Material Separation Plan
For the Diversion of Mercury
(MSP4, January 1 - December 31, 2007)

Annual Report

Wheelabrator Millbury Inc.

February 2008

Wheelabrator Millbury Inc.
Materials Separation Plan
Annual Report on the Results of the Mercury Recovery Program

Introduction

This report presents annual results of Materials Separation Plan (MSP4). It includes activities for the period covering January 1, 2007 to December 31, 2007. The report describes the activities involved in the design, implementation and operation of the Mercury Recovery Program (MRP) in each community. Each MRP is community focused, locally based and operated. Wheelabrator provides all of the technical, logistical and financial support for each program. The corner stone of the MRP Program are the community collection sites. Each community has at least one, often two and in some cases three centrally located and easily accessible locations in the city or town where residents can safely dispose of products that contain mercury.

MRP for 2007 consisted of the following elements:

- Regional Outreach
- Local Outreach / Education
- Mercury Separation and Recycling
- Thermometer Exchange
- Thermostat Recovery
- Thermostat Reimbursement Program
- School Clean Sweeps
- Button-Cell Battery Collection
- Bulk Mercury Collection
- Fluorescent Lamp Reimbursement
- Hardware store collection site development
- Purchase of Sheds for Community Program

Wheelabrator has continued to develop, expand and improve the MRP in each community participating in the program.

- The Regional Outreach coordinated by IWSA placed promotions radio spots in local radio stations in the Spring and Fall. New posters and flyers were developed and distributed to the communities.

- The Local Outreach placed four advertisements in the local newspapers in each community, promoting the local Mercury Recovery Program, informing residents where they could safely dispose of mercury products in their community. These advertisements are an important aspect of the overall educational and outreach effort.

- The Mercury Separation and Recycling, Local Community Collection Program was continued in each of the participating communities. Each community's collection site(s) is monitored on a regular basis. When the collection pails are full they are serviced promptly by the service provider. The program collects elemental mercury and a wide variety of mercury containing devices including: fever thermometers, lab thermometers, thermostats, mercury switches, sphygmomanometers, button-cell batteries, barometers and an assortment of miscellaneous mercury containing items.

- Training and education is conducted with personnel at each site on an ongoing and as needed basis.

- A special program for the collection of thermostats continues to develop in participating communities. Local Boards of Health continue to pass regulations banning the improper disposal of thermostats.

- The Thermostat Rebate Program was expanded to several plumbing supply companies within the service area. This program provides a financial reimbursement for used thermostats.

- School Clean Sweeps collection program continues to be offered to local school systems on an as needed basis.

- Button-cell batteries continued to be collected utilizing small collection boxes. The Button-cell Battery Reimbursement Program continued to be offered to communities. Several additional communities participated in the program.

- The Fluorescent Lamp Reimbursement offered financial reimbursement for costs related to the disposal of mercury containing lamps such as fluorescent and HID bulbs.

- The on-going program providing storage sheds for Universal Waste provided sheds to several communities for the storage of fluorescent lamps and other Universal Waste.

The Mercury Recovery Program has been successful in removing thousands of mercury containing products from the municipal solid waste stream. The Program through its regional and local educational outreach efforts, has contributed to a greater awareness on the part of residents regarding the potential impacts of mercury on human health and the environment. Residents are increasingly aware of where in their community they can safely dispose of mercury and products containing mercury. Resources, such as storage sheds and printed posters and flyers have assisted in the increasing community awareness. The

program continues to evolve as new approaches encouraging participation in the safe removal of mercury from the waste stream are implemented.

1. Regional Outreach

The Integrated Waste Services Association coordinated the regional education / outreach program for five Massachusetts' waste-to-energy facilities including facilities located in Saugus, North Andover, Millbury, Haverhill, and SEMASS.

Integrated Waste Services Association's activities in support of Massachusetts' Waste-to-Energy Facilities' Materials Separation Plan (MSP4) for 2007 were well received within each community. This following report, prepared by IWSA, describes the activities involved in the design, implementation and operation of IWSA's Program in support of the five waste-to-energy plants operating in Massachusetts and their Mercury Recovery Programs (MRP). Each facilities' MRP is community focused, locally based and operated; and the IWSA activities are designed to support in a coordinated fashion the MSPs on a regional basis.

IWSA's Annual Report on the Results of the Mercury Recovery Program

- **Introduction**

The Integrated Waste Services Association's activities in support of Massachusetts' Waste-to-Energy Facilities' Materials Separation Plan for 2007 continues the direction set in prior years. This report describes the activities involved in the design, implementation and operation of IWSA's Program in support of the five waste-to-energy plants operating in Massachusetts and their Mercury Recovery Programs (MRP). Each facilities' MRP is community focused, locally based and operated; and the IWSA activities are designed to support in a coordinated fashion the MRPs on a regional basis.

IWSA Regional Program activities for 2007 consisted of the following elements:

- Radio Advertising for "Keep Mercury From Rising"
- Evaluation & Analysis of the "Keep Mercury From Rising" campaign
- Revision & Update of Website www.keepmercuryfromrising.org
- Availability of print and video materials to facilities, the public and media

- **Regional Education Program "Keep Mercury From Rising"**

The Integrated Waste Services Association coordinated the regional education / outreach program for five Massachusetts' waste-to-energy facilities including facilities located in Saugus, North Andover, Millbury, Haverhill, and SEMASS.

a) Objectives

In 2007, the Regional Outreach Plan supported individual facility programs by the continued promotion of the media campaign, “Keep Mercury from Rising”. This campaign included two waves of radio advertisements to designed to reach the broadest possible audience. The campaign used targeted advertising educating the listeners about the concerns related to mercury. The advertisements also encouraged residents to contact their local health departments to receive more information about mercury and find out where in their communities they could dispose of mercury containing devices.

The objectives for 2007 were met and included the following:

- The Regional Outreach Program continued to raise awareness about mercury-containing products in the home and the proper handling and disposal of these products;

- The Program provided information and promote local recycling events;

- The Program continued to build an integrated communications program that leveraged opportunities for incremental, free media, and worked synergistically with the efforts of individual waste-to-energy facilities.

b) Tactics

A public survey was completed in mid-2007 measuring the effectiveness of the educational campaign “Keep Mercury From Rising.” Findings from this survey guide the development of the Regional Program. The website, www.keepmercuryfromrising.org, continues to be more user-friendly, and includes more contact information and contractor material, as well as continuing to provide information and assistance with recycling of mercury-containing products to the general public. IWSA produced five videos in 2003 for each waste-to-energy plant, and these videos are available on the website. The videos show the unique and effective programs now in place to keep mercury containing products out of the waste stream.

i) Survey

The effectiveness of the regional education campaign is in large part measured by an annual research survey. The polling is designed to measure positive changes in public attitudes and behaviors, as well as the receptiveness of the message. The

survey questionnaire was in the field during June 2007, and consisted of 400 completes, providing a 95% confidence level.

The Spring 2007 Massachusetts Study displayed an expected mix of perspectives: on the one hand, we measured continued improvement in mercury awareness and responsibility; however, we observed some warning signs of complacency, skepticism, and price resistance for alternative products without mercury.

Recycling participation is enjoying its highest two-year average (85%) in the past seven years. Over half (53%) of all households said they used *several bins* for different types of products (plastic vs. newspaper). More people would properly dispose of a broken mercury-containing item with a significant decline in the number of people throwing it in the trash. Circular wall thermostat awareness maintained 65% awareness vs. 58% in the year 2005. Fluorescent light bulbs, although only a point higher than last year, are at 47% awareness vs. 29% in the year 2001. Respondents gave owners of mercury products a higher responsibility number over last year's number, while much lower responsibility ratings were given to waste companies and the government.

While 89% of respondents considered mercury to be a hazardous material, 89% of respondents do not look for how much mercury is in household products before purchased, causing a potential dangerous disconnect. A more casual attitude towards mercury was observed, as fewer respondents (50% today vs. 61% in 2006) would immediately stop using a mercury item in the home, if labeled, and would wait to replace it, as needed. Signs of a tighter economy were seen in the willingness of people to find cash to pay for an equivalent thermostat that did not contain mercury. Last year, more would pay $45 for a non-mercury replacement of a $30 circular wall thermostat. This year, more chose the $33 replacement threshold.

ii) Advertising

IWSA developed a new radio spot for its wave of advertisements in 2007. The new spot capitalized on the educational outreach in past years and offered listeners a proactive message on what to do with items that contain mercury. Set to a catchy jingle, the advertisement reminds people which products are most likely to contain mercury and "Don't Put Mercury in the Trash!". The advertisement directs listeners to the Keep Mercury From Rising website or their local health departments for more information. The

radio spot is available for download on KeepMercuryFromRising.org.

IWSA purchased two separate two-week radio buys in 2007 and advertised on radio stations that broadened our geographic outreach. Radio is a targeted medium that provides cost-efficient mass communication and built frequency of message delivery.

The first three-week radio buy was implemented May 28 through June 10, 2007. Markets targeted by the radio buy were Boston, Worcester, New Bedford, and Cape Cod. In order to maximize the dissemination of the message, IWSA purchased another two-week radio buy that aired September 24 through October 7, 2007. Based on the results of the survey conducted after the radio ad, we believe the plan was successful in increasing public awareness.

iii) Web-based Tool

The website, www.keepmercuryfromrising.org, is user-friendly and provides additional information:

The site provides navigation under the masthead and incorporates information in the following categories:

Home – includes background on Keep Mercury From Rising and information on calling 1-866-9MERCURY for more information about safe disposal options.

Drop-off sites – provides information on where to drop-off mercury containing items.

Spills – provides a variety of information on actions one should take in the event of a mercury spill.

FAQs –provides answers to five common questions.

Video/Audio – provides the five videos developed by the facilities as well as an audio file of the new radio advertisement that aired in 2007.

Links – links were proactively sought and added to this page and efforts were made to increase the number of other website that link to http://www.keepmercuryfromrising.org.

Contractors - contains useful information and links for sources of mercury related information

iv) Print Materials

IWSA developed fresh, new print materials in 2007 to reinvigorate the regional campaign. The new materials include posters identifying items containing mercury and where you can bring those items in for exchange. IWSA also developed an eye-catching handout in the shape of a trash can that opens and discusses the types of mercury containing items that should not be put in the trash. These trash can flyers were extremely popular and demand was high. More than 70,000 of these flyers were printed in 2007.

v) Video

The five-minute "Keep Mercury from Rising" educational video was completed for each facility in 2003. The video explains the need to recycle mercury-containing products and the efforts undertaken by the state of Massachusetts and waste-to energy facilities to reduce the amount of mercury entering the environment.

The video now is being used at the five waste-to-energy facilities for educational purposes during tours and other meetings. Copies of the video have been made available to local cable access television stations and a "B-roll" of visuals and sound is available for media covering MSP events. Copies of the video also have been given to local public officials to be shown at meetings, schools, senior citizen centers, and other organizations that would benefit from viewing the video. As noted above, the video also may be viewed at the website.

c) 2007 Expenditures

Activity	Actual Expenditure
Survey	***$18,000***
Media Buys	***$90,256***
Website	**$367**
Print Materials	**$19,427**
Radio Spot Development	**$17,846**

2. Local Outreach / Education

The local outreach / education effort consisted of several activities with a goal of increasing community awareness concerning mercury. The outreach / educational effort focused on three principles of proper management of mercury and products containing mercury. It identified the environmental and health impacts of mercury, identified products containing mercury and provided instructions on how residents can properly manage and dispose of mercury in their community. These activities consisted of newspaper advertisements, local use of “Keep Mercury from Rising” video for presentations, educational flyer mailings to contractors, development and distribution of new posters and flyers **(Attachment #1)** to the communities and continued local display of the educational board.

a) Newspaper Advertisements

The Mercury Recovery Program continued to be advertised in local newspapers. This local outreach activity has proven to be an effective method of educating residents about mercury and the need to properly dispose of products that contain mercury. The local program coordinators consistently report that there is always an immediate increase in activity after an ad runs in their local newspaper.

The newspaper ads were specific to each community’s program. They informed residents of the potential harmful effects of mercury to human health and the environment and instructed residents where they could safely dispose of mercury containing products in their community.

A total of ninety-five ads were placed in local newspapers promoting the program. The vast majority of the newspapers are weekly publications usually published on Wednesday or Thursday of the week.

There were also two ads for special projects. Most of the ads were 5” x 5” ads. Some of the ads were for multiple communities and were much larger in size. A total of four ads were planned for each community. The ads were placed in each community’s local newspaper for the months of: April, May, September, and October. This included three additional ads that were placed for special mercury collection events such as Household Hazardous Waste collections.

Half of the ads were generic to the program, listing a variety of common products that contain mercury. All of these products could be properly disposed of at the local collection site (s). The ads also informed residents of the on-going thermometer exchange program and encouraged them to exchange their mercury fever thermometer for a new digital thermometer. The other two ads were specific to thermostats, encouraging contractors

and residents to properly dispose of these products at the local collection site.

b) “Keep Mercury from Rising” Video

The video that was developed in 2004 continues to be used by local coordinators in promoting the program in their communities when the program is presented to local organizations and schools.

The program coordinator often uses the film as part of presentations to boards of selectman, boards of health and other community groups.

Many local cable access channels still utilize the film as a community service announcement.

The film continues to be made available to local groups, organizations and schools through the Board of Health offices in each community.

Wheelabrator Millbury continues to show the film for educational purposes during tours, trainings and other meetings.

c) Educational Display Board

The educational display boards that were distributed to each community in 2002 are still being effectively utilized in the local community outreach campaign. Several of the boards are permanently displayed at the city or town hall. In many communities the boards are periodically displayed and rotated among the local libraries, senior citizen centers, health fairs and town meetings. These boards compliment the other local outreach efforts reinforcing the importance of properly disposing of mercury containing devices. The program coordinator regularly uses the display boards for presentations of the program to boards of selectman, boards of health and other community groups.

3. Mercury Separation and Recycling, Local Community Collection Programs

The community based collection sites continue to be the cornerstone of the overall Mercury Recovery Program. Each community has at least one; some have two centrally located, easily accessible collection site(s). These sites are typically located at the Board of Health office, Department of Public Works and or the Transfer Station.

There is a minimum of two five-gallon pails for the collection of mercury containing items at each of these sites. The second pail is the backup and is to be used only after the first pail becomes full. The individual(s) at each site

responsible for the daily management of the program have been trained in the proper handling and management of mercury containing products. They have also been trained in the proper clean-up procedures in the case of a spill. Each location has a mercury spill kit and a box of zip-lock plastic bags. Written instructions are on the spill kit itself as well as on each five-gallon pail. Due to the fact that there are frequent changes in personnel, training is reviewed with the staff on an as-needed basis during visits to the collection sites. In most cases some form of training and education takes place on each visit.

Enviro-Safe is the service provider for the MRP. Attached to each five-gallon pail are two stickers. One sticker contains the program instructions with information about what to do in case of a mercury spill. The other larger sticker identifies the program, lists a few of the representative mercury containing products and gives instructions about what to do when the pail is full. The local program coordinators are instructed to secure the lid and call the 800 telephone number for a pickup. Contractually, Enviro-Safe provides pick-up and recycling services for the pail normally within two weeks of being notified.

In the event that a large quantity of elemental mercury is found in a residents home, special arrangements can be made for a pick up to occur at that location, see # 9, Bulk Mercury Collection.

The town of Framingham is a new participant in the program for 2007. Framingham has a population of 65,000. The program is operated out of the Department of Public Works offices and has been fairly successful. They have adopted the local collection program, are collecting fluorescent lamps and are in the process of developing other aspects of the program.

This year two programs were discontinued. The towns of Northbridge and Oxford did not renew their contracts with Wheelabrator and were discontinued effective at the end of 2007. The resources that were allocated for these two towns were used for the town of Framingham.

4. Thermometer Exchange

The permanent Thermometer Exchange Program continues to be a very popular component of the overall MRP. All of the participating collection locations appreciate the ongoing exchange program and consider the program as an important outreach component for the overall mercury recovery program. Although the number of thermometers collected has dropped off from the earlier years of the program there continues to be a steady flow of residents coming into the collection sites to exchange their mercury fever thermometer for a new digital thermometer. Each community has an ample supply of digital thermometers for distribution. Many of the local program coordinators utilize the residents visit to their office as an opportunity to further educate them about mercury and other aspects of the program.

The Thermometer Exchange collected 1,067 4-inch fever thermometers and lab thermometers in 2007. This is about half as many as were collected in 2006. It is anticipated that the total number of fever thermometers has leveled off over the past couple of years and it is anticipated that the numbers of thermometers collected will continue to decrease over the next few years.

5. Thermostat Recovery

The Thermostat Recovery Program continues to expand. As a result of the expanded number of communities that have passed regulations banning the improper disposal of thermostats, mailings to contractors and local advertisements the number of recovered thermostats continues to increase.

Twenty-four communities have passed a version of the thermostat regulation banning the improper disposal of thermostats in the waste stream. The regulations banning the improper disposal of thermostats are very clear. They state the purpose of the regulation, definitions, penalties and effective date. The penalties associated with the regulations range from $50.00 per incident (per thermostat) up to a $300.00 fine per incident.

The new Mercury Management Act has passed and will become effective in May of 2008. This law makes it illegal to improperly dispose of mercury containing devices in the trash. Since the new state law has no enforcement, we will continue to promote the local health regulations because of the potential financial penalties. The new law and local health regulations should complement each other and will hopefully encourage local contractors to properly dispose of these devices.

As a result of the health regulations and the new mercury law in conjunction with other educational activities such as posters, direct mailings, flyers and local newspaper advertisements contractors and residents are increasingly properly disposing of these devices.

In 2007 one direct mailing was sent to plumbers, electricians, boiler technicians and building contractors in the communities that have passed a regulation.
The mailing consisted of an eye catching six-inch by nine-inch post card. **(Attachment #2**). In addition, two advertisements specific to thermostats were placed in the local newspapers. One ad ran in May and the other in October.

In 2007, 1,487 thermostats and 300 small switches were collected by the program. Contractors will save switches and bring them to the collection site in plastic bags. Assuming that each switch represents one thermostat, the total number of thermostats collected was 1,787. This is approximately 700 less thermostats in total than were collected in total in 2006. This number also

includes 502 thermostats that were collected under the Plumbing Supply Thermostat Reimbursement Program.

The thermostat program continues to have the desired effect in removing thermostats from the municipal waste stream and from plumbing supply businesses.

6. Thermostat Reimbursement Program

The Thermostat Reimbursement Program has been in place now for two years and has been extremely successful at one plumbing supply business and fairly successful at two others. As stated above 502 thermostats were recovered. This is approximately the same number of thermostats as was collected in 2006. The 2006 program only picked up from one location and in 2007 there were three. Last year B & D Supply generated 510 thermostats and 317 switches. A large portion of the 2006 total had been saved over years by B & D not knowing what to do with the thermostats. So, this year's collection is more representative of actual thermostats collected by the plumbing supply businesses in 2007.

The program is designed to provide plumbers and contractors a financial incentive to properly dispose of thermostats at Plumbing Supply businesses. These businesses are where the majority of thermostats are purchased (points of purchase) and are logical locations for plumbers and contractors to properly dispose of these used devices. A total rebate of $5.00 per "whole thermostat" was offered to the plumbing supply businesses. A $3.00 rebate to be paid to plumbers and contractors who brought in thermostats and $2.00 for to the plumbing supply business for each thermostat recovered.

7. School Clean Sweeps

The School Clean Sweeps Program in 2007 continued to be offered to school systems for elemental mercury and products containing mercury. The program provides a free service to school systems to inspect chemical storage areas and science laboratories and for the safe removal of elemental mercury and products or devices containing mercury. In addition to the removal service the program also provides replacement products for certain items targeted for removal. Replacement products consisted of lab thermometers, digital barometers and portable and wall mounted sphygmomanometers.

There was one Clean Sweep Program conducted at Worcester Academy in 2007. The collection resulted in a number of thermometers, one sphygmomanometer and two barometers being collected.

8. Button Cell Battery Collection

The Button Cell Battery Collection is an on-going effort in each community. Each community has received a supply of small collection boxes for button-cell

batteries. They are encouraged to distribute the boxes to targeted businesses and certain community locations for the collection of button-cell batteries. Key locations in any community consist of points of purchase such as drug stores, jewelry stores, hearing aide stores and camera stores. Also community locations such senior citizen centers, health offices and libraries are fairly good locations for the collection of button-cell batteries. With limited resources it is difficult for many communities to distribute and collect the collection boxes. Very often the only collection point is the Board of Health office.

Approximately 43,910.40 button-cell batteries were collected in 2007. There were 19,609 button-cell batteries collected in 2006. This is more than twice the number that were collected in 2006.

All of these batteries came from eight communities, four of which participate in the rebate program. The city of Newton accounted for thirty-five pounds of button-cell batteries. This is more than half the total amount of 68.61 pounds. Newton's total this year was actually a two year total for their program. They did not recycle all of their batteries in 2006. They save their button-batteries for a city-wide contest. Regardless, this is an example of the quantity of button-cell batteries that can be collected with an organized community wide effort.

Four communities are participating in the Button-cell Battery Reimbursement Program. This program was initiated in 2006 as a pilot and continued into 2007. If a local organization within the community could be identified that would be willing to place the collection boxes in specific collection locations and service the boxes on a monthly basis that organization would receive a reimbursement for the button-cell batteries collected. The organization would be paid $100.00 per pound up to a maximum for any calendar year of $500.00.

The four communities that signed up to participate in the rebate program collected sixty-five of the total sixty-eight pounds total pounds of button-cell batteries reported in 2007. The program was offered to the communities on several occasions but only four local community groups signed up. The other three communities other than Newton each collected approximately 12 pounds each of button-cell batteries.

With the success of the program and the participating organizations receiving a total of $2,000.00 it is anticipated that additional organizations will participate in the program in 2008.

9. Bulk Mercury Collection

Each community has been informed that a special collection program is available for elemental mercury. If a large quantity of elemental mercury or devices containing a quantity of mercury is identified in the community, a special pickup

of the mercury (or devices) is available. All of the program coordinators have been notified of this special collection service in the event of such a discovery.

In 2007 there was one large bulk mercury collection. The City of Worcester had a resident deliver 142 pounds of elemental mercury to the DPW collection location. That material was removed promptly from the premises by the service provider.

10. Fluorescent Lamp Reimbursement Program

The Fluorescent Lamp Reimbursement Program has been very successful over the past several years. A total of Thirty-one communities have active programs in place and are collecting fluorescent lamps from the municipality and schools. Several have programs that allow residents to recycle their fluorescent lamps. This year the collection effort was expanded to include local hardware stores, see information below. The only communities that do not have an active program for the collection of fluorescent lamps are: East Brookfield, Holliston, Mendon, Rutland and Oxford. Oxford in no longer participating in the program and it is anticipated that the remaining communities will have a fluorescent lamp recycling program by the end of 2008.

This year a total of twenty-one invoices from fifteen communities were submitted for reimbursement. Some communities had late pickups and as of the end of the year invoices had not been received for reimbursement.

a) Hardware Stores

In 2007 a concerted effort was made to solicit local hardware stores to begin collecting fluorescent lamps. Fourteen hardware stores are now collecting fluorescent lamps.

The program is presented as a partnership with the community to remove mercury from the municipal waste stream. The hardware stores are set up as a collection point for the town. When the drums or boxes are full the store calls the town. The DPW then comes and picks up the full drums and leave them empty drums. These lamps are then combined with their regularly collected municipal lamps. The hardware stores were mostly set up as collection points in the second half of 2007 so not many lamps were collected from these locations. It takes time for the residents to learn that there is now a permanent drop-off location in the city or town.

b) Results for the Fluorescent Lamp Recovery Program

In 2007 a total of 149,176 linear feet of fluorescent lamps were collected this was an increase of 27,854 linear feet over what was collected in 2006. An additional 4,645 single lamps such as circular, compacts, u-tubes and HID were also collected. This is an increase of 2,565 of these types of lamps over what was

collected in 2006. With the increased interest in the use of compact fluorescent lamps we expect to see a significant increase in the collection of these lamps in coming years. In 2007, 2,080 compact fluorescents were collected in the municipal programs. This is an increase of 438 over 2006. With the inclusion of local hardware stores collecting fluorescent lamps in partnership with the communities it is anticipated to see the collection of these particular types of lamps to increase substantially in the future. With several new communities collecting fluorescent lamps in 2008 it is anticipated that the total number of all fluorescent lamps collected will continue to increase in future years.

11. Purchase of sheds for the storage of Universal Waste

The purchase of storage sheds for the storage of fluorescent lamps and other universal waste has been very successful. Having a shed assists the community in establishing a comprehensive fluorescent lamp collection program.

It was recognized a couple of years ago that several communities could not start a fluorescent lamp collection and recycling program because they did not have an adequate location for the storage of the lamps. Other communities could not consider expanding their programs because of the same reason. Eight communities received sheds in 2006 and twelve in 2007. The communities that received sheds in 2007 include: Auburn, Grafton, Hopkinton, Medway, Milford, Millis, Millville, Natick, Princeton, Sherborn, Walpole, Weston.

Program Results

The total net amount of mercury collected through the Mercury Recovery Program for 2007 weighed 283.24 pounds.

The combined educational / outreach effort including regional radio ads, “Keep Mercury from Rising” video, mailings, flyer distribution, local promotions have all helped raise awareness of the health and environmental concern associated with the improper disposal of mercury and products that contain mercury.

The number of fever and lab thermometers collected decreased slightly from 2006. A total of 963 fever thermometers and 104 lab thermometers were collected in 2007. That is a decrease of 1,311 fever thermometers and about 52 lab thermometers from the previous year. The overall recovery of thermometers continues to decrease but there remains a relatively constant participation in the exchange program.

A total of 1,487 thermostats and 300 switches were collected in 2007. This is a decrease of approximately 313 thermostats and 338 swiches less than the the number of devices collected in 2006. This number includes the thermostats collected from plumbing supply businesses. One of those companies last year had a few hundred thermostats that they had previously collected and were

storing them, not knowing what to do with used thermostats. This could account for the difference.

It is anticipated that with the new mercury law in Massachusetts coupled with the local health regulation there should be an increase in thermostats collected in 2008. Even with this decrease the total number of thermostats collected in 2007 is significant. The sustained number of thermostats collected demonstrates that the thermostat regulations passed by the local boards of health in conjunction with the direct mailing and regional and local advertisements and local promotions (Posters, stickers etc.) have had their desired effect of educating residents and contractors of the need to prevent these devices from entering the municipal waste stream.

There was one large bulk collection at the Worcester Department of Public Works resulting in the removal of 142 pounds of mercury.

As a direct result of receiving Universal Waste sheds nine communities started the collection of fluorescent lamps from municipal buildings and schools in 2007.

The total linear feet of fluorescent lamps collected increased to 149,176 from 121,322 for 2006. The number of other fluorescent lamps collected also increased by 2,565 lamps from the previous year. If the collected fluorescent lamps were placed end to end they would stretch a total of 28.25 miles, this is about six miles longer in distance then in 2006.

In conclusion, the Mercury Recovery Program continued to operate very successfully in 2007 in all the participating communities. The program has had mixed results this year. Thermometer collection decreased a small amount, thermostats decreased slightly, fluorescent lamps and button-cell batteries increased significantly. The regional and local outreach efforts have been very effective in educating residents about mercury and its potential harm to human health and the environment.

Material Separation Plan
Millbury – Expenses – 2007

	Expenses	Budget	Balance
Expenses: Includes: Consultant fees, travel, supplies, office expense	**$49,701.87**	**$49,000.00**	**($ 701.87)**
Wheelabrator Technologies: Administrative costs	**$ 3,500.00**	**$ 3,500.00**	**$0**
Wheelabrator Millbury: Administrative costs	**$ 5,000.00**	**$ 5,000.00**	**$0**
Insurance: Includes: Cost of liability and disability insurance	**$ 2,542.62**	**$ 3,000.00**	**$ 457.38**
Regional Outreach (IWSA): Includes: Cost of Regional Outreach Program	**$41,800.00**	**$41,800.00**	**$0**
Local Outreach:			
Newspaper Ads	**$27,667.83**	**$39,000.00**	**$11,332.17**
Special Ads	**$868.25**	**$ 6,700.00**	**$ 5,831.75**
Educational Boards	**$0**	**$ 1,000.00**	**$ 1,000.00**
Community Collections: Includes: Cost of collection and sorting	**$ 7,123.20**	**$16,000.00**	**$ 8,876.80**
School Clean Sweeps	**$0**	**$ 500.00**	**$ 500.00**
Bulk Collection	**$0**	**$ 500.00**	**$ 500.00**
Thermostat Plumbing Supply Pickup Costs	**$ 1,080.80**	**$ 5,000.00**	**$ 3,919.20**
Thermometer Exchange: Includes: Cost of new digital thermometers	**$0**	**$ 4,000.00**	**$ 4,000.00**
Thermostat, Contractor Mailing: Includes: Cost of printing and mailing postcards	**$ 2,339.58**	**$ 5,000.00**	**$ 2,660.42**
Fluorescent Lamp Reimbursement: Includes: Cost of reimbursement to cities and towns	**$12,343.33**	**$10,000.00**	**($ 2,343.33)**
Universal Waste Sheds:	**$22,437.00**	**$24,000.00**	**$ 1,563.00**
Thermostat Reimbursement: Includes: Reimbursement to plumbing contractors	**$ 2,510.00**	**$ 6,000.00**	**$ 3,490.00**
Button-cell Battery Reimbursement: Includes: Cost of reimbursement to community groups	**$ 2,000.00**	**$ 5,000.00**	**$ 3,000.00**
Contingency	**$0**	**$10,000.00**	**$10,000.00**
TOTAL	**$180,914.48**	**$235,000.00**	**$54,085.52**
Annual Tonnage	**452,235 tons**		
Expenditures, Cents / Ton	**.400**		