MassDEP Reduce & Reuse (R&R) Workgroup Virtual Meeting

Topic: Priority Materials Deep Dive

Wednesday, December 16, 2020 | 10:00 AM – 12:00 PM | Meeting Summary

The R&R Working Group is a forum for discussion of source reduction and reuse regulations, policies, and programs in Massachusetts. The group was established to help in the development of a MassDEP Strategic Reduce and Reuse Action Plan as outlined in the **2030 Solid Waste Master Plan**. To learn more about the working group and find past meeting materials, visit: MassDEP Reduce & Reuse Working Group

This meeting was held virtually and facilitated by Erin Victor, Environmental Analyst, MassDEP erin.victor@mass.gov. A total of 86 people participated in the 12/18/2020 meeting. The discussion sections reflect both written and spoken comments and questions from participants.

Meeting Discussion Topics:

Agenda

10:00 AM – Welcome & Background – Erin Victor, MassDEP
10:30 AM – Breakout Rooms:

1. Furniture, Fixtures & Equipment (Commercial/Institutional)
2. Electronics
3. Textiles & Clothing
4. Building Materials
5. Transportation & Distribution Packaging

11:30 AM – Report out from breakout rooms (note takers)
11:50 AM – Announcements – Erin Victor, MassDEP
12:00 PM – Adjourn

Summary of Breakout Room Discussions

The December Reduce & Reuse Working Group discussion focused on the remaining priority materials identified in the draft 2030 Solid Waste Master Plan under the source reduction and reuse section. Breakout groups focus on identifying barriers and solutions to reducing waste at the source (point of generation) and/or promoting more reuse for each of the priority materials: Furniture, Fixtures & Equipment (Commercial/Institutional); Electronics; Textiles & Clothing; Building Materials; Transportation & Distribution Packaging.

Recording of Breakout Groups

Recordings of each of the 5 breakout group discussions can be found at:
https://youtube.com/playlist?list=PLJn2AKOcYr7nn9O0RKkR5yRjEgKpa6iuV

Furniture, Fixtures & Equipment (FFE) (Commercial/Institutional)

Facilitator: Erin Victor, MassDEP
Note Taker: Rachel Smith, MassDEP

Participants:

Laurel Christensen, Dyer Brown Architects; Jennifer Raymond, Seedling Labs; Mark Rivard, Habitat for Humanity; Susan Waite, Northhampton DPW; Richard Purnell, New Life Furniture Bank of MA; Meredith Chicklis, MI-BOX of Greater Billerica and Burlington; Sharon Martens, Household Goods; Jacqueline Gillis, Fresh Start Furniture Bank; Ashley Muspratt, CET; Alyssa Jones, Transfer Enterprises; Victoria Phillips, City of Boston; Norma Chanis, Wachusett Earth Day; Rachel Smith, MassDEP; Erin Victor, MassDEP

What are the barriers to greater reuse of FF&E?

Laurel Christensen: For workplace and corporate interior projects – anticipating a lot of furniture up for grabs as companies downsize or transition to increased teleworking. One challenge is moving pieces that are no longer in style or useful. Additionally, office spaces are typically refreshed frequently to keep up with the latest styles, these interior design projects are not accounted for in sustainability reports or certifications

Alyssa Jones: Echoed Laurel that many places going out of business or choosing to move to remote working. That the big misconception is cost – there is a ton of labor involved with liquidating office buildings – it's very expensive overhead due to labor, transportation, varying values of furniture. Takes a lot of time to carefully disassemble furniture rather than demolishing it all.

Ashley Muspratt: Based on experience working primarily with multi-family properties and colleges/universities, a huge barrier is that people take the path of least resistance (which is disposal). With college move outs, they all happen at the same time of year and timelines are tight, donation centers are overburdened. CET has seen this in technical assistance projects too when property owners are left with handling the dispose of furniture left behind during move out.

Victoria Phillips: The City of Boston is focusing on commercial and institutional reuse going forward, make part of ZW Plan and how to support reuse businesses in the city.

Alyssa: The hardest furniture for Transfer Enterprises to move is wood furniture – lots of massive and heavy wooden desks are hard to transport and store. The desire is now for furniture to be modular and smaller. They send wood furniture to a company that grinds up the wood to make wood chips when they cannot sell a piece for reuse.

Sharon: Household Goods has the opposite response to wood furniture. Solid wood furniture is desirable because it is durable and high quality but that also makes it harder to store/transport. Challenge: they take a lot of dorm furniture and problem is that college volume is high. Sometimes get a call to take 2,000 beds but can only handle 500. All colleges move out around same time. Feast or famine – supply and demand doesn't line up.

Rich Purnell: Echoed the space constraints Sharon mentioned at household goods regarding dorm furniture. They started repairing upholstered items but backlog due to COVID so they (New Life Furniture Bank) don't have time to clean and repair anymore.

Laurel: On repair/reupholstery – we need to think about possible chemicals of concern in older furniture (e.g., brominated flame retardants, formaldehyde, lead paint).

Jennifer Raymond: Seeding Lab vet all equipment and certify that it is in working order. Donors must vouch that items are decontaminated before they get them. They do not have resources to take non-working equipment that needs repair.

Alyssa: With COVID they had to go through extra cleaning and sanitizing processes. They only take furniture and equipment from certain manufacturers. It's a lot of work to look up the certifications for each manufacturer to determine which chemicals of concerned were or were not used in a product and if the product has any recalls. Limiting the number of manufacturers helps streamline this process.

Norma Chanis: At Wachusett Earth Day space is definitely a challenge, both for storage and display. Right now they store furniture in a Pod/Mi-box and bring to the furniture bank when full. Timeline is an issue – how long can you hold onto things and how can we transport. Having people who enjoy upcycling in the area so can take certain pieces of furniture and salvage it for repurpose.

Mark Rivard: It often comes down to a question of space versus operating costs on whether they can take certain materials/items. Challenge: getting people to come and "shop" – better marketing, publicizing is difficult.

Alyssa: High end manufacturers are focusing on durability and recycling. They see the value of keeping items around longer. With COVID we are seeing a trend toward more modular furniture.

Victoria noted that with college students it is the opposite as they only expect to keep furniture for a year or so, therefore looking for cheap or free rather than wanting to invest in quality pieces.

Kelley: There is a stigma around reuse, need to see shift in culture.

Susan: What are the statistics re: influx of furniture after baby boom generation?

Potential Solutions

- Laurel: Furniture reuse & recycling could be incorporated as part of LEED certification process
- Laurel: When calculating the carbon impact (like for a carbon tax) the embodied carbon of the FF&E could be included in this calculation.
- Laurel: MassDEP could provide incentives to purchase secondhand furniture and equipment over new which can sometimes be cheaper
- Kelley: Businesses have leasing models, perhaps this could this be done for college students too so that they don't purchase and dispose of furniture every year during move-in/move-out.
- Laurel: There is a third-party organization called Technician Divert Program that provides a detailed report to clients on what was diverted from a landfill, resold, or rebuilt. Including furniture and equipment reuse in these reports would help incentivize reuse.
- Laurel: A Finnish company is installing RFID tags on all furniture they produce. Could we retrofit pieces to do this? It's a way to catalogue all pieces of furniture in one space – potentially alleviate some of the storage issues because can plan in advance where furniture would go.
- Alyssa noted – couldn't do it too far in advance because often people change their minds or don't need as many as expected.
- Meredith Chicklis: One solution for storage issues is using portable Mi-Box which can be used for storage and transportation.
- Victoria: Utilize digital/social media. Boston started building an inventory of city supplies – will be especially useful for schools.
- Norma: Could we find a way to use vacant buildings, malls, etc. as storage spaces?
- Laurel suggested using social capital credits. Tasks that benefit the community can be redeemed for municipal services or used as currency for local businesses. This would incentivize people to make the effort to reuse.
- Susan Waite: Giving away things online is time consuming – not practical. If communities had their own warehouse to accumulate things, maybe charge people a small amount per item, have display and storage space so people could donate or buy things. Work with volunteers. Maybe MassDEP fund something like this to develop a model for rural communities to have collection centers.
- Susan: In relation to chemical concerns, a standardized tag for people to use to designate what is safe would help reuse organizations.

Electronics

Facilitator: Brooke Nash, MassDEP
Note Taker: Cathy Doodnauth, MassDEP

Participants: Peter Mui, Fix It Clinic; Ray Pfau, Repair Café; Alex DeBellis, US PIRG; Robin Ingenthron, Good Point Recycling; Kerry Sheehan, IFixit; Neil Rhein, Keep MA Beautiful; Micaela

Guglielmi, City of Salem; Gail Bernard, Town of Danvers; Khrysti Berry, CET; Doug Kobold, California Product Stewardship Council; Ken Stone, Plymouth, Amy Kay, NH Library of Things; Cathy Doodnauth, MassDEP

What challenges do participants face with their organization's reuse operations?

Robin Ingenthron (Good Point Recycling) talked about his current frustration after getting a call to destroy solar panels that are no longer under warranty after being used for 8 years or so. Solar panel manufacturers would rather destroy their technology instead of selling as surplus once efficiency has been reduced through wear and tear. The solar panels still work, but instead of being sold for second use anywhere else (especially in countries that could really use it), they are being destroyed. This is an artificial barrier put up by the manufacturer to avoid end-of-life operations.

Doug (California Product Stewardship Council) spoke about solar companies in California that are slowly starting to embrace reuse, even if it competes with new sales because they need to look "green" as they are selling green energy. Robin responded that these companies must develop the market.

Peter Mui (Fix It Clinic) said the challenge with solar panels is durability; customers want the cheapest cost and are not paying the full cost when purchasing it. Panels coming out of other countries are not as stable or durable as they used to be. We need to find a way to get better quality and long-term durability in solar panels.

Doug added that CA is part of the problem by introducing solar on every rooftop program. He's concerned that there will be inferior panels (or "builder grade") panels, so instead of durable panels that last 25-30 years, consumers get panels that last around 10 years and have to pay for a premium upgrade for the more durable ones. Peter responds that solar panel manufacturers should be responsible for handling their products at end-of-life.

Brooke Nash (DEP) mentioned that 25 states have Extended Producer Responsibility takeback laws for end-of-life consumer electronics but MA is not one of them; she hopes reuse and repair are prioritized over recycling in future e-waste legislation filed in Mass.

Kerry Sheehan (IFixit) said the automotive right to repair referendum laid the foundation for a digital right to repair law to be introduced. This will need a ground campaign, people calling their representatives and encouraging them to pass such a bill. Brooke added that there has been an e-waste bill reintroduced to MA legislation every session but getting it passed has been a challenge.

Robin said focus should be on procurement policies in state government for all electronics, including solar panels, computers, phones, etc. Working equipment should be sold as surplus property and getting that language into procurement policies would be helpful.

Kerry referenced a repairability scoring index from France that assigns scores based on how repairable the product is. Working on bringing that into an EU-wide policy to have repairability labels on products that can influence purchasing decisions – this will hopefully trickle up to manufacturers so they adjust their products.

Robin discussed adding specific language to procurement policies, in procurement offices at universities or state governments, so surplus property can be sold and give products a second life. Leasing equipment for offices is one option, so that offices will not be stuck managing material at end-of-life.

In Alameda County, CA, Peter is talking to them about procurement and e-waste and including durability standards in procurement. Pacifica School district also looking at this approach.

Peter brought up adding language to any agreements that introduces durability. Even if you can fix something mechanically, the product can still become obsolete. An example is Google providing updates for Chromebooks only until 2024, so while the product still works, the software won't. The same thing happens to cell phones.

Ray mentioned that original equipment manufacturers (OEM) need to make parts available to independent repair shops.

Kerry mentioned pending idea/policy from California, where manufacturers (through warranty) must continue to provide repair parts and services if the product was over $100, for 7 years after purchase.. Doug adds that this shows manufacturers that they can do it and sets standards.

Peter shared model language:

- *Mandating durability through institutional procurement processes, e.g. corporate, government, university RFPs and RFQs adding language along the lines of: "Preference will be given to vendors who provide service manuals, repair parts and diagnostic tools." (Also creates local skilled and semi-skilled jobs.) (And builds resilience against brittle supply chains.)*
- *"At the time of sale, the manufacturer shall provide repair and disassembly information directly to the purchaser or online (provide URL at time of sale).The information that must be provided shall include applicable documentation required for repair or disassembly of the device that can be used in-house or by the repair service provider of the purchaser's choice, and include:*
    - *step-by-step disassembly instructions with required tools,*
    - *exploded diagram of parts and compatibility charts,*
    - *product specifications,*
    - *maintenance procedures,*
    - *troubleshooting information.*

- *Additionally, compatible parts must be made available for purchase for a period of no less than 7 years after the product is no longer being manufactured."*
- Kerry Sheehan also shared a model state right-to-repair law, see attachment at end of meeting summary notes[i].

Robin said that it's not always the hardware that prevents reuse – fear or intimidation narratives impacts reuse, manufacturers saying that private data would be breached has caused people to stop buying secondhand equipment. HIPAA laws mandate that computers from medical offices/hospitals must have their hard drives destroyed if reuse is an option for the computer. This is based on a fear that people steal private patient data from these computers, which there is no evidence of. Patient data, in Europe, can be scrambled or wiped but in the US, must be destroyed. One solution is scrambling like they do in Europe. Robin recommends procurement language require 2 software licenses with each computer to ensure a second life and let a second user use the equipment after it is wiped.

Kerry shared a bill from 2016 that did not pass (Your Own Devices Act) that said if you own a device, you own the software – and so you can transfer it to a second user if you want.

Khrysti Berry (CET) said that food donation has parallels. Potential donors fear liability or believe it's illegal to donate unwanted food from commercial kitchens, hotels, etc. Recycling Works led stakeholder meetings with Boards of Health in Mass to identify key concerns and common myths, then produced a fact sheet that addresses this. Kerry added that they use one-page documents speaking against manufacturers that promote cybersecurity fears.

Doug said that procurement policies should specifically have language that manufacturers must follow the waste hierarchy of reduce, then reuse, then recycle, but ensure there are consequences or penalties if this is not followed and proof is not supplied. They are trying to do this in CA.

Brooke added that we have a growing movement of reduce and repair in MA, with fix-it clinics, repair cafes, library of things, etc. MassDEP's Recycling Dividends Program (RDP) incentivizes communities to set up repair events and library of things or expand them but we are still barely scratching the surface. What can we do to convince consumers to repair what they have first before running to the next new thing?

Kerry said that the French system educates consumers, includes communication with them about the real cost of consumerism. Manufacturers must provide software tools, schematics, etc.

Ray Pfau (Repair Café) added that educating consumers should be a priority. Get educational material in front of them to show durability, instead of something cheap that does not last long. Kerry added that labeling products with device lifetimes and repairability in Europe has shown that people are more likely to purchase the durable option. Peter added that consumers must see the true cost of a product and realize it is not free to throw it away.

Khrysti suggests incentives for consumers to return the old equipment and for suppliers to collect them, kind-of like how Best Buy has with electronics.

Doug said that we must tell manufacturers that they cannot introduce new products into the state unless they have a plan for its end-of-life and plan for reuse first. And that manufacturers will roll end-of-life costs into product cost, so consumers should be educated on the true cost of the product. Getting rid of these products appropriately should be structured into law with consequences and penalties to it, otherwise, it will be ignored. This can create a system where they will have to create a sub-economy for these products, so they don't end up in the incinerator or landfill.

Robin adds that language in policies and bills can be tweaked and twisted and to be careful. Catch the next HIPAA, next fake statistics, not to cure what we already have but to manage future products. Doug agreed, adding that you must follow regulatory path through to the end to avoid this. Robin said NY legislation put e-waste companies out of business by giving manufacturers low regulations. Brooke said that MA does not have e-waste takeback law but maybe by learning from the flaws in other states' laws we can get it right in Massachusetts.

Peter referenced solar panels again, asking if it is possible that MA can regulate and say manufacturers cannot sell product until they have plans for end-of-life. Khrysti discussed a similar idea in the agricultural world that regulates meat products, not allowing meat to be sold in the state that doesn't meet certain standards of humane treatment. There are challenges with its regulation but it is pending. Brooke adds that these analagous regulations help to make the case to legislators that we're not "breaking new ground, we're following precedent" because no one wants to be first.

Peter closes out the call by discussing a bigger vision – implementing "design thinking", especially to colleges and universities to teach the next generation how to design for durability.

Textiles & Clothing

Facilitator: Ann McGovern, MassDEP
Note Taker: Veronique Blanchard, MassDEP Municipal Assistance Coordinator

Participants: Amy Sullivan, Town of Auburn, Fred Olson, Planet Aid; Ann McGovern, MassDEP; Veronique Blanchard, MassDEP; Vithal Desphande, City of Somerville; *Mary Stucklen, Berkshire Zero-Waste Initiative; Peg Hall, Greening Greenfield*' Helen Snively; Elaine Lipcan; Janet Domenitz, MassPIRG; Laura Lilienkamp, Design Thinking Smith College; Christine Wyman; CPSC; Susan Waite, Northampton DPW; Leni Fried, Old Stone Mill

Ann asked about what the challenges were with respect to textile recovery, such as storage, collection, marketing, transportation, outlets, etc.

The discussion began with some statistics about the scope of the issue. Question: Of the 5.7 million tons of trash produced annually in Massachusetts, how much is textiles? About 5% of that total, or roughly 275,000 tons is thrown into the trash. Question: what quantity of textiles is actually being captured now? Mr. Olson told us that only 15% of textiles are being collected across the country, and that Massachusetts is probably in the 20-25% range for textile diversion. Usually about 80 lbs. per person per year is thrown away. If we use the middle of that range, then about 60,000 tons are currently being captured/diverted currently. Ann mentioned that a lot of this remaining 200,000 tons which needs to be captured is from commercial as well as from households materials which are being thrown away.

Question: How do you capture textiles when people are moving? Have tried to work with realtors but were told that there are too many, does anyone have an idea? Discussion then centered on the differences between curbside vs. drop-off options for textiles, and the comment was made that there is no centralized place to volunteer to help taking in donations, and that communication about what can be donated is a problem.

Vithal Desphande says Somerville uses Simple Recycling for residential curbside collection and is happy with this program. He wondered if there were other companies which provide this same type of curbside service, and two were mentioned which do pick up by appointment; Retrievr and Helpsy. Vithal also wondered if there was data available from the textiles companies?

Fred said that when they empty a bin, it is recorded in the database and the estimate of the number of pounds entered. That information can be provided in reports by town.

The question was then asked, how much of what is collected actually ends up as waste? There is a need for transparency from textile companies about where textiles actually go and what they are used for. Fred mentioned that a for-profit company does not have to be transparent, but a non-profit would. He stated about 18% of what is 'donated' at the bins is actually trash, and of the actual textiles donated about 3-4% is not useable and therefore discarded. The trash incorrectly left includes items such as plastics, furniture, tires, mattresses and propane tanks, which clearly don't belong in the textile bins. Many of the textiles Planet Aid collects are sent to overseas markets.

Education on this subject was then discussed, especially about the need to explain exactly what is a textile? People don't know what this means and don't know what can be donated. It was suggested that perhaps a universal label for all donation bins would help alleviate this problem, and this was done in Rhode Island.

New Bedford tightened up on their regulations on placement of donation bins so now they have fewer collection bins. Fred stated that the City's ordinance is very onerous on the vendors. Ann read the following which came in from the chat:

Mary Stucklen, Berkshire Zero-Waste Initiative : using different colored bags provided by towns that are specific to textiles for either curbside collection or for drop-off. We can incentivize towns to create their own plan to collect textiles

Peg Hall, Greening Greenfield, etc. : Industry-wide, there is a campaign to get textiles that are NOT reusable clothing into the system. But individual companies or drop-off bins either do not want textiles that aren't useable clothing, or prefer not to take it. It's not consistent. Even companies whose management takes it all have workers who say they don't.

Helen Snively : Agreed with Peg - after years of being the "disposal expert" for the homeless program, I still don't always know where to take certain items.. And with covid, it's all changing again of course

Amy Sullivan : I see a lot of comments from people who don't want to put "good clothes" in the bins. There is a misconception that clothes that are put in the bins are not being reused or helping the needy. I'm not sure where this stems from… Perhaps it is related to the perpetual dumping seen in and around the bins?

Susan Waite, Northampton DPW : I think part of the reason Planet Aid is getting furniture and household items in/outside their boxes is because collection boxes in busy public locations have historically been Salvation Army boxes. People are assuming that they can still leave non-textile items there as they have always been able to in the past.. We are creatures of habit...

Ann asked Fred about the bins being removed from New Bedford. Fred said that there are communities where towns are putting in ordinances which make it impossible to put in collection bins, such as Milford and Lexington, MA. These ordinances make the permit fee too high, or say they are banned from commercial parking lots. Since these businesses are for-profits, this is a problem.

Fred suggested there be one location to go to find out what to do with materials – where are the bins, and what goes in to each vendor's bins. Beyond the Bin and RecyclingWorksMA were mentioned as resources.

Mary Stucklen, Berkshire Zero-Waste Initiative : -educate residents -streamline communication -identify incentives for towns to assist residents -encourage grants or incentives for reuse businesses and nonprofits (consignment shops, etc.) -provide outreach/campaign to the public about availability of "textile" reuse opportunities

Peg Hall, Greening Greenfield, etc. : Any resource such as you describe HAS to be kept up to date.

Helen Snively : Cambridge has a website link, "Get rid of it right,." If I want to get rid of something I go to that link and type in the name of the item and it tells me either donate or recycle or trash, etc.. Do other towns have this? Could DEP or someone else make a state-wide tool like that?

Elaine Lipcan : I completely agree about out of date info online and centralized campaign.

Helen Snively : The Cambridge DPW site also has a map showing the location of bins.. including a couple for Planet Aid. So that helps me know where to take stuff.. but of course it doesn't tell me if the bin is overflowing. Still, I wonder if there's a way to extend such tools statewide?

Mary Stucklen, Berkshire Zero-Waste Initiative : Maybe EPR for textiles?

Peg Hall, Greening Greenfield, etc. : Does Planet Aid want non-wearable clothing? Does planet aide purposely accept textiles for wiping rags or shredding?

Fred: Materials which cannot be sold are then shredded, but you can't really make money on this.

Ann asked Leni to speak about commercial textiles. Leni has a 28,000 sq. ft. Zero Waste Maker Space in Adams, MA (Old Stone Mill) has a unique relationship with a linen company down the street, 6.25 tons/year from business she and there are 90+ linens companies in MA. It is

standard practice to discard, and everything they provide to their customers has to be in pristine condition. 600 bedsheets every week come to Leni, and they have redistributed these to artists, shelters and schools. The biggest challenge is storage. If MassDEP or someone could invest in a large amount of containers these could be located at different centers such as the Old Stone Mill or Devens Eco Efficiency Center which could store textiles.

Linens companies have to sort through their inventory daily to make sure it's in pristine condition, and they don't have any room to store those materials which can no longer stay in circulation. It has taken three years to build up the trust with this company to

Peg Hall, Greening Greenfield, etc. : Leni, the service cleans these items before they sort and discard? So anything obtained from them has already been essentially sterilized? (thinking of current Covid concerns)

Veronique Blanchard, MAC : Yes, the company does clean the linens before Leni gets them. She has spent a lot of time creating a relationship with this company.

Ann asked if Fred had any interaction with this type of textile companies. He said no, they only collect clothing, and in fact uniforms are a no-no in his industry. They would all be cut down into wipes, or perhaps sold overseas. Leni mentioned that most is 100% polyester, and Fred said that then they cannot be used as wipes because those have to be 100% cotton, and Ann said there are not many companies which create insulation from polyester materials.

Fred said the good news, in the last year since Covid, the yield has increased about 100%. Fred said he thinks it's because MassDEP is promoting the recovery of textiles, and that having an app on one's phone which would list where one could donate textiles would be very helpful.

All of Planet Aid's materials are being baled and shipped overseas, and they have a facility in Milford.

Leni said that a key is gaining the trust of these industries, and that it's not really their fault that these materials are being disposed, and that again, storage capacity is necessary.

Some discussion centered on the disconnect between those in need who could use these items and those who have the materials to discard, frustration over these materials being thrown away and not repurposed, and how we change our culture from a throwaway society.

Leni mentioned that without a structure in place, the culture can't change, for instance now we have swap shops. If we could get a home for these materials, such as abandoned armories, where they could be stored. She gave the example of mattresses being thrown away from a hotel, in perfect condition, which happens every five years. Household goods needed and wanted the mattresses – got a storage container and were able to redistribute those mattresses within three days. Two challenges are getting infrastructure in place and then getting the word out.

Janet Domenitz : Infrastructure is everything, Leni, I agree.

RecycleSmartMA is another resource for outreach and education, and the proposed Textile Ban was also discussed.

Christine Wyman : Should we think about educating the public to reduce the consumption of textiles, e.g. the thousands of gallons of water used to make a T-shirt and jeans, and the fashion industry being one of the biggest polluting industries

Helen Snively : oh, yes, Christine, that info needs to get out.

What Planet Aid collects in Massachusetts is not being sorted, the materials are baled and then shipped to Guatemala, Honduras, Chile, the Middle East etc. where they then open the bales and sort to sell. What they cannot sell gets shipped to Pakistan to be shredded. Is there the potential for a 'China Sword' in the textile market? Fred said not really, because unusable textiles will be used to burn for heat.

Laura Lilienkamp, Design Thinking Smith College : If anyone is interested in checking out the Western MA Creative Reuse Network list of reusable materials, here it is: https://docs.google.com/spreadsheets/d/1456qTGUUUzO9I8LOJnOdVIASlKYY0RI54YCosrQrYrk/edit#gid=0

Doug Kobold : CPSC is working with a large national thrift on the Textiles issue in California, but also expanding into the other materials mentioned earlier that they receive as "donations". We would love to collaborate with others on these issues. Please email me at Doug@calpsc.org if you are interested in collaborating.

Building Materials

Facilitator: Abbey Massaro, CET
Note Taker: Janine Bishop, Mass DEP and Kathi Mirza, MassDEP Municipal Assistance Coordinator

Attendees and interests:

- Abbey Massaro: facilitator
- Janine Bishop and Kathi Mirza: note takers
- Susan Cascino: Boston Zero Waste plan, Historic Preservation Alliance
- Christin Walth: Zero Waste Newburyport, Events with Habitat ReStore/collecting old building materials
- Kristen Fritsch: Sustainability Coordinator, Elkus Architects
- Jae McAuley: CET, Oversees EcoBuilding Bargains, works with contractors/designers/show rooms and resells to general public and through E-Bay
- Ralph Maselli: Upcycle, used buildings materials, Boston area
- Michael Orbank: Commodore Builders, pilot with Abbey/CET for waste diversion, identifying what construction companies can do better
- Laura Alves: Boston ZeroWaste Coordinator
- Camilla Elvis: Cambridge recycling outreach
- Deb Beatty Mel: Boston Building Resources, used building materials, Roxbury Crossing, mostly residential, 2 tiers of pricing (80% of sales to low/moderate income w/discount), & general public.
- Ian Johnson: Sustainable Building Consultant, working with Abbey on C&D pilot, looking at building science, certification, building materials, health, waste reduction
- Dave Bennick: Reuse Consulting, pacific northwest, building deconstruction and reuse, reuse innovations centers

- Charlie Flammer: homeowner, wants to be responsible, small builder puts excess waste into dumpster rather than reuse/recycling
- Alison Frazee: Boston Preservation Alliance, deconstruction policies and restore historic buildings
- Leslie Glynn: Planning Board in Weston, what to do regarding tear-downs, recycling and restoration
- Maura Zlody: City of Boston, Interagency group, Green Building Ordinance, demo (reuse and recycling) working with developers
- Stella Carr: Sustainability Director Lexington, reuse opportunities with facilities and buildings

Challenges/ Barriers to greater reuse of Building Materials

- Abbey: 32 million tons of waste to landfill each year: lots of new construction and replace with similar materials. Lives of commercial buildings are short: about 5-7 years, then companies move and ditch furniture and C&D
- Commercial contractor: working with hauler how best to divert waste. Some materials can't be diverted, how to partner with reuse stores, discards often reusable. *Need to know where to go with materials, e.g., doors, frames. Could use MassDEP support identifying avenues where to take materials for reuse
- If no immediate outlet for materials often disposed
- Donations usually free, especially materials that are residential and some that specialize in decommissioning offices
- Ian Johnson: Disconnect between architects and homeowners and where to find materials. Database with specs for architects and designers would be a helpful resource.
- Leslie Glynn: Scale and education. She is an architect and homeowners want new. Need to educate that old is often better. Make reuse easy for contractors to increase demand. Architects/builders purchase new as easier, items in stock, desired volume available
- Allison F: Supply and demand are big issues. Also storage. Explore mandate for reuse and/or require use of certain % reclaimed materials
- Deb B-M: Storage space is an issue. They have challenges matching intake of materials with customer base interests. Be aware of lead content in some materials and abatement requirements.
- Abbey: some discussions about identifying vacant and underutilized buildings for storage
- Cost to dispose vs reuse: can we incentivize donation/reuse? Tax incentives to donate?

Opportunities/Solutions

- Mandates and Incentives (tax and direct payments)

- historic preservation
- Deconstruction and reuse mandates?
- Commercial contractors can work with designers and architects to figure out how to divert.
- Fantastic example from Portland OR from David Bennick. Many contractors and businesses online with reuse and deconstruction. Deconstruction is the mainstream with about 2/3 of houses. Demolition has been outlawed in recent years. They have been able to show that the cost of deconstruction is similar to demo: can take 2K sq ft house down in 3 days. Next step: would like to sell materials rather than give them away and expand markets. Businesses are evolving to make products from excess materials. He estimates that 500 jobs have been created nationwide and that there are 20x more jobs created through deconstruction (transport, sell, remake) vs demolition.
- Post natural disaster? Some materials damaged and some demolished. Some can be reused and repaired, connect labor needs with unemployed
- Do reusable items affect sustainability? Leslie Glynn says that some are better (structurally and thermal capacity), sometimes need new inputs.
- Deb B-M: cost-benefit decision- some projects are easier to deconstruct vs others
- MassDEP waste bans for C&D: ABC, wood, metal , gypsum, OCC. How does processing cost for C&D compare with deconstruction/reuse?

What Can MassDEP Do To Help?

- Recycling Dividends Program (RDP) points for incentivizing builders to donate (through regs) / deconstruct for reuse?
- C&D info: share both processing and reuse opportunities in the same platform
- Leslie: MIT resource center for reuse would warehouse items for reuse- look to smaller satellites with partners like universities
- Provide specific *training for deconstruction with laborers and carpenters. Consider labor union issues and guidelines, especially in Boston.
- Guidelines for construction – link to MassDEP's C&D webpage provided for information on Project planning and materials management guidance.
- Building Permits can be a tool. Predictability for builders, clean process, gives time needed for deconstruction.
- Jae M: Grant for residential deconstruction and reuse. Do residential pilot and make sure it goes well. Pull all stakeholders: architects, builders, reuse centers, designers. Identify efficiencies and roadblocks and build from this. Architectural firms could support and help promote (how to guidance and share info on costs)
- Offer incentives for contractors for reuse
- Laura A: could follow urban farming framework
- Dave B: Training Center in WA state called Building Deconstruction Institute. They train on deconstruction, business issues, marketing, identifying value, techniques. Serves 125

clients with successful reuse businesses. Need to hit a home run with pilot, start with easy project. Training helps build infrastructure. They took down a building on live TV. Average building weighs 125K lbs- each building is equivalent to one person's lifetime worth of waste.

- Connect with reuse stores, where to take materials
- Leslie G: how to reuse 2x4's? Way to recommend modular/factory built homes. They can refine and reuse materials with training. This is happening on the west coast. Can Mass DEP incentivize companies to do this?
- Pandemic has impacted supply on cost of building materials Dave B has sold 7K 2x4's since they are most affordable- sold out!
- Portland OR: Resources on website, Dave B assists them, city came up with idea. Nation's 1st Reuse Innovation Center in 2022.
    - Started with incentives for contractors. If they salvage and show documentation, $500 offset/incentive (could be to homeowner or contractor)
    - Up to $2500 incentive if you choose deconstruction vs. demoliton
    - Funding for reuse businesses and training has revitalized the city.
    - 12 cities looking at this now

Transportation and Distribution Packaging

Facilitator: Lauren Potter, CET
Note Taker: Sharon Kishida, MassDEP Municipal Assistance Coordinator

Participants:

- Claudine Ellyin, MassDEP Commercial Waste Reduction Branch Manager.
- Melissa Eusden: Wakefield resident active in waste reduction initiatives (EPS, plastic bag bans)
- Paul Benoit: Box Save Paul's company rents durable, reusable plastic moving crates that can be recycled (at end of life) and contain recycled content.
- Marie Royea: Sudbury resident and member of Sustainable Sudbury (SS) who is interested in waste reduction. Sudbury recently passed a ban on straws and stirrers. SS is also looking at converting from a drop off community to curbside collection.
- Laura Lilienkamp, **Western Mass Creative Reuse Network (**WMCRN) - a collective of Western MA community members interested in redistributing waste materials from commercial and industrial sources to schools, makerspaces, artisans, teachers, and community organizations.
- Julia Greene, MassDEP NE3 MAC

What challenges do you face at your organization when it comes to expanding your reuse operations? (i.e. storage space, marketing/awareness of your services, transportation of materials, etc.)

Laura: WMCRN's biggest challenge is finding storage space to house donated and unwanted resources (e.g. election signs). Here is link to list of current materials that are available and what they are looking for (election signs! Physical storage is needed since it may take years to get linens, grain/brew/bird see/pellet bags to the right people!

Melissa: Educating the public about waste reduction

Paul: Consumer awareness: Consumers do not know that there are reusable alternatives to single use or reusable alternatives items like his moving crates. He is competing with cardboard boxes, which have a much shorter life. According to Paul, cardboard can be used 3 times vs 500 uses for his crates. Paul gets his reusable plastic crates that contain recycled content from Reuseable Transport. He returns broken crates to them to be recycled. He currently serves Greater Boston but hoping to set up reciprocal arrangements with like providers in other areas. His business has grown from 500 crates and one truck to 6,700 crates and two trucks primarily used for storage and moving. Crates stack 18 high on dollies.

Lauren described how Raytheon requires its suppliers to use reusable shipping containers.

Discussion ensued about setting up a resource hub for surplus reusables. It was suggested that it be set up as a virtual hub like the Buy Nothing Project, Other "hub" examples included the Greater Boston Food Bank, where there is a central (physical) hub that distributes statewide. Habitat for Humanity was another centralized hub example. It was agreed that a the reuse community needs a successful/**sustainable** hub model. Xtras for Creative Reuse (Lynn then Peabody) a source for educators was cited as a great resource, but that was not sustainable.

What Can the State Do to Help?

Require vendors on state contracts to use sustainable packaging. Vendors offering this on their bids could receive points, e.g. businesses and municipalities can also request / require in their procurements. Lauren had mentioned about Melissa and Marie said that Amazon now offers consumers an option to consolidate shipments and minimize packaging. Breweries now have compostable rings *(are they getting composted?)* .

We talked about standardization of recycling and RecycleSmartma.org , Beyond the Bin and RecyclngWorks as well as what do those recycling logos really mean!

Stakeholders that need to be in the T & D break-out room in future discussions:

- Facility Directors
- Moving Companies
- Institutions
- Realtors
- Amazon (other large retailers)
- W.B Mason (and other municipal suppliers

Next Meeting:

Please mark your calendars for the 4th Wednesday of each month at 10AM

Date: Wednesday, January 27, 2021
Time: 10AM – 11 AM
Topic: Discuss plan methodology, prioritization and outline for Reuse Action Plan
Location: Virtual,
Register: https://zoom.us/meeting/register/tJYodeyuqTkpEtDeIWLIdtVXk6r4PfzZPfc3

Reduce & Reuse Working Group Networking Resources:

Reduce & Reuse Working Group participants are encouraged to connect with other members in-between meetings to collaborate, share resources, ideas, best practices, fact sheets and more.

R&R Working Group Directory

- Interested in joining the R&R workgroup? Sign up here.
- Need to update your contact information? Email: erin.victor@mass.gov

Massachusetts Reduce & Reuse Network Listserv (Google Group)

- Join by emailing: ReduceReuseNetwork-MA+subscribe@googlegroups.com
- Email the listserv: ReduceReuseNetwork-MA@googlegroups.com

Contact

To learn more about the R&R Working Group, visit: https://www.mass.gov/service-details/massdep-reduce-reuse-rr-working-group

For questions, contact:
Erin Victor at erin.victor@mass.gov

[i] Model State Right-to-Repair Law shared by Kerry Sheehan, IFixit in electronic breakout group

Model State Right-to-Repair Law
Updated December 2, 2020

An Act to promote consumer choice and competition by requiring manufacturers of digital electronic equipment to make available to owners and independent repair providers, on fair and reasonable terms, the documentation, parts, and tools used to diagnose, maintain, and repair such equipment.

Section 1. Short title. This Act may be cited as the Digital Right to Repair Act.

Section 2. Definitions. In this Act:

(a) "Authorized repair provider" means an individual or business who is unaffiliated with an original equipment manufacturer and who has an arrangement with the original equipment manufacturer, for a definite or indefinite period, under which the original equipment manufacturer grants to the individual or business a license to use a trade name, service mark, or other proprietary identifier for the purposes of offering the services of diagnosis, maintenance, or repair of digital electronic equipment under the name of the original equipment manufacturer, or other arrangement with the original equipment manufacturer to offer such services on behalf of the original equipment manufacturer. An original equipment manufacturer who offers the services of diagnosis, maintenance, or repair of its own digital electronic equipment, and who does not have an arrangement described in this subsection with an unaffiliated individual or business, shall be considered an authorized repair provider with respect to such equipment.

(b) "Digital electronic equipment" or "equipment" means any product that depends for its functioning, in whole or in part, on digital electronics embedded in or attached to the product.

(c) "Documentation" means any manual, diagram, reporting output, service code description, schematic, or other guidance or information used in effecting the services of diagnosis, maintenance, or repair of digital electronic equipment.

(d) "Embedded software" means any programmable instructions provided on firmware delivered with digital electronic equipment, or with a part for such equipment, for purposes of equipment operation, including all relevant patches and fixes made by the manufacturer of such equipment or part for these purposes.

(e) “Fair and reasonable terms” for obtaining a part or tool or documentation means at costs and terms that are equivalent to the most favorable costs and terms under which an original equipment manufacturer offers the part, tool, or documentation to an authorized repair provider –

1. accounting for any discount, rebate, convenient means of delivery, means of enabling fully restored and updated functionality, rights of use, or other incentive or preference the original equipment manufacturer offers to an authorized repair provider, or any additional cost, burden, or impediment the original equipment manufacturer imposes on an independent repair provider;
2. not conditioned on or imposing a substantial obligation or restriction that is not reasonably necessary for enabling the owner or independent repair provider to engage in the diagnosis, maintenance, or repair of digital electronic equipment made by or on behalf of the original equipment manufacturer; and
3. not conditioned on an arrangement described in (a).

For documentation, including any relevant updates, “fair and reasonable terms” also means at no charge, except that, when the documentation is requested in physical printed form, a charge may be included for the reasonable actual costs of preparing and sending the copy.

For software tools, “fair and reasonable terms” also means at no charge and without requiring authorization or internet access, or imposing impediments to access or use, in the course of effecting the diagnosis, maintenance, or repair and enabling full functionality of digital electronic equipment, in a manner that impairs the efficient and cost-effective performance of any of those activities.

(f) “Firmware” means a software program or set of instructions programmed on digital electronic equipment, or on a part for such equipment, to allow the equipment or part to communicate within itself or with other computer hardware.

(g) “Independent repair provider” means an individual or business operating in this State, who does not have an arrangement described in subsection (a) with an original equipment manufacturer, and who is not affiliated with any individual or business who has such an arrangement, and who is engaged in the services of diagnosis, maintenance, or repair of digital electronic equipment, except that an original equipment manufacturer or, with respect to that original equipment manufacturer, an individual or business who has such an arrangement with that original equipment manufacturer, or who is affiliated with an individual or business who has such an arrangement with that original equipment manufacturer, shall be considered an independent repair provider for purposes of those instances in which it engages in the services of diagnosis, maintenance, or repair of

digital electronic equipment that is not manufactured by or sold under the name of that original equipment manufacturer.

(h) "Manufacturer of motor vehicle equipment" means a business engaged in the business of manufacturing or supplying components that are used in the manufacture, maintenance, or repair of a motor vehicle.

(i) "Motor vehicle" means a vehicle that is designed for transporting persons or property on a street or highway and is certified by the manufacturer under all applicable federal safety and emissions standards and requirements for distribution and sale in the United States. Motor vehicle does not include:

(1) a motorcycle; or

(2) a recreational vehicle or an auto home equipped for habitation.

(j) "Motor vehicle dealer" means an individual or business who, in the ordinary course of business, is engaged in the business of selling or leasing new motor vehicles to an individual or business pursuant to a franchise agreement, has obtained a license under the [cite to state law], and is engaged in the services of diagnosis, maintenance, or repair of motor vehicles or motor vehicle engines pursuant to that franchise agreement.

(k) "Motor vehicle manufacturer" means a business engaged in the business of manufacturing or assembling new motor vehicles.

(l) "Original equipment manufacturer" means a business engaged in the business of selling,leasing , or otherwise supplying new digital electronic equipment manufactured by or on behalf of itself, to any individual or business.

(m) "Owner" means an individual or business who owns or leases digital electronic equipment purchased or used in this State.

(n) "Part" means any replacement part, either new or used, made available by an original equipment manufacturer for purposes of effecting the services of maintenance or repair of digital electronic equipment manufactured by or on behalf of, sold or otherwise supplied by the original equipment manufacturer.

(o) "Tools" means any software program, hardware implement, or other apparatus used for diagnosis, maintenance, or repair of digital electronic equipment, including software or other mechanisms that provision, program, or pair a new part, calibrate

functionality, or perform any other function required to bring the product back to fully functional condition.

(p) "Trade secret" has the meaning given it in [cite to definition in state law, or if no state definition, to 18 U.S.C. 1839].

Section 3. Requirements.

(a) For digital electronic equipment, and parts for such equipment, sold or used in this State, an original equipment manufacturer shall make available, for purposes of diagnosis, maintenance, or repair of such equipment, to any independent repair provider, or to the owner of digital electronic equipment manufactured by or on behalf of, or sold or otherwise supplied by, the original equipment manufacturer, on fair and reasonable terms, documentation, parts, and tools, inclusive of any updates to information or embedded software. Nothing in this subsection requires an original equipment manufacturer to make available a part if the part is no longer available to the original equipment manufacturer.

(b) For equipment that contains an electronic security lock or other security-related function, the original equipment manufacturer shall make available to the owner and to independent repair providers, on fair and reasonable terms, any special documentation, tools, and parts needed to disable the lock or function, and to reset it when disabled in the course of diagnosis, maintenance, or repair of the equipment. Such documentation, tools, and parts may be made available by means of an appropriate secure system.

(c) When the original equipment manufacturer has made an express warranty with respect to digital electronic equipment and the wholesale price of the equipment is $100 or more, the manufacturer shall provide such parts, tools, and documentation as to enable the repair of the equipment during the warranty period, at an equitable price and convenience of delivery and of enabling functionality, in light of:

(1) the actual cost to the original equipment manufacturer to prepare and distribute the part, tool, or documentation, exclusive of any research and development costs incurred;
(2) the ability of owners and independent repair providers to afford the part, tool, or documentation; and
(3) the means by which the part, tool, or documentation is distributed.

Section 4. Enforcement by Attorney General. Violation of any of the provisions of this Act is an unlawful practice under the [cite to relevant state fraudulent and deceptive practices act]. All remedies, penalties, and authority granted to the Attorney General by

that Act shall be available to him or her for the enforcement of this Act. [Or alternative enforcement choice]

Section 5. Limitations.

(a) Nothing in this Act shall be construed to require an original equipment manufacturer to divulge a trade secret to an owner, or an independent service provider except as necessary to provide documentation, parts, and tools on fair and reasonable terms.

(b) No provision in this Act shall be construed to alter the terms of any arrangement described in section 2(a) in force between an authorized repair provider and an original equipment manufacturer, including, but not limited to, the performance or provision of warranty or recall repair work by an authorized repair provider on behalf of an original equipment manufacturer pursuant to such arrangement, except that any provision in such terms that purports to waive, avoid, restrict, or limit the original equipment manufacturer's obligations to comply with this Act shall be void and unenforceable.

Section 6. Exclusions. Nothing in this Act applies to a motor vehicle manufacturer, manufacturer of motor vehicle equipment, or motor vehicle dealer acting in that capacity, or to any product or service of a motor vehicle manufacturer, manufacturer of motor vehicle equipment, or motor vehicle dealer acting in that capacity.

Section 7. Applicability. This Act applies with respect to equipment sold or in use on or after the effective date of this Act.

Section 8. Effective date. This Act takes effect [date].