

EVALUATION AND APPRAISAL REPORT  
FOR THE  
INDIAN RIVER COUNTY  
COMPREHENSIVE PLAN

SOLID WASTE SUB-ELEMENT  
*DRAFT*

2008

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## **INTRODUCTION**

The purpose of this section of the Evaluation and Appraisal Report is to assess the success or failure of the Solid Waste Sub-Element of the Comprehensive Plan. This assessment must examine changes in solid waste disposal conditions within the County, evaluate achievement of objectives, and identify changes in State requirements affecting the Solid Waste Sub-Element. Based on this evaluation and appraisal, the Solid Waste Sub-Element may need to be updated and revised. This assessment contains the following components:

- Baseline Data
  - Solid Waste Conditions at the Time of Last Major Plan Update (1998)
- Existing Data
  - Existing Solid Waste Conditions (2005/06)
- Analysis of Solid Waste Conditions within the County
- Evaluation of Solid Waste Sub-Element Objective Achievement
- Evaluation of Solid Waste Sub-Element Policy Implementation
- Identification of Future Actions
- Identification of Anticipated Amendments

## **BASELINE DATA (1998)**

The summary of solid waste conditions within the County is provided in Appendix A. These data will enable the County to compare changes in conditions within the County from the time of the last major plan update to the present and make appropriate revisions to the Solid Waste Sub-Element as needed.

The last major update of the Solid Waste Sub-Element occurred in 1998. That updated Solid Waste Sub-Element describes conditions that existed during the years 1995/96. These data, shown in Appendix A, must be compared to data that are more recent in order to assess changes in solid waste conditions within the County.

## **Solid Waste Generation and Cost**

In 1995, Indian River County generated approximately 2.2 tons per capita per year of solid waste that required landfill disposal space. Consequently, the level of service standard for the County, in 1995, was based on a contribution rate of 2.2 tons/capita/year. At that time, the County had 325 acres of land for disposal of all solid waste generated within the County. As of 1995, 470,003 cubic yards (c.y.) of solid waste mass had been accumulated at the landfill site.

Based upon the compaction densities achieved at the landfill in 1995, the annual landfill capacity required by the County was 3.67 cubic yards per capita. At that time, projections showed that the landfill would require a capacity of 6,400,000 cubic yards through the year 2010.

In 1995, historical records showed that the seasonal variation of solid waste generation produced peaks and valleys that occurred annually with some consistency. The greater generation occurred in the spring months of March, April, and May, with lower generation rates in the fall and winter months of September, October, January, and February.

### Solid Waste Disposal District

The Indian River County Solid Waste Disposal District was created in 1987 under Florida Statutes as a special taxing district to establish a reliable source of funding for managing, maintaining and improving the county's solid waste facilities. In 1995, the Solid Waste Disposal District (SWDD), consisted of three (3) components which together provided solid waste and recycling services countywide.

#### Sanitary Landfill Component

The function of the sanitary landfill in 1995 was to provide effective waste reduction, reuse, special waste processing and waste disposal services necessary to maintain the health, safety and well being of all residents and the environment. At that time, the sanitary landfill operated in strict compliance with state and federal permit requirements. Operations at this facility included: contracted class landfill disposal operation; yard waste reduction and recycling; waste tires recycling; household hazardous waste services; construction and demolition debris recycling and disposal; environmental compliance and site management.

#### Refuse Collection & Disposal Component

In 1995, the Refuse Component consisted of five (5) transfer stations where residents could drop off their household solid waste, household hazardous waste and additional recyclable items for transportation to the landfill facility by SWDD staff and equipment. These five convenience centers, manned by SWDD personnel, were strategically located throughout the county and provided accessible collection points for all Indian River County households. Commercial waste was not accepted at these facilities.

#### Recycling Component

The Recycling Component was formed to comply with the State of Florida's 1988 Solid Waste Management Act requiring all Florida counties to offer recycling programs and services. The primary objective of this act was to reduce the amount of solid waste entering Florida landfills. On a countywide basis, private franchised haulers, under

contract with the county, provided collection of specific recyclable materials to all residential units, while SWDD personnel operated a materials recycling facility located at the landfill. After sorting and processing the recyclables delivered to this site and disposing of any contaminants, the SWDD staff then marketed and sold the recycled material to vendors for reuse or remanufacturing into new products.

The operational costs of the Solid Waste Disposal District (SWDD) were \$5,700,000 for 1995, with total revenue of \$7,662,540.

### **Solid Waste Collection, Storage, and Transfer**

In 1995, the City of Vero Beach provided door-to-door solid waste collection services. Within the other municipalities and the unincorporated parts of the County, solid waste collection services were provided to residential and commercial customers for a fee by private firms. In the unincorporated County, solid waste pickup was not mandatory in 1995.

In addition to the landfill site, five (5) manned transfer sites located throughout the County were operated by the Solid Waste Disposal District in 1995. At each transfer station, waste materials and recyclables were collected in segregated roll-off containers. As an alternative to having their solid waste picked up curbside, County residents could drop off their solid waste for no charge at the landfill or at any of the County's five transfer stations. Businesses, however, were limited to using the transfer stations to deposit only wastes that were to be recycled. In 1995, more than thirty percent (30%) of the County's residential solid waste was processed through the five transfer stations.

For solid waste and recycling collection, curbside service for the unincorporated County was split into two service areas. To provide collection services, the County had franchise agreements with two sanitation service companies. These companies provided fee based curbside solid waste collection for residential customers. One company served the northern portion of the County, while the other served the southern portion. The two sanitation service companies that provided residential service also collected solid waste and recyclables from commercial establishments. Because no mandatory commercial collection existed in the unincorporated County in 1995, commercial businesses had the option of contracting with a hauler for solid waste and/or recycling collection.

### **Recycling**

In 1995, recycling collection service was provided to all unincorporated County residents and residents in all municipalities within the County, at no charge, by the Solid Waste Disposal District (SWDD). The countywide recycling program included curbside pick-up for single-family homes and either pick-up or drop-off service for businesses and multiple-family developments.

During calendar year 1995, 57,000 tons of recycled waste were collected. This amount represented about 31% of the total solid waste stream in the County. During calendar

year 1995, the County recycled the following amounts of materials:

<b>MATERIAL</b>	<b>TONS RECYCLED</b>
Glass	1,755
Aluminum Cans	291
Plastic Bottles	261
Steel Cans	247
C&D	7,565
Yard Trash	31,806
White Goods	268
Tires	1,756
Other Plastics	26
Ferrous Metals	3,100
Non-Ferrous	139
Corrugated	3,985
Office Paper	45
Newspaper	4,521
Other Paper	3
Food	141
Textiles	2
Misc.	1,200
<b>TOTAL</b>	<b>57,111</b>

### **Solid Waste Processing and Disposal**

In 1995, there were three separate landfills at the 325-acre landfill site. There was an inactive Class I landfill (Segment 1), an active Class I landfill (Segment 2), and a Construction and Demolition (C&D) landfill. The landfill site also contained areas designated for future landfill Segments 3, 4, and 5. With the proposed segments, the landfill's maximum design capacity was 8,400,000 cubic yards. This amount was estimated to be adequate for more than twenty-five years.

In order to sufficiently reduce the total waste volume and ensure that it would receive the appropriate treatment, the SWDD used a different method of processing for each type of waste. The prerequisite for ensuring proper processing was appropriate separation of the solid waste. For that processing to occur, solid wastes were separated by type. Some separation occurred at the source of production, some at transfer stations, and some at the landfill site. Separation of different types of solid waste was costly, time consuming, and in some cases required special equipment such as a conveyer belt.

To ensure safe processing and disposal of the County's solid waste and to minimize environmental impact, the Solid Waste Disposal District (SWDD) monitored the landfill site and followed Federal and State standards and regulations. To decrease the demand for landfill space, the County used volume-reducing equipment such as tire shredders, wood shredders, and air curtain incinerators.

In 1995, the sludge and solid matter produced at the county's wastewater treatment plants was disposed of at the Gifford wastewater treatment plant. The screening and grit accumulated at the wastewater treatment plants, however, was disposed of at the county landfill. At the time of the last plan update, septage haulers were required to dispose of septage at the Gifford wastewater treatment plant.

In 1995, illegal dumping of solid waste was a problem. This problem had two parts. One part was the improper disposal of solid waste along County roadways and on private property. The other part was illegal disposal of solid waste outside of the five County transfer stations. While the service area for each transfer station was about 5 miles, the transfer stations were not open 7 days a week. On days when transfer stations were not open, waste was occasionally dumped outside transfer station gates.

From April 1995 through March 1996, the County's Code Enforcement Division had 181 "junk, trash & debris" code cases throughout the County. The referenced code enforcement cases represented only a small portion of total illegal dumping of solid waste.

In 1995, a household hazardous waste (HHW) storage facility was available at each transfer station for the temporary storage of residentially generated hazardous waste. Because hazardous waste has the potential to cause injury, illness, or death and could present a potential danger to human health, hazardous waste must be properly transported, stored, treated, disposed of, or otherwise managed. A full-time environmental chemist, who inspected, identified, separated, and stored HHW materials, supervised the HHW program.

In 1995, the SWDD contracted with licensed HHW haulers to dispose of non-recyclable hazardous materials such as motor oil, oil filters, and batteries. During fiscal year 1995, the household hazardous waste program collected and processed 46,256 pounds of household hazardous material. There were no cases of improperly managed or illegally disposed of hazardous waste in the County in 1995. In 1995, sludge from septic tanks was disposed of at the Gifford wastewater treatment plant.

### **EXISTING SOLID WASTE MANAGEMENT CONDITIONS (2005/06)**

In Appendix A, the most recent solid waste management conditions are provided under the existing conditions section of the corresponding matrix. In the Analysis section of this report, the information for existing solid waste conditions will be compared to the data provided in the Solid Waste Sub-Element (conditions at the time of last major plan update) to assess changes in solid waste conditions.

### **Solid Waste Generation and Cost**

Currently, the County generates approximately 2.4 tons per capita per year of solid waste that requires landfill disposal space. Although the present solid waste generation rate is

2.4 tons per capita per year, the solid waste level of service standard for the County is based on a contribution rate of 2.2 tons/capita/year. At present, the County has 595 acres of land for solid waste disposal. As of 2005, 1,098,528 cubic yards of solid waste mass had been accumulated at the landfill site. The annual landfill capacity required by the County, based upon the compaction densities practiced by the SWDD in 2005, is currently 3.43 cubic yards per capita. According to projections for the year 2030, the landfill facility will require a total capacity of 10.3 million cubic yards for solid waste disposal.

Although there are slight variations in the seasonal generation of solid waste, the spring months continue to have the highest generation rates, with lower generation rates continuing in the fall and winter months.

### Funding

For FY 2005, the operation costs of the SWDD were \$12,900,000, with revenue of \$15,700,000. The county uses non-advalorem assessment programs and user fees to fund orderly expansion and operation of the solid waste facilities.

### **Solid Waste Collection, Storage, and Transfer**

Within the City of Vero Beach, the City continues to provide solid waste collection service to its residents. Within the other municipalities and the unincorporated parts of the County, private companies provide solid waste collection services for a fee. In the unincorporated parts of the county, solid waste pickup remains voluntary.

In addition to the landfill, five transfer stations, which are now called Customer Convenience Centers (CCCs), continue to operate. At any of the five CCCs, County residents can at no charge deposit solid waste and waste that is to be recycled. In 2005, less than ten percent (10%) of the County's residential solid waste was processed through the five Customer Convenience Centers. The cost for coordination and maintenance of the five CCCs is about \$2 million per year.

The five CCCs are open and manned 5 days a week from 7:00 a.m. to 6:00 p.m., while the landfill site is open 7 days a week from 7:00 a.m. to 5:00 p.m. All CCCs are closed on Wednesdays, but three of the CCCs are also closed on Tuesday, with the other two CCCs closed on Thursdays. Each CCC has 40 yard roll-off containers designated for household waste and yard waste, segregated containers for recyclables, and designated areas for various other materials such as bulky materials, tires, batteries, etc. Materials collected at the CCCs are then transported by the SWDD to the landfill for disposal or for processing and transportation to recycling markets.

Since the time of the last major plan update, the County's five transfer stations have undergone a name change. The stations are now referred to as "Customer Convenience Centers" (CCCs). Currently, the SWDD is expanding the Fellsmere CCC, increasing its size by four (4) acres to 5.36 acres and remodeling the facility at a cost of \$2,000,000. Because solid waste collection remains voluntary, the CCCs continue to allow County

residents to drop-off solid waste and recyclable materials without a fee.

### Recycling

The countywide recycling program still includes pick-up for single-family homes and either pick-up or drop-off service for businesses and multiple family developments. To avoid concentrating recycling activities on only one or two materials, the State of Florida does not allow everything that is recycled to count toward a community's recycling goal. Consequently, the SWDD uses a portion of the ground yard waste for daily coverage of the landfill. Additionally, the SWDD contracts with a private company to remove all tires from the landfill for recycling into fuel and road base material.

During calendar year 2005, approximately 121,000 tons of recycled solid waste were collected. This amount represents 23% of the total solid waste stream in the County. During calendar year 2005, the County recycled the following amounts of materials:

<b>MATERIAL</b>	<b>TONS RECYCLED</b>
Glass	1,395
Aluminum Cans	156
Plastic Bottles	494
Clean C&D	43,000
Yard Trash	65,887
Tires	498
Scrap Metals	3,358
Corrugated	1,303
Office Paper	34
Newspaper	4,891
Phone Books	7
Textiles	2
<b>TOTAL</b>	<b>121,025</b>

### Solid Waste Processing and Disposal

Since the time of the last major plan update, the landfill site has been slightly altered and currently includes a total area of 595 acres. The landfill site contains two separate landfills: a Class I landfill (Segments 1 and 2 and the infill connecting the segments) and a Construction and Demolition (C&D) landfill. Additionally, the landfill site contains a 5-acre parcel dedicated for grinding all vegetative debris received.

Currently, SWDD's 5-acre yard waste area encompasses both disposal and recycling activities. The yard waste area is manned seven days a week by a contractor that is responsible for grinding all vegetative debris received. In 2005, 61,000 tons of yard waste were received and processed. Of this tonnage, the SWDD used approximately 12,000 tons of ground vegetative debris on site for daily cover for the Class I landfill. The contractor transports the balance off site.

Recently, the plans for future Segments 3, 4, and 5 were changed to establish one new segment, Segment 3, with four phases of development. As of 2005, 1,098,528 cubic yards of solid waste mass had been accumulated at the landfill site. In order to accommodate the projections for the year 2030, the landfill facility will require 5.7 million c.y. for Class I solid waste and 4.6 million c.y. for C&D debris, for a total needed capacity of 10.3 million cubic yards by that year. With the current segments and proposed Segment 3, which includes an expansion of the existing C&D landfill, the landfill's design capacity is 13,500,000 cubic yards.

At present, the processing of solid waste remains the same as it was in 1995, with solid wastes separated by type. As in the past, the processing of waste differs according to the various waste types. Separation continues to occur at the source of production, at the CCCs, and at the landfill site. The Solid Waste Disposal District continues to monitor the landfill site to ensure safe processing and disposal of the County's solid waste and to minimize environmental impact by following Federal and State standards and regulations.

To aid in volume reduction at the landfill site, the County contracts for tire removal and for yard waste grinding services. Tires are hauled off-site; a portion of the ground yard waste is used for coverage on the Class I landfill, and the remaining yard waste is hauled off-site.

Currently, sludge, screenings and grit from the county's wastewater treatment plants are disposed of at the county landfill. In the future, SWDD plans to move the sludge dewatering process from the Gifford wastewater treatment plant to the landfill. Recently, SWDD applied for a dewatering facility permit and is expected to start construction of dewatering facilities at landfill in FY 2008/09. Septage also is currently disposed of at the Gifford wastewater treatment plant. In the future, the septage will be disposed of at the county landfill.

In 2005, illegal dumping remained a problem in the County. While improper disposal of solid waste continues along roadways and on private property, the improper use of the five CCCs has significantly dropped. For fiscal year 2005/06, the County's Code Enforcement Division reported 350 "junk, trash & debris" code cases throughout the County. The referenced code enforcement cases represent only a small portion of total illegal dumping of solid waste.

Since the time of the last major plan update, the SWDD has hired a private contractor, licensed by the State, to manage all hazardous materials and to operate the household hazardous waste (HHW) program. This contractor replaced the environmental chemist who supervised in the HHW program in 1995. The SWDD continues to contract licensed HHW haulers to dispose of non-recyclable hazardous materials.

During fiscal year 2005, the household hazardous waste program collected and processed 75,912 pounds of household hazardous material. There were no cases of improperly managed or illegally disposed of hazardous waste in the County in 2005. Since 1995, the

sludge disposal facility has moved from Gifford wastewater plant to the county landfill.

## **ANALYSIS OF SOLID WASTE CONDITIONS**

Comparing solid waste conditions at the time of last major plan update with existing conditions provides an indication of changes that have occurred between 1995/96 and 2005/06. In evaluating the County's solid waste system, several functional components must be considered. These components include: 1) solid waste generation and cost; 2) solid waste collection, storage, and transfer; 3) solid waste processing and disposal; and 4) projection of future demand and landfill capacity.

### **Solid Waste Generation and Cost**

Since the last major update of the comprehensive plan, Indian River County has experienced a 30% population increase. Also, the average per capita annual solid waste generation rate increased by almost ten percent (10%). Thus, the amount of landfill site area needed for the disposal of solid waste has increased. Consequently, the SWDD in recent years acquired an additional 270 acres of land, increasing the landfill site by more than eighty percent (80%). From 1995/96 to 2005/06, the total cubic yards of solid waste mass accumulated at the landfill site more than doubled, but because the SWDD currently compacts its solid waste at a greater density rate than in the past, the rate at which the landfill approaches capacity is slower.

Currently, the county's Level of Service standard for solid waste is 2.2 tons per capita per year. Since the present solid waste generation rate is 2.4 tons per capita per year, the current adopted level of service standard is not appropriate and needs to be revised.

By the year 2030, the Solid Waste Master Plan projects 10.3 million cubic yards of solid waste capacity will be required. With the current segments and the proposed Segment 3, which includes an expansion of the existing C&D landfill, the design capacity of the landfill site for 2030 is 13,500,000 cubic yards. This design capacity, along with current SWDD practices, provides sufficient land area for solid waste management needs through 2030 and beyond. Consequently, there is no need to expand the landfill site's area through 2030.

While the yearly operational costs for SWDD facilities increased by 126% from 1995 to 2005, the yearly revenues doubled. Even though costs increased faster than revenue between 95/96 and 05/06, revenue received annually continues to exceed the yearly operational costs of maintaining the SWDD facilities.

### **Solid Waste Processing and Disposal**

At present, the processing of solid waste at the County's landfill meets Federal and State standards and regulations, ensures safety, and reduces environmental impacts.

At the landfill site, solid waste volume is no longer reduced by utilizing a tire shredder, a wood shredder, or an air curtain incinerator. Instead, the County has contractors that

provide for tire removal and for yard waste grinding services. Tires are hauled off-site; a portion of the ground yard waste is used for coverage on the Class I landfill, and the remaining yard waste is hauled off-site.

According to Florida DEP Solid Waste reports, Indian River County and its adjacent counties have seen slight, but steady, increases in the per capita tons of solid waste that are disposed of each year. The average tons/capita/year for the State of Florida is nearly double that of the County.

In order for the County to maintain at least three years of landfill disposal capacity, as required by Solid Waste Master Plan, there are two options. First, the County may continue with the existing system of recycling as much solid waste as possible and disposing the remainder in the landfill. Second, the County may contract with a regional landfill to transfer solid waste to that disposal site. Presently, option one seems more workable for the County.

### Hazardous Waste Disposal

Currently, the processing of household hazardous waste is accomplished by contracting with a State licensed contractor that operates the HHW Program in its entirety. Although the amount of household hazardous waste collected and processed increased by sixty percent (60%) between 1995 and 2005, this increase can be attributed to the County's growth during that period.

According to the State Environmental Health Department, only three events involving the mismanagement of hazardous waste occurred in the county between the years 1995/96 and 2005/06. The Environmental Health Department attributes the awareness of the dangers of HHW and the convenience of the household hazardous waste (HHW) storage facility for the minimal occurrences of illegal HHW disposal by County residents. In the future, it is important for the county to continue to promote public awareness.

### **Projection of Future Demand and Landfill Capacity**

Since the time horizon of the next comprehensive plan update will be 2030, future solid waste demand must be projected to that year. The projection of solid waste demand is based on two components: population growth and solid waste generation rates.

### Population Projections

Population growth and per capita generation rates are used to project future year quantities of solid waste. For population growth, the Introductory Element of the County's Comprehensive Plan provides information. Since the landfill site serves both the unincorporated and incorporated areas of the County, the total county population must be used to project solid waste demand.

Overall, the projected population determinates future needs for solid waste services.

Using a population projection that is too low is likely to result in the failure to adequately provide for the county’s needs. Conversely, using a population projection that is too high will result in identifying needs that will not occur in the forecasted time period. Therefore, an accurate forecast of the future population is essential in planning for solid waste demands.

Section 9J-5.005 of the Florida Administrative Code states that communities should utilize the University of Florida's Bureau of Economic and Business Research (BEBR) medium series projections when planning for future service needs. The following table identifies the county’s population projections through 2030:

<b>POPULATION PROJECTIONS INDIAN RIVER COUNTY</b>					
	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
<b>BEBR</b>	150,000	166,800	182,400	196,200	209,000

*Source: University of Florida, BEBR, Mid-Range Projections 2006*

Solid Waste Generation Rates

Based on population projections and the annual per capita generation rate developed from solid waste delivery records, the Solid Waste Master Plan projects that SWDD facility needs will be 5.7 million c.y. for Class I solid waste and 4.6 million c.y. for C&D debris, for a combined total of 10.3 million cubic yards, through the year 2030.

Landfill Capacity

One of the County’s principal responsibilities is to ensure that sufficient landfill capacity is available for disposal of processed or raw waste. According to the Solid Waste Master Plan, the County must maintain a disposal capacity of at least three years to allow for sufficient time to permit and construct a new active segment, when necessary.

Currently, the Solid Waste Disposal District (SWDD) utilizes two approaches to ensure that there is adequate landfill capacity. These are: 1) developing new landfill capacity, and 2) implementing programs to reduce the demand for landfill disposal. Since 1995, the SWDD Board has acquired and set aside approximately 270 acres of land adjacent to the landfill site for future development of additional landfill space. The SWDD has also optimized the design of the Class I landfill between Segments 1 and 2 to increase the disposal capacity of Class I and C&D debris. Recently, the SWDD permitted additional C&D disposal on the side slopes of Segment 1 to increase the C&D disposal capacity. Currently, the SWDD is in the process of developing two lateral expansions of the existing C&D landfill. Additionally, a 50 acre segment 3 will be developed in phases which will accommodate another 8.4 million cubic yards of Class I and C&D solid waste.

The existing Class I and C&D landfills, along with Segment 3, are designed to provide a disposal capacity of 13.5 million c.y. These will provide sufficient capacity to meet the county's disposal needs through the year 2030, as required by the Solid Waste Master Plan, and provide a surplus of more than 3 million cubic yards of disposal capacity.

In conjunction with increasing landfill capacity, the SWDD is continuing to work to decrease the demand for landfill space. The most significant effort in this regard is maintaining and expanding the county's countywide recycling program. Currently, the county's recycling program includes curbside pick-up for residences and either pick-up or drop-off service for businesses. Additionally, several private businesses recycle wastes that would otherwise be buried in the landfill. In the future, the county plans to expand its recycling educational program to encourage more recycling, increase the number of materials that could be recycled, and change county's current recycling collection and separation method. With expansion of resource recovery and recycling programs that could accept more materials for recycling, the amount of solid waste that will be buried in the landfill will be reduced further and will increase the expected life span of the landfill even longer.

#### Funding and Capital Improvements

The SWDD's 5-year Capital Improvements Program (CIP) is attached (attachment #2). This CIP includes citizen convenience center improvements and relocation; purchase of transfer tractors/transfer trailers and roll-off truck/containers; lateral and vertical expansion of segments I, II, and infill; and others. All of the SWDD's CIP is funded through assessments and user fees. To ensure that that solid waste is adequately collected and disposed of, the county must undertake the improvements identified in the CIP.

#### Solid Waste Collection, Storage, and Transfer

Generally, the County's existing collection system is adequate for a rural area. According to the Solid Waste Master Plan, a door-to-door type of solid waste collection may become necessary as the County becomes more urbanized. In rural areas, it is not feasible to pick up all solid waste at the source of generation. In urbanized areas, however, it is more efficient for solid waste haulers to pick up solid waste generated by all residences and businesses. Currently, the existing customers of the county franchised solid waste haulers are paying about \$13.50 per month for collection. According to the SWDD, the collection fee per customer could be reduced if there were a mandatory door-to-door solid waste collection system.

Presently, about ten percent (10%) of the County's solid waste is collected and transferred to the landfill through the five CCCs. This is a significant drop from the more than thirty percent (30%) at the time of the last major plan update. Even with this reduced activity level, however, the County must coordinate and maintain the five CCCs at a cost of about \$2 million per year, an amount that accounts for more than fifteen percent (15%) of the yearly SWDD operation costs. If all types of solid waste were

collected at the place of generation and transferred directly to the landfill site, there would be less need for coordination, and the County would have better control of the solid waste stream entering the landfill site. A mandatory door-to-door solid waste collection system would provide for better control of the solid waste stream entering the landfill site. Consequently, the county should evaluate the feasibility of establishing a mandatory collection system in the future.

### Recycling

Recycling pick-up services for single-family residents and drop-off capabilities for multi-family residents and business are unchanged from 1995, but the amount of solid waste that is being recycled per year has significantly increased. In the ten years between the last major plan update and this review, the yearly tonnage of recycled solid waste has more than doubled from 57,000 tons per year in 1995 to 121,000 tons in 2005. This increase can be attributed to the continuing efforts by SWDD to educate the public to the benefits of recycling, as well as the convenience of no-cost curbside recyclables collection for County residents.

While the amount of solid waste that is recycled has significantly increased, the percentage of solid waste that is recycled dropped from 31% in 1995 to 23% in 2005. That percentage of solid waste recycled falls below the State’s recycling goal of 30%. Although the SWDD has addressed all of the State’s requirements regarding the recycling of solid waste, including increasing recycling awareness and countywide recycling availability, these efforts have fallen short. According to the Florida Department of Environmental Protection’s (DEP) most recent (2004) Solid Waste Annual Report, the percentage of solid waste that is recycled in all counties in Florida averages 26%. Only 14 of the State’s 67 counties met the 30% recycling goal in 2004. The solid waste recycling percentages of Indian River County and neighboring counties are below:

<b>County</b>	<b>Waste Collected (Tons)</b>	<b>Waste Recycled (Tons)</b>	<b>Percentage</b>
Brevard	1,234,404	500,635	41%
<i>Indian River</i>	<i>430,652</i>	<i>100,359*</i>	<i>23%</i>
Martin	284,607	88,821	31%
Okeechobee	50,922	7,030	14%
Osceola	267,329	19,079	7%
St. Lucie	535,757	66,802	12%
<b>State</b>	<b>31,828,764</b>	<b>8,307,952</b>	<b>26%</b>

\*To avoid concentrating recycling activities on only one or two materials, the State of Florida does not allow everything that is recycled to count toward a community’s recycling goal. Therefore, the state counts only 100,359 tons of the 121,000 tons recycled in 2004 in Indian River County toward the community’s recycling goal.

To increase the amount and percentage of solid waste to be recycled, the county must undertake several actions. These actions include:

- Increasing public education

- Increasing the number of items that can be recycled
- Changing the current collection and separation procedure

Currently, the county recycles seven (7) items. These are plastic #1 and #2, steel cans, aluminum cans, clear glass, brown glass, green glass, and newspapers. Waste haulers must collect these items, separate them at the curb, and place them in recycling truck's 7 separate compartments. If one of the seven compartments is full, then the driver must travel to the landfill to empty that recycled material before he can collect more. Since the recycling trucks currently have only seven compartments, there is no room to add additional materials to be recycled. Many local governments, however, will collect all recyclables together and send them to regional facilities for separation. In the case of Indian River County, the SWDD indicates that it would be beneficial to collect newspapers separately and then collect other recyclables combined. By collecting all non-newspaper recyclables together, many other items, such as plastic #3 through #7, corrugated cardboard, phone books, and magazines, can be added to recycling.

### **Illegal Dumping**

In 1995, illegal dumping was a problem associated with improper disposal of solid waste throughout the County. While illegal dumping outside of CCC gates rarely occurs now, illegal dumping along roadways and on private properties remains a concern of the SWDD. As the population has increased, the number of "junk, trash & debris" code enforcement cases has also increased. According to the Code Enforcement Division, the number of concerned citizens willing to report acts of improper disposal accounts for some the increase in cases. In recent years, the county's emphasis on informing residents of the service hours and fees of the landfill and the customer convenience centers, as well as the County's policies on enforcement of illegal solid waste disposal and illegal dumping, have resulted in a reduction of the problem.

If the County established a mandatory door-to-door collection service, the amount of illegal dumping could be reduced even further by eliminating the incentive for illegal dumping. Since collection services would be available and would be paid for, there would be no reason for residents to illegally dump solid waste. As indicated above, mandatory door-to-door solid waste collection would also reduce the costs associated with maintaining the CCCs.

### **EFFECTS OF STATUTORY AND RULE CHANGES**

Local government comprehensive plans must be consistent with state and regional growth management requirements such as Chapter 163, F.S., the State Comprehensive Plan, Rule 9J-5, F.A.C, and the applicable strategic regional policy plan. As stated in Subsection 163.3191(1), F.S., the EAR is the "principal process for updating local comprehensive plans to reflect changes in state policy and growth management." Therefore, this EAR includes an analysis of the effects of statutory and rule changes upon the Solid Waste Sub-Element.

#### Consistency with Rule 9J-5, F.A.C

Section 9J-5.011, F.A.C., identifies the minimum requirements for the Solid Waste Sub-Element. Since the time of the last major plan update, only minor revisions were made to Section 9J-5.011, F.A.C. The Solid Waste Sub-Element remains consistent with Rule 9J-5, F.A.C.

#### Consistency with State Comprehensive Plan

The Solid Waste Sub-Element of the Indian River County comprehensive plan is consistent with the State Comprehensive Plan (Ch. 187,F.S.).

#### Consistency with Strategic Regional Policy Plan

The Treasure Coast Regional Planning Council adopted its current strategic regional policy plan on December 15, 1995. The Solid Waste Sub-Element is consistent with the Treasure Coast Strategic Regional Policy Plan.

#### Consistency with Ch. 163, Part II, F.S.

The Solid Waste Sub-Element is consistent with Ch. 163, F.S.

**EVALUATION OF OBJECTIVES**

Following is an evaluation of the achievement of the Solid Waste Sub-Element objectives. With the exception of Objective 4, each of the sub-element's objectives was achieved. The goals, objectives, and policies of the Solid Waste Sub-Element are attached (attachment 1).

Under each objective, those policies associated with the objective have been assessed to identify those that have been implemented and those that have not been implemented. Also, each policy has been assessed to determine if it directly or indirectly contributed to meeting the corresponding objective. Then, each policy was assessed to determine if it needs to be maintained, revised, or deleted and the reason for revision or deletion.

**Objective 1 Service Concurrent with Development**

During the 1998-2000 period, the active segment of the landfill will always have a minimum of 0.486 million cubic yards capacity (three years of disposal capacity) available for disposal.

MEASURE - CUBIC YARDS OF AVAILABLE CAPACITY IN THE ACTIVE SEGMENT OF THE LANDFILL.

In 1995, the available capacity of the active segment of the landfill was 2,446,000 cubic yards. In 2005, available capacity of active segment of landfill was 5,100,000 cubic yards.

Objective 1 was achieved.

Although Objective 1 was achieved, maintaining adequate landfill capacity is important. For that reason, this objective should be maintained, but the objective's target and target date should be revised. Target date should indicate that through the time horizons of the plan.

POLICY DESCRIPTION (refer to plan for actual policy)	ACTION/ ACCOMPLISHMENT	WAS POLICY IMPLEMENTED?		DID THIS POLICY CONTRIBUTE TO MEETING THE OBJECTIVE?		WAS THE ORIGINAL POLICY APPROPRIATE?		SHOULD THIS POLICY BE MAINTAINED, DELETED, OR REVISED?
		YES	NO	YES	NO	YES	NO	
1.1) Design for additional burial segments of the landfill shall be completed before the active segment of the landfill is at 70% of its capacity, and construction of additional segments shall begin when a facility is at 75% of its capacity.	Design and construction deadlines met	X		X		X		Maintain

POLICY DESCRIPTION (refer to plan for actual policy)	ACTION/ ACCOMPLISHMENT	WAS POLICY IMPLEMENTED?		DID THIS POLICY CONTRIBUTE TO MEETING THE OBJECTIVE?		WAS THE ORIGINAL POLICY APPROPRIATE?		SHOULD THIS POLICY BE MAINTAINED, DELETED, OR REVISED?
		YES	NO	YES	NO	YES	NO	
1.2) New development within Indian River County shall continue to be approved only when capacity is available at the active segment of the landfill. If the active segment is at 90% of its capacity and the new segment is not ready, additional development shall not be permitted.	Landfill capacity monitored through the concurrency management system	X		X		X		Maintain
1.3) The county adopts the following Level of Service (LOS) standard: 3.67 cubic yards per capita per year.	LOS adopted and maintained	X		X		X		Revise to change the LOS to 2.4 tons per capita per year
1.4) The county shall maintain its concurrency management system.	Concurrency management system maintained	X		X		X		Maintain
1.5) The Solid Waste Disposal District shall prepare annual summaries of demand and capacity information for the active segment of the landfill.	Summaries prepared	X		X		X		Maintain
1.6) The solid waste disposal district shall maintain at least 3 years of disposal capacity available at all times.	3 years of disposal capacity maintained	X		X		X		Maintain
1.7) The county shall provide countywide solid waste services to the entire county by providing landfill capacity, administering countywide recycling program, and studying and implementing new technologies	Countywide solid waste and recycling services provided	X		X		X		Maintained

All policies under Objective 1 were implemented. As structured, these policies all contribute towards meeting the objective and should be maintained. Policy 1.3, however, must be revised to establish a new LOS standard of 2.4 tons per capita per year.

### **Overall Assessment of Policies**

The policies under Objective 1 are sufficient to achieve the objective. No other policies are needed.

### **Objective 2 Special Waste and Hazardous Waste**

During the 1998 to 2010 planning timeframe, there will be no cases of improperly managed or illegally disposed of hazardous waste in the county.

MEASURE - NUMBER OF CASES OF IMPROPERLY MANAGED OR ILLEGALLY DISPOSED OF HAZARDOUS WASTE IN THE COUNTY DURING 1998 TO 2010.

Based on Environmental Health Department data, there were no known cases of improper or illegal disposal of hazardous waste in the county between 1998 and now.

The county has several services and activities in place to encourage the proper disposal of hazardous waste. These services and activities are part of the county's Household Hazardous Waste program and the Environmental Health Department's permitting and inspection program.

Objective 2 was achieved.

Although Objective 2 was achieved, managing special and hazardous waste is important. For that reason, the substance of the objective should be retained. The objective's target date must be revised.

POLICY DESCRIPTION (refer to Plan for actual policy)	ACTION/ ACCOMPLISHMENT	WAS POICY IMPLEMENTED?		DID THIS POLICY CONTRIBUTE TO MEETING THE OBJECTIVE?		WAS THE ORIGINAL POLICY APPROPRIATE?		SHOULD THIS POLICY BE MAINTAINED, DELETED, OR REVISED?
		YES	NO	YES	NO	YES	NO	
2.1) The county shall dispose of stabilized sludge from wastewater treatment plants at the designated facility at the Gifford Wastewater Plant, and other sites approved by the DER.	Currently, sludge disposed of at designated places at the county landfill	X		X		X		Revise to indicate that sludge will be disposed of at landfill
2.2) The county shall dispose of the screenings and grit, accumulated at the wastewater treatment plants, at the county landfill.	Screenings and grit disposed of at the landfill	X		X		X		Maintain
2.3) The county will not accept septage at the county landfill. Septage haulers operating in the county required to dispose of septage at the designated facility at the Gifford Wastewater Treatment Plant and other sites approved by DEP.	Septage disposed of at the Gifford wastewater treatment plant	X		X		X		Revise to indicate that septage will be disposed at landfill
2.4) The solid waste disposal district shall provide convenient locations at which residents can drop off household hazardous materials free of charge.	county coordinates with the Health Department	X		X		X		Maintain
2.5) By 1998, the county shall request that the tax collector's office establish a system that all new application for occupational licenses include a 4 digit SIC code to facilitate identification of potential hazardous waste generators.	Tax Collector computer system not set up to do this		X		X	X		Delete
2.6) The county shall continue to have a contract with a licensed hazardous waste transporter for providing	The county has contracted with a licensed hazardous	X		X		X		Maintain

POLICY DESCRIPTION (refer to Plan for actual policy)	ACTION/ ACCOMPLISHMENT	WAS POICY IMPLEMENTED?		DID THIS POLICY CONTRIBUTE TO MEETING THE OBJECTIVE?		WAS THE ORIGINAL POLICY APPROPRIATE?		SHOULD THIS POLICY BE MAINTAINED, DELETED, OR REVISED?
		YES	NO	YES	NO	YES	NO	
disposal services to the small quantity generators within the county.	waste transporter							
2.7) The county shall perform water quality tests to ensure segment I and segment II are not contaminating ground or surface water	Water quality tests are done on a regular basis	X		X		X		Maintain
2.8) The county shall maintain its existing construction and demolition segment of the landfill to facilitate efficient collection of debris.	Done	X		X		X		Maintain
2.9) The county shall encourage the Health Dept. to continue to perform regular inspections of small quantity hazardous waste generators.	Environmental Health Dept. does regular inspections of small quantity hazardous waste generators	X		X		X		Maintain
2.10) The county shall encourage DEP to continue to perform their inspections. Violators will be prosecuted and fined by the Environmental Control Board	DEP performs inspection	X		X		X		Maintain

With the exception of Policy 2.5, all policies under Objective 2 were implemented, contributed to meeting the objective, and should be maintained. Policies 2.1 and 2.3 should be revised to indicate that sludge from the county’s wastewater treatment plants and septage from septic tanks will be disposed of at the county landfill. Policy 2.5 should be deleted since the Tax Collector’s office computer system cannot be set up to use the SIC codes.

**Overall Assessment of Policies**

The policies under Objective 2, with the proposed deletion of policy 2.5, are sufficient to achieve the objective. No other policies are needed.

**Objective 3 Capital Improvements**

By 2010, the county will have completed improvements to the solid waste facility as outlined in the Solid Waste Sub-Element’s Table 3.C.4.

**MEASURE - COMPLETION OF THE SOLID WASTE CAPITAL IMPROVEMENTS**

Objective 3 was achieved.

Although Objective 3 was achieved, it should be revised. Objective 3 should be revised to reflect a new timeframe that indicate through the time horizon of the plan, and should be revised to reflect the latest capital improvements schedule.

POLICY DESCRIPTION (refer to Plan for actual policy)	ACTION/ ACCOMPLISHMENT	WAS POLICY IMPLEMENTED?		DID THIS POLICY CONTRIBUTE TO MEETING THE OBJECTIVE?		WAS THE ORIGINAL POLICY APPROPRIATE?		SHOULD THIS POLICY BE MAINTAINED, DELETED, OR REVISED?
		YES	NO	YES	NO	YES	NO	
3.1) The county shall maintain a seven-year schedule of capital improvement needs for public facilities, to be updated annually.	5-year CIP schedule maintained.	X		X		X		Revise to indicate 5 year CIP
3.2) Proposed capital improvement projects shall be divided into the following priority levels:  <u>Level 1</u> - projects that protect public health & safety, fulfill the county's legal commitment, or preserve or achieve full use of existing facilities  <u>Level 2</u> - projects that increase efficiency of use of existing facilities, or prevent or reduce future improvement costs	Capital improvement decisions made based on priority guideline	X		X		X		Maintain
3.3) The county shall treat solid waste service provisions as an enterprise system which is financially self-supporting.	Enterprise system established for SWDD	X		X		X		Maintain
3.4) The county shall continue its current non-ad valorem assessment program to fund orderly expansion of the solid waste facility.	Assessments continued	X		X		X		Maintain
3.5) The county shall pursue state and federal sources of funding available for the improvement and expansion of solid waste services as well as the establishment of a recycling program.	Funding pursued by SWDD	X		X		X		Maintain
3.6) All future expansion of SWDD facilities shall be consistent with adopted Level of Service (LOS) standards.	SWDD expansions meet LOS standards	X		X		X		Maintain
3.7) The county shall maintain its charge mechanism for the collection and management of special waste such as construction debris, bio-hazardous waste and other wastes needing special collection, handling, and disposal.	Charge mechanism maintained by SWDD	X		X		X		Maintain

Each of Objective 3's policies was implemented, and each contributed to achieving the objective. As structured, all policies should be maintained. Policy 3.1, however, should be revised to reflect that the county maintains a 5-year CIP.

**Overall Assessment of Policies**

The policies under Objective 3, with the proposed revisions, are sufficient to achieve the objective. No other policies are needed.

**Objective 4 Recycling and Waste Volume Reduction**

By 2010, the county through its recycling program will have increased the portion of solid waste recycled to 50%.

**MEASURE - PERCENT OF WASTESTREAM RECYCLED.**

The target date for this objective is not until 2010; however, the county recycled only 23% of the wastestream in 2004.

Although Objective 4’s target date is not until 2010, the objective will likely not be achieved.

This objective involves recycling and volume reduction. Because both recycling and volume reduction are important, Objective 4 should be retained, but revised. Although, recycling 50% of the wastestream by 2010 most likely is not achievable, several factors indicate that recycling 30% of the wastestream, as required by the state, is an achievable target. These factors include increases in the number of items that now can be recycled and the SWDD’s increasing attempts to educate the public regarding the recycling programs. Therefore, Objective 4 should be revised to state that by 2020 the county will have increased the portion of solid waste recycled to 30% of its wastestream.

POLICY DESCRIPTION (refer to Plan for actual policy)	ACTION/ ACCOMPLISHMENT	WAS POLICY IMPLEMENTED?		DID THIS POLICY CONTRIBUTE TO MEETING THE OBJECTIVE?		WAS THE ORIGINAL POLICY APPROPRIATE?		SHOULD THIS POLICY BE MAINTAINED, DELETED, OR REVISED?
		YES	NO	YES	NO	YES	NO	
4.1) The county shall maintain its recycling programs.	Recycling programs maintained and expanded	X		X		X		Revise
4.2) By 1999, the SWDD shall arrange for a completed study to determine the feasibility of establishing a mandatory separation and collection system for recyclables and a mandatory door-to-door collection system.	Study was not done		X		X	X		Revise for date
4.3) The county will continue to assist the school board to develop and maintain courses which inform students of the impact of mismanaged solid and hazardous waste and	Course offered	X		X		X		Revise, to expand educational programs

POLICY DESCRIPTION (refer to Plan for actual policy)	ACTION/ ACCOMPLISHMENT	WAS POLICY IMPLEMENTED?		DID THIS POLICY CONTRIBUTE TO MEETING THE OBJECTIVE?		WAS THE ORIGINAL POLICY APPROPRIATE?		SHOULD THIS POLICY BE MAINTAINED, DELETED, OR REVISED?
		YES	NO	YES	NO	YES	NO	
benefits of recycling program.								
4.4) The county shall maintain its Air Curtain Destructor at the county landfill.	The county does not operate Air Curtain Destructor anymore		X		X	X		Delete, since the SWDD does not operate air curtain destructor anymore
4.5) The county shall eliminate open burning in urban areas by maintaining its recycling facilities.	Recycling facility at landfill maintained	X		X		X		Maintain
4.6) The SWDD shall provide general public education on the importance and benefit of the recycling program.	Public information provided; however, the SWDD plans to provide expanded education.	X		X		X		Maintain
4.7) By 1999, the SWDD shall arrange for completed studies to determine the feasibility of maximum recovery.	Feasibility study was not done		X		X	X		Revise for date
4.8) By 1999, the SWDD shall arrange for completed studies to determine the feasibility of transferring the county's solid waste to another regional facility for recyclables separation.	Feasibility study was not done		X		X	X		Revise for date

With the exception of Policies 4.2, 4.4, 4.7, and 4.8, which were not implemented, all policies under Objective 4 were implemented and contributed toward meeting the objective. Policy 4.1 should be revised to indicate that the county will expand its recycling programs by increasing the number of items that can be recycled and by changing current collection and separation procedures to go to a dual collection process to collect newspapers separately and collect other recyclables combined. Policy 4.3 should be revised to indicate that SWDD will expand its educational programs to emphasize the importance of recycling. Since the SWDD does not operate an air curtain destructor anymore, policy 4.4 should be deleted.

Policies 4.7 and 4.8, which call for feasibility studies, were not implemented by the SWDD. Since, the county does not currently meet the state's 30% recycling target, it is even more important for SWDD to undertake these feasibility studies and to increase the amount of solid waste being recycled.

### **Overall Assessment of Policies**

The policies under Objective 4, with the proposed deletion and revisions, are sufficient to achieve the objective. No other policies are needed.

## **OVERALL ASSESSMENT OF OBJECTIVES**

The objectives of the Solid Waste Sub-Element, with the proposed revisions, should be sufficient to meet the overall intent of the element.

## **FUTURE ACTIONS**

The county must adopt EAR based amendments which update the tables, figures, text, and Goals, Objectives and Policies of the Solid Waste Sub-Element. Much of that update involves the inclusion of new data.

## **ANTICIPATED AMENDMENTS**

The following are anticipated amendments of the solid waste sub-element.

## **TABLES AND FIGURES**

Each of the Solid Waste Sub-Element's tables and figures must be updated to reflect current conditions.

## **TEXT**

Major portions of the text of the Solid Waste Sub-Element must be revised with new data including existing conditions and projections.

## **OBJECTIVES AND POLICIES**

Anticipated amendments to the objectives and policies of the Solid Waste Sub-Element are summarized below.

OBJECTIVE	POLICY	REVISION
1		Revised target and target date.
1	1.3	Revised to establish a new LOS standards
2		Revise the target date.
2	2.1	Revise to indicate that sludge will be disposed at landfill
2	2.3	Revise to indicate that septage will be disposed at landfill
2	2.5	Delete the policy.
3		Revise the target date.
3	3.1	Revised to indicate 5-year CIP.

OBJECTIVE	POLICY	REVISION
4		Revise the target date.
4	4.1	Revised to indicate that county shall expand its recycling programs.
4	4.2	Revise for the target date
4	4.3	Revise for expansion of recycling educational program
4	4.4	Delete, since SWDD does not operate air curtain destructor anymore
4	4.7	Revise for the target date
4	4.8	Revise for the target date

## Attachment 1

### **GOAL, OBJECTIVES AND POLICIES**

#### **Goal**

It is the goal of Indian River County to have an efficient and environmentally sound solid and hazardous waste management system to prevent spread of disease, to promote orderly growth within the county, and to meet existing and projected demand for the management and disposal of waste.

#### **OBJECTIVE 1 Service Concurrent with Development**

During the 1998-2000 period, the active segment of the landfill will always have a minimum of 0.486 million cubic yards capacity (three years of disposal capacity) available for disposal.

**POLICY 1.1:** Design for additional burial segments of the landfill shall be completed before the active segment of the landfill is at 70% of its capacity, and construction of additional segments shall begin when the active segment is at 75% of its capacity in order to ensure that the established level of service will be maintained.

**POLICY 1.2:** New development within the Indian River County Solid Waste Disposal District service area shall continue to be approved only when capacity is available at the active segment of the landfill. If the active segment of the landfill is at 90% of its capacity and a new segment is not ready, additional development shall not be permitted.

**POLICY 1.3:** The following level of service standards are hereby adopted, and shall be used as the basis for determining the availability of facility capacity and the demand generated by new development:

#### **Service Area Average Solid Waste Generation Rate**

County-wide 2.2 tons per capita for permanent population plus weighted seasonal population per year

or

3.67 cubic yards per permanent population plus weighted seasonal population per year

**POLICY 1.4:** The county shall maintain its concurrency management system to update its solid waste facility demand and capacity information as development orders or permits are issued.

**POLICY 1.5:** The Solid Waste Disposal District shall maintain a comprehensive solid waste management plan and shall prepare annual summaries of demand and capacity information for the active segment of the landfill.

**POLICY 1.6:** The solid waste disposal district shall maintain at least 3 years of disposal capacity available at all times.

**POLICY 1.7:** The county shall continue to provide countywide solid waste services to all of the county's municipalities and the unincorporated portion of the county by providing landfill capacity for solid waste disposal, by administering a countywide recycling program, and by studying and implementing new technologies. On-going studies shall identify the following:

- New technologies for recycling;
- New methods for safe solid waste disposal;
- Assessment of the feasibility of implementing these new technologies in Indian River County;
- Cost/benefit analyses for promising technologies.

**OBJECTIVE 2 Special Waste and Hazardous Waste**

During the 1998 to 2010 planning timeframe, there will be no cases of improperly managed or illegally disposed of hazardous waste in the county.

**POLICY 2.1:** The county shall dispose of stabilized sludge from wastewater treatment plants at the designated facility at the Gifford Wastewater Plant and at other sites approved by the FDEP.

**POLICY 2.2:** The county shall dispose of the screenings and grit accumulated at the wastewater treatment plants at the county landfill.

**POLICY 2.3:** The county shall not accept septage at the county landfill. The current local ordinance will continue to require all septage haulers operating in the county to dispose of septage at the designated facility at the Gifford Wastewater Treatment Plant and at other sites approved by DEP.

**POLICY 2.4:** The solid waste disposal district shall provide convenient locations at which residents can drop off household hazardous materials free of charge.

**POLICY 2.5:** By 1998, the county shall request that the Tax Collectors office establish a system that all new applications for occupational licenses include a four digit Standard Industrial Classification (SIC) code to facilitate identification of potential hazardous waste and bio-medical waste generators. The county shall provide this information to the Solid Waste Disposal District, the Environmental Health Department, and the Department of Environmental Protection.

**POLICY 2.6:** The county shall continue to have a contract with a licensed hazardous

waste transporter for providing disposal services to the small quantity generators within the county.

**POLICY 2.7:** The county shall perform water quality tests to ensure that the closed segment I of the landfill as well as the active segment II of the landfill are not contaminating the surrounding groundwater and surface water.

**POLICY 2.8:** The county shall maintain its existing construction and demolition segment of the landfill, opened in January, 1994, for the efficient collection and handling of the construction debris, demolition debris, and land clearing waste.

**POLICY 2.9:** The county shall encourage the county Environmental Health Department to continue to perform regular inspections of small quantity hazard waste generators.

**POLICY 2.10:** The county shall encourage the Department of Environmental Protection to continue to perform regular inspections of large quantity hazardous waste generators and private licensed waste handlers to ensure that bio-hazardous waste, generated by medical establishments and handled by private firms, is properly managed. When improper management of bio-hazardous waste is found during an inspection, the private waste handler (the violator) will be prosecuted and fined by the Environmental Control Board. The county shall continue to inspect the bio-hazardous waste which enters the landfill.

### **OBJECTIVE 3 Capital Improvements**

By 2010, the county will have completed improvements to the solid waste facility as outlined in the Solid Waste Sub-Element's table 3.C.4.

**POLICY 3.1:** The county shall maintain a seven-year schedule of capital improvements for the landfill and shall update this schedule annually in conformance with the review process for the Capital Improvements Element of this plan.

**POLICY 3.2:** Proposed capital improvement projects shall be evaluated and ranked according to the following priority level guidelines:

- Level One - whether the project is needed to protect public health and safety, to fulfill the county's legal commitment to provide solid waste facilities and services, or to preserve or achieve full use of existing facilities
- Level Two - whether the project increases efficiency of use of existing facilities or prevents or reduces future improvement costs

**POLICY 3.3:** The county shall structure solid waste fees, rates, and assessments to support the solid waste system as a financially self-supporting enterprise system.

**POLICY 3.4:** The county shall continue its current non-advalorem assessment program to fund the orderly expansion of its solid waste facilities.

**POLICY 3.5:** The county shall apply for state and federal sources of funding for the improvement and expansion of solid waste services as well as for expansion of its recycling program.

**POLICY 3.6:** All future expansion of the landfill and the Solid Waste Disposal District facilities shall be consistent with the adopted solid waste level of service standards.

**POLICY 3.7:** The county shall maintain its charge mechanism for the collection and management of special wastes such as construction debris, bio-hazardous waste, and other wastes needing special collection, handling, and disposal.

**OBJECTIVE 4 Recycling and Waste Volume Reduction**

By 2010, the county through its recycling program will have increased the portion of solid waste recycled to 50%.

**POLICY 4.1:** The county shall maintain its recycling program to reduce the volume of waste.

**POLICY 4.2:** By 1999, the SWDD shall arrange for a completed study to determine the feasibility of establishing a mandatory separation and collection system for recyclables and residual garbage, to efficiently separate waste at the place of generation, to solve the problem of illegal dumping along county roadways, private properties, and at transfer station sites. Upon the establishment of mandatory door-to-door garbage collection, the existing transfer stations will be closed.

**POLICY 4.3:** The county, through its Recycling Coordinator, shall continue to assist the school board to develop and maintain a course which informs students of the impact of mismanaged solid and hazardous waste as well as the importance and benefits of a recycling program.

**POLICY 4.4:** To decrease open burning, the county shall maintain its Air Curtain Destructor at the county landfill.

**POLICY 4.5:** The county as part of its recycling program shall eliminate open burning in urban areas by maintaining its facility for the recycling of organic waste, including land clearing debris, grass clippings, etc. into compost and mulch.

**POLICY 4.6:** The SWDD, through radio and newspaper advertisements, informational brochures, or through special events, shall provide general public education on the importance and benefit of the recycling program.

**POLICY 4.7:** By 1999, the SWDD shall arrange for completed studies to determine the feasibility of the maximum recovery of recyclables from the county garbage stream and

their conversion to useful products on site without public subsidization, development of a waste to energy facility, and other alternative disposal methods

**POLICY 4.8:** By 1999, the SWDD shall arrange for completed studies to determine the feasibility of transferring the county's solid waste to another regional facility for recyclables separation and/or the disposal of the residual waste.

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Attachment 2  
Five Year Capital Improvements Plan

**Solid Waste**

Revenue	FY 2007/08	FY 2008/09	FY 2009/10	FY 2010/11	FY 2011/12
Assessments & User Fees	\$ 18,160,483.00	\$ 5,650,000.00	\$ 2,300,000.00	\$ 5,143,000.00	\$ 12,109,000.00
<b>Total Revenue</b>	\$ 18,160,483.00	\$ 5,650,000.00	\$ 2,300,000.00	\$ 5,143,000.00	\$ 12,109,000.00

Expenditures	FY 2007/08	FY 2008/09	FY 2009/10	FY 2010/11	FY 2011/12	Revenue Source
Citizen Convenience Center Improvement Projects						
Relocation & Replacement of Fellsmere Citizens Convenience Center	\$ 1,880,000.00	\$ -	\$ -	\$ -	\$ -	Assessments & User Fees
Winter Beach Citizens Convenience Center Phase I Improvements	\$ 30,000.00	\$ -	\$ -	\$ 63,000.00	\$ 184,000.00	Assessments & User Fees
Roseland Citizens Convenience Center Expansion and Improvements	\$ -	\$ 640,000.00	\$ 1,920,000.00	\$ -	\$ -	Assessments & User Fees
Gifford Citizens Convenience Center Expansion and Improvements	\$ -	\$ -	\$ -	\$ 1,430,000.00	\$ -	Assessments & User Fees
Oslo Citizens Convenience Center Expansion and Improvements	\$ 2,200,000.00	\$ -	\$ -	\$ -	\$ -	Assessments & User Fees
Transfer Tractor/Transfer Trailers and Roll-off Truck/Containers	\$ 215,000.00	\$ 520,000.00	\$ 380,000.00	\$ 50,000.00	\$ 125,000.00	Assessments & User Fees
<b>Class I Solid Waste and C&amp;D Debris Landfill Development</b>						
Lateral and Vertical Expansion of Segment I/Segment II/Infill	\$ 2,245,000.00	\$ -	\$ -	\$ -	\$ -	Assessments & User Fees
Design, Permitting & Construction of Class I Landfill - Phase 1	\$ 9,590,000.00	\$ -	\$ -	\$ -	\$ -	Assessments & User Fees
C&D Debris Placement on Northern Slope	\$ 1,300,000.00	\$ 450,000.00	\$ -	\$ -	\$ -	Assessments & User Fees
Design, Permitting & Construction of Class I Landfill - Co Disposal (former 33 Acres for C&D)	\$ 203,483.00	\$ -	\$ -	\$ -	\$ 10,000,000.00	Assessments & User Fees
Chain-Linked Fence and Gates- South Boundary of Landfill	\$ 45,000.00	\$ -	\$ -	\$ -	\$ -	Assessments & User Fees
Relocation/Replacement 10,000 gal Diesel Fuel Tank	\$ 100,000.00	\$ -	\$ -	\$ -	\$ -	Assessments & User Fees

## Solid Waste

Revenue	FY 2007/08	FY 2008/09	FY 2009/10	FY 2010/11	FY 2011/12	
Abandon. Relocate 3 Groundwater Monitoring Well Clusters	\$ 52,000.00	\$ -	\$ -	\$ -	\$ -	Assessments & User Fees
Retrofit of MRF	\$ 50,000.00	\$ -	\$ -	\$ -	\$ -	Assessments & User Fees
Sequential & Partial Closure Projects						
Sequential Partial Closure of Seg-1, Seg-2 and the Infill	\$ 250,000.00	\$ 3,200,000.00	\$ -	\$ 3,600,000.00	\$ 1,800,000.00	Assessments & User Fees
Closure of Cell I, C&D Landfill	\$ -	\$ 840,000.00	\$ -	\$ -	\$ -	Assessments & User Fees
<b>Total Expenditures</b>	<b>\$ 18,160,483.00</b>	<b>\$ 5,650,000.00</b>	<b>\$ 2,300,000.00</b>	<b>\$ 5,143,000.00</b>	<b>\$ 12,109,000.00</b>	

Comparison of Expenditures to Revenue	FY 2007/08	FY 2008/09	FY 2009/10	FY 2010/11	FY 2011/12	Total
Total Revenue	\$ 18,160,483.00	\$ 5,650,000.00	\$ 2,300,000.00	\$ 5,143,000.00	\$ 12,109,000.00	\$43,362,483
Total Expenditures	\$ 18,160,483.00	\$ 5,650,000.00	\$ 2,300,000.00	\$ 5,143,000.00	\$ 12,109,000.00	\$43,362,483
Annual Balance	\$0	\$0	\$0	\$0	\$0	\$0

Appendix A  
Comprehensive Plan Evaluation and Appraisal Report  
Solid Waste Sub-Element

<b>Data Element</b>	<b>Baseline Conditions (1995)</b>	<b>Existing Conditions (2005-06)</b>
<b>Operating Entity</b>	Indian River County	Indian River County
<b>Geographic Service Area</b>	Entire County	Entire County
<b>Operations</b>	Landfill & Five (5) Transfer Stations	Landfill & Five (5) Customer Convenience Centers
<b>Landfill Size</b>	325 Acres	595 Acres
<b>Landfill Components</b>	Class I (Segments 1 & 2) and C&D	Class I (Segments 1 & 2) and C&D
<b>Segment Design Capacity</b>		
- Class I (segment 1)	Inactive	Active (segments 1 & 2 plus infill to connect)
- Class I (segment 2)	Active – 1,600,000 cubic yards	Active – 1,000,000 cubic yards (segments 1 & 2 plus infill)
- C & D	Active – 846,000 cubic yards	Active – 4,100,000 cubic yards
<b>Total Design Capacity</b>	2,446,000 cubic yards	5,100,000 cubic yards
- Class I and C&D (segment 3) projection	-----	Proposed – 8,400,000 cubic yards (through 2030)
<b>Combined Accumulation</b>	470,003 cubic yards (total accumulation through 1995)	1,098,528 cubic yards (total accumulation through 2005)
<b>Solid Waste Generation Rate</b>	2.2 tons/capita/year	2.4 tons/capita/year
<b>Level of Service</b>	2.2 tons/capita/year	2.2 tons/capita/year
<b>Projected Facility Needs</b>	6,400,000 cubic yards (through 2010)	10,300,000 cubic yards (through 2030)
<b>Recycled Waste</b>	57,000 tons/year	121,000 tons/year
<b>% of Waste Recycled</b>	31%	23%
<b>Hazardous Material Waste</b>	46,256 lbs./year	75,912 lbs./year
<b>Operation Costs</b>	\$5,700,000/year	\$12,900,000/year (126% increase)
<b>Total Revenue</b>	\$7,662,540/year	\$15,700,000/year (104% increase)

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