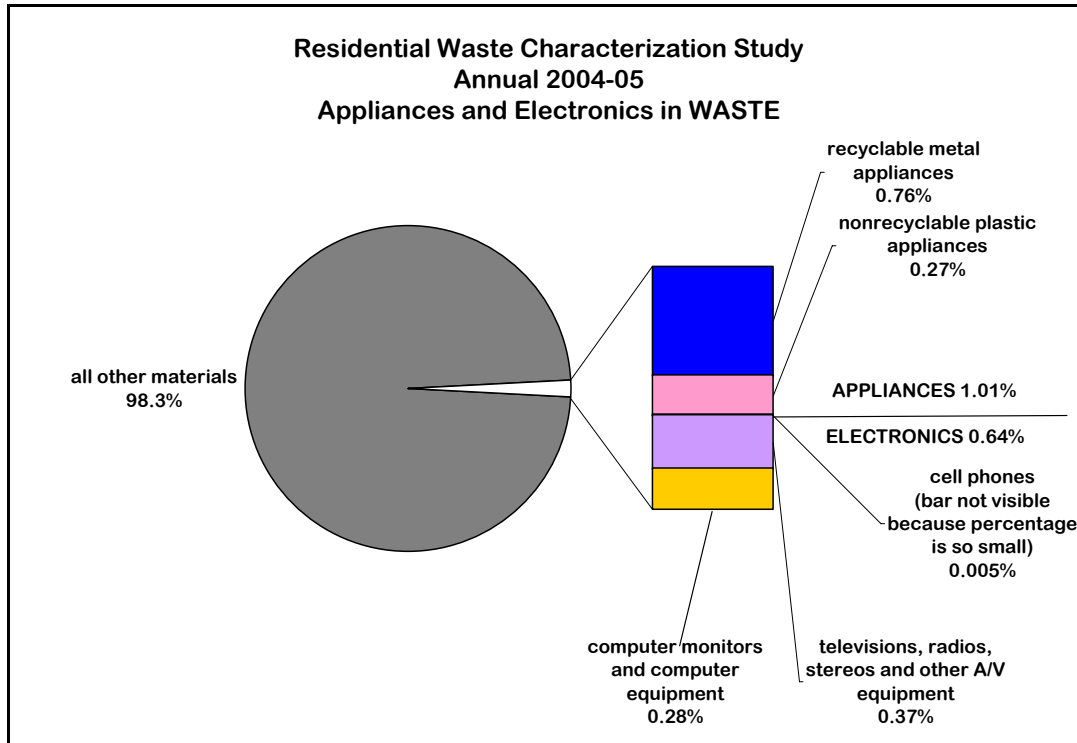


FOCUS ON RESIDENTIAL APPLIANCE AND ELECTRONICS WASTE

Electronics waste, also known as e-waste, is an extremely high profile segment of the waste stream because it tends to contain potentially valuable, as well as hazardous, materials. It is also framed in public discussion about recycling as a new, and growing, and burdensome aspect of consumer discards. The chart below shows the fraction of the waste stream that is appliances and electronics.



The WCS categorized electronics and appliances into eight categories, listed in the table below.

	Annualized WCS Results			
	Refuse	MGP	Paper	Waste
Appliances: Ferrous Metal	0.39%	5.54%	0.00%	0.71%
Appliances: Non-Ferrous Metal	0.03%	0.14%	0.00%	0.03%
Appliances: Plastic	0.24%	0.87%	0.01%	0.26%
<b>APPLIANCE SUBTOTAL</b>	<b>0.66%</b>	<b>6.55%</b>	<b>0.01%</b>	<b>1.01%</b>
Audio/Visual Equipment: Cell Phones	0.01%	0.00%	0.00%	0.00%
Audio/Visual Equipment: Other	0.27%	0.29%	0.01%	0.25%
Computer Monitors	0.08%	0.08%	0.00%	0.07%
Televisions	0.14%	0.00%	0.00%	0.12%
Other Computer Equipment	0.20%	0.52%	0.01%	0.20%
<b>ELECTRONICS SUBTOTAL</b>	<b>0.70%</b>	<b>0.90%</b>	<b>0.02%</b>	<b>0.64%</b>
<b>TOTAL APPLIANCES &amp; ELECTRONICS</b>	<b>1.36%</b>	<b>7.45%</b>	<b>0.04%</b>	<b>1.65%</b>

The information herein has been compiled, analyzed, and reported by the DSNY Bureau of Waste Prevention, Reuse and Recycling, using data collected by its consultant R.W. Beck. These highlights do not substitute for a thorough review of R.W. Beck's Final Report, which contains more detailed data. Some percentages may not total exactly due to rounding.

## 2004-05 NYC Residential and Street Basket Waste Characterization Study

In the waste stream, over half of the measured tonnage for “Appliances” was ferrous or nonferrous metal, which is recyclable with MGP. Plastic appliances, such as vacuums, hair dryers, and fans, accounted for the rest of the appliance stream.

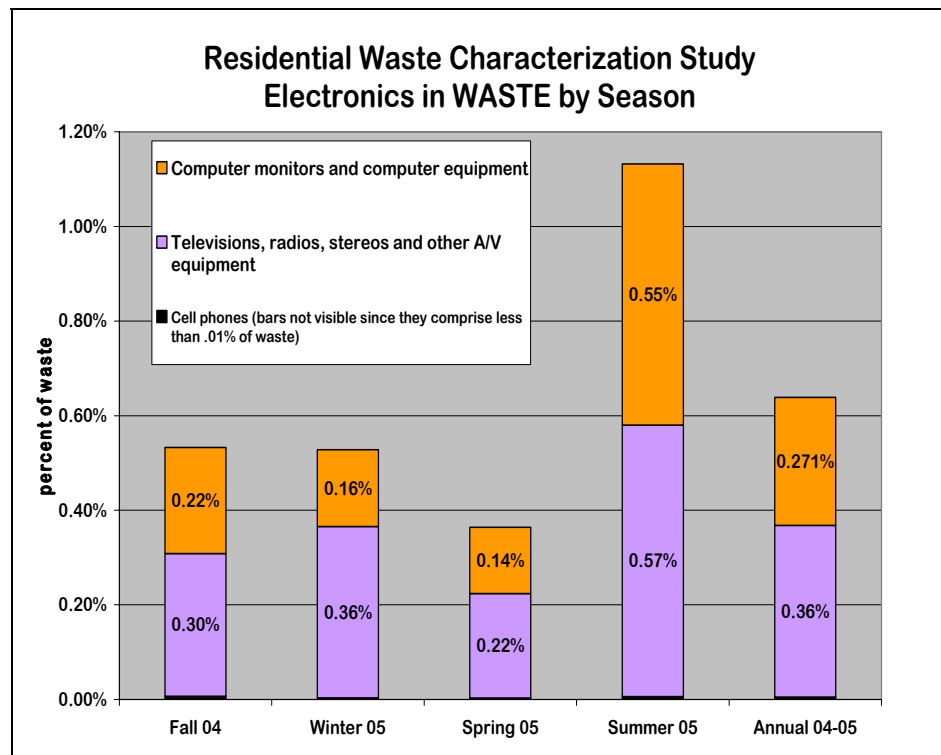
Electronic waste, as distinct from appliances, was sorted in categories of Cell Phones; Televisions; Other A/V Equipment such as stereos and radios; Computer Monitors; and Other Computer Equipment. These materials are collected and recycled by electronics recyclers, as opposed to metal appliances, which tend to be recycled with other metal; and plastic appliances, which are, in practice, non-recyclable.

For the purposes of assessing metal in various streams, metal appliances were grouped with other recyclable metal categories. The rest of this discussion will cover electronic waste, or e-waste. In most cases e-waste consists of electronic products that were used for data processing, telecommunications, or entertainment in private households and businesses that are now considered obsolete, broken, or irreparable.

### A Very Small Fraction of Residential Waste

Despite its high profile, e-waste makes up quite a small fraction of the overall residential waste stream (see sidebar). This is seen despite some fluctuation in amounts across seasons. As shown below, e-waste made up between 0.35% and 1.15% of the waste stream over the four seasons of the WCS. The causes of such fluctuations are not clear.

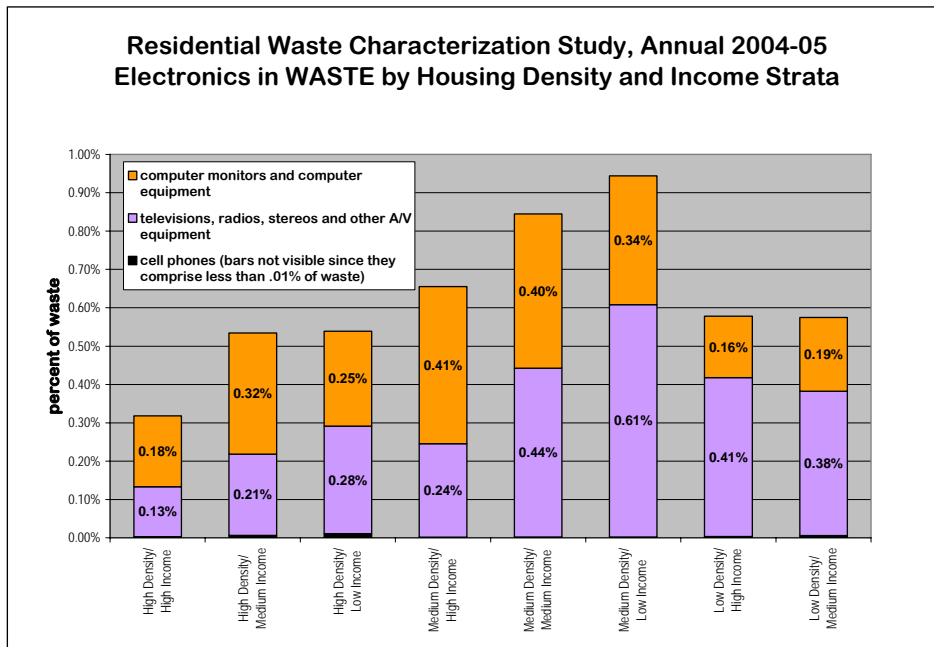
Reminder: these figures reflect e-waste that was thrown out in refuse or improperly placed in MGP or Paper recycling. They do not reflect e-waste that was recycled at events, through producer take-back, reused, stored for later recycling, or disposed of through other alternatives.



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## 2004-05 NYC Residential and Street Basket Waste Characterization Study

There was also fluctuation in e-waste generation by strata, with high and low density residents generating lower amounts of e-waste than medium density residents. Again, the source of such fluctuation is not clear. It is probable that e-waste generation is a highly variable fraction of the waste stream. Patterns of fluctuation reflect complex economic and demographic factors that may not have been adequately measured by the strata or seasonal approach. Despite fluctuation, however, the overall fraction of e-waste was small – less than 1% of NYC’s residential waste.



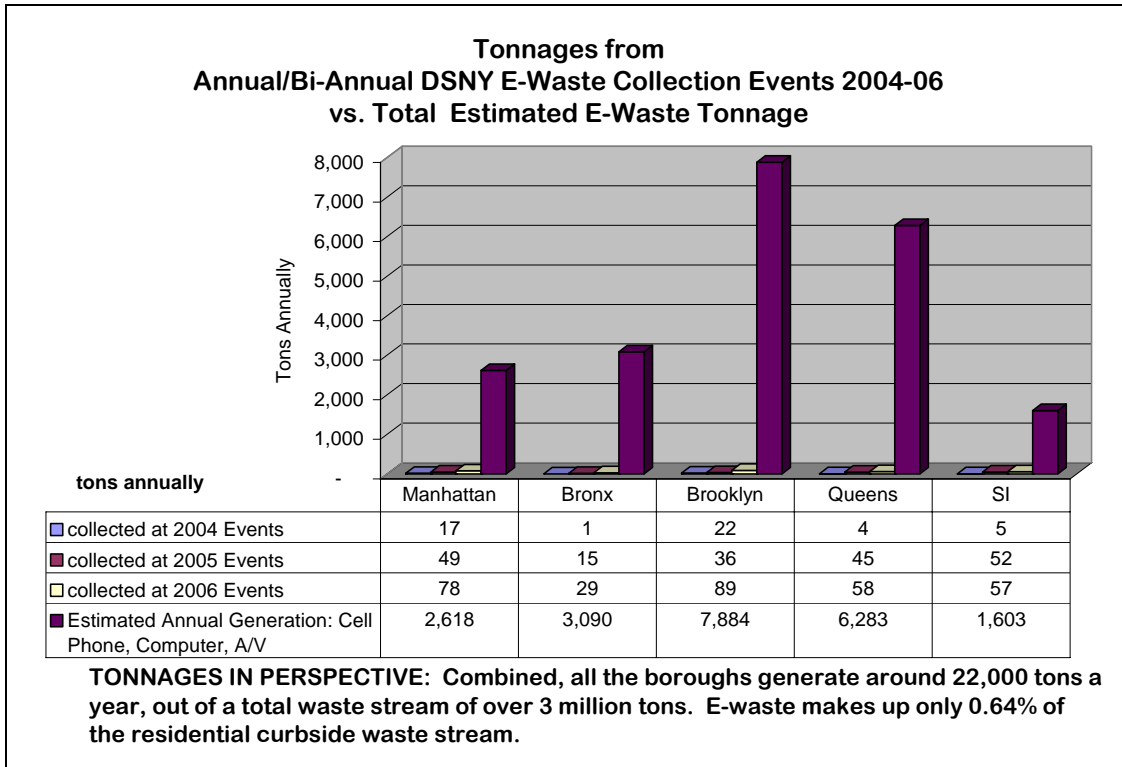
Like hazardous waste, e-waste’s environmental impacts are not measured fully by its weight. E-waste is more likely to include toxins than other fractions; thus small amounts of it can have potentially large consequences. As concern over e-waste continues, it will be important to balance the perception that e-waste is a massive and growing manifestation of a “wired” 21<sup>st</sup> century consumer society with real data showing only modest tonnage of e-waste in New York City’s waste stream.

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## 2004-05 NYC Residential and Street Basket Waste Characterization Study

### E-Recycling Events

DSNY's electronics collection events are a response to widespread concern over e-waste in disposed refuse, and they have been extremely popular with local residents. At present, DSNY sponsors two events per borough per year. As shown below, the actual tonnage captured out of the total annual e-waste stream is very small, but is growing at a significant rate.



As efforts continue to capture and recycle this fraction of the waste stream, it will be important to match costs and benefits to the public with responsibilities of the producers of electronics, who ultimately control all decisions about what materials to use in the manufacture of their products; the lifespan of their products; and how much responsibility to assume for the safe disposal of their products.

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