

Who Took Rhode Island's Trash and What Did They do with It?

Even a small state like Rhode Island produces a lot of garbage. I went on a mission to find out exactly what happens to the Ocean State's household refuse. First, I tagged along with a trash hauler in Providence, and then I paid a visit to the Central Landfill and Materials Recycling Facility in Johnston.

Some cities and towns in Rhode Island pick up household waste and take it to Johnston themselves; others employ a private firm to do so. Both Providence and Cranston contract with Waste Management, Inc., a Houston based company that hauls more than 80 million tons of solid waste yearly in the US and Canada.

I met Jerry Dugan and Ronnie Parenti, Waste Management District Manager and Route Manager respectively, at the Waste Management (WM) facility on Pontiac Avenue in Cranston. It was seven in the morning, raining, and dark. I had few illusions going in, but could see right away that there was no glamour in the garbage business. Jerry and Ronnie are trash veterans and have more than 60 years of combined waste removal experience between them. Ronnie can even recall a time when household food scraps were separated from dry garbage, collected, and then fed to pigs. Jerry, Ronnie and I drove to the Elmwood section of Providence where we watched a WM recycling truck in action; we then tailed a garbage truck for a few blocks.

Recycling trucks are run solo. Leonel Floriano, 38, stopped, got out, emptied the blue and green bins and then hopped back into the driver's cab. Floriano starts his day at 4:00 am, and drives one of six WM recycling trucks deployed in Providence. He says his biggest headache is not handling the recycling bins (he likes the exercise), but rather dealing with the traffic in downtown Providence when his route takes him there. Originally from Guatemala, he is a seven-year veteran of the waste business.

Floriano's job on the recycling truck is tough, particularly since he works alone, but after watching one of the garbage teams, I decided that he has it pretty good. The garbage men work as a trio: one person at the wheel of the truck (a \$175,000 piece of machinery that has a small camera mounted on the rear so the driver can see what's going on behind him) and two guys emptying bins and throwing bags into the back. The job is dirty, smelly and physically demanding, not to mention that in Rhode Island it's often too hot, too cold, or too wet to make working outside a lot of fun.

Every weekday, except for legal holidays, Waste Management hauls about 300 tons of household trash from Providence, and 175 tons from Cranston. There are spikes in trash production, notably at the end of the school term when college students clean out apartments and dorms, and certain fall weeks when yard waste balloons. Waste Management uses nine garbage trucks in Providence, as well as one "white truck" that picks up appliances. During a given shift, each truck will be filled and emptied three times.

People set out all kinds of stuff on the curb, not just bags of garbage, but also bulky items like mattresses, old carpets, and furniture. In addition to spending their day handling trash (not all of which is neatly bagged or placed in bins), and the inevitable back strains that come from so much lifting, the garbage man must also contend with the occasional rat running up an arm or down a leg, as well as cuts from broken glass and other sharp objects. Another danger is from vehicles; WM workers are on the job in the early hours when visibility is low, and are constantly in front of driveways and in the street.

I asked Jerry and Ronnie, both of whom started their careers working on the trucks, if they had any tips for the average Rhode Islander dragging their garbage cans to the curb. To start with the obvious, trash should be bagged, not heaped in a pile on the sidewalk. Recyclables and yard waste should be properly separated from garbage; if not, it all ends up in the landfill. And don't throw your dead dog or cat in the trash (this is not uncommon), or put toxic household products in with regular garbage.

Once the Waste Management truck is full, it heads to the Rhode Island Resource Recovery Corporation (RIRRC) in Johnston, fifteen minutes west of downtown Providence. The RIRRC is a nonprofit agency created by the General Assembly in 1974 to handle Rhode Island's solid waste; it operates both the Central Landfill and Materials Recycling Facility. There is a nice symmetry to waste disposal in Rhode Island: virtually all household refuse in Rhode Island goes to the RIRRC, and only Rhode Island trash and recyclables are taken there. In other words, Rhode Island is neither an importer nor an exporter of trash.

The RIRRC is an impressive place. From Plainfield Pike, you wind your way down Green Hill Road until you reach Shun Pike and are confronted by a decent sized mountain, by Rhode Island standards anyway. This hill turns out, not surprisingly, to be a massive heap of trash; it represents the first three phases of the Central Landfill, now "capped" and covered with grass.

Garbage trucks enter the RIRRC by weighing in at the scale house. They then proceed to a hangar-like building and discharge their contents. The waste is pushed through large holes in the floor and into trucks that take it to the 45-acre active landfill, a quarter mile to the west. Once there, the trash is deposited, moved around, and compacted by backhoes and haulers. At the end of each day, a several inch layer of crushed concrete, plaster, glass and wood is spread over the garbage, reducing odor and minimizing the risk of fire and rodent infestation. Appliances, tires, and computers don't make it into the landfill and are handled separately.

The idea of a designated place for waste disposal goes back some time. Athens established the first dump in 500 BC, requiring scavengers to dispose of waste at least a mile outside of city walls. The RIRRC is a long way from ancient Greece, and in its size and technological sophistication, almost as far from the twentieth century municipal dump as well. The RIRRC receives about 4,000 tons of municipal and commercial waste daily, and occupies 1,100 acres.

I was given a tour of the operation by Jim Allam, RIRRC Deputy Executive Director; John

Trevor, Recycling Program Manager; and Patrick Fingless, Materials Recycling Facility Business Manager. We drove up the mound of trash that is phase four of the Central Landfill. It's not a pretty spot, but it is a popular one for seagulls. This is not a place for walking; the ground can be squishy and treacherous underfoot, and none of us chose to alight from Jim's SUV. Surprisingly, however, the smell was not too bad, although I visited the landfill in the cooler months; I wouldn't want to get that close to the Ocean State's trash in the summer.

The landfill is a place of constant activity; not only is garbage continually being trucked in and compacted, waste below the surface is always settling and decomposing. This process produces substantial amounts of methane and carbon dioxide, as well as trace amounts of other gases. Much of the methane, which is flammable and prone to explosion if trapped, is harnessed by the RIRRC. The gas recovery/power generating system designed for this purpose is the largest in the Northeast and runs an on-site power plant, as well as producing surplus energy for sale. Narragansett Electric purchases enough power from the RIRRC to supply 17,000 homes yearly.

The Materials Recycling Facility (MRF)

The Central Landfill essentially functions like a huge cat burying Rhode Island's waste. The Materials Recycling Facility (MRF), on the other hand, doesn't dispose of waste, it grooms material for remanufacture. If you've ever wondered whether the items Rhode Islanders put in their blue and green bins are actually recycled, the answer is yes - I saw it happening. The MRF operates 16 hours a day, five days a week and uses 53 workers to convert millions of tins, bottles, plastic jugs, cans and newspapers into a saleable product.

Patrick Fingless, the MRF Business Manager, showed me the place. It's his job to sell the processed recyclables to manufacturers who will use them to make everything from tiles to park benches to gift boxes. I suppose in comparison with the adjacent Central Landfill, the MRF is a glitzy place; nonetheless, it is loud, gloomy and doesn't smell so great either. The machinery is amazing, however, and the MRF would make a great setting for the finale of a movie thriller: the hero and villain could face off trying to stuff each other into a huge shaker, grader or baler.

What's an empty milk container or piece of junk mail worth? Currently, plastic jugs are going for about \$300 per ton (sorted and baled of course), and mixed household paper, which is exported to India and China, fetches around \$50 per ton. Prices are in a state of constant flux, sometimes there is good money to be made, other times it costs more to recycle a given material than it can be sold for.

The MRF consists of a series of oversized shakers, graders, magnets, sieves and crushers. These work in conjunction with a network of conveyors, chutes, haulers, and, of course, people, to remove contaminants (non-recyclable items) and sort what remains. Paper products are separated by hand using conveyor belts and chutes to divide newsprint from cardboard and mixed household paper. Ultimately, these different elements are baled in large cubes bound with wire, and taken by forklift to storage containers for shipping.

The MRF's non-paper stream is a little more complicated. There is hand sorting, following which a powerful magnet picks off tin cans and steel. The remaining materials then travel across a massive 30 x 8 foot sieve. When turned on, it convulses, causing dirt, broken glass, leaves and other debris to drop through the holes. The good stuff that remains continues to the inclined sorting system, where chain curtains and conveyors remove the glass and send the mix to a shaker table. Once on the shaker, aluminum cans fall through slats and an electrical charge then propels them onto a conveyor for baling. What's left are plastics; these are sorted by hand (soda bottles, milk jugs, and rigid colored plastic all go to different places) and pushed down chutes into metal cages for compacting.

At one end of the MRF stands the finished product: bales of aluminum, tin and plastic. Patrick pointed to what he described as "superb" bale of aluminum - a contaminant free eight foot cube composed of thousands of compacted cans. On a per ton basis MRF revenues are low, but the key in the recycling business is volume, and sales are approximately four million dollars annually.

Probably the most impressive component of the MRF is not the hardware, but its educational and outreach efforts. The RIRRC has an on-site educational center that allows visitors (mostly school groups) an actual view of MRF operations. There is an observation deck overlooking some of the machines, and windows that allow a further view of the recycling process. This classroom, if I can call it that, is brightly colored and has a circus motif. It features hands-on displays, as well as a video screen and plenty of posters about garbage and recycling. I poked my head in on an elementary school group from Cranston who listened intently as a guide described the path taken by materials put in curbside blue and green recycling bins. These sessions are booked months in advance, and many teachers return with their classes year after year.

Unfortunately, you can't just drop in on the [Rhode Island Resource Recovery Corporation](#) for a tour, but that doesn't mean you can't get a good sense of what goes on there. The MRF's own recycling super hero, MaxMan, stars in an interactive (and entertaining) CD-ROM that includes a virtual tour of the recycling operations. MaxMan also makes classroom visits and co-hosts a video on recycling. In addition to the stellar work performed by MaxMan, the MRF produces an impressive collection of pamphlets and posters about conservation, recycling and trash. If, however, a virtual or print RIRRC tour is not good enough for you, and you need a taste, or a whiff, of what goes on in Johnston, you can take your old television or computer monitor out to Shun Pike for drop-off. Contact the RIRRC's Eco-Depot at (401) 942-1430 for more information on times for disposing of electronic goods and hazardous materials. You'll be doing good for the environment while getting a small peek at what is literally Rhode Island's underbelly.

This article originally appeared in [Providence Monthly](#) in February 2004 and subsequently on the website [Rhode Island Roads](#).