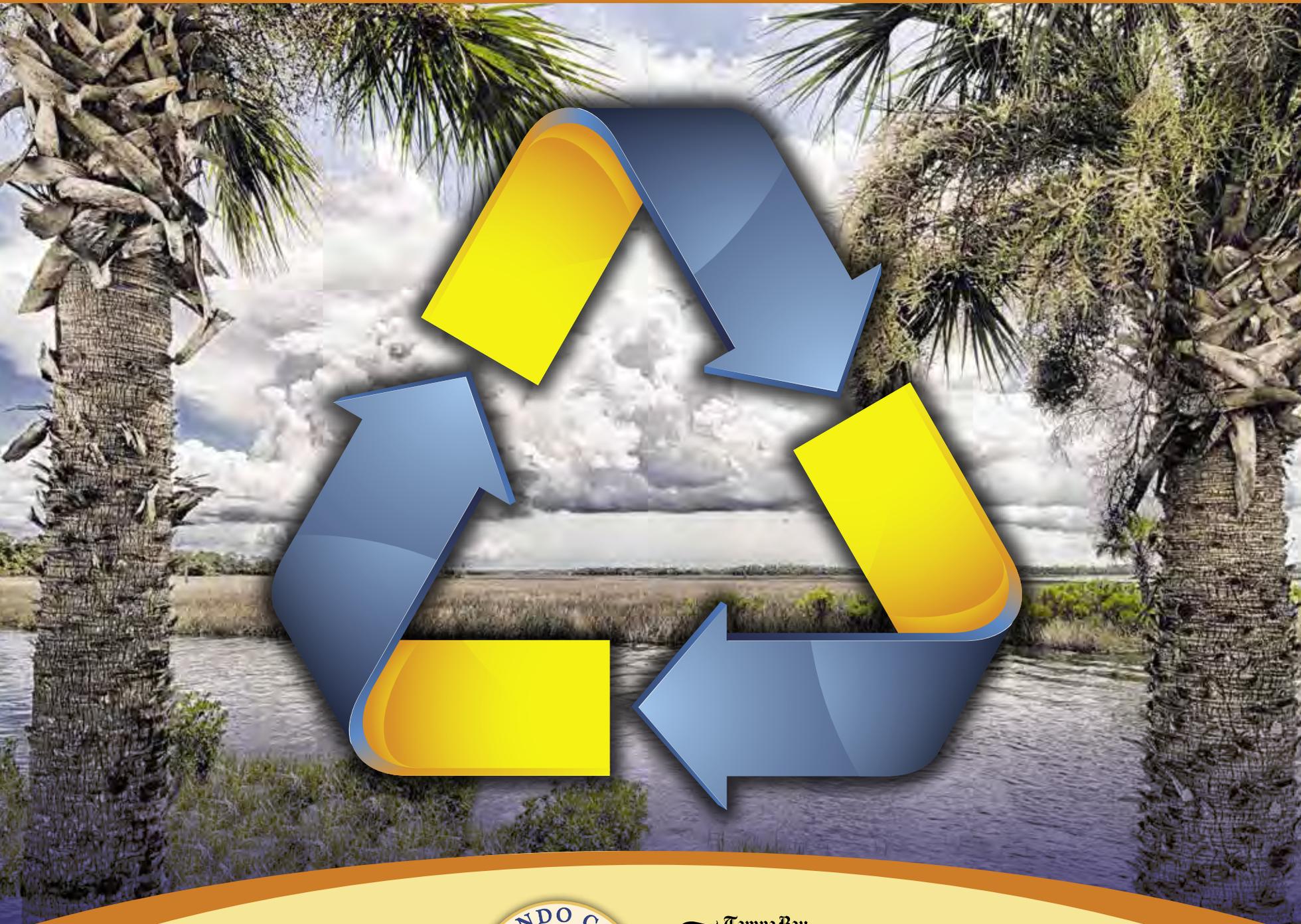


Hernando County Recycling 2019

EVERYTHING YOU NEED TO KNOW ABOUT RECYCLING
IN HERNANDO COUNTY



Tampa Bay
Times
NIE
newspaper in education
tampabay.com/nie

PLUS EMERGENCY MANAGEMENT AND WATER CONSERVATION INFORMATION!

No SUCH PLACE AS 'AWAY'

Most of us don't think about where our trash goes after we put it by the curb, but when we throw our trash "away," it actually goes somewhere!

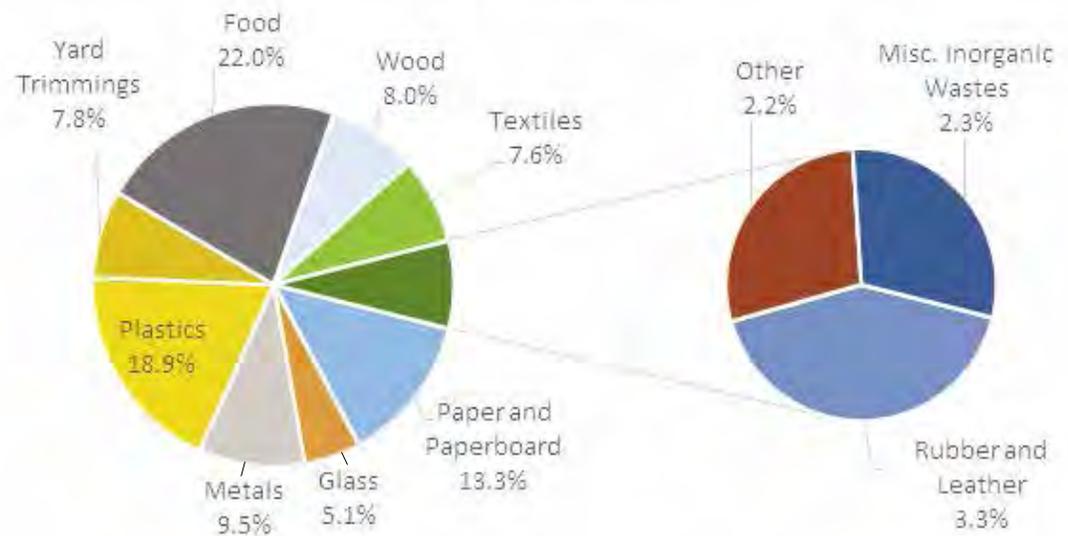
In Hernando County, municipal solid waste (MSW) – trash – is landfilled at the county's facility in Brooksville. The landfill handles approximately 400 tons of trash from Hernando County residents and businesses every day.

Although the landfill currently has enough capacity to handle the county's trash for decades to come, Hernando continues to grow and attract new residents and businesses – which means more trash.

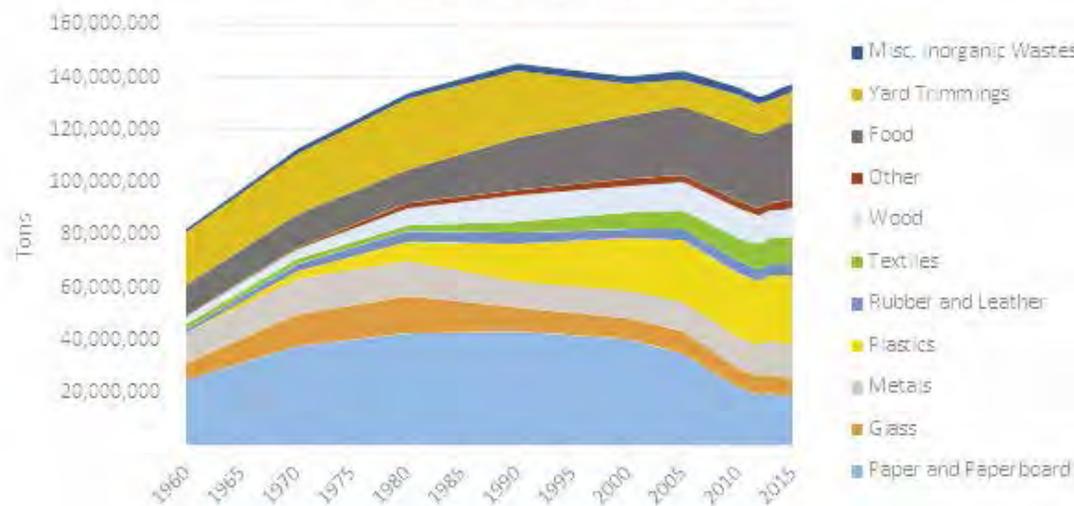
This is where we all can help.

Reducing the amount of trash going into the landfill saves tax money, reduces waste and extends the life of the landfill. In this publication, we're going to show you how you can make a difference.

Total MSW Landfill by Material, 2015
(137.7 million tons)



Landfilling Tonnages: 1960-2015



HERNANDO COUNTY SOLID WASTE AND RECYCLING FACILITIES:

Serve more than
300,000
CUSTOMERS
PER YEAR

Receive approximately
400 TONS
OF TRASH
DAILY

- Recycle **3,000 TONS** of cardboard and paper annually
- Recycle **800 TONS** of plastic annually
- Recycle **413 TONS** of tires annually
- Recycle **1,200 TONS** of scrap metal annually
- Recycle **25 TONS** of batteries annually

Source: Hernando County

WHAT GOES TO THE LANDFILL?

AMERICANS GENERATE

262.4 MILLION TONS

OF TRASH ANNUALLY – ABOUT 4.48 POUNDS PER PERSON PER DAY.

67.8
MILLION TONS
IS RECYCLED

23.4
MILLION TONS
IS COMPOSTED

137.7
MILLION TONS
IS LANDFILLED

33.57
MILLION TONS
WAS BURNED

Source: U.S. Environmental Protection Agency

Reduce, reuse, recycle

Reducing, reusing and recycling can help you, your community and the environment by saving money, energy and natural resources.

- **Reduce** – By purchasing, consuming and throwing away less.
- **Reuse** – By reusing items by repairing, donating or selling them.
- **Recycle** – By collecting recyclable materials that would otherwise be considered waste.

What is recycling?

According to the U.S. Environmental Protection Agency, recycling is “the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products.”

There are three steps to the recycling process:

- 1. Collecting and processing:** Recyclable materials are collected, sorted and processed into materials that can be used in manufacturing.
- 2. Manufacturing:** New products are manufactured using materials made from recycled content.
- 3. Purchasing:** Consumers purchase new products made with recycled content.

Why recycle?

Recycling benefits the environment, our community and our economy:

- Reduces the amount of waste sent to the landfill
- Conserves natural resources such as timber, water and minerals
- Prevents pollution by reducing the need to collect new raw materials
- Saves energy
- Reduces greenhouse gas emissions that contribute to climate change
- Helps create jobs in the recycling and manufacturing industries

Source: U.S. Environmental Protection Agency

THINK ABOUT IT



Recycling one aluminum can saves enough energy to run a 100-watt bulb for 20 hours or a computer for three hours.



The energy saved by recycling one plastic bottle will power a computer for 25 minutes.



Recycling one ton of cardboard saves 46 gallons of oil.



Recycling one ton of paper saves enough energy to heat an average home for six months.

Source: U.S. Environmental Protection Agency

Going beyond the text WASTE JOURNAL

A waste journal is a great way to study and analyze what you are throwing away and how it could be minimized. In this activity, you will record all items (including any food) that you dispose of over a two- to three-day period and analyze the results. Recording items can be done by writing down the name of the item or, for younger students, drawing an image or taking a photo.

Create a chart or spreadsheet with six columns.

In the first column, you will record the name of each item you dispose of.

In the next four columns, you will record where the item should go (reuse, recycle, compost or trash). Use Pages 4-5 and 10-11 of this publication to help you determine what is recyclable and compostable.

In the final column, you will record where you actually disposed of the item.

When your study period is finished, answer the following questions:

- How many items did you dispose of over the study period?
- What were the main components — parts — of your waste?
- What percentage of your waste was composed of recyclables? What percentage was food waste?
- What were some of the items that could have been reused or recycled instead of thrown away?

- Why do you think you didn't recycle those items?
- What steps can you take to increase your recycling rate?
- What steps can you take to reduce your nonrecyclable waste?

Using the articles in the *Tampa Bay Times* as models, write an article to share your results. Be sure to discuss the purpose and method of your study, the observations that you made and the conclusions that you drew from the data you collected.

Adapted from: “Student Waste Journal,” Recycling Champions Green Team Advocacy Action Kit, GrowNYC

Florida Standards: Language Arts LAFS.312.L.1.1; LAFS.312.L.1.2; LAFS.312.L.2.3; LAFS.312.L.3.4; LAFS.312.RI.1.1; LAFS.312.RI.1.2; LAFS.312.RI.1.3; LAFS.312.RI.2.6; LAFS.312.RI.3.7; LAFS.312.RST.1.3; LAFS.312.RST.3.7; LAFS.312.RST.3.9; LAFS.312.SL.1.1; LAFS.312.SL.1.2; LAFS.312.SL.1.3; LAFS.312.SL.2.4; LAFS.312.SL.2.5; LAFS.312.SL.2.6; LAFS.312.W.1.1; LAFS.312.W.1.2; LAFS.312.W.1.3; LAFS.312.W.2.4; LAFS.312.W.2.5; LAFS.312.W.2.7; LAFS.312.W.3.9 **Science** SC.6.N.1.1; SC.6.N.1.4; SC.6.N.1.5; SC.7.N.1.1; SC.8.N.1.1; SC.35.N.1.1; SC.35.N.1.2; SC.35.N.1.3; SC.912.L.17.14; SC.912.L.17.18; SC.912.L.17.19; SC.912.N.1.4; SC.912.N.4.1; SC.912.N.4.2 **Social Studies** SS.912.E.1.4; SS.912.E.2.1; SS.912.E.2.2; SS.912.E.2.11; SS.912.FL.2.1; SS.912.FL.2.2

CURBSIDE RECYCLING IN HERNANDO COUNTY

Hernando County residents with curbside trash service also have weekly curbside recycling collection service at no additional cost. Curbside recycling in Hernando County uses a dual-stream system. Residents sort paper and cardboard into one bin, and plastic and metal containers into a second bin. Bins are provided to residents free of charge.

On your recycling pickup day, simply place your bins curbside before 6 a.m.

To get started with curbside recycling, visit www.hernandocounty.us and click I want to..., Sign Up, Curbside Recycling or call 352-540-6457 to have your free bins delivered and find out your recycling pickup day.

WHAT CAN AND CAN'T BE RECYCLED CURBSIDE IN HERNANDO COUNTY

Paper and cardboard – DO RECYCLE

- Newspapers
- Magazines
- Office paper
- Junk mail
- Paper bags
- Telephone books
- Cardboard boxes (cereal, cracker, soda, beer, etc.)
- Corrugated cardboard
- Shredded paper (place in a paper bag to reduce litter)

Plastic and metal containers – DO RECYCLE

- Aluminum, tin and steel beverage and food cans
- Plastic food and beverage bottles, jugs and containers (#1 through #7 – no motor oil or chemical containers)

How to sort your recycling for curbside pickup

- Place your clean and dry paper and cardboard in one recycling bin.
- Do not include wet or food-soiled items.
- Place your plastic and metal containers in your other recycling bin.
- Rinse food and beverage containers before placing them in your bin.
- Paper labels and caps do not need to be removed.

Items NOT recycled curbside

The following items are not recyclable curbside in Hernando County. Do not place these items in your recycling bins.

- Plastic bags
- Glass bottles and jars
- Light bulbs and mirrors
- Motor oil and fluids, chemicals, pesticides and paint
- Styrofoam and packing material
- Medicine and medicine bottles
- Toys
- Clothing
- Cookware and dishes
- Foam (such as pillows and carpet padding)
- Small appliances and electronics
- Scrap metal
- Sharps (needles, syringes, etc.)

See Pages 6-7 for how to properly recycle or dispose of these items in Hernando County.



Going beyond the text WHAT'S IN YOUR TRASH?

Do any of the top five items on the "NOT recycled curbside" list make it into your trash every week? If you get your food on the go, it often comes in plastic bags and Styrofoam packaging. Even some grocery store items are packaged this way. What else do you purchase that is packaged in Styrofoam? Look through the advertisements in the *Tampa Bay Times* and make a list of all the products that are usually packaged in this material.

Now let's get scientific for a minute. Did you know that Styrofoam is a trademark for a particular type of chemical compound called polystyrene? The type of polystyrene that we're most familiar with is actually expanded polystyrene (EPS). EPS is light, heat-resistant and an excellent insulator. That's why it's widely used for packaging material and food containers.

Unfortunately, it also takes hundreds of years to decompose and poses a threat to marine life that mistake it for food. It also cannot be recycled in local curbside programs. Since

Styrofoam can't be recycled locally, the next best thing is to reduce the use of it and reuse it whenever possible.

Using the list you already made and your copy of the *Times*, come up with alternative packaging that can be used for the products you found that are packaged in Styrofoam.

Then, come up with ideas for ways this material can be reused. Create a chart, diagram or other graphic organizer with the information you have learned. Share what you have learned with your class.

Florida Standards: Language Arts LAFS.312.L.1.1; LAFS.312.L.1.2; LAFS.312.L.2.3; LAFS.312.L.3.4; LAFS.312.RI.1.1; LAFS.312.RI.1.2; LAFS.312.RI.1.3; LAFS.312.RI.2.6; LAFS.312.RI.3.7; LAFS.312.RST.1.3; LAFS.312.RST.3.7; LAFS.312.RST.3.9; LAFS.312.SL.1.1; LAFS.312.SL.1.2; LAFS.312.SL.1.3; LAFS.312.SL.2.4; LAFS.312.SL.2.5; LAFS.312.SL.2.6; LAFS.312.W.1.1; LAFS.312.W.1.2; LAFS.312.W.1.3; LAFS.312.W.2.4; LAFS.312.W.2.5; LAFS.312.W.2.7; LAFS.312.W.3.9 **Science** SC.35.N.1.1; SC.35.N.1.2; SC.68.N.1.1; SC.68.N.1.2; SC.912.N.1.4; SC.912.N.4.1; SC.912.N.4.2

Curbside yard waste collection

Hernando County residents with curbside trash service through Republic Services also have weekly yard waste collection service at no additional cost.

Yard waste is recycled into mulch, keeping it out of the landfill.

Residential yard waste is collected weekly (except for designated holidays). Residents should put yard waste curbside by 6 a.m.

- Up to 12 containers, bags or bundles.
- Maximum weight of 50 pounds each.
- Maximum container size of 45 gallons.
- Bundles must be less than 4 feet long.
- Branches must be less than 4 inches in diameter and 4 feet in length.
- Live Christmas trees must be cut into lengths of 4 feet or less and cleaned of all decorations, including tinsel.

Yard waste is recycled and, therefore, must be kept free of debris. Yard waste may include vegetative matter and

biodegradable brown paper bags only.

Do not mix treated mulch or wood, rubber mulch, trash, concrete, rocks, plastic pots or flowers, plastic bags from mulch or soil, or any other type of nonvegetative matter with your yard waste. Mixed yard waste will not be collected.

Commercial yard waste (waste generated by a landscaper, tree contractor or other professional) is not permitted to be left curbside for residential trash collection.



Don't be a 'wishcycler'

Attempting to recycle items that are not recyclable is called "wishcycling" – and it causes more harm than good.

The largest challenge facing recycling programs today is contamination. Contamination is when nonrecyclable or soiled items are placed into the recycling stream.

For example, if food or liquids are placed into a paper recycling bin, they will saturate the paper and cardboard, turning them from recyclable commodities that can be sold into trash that must be landfilled. One partial container of motor oil or automotive lubricant will contaminate an entire bin of plastics and metal.

Wishcycling reduces the amount of recyclables that can be recovered and sold, increases processing costs and increases the amount of potentially recyclable materials sent to the landfill.

If you're not sure if an item is recyclable in your curbside bin, always check with your recycling program or put it in your trash. When in doubt, throw it out!

Sources: CNBC, Waste Management

OOPS! TAG

Thank you for Recycling at the Curb

If you place items in your recycling bin that are not recyclable, your bin may not be emptied, and an "Oops!" recycling tag will be placed on it to let you know what the nonrecyclable items are.

Just remove the nonrecyclable items and place your recycling bin curbside on your next regularly scheduled recycling day.

- A bin for**
- ♦ Magazines
 - ♦ Paper bags
 - ♦ Office paper
 - ♦ Junk mail
 - ♦ Telephone books
 - ♦ Newspapers
 - ♦ Cereal boxes
 - ♦ Cracker boxes
 - ♦ Soda boxes
 - ♦ Beer boxes
 - ♦ Pizza boxes
 - ♦ Corrugated cardboard

- A bin for**
- ♦ Aluminum beverage and food cans
 - ♦ Tin (steel) cans
 - ♦ #1 thru #7 Plastics
milk, soda, and water bottles
cooking oil and salad dressing bottles
shampoo and lotion bottles
laundry detergent & window cleaner bottles

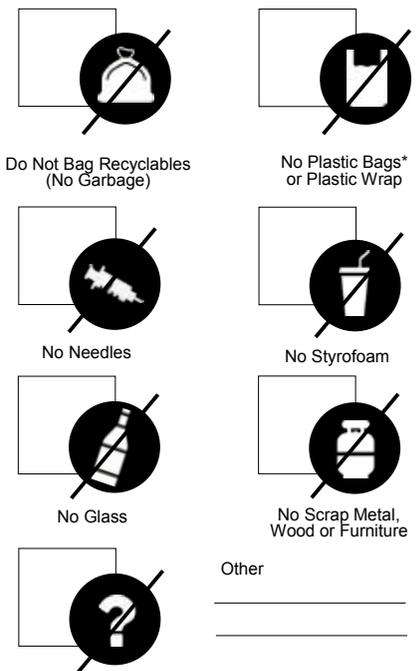
- For all recyclables**
- Bin color does not matter as long as material is properly sorted.
 - Items must fit into the recycling bin.
 - Rinse beverage and food containers
 - Paper labels or caps do not need to be removed.
 - NO food or oil soiled items.

NO GLASS, PLASTIC BAGS, MOTOR OIL, CHEMICAL CONTAINERS, or STYROFOAM

Please have your recycling out by 6:00 am every week on your scheduled pick-up day.

For more information call or contact
352 754 4112 or
Recycling@HernandoCounty.us

Oops there was something in your bin(s) we could not take. Remove the incorrect item and we will collect your bin(s) next week. Questions about curbside recycling pickup call 352 540 6457



* Return plastic bags to retailers



Questions about curbside recycling?
Contact Hernando County Solid Waste and Recycling at 352-754-4112 or recycling@hernandocounty.us, or visit www.hernandocounty.us/solidwaste.

Drop-off recycling and waste disposal in Hernando County

Many of the items that are not recyclable curbside in Hernando County, such as tires, yard waste and batteries, can be recycled at one of the county's drop-off locations.

Hernando County also offers residents free drop-off of unwanted items that cannot be picked up by your curbside trash service. Residents without curbside trash service are encouraged to use these drop-off locations.

To be eligible to use the drop-off locations, residents must live in a home that pays the solid waste assessment through their annual property taxes. See Page 7 for details.

HOUSEHOLD HAZARDOUS WASTE (HHW)

Almost every home contains products that can harm human health or the environment if improperly handled.

Products that contain ingredients that are toxic, flammable, corrosive or reactive are known as household hazardous waste (HHW). Common examples of HHW include products used in cleaning, home improvement, automobile maintenance, lawn and garden care, hobbies and a variety of other tasks.

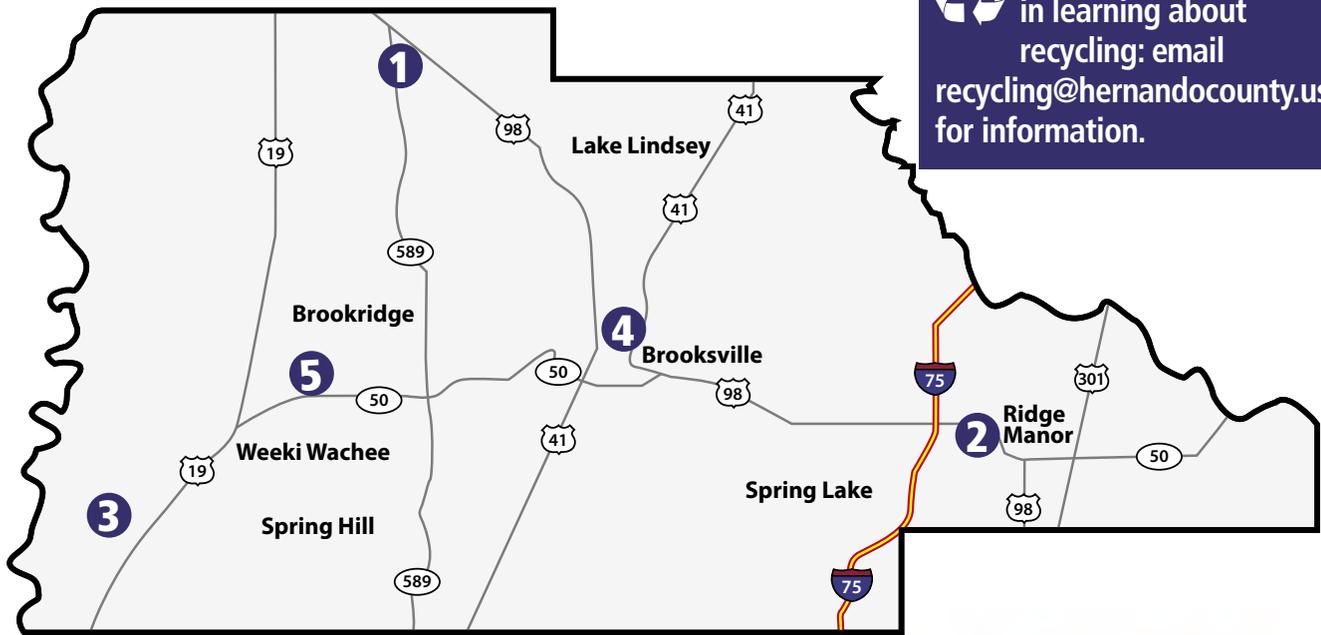
Improper disposal of HHW can pollute the environment, endanger wildlife and threaten human health. Every consumer should know how to properly use, store and dispose of hazardous household products.

HHW should never be poured down household or storm drains, poured on the ground, buried or put in the trash.

Free disposal of HHW is offered to Hernando County residents at the Northwest Waste Management Facility. Limited types and quantities also are accepted at the Residential Convenience Centers.

Hernando County does not accept hazardous waste from commercial businesses. Businesses should contact a licensed hazardous waste hauler for disposal options.

Sources: Hernando County, U.S. Environmental Protection Agency



 Businesses interested in learning about recycling: email recycling@hernandocounty.us for information.



Going beyond the text GETTING OUT THE WORD

Products that contain ingredients that are flammable, corrosive, reactive or toxic are known as household hazardous waste (HHW). These items are often everyday products we use in our homes and are potentially harmful to humans, wildlife and the environment. According to the Florida Department of Environmental Protection, "Hazardous waste exhibits one or more characteristics of ignitability, corrosivity, reactivity or toxicity which make it dangerous. Paint products, pool chemicals, household cleaners and pesticides are typical examples. When disposed of in the municipal solid waste stream or otherwise improperly managed, these materials have the potential of contaminating the ground water – our drinking water supply."

Using the information in this publication and on the Hernando County website, create a full-page advertisement encouraging people to bring their HHW products to a county facility. Use the advertisements and advertorials in the *Tampa Bay Times* as models for your advertisement. Share your ad with your classmates.

Florida Standards: Language Arts LAFS.312.L.1.1; LAFS.312.L.1.2; LAFS.312.L.2.3; LAFS.312.L.3.4; LAFS.312.RI.1.1; LAFS.312.RI.1.2; LAFS.312.RI.1.3; LAFS.312.RI.2.6; LAFS.312.RI.3.7; LAFS.312.RST.1.3; LAFS.312.RST.3.7; LAFS.312.RST.3.9; LAFS.312.SL.1.1; LAFS.312.SL.1.2; LAFS.312.SL.1.3; LAFS.312.SL.2.4; LAFS.312.SL.2.5; LAFS.312.SL.2.6; LAFS.312.W.1.1; LAFS.312.W.1.2; LAFS.312.W.1.3; LAFS.312.W.2.4; LAFS.312.W.2.5; LAFS.312.W.2.7; LAFS.312.W.3.9

DROP-OFF LOCATION

HOURS OF OPERATION

ITEMS ACCEPTED

<p>1. Northwest Solid Waste and Recycling Facility (main landfill) 14450 Landfill Road Brooksville, FL 34614 352-754-4112</p>	<p>Monday – Saturday 8 a.m. to 4:30 p.m. Closed on Sundays and New Year’s Day, Independence Day, Thanksgiving Day and Christmas Day.</p>	<p>Recyclables Paper and cardboard Aluminum, tin and steel beverage and food cans Plastic food and beverage bottles, jugs and containers (#1 through #7) Glass bottles and jars</p> <p>HHW Paint (up to five gallons/month) Used motor oil (up to five gallons/month) Fluorescent bulbs and PCB ballasts Automotive, lead-acid and rechargeable batteries Chemicals (pesticides, pool and cleaning supplies, solvents) Automotive fluids Mercury-containing devices (thermostats, switches)</p>	<p>Sharps (syringes, lancets) Unwanted non-narcotic medications Tires (eight per year per household) Yard waste Appliances and bulk items (furniture, mattresses) Scrap metal (bicycles, lawn mowers, grills, fencing, shelving, tin roofing) Construction debris (lumber, tile, drywall, concrete, carpeting) Trash</p>
<p>2. East Hernando Convenience Center 33070 Cortez Blvd. Ridge Manor, FL 33523 352-540-6205</p>	<p>Tuesday – Saturday 9 a.m. to 5 p.m. Residential use only. Proof of residency is required. Closed on Sundays, New Year’s Day, Independence Day, Thanksgiving Day and Christmas Day. Quantity and material limits apply.</p>	<p>Recyclables Paper and cardboard Aluminum, tin and steel beverage and food cans Plastic food and beverage bottles, jugs and containers (#1 through #7) Glass bottles and jars</p> <p>HHW Paint (up to five gallons/month) Used motor oil (up to five gallons/month) Fluorescent bulbs and PCB ballasts Automotive, lead-acid and rechargeable batteries</p>	<p>Sharps (syringes, lancets) Unwanted non-narcotic medications Tires (eight per year per household) Yard waste Appliances and bulk items (furniture, mattresses) Scrap metal (bicycles, lawn mowers, grills, fencing, shelving, tin roofing) Construction debris (lumber, tile, drywall, concrete, carpeting) Trash</p>
<p>3. West Hernando Convenience Center 2525 Osowaw Blvd. Spring Hill, FL 34607 352-754-4770</p>	<p>Tuesday – Friday 9 a.m. to 5 p.m. and Saturday 8 a.m. to 4 p.m. Residential use only. Proof of residency is required. Closed on Sundays, New Year’s Day, Independence Day, Thanksgiving Day and Christmas Day. Quantity and material limits apply.</p>	<p>Recyclables Paper and cardboard Aluminum, tin and steel beverage and food cans Plastic food and beverage bottles, jugs and containers (#1 through #7) Glass bottles and jars</p> <p>HHW Paint (up to five gallons/month) Used motor oil (up to five gallons/month) Fluorescent bulbs and PCB ballasts</p>	<p>Automotive, lead-acid and rechargeable batteries Sharps (syringes, lancets) Unwanted non-narcotic medications Tires (eight per year per household) Yard waste Appliances and bulk items (furniture, mattresses) Scrap metal (bicycles, lawn mowers, grills, fencing, shelving, tin roofing) Construction debris (lumber, tile, drywall, concrete, carpeting) Trash</p>
<p>4. Hernando County Government Center 234 E Jefferson St. Brooksville, FL 34601 352-754-4112</p>	<p>24 hours (exterior bins)</p>	<p>Recyclables Paper and cardboard Aluminum, tin and steel beverage and food cans Plastic food and beverage bottles, jugs and containers (#1 through #7)</p>	<p> Questions about curbside recycling? Contact Hernando County Solid Waste and Recycling at 352-754-4112 or recycling@hernandocounty.us, or visit www.hernandocounty.us/solidwaste</p>
<p>5. Walmart Supercenter 13300 Cortez Blvd. Brooksville, FL 34613 352-754-4112</p>	<p>24 hours (exterior bins)</p>	<p>Recyclables Paper and cardboard Aluminum, tin and steel beverage and food cans Plastic food and beverage bottles, jugs and containers (#1 through #7)</p>	



A refuge for wildlife

Hernando County’s main landfill has become a refuge for both native and migratory birds, including bald eagles, sandhill cranes, gulls, wood storks and wild turkeys. Birders interested in touring the facility should email recycling@hernandocounty.us to learn more.

How much energy does your recycling save?

Recycling everyday objects, such as metal cans, cardboard, paper and plastic bottles, saves energy. The materials that are recycled are used to create new products for consumers to buy. This means less new material needs to be mined or harvested, processed, manufactured and transported.

The EPA's Individual Waste Reduction Model (iWARM) tool is a downloadable Microsoft Excel file that can be used to find

out how much energy is saved by recycling small quantities of common waste materials.

In this activity, you will track your household's disposal of items that can be recycled curbside in Hernando County for one week and calculate their energy equivalent.

1) Each day, enter the amount of each recyclable item that you discard of in the trash or place in your curbside recycling bins.

- 2) At the end of the week, total the amount of each item that you threw out and recycled.
- 3) Download the EPA's iWARM tool by visiting www.epa.gov/warm/individual-waste-reduction-model-iwarm-tool and clicking on Full iWARM Tool.
- 4) Open the Excel file and click the yellow arrow to go to the iWARM tool.
- 5) In the Inputs section in the top

left, enter the total amount of each item that you recycled. How many hours could you run a room air conditioner with the energy you saved by recycling them? a clothes dryer? a laptop computer?

- 6) Clear your data by clicking on the yellow Clear All button in the Inputs section in the top left. Enter the total amount of each item that you threw in the trash. How many hours could

you run a ceiling fan? How much energy you could save by recycling them? How many hours could you run a compact fluorescent bulb?

Source: U.S. Environmental Protection Agency

Florida Standards Science: SC.5.N.1.1; SC.68.N.1.1; SC.7.P.11.2; SC.7.P.11.3; SC.912.L.17.1; SC.35.CS-CP.3.2; SC.35.CS-CP.3.2; SC.68.CS-CS.1.1; SC.912.CS-CS.1.2

Weekly waste generation tracking sheet

Enter the amount of each recyclable item that you discard each day

Material	Sunday		Monday		Tuesday		Wednesday		Thursday		Trash
	Trash	Recycling	Trash	Recycling	Trash	Recycling	Trash	Recycling	Trash	Recycling	
Aluminum drink can (12 oz.)											
Steel food can (15.5 oz.)											
Gallon plastic milk jug											
Gallon plastic detergent container											
Plastic bottle (20 oz.)											
Plastic bottle (2 liter)											
Corrugated cardboard box (2' x 2' x 2.5')											
Weekly magazine											
Catalog											
Daily newspaper											
Sunday newspaper											
12-inch stack of newspaper											
Printer paper, ream											
Printer paper, sheet											
White business envelope											
Paperboard cereal box											

Going beyond the text

THE ECONOMICS OF RECYCLING

In addition to its environmental benefits, recycling plays an important part in the U.S. and world economies. Recycling helps businesses and communities reduce costs associated with disposal facilities.

Recycling also produces significant economic benefits by creating jobs, generating tax revenues, building more competitive manufacturing industries and stimulating the development of green technology.

Recyclables, such as aluminum cans, plastic bottles, newspaper and cardboard, are commodities that have value and can be sold – if someone wants to buy them. The value of a particular recyclable depends on several factors, including quality and supply and demand.

Use the Internet to research a specific recyclable material as far as possible from collection to processing to end use.

1. Provide examples of who purchases this material.

2. What is the value of this material?
3. What happens to the material next? What form does it take and where does it go?
4. What is the final end use of the material? Who is the buyer for the end product? Is it a consumer or a manufacturer?

Using the information you have learned, write a newspaper article about the journey of your recyclable. Use the articles in the *Tampa Bay Times* as models for your article. Make sure you answer the basic journalism questions: Who, what, where, when, why and how.

Adapted from: "The Economics of Recycling," *Action in the Classroom: An Introduction to Environmental Science for High School Students*, South Carolina Department of Health and Environmental Control's Office of Solid Waste Reduction and Recycling

Florida Standards: Language Arts LAFS.312.L.1.1; LAFS.312.L.1.2; LAFS.312.L.2.3; LAFS.312.L.3.4; LAFS.312.RI.1.1; LAFS.312.RI.1.2; LAFS.312.RI.1.3; LAFS.312.RI.2.6; LAFS.312.RI.3.7; LAFS.312.RST.1.3; LAFS.312.RST.3.7; LAFS.312.RST.3.9; LAFS.312.SL.1.1; LAFS.312.SL.1.2; LAFS.312.SL.1.3; LAFS.312.SL.2.4; LAFS.312.SL.2.5; LAFS.312.SL.2.6; LAFS.312.W.1.1; LAFS.312.W.1.2; LAFS.312.W.1.3; LAFS.312.W.2.4; LAFS.312.W.2.5; LAFS.312.W.2.7; LAFS.312.W.3.7; LAFS.312.W.3.9; LAFS.312.W.4.10 **Science** SC.4.L.17.4; SC.912.L.17.14; SC.912.L.17.18; SC.912.L.17.19; SC.912.N.1.4; SC.912.N.4.1; SC.912.N.4.2 **Social Studies** SS.812.E.1.4; SS.812.E.2.1; SS.812.E.2.2; SS.812.E.2.11; SS.912.FL.2.1; SS.912.FL.2.2

USING

There are a number of ways to use recycled materials, such as recycled paper, plastic, and biodegradable materials. "Eco-friendly" means that a product is made from materials that are recycled or biodegradable. Discuss these issues through the *Tampa Bay Times*. Make a list of sources you have developed narrative. What you learned will change your perspective.

Florida Standards LAFS.312.RI.1.2; LAFS.312.W.2.5; LAFS.312.W.2.5; LAFS.312.W.2.5; LAFS.312.W.2.5; LAFS.312.W.2.5



Methane is captured by gas-extraction wells on the landfill surface.

Methane collection and conversion to energy

As organic waste in a landfill decomposes, it produces landfill gas, or LFG. LFG is composed of methane and carbon dioxide. Methane is a greenhouse gas that traps heat in the atmosphere, contributing to climate change.

Landfills are the third-largest source of methane emissions in the United States. In 2016, 16 percent of all U.S. methane emissions came from landfills.

Instead of letting the methane produced by the Hernando County landfill escape into the air, Hernando County captures the gas and burns it, converting it to electricity that is sold to the grid. Capturing and converting methane to energy:

- Reduces greenhouse gas emissions
- Reduces air pollution
- Creates health and safety benefits
- Benefits the community and economy
- Reduces environmental compliance costs

In 2018, Hernando County captured and converted **132 million Standard Cubic Feet (SCF)** of methane gas, producing **10,141,414 kilowatt hours (kWh)** of electricity – enough to power 1,000 homes!

Sources: U.S. Environmental Protection Agency, Hernando County Solid Waste



Methane is burned to produce energy that is sold to the grid.



Monitoring wells ensure that groundwater is not contaminated.

ECONOMIC BENEFITS OF RECYCLING

According to the U.S. Environmental Protection Agency's "2016 Recycling Economic Information Report":

Recycling activities contributed to the U.S. economy:

Every 1,000 tons of recycled material creates:



Source: "Advancing Sustainable Materials Management: 2016 Recycling Economic Information (REI) Report," Environmental Protection Agency <https://www.epa.gov/smm/advancing-sustainable-materials-management-facts-and-figures-report>

COMPOSTING



Food and yard waste make up more than a quarter of trash landfilled in the U.S. Composting is an environmentally sound way of reducing the amount of yard and food waste that is landfilled.

Composting is the breakdown of organic materials by microorganisms. The end result of composting is a dark, nutrient-rich material called humus, which can be used in gardening to build healthy soil. Work it into sandy garden soil to improve plant growth, apply

it as mulch on top of existing soil or combine it with potting mix for container plants!

By returning valuable nutrients to the soil, we are caring for the environment. Adding compost to a garden reduces the need for chemical fertilizers and pesticides. By using organic waste to make compost rather than throwing it away, we are reducing the amount of trash that is landfilled.

Source: U.S. Environmental Protection Agency, University of Florida IFAS Extension



Going green in retirement

When Kelley and Carol Wood retired to Brooksville, they made a commitment to reduce the waste they generate by shopping carefully, recycling and composting.

The Woods consciously shop to minimize waste. They bring their own bags to the store and choose products with little or no packaging.

Paper, plastic and metal are recycled through Hernando County's curbside recycling program. The Woods take their plastic bags and Styrofoam to be recycled at Publix and Walmart.

And they compost.

Kelley Wood started composting leaves and other yard waste in 2013. In early 2018, he attended a free class on composting led by the Hernando County Cooperative Extension Service. The class inspired the Woods to start composting kitchen waste in addition to yard waste.

Instead of throwing fruit and vegetable peelings and scraps in the trash, the Woods simply keep a small covered

container in their kitchen. When it gets full, they empty it into their outside compost bin and start the process over again.

Kelley Wood says that composting was even easier than he anticipated.

"The hardest part," he says, "was just changing our habit of throwing kitchen waste in the trash bin."

The Woods have not only reduced the amount of trash they send to the landfill; they also have free fertilizer for their garden – and the satisfaction of knowing that they are helping to protect and conserve our precious natural resources.



Going beyond the text COMPOST IN A BUCKET

Materials Needed:

- 5-gallon bucket with lid
- Trowel or spade
- Tarp
- One gallon of soil, compost, potting mix or sawdust from untreated wood
- Non compostable materials (e.g., plastic cups or bottles)
- Water
- Compostable materials
 - "Greens" (Greens include moist vegetable and food scraps, fresh grass clippings and yard waste, coffee grounds, tea bags and egg shells)
 - "Browns" (Browns include dry and woody plant trimmings [such as wood chips, dried leaves, dried grass and hay or straw], shredded newspaper, cardboard rolls and wool or cotton rags)

Procedure:

1. With the trowel or spade, chop the food and other organic material into small pieces. The smaller the pieces, the faster the decomposition. Leave some large pieces for comparison.
2. Fill the bucket half full with greens and browns. Layer and mix as you go. Include non biodegradable items in the layers, as well. Add water as needed to keep the pile moist. Record the items that you add to the bucket.
3. Add about one gallon of soil, compost, potting mix or sawdust to the bucket. The bucket should not be more than three-quarters full. Keep the material moist but not completely wet.

4. Individually, write down your predictions about what will happen to the contents of the bucket and the individual items. Will it smell bad? Will it decay? Will things grow in it? What will happen to the large pieces vs. the small pieces? What will happen to the non biodegradable items?
5. Every few days, open up the bucket to mix and water the contents. What changes are occurring?
6. After four weeks, examine the contents of the bucket. Try to identify as many items as possible. Record your observations.
7. As a group, discuss the outcome. What happened? How does the outcome compare to the predictions made at the start of the experiment?
8. Use your compost to enrich the soil of your garden or potted plants!

Adapted from: "Compost in a Bucket," *Do the Rot Thing: A Teacher's Guide to Compost Activities*, Central Vermont Solid Waste Management District

Florida Standards: Science SC.312.N.1.1; SC.312.N.1.2; SC.312.N.1.3; SC.312.N.1.4; SC.312.N.1.5; SC.312.N.1.6; SC.312.N.1.7



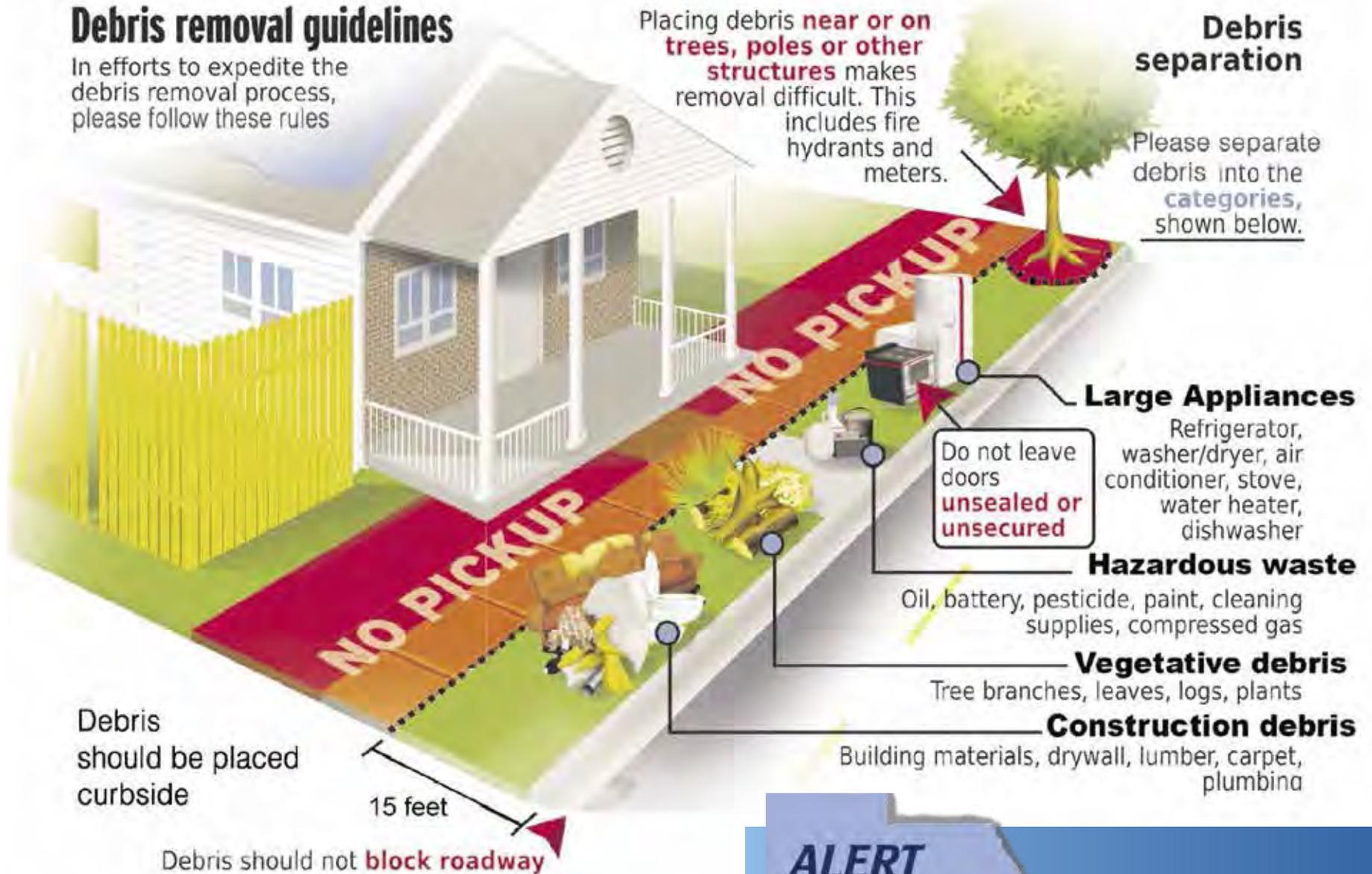
Questions about curbside recycling?

Contact Hernando County Solid Waste and Recycling at 352-754-4112 or recycling@hernandocounty.us, or visit www.hernandocounty.us/solidwaste.

Emergency Management – After the storm

Debris removal guidelines

In efforts to expedite the debris removal process, please follow these rules



Debris cleanup

Storms can generate thousands or even millions of cubic yards of debris. Here's what you need to know about debris cleanup.

- Normal daily schedules and processes will likely be different after a storm.
- The type of storm will also make a difference as to whether large items (such as refrigerators) will be picked up and if yard debris will be accepted in piles or must be bagged. You must be patient, as urgent needs will be taken care of first.
- For information, visit www.hernandocounty.us or watch the news.
- If you live on a private road, you will need to plan ahead for a location to dispose of debris on your own.
- Contractors hired to do work, such as cutting a tree down, fence work, flooding repair or removal of household items, are responsible for debris removal. That is included in the fee they are charging you, so, be sure they are licensed and they fulfill their responsibilities.

Sources: Centers for Disease Control and Prevention, Florida Department of Health, Hernando County Emergency Management



Alert Hernando is Hernando County's emergency alert program. Receive automated emergency weather alerts and other important messages from Hernando County. Register today at www.AlertHernando.org or call **352-754-4083**.

QUESTIONS ABOUT STORM DEBRIS MANAGEMENT?

Contact Hernando County Emergency Management at **352-754-4083** or EOCOPS@HernandoCounty.us.

After the storm....

SAFETY AND RECOVERY

After a storm, it's time to assess the damage and clean up your property. But it's also important to stay safe. Keep your battery-operated radio close for news reports about damage, road closures, power outages and other emergency instructions. With at least seven days of uncertainty, depending on the storm, you'll need to rely upon what you've stored for food, water, medications and entertainment. After a hurricane, it could be weeks or months before life gets back to normal. Use the following safety steps during recovery.

FLOODING

Even after the storm is over, flooding can be very dangerous. Avoid driving through flooded areas and standing water. As little as six inches of moving water can knock over an adult or cause you to lose control of your vehicle.

Floodwaters also contain many things that can harm you. Floodwater can contain sewage, chemicals, sharp objects and even downed power lines. Exposure to contaminated floodwater can cause infections and illness. Do not allow children to play in floodwater or with toys that have been contaminated by floodwater and have not been disinfected.

DRINKING WATER

A boil-water order may be issued during a hurricane or any other significant event that affects the drinking water supply. This means there is a possibility of some microbial contamination in tap water. While there are advanced and expensive filters and specialized water treatment tablets on the market that can make your water safe to drink, there are two methods that are typically used by homeowners:

- **Boiling:** Boiling is the most effective way to kill bacteria, viruses and parasites in water. According to the Florida Department of Health and the Centers for Disease Control and Prevention, a pot of water that has been brought to a full rolling boil for one minute is enough to kill pathogens and make the water safe to consume. Let the water come to room temperature before drinking.
- **Bleach:** Bleach is a less effective way to sanitize water than boiling, but can work if you don't have access to power or cooking fuel. Add $\frac{1}{8}$ teaspoon of common unscented household bleach (it should contain 5.25 percent sodium hypochlorite) per gallon of water and let the water stand for at least 30 minutes. Remember, these methods work with water that is clear but possibly contaminated, but not with murky water taken from a ditch, for example.



GENERATOR SAFETY

- Carbon monoxide is a colorless, odorless gas produced from burning fuel that is deadly even in very small amounts.
- Always use generators outdoors, away from doors, windows and vents. NEVER use them in homes, garages, basements, crawl spaces or other enclosed or partially enclosed areas, even with ventilation.
- Install battery-operated or battery-backup carbon monoxide alarms in your home. Test these alarms often and replace batteries when needed.
- Keep the generator dry. Operate on a dry surface in an open area. Dry your hands before handling it.
- Plug appliances directly into the generator or use a heavy-duty, outdoor-rated extension cord that is free of cuts or tears and has all three prongs, especially a grounding pin.
- NEVER plug the generator into a wall outlet. This practice, known as backfeeding, can cause electrocution risk to utility workers and others served by the same utility transformer.
- Generators use flammable fuels, increasing the chance of an accidental fire that can threaten your life and property.
- Before refueling the generator, always turn it off and let it cool.
- Always store fuel outside of living areas in labeled containers and away from any fuel-burning appliance.

Going beyond the text

BEING PREPARED

There is usually plenty of advance warning when a hurricane is on the way. Most of the time, there is advance warning of severe thunder and lightning storms, as well, but sometimes these storms can catch us off guard. The best way to be safe is to be prepared.

For this task, pretend you are preparing for a storm that's approaching your area. Go through the advertisements in the *Tampa Bay Times* and find products your family would need to stock up on for your disaster preparation kit. Remember the essentials as well as the comforting or fun items you might need if you are displaced from your home or are without power and supplies for several days.

As a follow-up activity, write a newspaper article for your school newspaper about the importance of being prepared for a storm. Use the articles in the *Times* as models. Follow the structure of a newspaper article – who, what, where, when, why and how – to write your article.

Florida Standards: Language Arts LAFS.312.L.1.1; LAFS.312.L.1.2; LAFS.312.L.2.3; LAFS.312.L.3.4; LAFS.312.RI.1.1; LAFS.312.RI.1.2; LAFS.312.RI.1.3; LAFS.312.RI.2.6; LAFS.312.RI.3.7; LAFS.312.RST.1.3; LAFS.312.RST.3.7; LAFS.312.RST.3.9; LAFS.312.SL.1.1; LAFS.312.SL.1.2; LAFS.312.SL.1.3; LAFS.312.SL.2.4; LAFS.312.SL.2.5; LAFS.312.SL.2.6; LAFS.312.W.1.1; LAFS.312.W.1.2; LAFS.312.W.1.3; LAFS.312.W.2.4; LAFS.312.W.2.5; LAFS.312.W.2.7; LAFS.312.W.3.9 **Science** SC.612.E.7.8

Watering restrictions
 These water restrictions are for everyone in Hernando County, including private well owners.

Hernando County Water Awareness Series
 Hernando County Utilities offers free monthly classes on water-related topics to Hernando County residents. Learn more and sign up on Eventbrite at www.HernandoWAS2019.eventbrite.com.

Calculate your water footprint
 Estimate how much water your household uses and find more tips to help you cut back on your water use at www.watercalculator.org.

Rain barrel workshops
 Want to learn more about conserving water with a rain barrel from the experts? Hernando County Utilities offers rain barrel workshops to Hernando County residents. Hernando County Utilities customers will receive a one-time credit of \$25 on their water bill for attending a rain barrel workshop and installing a rain barrel at their home. Visit www.hernandocounty.us/departments/departments-n-z/utilities-department/florida-friendly-landscaping or call 352-540-6230 to learn more and sign up.

Water conservation

You can help ensure that our aquifer will have good, usable water for years to come by following these tips:

- Turn off the faucet while you brush your teeth.
- Put some food coloring in your toilet tank. Wait 20 minutes and don't flush. Is color seeping into the bowl? You have a leak! Toilet leaks can waste 200 or more gallons of water a day.
- Wash dishes and laundry only when you have full loads.
- Capture "warm-up" water while you are waiting for the water to get hot. Use it to water plants or clean fruits and vegetables.
- Save the water you cook vegetables in to pour on your plants after it cools down.
- Install low-flow shower heads.
- Wash your car on the grass. Use a hose nozzle that turns itself off.
- Inspect your irrigation system. Make sure you don't have broken or misaligned sprinkler heads or leaks.
- Recycle the rain by installing a rain barrel. Call 352-540-6230 to learn about monthly rain barrel workshops.
- Follow lawn and landscape watering restrictions.
- Install a landscape that thrives on natural rain water.

Source: Hernando County Utilities

Know Your Irrigation Day
 Hernando County allows one-day-per-week watering before 8 a.m. and after 6 p.m.

Watering Days

If your address ends in... your day to water is...

0 or 1	2 or 3	4 or 5	6 or 7	8 or 9*
M	T	W	Th	F

*Areas where there is no address or multiple addresses (such as common ground areas or shopping plazas with multiple addresses) water on Friday.

Some Hernando County homeowners associations (HOAs) have a variance to this watering schedule. If you live in a HOA, please check with the organization or property manager for your specific schedule.

Going beyond the text

WATER CONSERVATION

Although the earth's surface is more than 70 percent water, only about 3 percent of that is fresh water, and less than 1 percent is available for consumption. In the United States, we often take it for granted that we can turn on the faucet and have easy access to safe, clean water. However, many people in the world are not so lucky. Conserving our freshwater resources is critical to protecting human health and to preserving the health of our environment.

A water diary is a great way to record and analyze your water use. In this activity, you will record your household's water use for one week, analyze the results and develop and test strategies to reduce your use.

Download the Planet H2O water diary from www.thirteen.org/h2o/print/p_educators_lesson4_h2.html. Record your household's water use for one week. At the end of the week, calculate your totals and answer the following questions:

- What was your household's total weekly water use?
 - What was your household's average daily water use?
 - What was your household's average individual daily water use?
 - What activity consumed the most water in your household? the least?
 - What percentage of your total weekly water use was due to your most water-intensive activity?
- Choose one or two things you and your other household members will do to conserve water,

such as turning off the water when brushing your teeth, taking shorter showers or running the dishwasher less often. How many gallons of water do you estimate that you can save with this strategy?

Record your household's water use for another week after implementing your water-use reduction strategy. At the end of the week, calculate your totals and answer the following questions:

- What was your household's total weekly water use?
- What was your household's average daily water use?
- What was your household's average individual daily water use?
- How many gallons of water were you able to conserve by implementing your strategy? How does the amount compare to your estimate?
- What additional strategies can you think of to save even more water?

Adapted from: "Water Conservation," Global Precipitation Measurement Mission, NASA

Florida Standards: Math MAFS.3.MD.1.2; MAFS.3.NBT.1.2; MAFS.3.NBT.1.3; MAFS.3.OA.2.6; MAFS.3.OA.3.7; MAFS.45.MD.1.1; MAFS.45.NBT.1.2; MAFS.45.NBT.2.4; MAFS.45.OA.1.2; MAFS.45.OA.1.3; MAFS.68.EE.1.1; MAFS.68.NS.1.1; MAFS.912.A-CED.1.1; MAFS.912.A-REI.1.1 **Science** SC.312.N.1.1; SC.312.N.1.2; SC.312.N.1.3; SC.312.N.1.4; SC.312.N.1.5; SC.312.N.1.6; SC.312.N.1.7



Florida-Friendly Landscaping™ tips

Plant the right plant in the right place. Tampa Bay is in Horticulture Zone 9a. Visit www.floridayards.org to identify the Florida-friendly plants that will work in your yard.

Only 1 percent of insects are pests. Ninety-nine percent of insects are beneficial or not causing a problem. Don't spray your whole yard with a bug killer. Spot treat problem areas only. Find out if you have an insect problem before using a pesticide.

Don't overwater. Our lawns only need 1/2-3/4 inch of water per watering event. Overwatering

invites diseases and more problems. Water only when the leaf blades are folded in half and footprints remain in the grass after it is walked on.

Follow your watering day. Skip a week or two in the winter, when your lawn is dormant. Turn your irrigation system off if it has rained.

Mow high. Hernando County lawns should be mowed at 3-4 inches. Most lawn problems are due to mowing too low.

Sources: FloridaYards.org, Hernando County Utilities



Unscramble the Nine Principles of Florida-Friendly Landscaping™

ercttpo het ttenowfarr _____

humcl _____

erued msaorwertt urnfod _____

rtigh talnp, grthi eplac _____

yecelcr _____

aacttr ifeldlwi _____

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rtaew ietlnffeyic _____

retzfliie aprteporlpvia _____

FOR MORE INFORMATION ABOUT FLORIDA-FRIENDLY LANDSCAPING™

Contact Lilly Browning, Hernando County Florida-Friendly Landscaping™ program coordinator, at 352-540-6230 or LillyB@HernandoCounty.us. Like us on Facebook! www.facebook.com/HernandoFFLProgram

FREE FLORIDA-FRIENDLY LANDSCAPING™ WORKSHOPS

Want to learn more about Florida-Friendly Landscaping™ from the experts? The Hernando County Utilities Department, in cooperation with UF/IFAS Hernando County Extension, offers free classes on Florida-Friendly Landscaping™. New residents and long-term inhabitants of Hernando County will learn how they can have a thriving landscape that is kind to the environment and their wallet. Visit www.hernandocounty.us/departments/departments-n-z/utilities-department/florida-friendly-landscaping, email LillyB@hernandocounty.us or call 352-540-6230 for more information.

Going beyond the text

PROTECTING THE ENVIRONMENT

We all need to work together to protect our environment. Conserving water, recycling and protecting our wildlife are important for the future of Earth. Look for articles in the *Tampa Bay Times* that show examples of people, groups or organizations that are working to protect the environment. Make a list of those involved and the actions they are taking. Select one of the environmental groups or issues you have read about and do some research about it. Then think about what actions you can take to protect the environment, especially your ecosystem

in Hernando County. Share your ideas with others by writing a blog post or short essay that incorporates the information you have learned.

Florida Standards: Language Arts LAFS.312.L.1.1; LAFS.312.L.1.2; LAFS.312.L.2.3; LAFS.312.L.3.4; LAFS.312.RI.1.1; LAFS.312.RI.1.2; LAFS.312.RI.1.3; LAFS.312.RI.2.6; LAFS.312.RI.3.7; LAFS.312.RST.1.3; LAFS.312.RST.3.7; LAFS.312.RST.3.9; LAFS.312.SL.1.1; LAFS.312.SL.1.2; LAFS.312.SL.1.3; LAFS.312.SL.2.4; LAFS.312.SL.2.5; LAFS.312.SL.2.6; LAFS.312.W.1.1; LAFS.312.W.1.2; LAFS.312.W.1.3; LAFS.312.W.2.4; LAFS.312.W.2.5; LAFS.312.W.2.7; LAFS.312.W.3.7; LAFS.312.W.3.9; LAFS.312.W.4.10



Hernando County Department of Solid Waste and Recycling

The Hernando County Department of Solid Waste and Recycling operates an integrated solid waste management system for Hernando County, serving more than 300,000 customers per year at three locations.

The department is responsible for solid waste disposal for the entire county, including residents in the city of Brooksville.

Hernando County contacts

Hernando County Solid Waste and Recycling

www.hernandocounty.us/solidwaste
352-754-4112 • recycling@co.hernando.fl.us

Hernando County Emergency Management

www.hernandocounty.us/em
352-754-4083 • EOCOPS@HernandoCounty.us

Hernando County Utilities

www.hernandocounty.us/utills
352-754-4037

About NIE

The Tampa Bay Times Newspaper in Education program (NIE) is a cooperative effort between schools and the Times Publishing Co. to encourage the use of



newspapers in print and electronic form as educational resources — a “living textbook.” Our educational resources fall into the category of informational text, a type of nonfiction text. The primary purpose of informational text is to convey information about the natural or social world.

NIE serves educators, students and families by providing schools with class sets of the Pulitzer Prize-winning *Tampa Bay Times* plus award-winning original educational publications, teacher guides, lesson plans, educator workshops and many more resources — all at no cost to schools, teachers or families. In 2017-2018, NIE provided more than 1.5 million print copies and 10 million digital editions of the *Times* to area classrooms

free of charge thanks to our generous subscribers and individual, corporate and foundation sponsors. NIE teaching materials cover a variety of subjects and are aligned to the Florida Standards.

For more information about NIE, visit tampabay.com/nie, call 727-893-8138 or email ordernie@tampabay.com. Follow us on Twitter at [Twitter.com/TBTimesNIE](https://twitter.com/TBTimesNIE). Find us on Facebook at www.facebook.com/TBTNIE.

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Educators

Share 100 words about how you used this resource in your classroom for a chance to win a \$15 gift card! Visit tampabay.com/nie for details and to enter.

Florida Standards

This publication and its activities incorporate the following Florida Standards for elementary, middle and high school students.

Language Arts LAFS.312.L.1.1; LAFS.312.L.1.2; LAFS.312.L.2.3; LAFS.312.L.3.4; LAFS.312.RI.1.1; LAFS.312.RI.1.2; LAFS.312.RI.1.3; LAFS.312.RI.2.6; LAFS.312.RI.3.7; LAFS.312.RST.1.3; LAFS.312.RST.3.7; LAFS.312.RST.3.9; LAFS.312.SL.1.1; LAFS.312.SL.1.2; LAFS.312.SL.1.3; LAFS.312.SL.2.4; LAFS.312.SL.2.5; LAFS.312.SL.2.6; LAFS.312.W.1.1; LAFS.312.W.1.2; LAFS.312.W.1.3; LAFS.312.W.2.4; LAFS.312.W.2.5; LAFS.312.W.2.7; LAFS.312.W.3.9 **Math** MAFS.3.MD.1.2; MAFS.3.NBT.1.2; MAFS.3.NBT.1.3; MAFS.3.OA.2.6; MAFS.3.OA.3.7; MAFS.45.MD.1.1; MAFS.45.NBT.1.2; MAFS.45.NBT.2.4; MAFS.45.OA.1.2; MAFS.45.OA.1.3; MAFS.68.EE.1.1; MAFS.68.NS.1.1; MAFS.912.A-CED.1.1; MAFS.912.A-REL.1.1 **Science** SC.312.N.1.1; SC.312.N.1.2; SC.312.N.1.3; SC.312.N.1.4; SC.312.N.1.5; SC.312.N.1.6; SC.312.N.1.7; SC.912.L.17.14; SC.912.L.17.18; SC.912.L.17.19 **Social Studies** SS.912.E.1.4; SS.912.E.2.1; SS.912.E.2.2; SS.912.E.2.11; SS.912.FL.2.1; SS.912.FL.2.2