



## Estimates of Connecticut Municipal Solid Waste (MSW) Generated, Disposed, and Recycled FY2010

The following MSW statistics are based primarily on data reported to the Connecticut Department of Energy and Environmental Protection (DEEP) by Connecticut municipalities and by Connecticut permitted solid waste facilities<sup>1</sup>. A listing of data qualifiers can be found at the end of this webpage ([click here](#)).

MSW disposed includes regular trash generated by both the residential and non-residential sectors. It does not include construction and demolition wastes, industrial sludges, or land-clearing debris. MSW recycled includes: [CT designated recyclable items](#) ; other types of MSW recyclables (e.g. food waste, yard waste brush and tree trimmings, plastic bottles, textiles, electronics, anti-freeze; boxboard, magazines, etc.); and material reported reused through municipal swap areas.

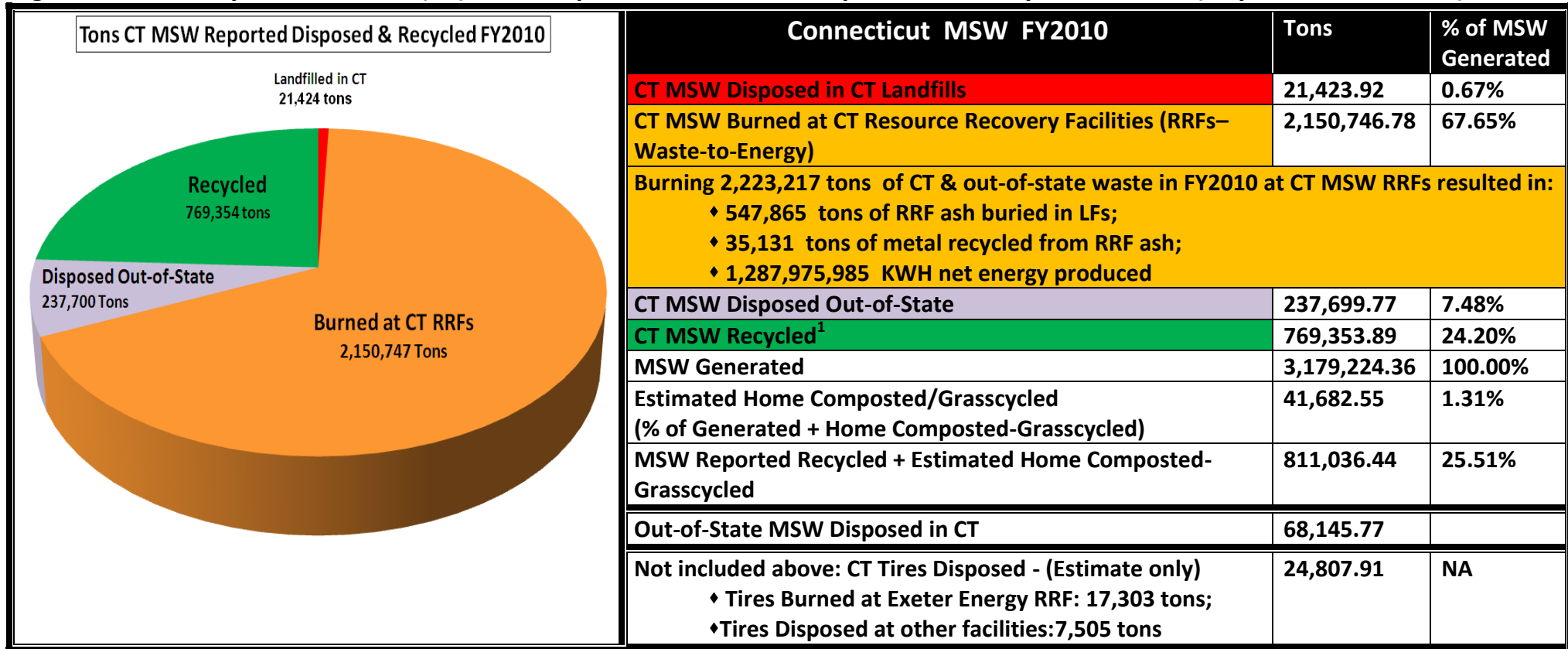
**Questions?** Contact [Judy Belaval](#) at the DEEP Bureau of MM&CA (860) 424-3237

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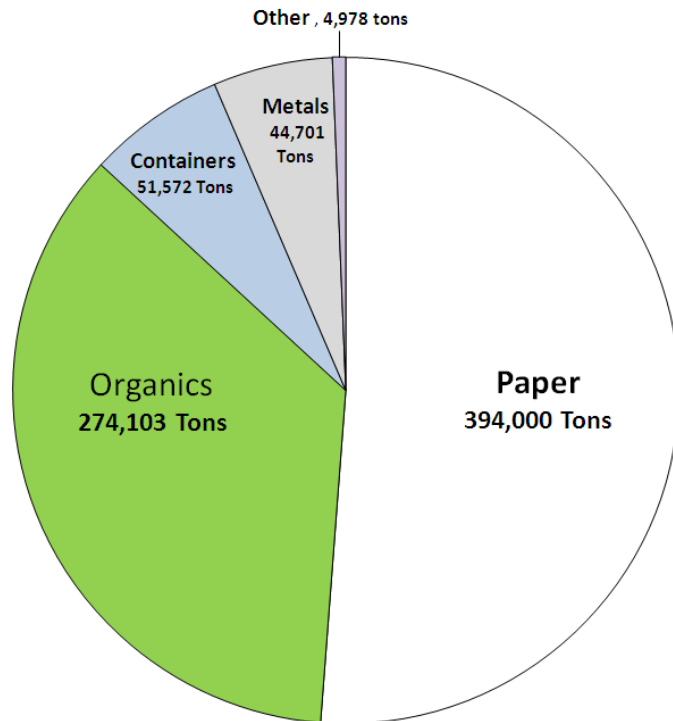
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**Figure 1 - Summary – Connecticut (CT) MSW Reported Generated, Disposed, and Recycled<sup>1</sup> FY2010 (July 2009 - June 2010)**

**Figure 2 - Summary - Types of Connecticut MSW Reported Recycled<sup>1</sup> FY2010**

**Tons MSW Reported Recycled FY2010**

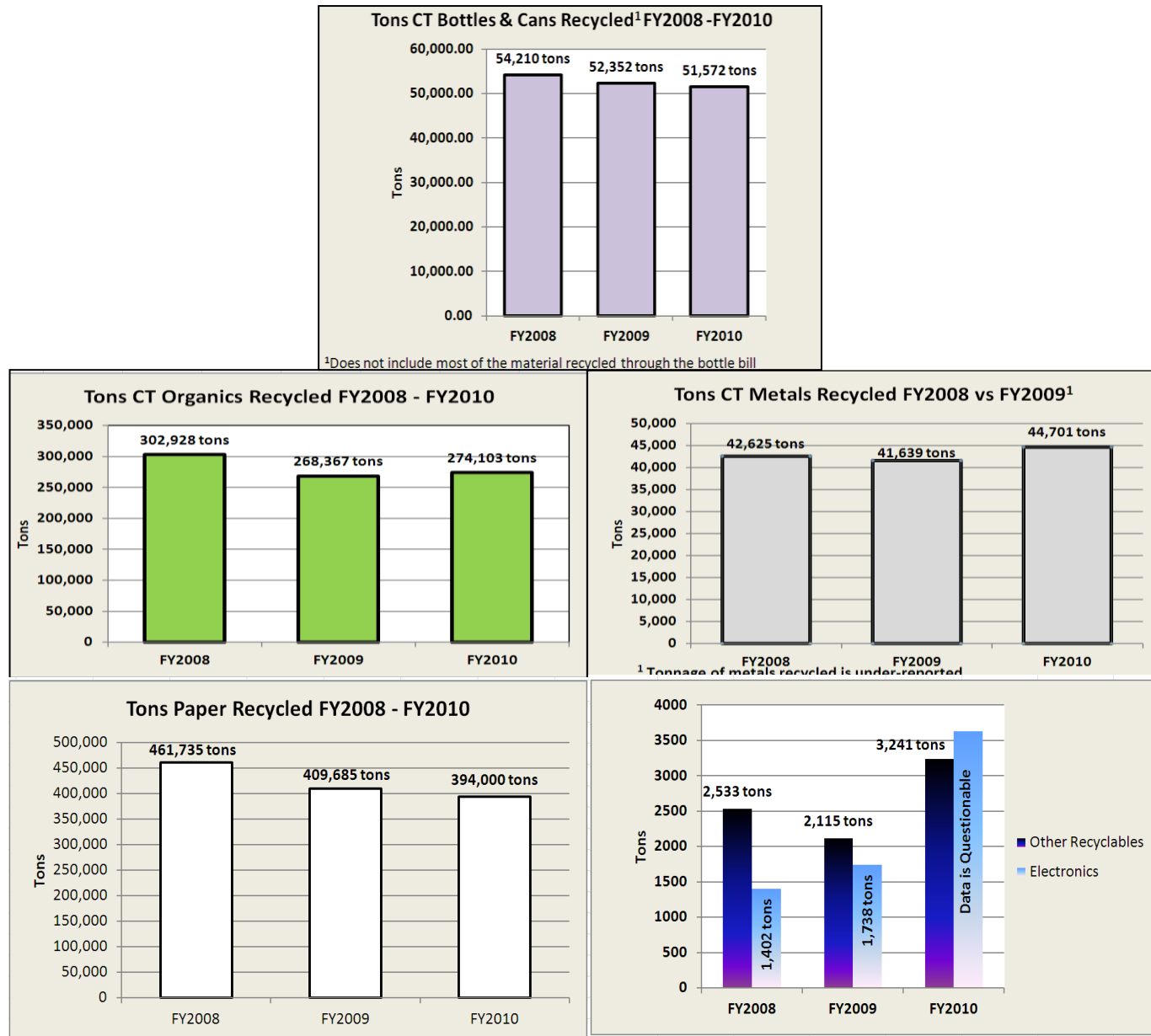


Material Type Reported Recycled	Tons Reported Recycled FY2010	% of MSW Recycled
Paper	394,000.29	51.21%
Organics (represents pre-compost weight-not weight of final products)	274,102.70	35.63%
Containers (bottles & cans) – Grossly under-reported. Doesn't include most of the material recycled through the CT bottle deposit law infrastructure	51,571.63	6.70%
Scrap Metal (represents amount collected for recycling minus 15% for residue.) Tonnage does not include most of the scrap metal recycled through commercial or institutional sectors.	44,701.01	5.81%
Other (represents amount collected for recycling – not amounts marketed)	4,978.3	0.65%
<b>Total MSW Reported Recycled</b>	<b>769,353.93</b>	<b>100.00%</b>

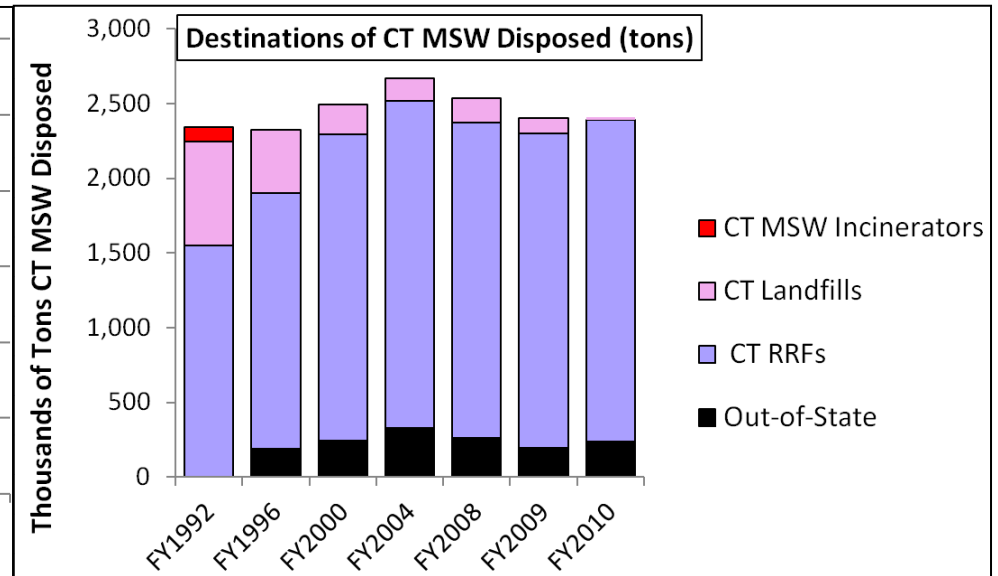
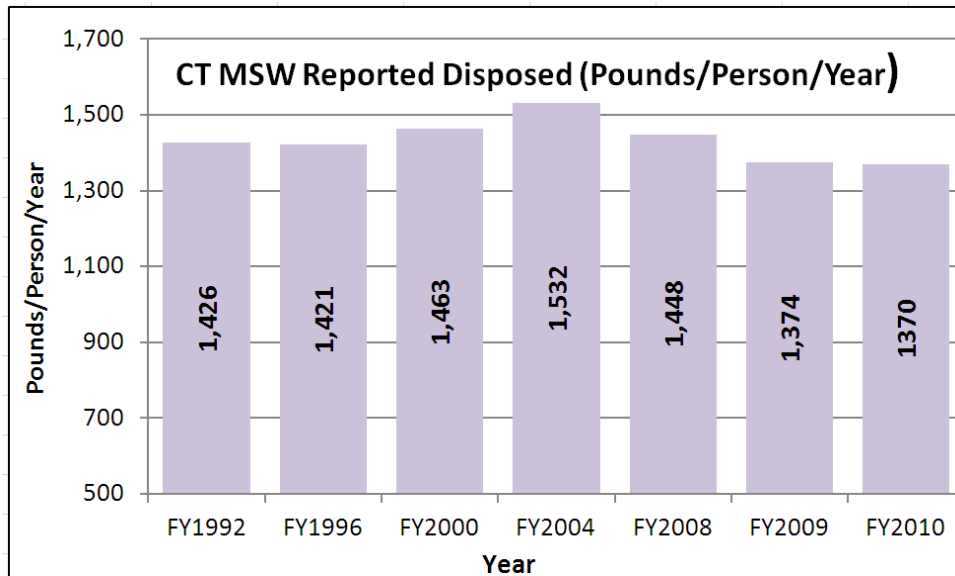
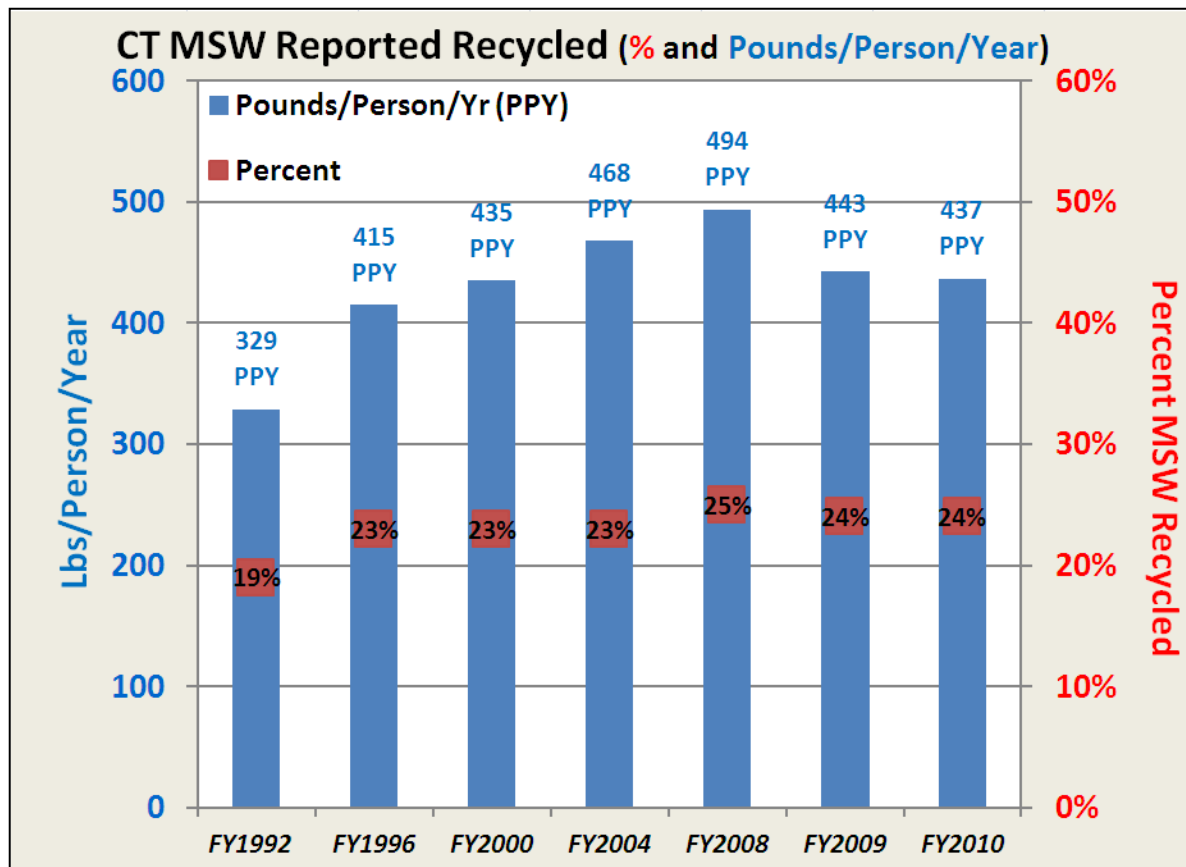
<sup>1</sup>CT recycling tonnages presented above are conservative figures, since they **do not include**: (1) most of the glass, metal, and plastic recycled through the CT bottle deposit law infrastructure;(2) automobile scrap metal; (3) waste oil recycled by businesses or garages; (4) storage batteries recycled through the CT storage battery deposit infrastructure; (5) much of the commercially recycled electronics, scrap metal, etc. ; (6) material recycled by direct haul from generator to end market or to out-of-state destinations since these tonnages may not be represented in the reports submitted to the DEEP. It is anticipated that some of these tonnages will be tracked in the future under new hauler reporting requirements.)

***Glass aggregate reported used as alternative landfill cover is not counted as recycled and is not included in the recycling tonnages presented above.***

**Figure 3 – MSW Reported Recycled and Disposed – Historic Perspective** (State-wide recycling tonnages for bottles, cans, and paper are based mostly on recycling facility marketing reports; recycling tonnages for other materials are based mostly on municipal annual recycling reports. Disposal tonnages are based on transfer station, landfill, and RRF reports.)



<sup>1</sup>Please refer to [data qualifiers](#) at end of this webpage for information regarding under-estimation of recycling tonnages for scrap metal; bottles, cans and paper; electronics; batteries; etc.



The economic downturn of fall 2008 contributed to a reduction in FY2009 (July 2008-June 2009) of both the CT MSW percapita disposal rate and in the CT MSW percapita recycling rate. The lower rates continued in FY2010. However, because both the amount disposed and the amount recycled dropped, the FY2009 and FY2010 percent of MSW recycled remained constant.

- Factors related specifically to the amounts of material recycled in FY2009 and FY2010 include the following:

- Economic Factors**

- Prior to the 2008 economic downturn demand for finished product was at an all time high and as a result, so was the demand for feedstock (including recyclables) used to manufacture those products. Often manufacturers and paper mills were forced to accept poorly prepared recyclables in order to meet the increased demand for their products.
    - In 2008, when the demand for finished product dropped due to the poor economy, manufacturers and paper mills (especially those in China) either stopped buying recyclables and/or became more selective about the quality of the recyclables they were purchasing. Recycling facilities that were churning out poorly processed recyclables could no longer market their material. Those recycling facilities that had maintained the quality of their recyclables during times of greater demand, were able to market their recyclables, albeit at a lower price.

Many recycling markets experienced a slight rebound in FY2010 and FY2011.

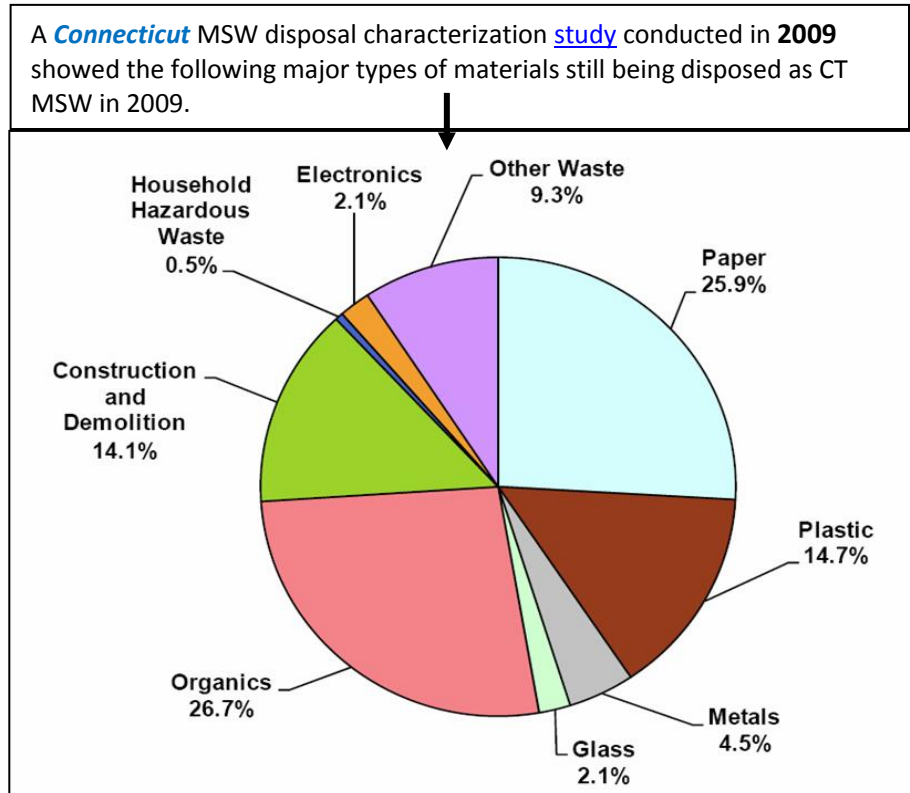
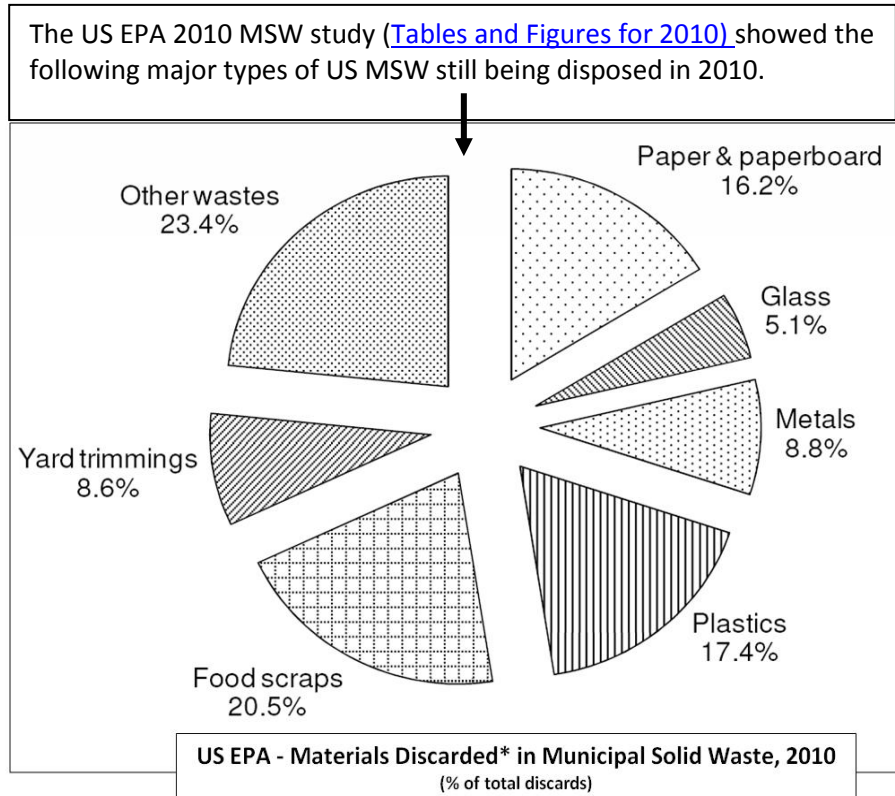
- Changing Nature of Waste Streams:**

Over the years the types of materials found in the U.S. MSW stream have evolved, in part due to cultural changes related to the types of media used to provide information, changes in packaging and marketing products, relocation of major manufacturing centers, etc.

**Table 1- Trends in Types of MSW Material Generated in the United States**

[Municipal Solid Waste Generation, Recycling, and Disposal in the United States Tables and Figures for 2010 – US EPA](#) indicated the following nationwide trends in the amounts of different types of MSW annually **generated** (amount recycled + amount disposed) since 2000:

Examples of Materials with <b>Decreasing Generation</b> ↓ Rates in the U.S. 2000-2010	Examples of Materials with <b>Increasing Generation</b> ↑ Rates in the U.S. 2000-2010
<b>Newspaper</b> ( 72% recycled in 2010) 14,790,000 tons generated in 2000 vs 9,880,000 tons generated in 2010	<b>Paper plates and Paper Cups</b> (Negligible amount recycled in 2010) 960,000 tons generated in 2000 vs 1,350,000 tons generated in 2010
<b>Magazines</b> (54% recycled in 2009; % recycled not available for 2010) 2,230,000 tons generated in 2000 vs 1,590,000 tons generated in 2010	<b>Clothing and Footwear</b> (14% recycled in 2010) 6,470,000 tons generated in 2000 vs 8,950,000 generated in 2010
<b>Office Papers</b> (74% recycled in 2009. ; % recycled not available for 2010) 7,420,000 tons generated in 2000 vs 5,260,000 generated in 2010	<b>Towels and Sheets and Pillowcases</b> (17% recycled in 2010) 820,000 tons generated in 2000 vs 1,290,000 tons generated in 2010
<b>Standard Mail Papers</b> (63% recycled in 2009; % recycled not available for 2010) 5,570,000 tons generated in 2000 vs 4,340,000 tons generated in 2010	<b>Plastic Packaging</b> (12.1% recycled in 2010) 6,900,000 tons generated in 1990 vs 11,190,000 tons generated in 2000 vs 13,680,000 tons generated in 2010
<b>Glass Packaging</b> (33.4% recycled in 2010) 11,040,000 tons generated in 2000 vs 9,360,000 tons generated in 2010	<b>Carpets and Rugs</b> (9% recycled in 2010) 2,440,000 tons generated in 2000 vs 3,460,000 tons generated in 2010
	<b>Food Scraps</b> (2.8% recycled in 2010) 29,810,000 tons generated in 2000 vs 34,760,000 tons generated in 2010

**Figure 4 – MSW Recyclables Still Being Disposed**

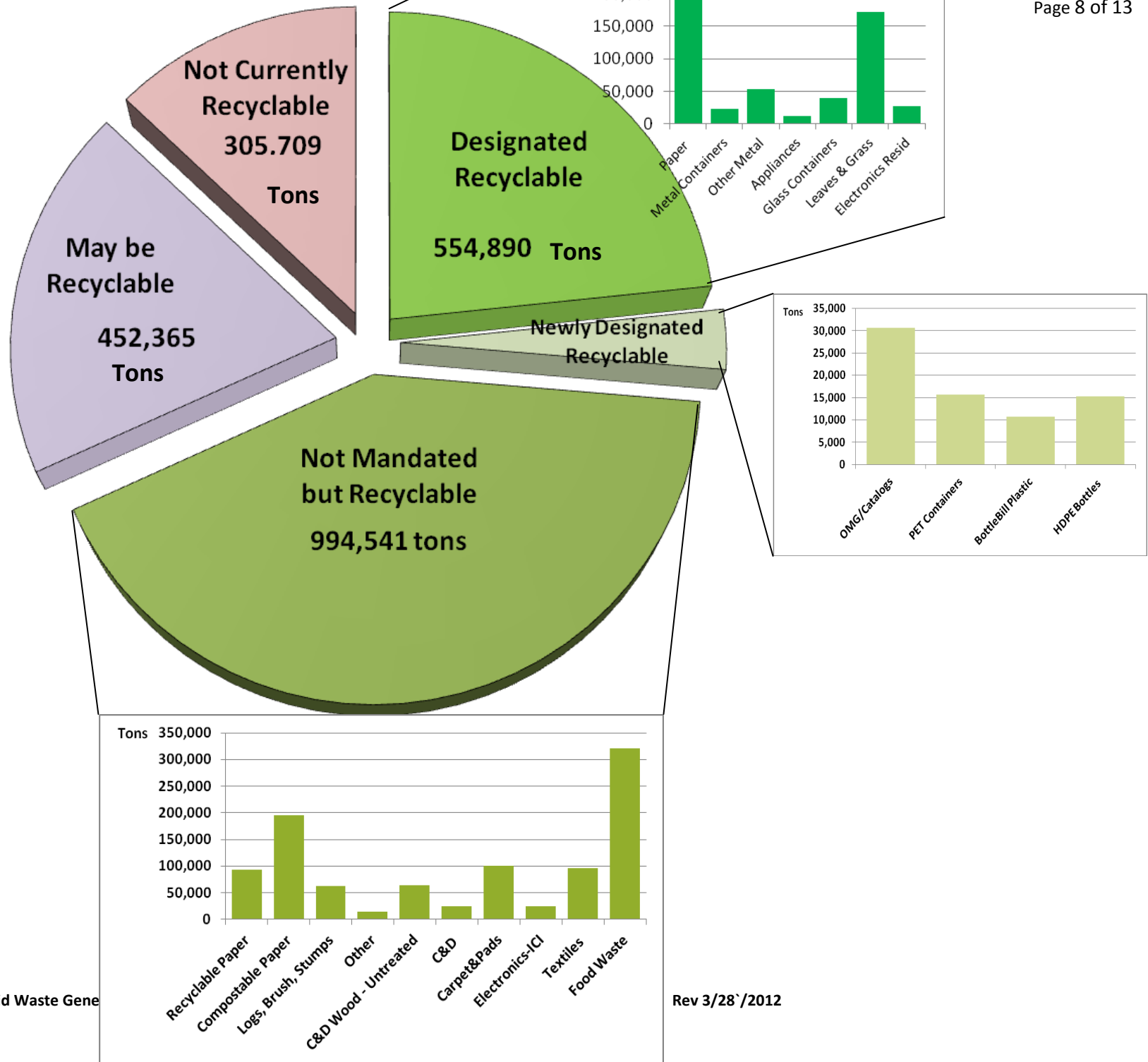
The 2009 CT MSW disposal characterization [study](#) indicated that ***CT designated (mandatory) recyclable items still accounted for approximately 27% of the weight of CT MSW disposed, and food waste accounted for another 13.5% of the CT MSW disposed in 2009.*** In addition there was a high percentage of other recyclable material still being disposed in CT. (See Table 6 – Page 15 of the [study](#) and [figures](#) on next page)

By maintaining and expanding source reduction and recycling efforts, Connecticut will continue to realize local and global environmental benefits while at the same time avoiding increased public expenditures for additional disposal capacity. However, simply collecting material for recycling is not recycling; recycling occurs when the material is used to make a product, and the cycle is not complete unless those recycled content products are purchased and used. Therefore material needs to be recovered for recycling in a manner that maximizes quality and value.

*Connecticut has the potential to do a much better job of source reduction and recycling and **needs to do that in a manner that ensures the quality and value of the material collected for recycling.***



**Figure 4a**  
**CT 2009 MSW**  
**Disposal**  
**Characterization**  
**Summary - Types of**  
**MSW Found in the**  
**Disposal Stream at**  
**Sampling Stations**  
**at CT RRFs and TS**








**Table 2 – Connecticut MSW – Detailed Statistics FY2010 – Includes Residential and Non-Residential MSW**[\(please see note re data qualifiers\)](#)



<b>CT MSW Reported Recycled</b>	
Tons CT MSW Reported Recycled FY2010	769,353.89
CT Population Estimate – July 1, 2009 <a href="#">CT Department of Public Health Estimate</a>	3,518,288
TPY (Tons/Person/Year) CT MSW Reported Recycled	0.2187
PPY (Pounds/Person/Year) CT MSW Reported Recycled	437.4
PPD (Pounds/Person/Day) CT MSW Reported Recycled	1.2
<b>Estimates of Amounts of Organic Material Grasscycled and Home Composted</b>	
Tons Organic Material Estimated Grasscycled and Home Composted (Based on municipal programs promoting grasscycling and home composting) FY2010	41,682.55
TPY (Tons/Person/Year) Organics Estimated Grasscycled and Home Composted FY2010	0.0118
PPY (Pounds/Person/Year) Organics Estimated Grasscycled and Home Composted FY2010	23.6
PPD (Pounds/Person/Day) CT MSW Estimated Grasscycled and Home Composted FY2010	0.06
<b>Disposed</b>	
Tons CT MSW Estimated Disposed FY2010	2,409,870.47
TPY (Tons/Person/Year) CT MSW Estimated Disposed FY2010	0.6849
PPY (Pounds/Person/Year) CT MSW Estimated Disposed FY2010	1,370
PPD (Pounds/Person/Day) CT MSW Estimated Disposed FY2010	3.75
<b>Generated</b>	
Tons CT MSW Estimated Generated FY2010	3,179,224.36
TPY (Tons/Person/Year) CT MSW Estimated Generated FY2010	0.9036
PPY (Pounds/Person/Year) CT MSW Estimated Generated FY2010	1807.2
PPD (Pounds/Person/Day) CT MSW Estimated Generated FY2010	4.95
<b>Summary</b>	
% CT MSW Estimated Recycled FY2010	24.20%
% CT MSW Estimated Recycled, Grasscycled, and Home Composted	25.51%



**Table 3 - Connecticut MSW Reported Recycled<sup>1</sup> by Material Type FY2010** – (see [note #1](#) in Figure 1 )

Material Category	Recyclable Item Reported Collected or Marketed	Tons Recycled FY2010
<b>CONTAINERS- Glass, Metal, Plastic - Bottles, Cans, &amp; Other Containers 51,571.63 tons</b>  Tonnage mainly based on data obtained from marketed reports submitted by CT solid waste facilities permitted to process source separated recyclables. Some municipal recycling report data also included.	Aluminum Cans	2,013.95
	Aluminum Foil	146.41
	Aseptic Containers/Paper Beverage Containers	210.26
	Commingled Containers (mix of bottles and cans – may contain a small amount of bottle bill material)	51.21
	Ferrous Cans	2,731.63
	Glass Aggregate - Does not include glass aggregate used as landfill cover.	15,205.03
	Glass Brown	1,964.06
	Glass Containers – Mixed (Most sent to glass beneficiators to be optically sorted and marketed)	5,661.76
	Glass Flint	1,544.11
	Glass –Green	2,478.78
	Metal (steel) Containers	1,119.77
	Plastic – Baled	932
	Plastic – Clear PET	3,142.18
	Plastic – Mixed Or Pigment PET	2,322.24
	Plastic - Natural HDPE	1,659.43
	Plastic Mixed	6,375.82
	Plastic-Mixed or Pigmented HDPE	2,894.91
	Plastic mix - #1 and #2	132.91
	Plastic mix - #3 thru #7	212.44
	Plastic - Other Plastic	487.12
	Containers Collected as Part of a Single Stream Recyclable Mix (Estimated that containers were 11%, by weight, of the single stream mix)	8.69
	Containers Collected Dual Stream but Weighed Together with Paper (Estimated that containers were 11%, by weight of the material collected dual stream)	276.92



Material Category	Recyclable Item Reported Collected or Marketed	Tons Recycled FY2010
 <b>ELECTRONICS - Data is Questionable</b> The FY2010 Annual Municipal Recycling Reports indicated 3,627.48 tons of electronics recycled. However, some of that data is questionable so FY2009 Annual Municipal Recycling Report figures were used. These figures do not include most of the electronics recycled from non-residential sectors and therefore is a gross underestimate.	CELL PHONES (not reported to DEEP)	0
	ELECTRONICS (FY2009 data)	<a href="#"><u>1737.6</u></a>
 <b>ORGANICS - 274,102.7 tons</b>  Based on data reported in the FY2010 Annual Municipal Recycling Reports and FY2010 data submitted by Scotts/Hypoxex in Lebanon CT.	Brush - Yard Waste	67,242.47
	Christmas Trees	94.39
	Cow Manure	208.04
	Food Proc Residuals (Source separated )	0.26
	Grass	4,838.47
	Leaves	130,864.43
	Wood Chips From Yard Waste	4,555.15
	Yard Waste	49,331.73
	Yard Waste- Additional tonnage reported received by Scotts/Hypoxex and which appeared not to be represented in municipal annual recycling reports	16,967.76
 <b>PAPER - 394,000.26 tons</b> Tonnage based mainly on data obtained from marketed reports submitted by CT solid waste facilities permitted to process source separated recyclables. Some municipal recycling report data also included.	Books	16
	Boxboard	3,266.33
	Coated Bookstock	963.29
	Cores Paper	26.02
	Corrugated	188,985.22
	Corrugate/Magazine/Newspaper Mix	32,808.26
	Corrugated/Newsprint Mix	11,652.61
	Magazines	166.5

Material Category	Recyclable Item Reported Collected or Marketed	Tons Recycled FY2010
 <p><b>PAPER (cont'd)</b></p>	Newspaper	64,890.07
	Newspaper #8	2,832.81
	Office- High Grade White Ledger Paper	3,246.55
	Office Paper	44,020.19
	Office Paper Sorted Mixed	3,810.75
	Other Paper Grade	260.80
	Paper Mixed	33,830.25
	Printer Paper Waste	858.33
	Phone Books	55.40
	Paper Collected as Part of a Single Stream Recyclable Mix (Estimated that paper was 89%, by weight, of the single stream mix)	70.34
	Paper Collected Dual Stream but Weighed Together with Containers (estimated that paper was 89% by weight of the material collected dual stream).	2,240.54
 <p><b>SCRAP METAL - 44,721.63 tons</b> Based on data obtained from the FY2010 Annual Municipal Recycling Reports and FY2010 MidCT RRF Operation Reports.</p> <p>RRF</p> <p>There were an additional <b>35,131</b> tons of post-combustion Fe recycled from ash. (Ash is categorized as a "special waste").</p> <p>This is probably an underestimate of the total amount of scrap metal recycled since it does not include most scrap metal recycled from commercial sectors.</p>	Propane Tanks	20.62
	Scrap Metal - 15% subtracted to account for residue	28,344.48
	Scrap Metal – RRF Pre-Combustion	16,356.53

Material Category	Recyclable Item Reported Collected or Marketed	Tons Recycled FY2010
<b>TEXTILES - 515.23 tons</b> Based on data obtained from the FY2010 Annual Municipal Recycling Reports. 	Sneakers	1.61
	Used Clothes/Goods	513.62
<b>OTHER MSW Recycled - 2,704.81 tons</b> Based on data obtained from the FY2010 Annual Municipal Recycling Reports. 	Automotive Recyclables - Includes: Anti-Freeze, Oil Filters, Storage Batteries, Waste Oil	2,593.02
	Ballasts	1.83
	Batteries (Other)	0.96
	Eyeglasses (actually >0, but tonnage not reported)	0
	Freon	2.25
	Household Batteries (Alkaline)	2.06
	Laser Toner Cartridges	0.46
	Mattresses	16.1
	Mercury Lamps; Fluorescent Lamps; Hid's; Specialty Lamps	64.05
	Nickel – Cadmium Rechargeable Batteries	18.87
	Paint – Latex	3.66
	Plastic Film	1.55

## **QUALIFIERS FOR DATA USED TO CALCULATE CONNECTICUT MSW RECYCLING, DISPOSAL, GENERATION RATES**

### **Recycling Data Qualifiers:**

- Recycling data is based on information provided on quarterly reports submitted to the DEEP by CT solid waste facilities permitted to process source separated recyclable items, CT regional solid waste transfer stations permitted to transfer recyclables, and the Annual Municipal Recycling Reports submitted to the DEEP.
- The tonnage of leaves or other yard waste recorded as being recycled at municipal sites is usually estimated on the basis of cubic yards. The reliability of the conversion factor may be affected by the moisture content of the leaves and other material.
- An estimate of the amount of yard waste and food waste backyard composted and the amount of grass “grasscycled” is based on descriptions in the Annual Municipal Recycling reports of municipal or regional programs to promote those activities.
- Recycling tonnages generally **do not** include glass, metal, and plastic recycled through the Connecticut bottle deposit law infrastructure.
- Tonnages of non-residential material recycled **are generally under-reported**.
  - Recycling tonnages **do not** include: most of the commercially recycled scrap metal, automobile scrap metal, waste oil recycled by businesses or garages, or most of the storage batteries which are recycled through the Connecticut storage battery deposit infrastructure.
  - Recycling tonnages generally **do not** include material backhauled by retail chains to out-of-state distribution centers for recycling or other recyclable material which does not pass through a permitted CT solid waste/recycling facility. With new hauler reporting requirements pursuant to P.A. 10-87, some of this data may be available to DEEP in the future.
- Tonnage of landclearing and demolition material recycled is not included in the MSW statistics
- Tonnages of material reported as “recycled” reflect the amount of MSW reported collected for recycling, or, in the case of bottles, cans, and paper the amount reported marketed to brokers, beneficiaries, or end users by Connecticut recycling processing facilities. ***Recycling tonnages do not necessarily reflect the amount actually used to make products.*** For example, the amount of residue generated at and disposed by secondary processing facilities (e.g. glass beneficiaries) and the amount of residue and unusable materials disposed by end users (e.g. paper mills) or brokers is not reflected in the recycling statistics.
- Material used as alternative daily landfill cover material is not knowingly included in the recycling stats.
- Material (other than waste oil) burned for energy is not considered recycled.

### **MSW Disposal Data Qualifiers**

- Disposal data is based on information provided on quarterly reports submitted to the DEEP by Connecticut permitted solid waste facilities including resource recovery facilities (waste-to-energy facilities), landfills, solid waste transfer stations, recycling facilities (residue), C&D VRPs (MSW separated out from C&D waste and disposed), and annual municipal recycling reports submitted to the DEEP.
- Data regarding MSW hauled directly out-of-state for disposal is not currently reported to DEEP. Therefore, there may be additional tonnages of MSW **disposed** that is not included in the CT MSW stats. With new hauler reporting requirements pursuant to P.A. 10-87, some of this data may be available to DEEP in the future.
- Tonnages of MSW disposed do not always include the tonnage of disposed bulky MSW (furniture, carpets, etc.) which is often reported to DEEP as “bulky waste” or “construction and demolition (C&D)” waste.
- MSW disposal figures represent residential and non-residential disposal.