



*Each Center for Hard-to-Recycle Materials (CHaRM) customer is greeted at a drive-thru window. This helps with quality control and is an community engagement opportunity.*

## **It Takes Some CHaRM to Boost Recycling Rates**

Eric Lombardi | Jan 28, 2016

One of the reasons that recycling has been a successful social revolution is that once people start recycling, they want to recycle *everything*. Today, most Americans can recycle the traditional items like newspaper and cardboard, aluminum, some plastic and glass containers. When you add in a composting program, some communities are now recovering 60 to 70 percent of their

discards. But what about *all that other stuff*—mattresses, books, clothing, plastic toys, small appliances, electronics and more?

In 2016 it's time we look beyond the blue bin to the 15 to 20 percent of the trash that we call "hard-to-recycle" materials, so named because they fall outside the norm of traditional and established recycling markets. Recycling these materials is worth pursuing for many reasons: It creates local jobs and new business opportunities, curbs greenhouse gas emissions, and reduces air and water pollution by handling electronics and other items that contain toxic elements.



A Center for Hard-to-Recycle Materials (CHaRM) is one of the six essential facilities every community needs to move toward Zero Waste...or darn near. The first CHaRM in the U.S. was built in 2001 in Boulder, Colo. Three more have sprung up across the U.S.—Athens, Ga.; Logan County, Ohio; and Arcata, Calif.

The Boulder CHaRM is a one-stop drop-off that recycles more specific items than any other single location in the nation (please let me know if you know of one that accepts more), including all traditional recycling and composting, plus electronics, clothing, books, small and large appliances, mattresses and box springs, block foam polystyrene packaging (aka Styrofoam), cooking oil, plastic bags and shrink wrap, plastic lawn furniture and other bulky durable plastics, bicycles and parts, fire extinguishers, porcelain fixtures like toilets and sinks, and even yoga mats (it's Boulder after all). See the full list here .

CHaRM recycles nearly 3.5 million pounds of materials every year and averages about 150 customers per day. About 80 percent of the materials come from residents. The facility operates as a drop-off center, and every customer is greeted at a drive-up window. This helps ensure minimal contamination since these materials tend to have strict market standards, and offers a wonderful opportunity for face-to-face community education. There is also a "CHaRM on the Road" pickup service for businesses.

Every year the list of CHaRM items accepted for recycling expands as we create more relationships with organizations and companies who can take material. Adding a new material on a regular basis serves to keep the community engaged and excited, with the newest item for 2016 being mattress recycling. It is remarkable how little trash is left over when a household or business fully utilizes the local recycling, composting and CHaRM services—it makes the dream of achieving Zero Waste actually within reach!

Not only is the environment improved by using the CHaRM, but there is also a financial reward to any household that makes the CHaRM a part of their routine. The reward comes due to our local unit-based pricing system (PAYT) for garbage. The CHaRM is like a super-charger to the PAYT system because it offers an alternative to the trash bin for the bulky items like plastic toys and block polystyrene, thus enabling people to subscribe to the smallest trash bin offered (32-gallon), resulting in a savings of \$100-\$200/year after the cost of the 64- and 96-gallon trash service.

The costs to build and operate a CHaRM facility are not high. A 5,000 sq-ft.-warehouse with an acre of open space is adequate, and no specialized equipment is needed, except perhaps a polystyrene grinder/baler. The bottom line for a CHaRM is similar to landfills and incinerators in that none of them makes a profit without charging a fee for their services. The current CHaRM user fee is \$3 per car to recycle an unlimited amount of most materials. However, a few items have an extra service fee since they are expensive to recycle, such as computers and mattresses. But at the end of the day, the CHaRM is a less expensive alternative to both landfills and incinerators.

And a CHaRM brings something a landfill or incinerator cannot. It creates social and economic value to the local community. For example, in Boulder, books collected support literacy by being distributed to local schools and low-income clinics, getting into the hands of kids who, in some cases, have never even held a book. Mattresses go to a program that creates jobs for former felons who are working through recovery programs for a second chance. Bikes go to a community bikes program where anyone can get a bike and learn how to maintain it, increasing bike use. Electronics that can be reused go to low-income families. Yoga mats and bike tires go to local for-profit businesses who use them to make accessories and computer bags. Where landfills and incinerators create long-term health and financial liabilities, CHaRMs build community opportunity.

The first ten years of the Boulder CHaRM operations saw operating costs increase with success, going from \$180,000/year to \$540,000. However, the revenues also increased, and by a larger margin, reaching \$608,000 and resulting in a 10-percent profit margin. The facility is run as a “not-for-profit social enterprise” and covers 85 percent of its expenses, with a city contract to cover the gap. The city gladly pays for this extremely popular public service because it’s a benefit to them as it helps residents, businesses, and ultimately the city meet its Zero Waste goals.

My vision is that someday there is a network of CHaRMs across America. The key to success is the same formula as it is for traditional recycling—ensure your markets that you can meet their requirements for Quality, Quantity and Reliability (QQR). And if possible, it’s good to have at least two market options for each material so you never have to stop recycling a material you’ve started to accept. The way to get the ball rolling and develop relationships with markets in your area is to offer one-day collection events or pilot programs in partnership with a business or organization that will receive the materials.

But these numbers raise an important question—who will be willing to take the risk and invest in a new CHaRM facility when success is only a 10-percent profit, and even that is probably dependent upon a contractual relationship with a local government willing to commit to a long-term partnership? I’m the first to admit that the politics of going beyond traditional recycling and embarking seriously on a path toward Zero Waste is a barrier to entry; thus there have been so few CHaRMs built.

However, there are many communities where high landfill fees and/or strong community goals around diversion and climate action could serve as the drivers for creating a CHaRM. And if we can make it work in Boulder, where the landfill tip fee is less than \$20/ton, you can make it work too! The opportunity is ripe for local government leadership or creative Zero Waste entrepreneurs—call me if this sounds like you and we’ll share everything we’ve learned about taking a community closer to Zero Waste with a CHaRM.

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