

US EPA ARCHIVE DOCUMENT

**Review of Alternative Data Sources to Replace the U.S. Department of
Commerce Current Industrial Report (CIR)-Scoping Analysis
U.S. Environmental Protection Agency
Office of Resource Conservation and Recovery
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1.0 INTRODUCTION

The U.S. Census Bureau Department of Commerce Current Industrial Report (CIR) program measured U.S. industrial activity by gathering data on the production and shipments of selected products. The Census Bureau terminated the collection of CIR data mid-2011. The CIRs provided critical data sets used to update EPA's Municipal Solid Waste Characterization annual report series. Specifically, the unit sales data by 6-digit NAICS (North American Industry Classification System) level and seven through ten digit product class and product code levels based on NAICS were used to estimate the generation of municipal solid waste from manufactured durable and nondurable goods such as apparel and footwear, small appliances, and linens.

This memorandum summarizes EPA's scoping analysis pursuing alternative data sources to replace the data previously provided through the CIR program. For the purpose of this analysis, EPA limited the search to data sources for three industry sectors crucial to estimating solid waste amounts for consumer goods. The industry sectors targeted were apparel and footwear, linens, and small appliances.

These three industry sectors provide a representative sample of the data necessary to update the annual Municipal Solid Waste Characterization report. New data identified through this scoping analysis will need to be downloaded and analyzed side-by-side with the existing methodology to determine if the resulting MSW generation estimates are similar to current estimates.

2.0 PUBLICLY AVAILABLE CENSUS DATA FOR MANUFACTURING

Table 1 lists the publicly available U.S. Census Bureau reports reviewed. None of these reports provide direct replacement data for the CIR data. These data sources either do not include the discrete number of units produced for specific types of products within different industry sectors or have incomplete datasets.

A Census Bureau staff member involved in the publication of the CIR series stated that the manufacturing data available from the Annual Survey of Manufacturers (ASM) and the Economic Census can mitigate the loss of the CIR data for most data users. The ASM provides regularly updated dollar value for shipments data but it does not provide product unit data. The Economic Census attempts to provide the number of units shipped at an appropriate level of detail however the data sets are incomplete because the individual numbers are either missing or deemed confidential.

Blynda Metcalf, Branch Chief of the Consumer Industrial Products Branch at U.S. Census, was contacted regarding the sources of data used to compile the CIRs. Ms. Metcalf explained that the primary source of data for the CIR and other Census reports is a mandatory survey of

manufacturers that is developed and administered by the Census. The raw data from these surveys are protected for confidentiality reasons but are used in aggregate to develop different studies and reports. It is unclear if EPA could access the background data in any other aggregated form than what is shown in the published Census reports.

With regard to the Apparel, Linens, and Small Appliances product sectors, Ms. Metcalf shared that the CIR has been discontinued due to funding cuts and, as a result, shipment data broken down to the 10-digit product codes for these sectors will not be published in future Census reports. She stated that the most detailed product information is published in the Economic Census, which is conducted in the years ending in 2 and 7. The 2012 Economic Census Industry Series will be published on a flow basis starting June 2014 through February 2015.

Table 1. U.S. Census Reports Reviewed

Data Source	Publicly Available?	Key Data Elements	Level of Detail	Frequency of Update
U.S. Census Manufacturers' Shipments, Inventories, & Orders (M3) Survey	Yes	Dollar value and percent change for shipments, new orders, inventories, and work in progress.	Data are collected and tabulated predominantly by 6-digit NAICS code level.	Monthly
U.S. Census Commodity Flow Survey	Yes	Shipment weights and dollar values for broad-based industry categories.	Data are tabulated at the 2-digit commodity code level	Every 5 years
Economic Census	Yes	Number of companies with shipments of \$100,000 or more, quantity of production for all purposes, number of product shipments ¹ , dollar value of product shipments.	Data are shown at the 6-digit NAICS level and seven through ten digit product class and product code levels based on NAICS	Every 5 years
U.S. Census Manufacturers Annual Survey of Manufacturers (ASM)	Yes	Dollar value of products shipped.	Data are collected at a comparable level of detail as the CIR.	Annually
Manufacturing and Trade Inventory and Sales	Yes	Dollar value and percent change for shipments and inventories.	Data are presented as industry totals at the 3-digit NAICS code level	Monthly

1. The 2007 data set only includes quantity of units shipped for 100 of the 9,600 records because the individual numbers are either missing or deemed confidential.

Since losing CIR funding, Census incorporated many of the product codes (at the 10-digit level) into the Economic Census. In most cases, however, the reports will include only the value of shipments, not quantities shipped. The 2007 data set only includes quantity of units shipped for 100 of the 9,600 records (~1 percent). The usability of this data set is unlikely because of the number of missing records for quantity of units shipped. The records for dollar value of products in the Economic Census are complete at the 6-digit NAICS level and seven through ten digit product class and product code levels.

The Economic Census combined with elements from the Manufacturers' Shipments, Inventories, & Orders (M3) Survey and/or the ASM survey could provide a suitable replacement with a modified methodology for estimating the generation of municipal solid waste. This would require a methodology that connects economic activity (dollar sales) provided by the M3 and the ASM with the unit data (number and weight of units) provided by the Economic Census. However, with the limited number of unit data shown in the Economic Census, this approach will be restricted in scope.

3.0 AVAILABLE INDUSTRY DATA

Proprietary and non-proprietary statistical data collected by industry associations and market research firms could potentially yield a direct replacement for the CIR data for some industry sectors but the cost and frequency of updates vary. Available industry data identified during this scoping analysis are discussed below.

3.1 Apparel and Footwear Manufacturing

EPA's research identified one industry specific data source for apparel and footwear manufacturing as well as two statistical analysis companies that publish industry market reports for several manufacturing sectors including apparel and footwear. The American Apparel and Footwear Association publish an annual statistical analysis report entitled *Trends*. This report appears to be a direct replacement of the CIR data. It provides a consistent level of detail for units produced, imports, exports, consumption, and consumer expenditures. Historical *Trends* data from 2001 through 2008 are available for download at no cost via the association's website; more recent reports are available for purchase by non-members for \$150 each.

Purchasing market research from the two companies identified is a more costly option for apparel and footwear; however, the companies are potential data sources to replace CIR data for other durable and nondurable goods.

Table 2. Data Sources Specific to Apparel Manufacturing

Data Source	Publicly Available?	Key Data Elements	Level of Detail	Frequency of Update
American Apparel and Footwear Association: Trends Report www.wewear.org/	Historical Reports are publicly available, Current reports are \$150 per report	Quantity of units produced, dollar value of products, volume and dollar values of imports and exports	The data are collected at a comparable level of detail as the CIR.	Annually
IBIS World Global Apparel Manufacturing: Market Research Report www.ibisworld.com/	Proprietary, \$925 per report; \$1,095 for membership	Provides industry market reports key industry statistics, market size, industry trends, and growth and profit forecasts for a 5-year outlook period	Unknown	Every 5 years
Statista Industry Reports www.statista.com/	Proprietary, \$299 per report	Dollar value of shipments and sales data with trends and 3 year forecasts.	Unknown	Annually

3.2 Linen Manufacturing

EPA's research identified no linen or textile manufacturers association that collects domestic shipment or sales data on finished products. The National Cotton Council of America publishes the total number of cotton bales consumed by home furnishings products sold in the U.S. However, a search of the Council's website determined that the background data source for bales consumed was the Census CIR program. The two statistical market research companies identified as a source of data for apparel and footwear products (Table 2) may also be a source of information for linens and textiles sold in the U.S.

3.3 Small Appliance Manufacturing

EPA's research identified one trade publication and two trade associations that collect and publish data on small appliance manufacturing. *Appliance Magazine* publishes a range of industry snapshot reports as well as a nationwide "Appliance Industry Statistical Review" report, which includes historical data.

Table 3 compares the product detail from the Census CIR program and *Appliance Magazine's 1999-2008 Statistical Review*; the current report is available on-line at a cost of \$995 and is assumed to have similar product detail as the older version. Although this is the most comprehensive data source identified, the product detail is not as extensive as the Census CIR for small appliances. Some products such as electric fans, humidifiers and air purifiers represent popular products but other products such as hot plates, pressure cookers, and chaffing dishes are less common.

In addition, the Association of Appliance Manufacturers and International Housewares Association both offer reports with appliance shipment data, however the reports are proprietary and the level of detail of data is not known. The best data sources identified are shown in Table 4.

Table 3. Small Appliance Categories Side-by-side Comparison

2010 CIR ⁽¹⁾	Appliance Statistical Review ⁽²⁾
Electric Fans	-----
Broilers	-----
Coffee Makers	Coffee Makers (Automatic Drip)
Deep Fat Fryers	Deep Fryers
Toaster Ovens	Toaster Ovens
Hot Plates/Disc Stoves	-----
Waffle Irons/Griddles	Waffle Irons/Sandwich Grills
Frying Pans/Skillets	Frying Pans/Skillets
Airspace Heaters	-----
Corn Poppers	-----
Electric Irons	Irons, Steam and Spray
Electric Bed Coverings	-----
Electric Heating Pads	Heating Pads
Portable Humidifiers	-----
Portable Air Purifiers	-----
Food Mixers	Mixers (Stand-type)

Blenders	Blenders (Hand-held and Stand-type)
Food Processors	Food Processors
Vacuum Canisters	Vacuum Canisters
Vacuum Hand-held	Vacuum Hand-held (Electric and Rechargeable)
Vacuum Stick	Vacuum Stick
Vacuum Upright	Vacuum Upright
Pressure Cookers	-----
Toasters	Toasters
Chaffing Dishes	-----
Crockpots	Slow Cookers
Drink Makers	-----
Whippers	Mixers (Hand-held)
Juicers	Juicers, Juice Extractors
Grinders	-----
Coffee Grinders	Coffee Grinders
Warming Trays	-----
Food Warmers	-----
Bottle Warmers	-----
Curling Irons	Curling Irons and Styling Combs/ Wands/Crimpers
Curlers	Hair Setters
Hair Dryers/Blowers	Hair Dryers
Knife Sharpeners	-----
Scissors	Hair Clippers
Toothbrushes	-----
Vibrators	Massagers, Hand-Held
Electric Razors	Shavers (Men's/Women's), Trimmers, Beards & Moustache
Can Openers	Can Openers

- (1) U.S. Dept. of Commerce, Bureau of the Census. Current Industrial Reports, Electric Housewares and Fans (MA335E). 2010.
- (2) *Appliance Magazine*. "U.S. Appliance Industry Statistical Review: 1999 to 2008". July 2009.

Table 4. Data Sources Specific to Small Appliance Manufacturing

Data Source	Publicly Available?	Key Data Elements	Level of Detail	Frequency of Update
Appliance Magazine www.appliancemagazine.com	Sample of some reports are publicly available, Current reports are proprietary, Prices vary. Historical statistical review costs \$995	Statistical manufacturing industry data, including United States unit shipment date on major appliance equipment.	The data are collected at a comparable level of detail as the CIR.	Variable, Monthly Industry Snapshots and Annual/Decade Reviews
Association of Home Appliance Manufacturers	Proprietary, Prices vary	Statistics on the production and shipment of major	Unknown	Annually

www.aham.org	from \$150 to \$1000 depending on report	appliances in the United States and Canada.		
International Housewares Association www.housewares.org	Proprietary, \$500 for 2013 report	Sales and market share data for housewares manufacturing sector	Unknown	Annually