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Neshaminy Manor Center
1260 Almshouse Road
Doylestown, PA 18901
Phone: 215-345-3400
Fax: 215-345-3886
Email: bcpc@co.bucks.pa.us

Southeastern Pennsylvania Regional Household Hazardous Waste Collection Program

2009 Annual Report

Introduction

The 2009 Household Hazardous Waste Collection Program was sponsored jointly by the five southeastern Pennsylvania counties of Bucks, Chester, Delaware, Montgomery and Philadelphia. This year concludes the twelfth year the five counties have worked together to sponsor a regional program. In Bucks County, the program is fiscally supported by all of the Bucks County communities, the County Commissioners, the Pennsylvania Department of Environmental Protection, as well as private contributors. The regional scope of the program benefits the residents of Bucks County by providing them the opportunity to attend any of the 28 annual collection events (2009) held throughout the five-county region, as well as reducing the cost to the individual counties and their respective communities.

The participating counties have contracted with the firm of Clean Ventures, Inc. (CVI) to accept, consolidate, package, transport, and properly recycle, process or dispose of the collected materials over the course of the current three-year contract. Through the assistance of CVI the regional HHW program is also addressing the recycling/disposal of old computers and related equipment. In order to assess the interest in the collection of old computers, one of the household hazardous waste collections in Bucks County in 2002, and two in 2003 included the acceptance of computer equipment. Due to the response to this component of the program, it was decided to include old computer equipment in future HHW collections.

Beginning in 2004, and continuing through 2009, all of the collection events held in Bucks County have included computers (including portable televisions) along with the typical household hazardous waste.

The decision to include computers as part of the household hazardous waste collection program appears to be appreciated by the residents of Bucks County. Since 2004, the first full year of accepting computer equipment at the collection events, the amount of computer equipment has increased, by weight, from 30 percent to 59 percent of the materials collected. Another way to look at the influence of accepting computers is that in 2004, 11 percent of the participants brought computers only to the collection events. That number increased to 34 percent in 2009, a 20 percent jump from the previous year.

This report provides information about this year's program including participation rates, amount of material collected, program costs, and an overview of participant surveys results.



Participation

This year, five collection events were held in Bucks County. A collection was held in each of the months of May, June, July, August, and September. In addition, as noted above, Bucks County residents were welcome to attend any of the 21 other events held in neighboring southeastern Pennsylvania counties, if those events were found to be more convenient. Over 6,900 residents, as compared to 6,800 residents in 2008, 6,000 residents in 2007, 5,490 residents in 2006, 4,900 residents in 2005, and 4,100 in 2004, from throughout the fifty-four communities in Bucks County, as well as other parts of the region, attended the collection events held in Bucks County. The table on page 5 provides a listing of the number of participants, by municipality, that attended each of the collection events.

Material Collected

Household hazardous waste

As in previous programs the types of hazardous materials delivered to the collection events varied widely. The table on pages 4 and 5 provides a listing, by collection site, of the types of material brought to the Bucks County events in 2009. The total amount of material delivered to the six Bucks County collection sites totaled 682,040 pounds or an average of 108 pounds of material per participant.

Computers and related equipment

In addition to the materials typically accepted at a HHW collection program, each of the five events held in Bucks County continued to accept computers and computer related equipment. Electronic equipment continues to be an issue due to it becoming such a large segment of the waste stream. News stories about old computer equipment can be found regularly in newspapers and periodicals as handling of this quantity of waste is becoming more and more difficult.

The six collection events held in 2009 produced 400,768 pounds, up significantly from the 292,301 pounds of computer related electronics in 2007, up from 203,057 pounds in 2006, and significantly more than the 22,800 pounds in the first collection year of 2002. Using an estimate that a typical computer system (CPU, monitor, and printer) weighs about 60 pounds, it is estimated that as many as 6,600 computer systems were received. In addition, hundreds of pieces of miscellaneous computer related equipment including scanners, hard drives, modems, battery backups, tape drives, zip drives, portable TVs, and a variety of other electronic components were received.

Americans generate 1.6 million tons
of HHW per year.



Program Costs

\$ The costs associated with this program are dependent upon the types and quantities of material collected. The contract with Clean Venture, Inc. provides a per pound cost to package, transport, process, and recycle or dispose of an extensive list of materials that are typically brought to a household hazardous waste collection event. The final cost to accept the 682,035 pounds (341 tons) of materials was \$214,682 up from \$193,913 in 2007. Based upon 6,962 households participating (up from 6,030 households in 2007), the average cost per participating homeowner was \$33.95. This is in line with a fairly consistent unit cost of 32 cents per pound throughout the programs history.



The National Safety Council projects that nearly 267 million computers will become obsolete in the next five years and mobile phones were discarded at a rate of 142 million per year by 2009.

Survey Synopsis

Each participant attending one of the HHW collection events was asked to respond to a brief survey. The purpose of the survey was to obtain information about each of the participants that could then be provided to those entities that have a stake in financially supporting the program. The responses provided answers as to what municipality the participant resided in, how they learned about the program, whether they ever attended a household hazardous waste program before and what type of material they brought to the day's event (HHW, computer equipment, or both). A review of the surveys, based upon a compilation of all six sites, indicated:

- 52 percent of the participants had never attended a HHW collection program before, which was up from 42 percent noted in 2008.
- The internet/websites drew a similar number of people at 21 percent. This was similar to the 18 percent in 2007, and up from 15 percent in 2006.
- 23 percent of the participants learned about the program from the local newspaper, down dramatically from 32 percent in 2008.
- 15 percent learned of the program from a municipal newsletter, consistent with the previous four years.
- As the amount of computer equipment rises, the participants that brought typical household hazardous waste has declined to 38 percent. In 2008 it was 40 percent (as compared to 42 percent in 2007).
- The participants that brought only computer related equipment to the collection rose to 34 percent (as compared to 27 percent in 2008 and 21 percent in 2006).
- 30 percent of the participants brought both HHW and computer related equipment (as compared to 34 percent in 2008 and 37 percent in 2007).

You can find more in-depth survey details later in this report.



Electronics dropped off at collection event.



Household Hazardous Waste Collected in Bucks County

(in pounds and percentages)

MATERIAL	Lower Makefield Township Corporate Center 5/2	Percent of Total	Upper Bucks County Area Vocational– Technical School 6/20	Percent of Total	Middle Bucks Institute of Technology 7/18
Acids	373	0.3%	615	0.5%	774
Aerosols	961	0.8%	1,479	1.2%	2,223
Alkaline Waste	291	0.3%	587	0.5%	593
Antifreeze	829	0.7%	867	0.7%	1,638
Asbestos			12	0.0%	178
Batteries - Household	394	0.3%	415	0.3%	858
Batteries Lead-Acid	4,230	3.7%	8,250	6.4%	6,529
Batteries Lithium	15	0.0%	24	0.0%	61
Batteries Ni-Cad/NiMh	134	0.1%	80	0.1%	119
Fire Extinguishers	150	0.1%	182	0.1%	415
Flammable Liquids	7,610	6.7%	5,138	4.0%	7,554
Flammable Solids	30	0.0%	15	0.0%	100
Fluorescent Lamps	183	0.2%	535	0.4%	277
Latex & Non-haz. Mat.	22,400	19.7%	26,680	20.8%	27,100
Mercury	36	0.0%	91	0.1%	221
Oil	2,101	1.8%	3,728	2.9%	4,599
Oxidizer Liquid	147	0.1%	188	0.1%	560
Oxidizer Solid	265	0.2%	97	0.1%	719
Paint, Oil (loose packed)	1,679	1.5%	2,636	2.1%	3,586
PCB's off spec/Ballast			385	0.3%	
Pesticide Liquid	882	0.8%	997	0.8%	2,185
Pesticide Solid	1,200	1.1%	1,453	1.1%	1,960
Propane - Large	1,720	1.5%	780	0.6%	960
Propane - Small	121	0.1%	155	0.1%	293
Refrigerant Gas (per Pound)	25	0.0%			
Oxygen Cylinder	7	0.0%	2	0.0%	4
Acetylene Cylinder			1	0.0%	
MAPP Gas					22
Computer Equipment	68,120	59.8%	72,820	56.8%	110,930
TOTAL (pounds)	113,903	100.0%	128,212	100.0%	174,458
Total Cost	\$35,092.17		\$39,171.88		\$53,441.73
No. of Participants	1,074.00		1,032		2,340
Avg. lbs./participant	106.05		124		75
Cost per participant	\$32.67		\$37.96		\$25.38
Cost per pound	\$0.31		\$0.31		\$0.31

Percent of Total	Bucks County Technical High School 8/15	Percent of Total	Quakertown Community Pool 9/26	Percent of Total	Total Pounds	Percent of Total
0.4%	472	0.3%	621	0.5%	2,855	0.42%
1.3%	1,045	0.8%	1,554	1.2%	7,262	1.06%
0.3%	454	0.3%	1,100	0.9%	3,025	0.44%
0.9%	1,494	1.1%	1,854	1.5%	6,682	0.98%
0.1%					190	0.03%
0.5%	477	0.3%	586	0.5%	2,730	0.40%
3.7%	6,112	4.4%	4,710	3.7%	29,831	4.37%
0.0%	47	0.0%	43	0.0%	190	0.03%
0.1%	409	0.3%	130	0.1%	872	0.13%
0.2%	109	0.1%	164	0.1%	1,020	0.15%
4.3%	7,210	5.2%	11,614	9.1%	39,126	5.74%
0.1%	27	0.0%	16	0.0%	188	0.03%
0.2%	380	0.27%	261	0.2%	1,636	0.24%
15.5%	26,040	18.8%	25,000	19.7%	127,220	18.65%
0.1%	66	0.0%	24	0.0%	438	0.06%
2.6%	4,349	3.1%	5,902	4.6%	20,679	3.03%
0.3%	55	0.0%	61	0.0%	1,011	0.15%
0.4%	304	0.2%	283	0.2%	1,668	0.24%
2.1%	1,134	0.8%	4,042	3.2%	13,077	1.92%
	32	0.0%	31	0.0%	448	0.07%
1.3%	1,214	0.9%	1,806	1.4%	7,084	1.04%
1.1%	825	0.6%	1,144	0.9%	6,582	0.97%
0.6%	1,980	1.4%	920	0.7%	6,360	0.93%
0.2%	110	0.1%	214		893	0.13%
			120	0.1%	145	0.02%
0.0%	5	0.0%	1	0.0%	19	0.00%
			1	0.0%	2	0.00%
0.0%	9	0.0%	3	0.0%	34	0.00%
63.6%	83,890	60.6%	65,008	51.1%	400,768	58.76%
100.0%	138,249	100.0%	127,213	100.0%	682,035	100.00%
	\$41,929.00		\$45,047.30		\$214,682.08	
	1,465		1,325		6,962	
	94		96		98	
	\$28.62		\$34.00		\$30.83	
	\$0.30		\$0.35		\$0.32	

Number of Households Represented

BUCKS COUNTY Municipalities	Lower Makefield Corporate Center 5/2	Upper Bucks Vo-Tech School 6/20	Middle Bucks Institute of Technology 7/18	Bucks County Technical High School 8/15	Quakertown Community Pool 9/26	TOTAL PARTICIPANTS FROM EACH
Bedminster Township	1	49	7		31	88
Bensalem Township	17	2	83	83	3	188
Bridgeton Township		9			1	10
Bristol Borough			69	69		138
Bristol Township	12	3	23	309	1	348
Buckingham Township	14	23	314	28	18	397
Chalfont Borough		37	38	4	17	96
Doylestown Borough	5	13	91	11	13	133
Doylestown Township	26	86	247	17	44	420
Dublin Borough	2	32	3	3	6	46
Durham Township		2			2	4
E. Rockhill Township		35	1	1	47	84
Falls Township	46	1	5	131	3	186
Haycock Township	4	13	2	2	40	61
Hilltown Township		57	13	8	47	125
Hulmeville Borough	3			9		12
Ivyland Borough			2	2	3	7
Langhorne Borough	34	4	3	16	2	59
Langhorne Man Borough	6			8		14
Lower Makefield Township	267	15	12	142	6	442
Lower Southampton Township	27	15	37	36	5	119
Middletown Township	132	7	16	196	5	356
Milford Township		13			103	116
Morrisville Borough	12	4	3	47		66
New Britain Borough	4	4	16	9	1	34
New Britain Township		22	72	9	44	147
New Hope Borough	7	23	19	5	4	58
Newtown Borough	14	3	7	4	1	29
Newtown Township	73	22	29	43	12	179
Nockamixon Township	5	27			25	57
Northampton Township	140	52	183	43	18	436
Penndel Borough			3	12		15
Perkasie Borough	3	147	4	1	61	216
Plumstead Township	5	27	86	4	24	146
Quakertown Borough		52			280	332
Richland Township		15	1	1	128	145
Richlandtown Borough			1	1	16	18
Riegelsville Borough		8			1	9
Sellersville Borough		23			31	54
Silverdale Borough		7	1		2	10
Solebury Township		11	87	7	16	130
Springfield Township	9	15	3		45	67
Telford Borough						
Tinicum Township	1	14	7		8	30
Trumbauersville Borough		2			8	10
Tullytown Borough	2		5	16		23
U. Makefield Township	49	2	24	24	11	110
U. Southampton Township	19	1	53	18	3	94
Warminster Township	9	14	184	17	14	238
Warrington Township	12	19	185	9	31	256
Warwick Township	6	2	277	7	4	296
West Rockhill Township		13			13	26
Wrightstown Township	6	2	12		1	21
Yardley Borough	17	4	2	2	2	27
SUB TOTAL	993	951	2,229	1,354	1,201	6,728
OTHER COUNTIES	33	17	63	63	58	234
2009 TOTAL	1074	1032	2,340	1,465	1,325	6,962
Participants in 2008	1208	772	1,847	1,412	1,010	6,851
Participants in 2007	1087	759	1,879	1,257	1,042	6,024
Participants in 2006	1081	743	1,621	1,034	1,019	5,498
Participants in 2005	941	779	1,475	785	933	4,913

Summary of 2009 Survey Questions

Were you able to bring material from more than one household?

Yes...	6.9%
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Have you brought materials to a previous household hazardous waste collection?

Yes	No
47.8%	52.2%

How did you learn about this year's program?

Newspaper	485	23%
Website	458	21%
Flyer	357	17%
Newsletter	317	15%
Family/Friend	188	9%
Other	191	9%
Signs	39	2%
County	89	4%
Cable TV	8	0%
Direct Mailing	6	0%

What did you bring to this year's events?

HHW Only	2,509	36.6 %
Computer Equipment Only	2,276	33.8 %
Both (HHW & Comp.)	2,023	29.5 %
	6,808	100%

Program Assistance and Funding



This program is provided to the residents of Bucks County through the efforts and foresight of many individuals at the local, county, and state levels. The Pennsylvania Department of Environmental Protection, the Bucks County Commissioners, each of the county's 54 municipalities as well as private sources provide funding to support the program.

Bucks County Technical High School provided a Program collection site.

Middle Bucks Institute of Technology provided a Program collection site.

Upper Bucks County Vocational Technical School provided a Program collection site.

Quakertown Borough provided a Program collection site.

BPG Management Services provided a program collection site and survey personnel.

Waste Management of PA provided Program funding.

Quakertown Fire Police provided traffic control at the Quakertown Community Pool site.

Bristol Township Fire Police provided traffic control at the Bucks County Technical High School site.

Warwick Township Police provided traffic control at the Bucks County Institute of Technology site.

Wheelabrator, Inc. provided Program funding.

PA Department of Environmental Protection provided Program funding.

Custom T-shirts were provided for all of the program's volunteers.



And last, but certainly not least, if it were not for the volunteers from many different organizations including the Bucks County Planning Commission staff, the Bucks County Adult Probation Community Service Program, the Retired Senior Volunteers Program, the Lower Makefield Township Environmental Advisory Committee, and many other individuals who made themselves available during the Saturday collection events to assist with traffic control, administer surveys, and distribute educational material, this program would not have been available to the residents of Bucks County.

If you have any questions about any aspect of this report, please contact the Bucks County Planning Commission at **215-345-3400**.

