



House Memorial 56 – Product Stewardship Study

Presentation to the Radioactive and Hazardous Materials Committee
of the New Mexico State Legislature

By the New Mexico Environment Department

November 12, 2013



- Begin with pilot program for mattresses during 2014:
 - Facilitated by a Product Stewardship Advisory Group;
 - Could use existing federal EPA Pollution Prevention grant funds to assist.
- Prioritized mattresses because:
 - Mattresses are problematic for landfills - safety risks and operational difficulties;
 - Mattresses are often illegally dumped;
 - Recycling or refurbishing mattresses has created jobs and revenue for non-profits and businesses in other states;
 - Existing industry supported national product stewardship program for mattresses.
- Recommend working closely with established national manufacturing associations:
 - Benefit from their expertise in developing product stewardship programs;
 - Enable private sector input.



Summary

- Given success in other states and industry support, product stewardship could be successful in New Mexico
- Electronics, mattresses, and paint may be good options for product stewardship programs in New Mexico
- Start with a pilot product stewardship program for mattresses
- Form a Product Stewardship Advisory Group to facilitate product stewardship research, product materials management data, stakeholder input, and program development



Mattress Problems & Solutions



- A common waste to be found dumped illegally;
 - Not all used mattresses are being replaced with new ones so aren't necessarily picked up or accepted by shops;
 - Can create hazardous conditions at landfills:
 - Unstable slope at landfills - can create unsteady surface for machinery to drive over and can cause rollovers;
 - Can tangle in equipment – mattress springs can wrap around machinery drive shafts causing significant damage to vehicles.
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- About 80-90% of the material can be recycled and added to the recycling market;
 - 9 pounds of cotton and 25 pounds of steel (38% cotton, 30% metal, 10% foam, 4 % wool shoddy);
 - Can also be stripped of cotton & foam and refurbished to be reused.



Mattress Anatomy



- Foam (torn or shredded) and Cotton baled, sold for reuse as insulation or carpet padding;
- Steel from springs sold to steel recyclers who melt it down to make new products;
- Wood sold to wood chippers and used as fuel source;
- Small businesses and non-profits have been successful at profiting from providing mattress recycling.



Mattress Solutions



- Foam and Cotton baled, sold, remade as insulation or carpet padding;
 - Steel from springs sold to steel recyclers;
 - Wood sold to wood chippers and used as fuel source;
 - Small businesses and particularly non-profits have been successful at profiting from providing mattress recycling.
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- Currently 3 states with EPR laws for mattresses (passed in 2013): CA, CT, RI;
- Industry supported - International Sleep Products Association (ISPA) active in drafting legislation and operating the new EPR programs;
- ISPA willing to assist New Mexico - not with legislation until get the other states up and running.



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Additional Information



New Mexico Environment Department

Compact Fluorescent Lamps (CFLs)



- NMED piloted in 2006-2007 CFL collection points at several recycling facilities in NM;
- Communities/facilities can recycle CFLs using fee-based mail-in programs or a Bulb Crushing unit;
- Only 9-10 mid-to-larger communities accept CFLs for recycling;
- NM Solid Waste Management Act says that small generators may dispose of household generated CFLs, placed in a bag;
- Only large businesses, institutions and industry users of fluorescent lamps are required to recycle;
- Ace, Home Depot and Lowe's accept small CFLs in household quantities for recycling.



Compact Fluorescent Lamps (CFLs)



Mercury Containing Devices in Comparison

- Relative Household Mercury Amounts:
 - CFL – 4 mg
 - 4-foot fluorescent lamp – 8 mg
 - Mercury thermometer – 500 mg
 - Automotive mercury switch – 800 mg
 - Older Thermostat — 3000 mg

Compact Fluorescent Lamps (CFLs)



- 3 states with passed legislation: Maine (2011), Vermont (2011), and Massachusetts (2008);
- Many others have considered: California, New York, Rhode Island, Wisconsin;
- Includes: linear lamps, U-shaped, circuline, High Intensity Discharge (car headlights, high-powered flashlights), compact curly-qs.;
- Industry is managed by the National Electrical Manufacturers Association (NEMA);
- NEMA opposed the 3 existing bills due to financing mechanism (not opposed to EPRs in general, just concerned about how they are handled);
- They would prefer to see an Advanced Recovery Fee or “environmental handling” fee seen in recent paint, mattress and carpet laws;
- Currently working with state of Washington on a bill amenable to them.



Electronics



- In the US, we throw away 400 million consumer electronics each year. Only 25% recycled;
- Electronics contain hazardous materials;
- Monitors and old tube TVs have 4-8 pounds of lead;
- Flat screen monitors and TVs contain lead & mercury;
- About 40% of the heavy metals, including lead, mercury and cadmium, in landfills come from electronic discards.



Electronics



- Some Goodwill locations take electronics for recycling for free, some only take working electronics;
- Office Depot, Staples & Best Buy take back electronics (some free, some if purchase made or for a fee);
- At least 12 private electronics recyclers/collectors operating in our state, working with businesses and communities;
- Most NM communities accept electronics. Some need to charge extra for monitors and TVs. Some do not accept monitors or TVs. (e.g. Albuquerque does not take TVs and charges small fee for all items);
- Eight TV companies have voluntary take-back programs for their old TVs;
- 25 states with electronics EPR;
- A few do not cover old TVs due to their materials and hard-to-manage size;
- There is NOT an EPR bill aimed directly at old TVs.



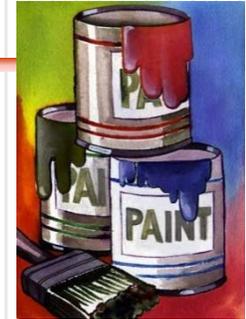
Electronics



- Electronics EPR Best Management Practices:
 - Set HIGH performance goals with \$\$ penalties for not meeting;
 - Very convenient: Towns 10,000+ must have collection site;
 - Offer variety of collection partners: muni, private, retail, nonprofit;
 - Ensure rural areas have collection requirements;
 - Landfill bans assist – phased in 1-2 years later;
 - Require e-waste to be recycled by certified entities and avoid prison labor;
 - Include broad range of products, including monitors, printers and TVs;
 - Encourage reuse with appropriate language;
 - Clear reporting requirements.
- **Challenge:** Many e-recyclers working with NM communities charge to take some items (e.g. monitors or TVs) and some are starting to charge for all items.
- **Challenge:** Communities must charge to manage their handling and e-cycling charges.
- **Alternate Solution:** NMRC's R3 Coop will soon launch an electronics recycling program to include old TVs with electronics recycling mix and pays by the ton.



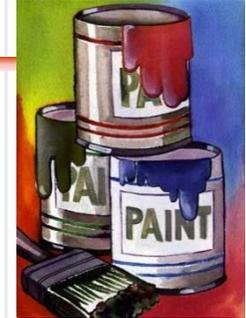
Leftover Paint



- US EPA estimates about 10% of purchased paint goes unused each year (mostly leftover);
- Average of 560 million gal. household paint sold each year;
- Considered Household Hazardous Waste;
- Disposed of improperly, can contaminate waterways and groundwater.
- **Oil based paint** – treated as hazardous waste:
 - Petrochemicals, solvents, heavy metals;
 - Can cause severe health risks.
- **Latex Paint** - recyclable and can be used to make new paint:
 - Less hazardous, but can still cause problems;
 - Contains acrylics, vinyls, epoxies.



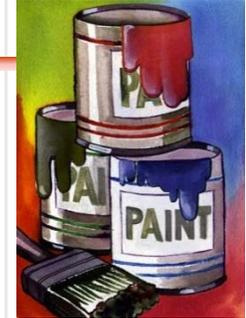
Paint Product Stewardship



- 7 states have paint EPR laws with more being drafted:
 - CA, CT, ME, MN, OR, RI, VT;
 - CO is submitting legislation in 2014;
 - NV & UT are considering drafting legislation;
- PaintCare is a non-profit created by American Coatings Association to assist with EPR legislation implementation.
- **Oregon example:**
 - Fee for program collected at sale;
 - Coordination, collection, transportation, etc. handled by PaintCare;
 - OR DEQ oversees program & handles fees (pint=\$0.35, gal=\$0.75, 5 gal=\$1.60);
 - Began with pilot program 2010, EPR law in 2013 – evaluation study shows growing support by community, retailers, suppliers.



Paint Product Stewardship



- Evaluation states that by end of year 2:
 - Over 94% of all residents live within 15 mile radius of a collection site [96% of those in towns] (pop. 3.4 mil);
 - Collection sites are: 19 HHW & Solid Waste Sites, 72 retailers, 11 ReStores (like Habitat for Humanity);
 - Revenue from fees= \$4,247,000; Program expenses= \$3,823,000;
 - HHW coordination sites reported over \$1mil savings after first year;
 - Survey of retailers, manufacturers, HHW coordinators at municipalities, contractors – should program be made permanent? Yes(68%), No (14%), Unsure (17%).

