



PRINCE WILLIAM
COUNTY

Recycling Program Update

Solid Waste Division

- Thank you for the opportunity to speak to you today.
- My name is Scott MacDonald and I am the Recycling Program Manager with the Department of Public Works Solid Waste Division.
- I am here today to update you on some of the recent changes with the recycling program and also address common questions that we receive at my office.
- The Prince William County Solid Waste Division is responsible for solid waste planning and recycling in the county and operates the Prince William County Landfill and the Balls Ford Road Composting Facility.
- In addition to the operation of these two facilities, Solid Waste also permits and oversees private trash collection in Prince William County.

Recycling in Virginia

Economic Indicator	Value for Virginia
Economic Impact	\$1,858,190,400
Employment	8,669
Total Wages	\$541,667,300
Taxes Paid	\$170,268,300

Source: Institute of Scrap Recycling Industries, Inc.

- Recycling infrastructure is mostly private and is a significant part of Virginia's economy.
- According to the Institute of Scrap Recycling Industries, Inc, the total value to Virginia is nearly 2 billion in total economic impact.
- There are more than 8,669 employed in recycling in Virginia with nearly a half a billion in wages and \$170 million in taxes paid.
- That is a lot of dollars flowing through Virginia!

Recycling Market Challenges



- For years, recyclers have relied on export markets to sell recycled commodities.
- In July 2017, China announced new restrictions on 24 types of solid waste and recyclables.
- These new restrictions took effect in January 2018 that have had significant impact on worldwide recycling markets for #3-#7 plastics and mixed paper.
- Other countries followed suit resulting in fewer places accepting these materials.
- It will likely take years to develop replacement markets for these materials.
- In the meantime we have to live with a “new normal” for recycling markets.

Materials Affected

CHINA WASTE IMPORT RESTRICTIONS: MATERIALS AFFECTED

POST-CONSUMER PLASTIC WASTE

- Soft drink bottles
- Water bottles
- Takeout containers
- Milk jugs
- Juice bottles
- Cleaning supplies
- Shampoo
- Grocery bags
- Cereal box liners
- Condiment containers
- Produce bags
- Bread bags
- Garbage bags
- Beverage cups
- Yogurt cups
- Margarine tubs
- Plastic film
- PET
- Polystyrene
- PVC


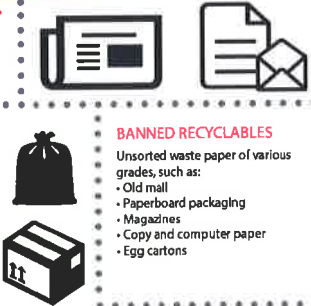
BANNED RECYCLABLES

Unsorted waste paper of various grades, such as:

- Old mail
- Paperboard packaging
- Magazines
- Copy and computer paper
- Egg cartons

LOWER CONTAMINATION RATES 0.5%

- Cardboard
- Sorted paper



For more information visit SWANA.org/ChinaResources



- This is a look at the materials affected by the Chinese waste restrictions.
- The restrictions affect about 20 types of post-consumer plastic waste, prohibits 5 types of unsorted waste paper and raises the bar for cardboard and sorted waste paper
- As you can see there are a lot of recognizable materials on the list such as:
 - Soft drink bottles
 - Water bottles
 - Yogurt containers
 - Margarine tubs
 - Condiment containers
 - Beverage cups
 - Take out containers
 - “Junk mail”
 - Magazines
 - Paperboard (e.g. cereal, tissue, boxes, etc.)
- The greatest impact to the U.S. is on #3-7 plastics and mixed paper because there are not a lot of other market opportunities for those materials.

“Wishful Recycling”



- The phrase “wishful recycling” (or “aspirational recycling”) has emerged from the market crisis, and is used to refer to the practice of putting something in your recycling bin that you “wish” were recyclable.
- Since the move to “single-stream recycling” in the early 2000’s the percentage of unrecyclable waste generated by recycling facilities has increased from about 8% to nearly 30%.
- Prince William County has two recycling processing facilities in the county and these two plants delivered approximately 62,000 tons of “wishful recycling” to the county landfill during CY 2018.
- This photo show how seriously Prince William County residents take their wishful recycling. This is a washer or dryer that was placed in a paper recycling bin a the Prince William County Landfill recently.

Plastic Recycling



- OK, I want everyone to be honest with me.
- By a show of hands . . . how many of you have seen these codes on a plastic bottle and said “great—it can be recycled!”
- These resin codes which were developed by the Society of Plastics Engineers in the early 1990’s where never intended for the public.
- But the public soon became “experts” in using the codes and as a result a lot of non-recyclable plastics was sent to local recycling facilities.

Plastic Recycling



- There is another label that actually was developed here in Charlottesville, Virginia that IS intended for consumers.
- Green Blue developed this “How2Recycle” labeling system for manufactures to use to educate consumers on what can and cannot be recycled.
- They also work with producers to make product containers more recyclable.
- Unlike the Society of Plastics Engineer’s label, the How2Recycle label is actually imprinted on the product label.

What Plastics Can be Recycled?



- Okay, how did you do?
- In Prince William County, we **ONLY** accept plastic bottles & jugs in with the recycling.
- These include water, milk, juice, soda, detergent, shampoo and also screw-cap containers containing things like peanut butter and condiments.
- Now you have all been re-programmed and are experts on plastics recycling, right?

Recycle Plastic Bags at Grocery Stores



- Plastic bags need to be recycled at grocery stores.
- I repeat . . . Plastic bags need to be recycled at grocery stores.
- Also, do not place recycling IN plastic bags and put it in your recycling bin.
- Why? Because plastic bags in a recycling center slow the sorting process and become tangled up in the sorting equipment.
- The bags foul up the processing equipment such that the facility operator has to shut down the plant to cut them out several times a day.
- This picture shows an employee at a local recycling center cutting out the bags from the “star screen” which separates flat paper-like materials from bottles and cans.
- Plastic bags are also a problem at landfills and compost facilities because they can blow off site and become entangled in vegetation.

Batteries



- How many of you have a pile of batteries laying around your house like this?
- We receive lots of questions regarding the proper handling of batteries.
- Like the electronic devices they power, batteries are increasing complicated and come in many different chemistry types.

Batteries



- What could go wrong, right? This photo is from a fire that occurred in Pennsylvania in 2018 when a faulty lithium-ion battery caused a UPS truck to go up in flames.
- These types of fires are happening with increased frequency and highlight the importance of proper battery care.
- When recycling rechargeable and single-use batteries it is important to remember to tape the terminals or placing each battery in a separate plastic bag. This may sound like a lot of work, but it only needs to be done for batteries 9 volts or greater in voltage.
- You should also never place batteries in a recycling bin because doing so can result in a fire in the collection vehicle or at the processing facility.
- In addition to the county facilities, a number of retail outlets also accept rechargeable batteries for recycling including Home Depot, Lowe's, Best Buy, Staples, and Mom's organic market.



Questions?

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Again, thanks and I will take questions if there is time.