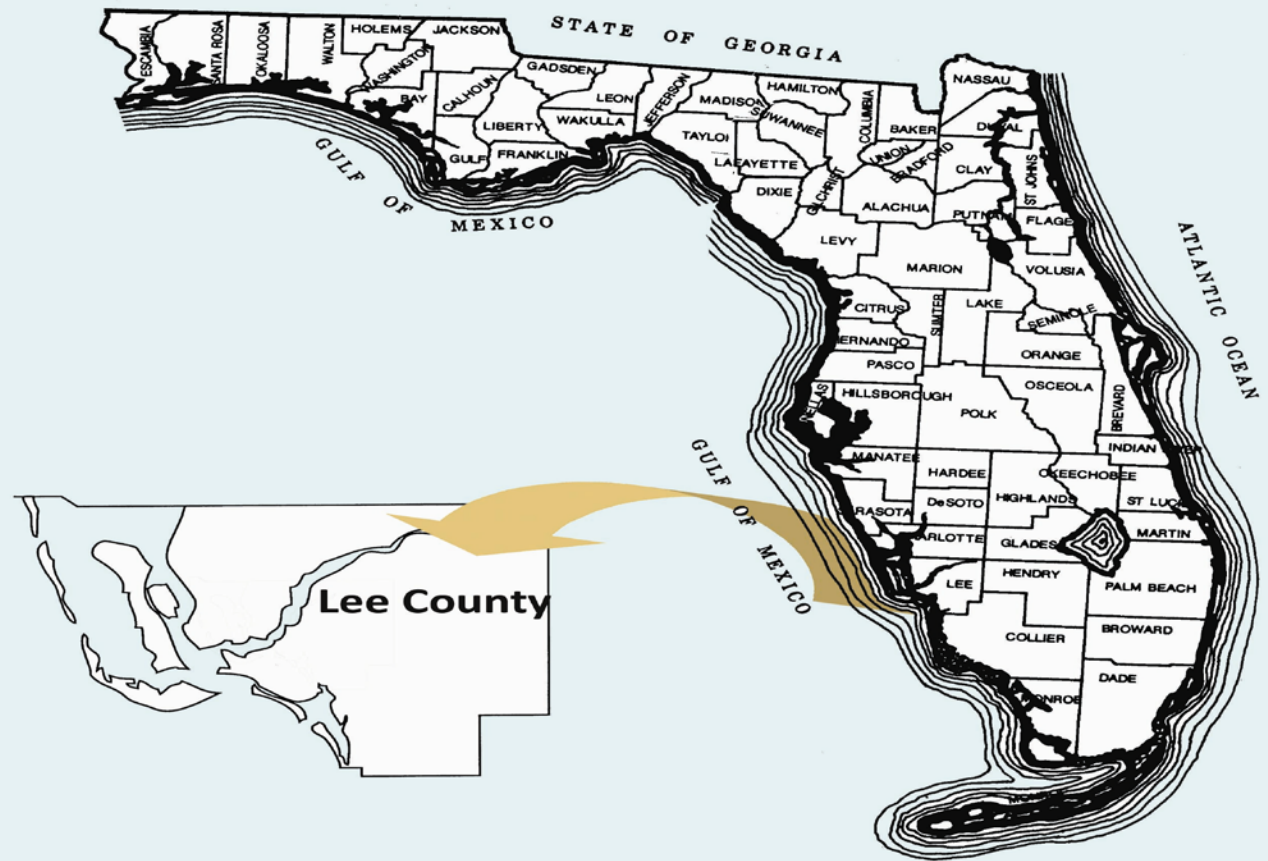


Lee County Solid Waste Division

Providing responsible solid waste management through the use of an integrated solid waste system and resource recovery principals



Lee County In Southwest Florida



Lee County Information

- **Population – 620,000**
- **Five Municipalities Encompass about 40% of Population (Ft. Myers, Cape Coral, Sanibel, Bonita Springs, and Ft. Myers Beach)**
- **County Provides Collection Service for All Unincorporated Area and Two Cities Using Franchise Collection System For Residential and Commercial (5 Franchise Areas)**
- **County's Residential Collection – 150,000 Units**
- **County Provides Disposal and Recycling Processing for All Areas and Cities**

System Components

- Franchise Collection Contracts (1-1-1)
- WTE - Keystone of the System. 1994
- WTE - Additional Combustion Unit. 2007
- Recycling - 100% Collection Service for Residential and Mandate for Multifamily
- Business Recycling Ordinance (Play or Pay)
- Construction Debris Landfill Diversion Ordinance (Play or Pay)

System Components (cont'd)

- Recycling Facility w/ Upgrade/Expansion to Single Stream. 2010
- Yard Waste Mulch w/ Community Distribution
- Yardwaste / Biosolids Compost
- Household Chemical Waste Collection Center
- Curbside Electronic Waste Collection & Rec.
- Landfill for Ash Residue
- Construction Debris Recycling. 2011

Lee County's Solid Waste Collection System

- One Each Residential Pick-Up for Household Trash, Recycling, Yard Waste Plus Appliance, Electronic Waste, And Bulky Item Curbside Pick-Up
- Contracted Franchise Hauling Companies for Business, Multi-Family, and Residents
- Contract Monitoring for Collection Service
- Right of Way Illegal Dump Clean Up
- Residential Chemical Waste Drop-Off Center

Lee County's Integrated Solid Waste Management System



Mass Burn Combustion, Renewable Energy, and Ferrous/ Non Ferrous Recovery (REC's and Carbon Credits)



Recycling of all paper, cardboard, plastics (#1 - #7), aluminum, steel, and glass containers

Recycling of electronics

Recycling of yard waste through mulching & composting



Landfilling of bypass waste (0% since mid 2007) and ash

A photograph of a long, low, reddish-brown wall with the facility's name in raised white letters. The wall is set against a backdrop of dense green trees and shrubs. In the foreground, there is a paved asphalt road and a strip of green grass.

LEE COUNTY SOLID WASTE RESOURCE RECOVERY FACILITY

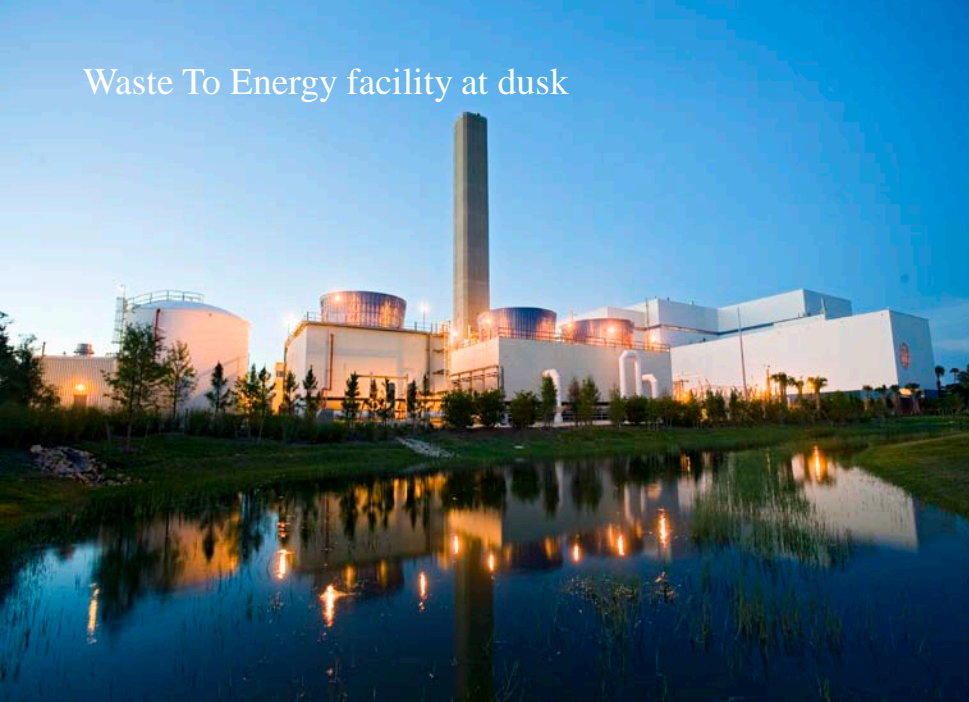




Resource Recovery Facility

- 1,836 ton per day capacity at the Waste To Energy facility (since 1994 two original 600 ton combustion units and a new 636 ton unit in 2007)
- Construction of the third 636 ton combustion unit began late 2005 and operational since August of 2007
- Strict environmental and emission standards.
- Original facility is 15 years old and with the third unit now burns 565,000 tons of garbage a year. It has the capacity to generate 59 megawatts of electricity
- Ash residue is approx. 10% of the incinerated volume and can be used as landfill cover

Waste To Energy facility at dusk



Turbine Generator



Grapple – lifts
approx. 8,000 lbs.



Stoker grates



Boiler, SDA Erection, T/G Rigging and Turbine Bldg Steel Erection July/August 2006



Tire Processing

- Tires from commercial sources are received at the Resource Recovery Facility for processing at a rate of \$105 per ton. Approx. 300 to 350 tons are received per month. Tires are utilized as fuel at the Waste To Energy Facility.



Recycling Material Processing Facility

- 2010 Renovation & Expansion – Converted from Dual Stream to Single Stream
- Ability to process 600 tons of material per day
- Most recent Facility has been in operation for 10 years was designed and built to accommodate the needs of Lee County up to approx. 2011
- New Single-Stream Facility with advanced technology will enhance the recycling program by providing ease to residents and cheaper collection system. More opportunities for commercial recycling collection

At the Materials Recycling facility -
Cardboard and paper material



Plastics are pushed onto the conveyor belt



Paper compacted and baled (1,500 lbs. each)

Baler & Operator

B22

23.5.2002



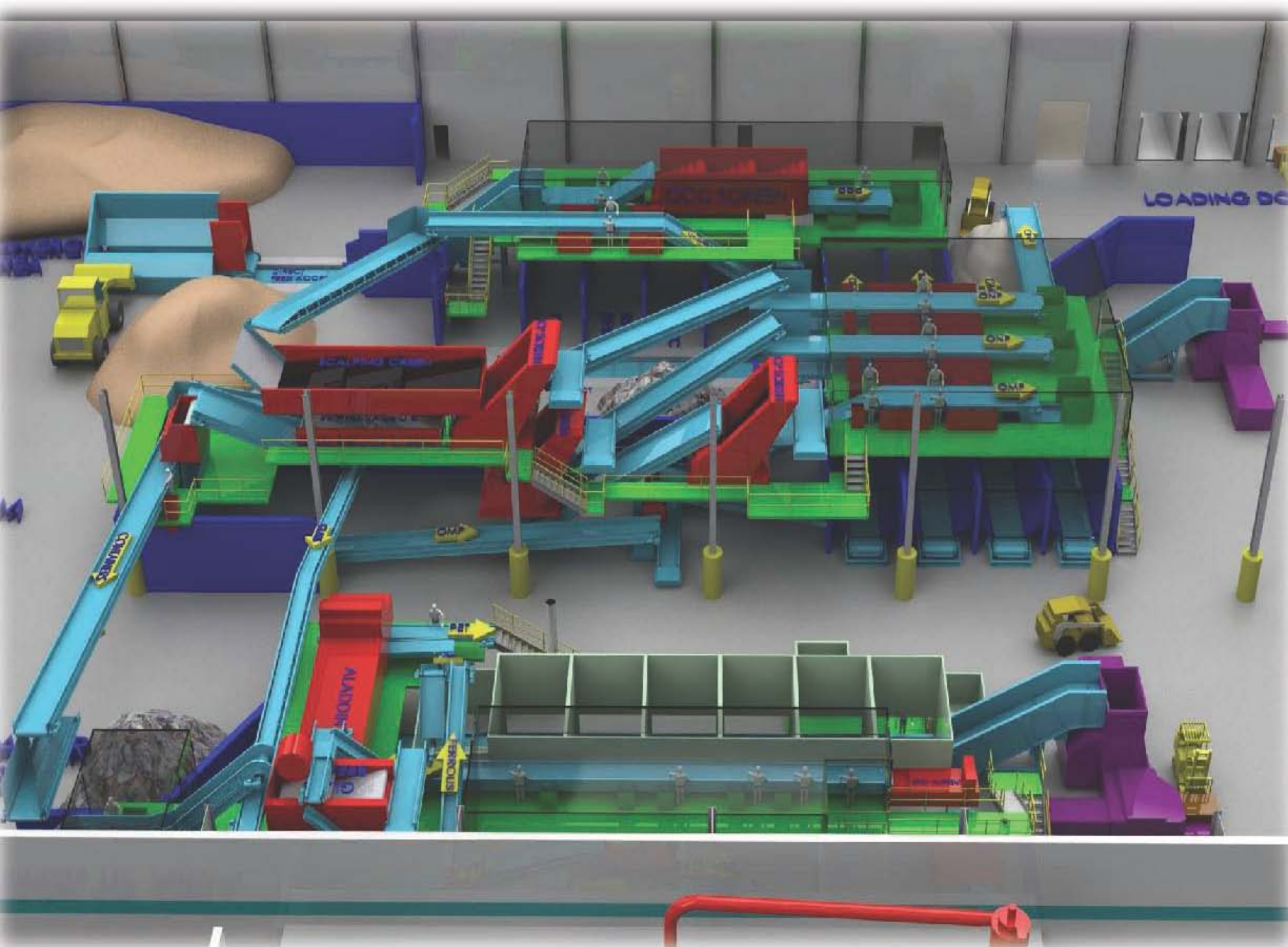
The Future of Recycling

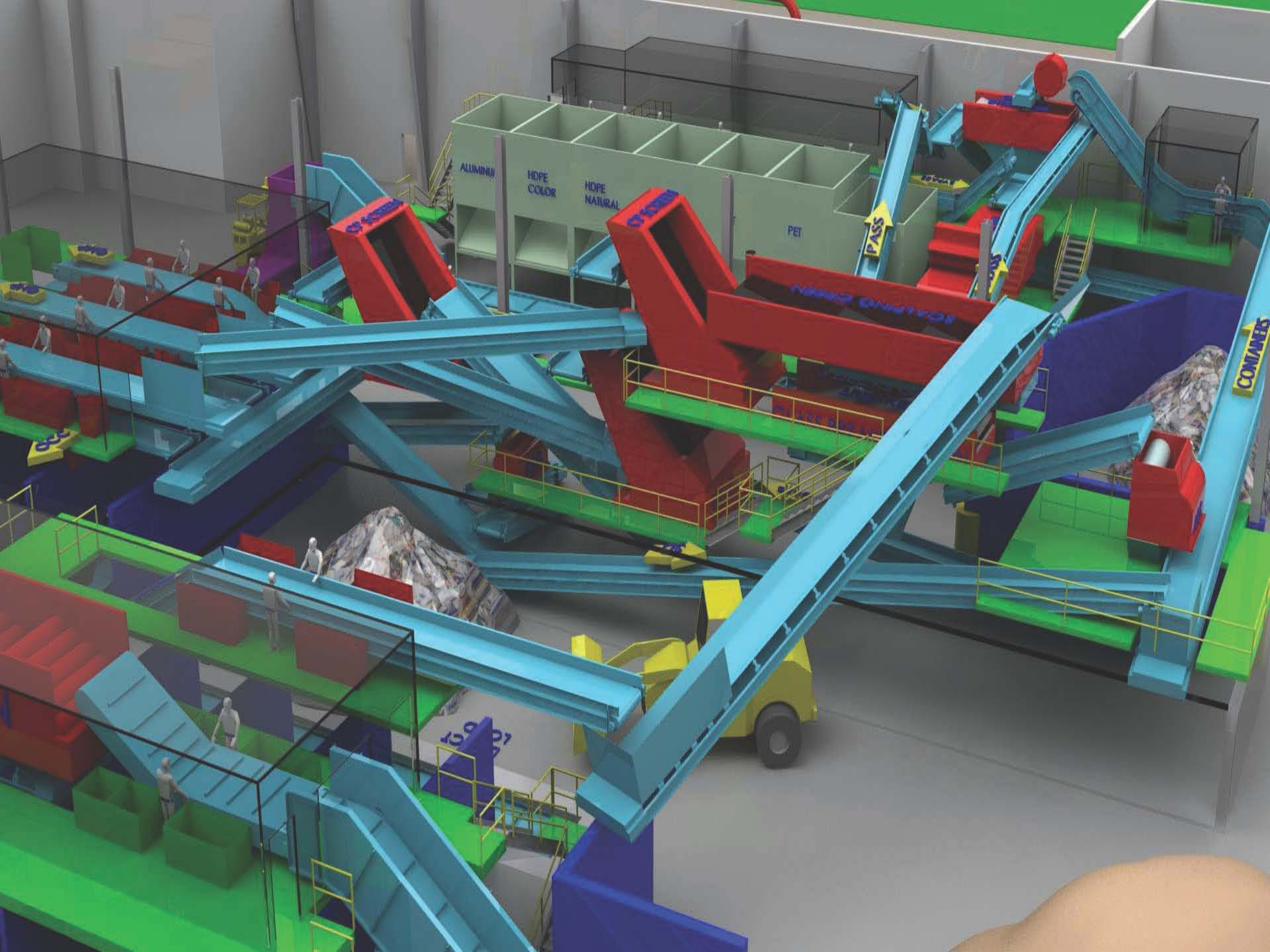
- *Continued disposal of recyclables is a needless waste of money, raw material, and disposal capacity.*
- *Diverting material from garbage containers to recycling bins saves money for everyone.*

In 2010 the County transitioned to the Single Stream Recycling system. Single Stream Recycling means that customers no longer need to separate the material by type. Paper, glass, metal and plastic will all go into one container. Collection vehicles can work more efficiently since these vehicles no longer require a division wall. This means a truck can be fully loaded, use compaction, and does not have to dump because one of its sections is full.

Construction of New Single-Stream Equipment. June 2010







Mandatory Business Recycling *starts* January 1, 2008



*Are you ready
to recycle?
We can help!*

Attend our free Recycling Workshop on how to implement a successful recycling program

FOR ASSISTANCE CALL 338-3302

WHO IS RESPONSIBLE:

The individual responsible for your company's garbage collection is the person responsible for meeting the requirements of this Ordinance. This person may be a property manager for a strip mall, the building owner, or an individual business owner.



Record Keeping

HOW TO MEET THE REQUIREMENTS OF THE ORDINANCE:

1. You must recycle that type of recyclable material that by weight takes up most of your solid waste stream. It may be one of the following:

- a) Fiber (office paper, cardboard, newsprint, magazines, junk-mail, fiberboard boxes, phone books, etc.)
- b) Commingled containers (plastic #1-7, container glass, aluminum, steel, tin cans)
- c) Ferrous metal
- d) Non-Ferrous metal (aluminum)
- e) Wood
- f) Other (by Solid Waste Division approval)

CONSTRUCTION MATERIAL RECYCLING

2. Decide if your business will establish a service contract with a Recycling Hauler or choose to self haul.

Option 1 - Establish A Service Contract

- Franchise haulers providing service within their franchise service area must provide this service at the negotiated rate of \$1.33 per cubic yard (2007/2008 rate).
- Other haulers as well as franchise haulers outside their service area can negotiate rates with individual customers. A known hauler list can be found on our website.

Option 2 - Choose To Self Haul

- A business may self haul to a recycling center or vendor. This requires additional record keeping to demonstrate compliance with the ordinance, including receipts and/or weigh tickets.

Complete a Recycling Plan Form and maintain on-site for review by County staff, if requested.



IT'S SMART BUSINESS

3. Ensure your business has sufficient bins for the collection of recyclables.

The hauler with whom you entered into a Service Agreement will be able to supply you the necessary bins and/or containers for your recyclable material.

Self haulers may purchase recycling bins or use containers that are clearly labeled for their employee use.



Shop around for cost savings

FOUR EASY STEPS TO YOUR

BUSINESS PARTICIPATION

Who is Required to Comply

- All businesses in unincorporated Lee County
- Businesses on minimum service (Can/Bag) are exempt
- Exemptions provided for hardship or other unique situations upon Division approval
- New businesses must comply within 14 days of starting solid waste service

What must be recycled

- Businesses must recycle the recyclable material that is generated in the greatest amount by the business
 - Fiber (paper, ONP, OCC, etc.)
 - Co-mingled Containers (metal cans, glass bottles and jars, plastic #1-#7)
 - Metal (ferrous and non-ferrous)
 - Wood
 - Other – per Division Approval

Multi-Family Properties

- Must provide for collection of fiber AND co-mingled containers
- Must educate new tenants as well as issue annual information to all tenants
- Can appeal for an exemption
- Compliance based on adequacy of the program
 - \$300 fines for non-compliance

Lee County's Mandatory Business Recycling Ordinance

Construction and Demolition Debris
Recycling



Construction & Demolition Recycling

*Are you ready
to recycle?*

We can help!

Attend our free Construction & Demolition Workshop to learn the steps
towards a successful debris diversion program

Covered Projects

- Any construction or demolition project
- Project requiring only mechanical, electrical or plumbing excluded
- Housing and Commercial less than \$90,000 excluded
- Commercial and Residential alterations less than \$10,000 excluded
- Roofing projects that require tear off

C & D Recycling – Progress

- Approximately 65% of all permitted jobs in Lee County divert their recyclable materials from the regular waste stream and recycle it.
- County continues to educate developers and construction businesses of the C & D recycling ordinance.

LEE COUNTY
HOUSEHOLD CHEMICAL WASTE FACILITY
6441



Household Chemical Waste Collections

- In April of 2008 opened a permanent facility for residents to accept household chemical waste products.
- This facility is open five days a week and the first Saturday of every month
- Since it began operation approx. 35,000 residents have made use of this facility





Electronics Collection

- Program started in 2001 (Drop off)
- New in October, 2005 residents in Lee County, may set out their electronics curbside for special recycling collection of electronics.
- 1000 tons of electronics collected per year
- Businesses call SW Division for bulk electronic collection service or businesses can deliver electronics to the HCW facility

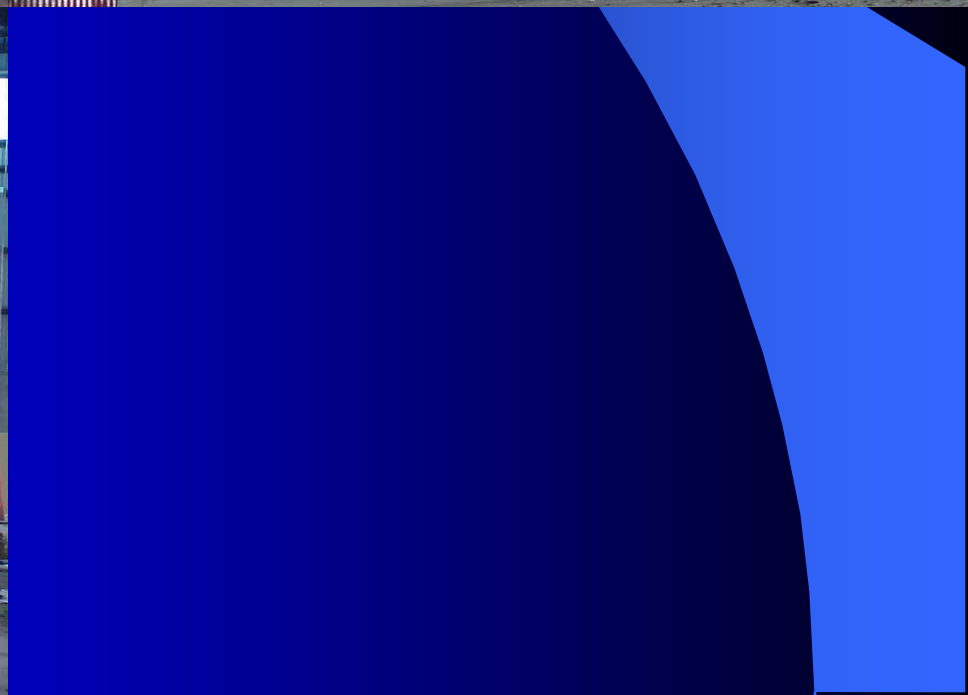


Transfer Stations

- Lee County operates three transfer stations, one in La Belle, one in Clewiston, and one at the Waste To Energy facility in Fort Myers.
- The new transfer station at the Solid Waste facility started operation in January of 2004
- During diversion approx. 1,000 tons per day are processed at the WTE transfer station

Transfer Stations / Recycling

- Lee County performs manual sorting of recyclables at the transfer station when waste diversion is low
- Select (C&D) loads that contain significant recycling material e.g., cardboard, metal, & wood
- This nominal recycling activity generates approximately 4,000 tons per year





Lee/Hendry Landfill

- The landfill was opened for disposal operations in October 2002. The initial 13-acre disposal area was projected to reach capacity in 2005 and, in conjunction with renewal of the operation's permit, the County received a FDEP permit to construct 25 acres of new disposal area. The new disposal area was completed November 2005. Another expansion including 16 acres for an ash monofill & 26 acres for C&D was completed in 2008.



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Yard Waste Processing

- Picked up by franchise hauling company
- Ground into mulch by contractor at Solid Waste facility
- 70,000 tons processed into mulch annually
- Material is distributed to public areas for use by residents
- New for 2010, Processed yard waste is used for composting with biosolids



Grinding Yard Waste



Composting - using biosolids and yard waste as feedstock

- During wastewater treatment, solids are settled out of the wastewater stream. The solid fraction contains suspended and dissolved organic matter, insoluble trace elements and nutrients. After the solids have undergone secondary treatment, they are known as biosolids, the treated and stabilized organic residuals derived from wastewater treatment. Biosolids are rich in organic matter and contain essential plant nutrients.
- The Division mixes biosolids and yardwaste mulch and places the material in sheltered windrows. The windrows are monitored for temperature, O₂ content and consistency. When the compost is mature, it is available for unrestricted use.
- Lee County will also use the compost for final landfill cover.

- Yard waste is readily available and ground to screen minus 2 inch in size.

The yard waste and biosolids are mixed at a volume ratio of 4 to 1 in windrows of 110 feet.

Lee County has six buildings at the Lee/Hendry landfill to accommodate the operation.







03/11/2010

Lee County Solid Waste Division

Thank You

