Microplastics in the Urban Environment Conference Presentation
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Business Approaches to Plastic Waste

- **Gary Sondermeyer** – Bayshore Recycling - Statewide Perspective of a New Jersey Recycling Processor
- **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?

- Paper - 21.3%
- Plastics - 16.0%
- Textiles, Rubber, Leather - 10.2%
- Wood - 6.4%
- Yard Waste - 6.0%
- Food Waste - 24.8%
- Other Organics - 3.6%
- Metals - 3.5%
- Glass - 2.4%
- Inorganics - 5.4%
- Hazard Materials/Other - 0.4%
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?**

1. **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.

2. **HDPE**
   - High-density Polyethylene
   - Water pipes, milk, juice and water bottles; grocery bags, some shampoo/toiletry bottles...

3. **PVC**
   - Polyvinyl Chloride
   - Not used for food packaging.
   - Pipes, cables, furniture, clothes, toys...

4. **LDPE**
   - Low-density Polyethylene
   - Frozen food bags, squeezable bottles, e.g. honey, mustard; cling films; flexible container lids...

5. **PP**
   - Polypropylene
   - Reusable microwaveable ware; kitchenware; yogurt containers; microwaveable disposable take-away containers; disposable cups, plates, etc.

6. **PS**
   - Polystyrene
   - Egg cartons; packing peanuts; disposable cups, plates, trays and cutlery; disposable take-away containers... Avoid for food storage!

7. **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...

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 Duel 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.