

## **Sewage Management and Disposal in Recreational Vehicle & Mobile Home Parks and Marine Vessel Sewage Pump Out Stations**

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Florida Regulations consider portable toilet wastes as **septage wastes**, like any domestic wastes removed from holding tanks and associated with household septic tanks, boats, marinas, campers, etc. Regulation states septage waste must be disposed of through the following alternatives:

- An approved OSTDS (Onsite Sewage Treatment and Disposal System). These facilities are regulated by the DOH according to Chapter 64E-6 F.A.C.
- An approved SMF (Septage Management Facility). SMF is a type of biosolids management facility and is regulated by DEP according to Chapter 62-600 F.A.C.
- A DEP permitted WWTF where septage waste receiving is allowed.

According to DEP's website, some facilities potentially accepting septage in SW Florida:

<https://floridadep.gov/water/domestic-wastewater/documents/list-wastewater-facilities-potentially-accepting-septage>

For more details on septage waste management and disposal, of RV Parks and Marine vessels, please see the below Technical Memorandum.

## TECHNICAL MEMORANDUM

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To: Mark Sunyak, P.E., Engineering Operations Manager

Subject: Sewage Management and Disposal in Recreational Vehicle & Mobile Home Parks and Marine Vessel Sewage Pump Out Stations

From: Luis A. Méndez, I.E., Industrial Pretreatment Coordinator

Date: September 22, 2021

### Introduction

This Technical Memorandum summarizes and discusses the Recreational Vehicles (RV) and Mobile Homes (MH) Parks sewage management and regulation. This analysis has been done in response to recent requests to discharge sewage from RV parks and Marine vessels into Lee County Utilities' sanitary sewer system.

A research was conducted to determine what are the regulations applicable to these facilities and the governmental agencies responsible for regulating and enforcing such Florida's statutes, what are the potential quality concerns, and what Lee County Ordinances establish related to the acceptability and control of these sewage discharges.

### RVs and MHs Parks Wastewater Discharges

Florida State regulates RVs and MHs Parks under Chapter 64E-15, F.A.C., *Mobile Home, Lodging, and Recreational Vehicle Parks and Recreational Camps Rule*. DOH is the primary agency responsible for regulating RVs and MH parks.

RV and MH parks requires an operational permit issued annually by DOH, regardless of the wastewater disposal method. DOH maintains and update a RV and MH parks permitted facilities register.

RV and MH wastewater is considered domestic wastewater, meaning "*wastewater derived principally from dwellings, business buildings, institutions, and the like, commonly referred to as sanitary wastewater or sewage*". State and federal regulations consider two options for the collection, treatment and disposal of RVs and MH parks' wastewater according to the availability of a sanitary sewer system:

1. An Onsite Sewage Treatment and Disposal System (OSTDS) where sanitary sewer is not available. These facilities are regulated by the DOH according to Chapter 64E-6 F.A.C. requirements.
2. A connection to a WWTF where sanitary sewer is available. These facilities are regulated by DEP according to Chapter 62-600 F.A.C. requirements applicable to the local utilities.

Currently, Lee County serves twenty seven (27) DOH permitted Parks, seventeen (17) in Fort Myers Beach WRF area, eight (8) in Three Oaks WRF area and two (2) in Fiesta Village WRF area. (See Appendix D)

### **Chemical Products Issues**

Since RV and MH facilities are not permanent structures it requires sewage holding tanks before its final disposal. Odors issues may arise due to several factors. The most common are often: 1) improper holding tank habits and 2) extreme changes in temperature. Some people use available commercial products to control odors. However, there are products that may contain chemicals that can be toxic or harmful for septic systems like the following:

1. Formaldehyde: active ingredient in some deodorizers, also called Formalin. Formaldehyde is an EPA-recognized probable carcinogen (i.e., causes cancer).
2. Para-dichlorobenzene: Known carcinogen and drinking water contaminant. Common ingredient in mothballs, urinal cakes and bowl fresheners.
3. Other Chemicals: Heavy metals (such as Zinc), benzene, toluene, xylene, ethylene glycol (anti-freeze), methylene chloride, 1,1,1-trichloroethane (TCA), trichlorethylene (TCE) and perchloroethylene (PCE). Strong acids and bases, such as sulfuric acid or caustic soda, can destroy biological activity and damage tanks and pipes.

There are environmentally friendly alternatives like biodegradable (enzyme and citrus-based products). There is no prohibition for the use of these chemicals at the Regulatory Agencies level. EPA only “encourage” RV and MH users to not use toxic chemical additives and recommends the use of biodegradable products and adopt BMP like frequent pump out. Regulatory agencies establish general applicability minimum requirements and relay on local government for specific prohibitions and control mechanisms.

### **Marine Vessel Wastewater Disposal and Treatment**

The Clean Water Act Section 312 (a) – (m) provide the statutory framework for the regulation of sewage discharges from vessels. The Clean Vessel Act of 1992 prohibit vessels from discharging raw sewage into fresh water or coastal saltwater. The U.S.EPA, U.S. Coast Guard and FDEP are the regulatory agencies with jurisdiction to regulate and/or enforce boats sewage disposal wastes.

State and federal regulations establish three (3) types of marine sanitation devices for collection of sewage on vessels. Only Type I or Type II MSD treated sewage are allowed to discharge in open sea within three miles. Waste from Type III marine sanitation devices has to be disposed of in an approved sewage pumpout facility in accordance to F.S. 327.

During the construction phase, marina’s pumpout stations require a Sewage Collection and Transmission Permit from the Florida DEP. This permit ensures a proper design and construction in order to the effluent be safely collected and processed by the receiving treatment plant. Upon completion of construction and before placing the collection/transmission facilities into operation for any purpose other than testing for leaks or testing equipment operation, the permittee must submit a Request for Approval to Place a Domestic Wastewater Collection/Transmission System into Operation (DEP Form 62-604.300(8)(b)) to the DEP. If the pumpout facility is not connected to a central sewer, will need an OSTDS permit from DOH. No other permit applies to the operation of dock pumpout.

Contrary to RV and MH facilities, boat waste storage tanks appear not to follow the common practice of adding odor control chemicals. Boats sewage tanks are easiest and more frequently emptied than RV and MH tanks.

### **Lee County Public Policy Considerations for the Connection, Receiving, Treatment and Control of Wastewater From RVs and MHs Parks and Marina Pumpouts**

Lee County Ordinance 76-17 requires any facility that generates domestic water to connect to the sanitary system if it is available. (LC Ordinance 76-17).

*“Whenever an adequate sanitary sewer system is made available, any individual sewage disposal system, septic tank, privy, device or equipment shall be abandoned, and the sewage wastes from the residence or building shall be connected and discharged to the existing adequate sanitary sewer system through a properly constructed structure sewer within ninety (90) days from said adequate sanitary sewer system being made available.”*

It is Lee County public policy as expressed in the Lee Plan, *“to require the connection of commercial and larger residential establishments to central utility systems when available for service and to require installations of shoreside pumpout stations at marinas to provide adequate facilities for transfer and treatment of boat sewage”* (see Appendix C).

LC Ordinance 12-03 definition on holding tank wastes is inclusive to “vessels” and “campers and trailers” waste holding tanks. The ordinance allows the discharge of wastes from holding tanks into the sanitary sewer through a modified Industrial Wastewater Discharge Permit. Specific concerns about discharging potentially harmful chemicals in the wastewater can be addressed through a Pretreatment discharge permit conditions and requirements in accordance with LC Ordinance 12-03. Lee County prohibits the introduction of wastes with harmful materials without having a pretreatment discharge permit. (LC Ordinance 12-03). Moreover, LCU may establish prohibitions and controls on toxic odor control additives use by RV and MH parks throughout pretreatment discharge permits. Still, there is an additional option to include a specific prohibition or condition regarding the use of potentially harmful chemicals discharged into the sanitary sewer, by amending Ordinance 12-03, if determined necessary.

### **Conclusion:**

1. Florida State Regulatory agencies require the adequate collection, disposal, and treatment of RVs and MHs Park’s sewage by the connection to a WWTF system where sanitary sewer is available or by an OSTDS system where is not available.
2. Florida State Regulatory agencies require that waste from Type III marine sanitation devices (non-treated sewage) to be disposed of in an approved sewage pumpout facility connected to a WWTF system where sanitary sewer is available or to an approved dump station facility or an OSTDS where there is no sanitary sewer.
3. It is Lee County public policy to mandate the connection of any individual wastewater holding tank disposal system and to require installations of shoreside pumpout stations at marinas where adequate sanitary sewer system is made available.
4. Lee County currently have RVs and MHs Parks and marina’s pumpout stations connected the sanitary sewer system.

### **Recommendations:**

1. Issue special pretreatment discharge permits to RVs and MHs Parks connected to LCU WRFs in order to control the introduction of harmful chemicals and inadequate practices that may

affect the quality of the wastewaters to be conveyed and treated at the wastewater treatment plant.

2. Identify and list all marina's sewage pumpout station served by LCU. At this point, the information available does not justify the need to establish a permitting program. An education program would be more appropriate.
3. Develop an onsite educational waste assessment program to educate and assist business owners/operators by explaining the minimum regulatory compliance requirements to ensure proper handling, storage and disposal of wastes generated at their facility. A joint venture with Natural Resources' Pollution Prevention Division should be explored because they have experience in that kind of program and it is within their scope and objectives.

Attachments:

Appendix A - Summary of Regulations Related to Mobile Homes and Recreational Vehicle Parks Operation

Appendix B - Summary of Regulations Related to Marine Vessel Sewage Disposal and Treatment, and Dock Sewage Pumpout Construction and Operation

Appendix C - Summary of Lee County Ordinances and Lee Plan Objectives Related to Sanitary Sewer and Wastewater Treatment Services and Estuarine Water Quality Protection

Appendix D - DOH's Permitted Recreational Vehicle and Mobile Homes Parks Served By Lee County WWTP



## Appendix A

### Summary of Regulations Related to Mobile Homes and Recreational Vehicle Parks Operation

Code	Scope	Primary Agency
F.S. 513	Mobile Home and Recreational Vehicle Parks Florida's Regulation	DOH
Chapter 64E-15.004 F.A.C.	Sewage disposal requirements: "A safe method of sewage collection, disposal, or treatment and disposal shall be provided at each park or camp and shall be in compliance with either Chapter 64E-6, Standards for Onsite Sewage Treatment and Disposal Systems, or Chapter 62-600, F.A.C., Domestic Wastewater Facilities."	DOH
Chapter 64E-15.005 F.A.C.	Establish sanitary facilities requirements for RV & MHs Parks	DOH
Chapter 64E-15.010 F.A.C.	Permits and fees	DOH
Chapter 64E-6 F.A.C.	Standards for Onsite Sewage Treatment and Disposal Systems: "Onsite sewage treatment and disposal systems shall be installed where a sewerage system is not available and when conditions in Sections 381.0065(4)(a)-(g), F.S., are met."	DOH
Chapter 62-600 F.A.C.	Domestic Wastewater Facilities - establish requirements for design, treatment, operation, monitoring and permitting domestic wastewater facilities.	DEP

## Appendix B

### Summary of Regulations Related to Marine Vessel Sewage Disposal and Treatment, and Dock Sewage Pumpout Construction and Operation

Code	Scope	Primary Agency
33 U.S. Code § 1322	Marine Sanitation Devices defines “sewage” as human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes”	EPA, Coast Guard, FDEP
Clean Water Act Section 312 (a) – (m)	Provide the statutory framework to regulate sewage discharges from vessels.	EPA, Coast Guard, FDEP
Clean Vessel Act of 1992	Is a federal law to reduce water pollution by prohibiting vessels from discharging raw sewage into fresh water or coastal saltwater. Provides funding to States for construction of pumpout and dump station facilities that help ensure proper disposal of human sewage from recreational boats.	EPA, Coast Guard, FDEP
CWA Section 402	Regulates discharges incidental to the normal operation of vessels operating in a capacity as a means of transportation through the Vessel Discharge Permit Program (Vessel General Permit) .	EPA, Coast Guard
F.S. 327.53	Requires a marine sanitation device (MSD) installation on board a vessel, designed to receive, retain, treat or discharge sewage and any process to treat such sewage: MSD TYPE I: Flow-through device that treats sewage by chemical or thermal means MSD TYPE II: Device that treats the sewage by biological means and uses bacteria MSD TYPE III: Holds the sewage. Prevents direct overboard discharge or sewage.	EPA, Coast Guard
F.S 403 Environmental Control	A permit must be obtained prior to construction of a domestic wastewater collection/transmission system.	FDEP
Chapter 62-604.700 F.A.C.	<i>“Upon completion of construction and before placing the collection/transmission facilities into operation for any purpose other than testing for leaks or testing equipment operation, the permittee must submit a Request for Approval to Place a Domestic Wastewater Collection/Transmission System into Operation (DEP Form 62-604.300(8)(b)) to the DEP.”</i>	FDEP





## Appendix C

### Summary of Lee County Ordinances and Lee Plan Objectives Related to Sanitary Sewer and Wastewater Treatment Services and Estuarine Water Quality Protection

Ordinance No. and Name	Section	Requirement
76-17 Ordinance related to requirements requiring connection to an approved sanitary system, abandoning of individual sewer disposal systems...	2	<i>"Whenever an adequate sanitary sewer system is made available, any individual sewage disposal system, septic tank, privy, device or equipment shall be abandoned, and the sewage wastes from the residence or building shall be connected and discharged to the existing adequate sanitary sewer system through a properly constructed structure sewer within ninety (90) days from said adequate sanitary sewer system being made available."</i>
12-03 Ordinance related to Industrial Pretreatment of Wastewater	3	Definition of Holding Tank Waste: <i>"shall mean any waste from holding tanks such as vessels, chemical toilets, campers, trailers and vacuum-pump tank trucks"</i>
12-03 Ordinance related to Industrial Pretreatment of Wastewater	4.B	Grants LCU ample faculty to assess and establish an adequate policy and decision making process about the acceptability of wastewater: <i>"The Control Authority shall, in forming an opinion as to the acceptability of these waste, give consideration to such factors as the quantities of subject waste in relation to flows and velocities in the sewers, materials of construction of sewers, nature of sewage treatment, process capacity of the WWF, degree of treatability of waste in the WWF and other pertinent factors"</i> .
12-03 Ordinance related to Industrial Pretreatment of Wastewater	4.B.11	<i>"No other holding tank waste, including portable toilet waste, may be discharged into the WWF unless the person has received permission and has been issued a modified Industrial Wastewater Discharge Permit, permission must be secured for each separate discharge"</i> .
Lee Plan	Goal 56	SANITARY SEWER INFRASTRUCTURE. In partnership with franchised/certificated utilities providers, provide sanitary sewer service and wastewater treatment and disposal throughout Lee County. (Ordinance No. 98-09, 17-19)
Lee Plan	OBJECTIVE 56.2	<i>"The county will maintain and enforce such ordinances as are necessary to require the connection of commercial and larger residential establishments to such public or private central utility systems when those systems are available for service."</i> (Ordinance No. 94-30, 00-22)





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### Summary of Lee County Ordinances and Lee Plan Objectives Related to Sanitary Sewer and Wastewater Treatment Services and Estuarine Water Quality Protection

Ordinance No. and Name	Section	Requirement
Lee Plan	POLICY 56.2.1	Maintain programs and regulations to abate and cease use of septic tanks and wastewater treatment package plants where and when central sewer is available and in areas Community Facilities and Services IV-6 June 2020 where assessment districts are established for upgrading sewer availability. (Ordinance No. 17-19)
Lee Plan	GOAL 122 POLICY 122.1.4  POLICY 122.1.5	ESTUARINE WATER QUALITY Cooperate with state and federal agencies to enforce pollution control standards for marinas, marine dumping, and illegal discharges from water craft. (Ordinance No. 00-22, 18-28) Require installations of shoreside pumpout stations at marinas that serve liveaboards provide adequate facilities for subsequent transfer and treatment of boat sewage. (Ordinance No. 00-22, 18-28)



## Appendix D

### DOH's Permitted Recreational Vehicle and Mobile Homes Parks Served By Lee County WWTP

Permit #	Company Name	Street Address	City	ZIP Code	WWTP Service Area
36-54-00002	Aspen Indian Creek Park	17340 San Carlos Boulevard	Fort Myers Beach	33931	FMB
36-54-00003	Siesta Bay	19333 Summerlin Road	Fort Myers	33908	FMB
36-54-00004	Ebb Tide RV Park, LLC	1725 Main Street	Fort Myers Beach	33931	FMB
36-54-00006	Bon Aire Deluxe Traveler Court	760 San Carlos Drive	Fort Myers Beach	33931	FMB
36-54-00016	Covered Wagon Trailer Park	21450 S Tamiami Trail	Estero	33928	TO
36-54-00021	Estero River Trailer/RV Park	20950 S Tamiami Trail	Estero	33928	TO
36-54-00022	Fort Myers Beach RV Resort	16299 San Carlos Boulevard	Fort Myers	33908	FMB
36-54-00023	Fort Myers Campground	16800 S Tamiami Trail	Fort Myers	33908	TO
36-54-00026	Gulf Air Travel-Sunburst RV FM Beach	17279 San Carlos Boulevard	Fort Myers Beach	33931	FMB
36-54-00032	Iona Ranch M.H. Park & RV	16295 Davis Road	Fort Myers	33908	FMB
36-54-00033	Island Bay Marina & Apts	290 Pearl Street	Fort Myers Beach	33931	FMB
36-54-00034	Jamaica Bay West	15235 S Tamiami Trail	Fort Myers	33908	FV
36-54-00037	Koreshan State Historic Site	3800 Corkscrew Road	Estero	33928	TO
36-54-00043	McGregor Mobile Home Park	16600 McGregor Boulevard	Fort Myers	33908	FMB
36-54-00044	Buttonwood Trailer Park	8395 Main Street	Bokeelia	33922	PI <sup>i</sup>
36-54-00045	Cap-N-Mac Mobile Home Park	8365 Main Street	Bokeelia	33922	PI <sup>i</sup>
36-54-00073	The Palms at Pine Island	15061 Stringfellow Road	Bokeelia	33922	PI <sup>i</sup>



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### DOH's Permitted Recreational Vehicle and Mobile Homes Parks Served By Lee County WWTP

Permit #	Company Name	Street Address	City	ZIP Code	WWTP Service Area
36-54-00087	Silver Tarpon Lodge	16870 Silver Tarpon Lodge Court	Bokeelia	33922	PI <sup>1</sup>
36-54-00095	Tropic Isles R.V. Park	15175 Stringfellow Road	Bokeelia	33922	PI <sup>1</sup>
36-54-00107	Lakes Park RV & MH Community	14600 S Tamiami Trail	Fort Myers	33912	FV
36-54-00112	Oyster Bay Park	1711 Main Street	Fort Myers Beach	33931	FMB
36-54-00124	Red Coconut RV Park, LLP	3001 Estero Boulevard	Fort Myers Beach	33931	FMB
36-54-00126	San Carlos RV Park & Marina, LLC	18701 San Carlos Boulevard	Fort Myers Beach	33931	FMB
36-54-00127	San Carlos Lodge, Inc	790 San Carlos Drive	Fort Myers Beach	33931	FMB
36-54-00128	Shady Acres Travel Park	19370 S Tamiami Trail	Fort Myers	33908	TO
36-54-00133	Sunny Grove Park, Inc.	3610 Lychee Lane	Estero	33928	PI <sup>1</sup>
36-54-00134	Sunnyland Court, Inc.	19241 San Carlos Boulevard	Fort Myers Beach	33931	FMB
36-54-00135	Estero Bay Village	20518 Tahitian Boulevard	Estero	33928	TO
36-54-00139	Tropicana Co-Op, Inc	16711 McGregor Boulevard	Fort Myers	33908	FMB
36-54-00141	Woodsmoke Camping Resort	19551 S Tamiami Trail	Fort Myers	33908	TO
36-54-00153	Century 21 Mobile Community	16271 McGregor Boulevard	Fort Myers	33908	FMB
36-54-00169	Gulf Waters RV Resort	11301 Summerlin Square Drive	Fort Myers Beach	33931	FMB
36-54-2189659	Sun Woodsmoke RV, LLC	19551 S Tamiami Trail	Fort Myers	33908	TO <sup>1</sup>

<sup>1</sup> This facility is located in a Lee County WWTP service area that does not have sanitary sewer available.