
UTILITIES ELEMENT

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UTILITIES ELEMENT

INTRODUCTION

The Town of Fort Myers Beach is a retail provider of drinking water but does not provide other direct utility services. Three major utility services are provided by others:

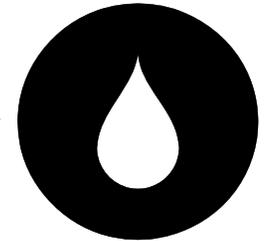
- **Bulk water** is provided by Lee County Utilities, a branch of Lee County government;
- **Sewer service** is provided directly to town residents and businesses by Lee County Utilities; and
- **Solid waste**, with pickup by investor-owned companies operating under a franchise from the Lee County government. Lee County also handles the ultimate disposal of trash from its various contracted trash haulers.

This comprehensive plan examines each of these services and assesses future expansion needs to accommodate growth. This plan also establishes “minimum levels of service” that must be met at all times in order for growth to continue.

Even though some of these services are actually provided by others, the town must ensure that proper provisions are being made for continued high-quality service into the future. The town may also wish to play a greater role in utilities in the future, for example by directly franchising its trash hauler rather than being included in one of Lee County’s larger contracts. Other alternatives for the town are discussed in this element.

PURPOSE OF THIS ELEMENT

The Utilities Element analyzes the availability of public facilities to meet the existing and future needs of the town. This analysis of potable water, sanitary sewer, and solid waste disposal service is mandated by Florida’s growth management legislation. Rule 9J-5.001 of the *Florida Administrative Code* requires that water, sewer, and solid waste services be provided in accordance with future land use projections, and it identifies a basic framework for inventories of existing infrastructure and services. It also provides the basis for the goals, objectives, and policies to be adopted in this comprehensive plan.



If proper water, sewer, and solid waste facilities are not available, the timing and location of development can be affected, as occurred during sewer moratoriums at Fort Myers Beach in the 1980s. Planning for these services is an integral part of any comprehensive plan.

WATER SUPPLY

Florida Cities Water Company, a private company, provided potable (drinking) water to the Town of Fort Myers Beach and surrounding areas until 2001, when the company was acquired by Lee County Utilities, a branch of Lee County government. Lee County then resold the water distribution system on Estero Island to the Town of Fort Myers Beach.

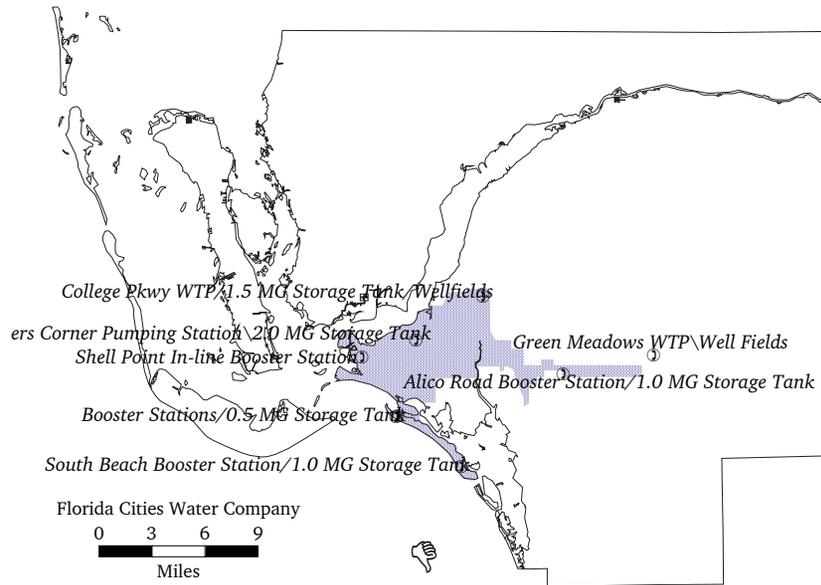


Figure 1, Former Florida Cities' south franchise boundaries & location of facilities

Figure 1 identifies the former Florida Cities' South Fort Myers certificated potable water supply area, which included the Town of Fort Myers Beach and nearby portions of mainland Lee County.

Lee County Utilities in 2001 acquired Florida Cities' two water treatment plants in the South Fort Myers area, which had supplied the following data about their operation. The Green Meadows Water Treatment Plant and College Parkway Treatment Plan, and their accompanying well fields, served this area. These plants had permitted and plant design capacities of 9,000,000 gallons per day (Green Meadows) and 1,500,000 gallons per day (College Parkway). These plants served approximately 16,000 water customers and an estimated population of about 56,000 (at an average of 3½ persons per connection). Land uses served are primarily residential and some commercial. Florida Cities

estimated that 3,000 of these customers and 10,500 of the population were located within the town's limits. (The number of customers is less than the total number of dwelling units because a majority of dwellings within the town are multi-family units, which share a water meter and are considered as "one customer.")

Florida Cities had a number of other facilities that served this area. These include:

- South Beach booster station and 1,000,000-gallon ground storage tank;
- North Beach booster station and 500,000-gallon ground storage tank;
- Marina in-line booster station;
- Miners Corner pumping station and 2,000,000-gallon ground storage tank; and
- Alico Road booster station and 1,000,000-gallon ground storage tank.

These facilities are also delineated on Figure 1. Figure 2 displays the potable water lines within the Town of Fort Myers Beach, indicating that potable water service is available throughout the town.

The average annual daily water demand within the South Fort Myers area averaged 5,757,000 gallons per day in 1997. The peak monthly demand was 7,306,000 gallons per day in 1997; the peak daily demand was 7,781,000 gallons on March 23, 1997.

Florida Cities did not have a meter at Matanzas Pass that measured total water consumption in the Town of Fort Myers Beach. In place of this data, a "proportional capacity" can be calculated to estimate the percentage of actual water consumption and of water treatment capacity used by the town, relative to the entire service area on the mainland. This capacity

is based on the peak number of customers within each location, compared to the peak month's average daily water demand and the total design capacity of the treatment plant. These figures are shown in Table 8-1. (Proportional capacity figures can be somewhat misleading since demand may be greater in one location one day and less on another day.)

The "level of service" *currently being provided* can be estimated using various methods. Residential levels of service are expressed here in "gallons per person per day." This calculation uses the peak month's average daily demand, which is then divided by the estimated peak population for the entire service area, yielding a figure of about 130 gallons per person per day, as shown in Table 8-2. (Note that this calculation does not apportion water consumption to commercial or industrial uses.) This computation is based on the entire service area rather than just the town because the actual peak population of the town greatly exceeds the population estimates used by Florida Cities.

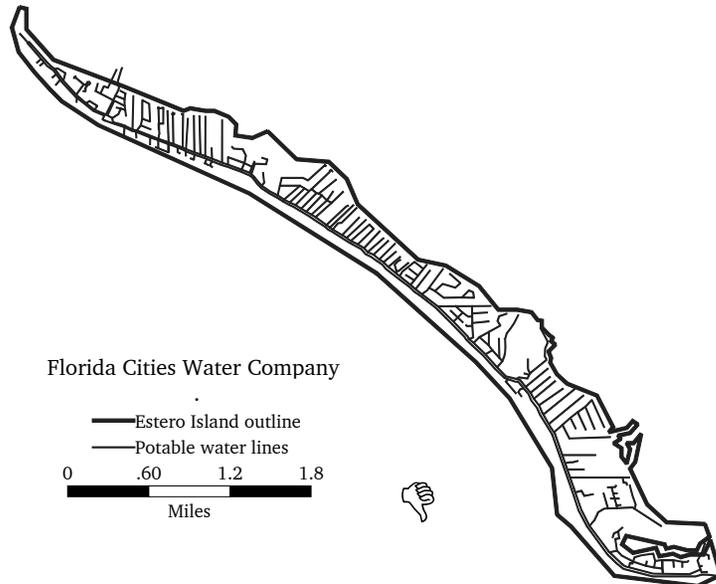


Figure 2, Potable water lines on Estero Island

Table 8-1 — Proportionate Capacity of Potable Water Treatment Facilities, 1995/96

<u>Customers/ Water Consumption</u>	<u>Town of Fort Myers Beach</u>	<u>Remainder of Lee County certificated area</u>
Approximate number of customers	3,000	13,000
Estimated peak population served	10,500	45,500
Estimated share of consumption using peak month water demand (gpd)	1,369,875	5,936,125
Estimated share of total plant design capacity (gpd)	1,968,750	8,531,250

Source: Population and total gpd figures from Florida Cities Water Company

**Table 8-2
Current Levels of Service for Potable Water**

<u>Peak Month Average Daily Water Demand (gpd):</u>	<u>Estimated Peak Population Served:</u>	<u>Gallons Per Person Per Day:</u>
7,306,000	56,000	130.46

Existing and Projected Water Facility Needs

Florida Cities used fixed gallon-per-day rates when designing its facilities. Single-family dwelling units are assumed to use up to 300 gallons per day, which constitutes one equivalent residential connection (ERC), and 240 gallons per day for multifamily units. Those standards have also been established in the Lee County Comprehensive Plan which has jurisdiction until the town's own plan is adopted. Lee County also established minimum standards for mobile homes and recreational vehicles at 187.5 and 150 gallons per day respectively. The state has established a

minimum water pressure standard of 20 pounds per square inch. An average pressure of 55 to 60 pound per square inch is maintained throughout the Fort Myers Beach distribution system.

For comprehensive planning purposes, the Town of Fort Myers Beach need not adopt these same standards. However, it would be best to use a standard based on dwelling units rather than people, since new housing is approved one dwelling unit at a time. By further defining this standard on an “ERC” basis, it can also be applied to new commercial development, which at Fort Myers Beach usually does not depend primarily on island residents for its customers. A simple and uniform standard would be 260 gallons per ERC (based on 130 gallons per person per day, times 2 people per typical unit). Since no further mobile home or recreational vehicle developments are expected, separate standards are not needed for them.

The 1990 U.S. Census reported 7,420 dwelling units within the town’s limits in April of that year. An additional 472 units were later constructed for a 1996 total of 7,710. As noted in the Future Land Use Element, housing units are forecasted to increase to 8,738 at buildout before the year 2020. An additional 175 dwelling units built after 2008 are forecasted to require an additional 45,500 gallons per day of potable water. Table 8-3 summarizes these forecasts. These additional demands are a minute portion (0.1%) of the supply increases being planned by Lee County Utilities by 2030 (source: *Lee County’s Water Supply Facilities Work Plan*, as updated in July 2008).

Table 8-3 — Forecasted Water Demand for the Town of Fort Myers Beach

<u>Year</u>	<u>Permanent Population</u>	<u>Peak-Season Population</u>	<u>Total Number of Dwelling Units</u>	<u>Total Daily Water Demand (at 260g/DU)</u>	<u>Forecasted Number of New Dwelling Units after 2008</u>	<u>Additional Forecasted Water Demand after 2008</u>
1996	6,039	15,680	7,710	2,004,600	—	—
2003	6,792	17,635	8,157	2,120,820	—	—
2008	7,100	18,435	8,527	2,217,020	—	—
2013	7,240	18,800	8,696	2,260,960	140	36,400
2018	7,275	18,890	8,738	2,271,880	175	45,500
2023	7,275	18,890	8,738	2,271,880	175	45,500

Source: See Future Land Use Element and Evaluation/Appraisal Report (2007) for details on forecasts

Bulk Water Agreement with Lee County

In August 2001, the Town of Fort Myers Beach entered into a binding contract with Lee County concerning the source of potable water that would be supplied to customers within town boundaries.

The county agreed to be fully responsible for providing a bulk supply of water to the town, which the town would then resell to its retail customers. The county confirmed that its water production and treatment facilities met all state and federal standards (and would meet all future standards), and that the county has and would continue to have the ability to provide sufficient water to the town for the duration of the agreement (a period of 25 years).

The town agreed not to purchase water from any other source, not to resell this bulk water to any other wholesale customer, and not to construct its own water production and/or treatment facilities.

This contract did not quantify future water demand within the town, inasmuch as the town was nearing buildout and little additional demand was anticipated. Continued planning by Lee County Utilities merely assumes that water customers within the town will require water at the same rates and with the same seasonal patterns as other nearby county water customers. This same approach is reflected in Lee County's July 2008 "Water Supply Facilities Work Plan," which is being incorporated into this plan by Policy 8-A-4.

Traditional and Alternative Water Supply Sources

The South Florida Water Management District updated its Lower West Coast Water Supply Plan in July 2006. The focus of this update was the development of "alternative" water sources, such as wells drilled into deeper aquifers, desalination, re-use of wastewater for irrigation, water conservation measures, and "aquifer storage and recovery" (ASR) where excess water during the rainy season is stored underground for later recovery during the dry season.

Lee County Utilities is committed to developing alternative water sources, including:

- Tapping the Lower Hawthorne aquifer at four wellfields.
- Expanding ASR wells from the two current wellfields to two additional wellfields, and expanding its use further in the future to include reclaimed water.

Essentially all future water supply development by Lee County Utilities will use alternative water supply sources, although traditional sources such as shallow wells will continue in use and will be spread out onto larger wellfields to reduce adverse impacts on wetlands.

Work Plan for Constructing New Water Supply Facilities

In July 2008, a *Water Supply Facilities Work Plan* was published jointly by Lee County Utilities and Lee County Planning. This plan was first mandated state law in 2002 to coordinate water supply planning between local, regional, and state agencies. The objectives were to:

- Identify population and water demands for a planning period from 2007 to 2030 with focus on the planning period from 2007 to 2017.
- Identify existing and planned potable and reclaimed water facilities that will be utilized to meet the projected demand to 2017.
- Identify sources of raw water required to meet the projected demand.
- Identify planned potable water supply and reclaimed water projects required to meet projected demands and specify when they must be developed and how they will be funded.

- Demonstrate that the proposed water supply development projects are feasible with respect to facility capacity and consumptive use permitting.
- Describe Lee County Utilities' efforts in developing alternative water supplies.

Table 6 of the *Water Supply Facilities Work Plan* (last updated in July 2008) presents a ten-year expansion program for Lee County Utilities (see Policy 8-A-4). Existing and proposed uses of traditional and alternative water supply sources are detailed there in conformance with SFWMD's *2005–2006 Lower West Coast Water Supply Plan Update* (approved on July 12, 2006).

Lee County has adopted Table 6 into its Comprehensive Plan potable water sub-element exactly as reprinted below. At present none of these improvements are needed to meet the potable water level of service at Fort Myers Beach; if any are needed during any upcoming five-year period, they will need to be included in the five-year schedule of capital improvements (Table 11-7) in the Capital Improvements Element.

TABLE 6
CAPITAL IMPROVEMENT PROJECTS
10 YEAR WATER SUPPLY DEVELOPMENT PROJECTS

ALTERNATIVE WATER RESOURCE PROJECTS

CIP PROJECT #	LCU PROJECT NAME/ LWCWSP Project Name	DESCRIPTION	PROJECT STATUS	TOTAL PROJECT COST	ESTIMATED COMPLETION DATE	FUNDING SOURCE
7097	Corkscrew WTP Wellfield- Alcoo Road / Corkscrew Lower Hawthorne Wells	Design and construct a 5.0 mgd wellfield capacity and raw water transmission system	The total wellfield expansion project is 30% complete and expected to be completed by November 2008. The alternative water supply portion of this project is 70% complete and expected to be complete in June 2008	\$15,899,910.00	November 2008	Grant/Enterprise Fund
7187	Green Meadows WTP Plant Expansion / Green Meadows Lower Hawthorne Wells	Expand Green Meadows WTP capacity, construct additional wells and transmission lines to support plant expansion	Completed an Expansion Process and Regulatory Evaluation. Currently constructing two test/production wells in the Lower Hawthorne aquifer.	\$37,000,000.00	2014	Grant / Debt Finance / Enterprise Fund
7602	North Lee County R.O. Plant Wellfield Expansion / Not included in the LWCWSP	Well installation of 2 Lower Hawthorne wells to reduce upconing and premature water quality decline	Surveying for well sites and wellfield design expected to be underway by May 2008. Expected completion date is December 2008.	\$1,650,000.00	December 08	Grant/Enterprise Fund
7028	North Lee County WTP Expansion to 10 MGD / North Lee County Lower Hawthorne Wellfield and Plant Expansion	Expand the treatment capacity of the existing R.O. plant from 5.0 MGD to 10.0 MGD. Includes construction of the well field expansion	Surveying for well sites and wellfield design expected to be underway by May 2008.	\$16,250,000.00	2010	Grant/Enterprise Fund
7155	Pinewoods WTP DIW & Wellfield Expansion / Pinewoods WTP Expansion Phase II	Construct a deep injection well for disposal of brine and construct at least 4 Lower Hawthorne wells to provide raw water for R.O. plant	Project substantially complete	\$15,924,903.00	January 2007	Grant/Enterprise Fund
7110	ASR Wells @ No. Reservoir & Olga WTP	Complete construction of 30 MGD Storage additional ASR wells	Project on hold due to Arsenic issues	\$2,435,552.00	Unknown	Grant/Enterprise Fund
7188	Green Meadows WTP Raw Water Line Improvements	Upsize/Replace raw watermain to increase wellfield efficiency	scheduled for construction in 2008	\$2,300,000.00	December 2008	Enterprise Fund

CIP PROJECT #	LCU PROJECT NAME/ LWCWSP Project Name	DESCRIPTION	PROJECT STATUS	TOTAL PROJECT COST	ESTIMATED COMPLETION DATE	FUNDING SOURCE
7280	Three Oaks WWTP Expansion / Three Oaks Reclaimed Water Transmission System	Expand the Three Oaks WWTP to 6.0 MGD	Reuse pumpstation portion of this CIP project for AWS Project, Project substantially complete	\$27,452,866.00	January 2007	Grant/Enterprise Fund
7279	Three Oaks Parkway Three Oaks Pkwy, Reclaimed Water Transmission System	Relocate and Upgrade Existing water, sewer and reuse lines along Three Oaks Pkwy	Reuse Pipeline portion of this CIP for AWS Project, Project substantially complete	\$6,939,250.00	January 2007	Grant/Enterprise Fund
7297	FMB WWTP Elevated Reuse Storage Tank / FMB Reclaimed Elevated Storage Tank	Construct an elevated reuse storage tank in the Fort Myers Beach WWTP Reuse system	A low cost interim alternative has delayed the need for this project, now scheduled for 2011	\$4,000,000.00	2011	Grant/Enterprise Fund
7284	Reclaimed Water ASR / Health Park Reclaimed Water ASR Phase I and Phase II	Pilot and construction of a Reclaimed Water ASR for Wastewater Treatment Facilities	Issues related to Arsenic and ASR have delayed this project to 2011	\$600,000.00	2011	Grant/Enterprise Fund
Future	Fiesta Village WWTP Reuse ASR and reject Storage	Study, design, and construct reuse ASR Well and convert existing GST to reject tank	scheduled for 2011	\$1,500,000.00	2012	Grant/Enterprise Fund
7292	FGCU/Micromar Lakes Reuse Extension / FGCU/Micromar Lakes Reclaimed Water Main Improvements	Construct 900 L.F. of 12" reuse main from 3 Oaks WWTP to FGCU	design underway	\$126,000.00	2009	Grant/Enterprise Fund
7217	FMB/Iona Reuse System Improvements	Install reuse lines to serve to serve FMB reuse service area	Reuse lines will be constructed as need arises	\$1,307,503.00	2008-2011	Enterprise Fund
7240	Pine Island WWTP Reuse System	Expand effluent transmission system to provide irrigation for future customers	Reuse lines will be constructed as need arises	\$1,082,806.00	2008	Enterprise Fund
7305	Three Oaks Reuse Transmission Improvements	Upsize/expand 3 Oaks reuse transmission lines to handle increased flows to various sites	Reuse lines will be constructed as need arises	\$780,000.00	2008	Enterprise Fund
7111	Automated Flushing Devices	Install automated flushing devices on existing dead-end water mains	on-going	\$162,865.00	2008-2010	Enterprise Fund

Water Conservation

With an ever-increasing population and a limited potable water supply, water conservation programs become increasingly important. Citizens of Fort Myer Beach must do their part to conserve this resource. The South Florida Water Management District developed a water conservation program in 1990 which identified six measures specifically for urban areas. These measures identified in the District Water Management Plan (April 1995) include:

- limiting lawn irrigation to the hours between 5:00 P.M. and 9:00 P.M.;
- requiring the adoption of xeriscape landscape ordinances;
- requiring the installation of ultra-low-volume plumbing fixtures in all new construction;
- requiring the adoption of conservation-oriented rate structure by utilities;
- requiring the implementation of leak detection programs by utilities with unaccounted water losses greater than 10%; and
- requiring implementation of water conservation public education programs.

Active water conservation activities as of 2008 are summarized here (also see Policy 8-A-5):

- *Permanent Irrigation Ordinance:* Lee County has imposed an ordinance restricting landscape irrigation to the hours of 5:00 PM to 9:00 AM two days per week (Ordinance No. 05-10). This ordinance is more restrictive than rules of the South Florida Water Management District.
- *Rain Sensors Required:* The Land Development Code requires rain sensors on new irrigation systems (§ 10-154(7)m).
- *Xeriscape Requirements:* The Land Development Code requires xeriscape principles for all required landscaping (§ 10-421(b)). Xeriscape principles conserve water

through drought-tolerant landscaping, the use of appropriate plant material, mulching, and the reduction of turf areas.

- *Leak Detection Program:* Lee County Utilities has an unaccounted-for water and leak detection program. The latest available data indicate that “unaccounted for” water losses are only 6.22% (calendar year 2006).
- *Water Conservation Education:* Lee County TV airs daily information on water conservation, addressing many ways that water customers can conserve. The Lee County Utilities web site contains several pages devoted to water conservation (start at www.lee-county.com/utilities/). The annual Consumer Confidence Report directs customers to the web site for conservation information. Water conservation posters and pamphlets are placed in schools, libraries, and county offices. About 20 water conservation presentations are made to third-grade students each year, and 4-5 water conservation presentations are made to civic organization throughout Lee County.

As the Town of Fort Myers Beach develops and maintains its public facilities, water conservation measures such as these should be followed, both to reduce consumption and to lessen costs for water supply. The town should take the lead by example (for instance by installing ultra-low-volume plumbing fixtures in new government facilities) and also by adopting ordinances requiring sound water conservation practices. The town should consider implementing a strong “conservation rate structure” where large water users pay a higher rate per gallon than is charged to frugal users. This approach could discourage excessive lawn irrigation while maintaining low rates for frugal users.

SEWER SERVICE

Lee County Utilities, a branch of Lee County government, provides sewer (wastewater) service to the Town of Fort Myers Beach. One of its service areas, known as the Fort Myers Beach/Iona-McGregor Service Area, includes Estero Island, San Carlos Island, and the Iona-McGregor district. This service is known as “sanitary sewer service” to distinguish it from “storm sewers” that collect excess rainwater.

Wastewater collected within the service area is transferred to the Fort Myers Beach Wastewater Treatment Plant where it is treated. A portion of the resulting effluent (after thorough treatment) is redistributed for irrigation purposes. Sewer bills are based on water usage, with charges billed by Florida Cities and then remitted to Lee County Utilities.

Figure 3 shows the boundaries of the Fort Myers Beach/Iona-McGregor sewer service area and the location of the wastewater treatment plant. Figure 4 shows the sanitary sewer lines within

the Town of Fort Myers Beach.

The original design capacity of the wastewater treatment plant in 1978 was 2,700,000 gallons per day. In 1989 it was expanded to its current design and permitted capacity of 6,000,000 gallons per day. As of September 1995, the plant served 7,015 residential and commercial customers. Land uses served are primarily residential (6,519 customers) with some commercial (496 customers).

The permanent and peak season populations within its service area are estimated to be 26,138 and 39,207 persons respectively. Lee County Utilities does not distinguish between the number of customers located within the separate districts of the service area. There are no legal on-site treatment and disposal systems remaining (package treatment plants or septic systems) on Estero Island, and the vast majority if not all structures are connected to the central sewer system in accordance with a mandatory connection policy. Therefore, the number of sanitary sewer customers within the Town of Fort Myers Beach can

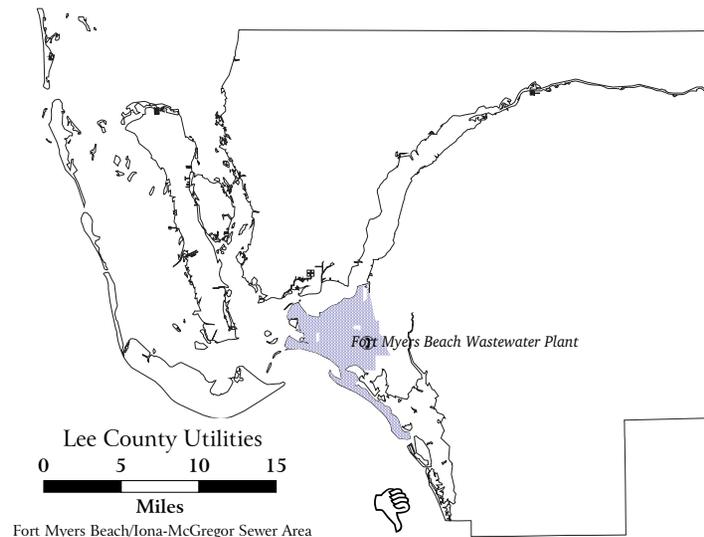


Figure 3, Sewer service area and wastewater plant

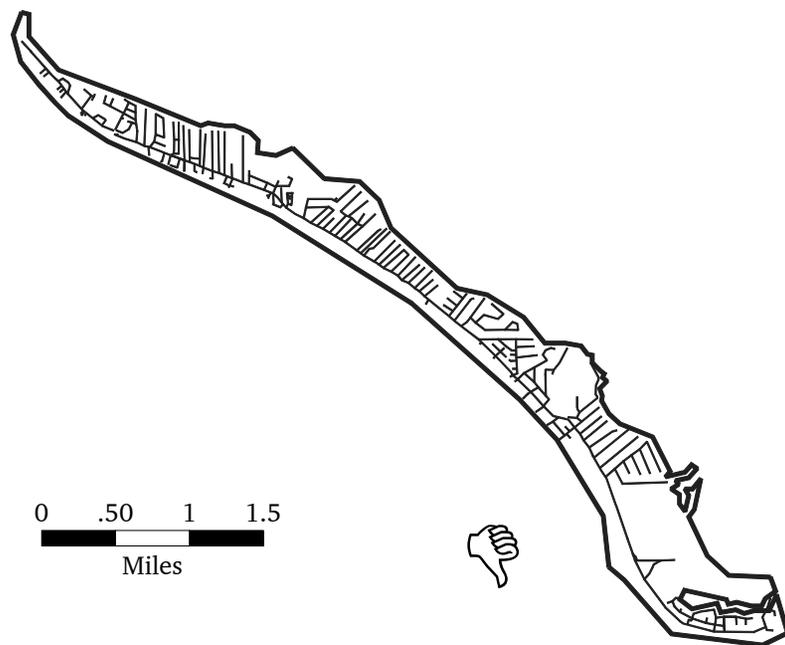


Figure 4, Sanitary sewer lines on Estero Island

be assumed to be the same 3,000 potable water customers reported by Florida Cities.

The average annual daily sewer demand within the South Fort Myers franchise area was 2,840,000 gallons per day between October 1994 and September 1995. The peak monthly demand was 3,436,000 gallons per day in February 1995. This type of data is reported every month by all utilities to the Florida Department of Environmental Protection.

As with potable water supply, a proportional capacity can be calculated to reflect the town’s share of the larger service area of Lee County Utilities. This capacity identifies the percentage of actual wastewater flows and of wastewater treatment plant capacity used by the town and by the remainder of the service area. It is based on the peak number of customers within each

location, compared to the peak month’s average daily sewer demand and the total capacity of the treatment plant. (As with potable water, the proportional capacity may be somewhat misleading since demand may be greater in one location one day and less on another day.) Table 8-4 reports the proportional capacity available to Fort Myers Beach.

Table 8-4 — Proportionate Capacity of Wastewater Treatment Facilities, 1995/96

<i>Customers/ Sewage Plant Consumption</i>	<i>Town of Fort Myers Beach</i>	<i>Remainder of Lee County service area</i>
Approximate number of customers	3,000	4,015
Estimated peak population served	10,500	28,707
Estimated share of consumption using peak month sewer flows (gpd)	1,469,423	1,966,577
Estimated share of total plant design capacity (gpd)	2,565,930	3,434,070

Source: Population from Florida Cities; gpd figures from Lee County Utilities

In the same manner as for potable water, the level of service currently being provided for sanitary sewer is expressed here in “gallons per person per day.” This calculation uses the peak month’s average daily flow, which is then divided by the estimated peak population for the entire Lee County Utilities sewer service area, yielding a figure of about 87½ gallons per person per day, as shown in Table 8-5. This is substantially less than the 130 gallons of water used per day, reflecting water consumption such as lawn irrigation that never flows into the sewer system. (Note that this calculation does not apportion sewer usage to commercial or industrial uses.)

<i>Peak Month Average Daily Sewage Flows (gpd):</i>	<i>Estimated Peak Population Served:</i>	<i>Gallons Per Person Per Day:</i>
3,436,000	39,207	87.64

Existing and Forecasted Sewer Service Needs

Lee County Utilities uses minimum level of service standards which have been established within the Lee County Comprehensive Plan. Those standards state that county sewage treatment plants will have the capacity to treat and dispose of 200 gallons per day per “Equivalent Residential Connection” (ERC) during the peak month. For mobile homes, the minimum level of service standard is 150 gallons per day and for recreational vehicles it is 120 gallons per day.

The town’s new comprehensive plan should use sewer standards comparable to those used for potable water, based in the same manner on observed usage rates adjusted “per ERC” rather than per person. A simple and uniform standard would be 175 gallons per day per ERC (based on 87½ gallons per person per day, times 2 people per typical unit). Since no further mobile home or recreational vehicle developments are expected, separate standards are not needed for them.

Table 8-6 displays the forecasted sanitary sewer demand for the Town of Fort Myers Beach for the two planning periods of this comprehensive plan. Assuming a growth of 411 dwelling units by the end of the first five-year planning timeframe in 2003, additional forecasted sanitary sewerage demand will be approximately 71,925 gallons per day using the 175-gallons-per-day standard. At buildout, an additional 617 dwelling units are forecasted to require an additional 107,975 gallons per day of

sanitary sewerage treatment capacity. These additional demands are only a small portion of the available capacity of the wastewater treatment plant (6,000,000 gallons available minus 3,436,000 gallons used during the busiest period).

Table 8-6 — Forecasted Sanitary Sewer Demand for the Town of Fort Myers Beach

<i>Year</i>	<i>Total Number of Dwelling Units</i>	<i>Forecasted Number of New Dwelling Units</i>	<i>Additional Forecasted Sewer Demand</i>
1996	7,710 (based on actual building permits)		
2003 (first planning timeframe)	8,121 (forecasted)	411	71,925 gpd
2020 (second planning timeframe)	8,738 (forecasted)	617	107,975 gpd

Source: See Future Land Use Element for permit forecasts

Performance of Existing Facilities

The Fort Myers Beach Wastewater Treatment Plant has been in operation since 1979. It is in good condition, with sufficient treatment capacity but inadequate effluent disposal capacity during extended rainy periods. The utility provides monthly monitoring reports to the Department of Environmental Protection which regulates the operations of the treatment plant. In the past, the plant has made improper discharges into a drainage ditch that is connected to Estero Bay. The Department of Environmental Protection found that this action violated state requirements, and Lee County was required to halt the illegal discharges. A \$20,000 fine was levied, and Lee County Utilities was forced to increase the effluent disposal capacity during peak periods.

Expansion Needs

Lee County Utilities reported no major problems specific to the town regarding facility replacement, expansion, or siting of new facilities. The treatment plant was recently upgraded with the addition of two chlorine contact tanks, which increase disinfection retention time. Private developers are installing a new sewage force main across Big Carlos Pass in order to replace a failing on-site sewer plant at the Grandview Resort and to serve two new buildings being constructed nearby on Black Island.

Lee County is installing a \$2.7 million deep-well injection system to increase disposal capacity during periods when demand for irrigation water is insufficient. Deep-well injection of sewage effluent appears to be environmentally sound but it is very expensive and is a waste of valuable irrigation water; it should be used only to avoid overflows into surface waters.

The Town of Fort Myers Beach contains many of the major users of this sewer service and it lies directly downstream of any effluent discharges into tidal waters. Both of these roles justify the town government's involvement in policy matters concerning sewer service. Although the town does not directly franchise or control this service, its long-range goal should be a significant role in its operation.

SOLID WASTE

The Lee County government uses a public-private partnership for collection and disposal of solid wastes throughout the county. All of the household garbage that is collected is taken by private contractors to the Lee County Resource Recovery Plant. There it is burned to reduce its volume and produce electricity; the ash residue is then transported to the county landfill. This ash product takes up 90% less room by volume in the landfill than

the unburned garbage would, greatly extending the life of the landfill.

Solid Waste Collection at Fort Myers Beach

Kimmins Recycling, Inc. is the primary solid waste collector for the Town of Fort Myers Beach. Its franchised service area includes the town as well as other locations within Lee County. Figure 5 delineates Kimmins Recycling, Inc.'s entire service area.

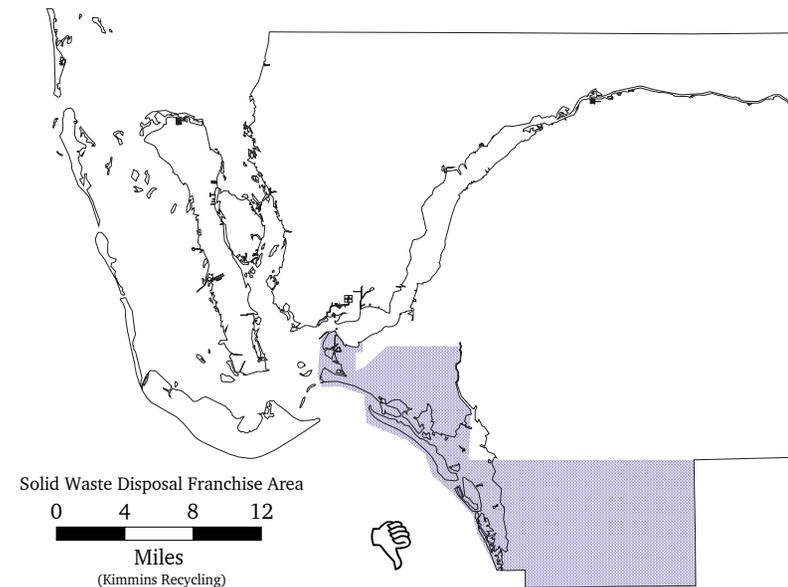


Figure 5, Solid waste disposal franchise area

Prior to the expiration of Lee County's existing contract with Kimmins, the town should research the alternative of seeking its own competitive bids from solid waste haulers rather than staying with the county's larger contract. The town may be able to obtain service better suited to its own needs, or may be able to reduce costs by eliminating superfluous county contracting requirements or using a smaller hauling company. Conversely, separate contracting might increase costs due to losses of

economies of scale. Nonetheless, the alternative of separate competitive bids should be explored prior to expiration of the existing contract.

Lee County has adopted a minimum level of service standard for solid waste disposal of 7 pounds per person per day for proper collection, disposal, and management. The Town of Fort Myers Beach can simply adopt that same standard.

Landfill Operations

The Town of Fort Myers Beach does not need to own or operate a landfill because it has full use of Lee County's modern waste disposal facilities. Lee County's landfill is the Gulf Coast Landfill located on SR 82 south of Colonial Blvd., operated by Waste Management, Inc. of Florida. The remaining lifespan of the Gulf Coast Landfill filled to its permitted height of 100 feet above sea level, is estimated to be the years 2000 to 2004, assuming renewal of its DEP operating permit.

The Lee/Hendry Landfill is a Lee County-owned landfill that is currently under construction. Phase I is scheduled for completion in 1997. The estimated ultimate capacity of the Lee/Hendry Landfill to receive solid waste is 40 years, assuming continued renewal of necessary permits and construction of additional phases at the landfill. However, no additional phases are currently planned.

Because of the high water table found throughout southwest Florida, landfills are created by depositing layers of waste and other fill material *on top of* the existing ground surface. In Lee County's case, ash from the Resource Recovery Plant is now the primary waste product which is deposited. The ash accumulates over time and is formed into a mound. Upon reaching a designated height, the landfilled waste receives a final cover of soil and vegetation. Landfill closures are governed by Rule 62-701 of the *Florida Administrative Code*.

Resource Recovery Plant

The Resource Recovery Plant is also known as a waste-to-energy plant because it produces electricity from burning trash. The plant receives, on average, 900 TPD (330,000 tons per year), and produces up to 39.7 megawatts of power, which is enough electricity for about 25,000 homes (more than all of the homes in Bonita Springs and Lehigh Acres combined). The resource recovery plant is forecasted to reach its current capacity of 1,200 TPD within the next 10 years. Additional disposal capacity is available for approximately 100 TPD of construction debris at the Gulf Coast Landfill.

The resource recovery plant has a forecasted operating lifespan of 30 years, with sufficient capacity to serve all of Lee County until 2027. The projection of plant life is based on engineering design, operational techniques, forecasted population, and average per capita solid waste generation.

The resource recovery plant is equipped with extensive air pollution control systems. It is the first operational plant in the United States to be built with a permanent activated carbon injection system for controlling mercury emissions. The environmental control systems were designed with the new, more stringent *Clean Air Act* standards in mind, and emissions have met the proposed standards without any modification. It was the only waste-to-energy facility in the world to win the *Power Engineering* and *Power Engineering International* magazine's 1995 Project of the Year Award.

Recycling Program



The State of Florida mandated a thirty-percent reduction in municipal solid waste deposited at landfills beginning in 1988. Fifteen percent of this reduction was to come from glass, aluminum, steel cans, plastic, and newspaper recycling. The other fifteen percent would come from the recycling of yard trash, appliances, construction and debris material, and automobile tires. The Town of Fort Myers Beach needs to continue in the successful county-sponsored recycling program.

This voluntary program consists primarily of the residential curbside collection of recyclables utilizing 90-gallon carts and other suitable methods. The town's franchised solid waste hauler, Kimmins Recycling, Inc., provides curbside collection of paper, aluminum, metal, plastic, and glass products. The hauler sorts the recyclables at the curb each week and then transports the recyclables to markets located in Fort Myers. Lee County's current recycling rate is 33%, which exceeds state recycling requirements. The town should strongly encourage all of its residents, visitors, and businesses to participate to the greatest extent possible in the existing voluntary recycling program.

Residential wastes are collected using a 1-1-1 system with once-per-week garbage, recycling, and yard waste collection. Commercial collection is mandatory for businesses and institutions. Commercial wastes are primarily generated by retail stores, restaurants, and resorts.

Fees

Residents of the Town of Fort Myers Beach pay for garbage collection, recycling, and disposal through an annual assessment (garbage bill) from the Lee County Tax Collector. Other residents (of condominiums and mobile home parks) and

businesses pay their hauling company directly for collection and part of the disposal expenses.

The fixed operating expenses of the county-owned solid waste disposal facilities are paid to the Lee County Tax Collector as a special assessment (separate bill). The fixed disposal facility expenses are divided equally among all Lee County areas, and each customer pays their share. Figure 6 shows the proportion of the solid waste fee used for different purposes.

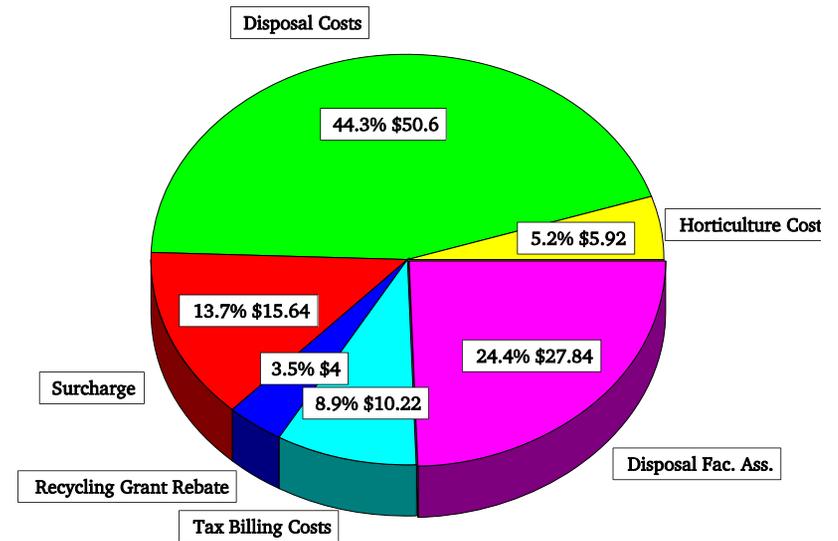


Figure 6, Annual residential solid waste rates FY 1996-97
(source, Lee County Solid Waste Rates: FY 96/97, 1996)

Residents of the town received their first solid waste assessment in 1995. Property taxes were reduced when the assessment was added. Table 8-7 shows the unincorporated Lee County solid waste rate summary for fiscal year 1996-97. This table details the fees, recycling rebates, and collection fees for unincorporated

Lee County. Table 8-8 compares household disposal costs from property taxes versus the new special assessment. The assessment costs less than a property tax-based assessment under the assumptions included in this table.

**Table 8-7 — Unincorporated Lee County
Solid Waste Rate Summary FY 96-97**

<u>Solid Waste Rate</u>	<u>FY 96-97</u>	<u>% Increment</u>
Disposal Tipping Fee	\$49.61/Ton \$50.60/HH	4%
Surcharges	\$12.90/Ton \$15.74/HH	(30%)
Recycling Grant Rebate	\$4.00/HH	NA
Residential Collection Fees	\$73.91 - 91.05/HH	3%
Billing Costs (Includes Late Payment Allowance)	\$10.22/HH	110%
Average Residential Bills	\$189.67/HH	(5%)

HH = household

Source: "Lee County Solid Waste Rates, Fiscal Year 96/97," 1996

Hazardous Waste

The Lee County Department of Solid Waste sponsors several "household hazardous waste collection days" throughout the year. Many of these products can be harmful or fatal if swallowed. These are items such as fluorescent tubes, paint, paint thinner, drain cleaners, automobile oil, thermostats, polishes, strippers, car/boat batteries, pool chemicals, pesticides, float switches, or anything marked corrosive, toxic, flammable, or reactive. The town may be able to sponsor an occasional pick-up day right on Estero Island for these products.

Existing and Forecasted Solid Waste Needs

There are no major problems of development or physical deterioration which will adversely affect solid waste collection within the town over the next two planning timeframes. The waste-to-energy facility is new and has very modern equipment, and the new landfill for the safe disposal of the ash has capacity until 2027.

Lee County has implemented a successful recycling program and has plans to expand it. By 1991, the county's 115,000 single-family homes were involved in the recycling program. Currently, all single-family homes as well as all multi-family complexes (apartments, condominiums, and mobile home parks) have the opportunity to participate in the recycling program. However, motels are not included. In 1995, 33% of the county's total waste stream was recycled. In comparison, only 5% was recycled in 1989. The county is working toward a voluntary goal of 50% by the year 2000.

The quantity of solid waste will grow with the town's population. Table 8-9 and Figure 7 display population and solid waste forecasts through the year 2020. It is clear that the town's proportionate capacity of the Resource Recovery Plan and new landfill are minuscule, and that adequate service will be available for both planning timeframes.

These forecasts include solid wastes that will be recovered and recycled. In order to more accurately project the life expectancy of the waste-to-energy facility, recycled wastes must be accounted for because they will not be incinerated. In 1995, the Town of Fort Myers Beach achieved an adjusted recycling rate of 33 percent, based on Lee county's results. The adjusted recycling rate places goals on specified categories of recyclables; therefore, actual recyclable percentages may exceed those ceilings.

**Table 8-8 — Town of Fort Myers Beach
Comparison of Household Disposal Costs
Property Tax vs. MSBU Assessment**

Collection Options	Property Tax FY 95-96	MSBU Assessment FY 97-98
Disposal Facility Assessment Rate/Ton	\$27.29	\$27.29
Total Revenue Required	\$7,835,000	\$8,426,300
Payment Basis	Property Value	Disposal Tonnage
Tonnage Disposed		6,180
Fort Myers Beach Payment Share in %	5%	2%
Fort Myers Beach Total Payments in \$	\$391,750	\$168,652
Unincorporated Lee County Payment Share in %	58%	65%
Unincorporated Lee County Total Payments in \$	\$4,544,300	\$5,447,095
Average Household Tonnage	1.07	1.02
Estimated Tax Millage	0.405	
Fort Myers Beach Household Annual Facilities Payment in \$	\$192.38	\$33.84
Tipping Fee, \$/Ton (Escalated)	\$47.70	\$51.10
Disposal Payment in \$	\$51.04	\$52.12
Total Household Annual Disposal Payment in \$	\$91.54	\$85.96

Source: "Lee County Solid Waste Rates, Fiscal Year 96/97" and "Finding Sound Solutions -- Solid Waste Rates, FY 97-98"

"MSBU" means Municipal Services Benefit Unit.

**Table 8-9 — Solid Waste Forecasts by Population:
Collection of Total Solid Waste, 1990 — 2020**

<u>Year</u>	<u>Total Dwelling Units</u>	<u>Effective Population</u>	<u>Tons of Solid Waste Per Day</u>	<u>Tons of Solid Waste Per Year</u>
1990	7,420	8,826	30.9	11,279
1996	7,710	9,171	32.1	11,717
2003	8,121	9,660	33.8	12,337
2020	8,738	10,393	36.4	13,286

Sources:

— Dwelling units count for 1990: compilation of STF1A data for Census Tract 601, BG 3-7 plus Census Tract 602, BG 1-6

— Dwelling unit estimates for 1996, 2003, 2020: Future Land Use Element

— Effective population estimated as follows: Peak population = [(total dwelling units x 38.2% dwelling units occupied by permanent residents) + (total dwelling units x 61.8% x .33 allowing for 4 months out of year 100% dwelling units occupied)] x 2.03 persons per household

— Solid waste forecasts: based on standard of 7 pounds per person per day

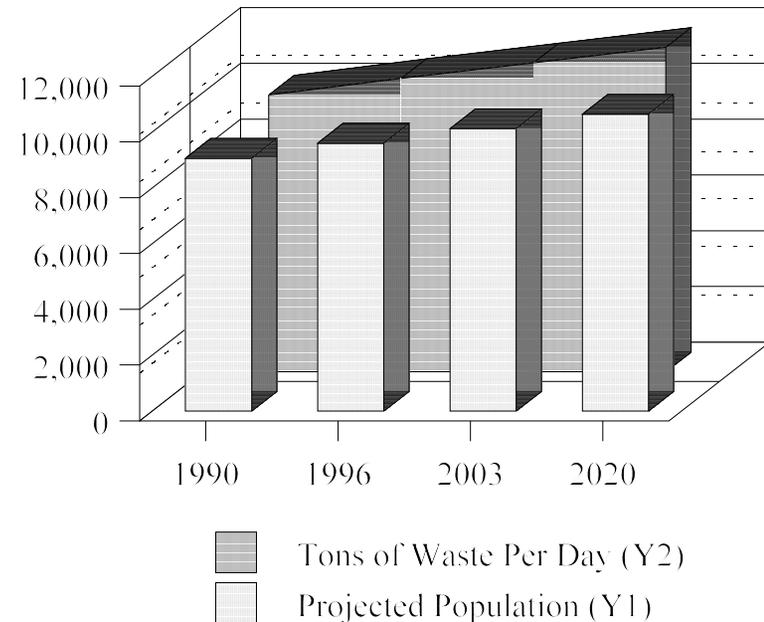


Figure 7, Tons of waste and population growth

Expansion Needs

The preceding analysis shows that Lee County's current system of incineration and landfilling is adequate for a 30- to 40-year period. There are no apparent problems with this system. Fort Myers Beach may wish to separately franchise its trash hauler if, after careful examination, there would be benefits to the town in this course of action.

UTILITIES AND CONCURRENCY

The Town of Fort Myers Beach must ensure that infrastructure and services are provided in order to support new development. This process is implemented through a concurrency management system, a requirement of Florida's growth management legislation. A concurrency management system coordinates the issuance of development orders/permits and certificates of occupancy with continuing measurements of infrastructure and services needed to support development (see the Capital Improvements Element). For potable water, sanitary sewer, and solid waste disposal services, the town depends heavily upon reports furnished by the utility providers to measure availability according to the standards contained in this plan.

The inventory and analysis of utility providers indicates that adequate services can be expected to be available to serve new development through build-out of Fort Myers Beach. Even though there appears to be no problem with the provision of these services, the town must still monitor continuing reports through its concurrency system to ensure that no unexpected problems are developing.

GOALS - OBJECTIVES - POLICIES

Based on the analysis of utility services in this element, the following goals, objectives, and policies are adopted into the Fort Myers Beach Comprehensive Plan:

GOAL 8: To improve the existing systems that provide safe drinking water, irrigation water, sewer service, and solid waste disposal in order to reduce environmental impacts on land and water while keeping costs as economical as possible.

OBJECTIVE 8-A RELATIONS WITH UTILITIES — Increase the town’s role in influencing utility providers about service alternatives, facility locations, and conservation of resources.

- POLICY 8-A-1 Mandatory customer connections to water and sewer utilities shall continue to be the policy of the Town of Fort Myers Beach.
- POLICY 8-A-2 When considering improvements to utility systems, utility companies should expect involvement by the town in evaluating alternatives and seeking the best interests of utility customers and other people and resources affected by those decisions.
- POLICY 8-A-3 The town shall seek a significant role in policy matters concerning Lee County Utilities’ sewer service, based on the town’s dual roles as a major user of this service and its location directly downstream of any effluent discharges into tidal waters.
- POLICY 8-A-4 The town’s potable water supply distribution system is supplied by Lee County Utilities under terms set forth in a bulk water agreement approved in August 2001. Lee County Utilities

has a long-term expansion plan that details existing and proposed uses of traditional and alternative water supply sources, in accordance with SFWMD’s Lower West Coast Water Supply Plan Update (July 2006). Lee County Utilities’ expansion plan, the Water Supply Facilities Work Plan, was last updated in July 2008 and is incorporated herein by reference.

- POLICY 8-A-5 The town shares a common interest with Lee County government in ensuring that potable water supplies will be sufficient to meet future demands. The town will coordinate with Lee County on an ongoing basis on the following matters:
1. Analyzing peak season demands and providing sufficient allocations of water.
 2. Using consistent population projections and level-of-service standards.
 3. Conserving water by adopting a conservation rate structure (see Policy 8-C-6).
 4. Implementing a leak detection program and replacing obsolete portions of the water supply system.

OBJECTIVE 8-B LEVELS OF SERVICE — Maintain minimum acceptable levels of service for potable water, sanitary sewer, and solid waste disposal.

POLICY 8-B-1 The minimum acceptable level of service standards for utility services within the Town of Fort Myers Beach shall be:

- i. **for potable water service:**
 - (a) available supply, treatment, and delivery capacity of 260 gallons per day per equivalent residential connection (ERC), and delivery of potable water at a minimum pressure of 20 pounds per square inch (psi) at the meter anywhere in the system.
 - (b) Prior to issuance of building permits, the town must obtain assurances from Lee County Utilities that an adequate bulk water supply will be available to the town’s water distribution system to serve new development at these same rates.
- ii. **for sanitary sewer service:** available capacity to collect, treat, and dispose of wastewater of 175 gallons per day per equivalent residential connection (ERC).
- iii. **for solid waste disposal service:** the ability to collect and manage 7 pounds of municipal solid waste per person per day.

An ERC is defined as the total number of meter equivalents using the methodology of the Florida Public Service Commission (and is synonymous with their use of the term “equivalent residential units”). ERCs are used to convert commercial and industrial water or sanitary sewer use into standard units that are based on typical rates of use in dwelling units.

POLICY 8-B-2 The town will enforce these levels of service under the concurrency requirements of Florida law by requiring one of the following before issuance of development permits:

- i. development orders or building permits will be issued subject to the condition that, at the time of the issuance of a certificate of occupancy, the necessary facilities and services must be in place and available to serve the development being authorized; or
- ii. at the time development orders or building permits are issued, the necessary facilities and services are guaranteed to be in place and available to serve the development at the time of issuance of a certificate of occupancy through an enforceable development agreement pursuant to Section 163.3220, *Florida Statutes*, or through an agreement or development order pursuant to Chapter 380, *Florida Statutes*.

POLICY 8-B-3 The concurrency management system in the town’s Land Development Code shall be amended to requirement the assessment of water supply capacity, in addition to treatment plant capacity, when determining compliance with the potable water level of service specified in Policy 8-B-1.

OBJECTIVE 8-C WATER CONSERVATION — Take all reasonable steps to conserve potable water supplies, aiming for a 10% per-capita reduction in water use by 2005.

- POLICY 8-C-1 The town shall, by resolution, encourage Lee County Utilities to expand its facilities and agreements for recycling treated wastewater for reuse as irrigation water; deep-well injection of surplus wastewater should be limited to emergency use only.
- POLICY 8-C-2 The town shall consult with the South Florida Water Management District to obtain suggestions on regulations to conserve water before adopting such regulations.
- POLICY 8-C-3 The town will use drought-tolerant vegetation, xeriscape techniques, recycled water, or other available methods for landscaping publicly owned lands, and encourages private landowners to do the same to reduce usage of potable water for irrigation purposes.
- POLICY 8-C-4 The town will continue to require, through its building codes, the use of water-saving plumbing fixtures in all new development and redevelopment.
- POLICY 8-C-5 The town will support public educational programs that encourage water conservation practices.
- POLICY 8-C-6 The town should consider implementing a strong conservation rate program where large water users pay a higher rate per gallon than is charged to frugal users.

OBJECTIVE 8-D SOLID WASTE — Add recycling pickup at commercial enterprises, and maintain an efficient solid waste system that stresses recycling of reusable materials plus safe and efficient disposal of that which cannot be recycled.

- POLICY 8-D-1 The town will ensure the routine collection of residential and commercial wastes; special collections of bulky items; separate curbside and bulk collection of recyclable materials; and separate collection of yard wastes and construction debris.
- POLICY 8-D-2 The town will continue its participation in Lee County's program of recycling, incineration, and disposal of solid wastes.
- POLICY 8-D-3 The town will seek to expand the current program to collect recyclables from motels and other tourist lodgings, and to collect and recycle additional materials.
- POLICY 8-D-4 The town will consider an ordinance requiring mandatory recycling of solid waste if voluntary participation does not achieve standards set by state or regional agencies.
- POLICY 8-D-5 The town will evaluate methods of improving the cost-effectiveness of solid waste collection, and may consider franchising the collection process independently of Lee County.
- POLICY 8-D-6 The town will cooperate with Lee County in implementing programs to decrease the volume of solid waste requiring landfilling (e.g. source separation of material which can be reused, recycled, or disposed of in another manner). The town shall also support and assist in programs to reduce roadside litter and illegal dumping, such as Keep Lee County Beautiful's annual coastal cleanups.

POLICY 8-D-7 The town will cooperate with the Lee County in educating businesses and residents on the proper management of hazardous wastes and the provision of convenient disposal opportunities for the benefit of the town's citizens and visitors. This cooperation shall include distributing written material prepared by Lee County and publicizing their regular schedule of household hazardous waste collection days.

APPENDIX: INFLUENCE OF LEGISLATION

The town's utility providers must construct and operate potable water and sanitary sewer facilities in accordance with all applicable federal, state, and local regulations. Most of the existing regulations pertaining to water quality and sewage treatment are based on federal guidelines mandated by the United States Environmental Protection Agency (EPA). Minimum drinking water standards are defined under Public Law 93-423. This law, also known as the "Safe Drinking Water Act," establishes federal water quality standards for the protection of water for public uses, including operational standards and quality controls for public water systems.

In order to comply with the federal regulations for water quality, the State of Florida has adopted legislation pursuant to Chapter 403.850, *Florida Statutes*. The "Florida Safe Drinking Water Act" meets the same federal primary and secondary water quality standards required for public health and recommended for aesthetic quality. The State of Florida has also implemented specific laws for classifying and regulating public drinking water systems under Chapters 62-501 and 10D-4 of the *Florida Administrative Code*.

The federal regulations governing wastewater treatment are set forth under Public Law 92-500 or the "Federal Water Pollution Control Act." This law requires that wastewater treatment programs be established to regulate water quality limits for effluent disposal and to control "point source" pollution. These provisions have been implemented at the state level under Chapter 403.086, *Florida Statutes*, and Chapter 62-600, *Florida Administrative Code*. Separate standards for on-site sewage treatment and disposal systems are established in Chapter 10D-6, *Florida Administrative Code*.

State requirements pertaining to the management of water resources and the regulation of consumptive water use have been adopted by regional water management districts pursuant to Chapter 40D-2, *Florida Administrative Code*. The purpose of Chapter 40D-2 is to implement the provisions of Part II of Chapter 373, *Florida Statutes*,

and the State of Florida Water Policy. Additional rules relating to water use are found in Chapter 40D-3, entitled "Regulation of Wells"; Chapter 40D-8, entitled "Water Levels and Rates of Flow"; and, Chapter 40D-21, entitled "Water Shortage."

Numerous federal, state, and local laws and rules regulate solid waste disposal. In addition to mandates, organizations such as the Southwest Florida Regional Planning Council have guidelines and policies with which Fort Myers Beach's solid waste operations must be consistent. Among these rules and plans are chapters 187 and 403 *F.S.*, the Federal Resource Conservation and Recovery Act, Rules 9J-5 and 62-701, the *Florida Administrative Code*, and the *Regional Strategic Policy Plan*.

Chapter 403 (Part IV) of the *Florida Statutes* contains the 1988 Solid Waste Management Act. This act greatly altered the management of solid waste for all local governments, specifically requiring all local governments to start recycling programs in order to reduce the amount of waste being deposited into landfills by thirty percent (30%). In addition, counties are required to recycle at least fifty percent (50%) of newspapers, aluminum cans, glass, and plastic bottles. The act also addresses the disposal of various other wastes such as lead-acid batteries, used oil, and tires.

The Resource Conservation and Recovery Act (RCRA) was adopted by Congress in 1976 and serves as the Federal legislation which regulates the disposal of municipal solid waste by setting minimum standards for waste disposal facilities. It also established resource recovery as a national priority and mandated that efforts to better utilize and manage the recycling of wastes were needed.

Rule 9J-5, *Florida Administrative Code*, specifies the requirements for local government comprehensive plans. It requires the Town of Fort Myers Beach to include an infrastructure element with a solid waste section and goals, objectives, and policies relating to solid waste. The Rule requires adoption of minimum level of

service standards and concurrency requirements indicating that the Town of Fort Myers Beach will not issue development orders or building permits unless facilities and services are in place to manage a development's impact.

Chapter 62-701, *Florida Administrative Code*, outlines specific state requirements regarding the operation and closure of landfills, solid waste permits, and the handling of special wastes. This rule also regulates the disposal and classification of waste, and prohibits the disposal of yard wastes in landfills with liners.

The Town of Fort Myers Beach has currently adopted Lee County regulations which govern solid waste in order to be consistent with these state, federal, and regional guidelines.

The State of Florida's comprehensive plan (Chapter 187, *Florida Statutes*) seeks to ensure that sewer, water, and solid waste disposal services are provided in accordance with the aforementioned regulations. The plan has several goals relating to utility services. Overall, the plan seeks to safeguard the environment from the effects of pollution.

Chapter 163, Part II, *Florida Statutes* is known as the local government comprehensive planning act. It requires local governments to adopt comprehensive plans which are reviewed and approved by the state's land planning agency, the Department of Community Affairs. This element is one of those required by Chapter 163.

The Florida Department of Community Affairs also requires local governments to incorporate a concurrency management system in accordance with Chapter 163, Part II, *Florida Statutes*. For the Utility Element, potable water and sanitary sewer facilities and solid waste collection and disposal must be in place or available to serve new development at the time a certificate of occupancy is issued by the local government.

The Southwest Florida Regional Planning Council has a Strategic Regional Policy Plan (SRPP) for this region. This plan identifies several issues and policy statements which have regional significance. These regional issues and policies cover "Surface Water Management," "Protection of Groundwater Resources," "Planning for Public Facilities," and "Protection of Water Supply" to name a few. The goals, objectives, and policies of the Utility Element should be consistent with these federal, state, and regional laws and plans.

According to the SRPP, "Planning for Public Facilities" section, sewer (facilities and service), water, and solid waste are categorized as "primary" public facilities in the SRPP, which are required by the public on a daily basis. Region-wide, population growth will continue to strain existing facilities and services. Seasonal populations make facility planning very difficult. It is hard to ensure that development utilizes existing unused service capacities before resorting to the construction of new facilities.

The SRPP indicates that local governments within the region should support and establish recycling and hazardous waste disposal programs; transportation of hazardous waste products is regulated; personnel working with hazardous wastes be trained and properly protected; and local governments properly collect solid wastes and operate disposal facilities.

Solid waste management programs in the Region consist of landfills, transfer stations, and yard trash compost sites. An SWFRPC study indicated limited effectiveness for a single six-county solid waste disposal system. As a result, alternatives such as the Lee County Resource Recovery Facility and the currently under construction - Lee/Hendry Landfill have come to fruition.