

*Solid Waste*  
FOUNDATION DOCUMENT

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## 7-1 INTRODUCTION

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The Solid Waste Element provides an understanding of both solid waste and hazardous wastes in the County. On average, each person within Santa Rosa County produces 40-58.18 pounds of solid waste per day. Although hazardous waste disposal is not a large component of the total waste generated, several large and small hazardous waste generators are located within the County.

The purpose of this sub-element is to determine the current and projected needs of Santa Rosa County in order to provide adequate solid waste facilities to meet those needs. Analysis and projected levels of service are based on an inventory of existing facilities and capacities.

### A. Organization of the Element

This element is divided into four major sections, the Introduction, Terms and Concepts, Existing Regulatory Framework, and Data and Analysis. The Terms and Concepts define the terms applicable to solid waste, which are utilized throughout this document. The Existing Regulatory Framework describes the current federal, state, regional and county regulations. The Data and Analysis section identifies the conditions of the County's solid waste disposal facilities. The Needs and Assessments subsection describes the County's solid waste facility capacity, population projections, and provides current and projected needs assessment at the recommended level of service for both solid and hazardous waste.

### B. Relationship to Other Elements of the Comprehensive Plan

There are several key linkages between the Solid Waste Element and other elements of the Comprehensive Plan.

The *Future Land Use Element*, as an overall blueprint for managing growth in the County, defines the direction and intensity of future growth and development, and will strongly influence the analysis of future solid waste disposal demand within Santa Rosa County.

The *Conservation/Coastal Management Elements* identifies all of the County's natural resources and discusses various preservation and land management techniques, which will help to eliminate various land use conflicts.

The *Intergovernmental Coordination Element* provides opportunities to improve County collaboration and coordination with other agencies such as the Florida Department of Environmental Protection (FDEP) and the U.S. Environmental Protection Agency (EPA).

The *Capital Improvements Element* reflects the County's strategy for the delivery of infrastructure and other public services, which will serve a primary role in growth management and help shape future demand for solid waste collection. In addition, the Capital Improvements Element reflects recommendations, which should support the Goals, Objectives, and Policies of this Element.

The *Infrastructure Element* consists of five Sub-Elements, including the Potable Water, Sanitary Sewer, Natural Groundwater Aquifer Recharge, Stormwater Management and Solid Waste. Together, these Sub-Elements help shape the development trends within Santa Rosa County into the next planning horizon,

thus directly impacting municipal solid waste management and hazardous waste management practices within the area.

## 7-2 TERMS AND CONCEPTS

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Terms included in Appendix B of the Foundation Document are applicable to this element and are identified and described by the Florida Department of Community Affairs, in Rule 9J-5 of the Florida Administrative Code (F.A.C.) and in Section 163.3164, Florida Statutes (F.S.). All other terms and concepts used in this element are consistent with the intent of Rule 9J-5 and Chapter 163, F.S.

*Commercial Waste:* Waste generated by commercial and institutional entities. These wastes have physical characteristics similar to residential wastes, consisting largely of combustible materials such as paper and food waste.

*Composting:* The process by which biological decomposition of the organic constituents of solid waste under controlled conditions occurs.

*Industrial Waste:* Waste generated by industrial processes and manufacturing operations. These can include general industrial housekeeping and support activity wastes, but exclude hazardous wastes.

*Landfill:* The final disposal (burial) site of solid waste that has not been, or cannot be, recycled.

*Large Quantity Generators (LQG):* Generators that produce over 2,200 pounds of hazardous waste per month.

*Leachate:* A liquid that has emerged from solid waste and contains dissolved or suspended materials.

*Municipal Services Benefit Unit (MSBU):* A mechanism to levy and collect special assessments against residential properties to fund the cost of facilities and activities such as, landfills, litter and code enforcement activities, and residential waste collection and curbside recycling.

*Recycling:* Any process by which materials otherwise considered to be solid waste are collected, separated, processed and reused or changed into raw materials or new products.

*Residential Waste:* Mixed household solid wastes, including yard trash.

*Resource Recovery:* The process of recovering usable materials or energy from the municipal solid waste system.

*Small Quantity Generators (SQG):* Generators that produce between 200 and 2,200 pounds of hazardous waste per month.

*Special Waste:* Waste having special characteristics or requiring special handling. These wastes include tires, asbestos, liquids, sludge, containers, oversize bulky wastes, and process fuels.

*Transfer Station:* A facility established to receive and store solid waste, including recyclables, prior to transportation to a processing plant or disposal site.

*Waste Generation Unit:* A weight unit equivalent to 1 ton of solid waste.

*Yard Wastes:* Vegetative matter resulting from landscaping maintenance and land clearing operations. These wastes are generated in both the residential, commercial and industrial sectors.

## *Concepts*

*Solid Waste:* The materials in this sub-element fall under the definition of solid waste as adopted in Section 9J-5.003(125) (Florida Administrative Code, F.A.C.). Rule 9J-5 defines solid waste as sludge from waste treatment plants and air pollution control facilities. Garbage, rubbish, refuse and other discharged materials are also considered solid waste. Any solids, liquids, semi-solids and controlled gaseous materials resulting from domestic, industrial, commercial, mining, agricultural or governmental operations are also defined as solid waste. Solid waste facilities are structures designed for the collection, processing or disposal of solid wastes. Such facilities include transfer stations, processing plants, recycling plants, landfills and other disposal systems.

Solid waste is further defined by the generation source and characteristics of materials composing the waste. Residential wastes are mixed household wastes including yard clippings. Commercial wastes are generated by commercial sources and are similar to residential wastes in composition. These wastes consist of paper and foods from offices, restaurants, retail stores and centers, schools and churches. Industrial wastes are generated by industrial sources and manufacturing processes. Hazardous wastes produced by these sources are not included in solid waste management and need to be treated and disposed of by different methods. Special wastes include wastes that have special characteristics or require special handling or disposal, again excluding hazardous waste. These wastes include oversize bulky wastes, materials generated in demolition and construction activities, abandoned automobiles, batteries, tires, waste oil, sludge, dead animals and septic tank pumpings.

*Hazardous Waste:* This sub-element also addresses hazardous wastes as defined in Section 9J-5.003 (56) (F.A.C.). Hazardous waste is defined as solid waste or a combination of solid wastes, which, because of the composition, may cause or contribute to an increase in mortality or an increase in serious irreversible illness. These wastes include anything that may pose a threat or hazard to human health or the environment when transported, stored or disposed of improperly. Hazardous waste requires treatment or processing in handling and disposal.

## **7-3 EXISTING REGULATORY FRAMEWORK**

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The focus on solid waste and hazardous waste management has been a major concern nationwide, as well as throughout the state of Florida. In Florida, over 90% of the population is dependent on groundwater from aquifers for its water supply. Once pollution reaches the groundwater resources, the aquifers may hold the contaminants for thousands of years, during which time they may continually pollute the groundwater that flows through the area. As a result, the protection of land from contamination is essential in the preservation of the extensive network of aquifers that provide the residents of Santa Rosa County, as well as residents of the state, with the water supplies for the future.

The potential environmental impacts of solid waste facilities have led to the development of an extensive network of permitting requirements at the federal, state, regional and local level. An overall discussion of the regulatory framework that has been developed will help put in perspective the issues that must be addressed in waste management, and to describe what agencies are mandated to help manage waste.

## A. Federal

Federal regulations for solid waste management have primarily focused on adequate disposal of waste, with little emphasis placed on controlling solid waste generation or mandating recycling practices on a nationwide level. Therefore, federal regulations have centered around the potential environmental impacts of solid waste facilities, developing an extensive network of permitting requirements at the federal and state levels. The U.S. Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (DEP) review facilities with impacts on air and water quality. In contrast, in areas where dredging and filling may occur, the U.S. Army Corps of Engineers (USACE) must also review the facilities.

In relation to hazardous waste regulation on the federal level, the United States established the "Resource and Recovery Act" (RCRA)(US Public Law 94-580) in 1976. The Act established a means of monitoring hazardous waste by directing the EPA to develop a national program to regulate and manage the production and disposal of hazardous waste and provide incentives for states to adopt consistent programs. The RCRA further required the EPA to establish standards necessary to protect the human health and the environment from hazardous and toxic waste. The RCRA gives States with approved programs primary responsibility for hazardous waste management. Under this Act, the EPA is responsible for developing regulations in four major areas, which include:

- 1) the establishment of a manifest system to track the movement of hazardous waste from "cradle to grave;"
- 2) development of criteria to identify what constitutes a hazardous waste, and a listing of hazardous wastes;
- 3) promulgation of standards for generators, transporters, owners and operators of treatment, storage and disposal facilities for hazardous waste with permit requirements for all such facilities; and
- 4) the establishment of state-based waste management programs.

In addition, the RCRA sets guidelines for the development of solid waste management plans, prohibits open dumping (while requiring the closure or upgrading of existing dumps), and regulates underground storage tanks. The Act also encourages public participation in the regulatory process. Regulations are enforced through civil penalties, civil actions for injunctive relief and judicial penalties. RCRA specifies that generator standards include specific requirements for the record keeping, reporting, use of appropriate containers, container labeling, providing information on the chemical composition of the waste and compliance with the manifest system. Similarly, transporter standards also include record keeping requirements, labeling requirements, requirements for compliance with the manifest system. These standards also restrict the transportation of hazardous waste to permitted facilities only. The Hazardous and Solid Waste Amendments of 1984 serve to expand and strengthen these provisions and broaden those subject to federal hazardous waste regulations to include small quantity generators (SQGs).

In 1998, the U.S. EPA established the National Comprehensive Emergency Response and Compensation Liability Act (CERCLA), also known as the EPA "Superfund Program." This act gave the EPA the authority to respond to incidents requiring hazardous waste site clean up and emergency mitigation and provided funding for site clean up. The Act also defined the liability of a business engaged in hazardous waste generation, transport and disposal, provided for enforcement measures, and establishes priority of the sites and selects sites for clean-up and mitigation when needed.

## **B. State**

To parallel the legislative efforts of the EPA, Florida has taken sound steps in managing solid and hazardous waste generation and disposal within the state boundaries. Chapter 403.700, F.S., has delegated regulatory responsibility on the state level to the Department of Environmental Protection (DEP). The applicable DEP regulations governing solid and hazardous waste facilities are contained respectively in Chapter 62-700 and 62-730, F.A.C. In addition, surface water facilities require permit review by the regional water management district (Northwest Florida), which are also responsible for state level review for water quality and quantity impacts.

In 1980, the Florida Legislature passed the Florida Resource Recovery and Management Act (FRRMA). This act adopted the federal guidelines and directed the Florida Department of Environmental Protection (FDEP) to develop and implement a hazardous waste management program. Amendments to the FRMMA in 1983 provided directions and funds to establish a cooperative hazardous waste management program between local, regional and state levels of government. Regulation of hazardous wastes by the Department of Environmental Protection is performed under Chapter 62-730, F.A.C. This section contains requirements for Treatment, Storage and Disposal (TSD) Facilities, Large Quantity Generator (LQG) facilities, Small Quantity Generator (SQG) facilities, and Conditionally-Exempt Small Quantity Generator (CESQG) facilities.

In 1988, the legislature passed the Solid Waste Management Act titled "An Act Relating to Waste Management" (Chapter 88-130, F.S.) pertaining to a wide variety of solid waste issues. The Act was designed to reduce the amount of waste being generated by the public and encouraged recycling, composting and other methods of solid waste management and resource recovery. The basic goal was to reduce the amount of solid waste by 30% before it is incinerated or landfilled. It provided for grants to assist local governments in achieving this goal and stipulated that governments that fail to implement recycling programs will be ineligible for such grants.

In addition, impacts on air and water quality are reviewed by FDEP, along with the U.S. EPA. Similarly, actual construction and operation of solid waste facilities require further permits and review by the State Department of Environmental Protection (FDEP).

## **C. Regional**

The Northwest Florida Water Management District (NFWFMD) implements regional regulations relevant to the Solid Waste Sub-Element. These regulations include the issuance of consumptive use permits (CUPs) and state level review for water quality and quantity impacts, as discussed in the previous section (State level regulations).

## **D. Local**

Solid waste planning, regulation, and management on the local level occurs through the Santa Rosa County Public Works Department, which operates under state regulations. The Public Works Department is responsible for processing permit applications for new facilities and ensuring existing facilities are operating properly.

Chapter 18 of the County's Code of Ordinances regulates the accumulation, collection, transportation and disposal of solid waste in the County. Chapter 10 of the Code of Ordinances regulates the accumulation, collection, transportation and disposal of hazardous waste in the County.

## 7-4 DATA AND ANALYSIS

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### A. Existing Conditions

The Central Landfill, which was originally permitted in 1977, is owned and operated by the County under the authority of the Santa Rosa County Public Works Department. The landfill consists of 593 total acres. The most recent permit renewal was in December 2001 for 57.5 acres of Class I and 24.47 acres of Class III over top of the old Class I facility. The Class III section replaces the Class III Landfill on Carroll Road that closed in August 2001. The Class III section includes an air curtain incinerator for the burning of clean wood waste.

In addition to the Class III Landfill on Carroll Road, there have been three (3) other landfills that have closed in the County. The North Landfill (Munson) closed in August 1988. The Northwest Landfill (Jay) closed in August 1989; however, the site continues to be used as a transfer station for the northern part of the County. The Holley Landfill closed in August 1992. All these landfill closures were in compliance with existing rules and regulations. An illustration of all of the active and abandoned landfills and transfer stations is shown in *Map 7-1* (Appendix A)..

Traditionally, sanitary landfills have been an acceptable disposal method for solid waste. At these sites waste is deposited in the landfill, spread in thin layers or compacted to the smallest volume possible and then covered with soil or buried in the ground. With the passage of the Resource Conservation and Recovery Act (RCRA), a more comprehensive approach to solid waste disposal was achieved. The new law required the permits for the design, construction and operation of landfills to include methods of resource recovery. Under this Act, more emphasis was placed on groundwater protection and monitoring, leachate collection and treatment, lining, closure plans and post closure requirements for long term maintenance of the facility.

Under regulations implemented by this Act, new landfills are required to upgrade their facilities and install liner systems. A liner may be constructed of soils with low permeability, synthetic materials or other low permeability materials. It is placed at the bottom of the landfill, with some type of leachate collection system installed directly above the bottom liner. This collection system accommodates the removal and subsequent treatment and disposal of the leachate. Finally, groundwater-monitoring wells are installed at a vertical gradient from the landfill to monitor groundwater contamination. The following is a list of landfill classifications and their required operations:

Class I Landfill	Landfill receiving some putrescible waste with a total disposal in excess of 20 tons or 50 cubic yards (compacted) per day. Daily cover is required.
Class II Landfill	Landfill receiving some putrescible waste with a total disposal of less than 20 tons or 50 cubic yards (compacted) per day. Minimum cover is required every four days.
Class III Landfill	Landfill disposing of non-putrescible waste only. Minimum cover is once per week.

The Central Landfill is a Class I and Class III Landfill meeting the requirements of the above definition and DEP requirements and meets all of the FDEP regulations for lining and operation. The County has an interlocal agreement with the City of Milton for the treatment and disposal of leachate from the Central Landfill at the City's wastewater treatment plant.

Landfilling of solid waste has been acceptable in the past, but more recently this disposal method has become debatable. Publicity concerning groundwater contamination, odors and the ugliness associated with landfills has caused nearby communities and individuals to form strong negative opinions of landfills. The “not in my backyard” (NIMBY) syndrome has made land available for landfills difficult to find and obtain. Landfills will continue to be a necessary method of disposing of waste, but measures can be taken to reduce the amount of waste entering the landfill.

The Central Landfill, the only sanitary landfill located within Santa Rosa County, is owned and operated under the authority of the Santa Rosa County Public Works Department. The site consists of 593 acres with a total cumulative air space volume of 19,868,000 cubic yards. The active sector of the landfill consists of 57.5 acres of Class I and 24.47 acres of Class III and can accommodate in excess of 1,000,000 cubic yards of waste.

### A.1 Predominant Types of Land Uses Served by the Central Landfill Facility

All of Santa Rosa County is required to dispose of solid waste at an approved transfer station or solid waste landfill. The types of land uses in the County which use the solid waste facilities are:

Residential:	88,792 acres
Institutional:	998 acres
Commercial:	2,171 acres
Industrial:	1,897 acres

As can be seen, residential and commercial land uses were the largest solid waste generators in the County, with industrial and institutional land uses being somewhat smaller.

### A.2 Solid Waste Collection

Santa Rosa County provides collection services for the majority of the residents and businesses of the County with 12 private companies. These companies consist of Browning Ferris (BFI), Waste Management, Breeze Sanitation, Community Sanitation, Gandy Garbage Service, J&L, North Santa Rosa Sanitation Service, PAT, Patriot Waste Service, Sunbelt, Red River, Sutton, and Arrow Disposal, Titan Waste Service.

### A.3 Solid Waste Disposal

As previously discussed, the Central Landfill is the only solid waste disposal facility within Santa Rosa County. In an effort to prolong the life span of this facility, the County initiated a recycling program that provides recycling containers located throughout the County. This program has had a significant impact on the demand placed on this facility. Due to the success of the recycling program, and the addition of the Class III section and the air curtain incinerator for clean wood waste, the amount of waste being generated per day is down. The total per capita breakdown of the waste stream within Santa Rosa County is as follows:

Total Solid Waste -	40.58.18 pounds per capita per day (ppcd)
Landfilled Materials -	7.6 5.61(ppcd)
Recyclable Materials -	2.82.57 ppcd
C& D Debris -	4.50.08 ppcd

As illustrated, the removal of recyclable materials and construction and demolition debris tonnages from the waste stream entering the Central Landfill can substantially increase its life span. At the current time, the County expects the landfill to reach maximum capacity in 2065. *Table 7-1* shows the current demand on the Central Landfill.

**Table 7-1  
Current Municipal Solid Waste Demand  
January 1, 2000 – December 31, 2000**

<u>Waste Type</u>	<u>Collected (tons per year)</u>	<u>Recycled (tons per year)</u>	<u>% Recycled<sup>1</sup></u>
Newspapers	4,7826,250	673420	147
Glass	4,2804,256	27626	61
Aluminum Cans	1,108875	117129	1115
Plastic Bottles	3,5762,454	10685	3
Steel Cans	4,5821,200	2,74381	607
C&D Debris	97,20221,081	0	0
Yard Trash	56,22628,760	43,2407,600	7726
White Goods	2,0092,430	1,182,572	5924
Tires	17573	043	059
Other Plastics	18,7624,363	3250	06
Ferrous Metals	4,14057,098	3,77135,175	9162
Non-ferrous Metals	1,0363,500	6071,727	5949
Corrugated paper	7,38233,443	4,74615,658	6447
Office Paper	2,3406,700	4632,321	2035
Other Paper	3,5609,600	1,5771,894	4420
Food	5,08915,043	2330	0
Textiles	1,3142,955	123	01
Miscellaneous	7,43012,000	0600	05
<b>Total</b>	<b>224,993212,081</b>	<b>59,52866,635</b>	<b>2631</b>

<sup>1</sup>. Unadjusted Recycling figures (Population Served - 117,743142,144)

**Source:** Florida Department of Environmental Protection – 2004-2007 Solid Waste Management Annual Report

Residential and commercial/industrial wastes make up the majority of the waste stream in Santa Rosa County. A breakdown of these figures is included in *Table 7-2*. Analysis of this table indicates that the majority of the waste stream in the County comes from single family dwellings. This source of solid waste contributes approximately 4944% of the total solid waste in the County.

**Table 7-2  
Municipal Solid Waste By Generator Type - Santa Rosa County  
January 1, 2000-2007 – December 31, 2000-2007**

<u>Generator Type</u>	<u>Collected (tons per year)</u>	<u>Recycled (tons per year)</u>	<u>Recycled (%)</u>
Residential: Single Family	110,24792,600	29,16932,635	2635
Residential: Multi-family <sup>1</sup>	13,500	3,5714,000	2630
Commercial	101,246105,981	26,78830,000	2628

Total	224,993,212,081	59,528,666,635	2631
1. Includes apartments, condominiums and others	(population served 117,743,142,144)		
Source: Florida Department of Environmental Protection - 2001-2007 Solid Waste Management Annual Report			

#### A.4 Recycling

As waste generation continues to increase, an important part of volume reduction involves recycling. Recycling in Santa Rosa County began in 1990. The County has a voluntary recycling program with recycling bins located throughout the County. In 2000-2007, the County recycled approximately 2631 percent of the total waste stream, as indicated in Table 7-1.

#### A.5 Construction and Demolition Debris

Construction and Demolition debris within Santa Rosa County comprised approximately 439.9 percent of the total waste stream as indicated in Table 1. Due to the nature of these wastes, none were recycled. Also, not all of this waste is disposed at the Central Landfill. There are several licensed C & D facilities located throughout the County. Since not all of this waste is disposed at the Central Landfill, it skews the overall level of service for solid waste. Excluding C & D debris, the level of service for solid waste is 6 pounds per person per day. In addition, this is not household waste, which is the main type of waste used to calculate level of service for solid waste facilities. The portion of this waste that is disposed at the Central Landfill is disposed in the Class III section of the landfill.

#### A.6 Hazardous Waste

The management and disposal of hazardous waste has been a major issue for over two decades. In 1976, the United States Environmental Protection Agency (EPA) was directed to develop the Resource Conservation and Recovery Act (RCRA), which is a national program designed to regulate and manage hazardous wastes and provides incentives for states to adopt programs to regulate hazardous wastes. Additionally, the Agency is responsible for incidents that require site cleanup and emergency mitigation.

In 1983, the Florida Legislature saw a need for water quality regulations to protect the water resources of the state. In response, they created the Water Quality Assurance Act of 1983. A component of this Act addressed the issue of hazardous waste and prohibited the landfilling or disposal of these wastes on the ground in any part of the state. The Act also required local governments to implement a local hazardous waste management assessment program and to identify and designate two areas in each County where a hazardous waste storage facility could be located.

Within Santa Rosa County, hazardous waste has not been a major problem because of the small number of large quantity generators (LQGs). However, in the future the County may be affected because of the increasing number of small quantity generators (SQGs). FDEP regulations, along with those developed by the EPA, require all counties to identify all small and large quantity generators in an attempt to monitor the growth and production of hazardous wastes.

Large quantity generators (LQGs) are those facilities that produce over 2,200 pounds of hazardous waste per month. Under the regulations of the RCRA, all LQGs are required to report production on a two year cycle to the EPA. The data reported for 1999-2007 is reflected in *Table 7-3*, on the following page. The numbers that are reflected in the table are those that were submitted by each individual producer within the County. At the current time, there are four LQGs, which include Air Products & Chemicals, Inc.; Fabbro Marine Group; Odom Fiberglass, Inc.; and Sterling Fibers, Inc.

**Table 7-3  
Hazardous Waste Large Quantity Generating Facilities  
Santa Rosa County, 1999-2007**

<i>Generating Facilities</i>	<i>Air Emissions</i>	<i>Surface Water Discharges</i>	<i>Underground Injections</i>	<i>Releases to Land</i>	<i>Total Releases (pounds)</i>
Air Products & Chemicals, Inc. Taminco Methylamines, Inc.	528,524,776.00	143,6480	0	117,246,320.00	789,418,800
Fabbro Marine Group	30,882,175.00	0	0	0	30,882,175.00
Odom Fiberglass, Inc.	18,541	0	0	0	18,541
Sterling Fibers, Inc.	45,866	0	320,736	43,831	410,433

**Source:** U.S. Department of Environmental Protection, Office of Environmental Information, 1999-2008

Conditionally exempt small quantity generators (CESQG) generate less than 220 pounds per month and less than 2.2 pounds of acute hazardous waste per month. Small quantity generators (SQGs) of hazardous wastes produce between 200 and 2,200 pounds per month. The County accepts some household hazardous waste (i.e., paint and batteries) at the Central Landfill and disposes it to outside contract sources. The County does not accept hazardous waste that requires long term or improved storage. The County accepts other hazardous waste one time per year on amnesty day and that waste is collected at remote sites from the landfill. This waste is also disposed of through outside contract sources. This is administered through a cooperative grant program with Okaloosa County. As a result, commercial entities must contract with hazardous waste carriers for the disposal of their wastes. To deal with these SQGs, the State of Florida requires all counties, through the Small Quantity Generator (SQG) Program, to randomly inspect and ensure that commercial generators of hazardous wastes are complying with state requirements.

A study was performed for Santa Rosa County by the West Florida Regional Planning Council (WFRPC) and was completed in 2002. The total waste produced by conditionally exempt and small quantity generators in Santa Rosa County was approximately 1,864,130.177 tons from 1996-2002 through 2002-2007. Lead acid storage batteries, used oil and filters generated the largest quantity of waste. Service stations and repair shops produced approximately 82 tons of these materials. Battery shops, service stations and repair shops generated about 81,723 tons of lead acid batteries. Used oil and filters. Lead acid storage batteries were the second most frequently generated waste. Battery shops, service stations and repair shops generated about 81,723 tons of lead acid batteries. Service stations and repair shops produced approximately 717 tons of these materials. The third largest type of waste produced was antifreeze. Non-halogenated solvents, which amounted to approximately 10013.4 tons. **Table 7-4**, on the following page, identifies the conditionally exempt and small quantity generators by EPA hazardous waste categories based on specific hazardous waste characteristics in Santa Rosas County from 1996-2002 through 2002-2007.

**Table 7-4**  
**Conditionally Exempt and Small Quantity Generators**  
**Santa Rosa County, 1996 – 2002-2007**

<i>SQG EPA Waste Categories &amp; Waste Characteristics</i>	<i>Active Facilities</i>	<i>Pounds</i>	<i>Tons</i>	<i>Percentage %</i>
Antifreeze	4312	199,18010,354	99.65.2	5.33.98
Batteries (Lead – Acid)	10020	1,633,85346,474	816.923.2	43.817.85
Corrosive (Acid/Base)	3	10,621	5.3	0.2
Pesticides	372	68,683636	34.30.3	1.80.24
Fixer/Film/Developer	534	106,7241,470	53.40.7	2.80.56
Gasoline and Fuels	146	6,4014,093	3.22.0	0.11.57
Halogenated Solvents	331	20,87550	10.40.0	0.50.02
Inks/Dyes/Toner	1	105	0.1	0.0
Lamps (Fluorescent – HID)	51	1,20860	0.60.0	0.00.02
Metals/Metal Contaminated	145	52,944152	26.50.1	1.40.06
Nonhalogenated Solvents	14730	105,66826,713	52.813.4	2.810.26
Other Toxic Chemicals	6	44,763	22.4	1.2
Paints/Coatings	15	12,7923,527	6.41.8	0.31.35
Rechargeable Batteries	6	2,647	1.3	0.0
Solvents (Mixed/Other)	264	20,1002,529	10.11.3	0.50.97
Used Oil (And Filters)	30956	1,435,527164,296	717.882.1	38.563.10

Source: West Florida Regional Planning Council, 2002-2009

## **B. Solid Waste Needs and Assessments**

The Existing Conditions section identified the current demand, as well as available capacity, for solid waste disposal within Santa Rosa County. This section closely examines facility capacity analysis based on recent population projections, level of service standards, funding alternatives, and the problems and opportunities that have faced the County since the last planning timeframe.

## B.1 Population Projections

The actual and anticipated rates of development for the County have been primarily in line with one another for purposes of this sub-element. While the overall population growth rate for the County from 1990 to 2000 was 53.2%, there was significant growth in the Pace/Pea Ridge area of the County and along the U.S. Highway 98 corridor in the southern part of the County. The best available population data are projections provided by the County's Community Planning, Zoning and Development Division utilizing U.S. Census and University of Florida's Bureau of Economic Business Research (BEBR) estimates. These projections are illustrated in *Table 7-5*.

**Table 7-5**  
**Santa Rosa County Population Projections**  
**1995-2000-2025**

<u>Year</u>	<u>Unincorporated Santa Rosa County</u>	<u>Incorporated Cities</u>			<u>Total</u>
		<u>Jay</u>	<u>Milton</u>	<u>Gulf Breeze</u>	
1995	84,184	689	7,511	5,922	98,688
2000	104,454	579	7,045	5,665	117,743
2005	120,779	561	6,989	5,719	134,080
2007	127,411	572	7,717	5,805	142,144
2010	139,677	540	6,918	5,695	152,872
2015	157,782	501	6,786	5,635	170,781
2020	176,280	451	6,544	5,599	188,800
2025	178,093	222	7,466	5,458	191,239

**Source:** Santa Rosa County Community Planning, Zoning, and Development Division, 2004; Bureau of Economic Business Research (BEBR) – University of Florida

## B.2 Level of Service

A level of service standard (LOS) was established in order to estimate solid waste generation and to determine landfill life expectancy and projecting capacity of the landfill. The LOS was calculated by multiplying the amount of solid waste generated daily in the County by the population and projected population. This rate is currently ~~10.58~~ 18 pounds per person per day.

As part of the Concurrency Management System, the County uses LOS standards to determine whether the capacity of solid waste facilities is adequate to support the impacts of each proposed residential development. If the projected solid waste generation by the development will result in the standard being exceeded, provisions for solid waste facilities and services necessary to maintain the standard must be provided as required by the Concurrency Management regulations.

## B.3 Ensuring Adequate Landfill Capacity

The total capacity of the Central Landfill solid waste facility is allocated to serve the entire County. The Central Landfill facility has been sized and permitted to accept municipal waste based on county-wide (including municipalities) population estimates. The Central Landfill has sufficient capacity to meet demand through the Year ~~2065~~ 2040 under the current and projected operating conditions. The current active section consists of ~~57.539~~ 0.03 acres of Class I and ~~24.474~~ 2.27 acres of Class III.

In addressing adequate landfill capacity, Santa Rosa County has focused on both increasing the supply of, and decreasing the demand for, landfill space in the County. To decrease demand for landfill space, Santa Rosa County has taken several steps, the most significant of which is the development of a county-wide recycling program. The County recycling percentage increased from approximately ~~8.9~~26 percent of the waste stream in ~~1994~~2001 to ~~26~~31 percent in ~~2000~~2007. One of the challenges facing the County in the future will be increasing that percentage. The County intends to use two measures to increase the percentage of waste recycled, the initiation of additional recycling efforts at the landfill and the enhancement of commercial and governmental recycling initiatives.

Another recycling issue facing Santa Rosa County (and all public or private organizations that collect recyclable materials) is finding additional markets for recyclable materials collected. As recycling technology increases, so do products made from recycled materials. Counteracting that trend, however, is the increasing supply of recyclable materials. The increase in the quantities of recyclable material is largely due to more and better recycling efforts by communities throughout the nation.

An additional step that has helped Santa Rosa County decrease demand for landfill space is the addition of the air curtain incinerator at the Class III section of the landfill. This facility, along with the recycling program, will greatly increase the life span of the landfill.

Other methods of solid waste disposal include various methods of resource recovery. These methods do not eliminate the need for landfills, but they decrease the amount of waste entering into the landfill, thereby increasing the life span of the landfill.

#### **B.4 Flow Control**

In relation to the Solid Waste Sub-element, flow control cannot be accomplished within Santa Rosa County. The County cannot control the flow of solid waste to the Central Landfill due to the fact the County does not require franchise agreements for the collection, transportation, and disposal of solid waste within the County. Santa Rosa County has requirements in the Code of Ordinances regarding solid waste facility use within the County, but cannot control those solid waste providers that choose to have waste disposed of outside the County.

#### **B.5 Quality of Life Issues**

The remaining issues that could significantly impact the lifestyles of many Santa Rosa County residents in relation to the solid waste sub-element are classified as Quality of Life issues. The first is the siting of future solid waste facilities. It is important that siting criteria ensure the fair and equitable location of solid waste facilities throughout the County and help prevent the siting of these facilities in certain areas or neighborhoods in the County. Siting criteria would also assist the County in determining whether there could be a need to develop regional solid waste facilities. A regional landfill or other solid waste facility is a viable alternative to County facilities if land is scarce or if the demand does not exist to justify developing a new facility. The County should also work towards developing solid waste disposal facility siting criteria to protect and preserve the quality of neighborhoods where solid waste disposal facilities currently exist and to prevent adverse impacts on the quality of life of residents in communities where solid waste disposal facilities could be located in the future.

## B.6 Hazardous Waste Management

Santa Rosa County does not have a complete and fully operational hazardous waste management collection operation. The County has a cooperative grant agreement with Okaloosa County on hazardous waste management to dispose of hazardous waste from the County landfill. The County has an annual amnesty day event for household hazardous wastes that takes place at various locations around the County. The County contracts with Okaloosa County to have these wastes disposed of outside of Santa Rosa County. In addition, the County provides services at the Central Landfill for hazardous waste collection during the year, such as household paint and battery disposal. The County contracts with the West Florida Regional Planning Council for the Small Quantity Hazardous Waste Generator (SQG) program.

## B.7 Funding Alternatives

Traditional revenue sources for the funding of solid waste facilities have been tipping fees charged to residential and commercial users as well as various grants acquired to fund the County's recycling program. In the future, the County should consider utilizing other funding sources to expand solid waste disposal and recycling services. Some of these funding sources include impact fees and assessments.

Increases in ad-valorem taxes are one way in which Santa Rosa County could finance the construction of additional publicly owned solid waste facilities. Although such an increase is never popular with homeowners, the need for facilities will continue to exist in correlation with increasing quantities of solid waste generated by a growing population in Santa Rosa County.

Impact fees may also be an attractive means of financing public facilities required for solid waste disposal. Collection of fees at the time when permits for new developments are issued would allow the burden of the new facilities to be placed on those responsible for the increased demand.

Florida Law implicitly allows, but does not require, local governments to impose impact fees through Chapter 163. Despite the failure of the Florida statutory law to offer guidance regarding what must be contained in any impact fee ordinance, the courts of the State of Florida have developed a three-part test for the acceptance of impact fees. This test includes:

- 1.) the need to expand the facility must be the result of new development;
- 2.) changes imposed by through the fee must not exceed the proportionate share of the total cost of the facility prorated to the new development; and
- 3.) any funds collected as a result of the imposition must be specifically used for the purpose of which the funds are collected.

The third tool that the County may use is assessments for Municipal Service Benefits Units (MSBU). The need for revenue to fund collection services, recycling efforts and other operations will continue. The aforementioned funding alternatives provide the County with ways of financing these activities.