



**Microplastics in the Urban
Environment Conference Presentation**
Gary Sondermeyer, Vice President of Operations
Bayshore Family of Companies
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Business Approaches to Plastic Waste



- **Gary Sondermeyer** – Bayshore Recycling - Statewide Perspective of a New Jersey Recycling Processor
- **Tristan Steichen** – Healthcare Plastic Recycling Council - New Jersey “Healthcare Sector” Perspective
- **Tristanne Davis** - GreenBlue Sustainable Packaging Coalition – Industry Consortium Perspective at the National and International Levels
- **Michael Arcieri** – Ekman Recycling – International Market Availability Perspective for Recovered Product

Incredibly Exciting Times!

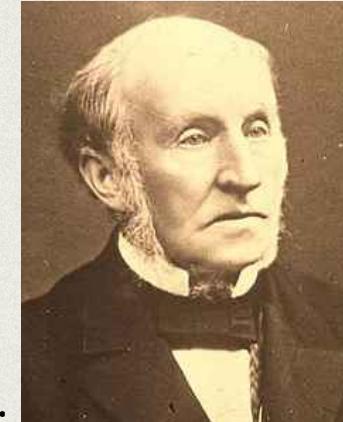


- **Recycling Markets** are the Most Challenging in History!
- We have **Unprecedented Media Focus** on Plastics in our Environment:
 - A “Plastic Ocean”
 - “Bag It – Is Your Life Too Plastic?”
- Single Use Plastics - Bag Bans, Straws, Polystyrene Food Service Products:
 - New York City Program
 - Sustainable Downbeach and Many Shore Communities
 - A4330 Sponsored by Assemblywoman Nancy Pinkin
- Recent Creation of the “**Alliance to End Plastic Waste**” and Pledge to Provide **\$1.5 BILLION** to Address the Problem
 - (P&G, Shell, Veolia, Suez, Exxon/Mobile, Phillips/Chevron, Dow Chemical, PolyOne, BASF and others)
- International Pilot for Reuse by **TerraCycle: LOOP Program**
 - (P&G, Nestle, PepsiCo, Unilever, Mars, Clorox, Coca-Cola)

Toronto, Paris and New York City This May!!!

A Brief History of Plastics

- 1862 – 1st Man-Made Plastic Created by Alexander Parkes at the Great International Exposition – London;
- 1868 - First Commercial Product – Billiard Balls;
- 1872 – PVC First Created;
- 1908 – Cellophane First Marketed;
- 1926 – Vinyl Invented from PVC;
- 1939 – Nylon and Neoprene Invented to Replace Silk;
- 1941 – PET Invented;
- 1951 – HDPE First Introduced;
- 1953 – Saran Wrap Introduced by Dow Chemical;
- 1954 – Styrofoam Invented;
- 1967 – The “Graduate” with Dustin Hoffman – “The Future is Plastic”
- 1970 – Dacron Polyester Used in Clothing;

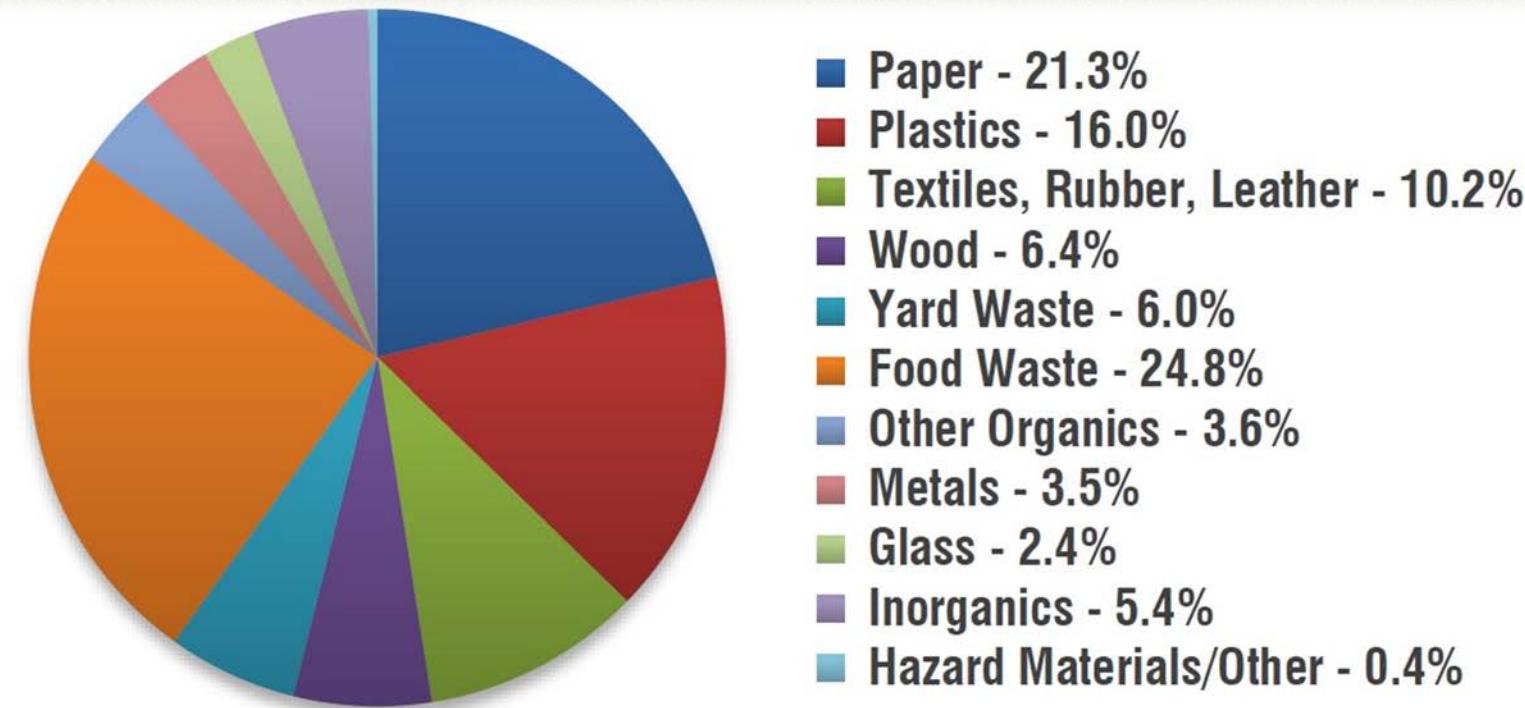


Where it all began – NJ Recycling

- 1982 – “Recycling in the ‘80’s”
- 1987 – Mandatory Recycling
 - “Floor” of Recycling “3 Materials, plus Leaves”
- Glass Containers, Aluminum Cans & Newspaper
- NO ONE Exempt!!!
- Down to “Kitchen Level”
- 1993 Plan and Integrated & Waste Management
- 50% MWS and 60% TWS
Goals Codified by Legislature



What's Left in the Can After 30 Years of Mandatory Recycling?



SO....What's the Problem???



- Most New Jersey Towns have Gone to “**Single Stream**” v. “**Dual Stream**” Collection – Leads to VERY High Contamination and Compromised Markets
- **International Market Restrictions** from China – Green Fence & Green Sword
- **Recycling is Confusing** – Plastics Recycling is NUTS!!!
- **“Recycle Mania”** – EVERYTHING is recyclable!!!
- Total Disconnect between “**Supply and Demand**” – we Got the Stuff – Too Few Markets to Send it to!
- **Economics of Recycling** have Left the Building - In a Few Years Towns Went from “Getting Paid” to “PAYING” \$65/Ton + North!
- Long Lead Time Necessary to **Restore Domestic Markets**.
- 100 MILLION Tons Manufactured Globally Annually, In the U.S. – **only about 10% is recovered** of all Plastic;

The Complexity of Plastics

WHAT DO RECYCLING SYMBOLS ON PLASTICS MEAN?



PET, PETE
(Polyethylene Terephthalate)

- Soft drink, water and salad dressing bottles; peanut butter and jam jars...
- Suitable to store cold or warm drinks. Bad idea for hot drinks.



HDPE
(High-density Polyethylene)

- Water pipes, milk, juice and water bottles; grocery bags, some shampoo / toiletry bottles...



PVC
(Polyvinyl Chloride)

- Not used for food packaging.
- Pipes, cables, furniture, clothes, toys...



LDPE
(Low-density Polyethylene)

- Frozen food bags; squeezable bottles, e.g. honey, mustard; cling films; flexible container lids....



PP
(Polypropylene)

- Reusable microwaveable ware; kitchenware; yogurt containers; microwaveable disposable take-away containers; disposable cups; plates....



PS
(Polystyrene)

- Egg cartons; packing peanuts; disposable cups, plates, trays and cutlery; disposable take-away containers.

Avoid for food storage!



Other
(often polycarbonate or ABS)

- Beverage bottles; baby milk bottles. compact discs; "unbreakable" glazing; lenses including sunglasses, prescription glasses, automotive headlamps, riot shields, instrument panels...

veganology

Safe food containers are made from number
1, 2, 4, and 5 plastics.

Plastics Recycling Breakouts

- IPF's or MRF's Process "Post-Consumer" Plastics;
- **Normal Breakout Categories:**
 - PET: Clear Water Bottles
 - HDPE Natural: Milk Containers
 - HDPE Color: Laundry Detergent Containers
 - LDPE Film Natural: Dry Cleaner Bags
 - LDPE Film Colored: Clothing Bags
 - Mixed Rigid: Spackling Buckets, Kids Toys
 - Other 3 – 7 Plastic: Yogurt and other Containers
 - PVC: White and Dark Piping, Etc.



SO.....What Can We Do?

- Local Bans on Sale or Use – Straws and Film Plastic Bags;
- Statewide Legislation like A4330
- Stepped up Education & Enforcement Related to Contamination
- State Leadership (State Plan/County Planning Initiative)
- Incentives for Development of Domestic Markets – Business Recycling Loans as in Years Past
- Do we Stop Collecting Some Plastics – Just Look at #1 & #2?
- Do we go back to Dual Stream? (California Assembly Bill 815)
- Need a Statewide Markets Development Council
- We Must Reactivate the State SWAC
- Critical to have a Statewide Dialogue!





Thank you

BAYSHORE
Your recycling solution.