



METROPOLITAN WASHINGTON  
**Council of Governments**

# Recycling Committee Meeting March 2016



# g<sup>2</sup> revolution

- Servicing retailers and manufacturers on a national basis since 2008
- Headquarters in suburban Chicago
- All processing in Findlay, OH
- Focused on Retail and Supply Chain
  - “Big box” and specialty retail stores
  - Manufacturers of consumer items
  - Multi-state/jurisdiction challenges
- Experienced retail environmental personnel
  - Understand unique retail needs/consumer products
  - Regulatory knowledge of waste and recycling rules



# $g^2$ revolution

- Commodity Materials
  - Shopping bags, office paper, etc.
- Manufacturer Product Stewardship
  - Keurig K-Cups®, Whirlpool® water filters
- Consumer Chemical Products
  - Perfume, nail polish, cleaners, etc.
  - Knightshade® nicotine reclamation
- Universal/electronic waste
  - Bulbs, batteries, LCDs, cords, etc.



# Commodity Materials

- Commingled or Specific Streams
  - Local mandates/bottle and can laws
  - Smaller locations that can't put in a larger container outside or need controlled access
  - Small volumes, many locations
- Special Items
  - Retail hangers (come in variety of materials)
  - Plastic gift cards
  - Sustainability messaging – employees, shareholders and customers
- Mail-In via common carrier
  - Materials tracked, weighed and protected portal with recycling data



# Manufacturer Product Stewardship

- Research and develop specific solutions for manufacturers with consumer items
- Keurig® K-Cups
  - Developed two sizes of easy-to-use containers for commercial entities
  - Created Grounds to Grow On™ website
  - Farm compost and waste-to-energy
- Whirlpool® water filters
  - Refresh & Recycle™ program
  - All brands of refrigerator filters
  - Mail-in recycling kits for customers
  - Coupon incentives



## Introducing the Refresh & Recycle™ program, the first-of-its-kind water filter recycling program.

EveryDrop™ by Whirlpool® Water cares about you and the environment, which is why we developed the Refresh & Recycle™ program, a state-of-the-art solution to recycle your used refrigerator water filter regardless of the brand or manufacturer.

Recycle Now >

## How It Works

Our partner, g2 revolution®, will receive your used refrigerator water filter at their facility where it will be cataloged and sent to a co-processor. From there, used filters will be tested for material content and transformed into concrete aggregate to be used in roads and other concrete structures.



**g2 revolution**  
go green  
transforming waste into concrete aggregate

# Consumer Chemical Products

- Grocery, department store, specialty retail locations, especially multi-state
- Products may be
  - Reused as “ingredients” or as “substitutes”
    - Perfume, nail polish, cleaning chemicals, soaps
    - Converted to industrial/commercial chemical use
  - Waste-to-energy
    - Non-hazardous non-recyclable (makeup, over-the-counter products, etc.)
  - Legitimate reclamation
    - Aerosols
- Watch for recycling regulations
- Department of Transportation shipping



June 2010  
Version 1

**Revisions to the Definition of Solid Waste Final  
Rule Compilations: The Legitimate Recycling  
Standard**

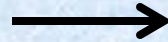


**Overview of the 2015  
Definition of Solid Waste  
Final Rule**

*Signed December 10, 2014  
Published January 13, 2015*

# Consumer Chemical Products Ingredient/Substitute

Perfume  
and  
cologne

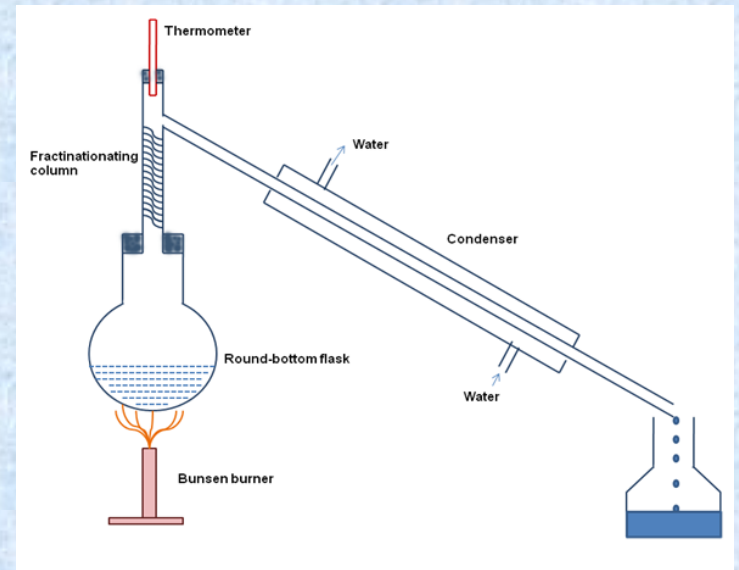


Nail  
Polish



# Consumer Chemical Products Reclamation

- *Reclamation* (via chemical, heat, etc.) of usable material for the same intended use
- Some states don't allow or may restrict this option
- Must have a "legitimate" reuse – recovered material has a "market"
- Documentation





# Consumer Chemical Products

## Reclaiming Nicotine

**Expired Nicotine  
Products**



**Recovered  
Nicotine**



**New Nicotine  
Products**



# Universal Waste/Electronics

- Still hazardous waste, but relaxed rules
  - Fluorescent bulbs
  - Batteries (Lithium, etc. - Also alkaline batteries in CA)
  - Uncommon: Devices with mercury (old thermostats, etc.)
  - Retail electronics not just traditional computers
- Some states have added other materials to UW
  - Electronics (About nine states)
  - Aerosols (CA, CO, MN)
  - Pharmaceuticals (MI, FL)
  - Paint-related (TX)
  - Antifreeze (LA)
  - Oil-based finishes (NJ, PA)
- As always, pay attention to regulations

