

We CAN Recycle Inc.

Mark Austin, Director

We CAN Recycle Inc. is a 501(c)(3) non profit corporation



Thanks to Steve & the GBRC

- Thanks to you for attending!
- What inspired me
- Why a non profit
- Started with cans & now specialized in glass
- Numbers guided our decision
- Glass is an astronomical issue – thousands of tons go to landfill
- How we do it and what happens to the glass
- Keys to our success
 - Efficient
 - Resourceful
 - Mission driven



In the Beginning...

- In 2009, after watching the film “In The Shadow Of The Moon”, about the Apollo Moon Missions...
 - Gene Cernan talked about how we were not very good stewards of our planet once he returned home from the moon
- I felt it was important to do “something”??
- Started recycling aluminum cans for office buildings
- Cans were about 80 cents a pound and reasonably profitable to collect
- Could collect part time and for free

Founded Non-Profit

- Saw the foundation of a non-profit as a way to...
 - Obtain grant and /or foundation funding
 - Increase recycling awareness
 - Contribute to the local economy
 - Do something relevant for the environment
 - Create tax incentives for recycling
 - Donation vs. landfill
 - Create community recycling center



Great expectations

- Purchased small used trailer
- Purchased industrial can crusher
- Estimated 300,000 to 500,000 cans a month
- 250,000 cans a month would gross \$6000.00 at 80 cents a pound based on 33 cans per pound.
- Found a small area to operate... at no cost!
- Found a few true “believers” who provided logistical support – Scott Barnes or the Buffalo Bayou Partnership





And then...

- The stock market tanked in the fall of 2009
- Most commodity recyclables became worthless
- Aluminum cans went to 10 cents a pound
- Could no longer provide free service
- Started getting calls to recycle other materials
- Said “yes” way to often
- Began to recycle - for a fee
 - Cardboard
 - Glass
 - Tin
 - Plastic



Opportunities for growing business

- Little recycling available for businesses
 - Virtually no recycling for restaurants
 - Arranged to collect pre-sorted recyclables from a few restaurants
 - Collected by hand with a pickup truck & trailer
 - Very labor intensive
 - Very difficult to recycle “soft” recyclables* and glass
- *(cardboard, plastic, UBC etc...) at the same time

Acquired some valuable equipment

- Old non working cardboard baler donated
- Purchased forklift to handle materials





Deciding to tackle glass

- A small restaurant can generate over a ton of glass a month
- There are over 9000 restaurants in greater Houston
- There are over 10,000 bars in greater Houston
- There are hundreds of hotels in greater Houston
- All these businesses generate a lot of glass
- The value of glass did not drop when the market did
- Local processing of post consumer glass
- Large bottle manufacturing plant in Houston

The two major types of glass

- Glass containers

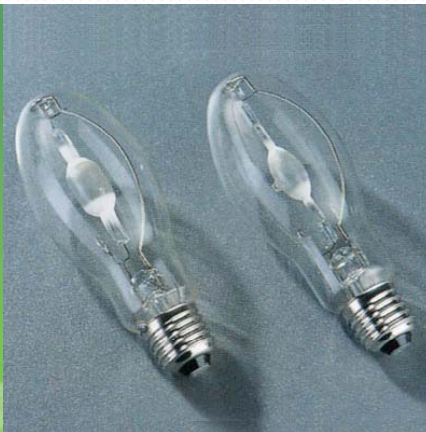


- Window Plate (float)



Glass that is difficult to recycle

- Laminates – automotive windshields
- Mirrors – coating can be hazardous
- Fluorescent light bulbs & compact fluorescents
- Other industrial lamps – Sodium, Mercury etc.



What happens to recycled glass?

- Bottle and plate glass is crushed and cleaned



What happens to recycled glass?

- Bottles are remade into bottles – in Houston



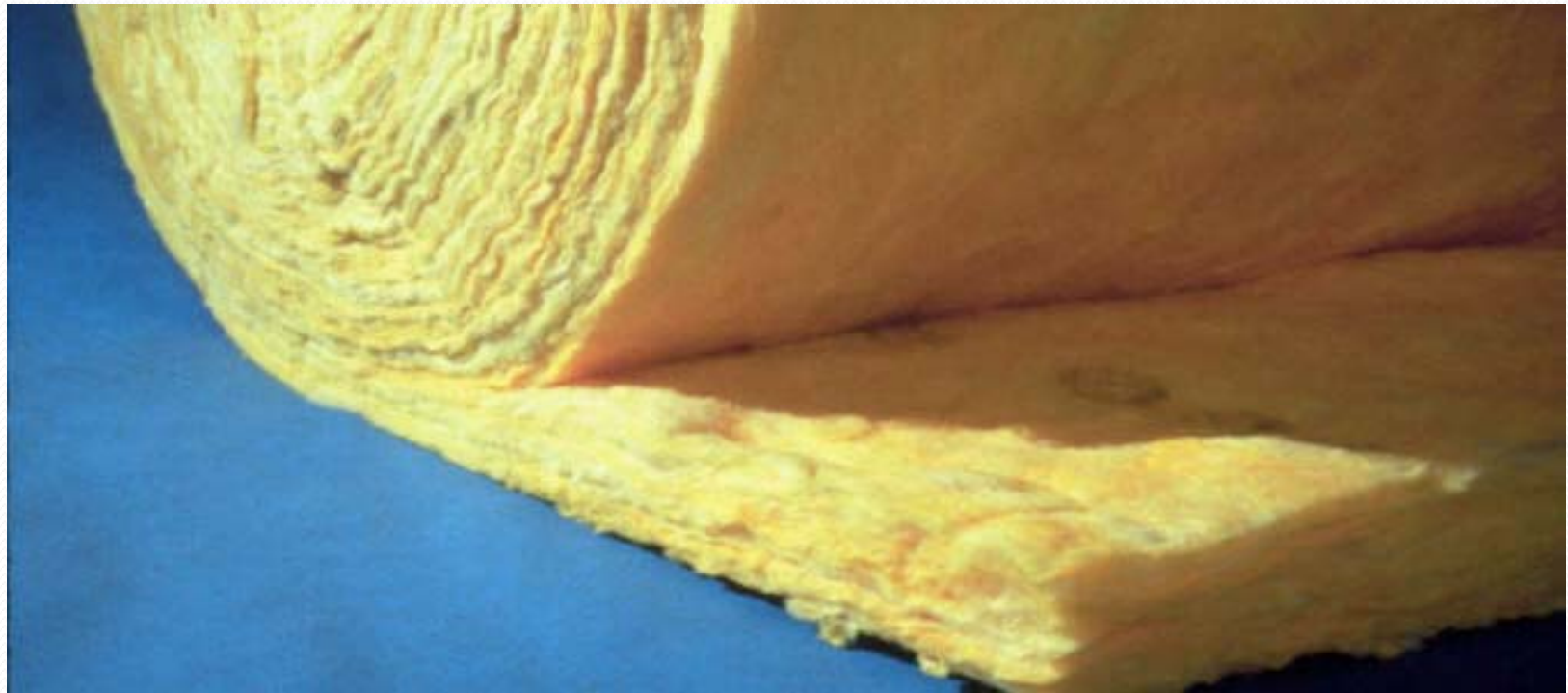
What happens to recycled glass?

- Plate glass is made into
 - Sand blast media
 - More efficient than sand
 - Little to no free silica produced, not as harmful to humans as sand



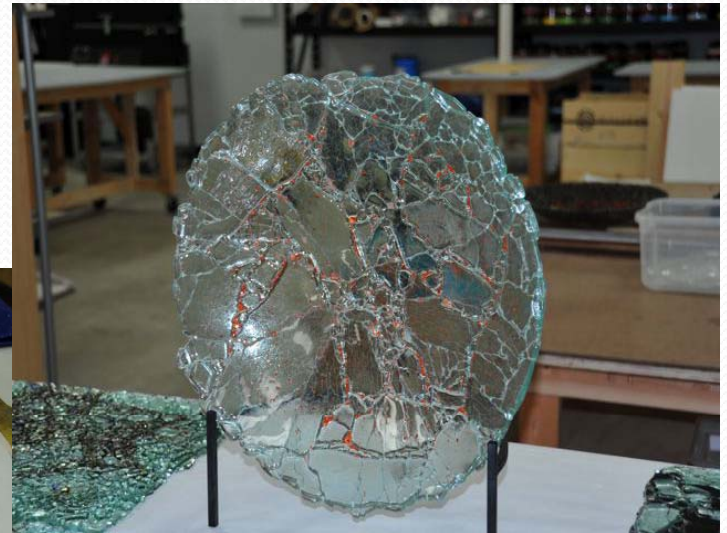
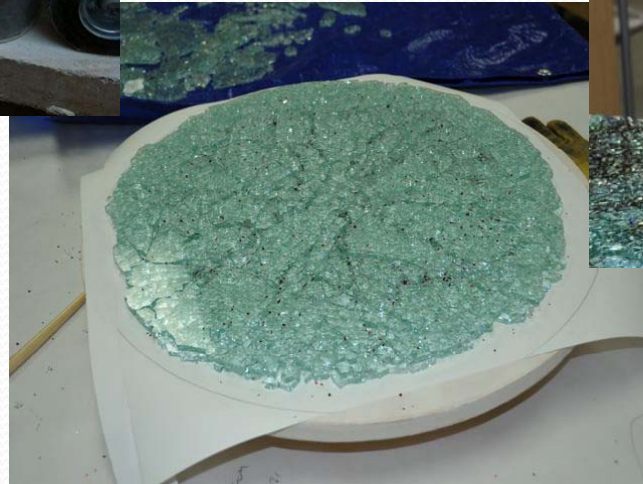
What happens to recycled glass?

- Fiberglass insulation



What happens to recycled glass?

- Architectural and Fine art objects



What happens to recycled glass?

- Bottle and plate glass is made into glass beads for reflective markers





Why recycle glass?

- If land filled it does not decompose for several million years
- Recycling saves up to 75% of the energy used in creating new glass from raw materials
- Less energy used means less coal burned – cleaner air
- Keeps valuable product in the economy
- Creates and sustains jobs
- Glass can be recycled indefinitely with no degradation

Glass recycler - part 1

- Businesses purchased “Toter” carts
- Businesses pre-sort glass by color



The daily grind

- A typical collection
 - Pick up all carts on a regular route
 - Drive to processing center
 - Dump carts
 - Return carts





Recycling glass is not easy

- Problems
 - Glass has low value on scrap market
 - \$10 to \$35 a ton
 - Have to return empty carts
 - inefficient
 - Half run was wasted time
 - Very hard work
 - Great way to get exercise
 - Takes 36 hours to recycle 2.5 to 3 tons
 - Inefficient process

Creating a better way

- Designing a dedicated glass recycling truck
 - Building an efficient way to collect glass



Found a cart tipper

Decided on type of truck



Got a small grant to purchase a used flatbed dump



Building the truck



Two Weeks Later



Automation changes everything



Glass Recycling - Part 2

- Now able to collect a ton of glass an hour freeing up 30+ hours a week
- Purchased small glass crusher



- Began glass container product destruction project
 - Recovered 890,000 pounds of glass

Expanding the program

- Moved into 6000 Square Foot facility
- Started recycling cardboard again



A typical days load

One month load - 44,000 pounds



Plastic processing

- 2010 purchased compactor for recycling comingled plastics



Needed a bigger baler

- Started receiving more cardboard than we could process
- Purchased horizontal baler September 2011
- Now able to process 5+ tons per hour vs. 3 tons a day



What we have accomplished as of December

2011:

3,876,063 pounds of materials recycled

- **2011 statistics (final) 1,482,800 pounds (741.4 tons) all materials recycled**
 - Glass : 804,500 Pounds (402.25 tons)
 - Cardboard / Paper : 656,180 Pounds (328.29 tons)
 - Metals : 11,700 Pounds (5.85 tons)
 - Plastics : 10,420 Pounds (5.21 tons)
- **2010 Statistics 1,578,094 pounds (789.047 tons) all materials recycled**
 - Glass : 1,219,332 Pounds (609.66 tons)
 - Cardboard / Paper : 336,942 Pounds (168.47 tons)
 - Plastic : 18,800 Pounds (9.4 tons)
 - Metals : 3,020 Pounds (1.5 tons)
- **2009 Statistics 815,170 pounds (400.5 tons) recycled (final)**
 - Glass : 706,825 Pounds (353.4 tons)
 - Cardboard / Paper : 106,560 Pounds (53.28 tons)
 - Metals : 1,785 Pounds



Very efficient processing = sustainability

- Time for outreach
- Allows more materials to be processed
- Has positive effect on waste diversion
- Has positive effect on environment



Recycling center - costs

- Important to help the underserved community
- Community outreach has been well received
- Several important and successful recycling centers closed – with more to close in the future
 - Not profitable
 - Many municipalities going to single stream collection
- Many businesses use community recycling centers
 - When centers close it forces businesses to landfill

Recycling center growth

People needed 24 hour access so we placed containers outside gate

When we started



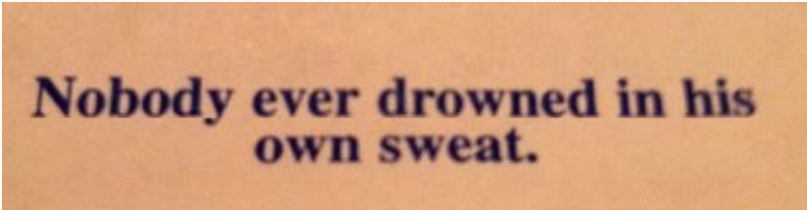
A daily event





Where we are:

- We are sustainable
- See the possibilities as limitless
- One person can make a difference
- Everything counts - EVERYTHING
- We CAN Recycle is still a one man operation
- My favorite cookie fortune...



**Nobody ever drowned in his
own sweat.**