

Say NO to  
Plastic Bags



# Introduction

Plastic bags are littering our streets and waterways, and clogging the processing machines at our transfer stations. Some communities have attempted to address the problem using one of three methods. Could any of these work in your community?



# Bag Bans

- Plastic bag bans are placed on a state, city, or town level and can be regulated by code enforcement officers who periodically visit vendors to ensure they are following the regulations.
  - Violators will be penalized with a fine.



# Bag Bans



- Ban the distribution of plastic bags by chain retailers within a community.
  - Cuts off supply of plastic bags at the source.
  - Some bans are based on square footage of the business, i.e.. Retail establishments or food providers with greater than 10,000 square feet in specific store size must comply with the ban.
  - Small businesses are harder to regulate but are usually brought under the regulation over time.

# Bag Bans

- Works very well in some areas
  - In Portland Oregon, since 2013, the ban caused a reusable bag use increase of 304% while paper bag use jumped 491%.
- Some vendors have found loopholes to this method.
  - Austin, Texas and Honolulu, Hawaii placed a ban that initially only included bags that were 4-millimeter thick or less.
    - This caused retailers to start using thicker plastic bags, greater than 4mm that still ended up in the waste stream.
  - Barrington, Rhode Island ran into the same loophole after enacting the 'Reusable Check-out Bag Initiative'.
    - Shaw's and CVS seized the opportunity and introduced a so called reusable plastic bag that was thicker than the 2.25-millimeter limit.
      - To solve the issue, Barrington Town Council passed a ruling to adjust the ordinance to include thicker plastic bags.

# Bag Takeback Recycling Programs



- Communities encourage vendors to offer recycling bins for customer's plastic bags and film.
  - The plastic bags placed into the bins are then taken to recycling centers and turned into new plastic bags or other plastic materials for future use.
  - Hannaford, Walmart, Lowe's and Shaw's all offer takeback bins at their facilities.

# Bag Takeback Recycling Programs

- This may be harder to enforce due to being based heavily on public awareness and cooperation.
- In Delaware all plastic bags must be labeled with instructions to return said bag to a participating store for recycling.
  - Stores are also required to offer reusable bags to their consumers.
  - In this case efforts have so far been unsuccessful, and further action is being considered.



# Bag Takeback Recycling Programs



- In Rhode Island, their “ReStore” program has been very well received and is being considered a success.
  - Initially a voluntary effort by the consumer, it is then mandatory for commercial facilities to participate.
  - With this in place, bags are accepted essentially everywhere in Rhode Island making it very convenient for the public to participate.



# Bag Takeback Recycling Programs

- Phoenix, Arizona collaborated with the Arizona Food Marketing Alliance to spread public awareness and encourage participation.
  - The public works department uses a quarterly customer service survey to gather input and determine the effectiveness of the educational materials the public is being provided.
  - In an 8-year span, plastic bag use has dropped 12%, 1,300 tons of plastic bags have been collected annually by six separate grocery chains and there was a 20% decrease in plastic bags brought to the recycling facility.



# Plastic Bag Fee



- Places a pay per bag fee on plastic grocery bags to encourage consumers to choose another option, and or make them aware of the plastic bags they're consuming.

# Plastic Bag Fee

- The fee option succeeds in Colorado.
  - Breckenridge, Colorado splits their revenues between the town and the retail businesses.
    - Retail business' use their share to help recoup program costs.
    - The town uses their portion to purchase and distribute reusable bags as well as educate the public about the program and its effects on their community.
    - In the first year there was a 40% reduction in bags.
    - Residents have been very supportive of the program, and most tourists have complied as well.



# Plastic Bag Fee

- Portland, Maine has seen reusable bag sales climb 350% at Hannaford Grocery stores in the area due to their implementation of a 5-cent fee since April, 2015.



# Plastic Bag Fee

- Successfully implementing such a fee has proved to be difficult in some communities.
  - Determining a price point at which people will be deterred from simply purchasing all the plastic bags they need, instead seeking alternate options such as reusable cloth bags.
    - Washington D.C. placed a tax of 5 cents per plastic bag.
    - In the first 4 years this tax generated \$1.5 million to \$2 million per year.
      - This implies that the tax was not high enough to discourage consumers as they still chose to use bags and simply pay the fee.
      - These revenues are used for several purposes.
        - One cent of each 5 cents fee is kept by the respective retail establishment.
        - Remainder is kept by the Office of Tax and Revenue to be allocated between school fieldtrip funds, employee salaries, and environmental initiatives within the District such as trash traps to clean up the Anacostia River.



# 2015 National Post-consumer Plastic Bag & Film Recovery Report

- Conducted by Moore Recycling Associates out of Sonoma, California
- This research was conducted and the report finalized by Moore Recycling Associates Inc. for the Plastics Division of the American Chemistry Council (ACC).



# Film Categories

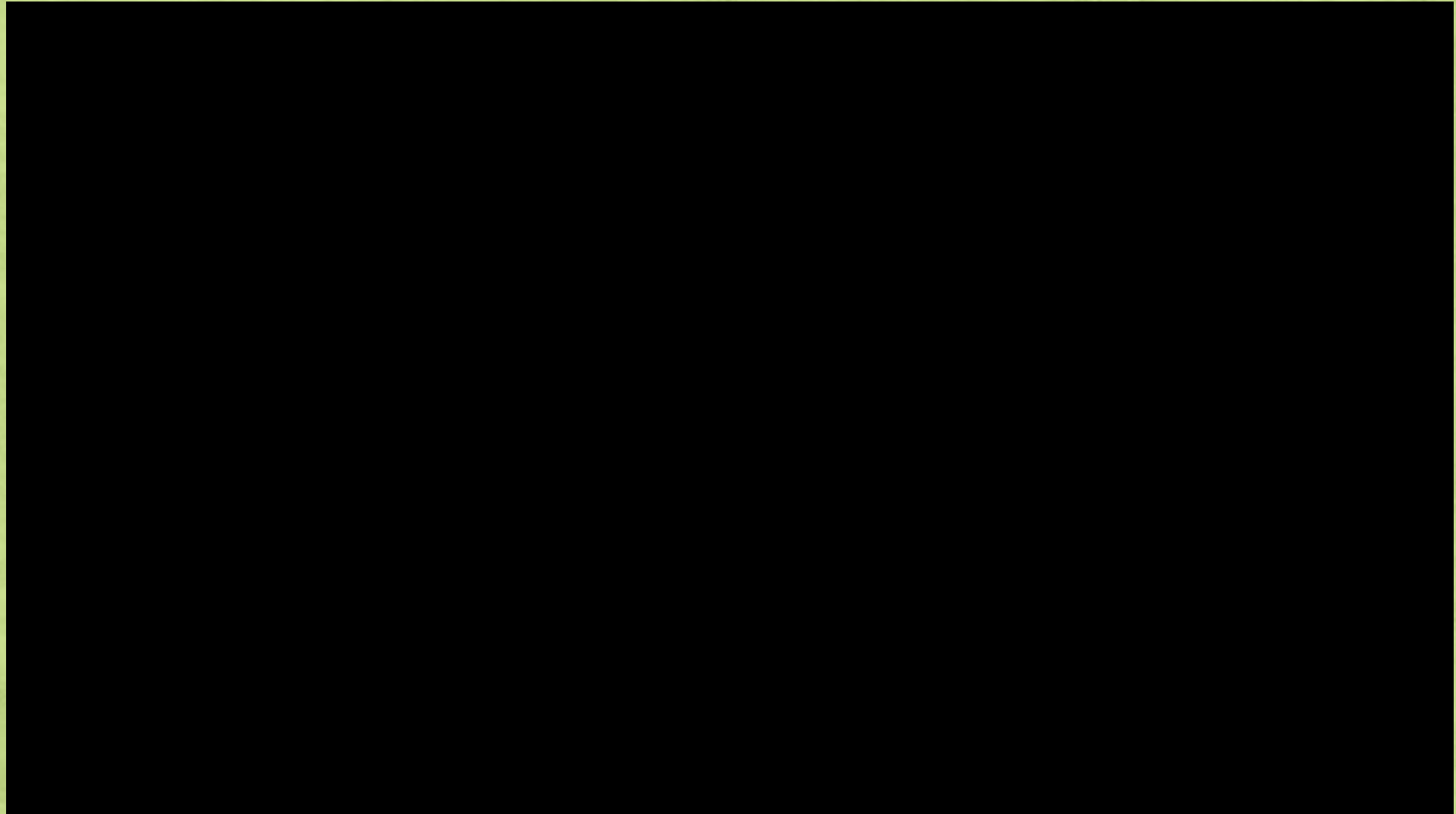
- **PE Clear Film** (formerly Commercial Clear Film) - Clear, clean polyethylene (PE) film from commercial sources, including stretch wrap and poly bags
- **PE Mixed Color Film** (formerly Commercial Mixed Color Film) - Mixed color PE film from commercial sources, including stretch wrap; no post-consumer bags
- **PE Retail Bag and Film** (formerly Mixed Film) - Mixed color, clean PE film, including stretch wrap and retail collected post-consumer bags, sacks, and wraps
- **MRF Curbside Film** (formerly Curbside Film) - Post-consumer Mixed-PE film collected curbside
- **PE Agricultural Film** (formerly Agricultural Film) - Dirty Ag Film, or film that has been in contact with the ground, exhibiting up to 50 percent contamination, including mulch film; this also includes Clean Ag Film, or dry film, which has been used in applications that do not involve contact with the ground, at up to 10 percent contamination, including greenhouse film
- **Other Film** - A “catch-all” for film that does not fit in any of the categories above; mostly non-PE films, such as polyvinyl chloride (PVC) and polypropylene (PP)

# U.S. Post-consumer Film Recovered for Recycling (pounds)





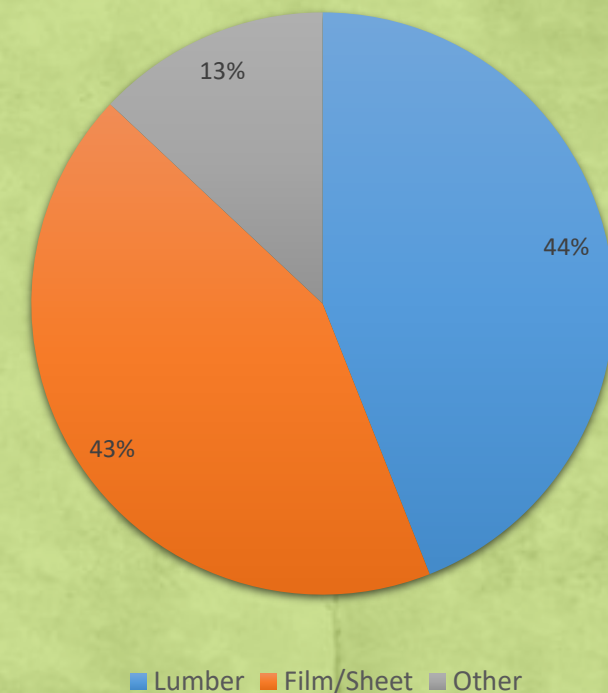
# Products Made From Plastic Bags/Film



# Products Made From Plastic Bags/Film

- Of the approximately 870 million pounds per year of plastic film reclamation in the U.S., 44% of that is used to make composite lumber.
  - Trex offers recycling programs to communities and schools.
    - Incentives include awards for your successful recycling efforts with Trex products such as park benches.
- 43% is used to make new plastic film and sheet which will be used to create new bags and packaging.
- The remaining 13% is categorized as other.
  - This can include marine products, agricultural products, crates, buckets, pallets, etc.

**Reclaimed U.S. Post-consumer Film:  
2015 End Uses**



# Outreach

- A certain amount of film, including mixed-resin film material, will end up in Municipal Recycling Facilities, even with a significant improvement in consumer education.
- Solutions are needed on several levels.
  - Unified messaging about how and what to recycle should be institutionalized throughout the country.
    - This would prevent ongoing confusion and lack of information from serving as barriers to recycling.



# W.R.A.P.

- The Wrap Recycling Action Program (WRAP) is a national public outreach and education initiative, created by the Flexible Film Recycling Group (FFRG).
  - Goal is to increase film recycling by engaging key stakeholders to improve education and to activate collection networks.
  - WRAP has now impacted communities in the Northeast, Midwest, Northwest, and Southeast and is working to reach more areas in the coming years.
  - Their new partnership with the EPA will likely support this goal.



# The Future of Plastic Film Recycling

- Many voices in plastic film recycling noted a decrease in end-use demand in 2015 due to competition from virgin resin; raw plastic material made from oil verses from recycled plastic.
  - Fluctuating oil markets impacted the affordability and competitiveness of virgin resin against post-consumer resin in 2015.
    - If the decreased price of oil becomes profitable, virgin resin will become more valuable in the market than post-consumer resin.
- The value of post-consumer resin is what drives innovation in collection, processing, and conversion of scrap material for use in new products.
  - Growth in end-use demand is essential if film recycling is to continue to expand.



# THE END

- Questions?
- Comments?



# Resources

- <https://www.plasticfilmrecycling.org/>
- <http://www.pressherald.com/2015/10/11/as-portland-goes-so-goes-maine/>
- <https://plastics.americanchemistry.com/2015-National-Post-Consumer-Plastic-Bag-and-Film-Recycling-Report.pdf>
- <https://www.youtube.com/watch?v=7zEBEXPB4co>

- <http://pixel.nymag.com/imgs/daily/intelligencer/2015/07/14/14-plasticBags.jpg>
- <https://bodyunburdened.com/wp-content/uploads/2014/08/plastic-in-water1.jpg>
- <https://assets.dnainfo.com/photo/2016/12/1481924957-285888/extralarge.jpg>
- <http://assets.inhabitat.com/wp-content/blogs.dir/1/files/2014/09/Plastic-Bags-Banned-in-California.jpg>
- <http://www.suttonmass.org/about/recycling/plasticbags.jpg>
- <https://recyclenation.com/wp-content/uploads/2013/10/recycling-plastic-bags.jpg>
- <https://usm.maine.edu/sites/default/files/Sustainability%20at%20USM/plastic-bag-recycline-circle2.jpg>
- <http://www.pressherald.com/2015/10/11/as-portland-goes-so-goes-maine/>
- [http://3blaws.s3.amazonaws.com/images/wegmans\\_plastic\\_bag.jpg](http://3blaws.s3.amazonaws.com/images/wegmans_plastic_bag.jpg)
- <https://www.packworld.com/sites/default/files/styles/lightbox/public/field/image/dropoffcenterposter.jpg?itok=VEpviwmT>
- <https://cbsdenver.files.wordpress.com/2014/08/fort-collins-plastic-bags.jpg?w=640&h=360&crop=1>
- <http://www.greenlifestylechanges.com/wp-content/uploads/2013/08/DC-bag-law-600x448.jpg>
- <https://pbs.twimg.com/media/DCH6rxlVYAAHasA.jpg>
- [http://static.wixstatic.com/media/8e974f\\_afoefed4d1e345e4835f55c1fc3f2d4f.png\\_srz\\_600\\_187\\_85\\_22\\_0.50\\_1.20\\_0.00\\_png\\_srz](http://static.wixstatic.com/media/8e974f_afoefed4d1e345e4835f55c1fc3f2d4f.png_srz_600_187_85_22_0.50_1.20_0.00_png_srz)