June 20, 2017
Stakeholder Meeting Notes

Stakeholder Workshop
Future of Electronic Waste Management in California – Part 3

Workshop Documents and Attachments can be found:
http://www.calrecycle.ca.gov/Action/PublicNoticeDetail.aspx?id=2094&aiid=1911
Meeting Facilitators: Shirley Willd-Wagner / Howard Levenson

Attendance:

Stakeholders
Maria Espinoza, CEAR, Inc.
Joanne Bettencourt, Dell
Peter Mui, Fixit Clinic
Kathy Mathisen, eRecycling of CA
Will Sanford, Futures Explored
Holly Renn, Johnson & Johnson
Veronica Pardo, CRRC
John Davis, Mojave Desert & Mountain Recycling JPA
Doug Kobold, County of Sacramento
Aaron Blum, ERI
Jay Weir, AT&T
Ben Harris, Comcast Cable
James Gonzalez, SIMS Recycling Solutions
Chuck White, Chuck White Consulting
Kelly McBee, Californians Against Waste
Russ Caswell, ERC
Phil Conrad, CEAR
Jaime Minor, Niemela Pappas & Assc. for HP
Roy Dann, Cal Micro Recycling
Larry Sweetser, Rural Counties ESJPA

Via Phone:
Julia Bluff, FixIt Clinics
Brandon Seegmiller, HP
Emily Pappas, NPA for HP Inc.
Nena Pesco, Excerio
City of Santa Barbara
Ed Segal, IMS
Lisa Tompson, Riverside County
Lisa D. Scales, Los Angeles County Sanitation
Luke Frazier, Best Buy
Melissa Plamondon, LA Sanitation
Cintia Lederer Gates, Microsoft
Mark Rappaport, City of Folsom
Charlene Malsom, Waste Management
Leonard Lang, Upper Room Consulting, Inc.
Maggie Johnson, San Francisco Department of the environment
Sharon R. Simpson, Waste Management
Jeffrey Harding, Recycle San Diego

CalRecycle Speakers
Howard Levenson
Shirley Willd-Wagner

AGENDA AND STAFF PRESENTATIONS

Howard welcomed stakeholders and reviewed the Futures project's purpose and status. Shirley gave a brief introduction to the topics to be discussed today: potential product selection criteria, potential product categories, and reuse, repair and product longevity issues.

The discussion follows the background documents that were posted prior to the workshop.

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STAKEHOLDER MAJOR TAKE-AWAYS

Product Selection Criteria – Stakeholders identified highest priority criteria:

- Characteristics of product – Anything hazardous. What percent of device is considered hazardous?
- Commodity value of discarded product.
- Can device be repaired and reused?
- Prevelance of device coming into local government systems through HHW collection, illegal disposal or as municipal solid waste.

Product Categories – Stakeholders varied on what categories should be included and how products could be categorized. Frequent comments:

- Balance of input suggesting that anything that uses batteries or has a power source should be added; and more limited approach based on criteria identified as highest priority.
- Include all IT peripherals.

Reuse and Right to Repair:

- Can't repair due to design.
- Can't repair because it is hazardous.
- Education needed.
    - How to influence behavior change.
    - Incentives better than punishment.
- Modulated fees could be used to incentivize environmentally preferable design.
- Pursue Right-to-Repair legislation.

POTENTIAL EVALUATION CRITERIA

Attahment 1

Comments from stakeholders at the workshop. (NOTE: At the end of this section is a table that was included as Attachment 1 in the background documents along with a high level summary of the relative priority of the various categories.)

Aaron (ERI) – Commodity value is the highest priority – feels like you get more from a commodity standpoint - labor costs are to be considered.

Roy (Cal Micro Systems) – Highest priority – anything that uses a battery the highest, is it hazardous, does it have low value, and is it difficult to manage. Battery inside or not; type of battery takes a lot to time, high labor.

Peter (Fix-It Clinic) – Delineate user serviceable batteries; lower priority if batteries can be replaced.

Ben (Comcast Cable) – Hazardous characteristics is highest priority. Next – commodity value.

Veronica (CRRC) – Are solar panel considered e-waste? Larry echoed the question.

Howard – DTSC needs to determine that.

Chuck (Chuck White Consulting) – Hazardous characteristic of the waste is the priority (reducing disposal of hazardous material), so DTSC should be more involved determine and set the priorities. Look at it from a toxic or not-toxic aspect. We can use the current list of hazardous devices and add more later.

Larry (EJPA) – Solid waste doesn't need economic value, locals still have to handle everything. Hazardous determination would be hard to keep up on (DTSC timeline); too many devices to test so it shouldn't be the only priority. Maybe DTSC should only focus on computer equipment. Locals see mostly non-CEWs products like computer equipment (printers, copiers, tablets, mouse, and keyboards) and small miscellaneous e-waste that may not be hazardous.

James (SIMS Recycling) – Not necessary to wait for DTSC determination on all products; most questions on hazardous materials have already been answered. This could create a huge delay.

Brandon (HP) – HP has ongoing research current on collection and management structure. Any existing take back programs should considered before adding new products. Prevalence (is there currently a problem). Prioritize by problem waste stream; most hazardous in volume. Also commodity value such as laptops and tablets due to resale. Consider circular economy-designs for longevity.

Aaron – Peripherals have no market value. We need feedback from the solid waste facilities (cities / counties) – what is hitting the waste stream? Devices still coming to locals in high volume should be high priority.

Maria (CEAR) – 1. Characteristics is most important. 2. Commodity value. Many devices come in labeled as non-hazardous but found to be hazardous when dismantled. (e.g. lamps, batteries are hazardous and tedious to process). We see a lot of printer cartridges.

Peter – Overriding criteria – can product be repaired? Commodity value high priority; is it worth trying to put back in service?

John (Mojave Desert & Mountain Recycling JPA) – High priority; is reuse encouraged or is product obsolete? 1 – 2 year old items should be repairable.

Doug (County of Sacramento) – Can you fix it or have to replace it? Cost to repair vs new price; commodity value. Need manufacturer outreach. Add opportunity for consumer outreach as criteria.

Julia (iFix-It) – Reuse should be first priority.

Jeff (Recycle San Diego) – Stewardship is high priority; costs to locals.

Mark (City of Folsom) – Stewardship is high priority; local government bears the cost to collect, process non-CEWs. Also high priority – trends and prevalence. Reuse – products which are going to be easier to fix for example like computers, fax machines, printers etc.

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Side discussion – The group discussed an issue not related to product selection criteria or product categories. Discussion centered on a concept for a different model focused on local government taking the center role for collecting and managing residentially generated e-waste.

Jeff – Private collectors having a hard time funding collection for residential generators. Instead private collectors are working more with corporate collections since they will pay for the services. Average payment rates can't keep up with market conditions. Concept for model: locals contract with recyclers for services; costs become competitive. Activities are qualified for reimbursement through municipalities. DTSC determines if product is hazardous. CalRecycle determines eligible devices. Charge fees at retail sale. Then state reimburses locals through non-competitive grants.

Mark – Current approach of setting price causes problems with the payment rate average net cost some payed too much or too little. Scheme to pay local government through grants keeps price in line with the market. Maybe it should be more like the used oil enhancement act – block grants. Extended producer responsibility.

Howard – What are cities and counties seeing?

Mark – A lot more electronics, non CEWs. Peripherals-computers, mice, keyboards, cables, other miscellaneous electronics. CRTs going down, flat panels going up; problem due to weight. Anything falling under the electronic heading. Solar panels may be new trend.

Doug – Increase fees paid at retail; add products. Sacramento County collected 2 million lbs. of e-waste last year. Overall cost to recycle is $260 a ton. Received $.19/ lb. from their recycler for CEW which made up 60% of the e-waste. County is charged for UWEDs and for miscellaneous electronic devices such as vacuums and power tools. Some of these end up going to the landfill.

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The table below summarizes at a very high level stakeholder input on the categories that were suggested by CalRecycle in Attachment 1 of the background documents.

	Potential Criteria	**Stakeholder Feedback Summary (from 6/20/17 workshop)**
1.	**Current Management:** How is the product currently managed? a. Is there an existing collection and processing system (including voluntary manufacturer initiatives or retail take-back)? If so, does that system sufficiently address the fundamental goals of California's e-waste management program? b. Are free and convenient collection opportunities available to consumers throughout the state and throughout the year? c. Are the materials managed in an environmentally sound manner? d. Is reuse encouraged? e. Is the product difficult to collect and recycle due to weight, bulk or other factors?	Important to consider in evaluation but not as critical as #s 2 and 5. Consider existing voluntary efforts. Ability to repair and reuse product is important criteria.
2.	**Characteristics:** Does the product contain toxic materials; does it fail hazardous waste tests? a. Is it currently listed in DTSC regulations? b. Does it pose a hazard to human or environmental health?	Identified as highest priority by majority of stakeholders; Battery and other haz materials management. DTSC testing can create delay; don't rely only on testing.
3.	**Prevalence:** How prevalent is the product in the waste stream and/or in the HHW collection system? *(See notes below from Form 303 data and the Waste Characterization Study.)* a. Is there a problem with illegal dumping? b. Regardless of the percentage of the product in the waste stream, what is the impact associated with disposal of the product?	Important to consider in evaluation but not as critical as #s 2 and 5. Important to consider volume and type of material that local jurisdictions are finding and managing in their programs.
4.	**Trends:** What are the projected usage trends (increasing/decreasing; will the issue be going away in the future)?	Important to consider in evaluation but not as critical as #s 2 and 5. Focus on what is coming in to management system.

Potential Criteria	Stakeholder Feedback Summary (from 6/20/17 workshop)
5. **Commodity Value:** What is the intrinsic value of the discarded product? a. Is it economically feasible to sell the product or its components for reuse? b. Is there value in recovering materials contained in the product before processing the device? (For example, can resources such as precious metals be removed before treating, crushing, shredding?)	Identified as very high priority Many newer devices have low commodity value and high cost to recycle. Others – some laptops and tablets have high value.
6. **Stewardship:** a. Do local governments bear the cost of collection and processing? b. Can the manufacturers can be easily identified? (For notification under the current fee and payment system; or for assignment of responsibility in a product stewardship model.)	
Suggested New Categories	Opportunity for influencing consumer education. Target individual consumer over commercial wastes.

POTENTIAL PRODUCT CATEGORIES

Attachment 2

Group discussion on the types of products that should be added to the definition of a covered electronic device. The background paper presented some examples of product categories that are used in other states and countries.

Kelly (CAW) – Any product that needs a battery or has a power source should be added to the program.
Howard – Is that a product that is sold with a battery or just one that uses a battery?
Kelly – Both.

Aaron – Disagrees; that is a bad business idea and could ruin the reuse market. Look at product categories resale or end of life. Very little resale value. Be careful with this characterization of adding everything with a battery.

Roy – Wants to prioritize all items that DTSC defines as hazardous; we need more definition/clarification on LCDs.

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Chuck – Disagrees with Californians Against Waste about the European rule. Focus more on protection from toxic materials.

Larry – Need broad scope. Most of what locals manage is not CEW.

General questions on definitions: Would "wearables" be included? Car navigation systems? Electric car batteries?

REUSE, REPAIR AND PROUCT LONGEVITY

Background Document

Julia – Maybe rate products. The ones that are harder to repair by design have a higher rating. (Modulated fees)

- Consumer Repair Issues
    - Adhesives; batteries and other components glued down rather than using replacable screws.
    - Upgradable/Repairable
        - Physical access on the device; can you get to parts for upgrading, repairing?
        - Availability of parts and tools
    - Modular components
    - Common point of failure – can you identify and easily replace?
    - When battery is glued in, life of device is limited to life of battery.

Maria – Seeing more embedded batteries and with lithium ones it is not safe to try remove. Most are incinerated.

Ben – For consumer products Comcast has closed loop system. People rent equipment, when returned they are refurbished. Challenge is how to recover value from older equipment when they do updates. When a new platform is built it cannot be refurbished or reused. So those get landfilled or recycled.

Doug – Supports modulated fees concept especially with a product stewardship model. Would be hard to assess modulated fees at retail level.

Peter – Manufacturers should have more responsibility to fix devices. Universities are starting to offer design curriculum; thinking about designing for future, durability, maintainability, serviceability. Per the discussion points in background document:

- Reuse – Yes we should do more.
- Repair – Fix devices rather than dump them. Most failures involve power issues that can be fixed. But there are problems getting some parts for repair and information on how to repair. (Fixit Clinics are working on this.)
- Encourage better design – Yes we need education and change. Influence public to make better choices based on true costs of product lifecycle.
- Attributes – Typically items that are low cost to sell have a higher cost to repair or they are designed so you cannot even open them up in order to fix them.

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- Modulated fees – Thinks manufactures should work cradle to grave. Package UPS (or USPS, FedEx) return stickers; send products back to original manufacturer at end of life.
- Legislation – Yes we should incentivize reuse. We need to have the Right to Repair model everywhere.

Jay (AT&T) – It would be good to have more software upgrades instead of equipment upgrades. Check the trends to see if more of that is happening. Upgrade rather than replace.

Maria – She sees the trend of more plastic pieces being processed; lighter weight. It will never go away.

James – Commercial users – What are we doing? What does CalRecycle do with our material? Other state agencies. Education on reuse instead of recycling. (Shirley mentioned that EPEAT [Electronic Product Environmental Assessment Tool] is used as guidance to state purchasing entities.)

Roy– Trend; recycling is becoming harder. Devices are becoming smaller and more expensive to recycle. Need a new universal policy for future that includes clarity and predictability.

- Watches, wearables contain batteries. Would they be e-waste?
- Tesla Car (4000 lbs. batter-is it e-waste or scrap metal)?
- Plastics (more hazardous than nuclear waste and it doesn't go away).

Tell the legislature what products are going to be a problem. What percentage of them are considered hazardous waste? What about the concept of giving a "carbon credit" for product longevity design?

John – Reuse-all six of the discussion points should be considered. If any items sold today are not repairable they should be elevated to the list of new products to be added to the list. Should pursue Right-to-Repair legislation. Provides opportunity to focus on materials consumption.

Jay – Residential focus. They need education. We shouldn't forget that our main customers are residential mom and pop shops. AT&T is very regulated in terms of what we can do as a business.

Peter – Mom and Pop shops and individual consumers want to make the right choices. We need to share classes and environmental clinics for fixing items for reuse. Put up a website about various things that people try to repair and can't. We need consumer education to fix products and a manufacturer pre-paid postage, UPS ship back label for dead products vs sending those products directly to the landfill. There are "suicide items" that the manufacturers produce where the product breaks after a certain amount of use.

Ben – If big business doesn't follow the regulations they are fined. They have no choice. Residents don't have to worry about that.

Jeff – Lack of punishment on consumers (trashcan audits). Low income tend to toss things out, but they also tend to keep products longer and buy from reuse markets. Encourage reuse through on-line applications (craigslist, Facebook). Need incentives or punishment and to work with municipalities.

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Julia – 100 million people a year come to the fix it clinics; people want repair legislation. 12 states have introduced right-to-repair legislation, but it is hard to pass.

Peter – We teach people how to fix stuff. It is amazing. Incentives are better than punishment. We teach in a way that they don't realize they are learning until it is too late and they have fixed it.

Chuck – Punishment against municipalities. How to make SB 20's free and convenient opportunities apply to non covered devices, especially those with hazardous characteristics? Need free and convenient drop off or curbside collection. Narrow down to hazardous materials that pose the most concern and get them out of the system as fast as we can.

John– Influence behavior. Give people the opportunity to do the desired behavior. We can change the behavior so manufacturers/retail should not close door to repair.

Doug – What would it cost to have curbside collection of small appliances (e-waste)? $2 ton collect. $260 ton to recycle. 2% of what is found in trash cans is e-waste. Take Back is best option.

Phil (CEAR) – What impacts we are trying to prevent or achieve? What are we trying to keep out of the landfills? Idea: Manufacturers charge a fee. Gets collected through take back. Pay recyclers to recycle or reuse.

Mark – Look at this through the lens of hierarchy; Reduce, Reuse, Recycle. Reducing toxicity fits into product stewardship scheme. Manufactures could pay for hazardous testing and create law to give public that information. Use alternative testing contracts rather than DTSC; maybe ANSI, UL Labs.

Chuck – Modulated fee concept; incentivize design with fewer toxic materials. Fee for toxic devices, as determined by DTSC; but offer "opt-out"; if manufacturer can prove product is no longer hazardous.

Wrap-Up

Howard described CalRecycle's intent for the next steps on the Futures project. The end goal is to lay the groundwork for responding to potential legislation that might be introduced. CalRecycle may or may not make specific recommendations, but will prepare a paper summarizing the issues, including pros and cons of various models and impacts of implementing changes to the program. We hope to circulate a document for stakeholder input and host a workshop in the fall.

Howard thanked everyone, both in person and on the phone, for participating in the workshop and urged stakeholders to remain engaged. Background documents and presentations from all workshop can be found on the e-waste futures website.