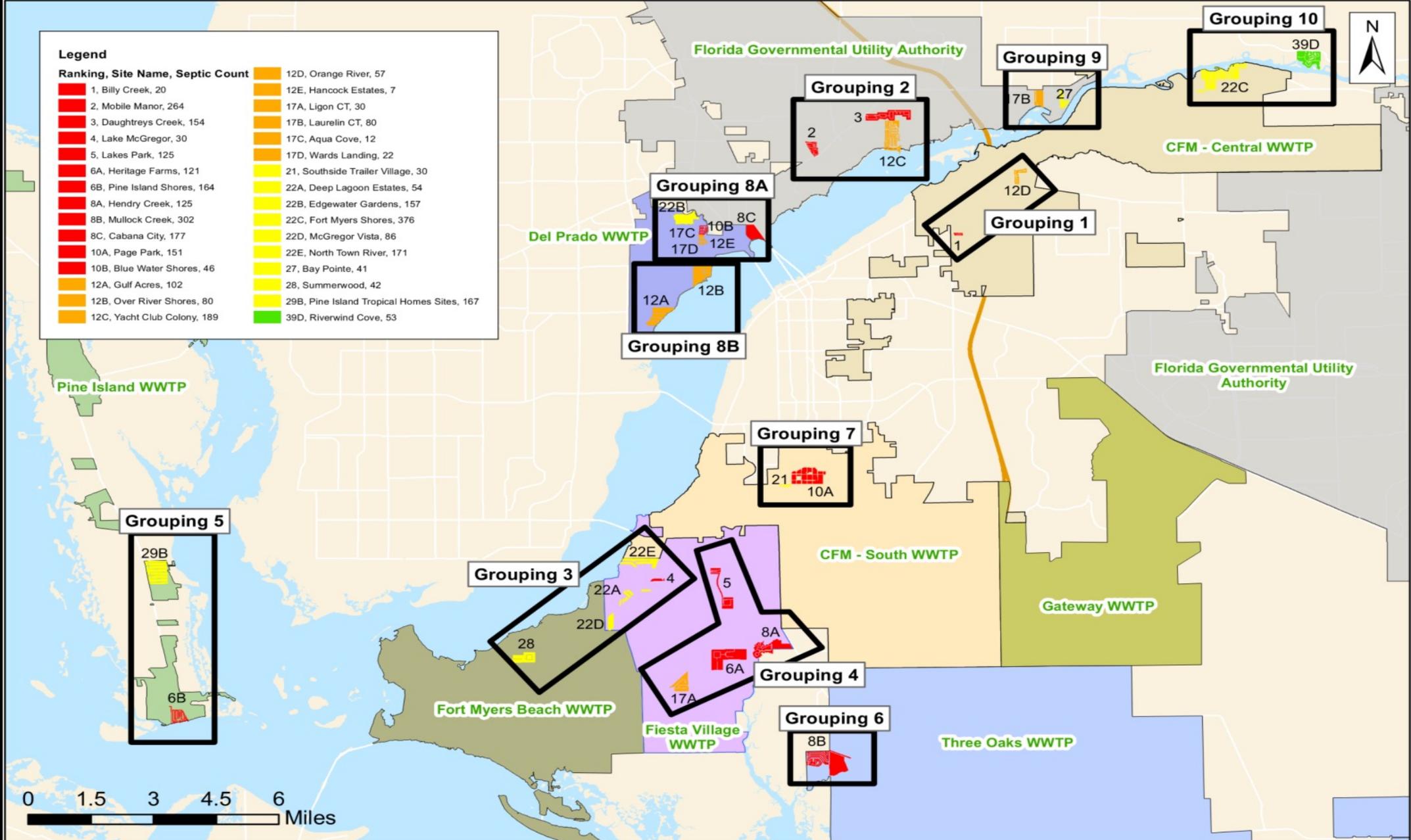
The Clean Waterway Act, Senate Bill 712 focusses on remedial action and improvements to regulations on Septic Systems and Wastewater Infrastructure

Lee County Utilities finalized the Countywide Wastewater (Septic) Management Plan by Spring 2023

- Prioritize the greatest impact to improve surface water quality to the County
- Identify grant and other funding sources to support septic conversions
- Presented final plan to the BOCC for review and for policy direction

Second Screening Process & Creation of Tiered Areas

Second Screening of Approved Project Groupings



Source:
 FDOH and ESRI
 Date April 2021
 County: Lee



Countywide Wastewater Management Plan
 Recommended Septic Conversion Areas in Priority Groupings



Figure
 3-2

TIERED PRIORITY PROJECT AREAS

Potential Grant Funding:

Areas 1, 7, 2, 8B

Low to Moderate Income



Priority Tiers	WWTP Area/ Service Area	Priority Grouping Number	Area Name	FDOH Septic Count	TN Loading to Groundwater: Residential Septic Systems (lbs/yr)	Project Cost Estimates (Millions)	Average Cost per Tier
1	CFM- Central WWTP	1	Billy Creek	24	213	\$1.65	\$59,826
			Orange River	61	608	\$3.27	
	LCU - Fiesta Village WWTP	4	Hendry Creek	128	3,221	\$9.51	
			Heritage Farms	126	1,290	\$9.25	
			Lakes Park	125	1,333	\$7.43	
			Ligon Court	35	853	\$2.89	
			LCU - Three Oaks WWTP	8A	Mullock Creek	318	
	CFM- South WWTP	7	Page Park	301	1,610	\$14.64	
			Southside Trailer Village***	27	320	\$1.54	
Tier 1 Subtotal				1145	10,781	\$68.50	
2	FGUA - Del Prado WWTP	2	Daughtreys Creek	158	1,642	\$8.58	\$51,428
			Mobile Manor	254	2,816	\$8.18	
			Yacht Club Colony	192	2,016	\$10.58	
	FGUA - Del Prado WWTP	8A	Aqua Cove	12	128	\$0.85	
			Blue Water Shores	61	491	\$3.33	
			Edgewater Gardens	156	917	\$8.15	
			Hancock Estates	8	75	\$0.67	
			Cabana City	177	596	\$9.44	
			Wards Landing	24	235	\$2.30	
	FGUA - Del Prado WWTP	8B	Gulf Acres	111	853	\$5.75	
			Over River Shores	87	1,088	\$5.95	
Tier 2 Subtotal				1240	10,857	\$63.77	
3	LCU - Fiesta Village WWTP	3	Deep Lagoon Estates	53	501	\$5.80	\$59,227
			Lake McGregor	30	320	\$1.04	
			McGregor Vista	94	1,674	\$6.98	
			North Town River	179	576	\$8.53	
	LCU - FMB WWTP		Summerwood	42	448	\$3.13	
	LCU - Pine Island WWTP	5	Pine Island Shores***	174	1,749	\$8.00	
			Pine Island Tropical Homesites	184	1,781	\$13.26	
	FGUA - Del Prado WWTP	9	Bay Pointe	41	437	\$3.09	
			Laurelin Court	82	320	\$4.12	
	CFM- South WWTP	10	Fort Myers Shores	446	4,010	\$21.29	
River Wind Cove			58	459	\$6.67		
Tier 3 Subtotal				1383	12,275	\$81.91	
Total				3,768	33,913	\$214.17	\$56,827

Funding Sources – MSTBU Created at Neighborhood Request

Current funding mechanism, neighborhoods request voluntarily MSTBU
Leegov.com/budget/mstbu

The county obtained legislative funding for the highest priority, Billy Creek and Orange River

- Connect 85 aged septic systems to the CFM Central WRF
- Currently in design and permitting phase with construction to begin in 12 to 18 months
- Estimate Project cost \$1.5M for design, permitting and capacity fees and \$4M for construction