



Spark Photography

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CITIZEN ACADEMY

2015

Marion County Solid Waste Department
5601 SE 66th Street | Ocala, Florida 64480
352-671-8465 | 352-671-8491



<http://www.marioncountyfl.org/departments-agencies/departments-o-z/solid-waste>

SOLID WASTE DEFINITIONS

The following is a list of terms to help define and classify the waste characteristics found in today's solid waste streams:

Solid waste means garbage, refuse, sludge, and other discarded solid materials resulting from industrial and commercial operations and from community activities.

Hazardous waste means a waste or combination of wastes of a solid, liquid, contained gaseous, or semisolid form, which may cause, or contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness.

Commercial solid waste means all types of solid wastes generated by stores, offices, restaurants, warehouses, and other non-manufacturing activities, excluding residential and industrial wastes.

Residential solid waste means the wastes generated by the normal activities of households, including, but not limited to, food wastes, rubbish, ashes, and bulky wastes.

Industrial solid waste means the solid waste generated by industrial processes and manufacturing.

Special waste means non-hazardous solid waste requiring handling other than that normally used for municipal solid waste.

Recycled material means a material that can be utilized in place of a raw or virgin material in manufacturing a product and consists of materials derived from post-consumer waste, industrial scrap, and material derived from agricultural wastes and other items, all of which can be used in manufacture of new products.

Municipal Solid Waste or MSW means household, commercial/retail, and/or institutional waste generated within a community. Household waste includes material discarded by single and multiple residential dwellings, hotels, motels, and other similar permanent or temporary housing establishments or facilities. More than 50 percent of municipal-type solid waste consists of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as glass and rock. Municipal solid waste is classified according to its composition (i.e., Class I, Class II and Class III). Baseline Landfill accepts both Class I and Class III wastes.

Class I waste is defined as general, non-hazardous household, commercial, industrial, and agricultural wastes.

Class II waste is defined as general, non-hazardous household, commercial, industrial, and agricultural wastes and takes a total of less than 20 tons per day.

Class III waste is defined as waste that is not expected to produce leachate, which does not pose a threat to public health or the environment. Such waste includes yard waste, construction and demolitions debris, waste tires, asbestos, carpet, cardboard, paper, glass, plastic, and furniture other than appliances.

Waste-To-Energy is defined as an incineration process in which solid waste is converted into thermal energy to generate steam that drives turbines for electricity generators.

Resource Recovery (Gas-To-Energy) means the process of recovering materials or energy from solid waste, excluding those materials or solid waste under the nuclear regulatory commission.

Single Stream Recycling (also known as “fully commingled” or “single-sort”) recycling refers to a system in which all commodities (newspaper, paperboard, corrugated fiberboard, plastic, glass, etc.) are mixed, instead of being sorted by the resident into separate containers and handled separately throughout the collection process. In single stream, both the collection and processing systems are designed to handle this fully commingled mixture of recyclables with materials being separated for reuse at a materials recovery facility (MRF).

Material Recovery Facility (MRF)



The above MRF, built by Waste Pro, LLC became fully operational in January 2015. Single stream recycling collected at Marion County’s 18 recycle convenience centers are transported to the MRF where items are sorted, bailed and sent to market.

SOLID WASTE FACILITY OPERATIONS

The three (3) divisions of the Solid Waste Department (Collections/Litter Control, Disposal/Hazardous Waste and Recycling) are managed and operated here at the Baseline Solid Waste Facility. The following information provides an overview of how the services and programs currently managed by the Department work together to provide effective solid waste management services for Marion County.



Collection/Litter Control provides for the transportation of solid waste from eighteen (18) residential recycling convenience centers to the Baseline Solid Waste Facility and provides for the hauling of collected recyclable materials to a recycling processing facility. Yard waste collected at the centers is loaded and hauled to the Baseline Facility or directly to a permitted processing facility. Another function of the Collection Division is the operation and management of litter control on county road right of ways. The litter control programs are committed to alleviating the litter and illegal dumping by conducting investigations, educating the public and citing offenders on these important solid waste issues. Other litter control programs managed and supervised by Department staff include:

- Community Service Probationary Work Program – workers are provided by the County Court system for picking up litter on county roads
- The Adopt A Road program – currently 43 groups are volunteering to clean 86 miles of County road right of way, four (4) times per year

- Salvation Army Corrections Community Service Program – provides 450+ workers assigned to Recycling Convenience Centers to help residents unload garbage, trash and recyclable material. They also perform minor maintenance on the facilities.
- Sheriff's Department: provides up to 12 male and 12 female inmates 5 days per week for litter activities on county maintained roads.

Disposal Division has the responsibility to operate all the solid waste functions of the Baseline Solid Waste Facility. The disposal staff are responsible for the proper operation of the scale house facility to weigh and screen waste type and to direct customers to a disposal location while computing disposal fees.

SCALE HOUSE



The accounting and scale systems utilized within the scale house help the scale operators monitor and record all solid waste transactions for the Solid Waste Department. On any given weekday the scale house records at least 320 transactions and on average, weighs approximately 425 tons per day. The solid waste system revenue sources include the tipping fees from commercial users and residents based upon the type of waste disposed.

TIPPING FEES

	<u>Per 100 lbs</u>	<u>Per Ton</u>
<u>Class 1 & Class 3 Waste:</u> (household garbage, furniture, agriculture, commercial, construction & demolition (C&D) and residential electronics)	\$ 2.10	\$ 42.00
<u>Mixed Loads – All types:</u> (any mixing of different types of waste is considered a mixed load)	\$ 2.10	\$ 42.00
<u>White Goods / Metals:</u> (refrigerators, stoves, washing machines, freezers, etc.)	\$ 2.10	\$ 42.00
<u>Tires:</u> (five (5) vehicle size tires per year free to residents who pay the solid waste assessment) <ul style="list-style-type: none">- Passenger & Light Duty- Off Road / Equipment	\$ 4.75 \$ 10.50	\$ 95.00 \$ 210.00
<u>Special Handling:</u> (asbestos, latex paint, old data files & info., etc.)	\$ 5.00	\$ 100.00
<u>Yard Waste:</u>	\$ 1.25	\$ 25.00

\$2 minimum charge across the scales

ACCEPTED PAYMENT

VISA – MASTERCARD – DISCOVER – AMERICAN EXPRESS

CASH and CHECKS

HOW YOUR TAX DOLLARS ARE SPENT

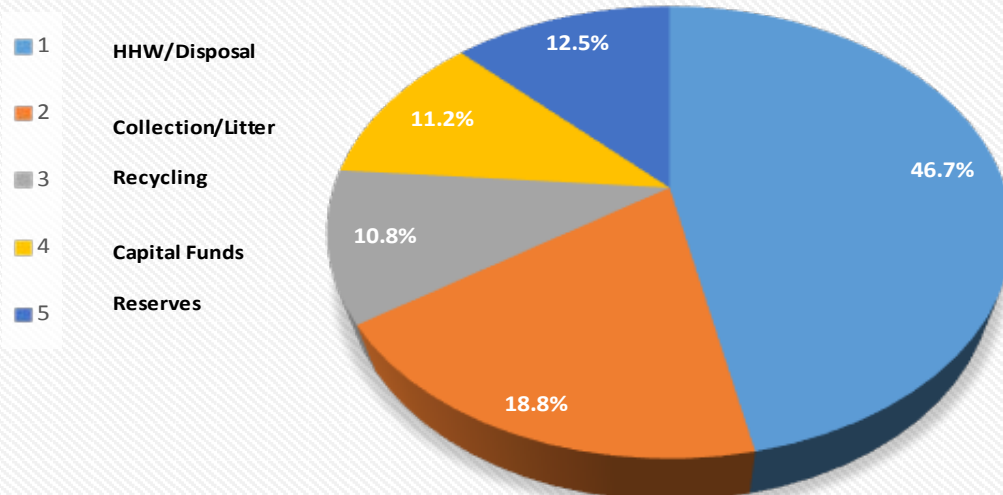
In addition to tipping fees the solid waste system utilizes the revenue derived from the Municipal Service Benefit Unit (MSBU) non-ad valorem tax known as the Waste Assessment. The Waste Assessment is paid by unincorporated property owners at a rate of \$87.00/residential parcel/year.

SOLID WASTE ASSESSMENT BREAKDOWN

\$87/year per Residential Unit

Solid Waste Budget	Percentage	Pro-rated
<u>Department Description</u>	<u>of Total</u>	<u>Waste Assessment</u>
1 Disposal/HHW Division	46.70%	\$40.63
2 Collection/Litter Division	18.80%	\$16.36
3 Recycling Division	10.80%	\$9.40
4 Capital Funds	11.20%	\$9.74
5 Reserve Funds	12.50%	\$10.87
	100.00%	\$87.00

Assessment Percentages



Transfer Station and Baseline Landfill

The disposal staff is responsible for the proper operation of the landfill, inspection of incoming loads, yard waste operations, metal and tire storage, and overseeing of franchised hauler operations. Approximately +/-130,000 tons per year is disposed into the Baseline Landfill.

Only the Transfer Station and Class I landfill are a final disposal method. Once the final maximum build out of the Class I area is complete, the land filled area will cover approximately 65 acres.

Transfer Station



The Transfer Station is currently being used by hand unload customers to improve safety in the landfill.

Tires

Approximately 43 tons of whole waste tires per month are collected at the Baseline Facility. All waste tires are stockpiled, loaded into trailers and removed from the site by a waste tire recycling contractor. The processing disposal cost of waste tires is derived from waste tire tipping fees collected at the scale house. The current waste tire tipping fee is \$95.00 per ton (*\$4.75 per 100 pounds*) for vehicle size tires and \$210 per ton (*\$10.50 per 100 pounds*) for off-road or equipment size tires.



Metals

Appliances and non-ferrous metals are separated and removed from the recycling area by a contracted recycler. The recycler is responsible for removing the metals and paying the County a contract negotiated rate per ton for all recycled material. During the 2013 fiscal year approximately 1,208.8 tons of metals were recycled and diverted from disposal within the Baseline Landfill.



Baseline Landfill Metal Pad

Yardwaste

Yard trash collected at the 18 recycling convenience centers along with wood waste that is brought in by commercial haulers and residents, is processed through an industrial wood grinder on site at the Baseline Solid Waste Facility. Tipping fees from commercial and residential customers (\$25/ton) along with the Solid Waste Assessment support this program. Approximately 23,400 tons of yard and wood waste is processed annually.



Household Hazardous Waste

Hazardous Waste staff handle the collection, packaging and proper disposal of all household hazardous waste delivered to our facilities by residents of Marion County. All household hazardous material is transported and disposed of by a permitted environmental contractor. The Collection Center accepts household hazardous waste from County and City of Ocala residents free of charge ***(Businesses: please visit our website or call the Solid Waste Office at 352-671-8465 for business waste disposal information)***

The following is a partial list of acceptable materials for disposal by Marion County residents at the Household Hazardous waste section located at the Baseline Solid Waste Facility:

- Lawn and garden chemicals, fertilizers
- Paint, strippers and thinners
- Gasoline, antifreeze, used oil filters and brake fluid
- Batteries (household and automotive)
- Thermometers, florescent light bulbs, compact fluorescent bulbs
- Propane cylinders, aerosol cans, pool chemicals
- Pharmaceutical waste (excluding controlled substances)
- Mercury thermostats

The Hazardous Waste Division also manages the following programs:

- Sharps program (hypodermic needles)
- Pesticide Container Recycling program
- Business Small Quantity Generator Program
- Fluorescent Lamp Recycling Program
- Asbestos-Containing Waste Material Guidelines
- Managing Discarded Mercury-Containing Devices (MCD's)
- Guidelines for Disposal Contaminated soil, muck, wastewater, sludge, septage or other material of industrial origin

For more information on the above programs and services, please visit our website or call our office at 352-671-8465.

Household Hazardous Waste Barn



Leachate Management System

Leachate is the term used for rainwater and liquid which has trickled down through the waste to the bottom of the landfill cell. Each cell incorporates an active system for collecting and removal of leachate. The leachate collection system consists of a series of perforated piping laterals running across the bottom of the landfill. These laterals serve to collect the leachate that forms and collects on top of the liner. The leachate is then pumped out of the landfill into a storage system.

While Urban Cell is unlined, all of the cells in section III-A, III-B and III-C, have been constructed using a double composite liner system. This system consists of two 60-mil thick plastic geomembranes. Because of the two composite liners, the landfill exceeds any governmental requirements and provides unsurpassed protection against leakage to the groundwater.

Leachate Storage tanks (30,000 gallons each)



Leachate is trucked off-site by a Florida Water Treatment company for pretreatment and reuse.

Landfill Gas to Energy Project

The Landfill gas to energy (LFG) project is a partnership between Marion County and G2 Energy, LLC of Boise, Idaho. This project was built and is operated by G2 Energy which includes three large landfill gas powered electric generators. Operations run 24/7 with the exception of normal system and/or line maintenance.

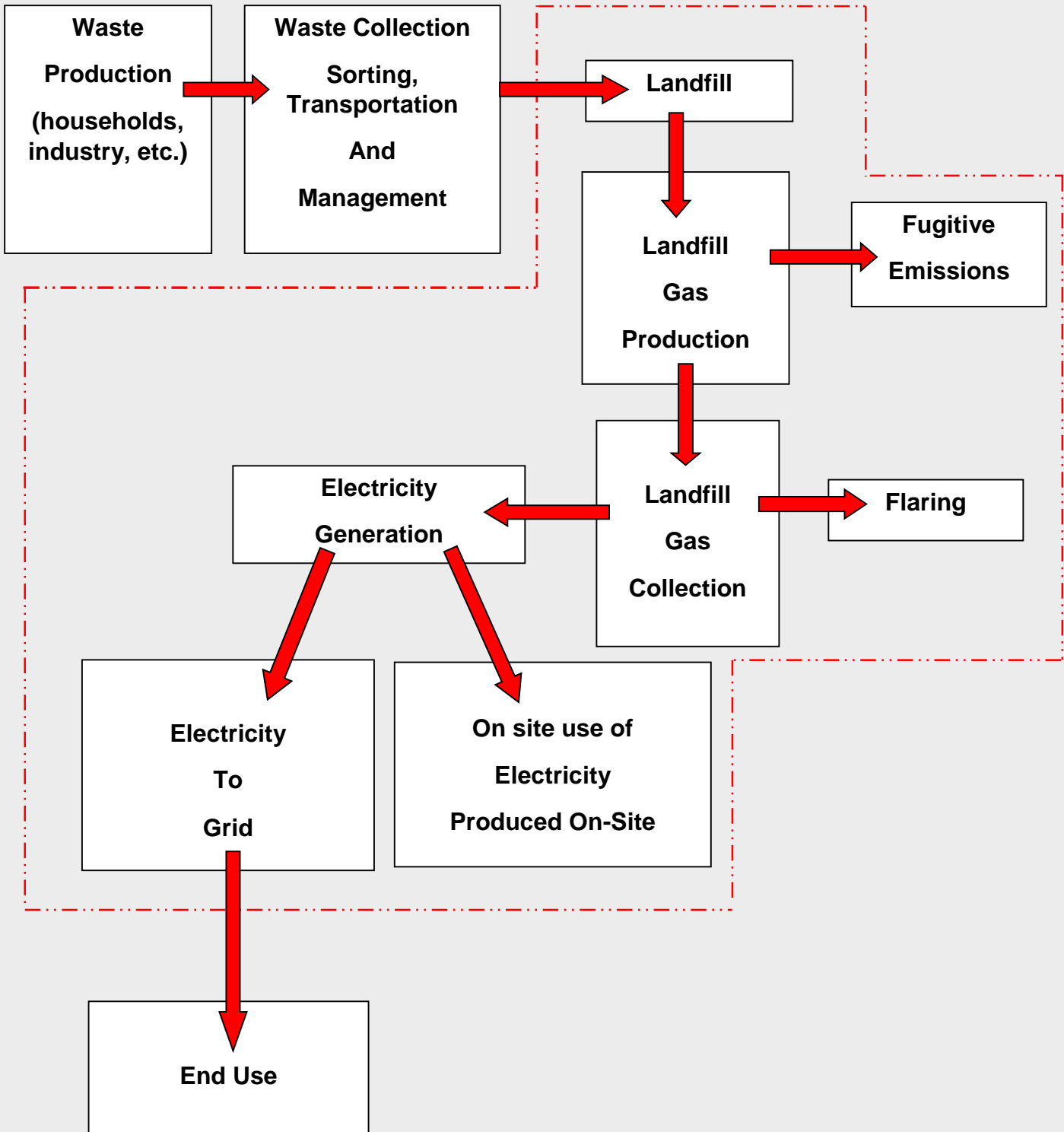
The operation of this project began in December 2008 and it will produce a maximum of 4 megawatts (current average is 3.65 megawatts) of electricity on a daily basis. No Marion County funds or personnel were spent on this project with the exception of normal updates/upgrades to our Landfill Gas System to keep within Florida Department of Environmental Protection (FDEP) permit requirements. Marion County received \$238,007.42 in royalties from the sale of gas from G2 Energy in 2014.

Normal gas flow is around 1365 standard cubic feet per minute (scfm) which is equivalent to producing enough electricity to power approximately 4,000 homes per day with a green renewable energy source. According to the Landfill Methane Outreach Program (LMOP), under the Federal Environmental Protection Agency (EPA), by operating this type of facility we are removing enough carbon emissions from our atmosphere to equal the removal of 30,000 cars off the streets and eliminating emissions they would have expelled each year.



G2 Energy Plant

GAS TO ENERGY PROCESS FLOW CHART



Landfill Gas Collection System Active Gas Collection System

Landfill Gas Flare System



The original Urban Cell, which was constructed without a bottom liner or leachate collection system, is no longer receiving waste, but landfill gas is being collected. The landfill gas, known as methane gas, is odorless and colorless and can be explosive. The gas is extracted through wells and pipes and is pumped to the Baseline Solid Waste Facility flare station. Controlling the landfill gas migration has virtually eliminated odors from the landfill.

The final cover over Urban Cell consists of a clay liner, storm water control provisions, and active landfill gas collection system. The active landfill gas collection system uses a vacuum system to transport the gas to the flare station. In the past, the gas has been thermally destroyed (burned off), but now the gas has been put to beneficial use with the addition of the G2 Energy landfill gas to energy project.

Currently 100 percent of the methane gas is pulled from all Baseline cells to the Gas to Energy plant. The flare (tested monthly) is used for emergencies and maintenance.



On Top Of The Hill

Where we are right now

- A 3:1 (from a 5:1) side slope modification has extended the life of the Baseline Landfill by approximately 2 years.
- 6+ years remaining landfill life

Where we are going

- The Board approved a contract with the Heart of Florida (HOF) Sumter County located landfill for out of county disposal of solid waste. The HOF Landfill site is projected to provide enough space to accommodate approximately 20 years of Marion County waste. When combined with the remaining capacity at the county's landfill, this move is expected to meet county disposal needs for more than 30 years.
- Transfer Station Improvements
- Build a Citizen Drop-off
- Begin shipping out to Heart of Florida Landfill in 2019



727.520.8181
www.aerophoto.com

ACMS Class I Landfill
(Subcells 1 and 2 Construction)

Image # 130102 2000
Date 01.02.13

Recycling Division: manages the recycling programs that include an educational program for the public on recycling (i.e. tours of the Solid Waste Management Facility, classroom presentations at area schools, participation at Senior Service days, etc.) This division is also responsible for staffing and operating the eighteen (18) recycle convenience centers located throughout the county. Recycle convenience centers are largely responsible for the County's annual reported recycling rate of 48%. The drop off services provided by the centers include:

- Receiving household garbage
- Single stream recycling collection
- Yard waste collection
- Limited household hazardous waste materials
- Textile recycling collection
- White good drop off area
- Scrap metals collection
- Scheduled furniture disposal events
- Scheduled electronic waste recycling events
- Bio-medical (sharps) container distribution program
- Recycle Center Permits for Non-assessed residents

Entrance to Baseline Recycle Center



Garbage compactors



Single Stream Recycle bins



Metal bin and Yard Waste



QUESTIONS?

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BROCHURES

- Hours of Operation
- Recycle Center List of Acceptable Items
- Recycle Center Permit Information
- Single Stream Recycling FAQ

HOURS OF OPERATON

BASELINE LANDFILL

7:00 a.m. until 5:00 p.m.

Monday – Saturday

Closed on Sunday

RECYCLING CENTERS

Baseline Recycling Center (located at the landfill)

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
7 a.m.-5 p.m.	7 a.m.-5 p.m.	7 a.m.-5 p.m.	7 a.m.-5 p.m.	7 a.m.-7 p.m.	7 a.m.-5 p.m.	9 a.m.-5 p.m.

All other recycling centers

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
7 a.m.-5 p.m.	Closed	7 a.m.-5 p.m.	Closed	7 a.m.-7 p.m.	7 a.m.-5 p.m.	9 a.m.-5 p.m.



Additional information:

Visit Solid Waste's website at www.marioncountyfl.org/solidwaste.htm, call the office at 352-671-8465 or email solidwaste@marioncountyfl.org.



**Marion County
Solid Waste**

RECYCLING CONVENIENCE CENTERS

ACCEPTABLE ITEMS

Recycling Centers provide containers for the following:

- Household Garbage - must be bagged or containerized - No loose garbage, place in **Green** compactor
- Single Stream Recycling (No sorting necessary) - place in **Blue** compactor
 - Newspapers
 - Corrugated Cardboard, includes soft drink cartons and cereal boxes
 - All Plastics #1 through #5 and #7 (No #6 Styrofoam)
 - Aluminum beverage cans
 - Glass - clear, green and brown bottles
 - Tin food cans - clean only
 - Junk mail/Magazines/Phone books - no hardbound books
- Oil Tank - used motor oil (No Water, gas, antifreeze or cooking oil)
- Used Oil filters
- Batteries, paint and paint related materials (quantity restrictions may apply)
- Scrap metal including household appliances (refrigerators, stoves, washing machines, etc.)
- Used Sharps containers (see Attendant for details)
- Used fluorescent and compact lamps
- Electronics (Must be small enough to fit into the Green compactor where household garbage goes)
- Yard Waste (limited to 2 cubic yards - the size of a standard size truck bed up to the top of the bed. Items must be smaller than 4' in length and less than 4" in diameter)
- Multiple residential owners may dispose of Yard waste from more than one residence only after verification of annual assessment. See Attendant for forms. Forms are submitted to Solid Waste Administration for verification.

Special Collection Events

- Electronic Waste Recycling events are sponsored by the Solid Waste Department on a quarterly schedule. Please contact the Solid Waste Department at 352-671-8465 or visit us at the website listed below.
- Furniture (Each Recycle Convenience Center hosts two (2) Saturdays every year for residents to dispose of their furniture, mattresses and bedding. See Attendant for dates/times)

NOTE: - If you have an out of county tag, you may be asked to provide proof of Marion County residency as outlined in the Marion County Solid Waste Code of Ordinance.

Non-Accepted Items (not covered under the Solid Waste Assessment) can be disposed at the Baseline Solid Waste Facility for the posted tipping fee

- Carpeting, remodeling or construction & demolition debris - \$42/ton (\$2.10 per hundred pounds)
- Pesticides or other household hazardous wastes - **No Charge Residential only**
- Yard waste in excess of 2 cubic yards - \$25/ton (\$1.25 per hundred pounds)

No Commercial/Industrial waste or recycling is permitted at any Solid Waste Recycle Center

RECYCLING CENTER PERMITS FOR NON-ASSESSED RESIDENTS


About the Permit:

Residents who live in unincorporated areas of the County pay an annual assessment fee to utilize the services of the county's 18 recycling centers. Residents living in incorporated cities and towns and outside the county now have an opportunity to also use the recycling centers with the purchase of an annual permit. Permits cost \$100 each year, and are transferrable to a maximum of three registered vehicles per household.

NOTE: Commercial users do not pay the solid waste assessment and are not permitted to dispose of trash or recyclables at the recycling centers. Businesses can utilize the **Marion County Baseline Landfill** and should contact Solid Waste at 352-671-8465 for a list of programs.

How to purchase a Non-Assessed Residential Permit:

Access the application online at: <http://www.marioncountyfl.org/departments-agencies/departments-o-z/solid-waste/recycling-and-trash-disposal> or contact the Marion County Solid Waste Department at 352-671-8465. After filling out the application, please print and bring it to the Solid Waste Department office at 5601 SE 66th Street, Ocala, FL 34480 with a check for \$100.



THIS SIDE FACE TO OUTSIDE

MARION COUNTY SOLID WASTE
NON-ASSESSED RECYCLING CENTER PERMIT

JAN	
FEB	
MAR	
APR	13
MAY	14
JUN	15
JUL	16
AUG	17
SEP	18
OCT	
NOV	
DEC	

PERMIT # 00001

VOID IF ALTERED OR DEFACED

HOURS OF OPERATION

Baseline Recycling Center

Mon	Tues	Wed	Thurs	Fri	Sat	Sun
7a.m.- 5p.m.	7a.m.- 5p.m.	7a.m.- 5p.m.	7a.m.- 5p.m.	7a.m.- 7p.m.	7a.m.- 5p.m.	9a.m.- 5p.m.

All other Recycling Centers

Mon	Tues	Wed	Thurs	Fri	Sat	Sun
7a.m.- 5p.m.	closed	7a.m.- 5p.m.	closed	7a.m.- 7p.m.	7a.m.- 5p.m.	9a.m.- 5p.m.

Additional Information:
Visit Solid Waste's website at
www.marioncountyfl.org/solidwaste.htm,
call the office at 352-671-8465 or
email solidwaste@marioncountyfl.org.

Single-stream recycling FAQ

What is single-stream recycling? Single-stream recycling means that recyclable items can be disposed of in one container. You don't have to separate glass from plastic or newspaper from cardboard. All items can now be disposed of in one big, blue container.

Why the change? Marion County Solid Waste began providing single-stream recycling for several reasons:

- **It's easier.** Single-stream recycling reduces the time and effort needed to recycle.
- **It's safer.** Residents no longer have to walk around busy recycling centers to dispose of recyclables into a series of different containers. Having one single recycling container also saves space at the centers and makes the surroundings less crowded.
- **It will likely increase the recycling rate.** Marion County currently has the 10th highest recycling rate (37 percent) in the state of Florida, but is hoping that this easier process will encourage even more residents to recycle, thereby reducing the amount going into the landfill. Introducing single-stream recycling typically has increased the recycling rates in other communities across the country.

Will it cost me more money? No. The system's increased efficiencies combined with revenue from the recycled goods are expected to cover the cost of the increase in service level – without an increase in your Solid Waste assessment.

What happens to all those items after we toss them into the big, blue bin?

Are they really recycled? Yes! After the single-stream recycling container becomes full, Waste Pro (the company that's contracted with Solid Waste), transports the items to a materials recovery facility (MRF). The materials are sorted by different machines, baled according to type and then sold for recycled content. Currently this facility is located in Volusia County, but the company plans to build a regional MRF in Marion County that has the potential to provide about 20 new local jobs.

Can I see how single-stream recycling works? Sure. Click here to view an article by the Connecticut Resources Recovery Authority that includes a video depicting a Material Recovery Facility and how recyclables are sorted: http://www.crra.org/pages/single-stream_recycling.htm. Although Marion County's program features recycling centers and not curbside pickup, the process of separating recyclables at the MRF is the same.

Additional information:

Click here for Solid Waste's [brochure on single-stream recycling](#).



Contact us if you have questions.

Call our office at 352-671-8465 or email us at solidwaste@marioncountyfl.org.