

**2007**  
**Dane County and City of Madison**  
**Clean Sweep Program**  
**Annual Report**

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# Table Of Contents

<b>Executive Summary</b> .....	3
<b>Introduction</b> .....	4
<b>Organization and Methods</b> .....	5
<b>Facility Description</b> .....	5
<b>Program Administration &amp; Personnel</b> .....	5
<b>Materials Accepted</b> .....	6
<b>Hours of Operation</b> .....	6
<b>Operating Procedures</b> .....	6
<b>Funding Mechanism</b> .....	6
<b>2007 Program Summary</b> .....	7
<b>Wastes Volumes</b> .....	7
<b>Customer Counts</b> .....	9
<b>Special Events</b> .....	11
<b>Customer Distribution Patterns</b> .....	11
<b>Averages and Ratios</b> .....	12
<b>Mercury Recovery</b> .....	13
<b>Waste Shipments</b> .....	13
<b>Recycling/Treatment/Disposal Destinations</b> .....	13
<b>Program Promotion</b> .....	14
<b>Trends &amp; Emerging Issues</b> .....	14
<b>Program Costs</b> .....	15
<b>Highlights &amp; Accomplishments</b> .....	17
<b>Recommendations &amp; Conclusions</b> .....	18
<b>Appendices</b> .....	20

## Executive Summary

Dane County and the City of Madison have each had long-standing commitments to environmental stewardship. Together, they have demonstrated this commitment by providing services that offer cost effective solutions to environmental problems. As a collaborative effort between these two entities, the Dane County/City of Madison Clean Sweep program has grown to become one of the largest (in terms of waste volumes collected annually) continuous or permanent hazardous waste collection programs in the State of Wisconsin. The program aims to mitigate the risks associated with improper disposal of hazardous materials by collecting unwanted pesticides, household products and chemicals for safe and legal disposal before they cause problems.

The 2007 season was a highly productive season for the Dane County/City of Madison Clean Sweep program. During 2007, program staff:

- ❑ Received and managed a grand total of **942,030** pounds of waste materials, a **17.4%** increase over 2006 totals;
- ❑ Recycled **470,210** pounds of latex paint;
- ❑ Returned a total of **16,388** useable products (having an estimated weight of **61,013** pounds) to **2,055** customers through the collection facility product exchange;
- ❑ Serviced a grand total of **9,071** customers, including **6,073** household drop-offs, **854** household participants in satellite collection events, and **79** businesses;
- ❑ Provided service to **10** customers under agreement with Columbia County;
- ❑ Organized and completed a satellite collection event in the City of Sun Prairie, servicing **288** participants and capturing **10,301** pounds of waste;
- ❑ Participated in Dane County's first-ever pharmaceutical collection program, capturing approximately **1,500 pounds** of uncontrolled and 180 pounds of controlled substances from **566** participants;
- ❑ Collected and recycled **189** auto batteries and approximately **100** pounds of other rechargeable batteries.

Fees collected in the form of tipping fees at the Dane County Landfill are the primary source of funding for the Dane County/City of Madison Clean Sweep Program. Other funding sources include grants and user fees collected from business customers. The key financials from 2007 include the following:

- ❑ Net program costs totaled **\$314,274** in 2007, a **25 %** increase from 2006;
- ❑ Waste disposal costs totaled **\$229,726** in 2007, a **17.8%** increase from 2006, due to annual disposal cost increases and larger volume of waste received;
- ❑ Administrative & labor costs totaled **\$147,696** in 2007, a **20.6%** increase from 2006, due primarily to the reclassification of a technician position from ½ time to full-time.
- ❑ Grants awarded in 2007 (from DATCP) totaled **\$27,867**;
- ❑ User fees received from businesses in 2007 totaled **\$26,054**;
- ❑ Revenues received in the form of reimbursements for costs associated with special events or services totaled **\$8,991** in 2007.
- ❑ Revenues received from automotive battery recycling in 2007 totaled **\$236**.

Overall, facility customer counts were down approximately 21 % in 2007, yet the total volume of waste received in 2007 was the most ever in the program's history. The program's rapid growth rate, growing fiscal demands, future funding uncertainties, and public expectations for expanded service levels will present a real management challenge for Dane County and the City of Madison in the coming years.

# Introduction

The Dane County/City of Madison Household Hazardous Waste Collection Program is a collaborative effort between Public Health Madison & Dane County and Dane County Department of Public Works. This popular program provides opportunities for City and County residents to safely dispose of hazardous waste. Since opening a permanent collection facility in 1993, the program has evolved to consist of four basic elements or service offerings. These services include:

- **Household Hazardous Waste (HHW) collection services**  
Provides a permanent collection facility and satellite collection events offering free disposal of household hazardous waste to any household unit within Dane County.
- **Agricultural Waste collection services**  
Helps farmers and agricultural businesses to dispose of unwanted, unused, damaged or banned hazardous chemicals, including pesticides.
- **Very Small Quantity Generator (VSQG) waste collection services**  
Assists businesses who are very small quantity generators of hazardous waste by providing a convenient and cost-effective hazardous waste disposal alternative.
- **Product Exchange**  
Facilitates reuse of paints, chemicals and other household products which are delivered to the collection facility in a useful condition.

Throughout its history, the primary objectives of the Dane County/City of Madison Household Hazardous Waste Collection Program have been to:

- Facilitate convenient and cost-effective HHW collection and disposal opportunities for all City and County residents in order to mitigate the health hazards and environmental consequences associated with improper disposal of hazardous wastes.
- Educate and enable residents to select, utilize, store and dispose of products in ways that serve to minimize the generation of hazardous waste.
- Encourage and facilitate the reuse and recycling of household hazardous waste.
- Provide cost effective waste disposal options for farmers, VSQG's and agricultural businesses.

By assuring safe waste management practices, encouraging pollution prevention, reuse and recycling, and assuring proper disposal, the program helps to prevent hazardous material from entering local landfills, thereby protecting public health and the environment. The information contained in this report is intended to serve both internal and public accountability purposes, while providing a vehicle by which the effectiveness and efficiency of the Clean Sweep program can be evaluated and the ongoing allocation of financial resources can be supported and justified.

# Organization and Methods

## Facility Description

The Dane County/City of Madison Clean Sweep Facility is located on the north end of the Dane County Highway Garage property at 2302 Fish Hatchery Road in Madison, Wisconsin. The site is classified as a HHW collection facility. The facility continued to operate seasonally in 2007, receiving materials only during the months of May through October. Materials collected at the site continue to be accumulated or stored less than one year from the time of receipt.

The facility, which is owned by Dane County, was designed and constructed according to Wisconsin Administrative Code NR 666 and NFPA 49 and is operated in accordance with the stipulations contained therein.

The Clean Sweep HHW collection facility consists of an office trailer; two pre-fabricated chemical storage buildings; a sumped bulking area (15'-6"L x 8'-6"W); one pre-fabricated chemical storage building for the product exchange; a 40-foot semi-trailer for dry storage of empty containers and spill supplies; and during the season, a 40-foot semi-trailer supplied by the hazardous waste contractor for storage of filled containers of waste awaiting shipment; a 25-cubic yard lined roll-off container for solid waste, and a covered 25 foot roll-off container for stacking latex paint cans for recycling. The two chemical storage buildings and sump area is enclosed within a 4-1/2' poured concrete wall topped with an 8' chain link fence and is situated on a concrete pad sloped inward to contain spills. The fenced-in area is sheltered with a wood truss, steel-paneled roof canopy. A chain link fence completely encloses the canopied area. The complete facility occupies approximately 2,000 sq.ft. of the 9 acre Dane County Highway Garage property. The office trailer is equipped with telephone, fax, a high speed internet connection, electrical service, air conditioning and heat using propane gas. A 6-camera video system provides surveillance when the facility is closed.

## Program Administration & Personnel

The Clean Sweep program is jointly run by Dane County Public Works and Public Health Madison & Dane County. This long-term partnership has resulted in a very successful collaboration between Dane County and the City of Madison.

Program managers and staff are as follows:

- ❑ Gerald J. Mandli, Commissioner/Director of the Dane County Department of Public Works
- ❑ Mike DiMaggio, Solid Waste Manager, Dane County Department of Public Works
- ❑ Dr. Thomas L. Schlenker, Director, Public Health Madison & Dane County
- ❑ Tommye Schneider, Director of Environmental Health, Public Health Madison & Dane County
- ❑ David L. Radisewitz, Hazardous Waste Coordinator, Public Health Madison & Dane County
- ❑ John Carroll, Hazardous Waste Technician, Public Health Madison & Dane County
- ❑ Joe Albanese, Hazardous Waste Assistant, Public Health Madison & Dane County

## **Materials Accepted**

The facility accepts household hazardous waste (HHW) from households, agricultural herbicides and pesticides from farmers, and hazardous materials from businesses classified as very small quantity generators (VSQG's). The facility accepts most forms of HHW with exceptions including ammunition, explosives, pharmaceuticals, tires, biological and infectious wastes, and radioactive material.

## **Hours of Operation**

For the 2007 season, the facility was open to the public from 7:30 am to 2:00 pm on Tuesdays, Wednesdays, Fridays and Saturdays. Thursdays were reserved for business customers, by appointment only.

## **Operating Procedures**

All activities associated with the collection, sorting, and management of hazardous materials are conducted within the confines of the fenced area of the facility, with the following exceptions:

- Four lined cubic-yard boxes on spill containment pallets are moved out side of the fence during collection hours for ease of sorting and packing. The boxes are moved behind the fence for storage when the facility is closed.
- Cans of latex paint are stacked in a 25-cubic yard roll-off container. The roll-off is covered with a tarp whenever it is raining or the facility is closed.
- Filled, labeled, and logged cubic yard boxes are moved onto the shipping trailer to await shipping.

On a typical day, most customers arrive at the site in their automobiles. After the customer has parked their vehicle and turned off their ignition, a Clean Sweep staff member greets them and collects the customer's materials on a cart for sorting. First, useable products like, paint, household cleaners, automotive supplies, lawn and garden needs, etc., are placed on a separate table to be inventoried and placed in the Product Exchange building. Unusable flammables, aerosols, latex quarts, and special paints are sorted into their appropriate boxes. Latex gallons are stacked into a 20 cubic yard rolloff container to be collected and recycled. Any remaining hazardous materials are sorted, placed into appropriately labeled storage areas, boxes or drums. Gasoline and other flammable liquids are bulked into a 55-gallon metal solvent drum for fuel blending. The date, number, type of container, and type of waste are logged into a binder for program records.

Once there are enough materials accumulated for a shipment, Veolia Environmental Services, the hazardous waste services vendor, is contacted to ship the packaged materials to the appropriate disposal/recycling site. The wastes are then disposed of based on the waste disposal hierarchy of beneficial reuse: recycling, treatment, incineration, and lastly, landfilling. Historically, greater than 90 percent of the waste materials received at the facility have been beneficially reused or recycled by utilizing this strategy.

## **Funding Mechanism**

The Dane County/City of Madison Household Hazardous Waste Program is funded entirely from non-levy sources, with the bulk of the program funding being derived from tipping fee revenues collected at the Dane County Landfill. Some program costs are offset by user fee collections (e.g., VSQG's) or via reimbursements for costs incurred during special events (e.g. Satellite collections). Clean Sweep grants, administered by the Wisconsin Department of Agriculture, Trade and Consumer Protection (WDATCP) make up the balance of the funding for the program.

# 2007 Program Summary

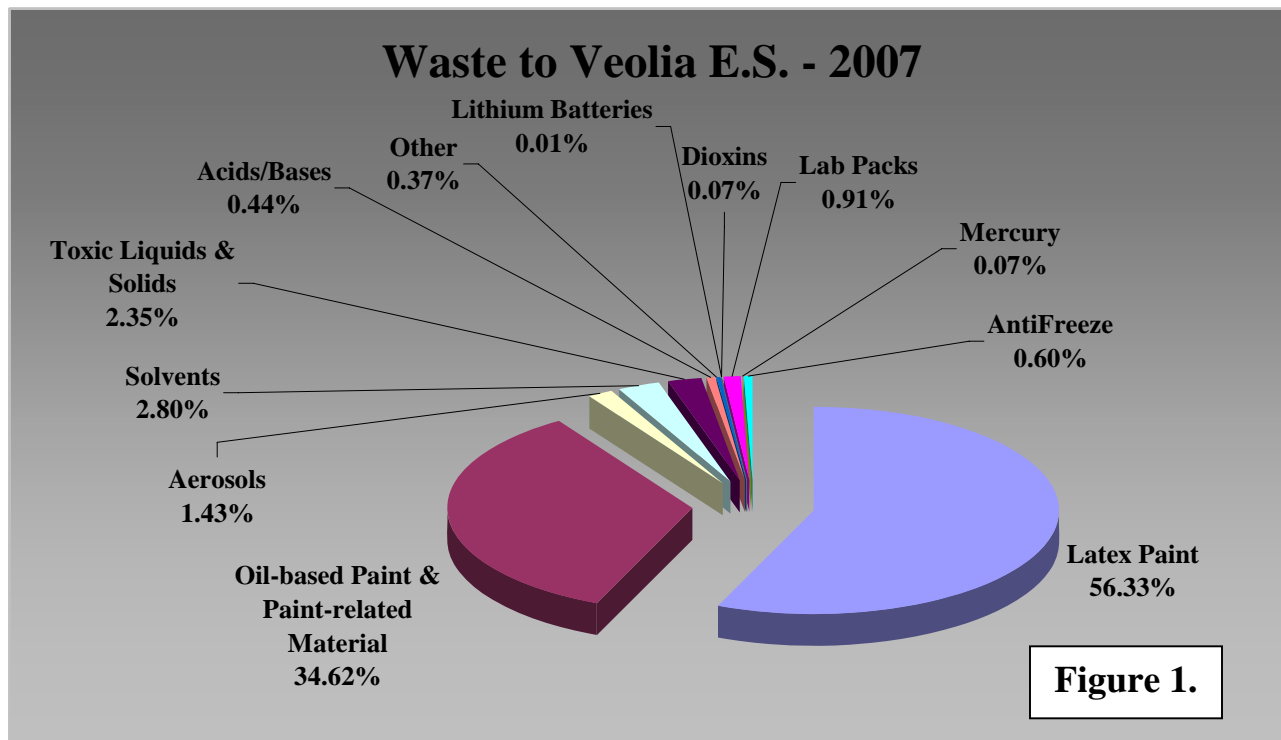
## Waste Volumes

In terms of waste volumes handled, the 2007 season was the busiest season yet in the history of the program. As shown in Table 1, a grand total of 942,030 pounds of waste material was handled by facility staff in 2007, a 17.4 % increase over 2006 totals.

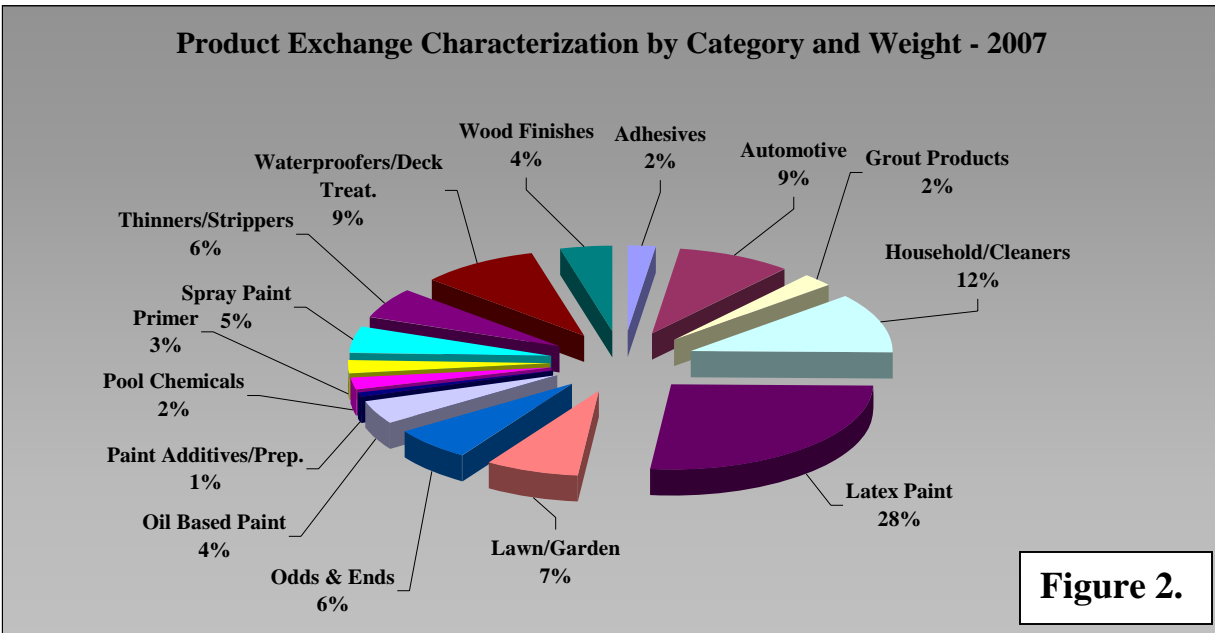
**Table 1. – Comparative Analysis – Facility Outputs**

	2006	2007
Waste to Veolia E.S.	684,671	834,689
Product Exchange	76,102	61,013
Acids/Bases to MMSD	11,524	8,200
Solid Waste to Landfill	29,830	31,980
Rechargeable & Auto Batteries	0	6,148
<b>TOTALS</b>	<b>802,127</b>	<b>942,030</b>

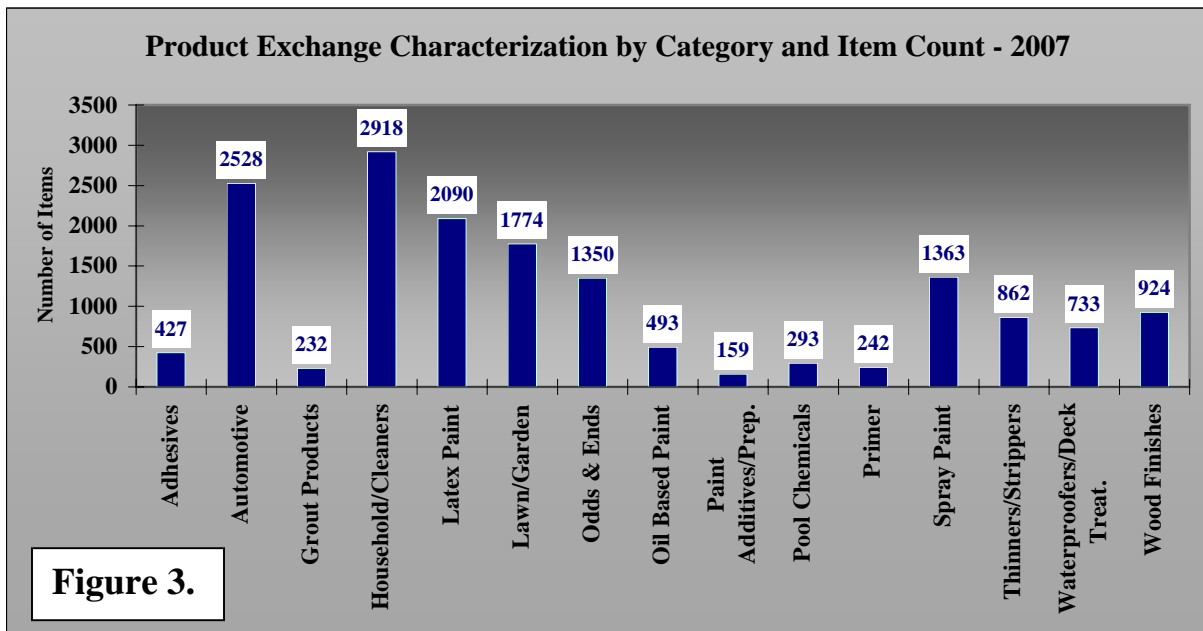
The largest of the five facility outputs identified in Table 1, the category “Waste to Veolia” represents the total amount of waste shipped from the facility by Veolia Environmental Services for recycling, treatment or disposal. This category includes chemicals and household hazardous waste delivered to the facility by farms and other residential customers, as well as hazardous waste delivered to the facility by businesses and municipalities under the VSQG program. It also includes the volumes of waste materials collected during special satellite collection events. A breakdown of this waste is presented in Figure 1. Paint and paint related products continue to be the dominant waste type delivered to the facility, with latex paint having the largest percentage by weight of the total material shipped in 2007.



The volume of waste set aside for product exchange purposes decreased in 2007, due primarily to reduced usage by business entities who had in past years delivered large volumes of useable paint to the facility. The product exchange is comprised of paint and other usable products that were delivered to the facility by residential and business entities and subsequently re-distributed to the general public in 2007. A total of 16,388 items, having an estimated overall weight of 61,013 pounds, were turned back to the general public in 2007. A characterization of the waste materials received for product exchange in 2007 is presented in the following figures. Figure 2 shows the product exchange materials broken down into categories by weight and reveals that latex paint waste was the dominant product by weight in 2007.



**Figure 2.**



**Figure 3.**

Figure 3, which presents the product exchange broken down into categories by item count, shows that the household cleaners category had the most items placed in the product exchange in 2007.

The product exchange continues to be a very popular feature of the Clean Sweep program, and provides an outlet for environmentally and socially conscious citizens to get rid of their unwanted products to the benefit of other citizens. It should also be noted that the product exchange provides an alternative disposal outlet for many waste materials that are technically non-hazardous and suitable for land disposal or flushing to municipal wastewater treatment systems. In terms of economic benefit to product exchange customers, the 16,388 items redistributed in 2007 had an estimated retail value approaching \$100,000, assuming an average retail cost of only \$5.00 per item.

The third distinct facility output from Clean Sweep operations includes the acids and bases that are transferred to the Madison Metropolitan Sewerage District (MMSD) for neutralization. These waste materials are carefully introduced into the wastewater at MMSD's treatment facility, and through dilution and digestion processes, are effectively neutralized. The volume of waste diverted to MMSD also decreased slightly for 2007, in part due to changes in MMSD's policies limiting acceptable materials to liquid, pourable acids and bases. Additionally, Clean Sweep facility staff placed an increased emphasis on diverting useable acids and bases (such as muriatic acid, drain cleaners, etc.) to the product exchange area. In 2007, approximately 5 cubic yards of acids and bases, having an estimated weight of 8,200 pounds was transferred to MMSD for neutralization treatment, resulting in a disposal cost savings of approximately \$4,000.

The fourth facility output from Clean Sweep operations includes non-regulated or solid waste materials. This waste is generated primarily as a result of solvent bulking operations, and is comprised mainly of empty solvent containers, gasoline cans, or other containers of dried or cured non-regulated solid waste or trash delivered to the facility by customers. These wastes are placed into a 30 cubic yard, lined roll-off container, and transferred to the Dane County Landfill when the roll-off container is full. Tipping fees for these wastes are waived at the Dane County Landfill. Pellitteri Waste Systems provided the roll-off container and transportation services for this waste in 2007. As shown in Table 1, the volume of non-regulated waste and trash increased slightly in 2007.

The fifth and final facility output from Clean Sweep operations includes automotive and other rechargeable batteries. Automotive battery recycling services were a new component of facility operations in 2007. 189 automotive batteries were received in 2007, having an estimated weight of 6,048 pounds. Northern Battery provided a storage bin and the recycling services for automotive batteries in 2007. The facility received \$1.25 for each automotive battery received in 2007. Additionally, Clean Sweep staff received approximately 100 pounds of rechargeable Ni-CD, Ni-MH, Li-ion, and small sealed lead batteries of the type commonly found in cordless power tools, electronic devices and toys. These batteries were recycled through the Rechargeable Battery Recycling Corporation (RBRC), who provides a shipping container for battery accumulation and storage at no cost to the facility.

## **Customer Counts**

For the first time in several years, traffic counts decreased for most customer categories in 2007. As shown in Table 2, overall traffic was down nearly 21% when compared to 2006 operations. This is a somewhat surprising aspect of 2007 operations, given the fact that overall waste volumes showed an increase of approximately 17%. Customer counts are tallied manually by facility staff and therefore, and some margin of error is anticipated due to the nature of facility operations. In general, it is felt that the current method for counting customers could be improved by incorporating automated traffic counting technology into daily operations, and through redistribution of manual traffic counting equipment and responsibilities, all of which are planned for 2008.

**Table 2 – Comparative Analysis: Total Customer Count**

<b>Customer Category</b>	<b>2006</b>	<b>2007</b>
Household (HHW) Customers	7,272	6,073
Product Exchange Customers	3,029	2,055
Agricultural Businesses	8	1
Farmers	12	7
Municipalities	9	16
VSQG's	46	55
Columbia County	0	10
Satellite Events	138	288
Med Drop	0	566
<b>TOTALS</b>	<b>10,514</b>	<b>9,071</b>

In 2007, 2,055 customers visited the product exchange at the Dane County/City of Madison facility, taking home an average of nearly 30 pounds of useable product per customer visit, up slightly from an average of approximately 25 pounds per customer visit in 2006. Patrons to this program range from private homeowners looking for materials for home improvement projects to art instructors looking for paints and supplies for theater set development. Many were repeat customers throughout the season.

Also in 2007, 79 farmers, businesses or VSQG program participants delivered 25,454 pounds of waste to the facility. Only one business program participant delivered waste that qualified for the WDATCP pesticide disposal subsidy, and only 7 farms brought waste to the facility in 2007. In general, agricultural waste totals continue to follow downward trends observed in recent years, mirroring statewide trends reported by WDATCP. Overall, the total volume of waste captured through the business waste program was down approximately 15% when compared to 2006, although VSQG program utilization by small businesses and municipalities was up almost 24% from 2006. Table 3 shows the breakdown of the facility's business program utilization for 2007.

**Table 3 – Comparative Analysis: Business Program Participation**

<b>Program</b>	<b>2006 Customer Count</b>	<b>2006 Pounds</b>	<b>2007 Customer Count</b>	<b>2007 Pounds</b>
VSQG	46	12,660	55	17,121
Ag Business	8	5,308	1	282
Ag Unit (Farmers)	12	4,834	7	729
Municipality	9	7,096	16	7,322
<b>TOTALS</b>	<b>75</b>	<b>29,898</b>	<b>79</b>	<b>25,454</b>

A new element to the Dane County/City of Madison Clean Sweep program for 2007 was the expansion of services to allow Columbia County waste generators to utilize the drop-off facility. The terms of the agreement between Dane County and Columbia County call for an annual lump sum fee and \$20 per participants' "trunkload equivalent" to be paid to Dane County for all materials brought to the facility by Columbia County residents. During the 2007 season, only 11 customers from Columbia County took advantage of this new opportunity. It is likely that high fuel prices in 2007 had a negative impact on participation rates, although participation rates are expected to rise as awareness of the program becomes more widespread.

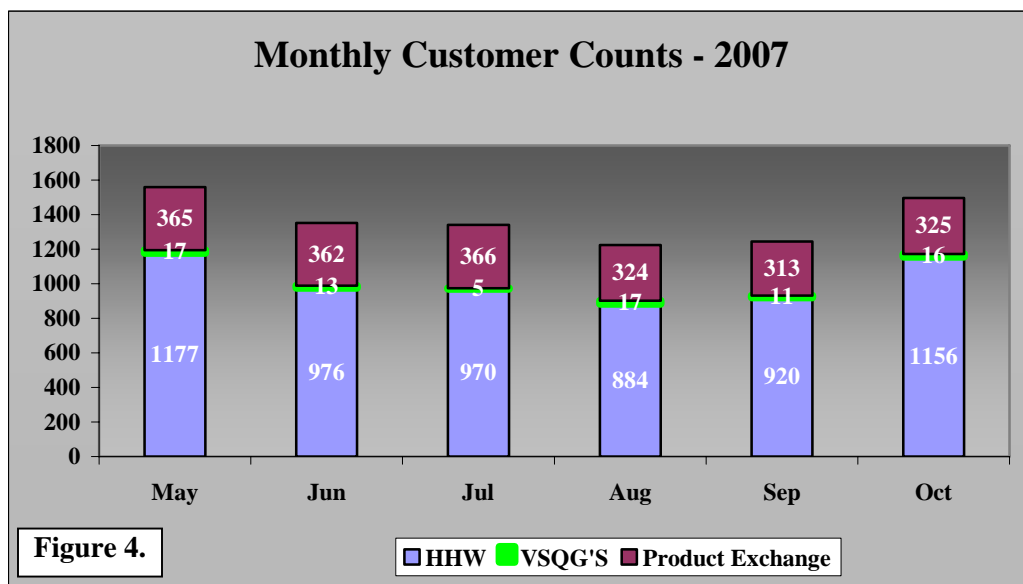
## Special Events

The site for the satellite collection event for 2007 was the City of Sun Prairie. Held on Saturday, October 20, 2007 at the Sun Prairie Recycling Center, 288 participants delivered 10,301 pounds of waste to the event. The event was open to all Dane County households, farmers and agricultural businesses only. Latex paint was not accepted at the event.

Also new in 2007, Clean Sweep facility operations helped to support Dane County’s first-ever pharmaceutical collection program, now known as MedDrop ([www.meddropdane.org](http://www.meddropdane.org)). The event was sponsored by the Madison Patient Safety Collaborative, whose membership is comprised of area hospitals, clinics and health care organizations. Additionally, the event received support from numerous other governmental agencies and organizations including Dane County Public Works, Madison Metropolitan Sewerage District, City of Madison Recycling & Police Departments, Public Health Madison/Dane County and local pharmacies. The event was held on October 13, 2007 at the Olin Avenue Transfer Station in the City of Madison. 566 participants delivered over 1,500 pounds of uncontrolled substances and approximately 180 pounds of controlled substances to the event. The uncontrolled substances were disposed of through Veolia Environmental Services. Working closely with the LaCrosse County Pharmaceutical Collection Program, city law enforcement agents successfully transferred and disposed of the controlled substances in accordance with applicable regulations and current guidance. A second collection event is planned for the month of June, 2008.

## Customer Distribution Patterns

Customer distribution patterns in 2007 essentially mirrored patterns observed in previous years, with the highest number of customers utilizing the facility during the first and last months of the season (May and October). Figure 4 illustrates the monthly customer counts for HHW, VSQG’s, and Product Exchange in 2007. Saturdays and Tuesdays proved to be the busiest collection days in 2007, with each day showing nearly equal traffic numbers. An average of 58 HHW customers utilized the facility per day in 2007, over 105 days of operation. The product exchange averaged 20 customers per day in 2007.



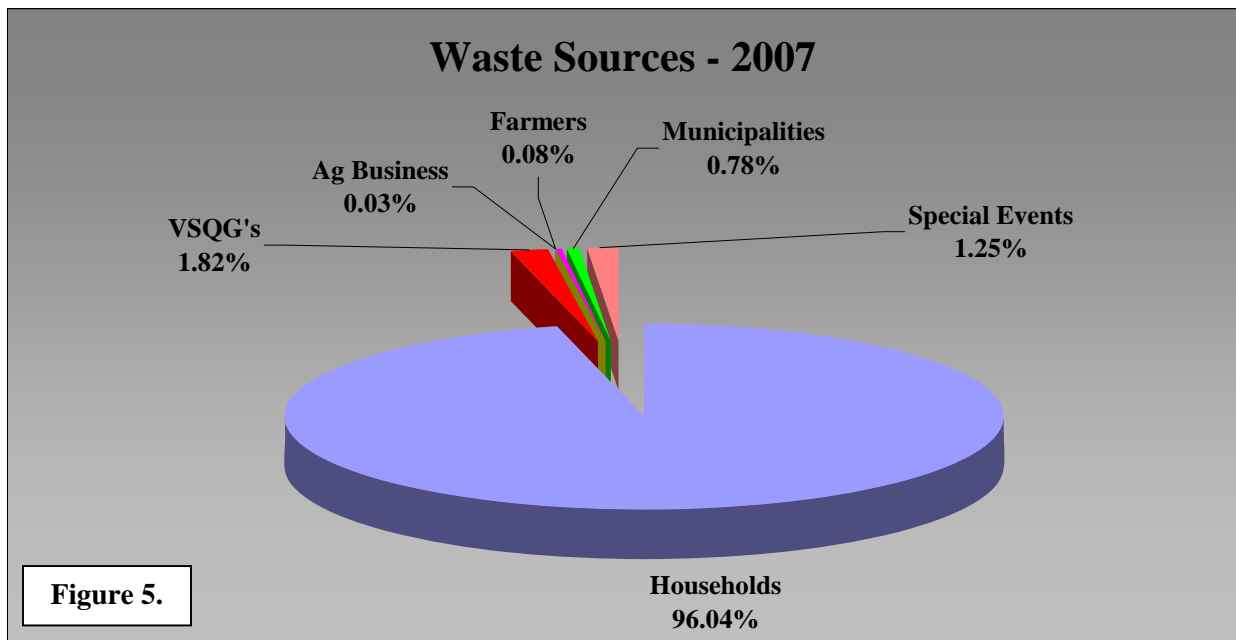
## Averages and Ratios

For each customer category listed in Table 2, with the exception of the Product Exchange Customer category, the customer counts represent the number of individuals delivering waste to the facility. Customer count data from these categories, as well as poundage data from waste shipment records, including inventoried product exchange poundage, is used to calculate an overall “per customer” waste delivery rate. Customer counts from the Product Exchange Customer category are not included in this calculation because it is assumed that all product exchange customers who contributed HHW to the facility have been already accounted for in the customer count for the Household HHW Customer category.

In 2007, each customer delivered an average of 134.26 pounds of waste to the facility, compared to an average of 107.16 pounds per customer in 2006, an increase of approximately 25%. The higher volume of latex paint seen in 2007 was a significant factor in boosting per customer delivery rates. Additionally, the facility may have seen more load consolidation amongst program participants, as customers responded to ever increasing fuel prices.

In 2007, Clean Sweep facility staff managed 942,030 pounds of waste over 105 days of operation, which computes to an average of 8,971 pounds of waste per day, a 16% increase over 2006. Figure 5 illustrates the various sources of this waste for 2007, the overwhelming majority of which originated in Dane County/City of Madison households.

The Clean Sweep program, through its HHW facility and special collection events, served 3.27% of the estimated 211,751 households (assumes 1.9% increase from 2007 U.S. Census Bureau estimate of 207,803 households in 2006) in Dane County in 2007. This participation rate is down slightly from the 2006 estimate of 3.57%. This continues a downward trend noted over the past several years. It is possible that public awareness of the program is not keeping pace with the high rate of residential housing starts observed in Dane County in recent years. Nonetheless, waste volumes taken in by the program keep rising annually. Clearly, there is a huge potential for growth in this program given the overall observed participation rate.



## Mercury Recovery

The recovery and recycling of mercury and mercury containing devices continues to be an important part of Clean Sweep facility operations. Table 4 summarizes mercury device recovery efforts of the past two seasons. Thermostat recovery efforts were particularly successful in 2007, as 372 thermostats were recovered and shipped via the Thermostat Recycling Corporation (TRC) program. TRC is a non-profit corporation founded and operated by thermostat manufacturing companies. TRC facilitates the nationwide collection and recycling of used wall mounted mercury switch thermostats through a collection network comprised of HVAC wholesale outlets, HVAC contractors and local household hazardous waste collection facilities. The collection of sphygnomanometers also increased significantly in 2007, as several medical facilities converted from mercury-containing to electronic devices.

**Table 4 – Comparative Analysis: Mercury Containing Devices**

Device Type	2006	2007
Sphygnomanometers	17	71
Thermostats	201	372
Fever Thermometers	274	233
Other Thermometers	50	7
Switches	221	65
Arc Lamps	6	0
Manometers	1	2
Barometers	1	1
Other	0	2

## Waste Shipments

Veolia Environmental Services performed nine hazardous waste shipment events in 2007, eight of which originated from the collection facility and one arising from the satellite collection event in Sun Prairie. Additionally, Veolia transported twelve 20-cubic yard roll-off containers of latex paint to Amazon Environmental, in Roseville, Minnesota for recycling in 2007. This compares to seven and ten, respectively, in 2006. HHW shipments originating from the collection facility and satellite events were routed to Veolia's HHW facility in Menomonee Falls, Wisconsin for further sorting and processing prior to treatment and/or disposal at other facilities. All shipments were properly manifested in accordance with applicable rules and regulations.

## Recycling/Treatment/Disposal Destinations

With the exception of latex paint shipped in roll-off containers directly to Amazon Environmental, Inc., all other waste materials transported by Veolia E.S. in 2007 were first shipped to Veolia Environmental Services Controlled Waste Division (VES-CWD) HHW Facility in Menomonee Falls, Wisconsin for further processing and handling. This facility possesses a Part B Permit, issued in June of 1988, for RCRA drum and bulk storage of liquids and solids. Additionally, the facility offers drum processing, fuels bulking and labpack depack operations. This allows the materials to be separated and/or consolidated for eventual shipment to appropriate final treatment and disposal destinations. This included the following facilities in 2007, each of which is described in greater detail in the appendices to this report:

- **VES – Port Washington, WI: Lamp recycling and mercury retort facility**

- ❑ **VES – Port Arthur, Texas: RCRA/TSCA Incineration Facility**
- ❑ **VES – Phoenix, AZ: Ballast Recycling**
- ❑ **VES – Sauget, IL: RCRA Incineration Facility**
- ❑ **Green America Recycling/Continental Cement Company - Hannibal, MO: Beneficial Reuse/Fuel Blending**
- ❑ **Dupont Secure Environmental Treatment – Deepwater, NJ: Wastewater Treatment Facility**
- ❑ **Giant Resource Recovery, Inc. – Arvonnia, VA: Beneficial Reuse/Aerosols**
- ❑ **Amazon Environmental, Inc. – Roseville, MN: Latex Paint Recycling**
- ❑ **Jacobus Environmental Services – Madison, WI: Oil and Antifreeze Recycling**
- ❑ **Stablex – Quebec, Canada: Mercury Compound Treatment & Disposal**
- ❑ **Inmetco – Ellwood City, PA: Battery recycling**
- ❑ **Northern Battery – LaCrosse, WI: Automotive battery recycling**

### **Program Promotion**

In 2007, information pertaining to the Dane County/City of Madison Clean Sweep program was disseminated to the public through direct mail to select customer groups, press releases, publications and newsletters, and brochures. Dane County U.W. Extension distributed, via direct mailing, information to all farms and agricultural cooperatives in Dane County in promotion of the Agricultural Chemical Clean Sweep program. In addition, the program maintained an information hotline (608-243-0368) and website (<http://www.danecountycleansweep.com>) devoted to the Clean Sweep program.

### **Trends & Emerging Issues**

The most significant trend affecting the cost of the Dane County/City of Madison Clean Sweep program is the ever-increasing volume of waste material received. Options are extremely limited in terms of increasing facility output without dramatically increasing costs. To date, program expenses have been mostly funded with Dane County dollars derived from tipping fee revenues collected at the Dane County Landfill, and to a lesser extent, with WDATCP Clean Sweep grants and VSQG payments.

Rapidly depleting disposal capacity at the Dane County Landfill may have significant implications for the long-term funding of the Dane County/City of Madison Clean Sweep program. If new disposal capacity is not developed to replace the existing capacity, new funding sources for the Clean Sweep program may need to be identified. Future funding options may include implementation of user fees at the Clean Sweep facility and/or the use of tax levy dollars to fund facility operations, possibly in concert with restrictions on the types of waste that can be brought to the facility. Additionally, it may become necessary to consider changes in waste management strategies that would permit lower-cost land disposal alternatives for high volume, non-hazardous waste streams like latex paint.

WDATCP is scheduled to complete a revision of Ch. ATCP 34, Wis. Admin. Code in the near future. This process should be closely monitored, as changes could occur in Clean Sweep program grant formulas and requirements, or the availability of grant funding for certain activities, all of which will have an impact on future facility operations.

While more of a long-standing issue than an emerging issue, the expressed desire of many citizens of Dane County is to see the expansion of the Clean Sweep program from a seasonal to a year-long operation. This issue is inextricably tied to the aforementioned funding issues, and such operations would require the construction of a new facility, as the current facility is inadequately equipped to receive, store and ship waste in winter weather conditions. However, as Dane County considers the possible development of new public works facilities such as a new landfill site or solid waste transfer

station, perhaps some economies of scale could be realized by consolidating all waste handling facilities, including Clean Sweep, in a single location.

### Program Costs

Table 5 presents a comparison of Clean Sweep program costs for the past two seasons. Waste material disposal costs represent the largest expenditure category, consuming approximately 2/3 of total annual expenditures for the program. Overall, net program costs increased approximately 25% between 2006 and 2007. The higher volume of waste received by the program is the primary reason for the sharp increase in overall program costs for 2007. Additionally, labor costs in 2007 were higher due to the reclassification of the Hazardous Waste Technician position from a part-time to a full-time position. Revenues used to help offset annual costs were also depressed slightly in 2007, due to decreased waste volumes in the agricultural waste and business programs, which in turn, resulted in reduced grant and user fee revenues.

**Table 5 – Comparative Analysis: Clean Sweep Expenses & Revenues**

	<b>2006</b>	<b>2007</b>
Veolia ES Disposal Costs	\$173,112	\$209,476
Veolia ES Material & Misc. Costs	\$21,840	\$20,250
Administrative/Labor Costs	\$122,395	\$147,696
DATCP Grants	-\$31,500	-\$27,867
VSQG Payments	-\$31,279	-\$26,054
Reimbursements: Satellite Events	-\$2,800	-\$3,417
Reimbursements: MedDrop	0	-\$2,974
Reimbursements: Columbia Co.	0	-\$2,600
Automotive Battery Revenues	0	-\$236
<b>Net Program Costs</b>	<b>\$251,768</b>	<b>\$314,274</b>

834,689 pounds of waste was shipped through Veolia ES in 2007. The disposal cost for this waste was \$209,476, yielding an average disposal cost of approximately \$0.25 per pound. The total cost of the Veolia ES contract in 2007 was \$229,726 (disposal costs + material & misc. costs), yielding an average cost per pound shipped of approximately \$0.27 per pound. Figure 6 illustrates the disposal costs and poundage for each of the major waste categories handled in 2007. Note that latex paint accounts for more than half of the waste volume handled in 2007, and management of this non-hazardous material was responsible for approximately 1/3 of the Clean Sweep programs' cost in 2007.

Not reflected in the data in Table 5 are the additional financial contributions made by Dane County in 2007 for expenditures such as utilities, capital improvements and repairs, and equipment. In 2007, these costs totaled approximately \$15,000. These direct-billed costs included \$9,660 for a new office trailer and forklift (both purchased through the Federal Surplus Property program) for use by Clean Sweep facility staff in 2007.

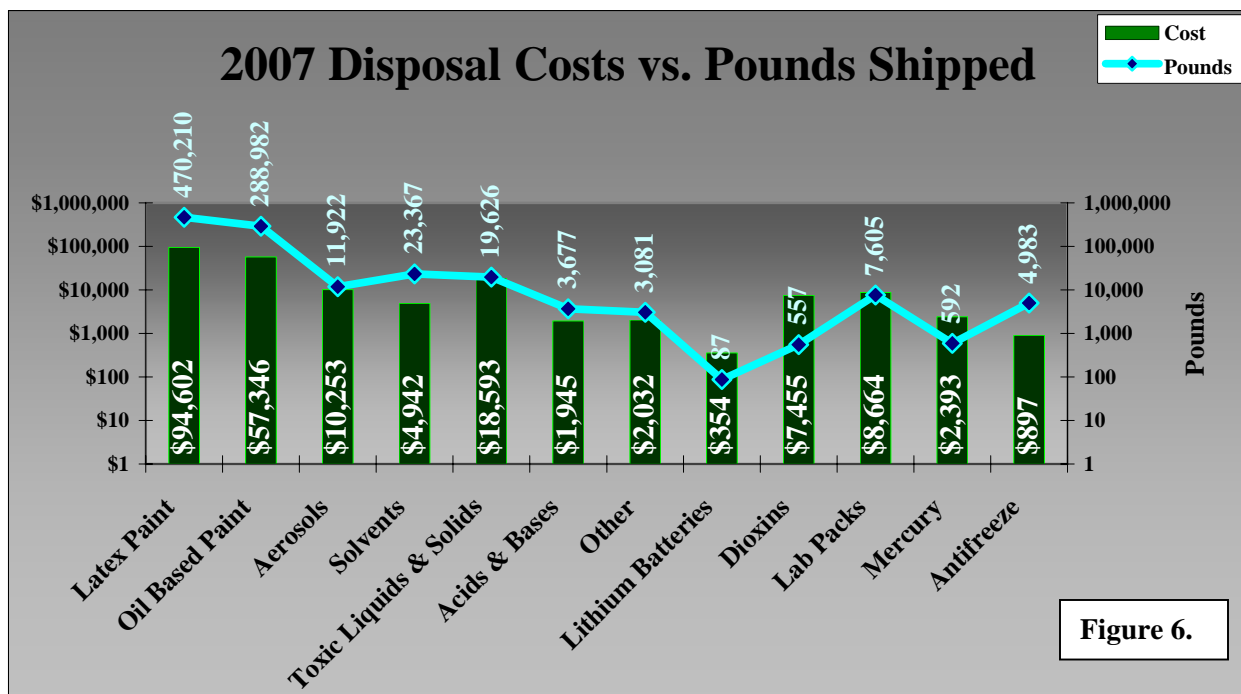
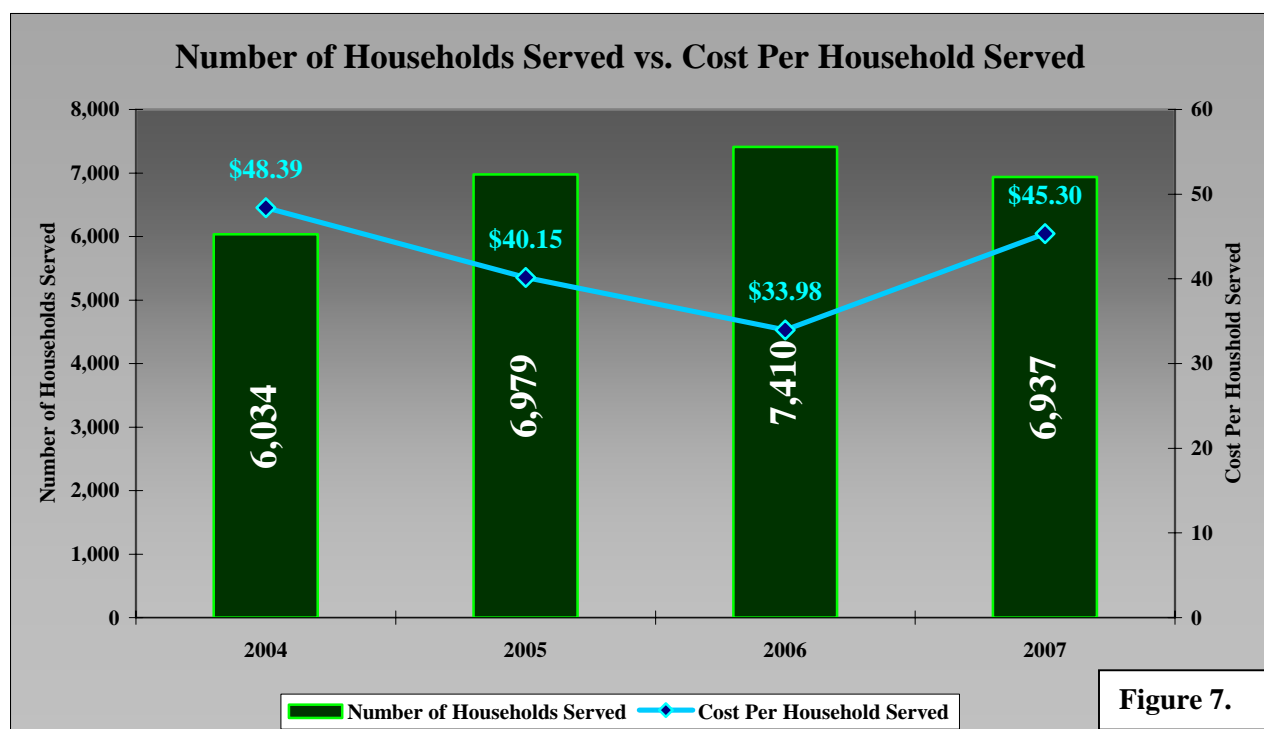


Figure 7 presents a historical comparison of households served and net program costs, broken down into cost per participating household. After trending downward for a few years, the cost per participating household jumped upwards in 2007, due primarily to reduced traffic counts from HHW customers. In general, the data show that as HHW traffic increases, the cost per participating household tends to decrease. The inverse also appears to be true, demonstrating the economies of scale that can be realized when large numbers of households participate in the program. Because customer counting errors can be particularly troublesome in this analysis, the reader is cautioned to take this into account before drawing any hard conclusions regarding the trends and figures noted above.



## Highlights & Accomplishments

Although not reflected in the customer counts for 2007, the Dane County/City of Madison Clean Sweep program continues to grow in terms of the total volume of waste recovered each year. The 942,030 pounds of waste recovered in 2007 is the most material received in a season in the history of the program. Since its inception, this program has diverted *millions* of pounds of paint and hazardous material from disposal in local landfills. In an era where governmental operations are under considerable pressure to privatize services or reduce the scope of governmental operations in order to minimize property tax burden, Dane County and the City of Madison have steadfastly maintained their commitment to environmentally sound hazardous waste management services, and have done so without impacting the general tax levy. Perhaps even more importantly, the citizens served by these services have consistently demonstrated support for such services, with many expressing a desire for expansion in the scope and availability of the program.

The collection facility received some much-needed improvements in 2007. A new office trailer was purchased through the Federal Surplus Property program to replace the old, dilapidated unit that had served as an office at the collection facility during seasonal operations for many years. Additionally, a forklift was acquired for dedicated use by Clean Sweep facility staff during seasonal operations, mitigating the need to borrow equipment from adjoining County highway facilities. Security of the drop-off facility was improved by vertically extending the chain-link fencing at the front of the facility to the canopy, thus mitigating the risks of unauthorized entry. Finally, as a spill prevention measure, spill-containment pallets were acquired and utilized during waste sorting and temporary waste storage operations.

Clean Sweep staff completed a comprehensive review and update of the facility operations, health and safety, and contingency plans in 2007. Additionally, all personnel engaged in work at the facility received 8-hour hazardous waste refresher training in accordance with facility plans and applicable regulations.

The Clean Sweep program played an important role in Dane County's first-ever pharmaceutical collection program, MedDrop. The event, which was sponsored by the Madison Patient Safety Collaborative, was one of the largest events of its kind in Wisconsin to date, serving 566 participants and capturing over 1,500 pounds of uncontrolled substances and 181 pounds of controlled substances. Clean Sweep staff participated in the planning, organization and implementation of the event, and all of the uncontrolled substances collected were disposed of through Clean Sweep facility operations. This event could not have taken place without the cooperation of the numerous agencies, organizations and individuals involved, and its successes are a testament to the fine work which can be accomplished when public and private entities work together to meet community needs.

Daily facility operations in 2007 remained much the same as they had in previous years, although scheduling of very small quantity generators (VSQG's) was shifted from Wednesdays to Thursdays, when the site is closed to the public. This change was made in order to allow for more flexibility in the scheduling of business customers and to allow Clean Sweep staff to devote their full attention to scheduled business customers, whose deliveries are commonly large, without interruption from HHW traffic.

## **Recommendations & Conclusions**

By most any measure or comparison, the 2007 season was extremely successful. Still, there is room for improvement in some areas. The following are recommendations for the 2008 season:

### **□ Implement measures necessary to improve accuracy of customer counts**

One of the most critical pieces of data collected at the Clean Sweep drop-off site is the customer count data. To date, this information has been gathered utilizing mechanical hand tally counters, with the task typically being assigned to a single staff person. This method works reasonably well, provided traffic is relatively slow. Accuracy is compromised when traffic becomes congested, and all staff members are busy assisting customers. Staff members are routinely required to assist multiple customers in quick succession, and recollection of the number of customers served by each staff member becomes difficult in such situations. For 2008, it is proposed that each staff member be supplied with his own tally counter, to be worn on his person, and that each staff member is responsible for maintaining his own customer count. At the close of business, all staff members would then compile their counts in daily reports. To provide backup and/or a means of reconciling the hand tally counts, it is proposed that an automated highway traffic counting device be employed at the site to record the total number of vehicles passing through the facility.

### **□ Increase marketing efforts to attract more VSQG's to program**

The VSQG program is a cost-efficient feature of the Clean Sweep Program, and the facility does have the capacity to accept additional VSQG customers. Efforts to boost consumer awareness of the VSQG program are likely to have a positive impact on the number of VSQG customers utilizing the facility. As agricultural business and farm utilization of the program continues to trend downward, perhaps some of the resources currently being utilized to promote the business program to these customer groups could be reallocated to other potential VSQG customers. In 2008, staff will expand the VSQG mailing list to include other appropriate business groups such as dentists and biotechnology businesses.

### **□ Emphasize drying/disposal of latex paint as an alternative to Clean Sweep**

In 2007, latex paint management consumed approximately 1/3 of the annual budget for the Clean Sweep program and accounted for about 1/2 of the total waste volume received at the facility. This material, which is basically non-hazardous, can be managed at the point of generation with a little effort. Efforts to educate citizens about latex paint drying techniques and its cost savings benefits should be enhanced where possible. If such efforts fail to curtail the volume of latex paint, this wastestream could be targeted for application of user fees and/or tighter restrictions on acceptance at the facility.

### **□ Improve and enhance customer survey data collection efforts**

In an effort to more fully understand customer awareness, attitudes, expectations and usage patterns, it is recommended that a revised customer survey be made available for the 2008 season, and that as many customers as possible be encouraged to complete a copy during their visit. Staff should also explore methods to conduct a statistically sound county-wide survey regarding the efficacy and possible future direction of the Clean Sweep program.

### **□ More advertising of program**

Continue to seek out and utilize cost-effective means of advertising program elements in order to facilitate greater awareness and participation in the Clean Sweep program.

### **□ Continue working towards the establishment of a permanent facility**

Customer feedback indicates a desire for an expanded scope of operations and year-round access to the Clean Sweep facility. Program staff should continue to investigate the feasibility of this matter, for

possible implementation in the future. Establishment of a new permanent facility would address current facility capacity and waste storage concerns, and would facilitate a year-round operating schedule, and perhaps even extended hours of operation if staffing levels are increased. Finally, a new facility would provide an opportunity to expand the range of materials accepted at the facility. Staff's ability to respond to customer demands at this time is extremely limited due to staffing levels and the design of the current facility. As an interim measure, facility staff has been authorized to accommodate households during the off-season on a case-by-case, last resort basis, subject to availability of storage capacity and payment of a user fee. Additionally, staff will endeavor to establish at least two collection dates during the off-season for VSQG's. It is hoped that these interim measures will be of assistance to those whose needs are of a genuinely urgent nature, and provide some relief while permanent solutions to customer needs are being explored.

## **Appendix A**

### **Disposal Facilities Utilized in 2007**

#### **□ VES – Port Washington, WI**

The Veolia Environmental Services (VES) Port Washington, Wisconsin facility is an Electronics Recycling Group location. The facility is exempt from regulation under certain portions of Chapter NR 600 Wis. Admin. Code because it meets the definition of "legitimate recovery" operations under NR 625.06 Wis Admin. Code. PCB accumulation is exempt from commercial PCB storage requirements under section 144.44 (9) Wis. Stats. VeoliaES-Port Washington can handle the following types of waste: mercury bearing lamps, mercury devices, mercury compounds, mercury debris, mercury soil, mercury contaminated phosphor, lamp ballasts, small PCB capacitors (<9lbs), all types of batteries, computers and electronics.

#### **□ VES – Port Arthur, Texas**

The Veolia Environmental Services (VES) Port Arthur, Texas Treatment Complex operates a rotary kiln incinerator, and is permitted to accept RCRA, CERCLA and TSCA wastes. The VeoliaES-Port Arthur Treatment Complex is permitted to handle all six RCRA hazardous waste code categories (ignitable, toxic, corrosive, acute hazardous, EP toxic, and reactive) as well as most PCB wastes. VeoliaES-Port Arthur accepts waste solvents, solvent/oil mixtures, organic and inorganic chemical wastes, pesticide wastes, petroleum wastes, aqueous wastes, contaminated soils and sludges, PCBs and capacitors, as well as other wastes.

#### **□ VES – Phoenix, AZ**

The Veolia Environmental Services (VES) Phoenix, Arizona facility is an Electronics Recycling Group location. It is a strategically focused recovery and waste management facility that provides a variety of waste recycling services. Veolia ES-Phoenix operates a 96,000 square foot plant used to store, process and handle a variety of PCB and non-PCB equipment and mercury bearing waste. This facility is fully permitted in accordance with all applicable USEPA and ADEQ regulations governing the handling and disposal of PCB and mercury waste.

#### **□ VES – Sauget, IL**

The Veolia Environmental Services-Trade Waste Incineration (VES-TWI) Sauget, Illinois facility operates two fixed hearth, dual chamber, multi-type feed incinerators and one rotary kiln incinerator. The facility can accept RCRA and CERCLA waste in bulk, drum or labpack quantities and is capable of managing waste requiring special controls including DEA controlled substances, drugs, cylinders, reactive and explosive materials, odiferous waste, or those wastes requiring direct injection.

#### **□ Green America Recycling/Continental Cement Company**

This facility uses waste materials to supplement coal as a fuel for the cement manufacturing process. Located in Hannibal, Missouri, the facility is a Part B permitted RCRA Treatment, Storage and Disposal Facility.

#### **□ Dupont Secure Environmental Treatment**

This facility, located in Deepwater, New Jersey, accepts RCRA liquids, including acids and bases, and other wastewaters for disposal by neutralization followed by biological treatment. The facility is the largest hazardous wastewater treatment facility in North America. The treatment facility uses a unique

DuPont-patented wastewater treatment technology called Powdered Activated Carbon Treatment (PACT®). Only after passing through this rigorous treatment process, is wastewater discharged to the Delaware River under permits with the EPA and the New Jersey Department of Environmental Protection.

□ **Giant Resource Recovery, Inc.**

Located in Arvon, Virginia, this facility recycles a wide range of liquid, solid, semi-solid and aerosol wastes by blending them into fuel. This facility employs a patented process to separate gaseous & liquid components from aerosol wastes prior to fuel blending.

□ **Amazon Environmental, Inc.**

Amazon Environmental, Inc. (AEI) is a leading provider of latex paint recycling services. Amazon accepts many types of water-based materials including latex paints for recycling. Materials that meet quality requirements are manufactured into high-quality paints for consumer and commercial uses. Paints that fall below standards are recycled into specialty cement additives. Amazon recycles 100 percent of the approved materials received.

□ **Jacobus Environmental Services**

Jacobus Environmental Services, headquartered in Madison, Wisconsin, specializes in the collection, testing and recycling of used oil, oily water, used antifreeze, oil filters and absorbents. All of the antifreeze collected in 2007 was recycled by this company, which serves businesses in Wisconsin, Illinois, Iowa, Nebraska, and upper Michigan.

□ **Stablex**

Using a unique technology, Stablex characterizes, treats and stabilizes inorganic industrial wastes and contaminated soil before disposing of the benign product in a dedicated secure landfill cell.

□ **Inmetco**

Inmetco is a leading recycler of metal-bearing wastes in North America. Located in Ellwood City, Pa, Inmetco recycles thousands of tons of nickel, chromium, iron, molybdenum and cadmium bearing wastes annually. Inmetco is the only facility in North America that provides thermal recovery for nickel-cadmium batteries.

□ **Northern Battery**

Northern Battery, headquartered in LaCrosse, WI, is a certified scrap battery hauler offering a complete battery recycling program. They provide pickup and secured handling of battery cores within documented hazardous waste guidelines.

## APPENDIX B

### 2007 Summary of Veolia Waste Types, Volumes, Costs and Disposal Methods

Disposal Method	Waste Description	Quantity	Unit of Measure	Vol. To Wt. Conversion Factor	Pounds	2007 Cost/Unit	Invoiced Amount
I	Toxic Liquids Loosepack		Pounds	actual weight	6,596	\$1.04/lb	\$6,859.84
I	Toxic Solids Loosepack		Pounds	actual weight	6,018	\$1.04/lb	\$6,258.72
I	Toxic Solids Loosepack	5	051G	From VES WM&G Reports	72	\$45/container	\$225.00
FB	Non-Halogenated Solvents	50	551A2	458.997 pounds/unit	22,950	\$96.62/ drum	\$4,831.00
FB	Non-Halogenated Solvents	1	301A2	250.362 pounds/unit	250	\$72.47/ drum	\$72.47
FB	Non-Halogenated Solvents	1	201A2	166.908 pounds/unit	167	\$38.65/ drum	\$38.65
R	AntiFreeze (Bulk Drums)		Pounds	actual weight	4,983	\$0.18/pound	\$896.94
I	Non-Asbestos Roof Tar Non-Regulated Subtitle C	2	55A12	458.997 pounds/unit	918	\$96.62/ drum	\$193.24
LF	Landfill - Asbestos Latex Paint Cans For	1	55 GAL	458.997 pounds/unit	459	\$208.49/ drum \$6,813.90/rollof	\$208.49
R	Recycling	12	20YDRO	33711 pounds/rolloff	404,532	f	\$81,766.80
R	Latex Paint In Cans	38	CYD11G	1685.5549 pounds/unit	64,051	\$325.44/cy box	\$12,339.52
R	Latex Paint (Bulk Drums)	3	551A2	458.997 pounds/unit	1,377	\$132.21/ drum	\$396.63
R	Latex Paint (Bulk Drums) Oil Based Paint Cans For	1	301A2	250.362 pounds/unit	250	\$99.16/ drum	\$99.16
FB	Fuel	166	CYD11G	1685.5549 pounds/unit	279,802	\$330.53/cy box	\$54,702.08
FB	Oil Based Paint (Bulked) Flammable Gas Loosepack	20	551A2	458.997 pounds/unit	9,180	\$167.81/ drum	\$2,644.30
FB	(Aerosols) Flammable Liquid		Pounds	actual weight	11,922	\$0.86/pound	\$10,252.92
I	Loosepack		Pounds	actual weight	6,481	\$0.81/pound	\$5,249.61
AT	Acid Labpack	4	551H2	458.997 pounds/unit	1,836	\$228.83/ drum	\$915.32
I	Acid Labpack	2	051G	From VES WM&G Reports	5	\$57.20/cont.	\$114.41
AT	Alkaline Labpack	4	551H2	458.997 pounds/unit	1,836	\$228.83/ drum	\$915.32
R	Mercury Compounds	1	141G	From VES WM&G Reports	9	\$370/container	\$370.00
R	Mercury Compounds Mercury Devices and	1	051G	From VES WM&G Reports	1	\$193.23/cont.	\$193.23
R	Debris		Pounds	actual weight	120	\$5.59/pound	\$670.80
R	Metallic Mercury	2	051G	From VES WM&G Reports	3	\$193.23/cont.	\$386.46
R	Metallic Mercury	1	551A2	458.997 pounds/unit	459	\$772.92/drum	\$772.92
I	Dioxin Minimum	2	each	From VES WM&G Reports	22	\$250/container	\$500.00
I	Dioxins		Pounds	actual weight	535	\$13.00/pound	\$6,955.00
I	Oxidizer Labpack	1	051G	From VES WM&G Reports	14	\$45/container	\$45.00
I	Oxidizer Labpack		Pounds	actual weight	86	\$2.03/pound	\$346.46
I	Non-RCRA Labpack		Pounds	actual weight	7441	\$1.04/pound	\$7,738.64
BR	Caustic Cleaning Solution	1	851A2	458.997 pounds/unit	459	\$300.00/ drum	\$300.00
	Teat Dip	1	151H1	From VES WM&G Reports	83	\$120.01/cont.	\$120.01
I	Bulked	1	551A2	458.997 pounds/unit	459	\$300.02/ drum	\$300.02
LF	Polyacrylamide Emulsion Sure Clean Restoration	1	551H2	458.997 pounds/unit	459	\$208.49/ drum	\$208.49
AT	Cleaner Dangerous When Wet	1	301H2	250.362 pounds/unit	250	\$337.50/cont.	\$337.50
I	Labpack	2	051G	From VES WM&G Reports	13	\$61.02/cont.	\$122.04
I	Flammable Solid Labpack Spontaneously Combustible	1	301G	From VES WM&G Reports	42	\$228.83/cont.	\$228.83
I	Labpack	1	051G	From VES WM&G Reports	4	\$61.02/cont.	\$61.02
I	Organic Peroxide Labpack	2	051G	From VES WM&G Reports	5	\$61.02/cont.	\$122.04
I	Lithium Batteries		Pounds	actual weight	87	\$4.07/pound	\$354.09
R	PCB Containing Devices		Pounds	actual weight	449	\$0.71/pound	\$318.79
I	PCB Contaminated Liquids	1	051G	From VES WM&G Reports	4	\$45/cont.	\$45.00
	<b>TOTALS</b>				<b>834,689</b>		<b>\$209,476.76</b>

**R = Recycled, I = Incineration, FB = Fuel Blending, LF = Haz Waste Landfill,**

**KEY: AT = Aqueous Treatment, BR = Beneficial Reuse**