

Household Hazardous & Conditionally-Exempt Small Quantity Generator (Small Business) Hazardous Waste

Overview

Federal and state laws have strict requirements for storage, handling and disposal of hazardous waste. However, federal law provides an exemption from these rules for household hazardous waste (HHW), and allows disposal of HHW in a municipal waste landfill. Businesses and industries that monthly generate less than 220 pounds (100kg) of hazardous waste and 2.2 pounds (1 kg) acute hazardous waste (and subject to certain requirements) are considered conditionally exempt small quantity generators (CESQG) and are allowed by Federal law, based on certain limitations, to be disposed of in a municipal waste landfill. However, local laws are more stringent than Federal law. During the citing process for the Bluff Road Landfill, the City of Lincoln decided that it was in the best interests of the City and the environment to reduce the disposal of hazardous wastes in the Bluff Road Landfill. The City put in place programs focused on toxicity/risk reduction, including the Special Waste Program (described in greater detail in the paper on Universal, Special and Unique Wastes), the Household Hazardous Waste Collection Program, and the CESQG waste collections program.

HHW includes leftover household products which contain ignitable, corrosive, chemically reactive or toxic ingredients. Examples of HHW include but are not limited to: lawn and garden chemicals, pesticides, automotive fluids, batteries, cleaning agents, solvents, mercury containing products, and oil based paints. Improperly managed HHW can pose a threat to human health (i.e. cause injury to sanitation workers, children or family pets, and others that might handle the products) and the environment. Diverting HHW from the solid waste stream, along with proper management, can mitigate these risks and reduce the toxicity of the waste stream. Many communities across the United States, including Lincoln-Lancaster County provide programs to allow members of their community to safely manage HHW. Household participation in any HHW program can be significantly influenced by convenience and level of public education outreach.

Current Programs

The Lincoln-Lancaster County Health Department (LLCHD) coordinates programs for toxics reduction/hazardous materials management for households and small businesses. These programs include but are not limited to community education (focused on choosing least toxic alternatives and buying only the amount needed) and an annual series of hazardous waste collection events for households and small businesses (CESQG). The HHW events are typically scheduled from March through November, and currently include two (2) by appointment only events. The LLCHD also shares responsibility with Aging Partners for oversight of the *Safe Homes for Seniors* service that provides in-home household hazardous waste assessments, sorting and proper disposal for seniors and other home-bound populations. A more detailed description of these programs is included as an Appendix. The City also provides for management of certain hazardous materials at its North 48th Street Landfill, where it accepts used motor oil, batteries and has a program for removal of hazardous components from appliances, as part of its appliance demanufacturing facility. Other private industries provide hazardous materials management through programs that reuse, recycle or otherwise properly manage batteries, computer components, oils, latex paints, compact fluorescent light bulbs, devices containing mercury and others. The City and County also provide educational tools and support to help members of the community identify and choose less toxic alternatives and proper management methods. A more detailed list of local options can be

found in the *Lincoln-Lancaster County's Official 2012 Waste Reduction & Recycling Guide*, and through the following websites and related links:

- City's Solid Waste Operation's website
<http://lincoln.ne.gov/city/pworks/waste/sldwaste/>
- Lincoln-Lancaster County Health Department's website
<http://lincoln.ne.gov/city/health/environ/pollu/index.htm>

The LLCHD has identified a goal that 90 percent of Lincoln and Lancaster County Planning Area (Planning Area) small businesses/CESQGs have access to the program and that the program serves at least 30 small businesses and agencies each year, with an added goal of diverting at least 7.5 tons of hazardous waste annually. Participating businesses pay the cost for waste disposal and the balance of the costs are paid from refuse hauler occupation tax and State grants. Participants see a benefit in this program because it reduces their overall costs, including the costs for arranging disposal and actual disposal cost (because it takes advantage of a LLCHD volume based disposal rate). There are only two CESQG events per year, which means that they may not always be convenient and accessible to Planning Area businesses and agencies; this may be a significant limiting factor in program participation rates and the quantities of waste that is managed through this program.

As further described below, the LLCHD-coordinated HHW events program divert an average of 40 tons per year of HHW. These are major events often attracting as many as 620 cars in 4 hours. These events rely heavily on volunteers and the partner business, and represent a significant staffing challenge as they require specialized personnel including trained chemists, specialized waste handlers, and personnel with extensive safety training (to handle the wide variety of materials), as well as the uncertainties associated with some materials collected. While the volunteers are considered a net cost savings, the LLCHD makes a significant investment in recruiting, coordinating, and training volunteers.

LLCHD personnel have identified the largest challenges to this program as:

- Accessibility
- Management
- Safety
- Public Education/Behavior Change

Accessibility. With a limited number of HHW collection events, access is limited by such factors as convenience and location. Often the need for this disposal option may not coincide with the event generating the waste (e.g., moving, house cleaning) or may not be accessible to people who are homebound, must work during the time of the event, or for other reasons cannot take advantage of the opportunity when the need exists. LLCHD estimates that the current program is utilized by less than 3 percent of the community households per year.

Management. Challenges relate to: the nature of coordinating mobile events; coordinating volunteers; specific in-field challenges (e.g., chemical or physical assessment of materials collected, highly variable quantities received); traffic and space limitations to safely receive, sort and store materials; and, weather risks. Challenges and cost considerations also arise when the material received do not equal a full barrel or container, but must be shipped off of the collection event site.

Safety. Challenges include: assessing and handling chemicals in a parking lot (out-door working conditions/environment); safety concerns for volunteers; risk management requirements; training costs; and, the high intensity (large volume; short duration) nature of mobile HHW collection events. LLCHD has protocols and programs to ensure these matters are effectively managed.

Public Education/Behavior Change. Challenging yet critical to an effective and efficient toxics reduction program is education, which results in behavioral changes. If the target population and/or businesses that stand to participate and benefit from the program are not aware of it or know how to fully utilize associated services then the participation rates are lower. The ability to meet specific waste reduction goals is inhibited and risks to public health and the environment are greater with low participation rates. Community behavior change is dependent on removing barriers, creating incentives and disincentives, and implementing behavioral science strategies proven to work at the community level.

Excluding the value of volunteer time and participation by corporate partners, the cost of these programs in fiscal year 2011 were paid for from the following sources:

- Grants: 17 percent
- Occupation Tax: 83 percent

There is no data available to accurately quantify the amount or cost of HHW material diverted through private industries and businesses initiatives.

Generation and Diversion

HHW is a relatively small proportion of the municipal solid waste disposed at landfills. The California Statewide Waste Characterization Study, 2008 estimated HHW to be approximately 0.3 percent of the municipal solid waste (MSW) stream disposed; Vermont’s 2002 Waste Composition Study, concluded that HHW constitutes 0.6 percent of the MSW destined for disposal . The NDEQ conducted a series of waste composition studies in 2007 and 2008. The portion of the study conducted at the City’s Bluff Road Landfill showed 0.02 percent of waste stream was HHW – this excluded electronic waste (0.41 percent), and dry cell batteries (0.08 percent). This totals 0.51 percent of Lincoln’s MSW that may be considered HHW. Table 1 provides a summary of quantities of HHW materials collected at the LLCHD HHW events over the past 11 years and the technique employed to manage or dispose of these materials. This represents an average collection rate of approximately 40 tons per year, with approximately 50 percent diverted from disposal. LLCHD does not accept used oil or electronics in their HHW collection program because private businesses provides a management alternative for these materials. The City does accept used oil at its North 48th Street Transfer Station. LLCHD also does not accept latex paint (because it is not a hazardous waste) and other wastes readily recycled through local firms.

Table 1 – Pounds of HHW Collected Per Year

Year	Recyclables	Fuels Blending	Incinerable	Landfill	Totals
2001	34,760	19,037	21,452	681	75,930
2002	2,341	35,161	29,071	385	66,958
2003	7,472	37,083	32,487	1,235	78,277
2004	21,246	36,570	33,667	364	91,847
2005	3,931	26,858	29,179	1,553	61,521
2006	6,664	28,604	23,046	2,447	60,761
2007	7,013	37,209	44,144	1,194	89,560
2008	50,058	17,444	72,963	-	140,465
2009	4,325	13,558	59,285	37	77,205
2010	3,615	12,394	53,374	-	69,383
2011	4,065	35,974	44,571	-	84,610
Totals	145,490	299,892	443,239	7,896	896,517
Total Tons	72.75	149.95	221.62	3.95	448.26

Based on an assumption that between 0.3 and 0.6 percent of the MSW is HHW, it is estimated that between 900 tons and 1,800 tons of HHW are currently generated in the Planning Area or approximately 20 to 40 times the amount historically collected through the LLCHD coordinated collection events. Again, the amounts of HHW materials received and managed by private businesses are unknown.

Program (Facility/System) Options

There are several system, facility and program options for HHW diversion from the solid waste stream. Among the most common approaches are the following:

- **Periodic or Mobile collection events.** This is the system currently used in the Planning Area - Status Quo. While this is often called a mobile event there are also less common systems that provide vehicles that collect material on an “as-requested” basis. Such mobile vehicle systems are considered costly as a primary program type, based on the total quantity diverted and are not addressed in this paper.
- **Home-based collection.** This type of system is also currently used to a limited extent in the Planning Area. The *Safe Homes for Seniors* service allows for the assessment, sorting, removal and proper disposal of HHW directly from the homes of area seniors participating in Aging Partners programs and other home-bound populations. Large scale home based collection events have been shown to be very costly.
- **Local business collection sites.** This type of system is also currently used in the Planning Area (Status Quo). These types of systems often target single material types (e.g., oil, batteries, and electronics). Some may also be aligned with point-of-purchase facilities. Local business collection sites may also correspond to producer responsibility option as further described under a separate paper on Product Stewardship.
- **Permanent facility(s).** This exists to a limited extent with the City’s North 48th Street Transfer Station; this facility only takes materials banned from landfill disposal, specifically motor oil, batteries and appliances.

Effective HHW programs often use more than one such system to maximize diversion and address inherent limitations with any one program type.

Permanent HHW collection facilities are fairly common in larger communities in the Midwestern region including Omaha, NE; Sioux Falls, SD; Minneapolis/Hennepin County, MN; Des Moines, IA; Council Bluffs, IA; Kansas City, MO; and, Wichita, KS. Permanent facilities typically have scheduled days and hours of operation, but some smaller facilities may function as appointment only, due to staffing considerations and safety issues. Some HHW facilities are co-located with other solid waste management facilities/functions, others are stand-alone facilities. Besides material handling and storage areas, facility features and options often include covered canopy unloading area, limited laboratories, materials exchange/reuse center, office space, and education areas.

In Nebraska, five jurisdictions are known to have permanent HHW collection facilities: these include the cities of Holdrege, Kearney, North Platte, and Omaha, and Red Willow County. Permanent facilities in other Nebraska communities are also known to be under development. The Holdrege facility serves four counties with a mobile collection trailer.

Some permanent HHW facility programs accept CESQG hazardous materials with designated operating day(s) or hours reserved for CESQG appointments. Allowing CESQG access to a HHW facility typically provides businesses a lower cost option for hazardous wastes disposal and may represent an optional source of revenue.

The 1994 Lincoln-Lancaster County Solid Waste Management Plan (1994 Plan) recommended building a modest, accessible household hazardous waste collection facility in the Phase II recommendations. The 1994 Plan recommendations also included the possibility of charging fees to businesses utilizing the facility to cover all costs for their waste disposal and a portion of the cost for operating the facility.

Another option which has been discussed with LLCHD and the NDEQ is construction of permanent HHW facility that would serve as a regional hub to accept HHW from periodic or special collection events that might be collected in adjacent counties or as part of events located in rural areas.

Options Evaluation

The advantages of any toxics reduction, HHW or CESQG program are protection of human health and the environment, and extend to conservation of resources, cost savings, reduced generation (largely through education), and proper disposal (which prevents pollution).

The general issues associate with periodic or mobile collection events are largely discussed above and include issue of accessibility, management and safety. The accessibility limitation in particular likely limits participation rates and rate of diversion.

There are generally no significant issues associated with local business collection sites in the Planning Area other than the limits on the types of materials they accept (e.g., often target single material) and thus do not represent a convenience when dealing with multiple material types. Because some businesses charge a fee for services, consumers may be reluctant to use the service, when legally HHW can be directed to an MSW landfill (Bluff Road). Because some local businesses also offer single material type special collection events (e.g., computers and electronics) they can also have issues of limited accessibility.

The option of constructing a permanent and fixed-facility for the Planning Area, for the receiving, handling and management of HHW and CESQG waste would likely result in several program advantages. These include:

- Increased diversion of hazardous and toxic materials from the landfill, including increased number/types of materials that could be managed.
- Increased convenience and accessibility to residents and businesses, which would likely increase program participation rates and the quantity of material collected.
- Increased opportunities for the safe and legal management (characterization/assessment, handling and disposal) of hazardous materials and waste.
- Increased opportunity for toxics reduction education and community behavior modification.
- Decreased (mobile) event costs, due to decrease mobilization, management, safety, and execution costs.
- Decreased need for volunteers (technical and non-technical), and associated risk, safety and management issues.
- Ability to maximize local reuse of good products to avoid shipping and disposal costs. This assumes such a facility would include a repurpose/swap shop.
- Ability to store large size shipments for most or all waste, thus creating more efficient and cost-effective shipping.

Beyond these advantages, a permanent and fixed-facility could have some short- and long-term disadvantages, including the following:

- Cost of facility design, construction and operation. A further evaluation of funding options would be necessary to establish cost implications to the Planning Area residents and businesses.
- Costs of additional staff to operate the facility. This would need to be further evaluated based on levels of service, hours of operation and materials accepted.
- Potential decrease or more limited opportunities for corporate partnerships.
- Decreased or limited opportunities for the use of volunteers.

There are not many notable disadvantages to a permanent and fixed facility to handle CESQG waste.

Consistent with the guiding evaluation criteria developed for use in the Solid Waste Plan 2040, the HHW and toxics reduction options have been further evaluated based on the considerations shown in Table 2. It is important to note that to best serve the City and Lancaster County a combination of fixed-facility(s) with limited mobile (and home-based community) collection events and local business collection sites would likely maximize the diversion of hazardous materials from disposal, community participation and program effectiveness.

Relationship to Guiding Principles and Goals

The current toxics reduction program of HHW/CESQG collection events, private businesses, City facilities, and education outreach provides a level of public/private partnership and opportunities for engaging the community in reducing waste and waste toxicity. As it relates to the Guiding Principles and Goals of the Solid Waste Plan 2040, (household and CESQG) hazardous waste management is directly applicable, as further noted below.

- **Emphasize the waste management hierarchy:** The toxics reduction programs (HHW, CESQG) are directly related to the waste management hierarchy in that they place maximum emphasis on options to reduce, reuse/repurpose, recycling, and recover to avoid and prevent the need to generate and manage a more toxic waste stream. A permanent HHW/CESQG hazardous waste facility (alone or in conjunction with existing periodic/ mobile collection events and local business collection site) provides the greatest opportunity to increase reuse (materials exchange), recycling, and recovery.
- **Encourage public/private partnerships:** The current toxics reduction program involves public and private stakeholders in complementary programs. A permanent facility would complement the current private business run recycling/take-back programs and could provide additional service to small business/CESQGs.
- **Ensure system capacity:** Current periodic/mobile collection events are heavily utilized, but may fall short of providing the required accessibility for all residents of the Planning Area. A permanent facility (alone or in conjunction with existing periodic/ mobile collection events and local business collection site) would significantly increase accessibility, and diversion and reuse opportunities to manage the hazardous waste generated by households and small businesses/CESQGs in the Planning Area; it would also provide needed capacity to sort, store and manage material more efficiently.
- **Engage the community:** an expanded toxics reduction program could help further involve the public and change behaviors relative to safe, sound, environmentally responsible solid waste management practices and increase emphasis on conservation, source reduction, reuse and recycling alternatives.

Table 2 – Options Evaluation

Evaluation Criteria	Periodic/Mobile Collection Events	Local Business Collection Sites	Permanent Facility
<p>Waste Reduction/ Diversion</p>	<p>Historic collection events have been effective; participation and quantities collected limited by frequency, location and nature of events. As noted above, quantities of HHW going to disposal with the MSW waste stream may be significantly greater than amount currently diverted by periodic mobile collection events.</p> <p>50 percent of the material currently collected is diverted; 50 percent is sent for disposal; these ratios are affected by the types of materials accepted and limited ability to repurpose or store materials that could be reused.</p>	<p>Are considered effective but focus on single materials and thus require a collective network to address all targeted materials.</p> <p>The quantities diverted are not known for the Planning Area.</p>	<p>Provides greatest potential for capturing and diverting HHW.</p> <p>Could offer an expanded menu of materials and could potentially be consolidated with materials from City facilities and/or CESQGs.</p> <p>Inclusion of a materials exchange/repurpose/reuse center will further increase diversion and community engagement in source reduction practices.</p>
<p>Technical Requirements</p>	<p>Diversion potential limited by number and nature of multiple single day events.</p> <p>LLCHD staff effectively manages the requirements of such events. Requires significant personnel time, challenging contractual issues, and often relies heavily on volunteers.</p> <p>Flexibility to increase or decrease events based on available funding.</p> <p>Continuing mobile collection events in</p>	<p>As a standalone option it may not include all desired materials. In conjunction with other systems/facilities provides for a comprehensive program and allows for diversion of potentially large volumes of a specific material.</p> <p>Reduces cost to government and consumers for proper management of specific materials.</p>	<p>Provides the greatest capacity and potential for increased materials diversion, community participation and material reuse (Accessibility).</p> <p>Greater potential for worker safety and safe working conditions (Management and Safety).</p> <p>Can provide year-round access and short-term scheduling, based on need (accessible and</p>

Evaluation Criteria	Periodic/Mobile Collection Events	Local Business Collection Sites	Permanent Facility
	<p>the Planning Area (possibly in conjunction with a permanent facility) will provide convenience, accessibility and participation.</p>	<p>May not require the same level of training as other HHW because of limited product nature.</p> <p>Easy to continuously promote and promotional effort may provide secondary benefits to local business.</p>	<p>available when resident wants to clean out or get rid of HHW).</p> <p>Greatest control of site security.</p> <p>Flexibility in handling materials of unknown composition.</p>
<p>Environmental Impact</p>	<p>Helps reduce toxicity of the waste stream disposed, prevents inappropriate releases to other management systems and the environment.</p> <p>Residents may continue to dispose HHW with refuse due to limited program availability.</p> <p>Spill prevention and site preparedness required in conjunction with each event.</p>	<p>Helps reduce toxicity of the waste stream disposed, prevents inappropriate releases to other management systems and the environment.</p> <p>As a standalone option it may not include all desired materials. A comprehensive network is required to address the range of HHW materials requiring management.</p> <p>Due to the standalone nature it may not adequately provide for materials that are more hazardous to business employees (e.g., may not accept ignitable, corrosive, toxic (by exposure) chemically reactive or toxic ingredients).</p>	<p>Provides greatest opportunity to reduce toxicity of the waste stream disposed, prevents inappropriate releases to other management systems and the environment.</p> <p>Can provide opportunities to reuse and recycle of hazardous household products, conserves resources and can reduce the need for generating new hazardous products.</p> <p>Permanent facility design can best reduce/minimize environmental risks from potential spills.</p>

Evaluation Criteria	Periodic/Mobile Collection Events	Local Business Collection Sites	Permanent Facility
Economics	<p>Annual cost of collection events depending upon number of events, quantity and types of materials received.</p> <p>Requires a funding commitment; is not considered a net revenue generator; some revenue options are available from users.</p> <p>Often relies heavily on volunteers (8 to 20 per event) to reduce costs.</p> <p>Number of collections can be used to control costs; but, this also limits program effectiveness.</p>	<p>Generally all costs paid by business; some materials may involve user fees.</p> <p>Because the materials handled may be limited it may not fully shift cost away from waste generators and government. See the paper on Product Stewardship for additional information on extended producer responsibility options as a funding mechanism for certain materials.</p>	<p>Requires funding to cover land purchase, design, and construction costs.</p> <p>May not have access to all of the same corporate funding as periodic/special collection events.</p> <p>May have greater access to sources of revenue from CESQG fees and if used as a regional facility.</p> <p>Hours of operations can be used to control labor costs.</p>
Implementation Viability	<p>Not a new technology and has been proven viable.</p> <p>Requires promotion and education to maximize participation on select days. However, this promotional effort serves to keep alternative for safe and environmentally appropriate management of household hazardous waste in full public view.</p> <p>Relies upon corporate/community partners for event site</p> <p>Require significant effort and logistical considerations for each one-day event.</p>	<p>Not a new technology and has been proven viable.</p> <p>Extensive network currently in place for select materials. Extended Producer Responsibility laws could increase number of sites and types of materials handled at no added cost to government.</p> <p>Does not rely upon government funding to implement or sustain program.</p> <p>Voluntary nature does not ensure longevity or consistency</p>	<p>Not a new technology and has been proven viable.</p> <p>Suitable and permitable site required.</p> <p>May be co-located near existing City solid waste facilities that serve households.</p> <p>Once established it will require a long-term commitment to funding; community will expect minimum level of services to be maintained.</p>

Evaluation Criteria	Periodic/Mobile Collection Events	Local Business Collection Sites	Permanent Facility
	Can be modified from year to year based on available funding.	of approach.	

- **Embrace sustainable principles:** Proper management of hazardous materials and waste is based on sustainable principles in emphasizing that waste is not inevitable and in considering environmental, economic, and social dimensions in managing and using resources.

Summary

Federal and state laws allow for disposal of HHW and CESQG hazardous waste in a municipal waste landfill. Lincoln and Lancaster County have implemented toxics reduction programs to reduce the amount of hazardous waste going into the City's landfill and to protect public health and the environment. Participation in any toxics reduction program and related HHW/CESQG collection efforts can be significantly influenced by convenience and level of educational outreach. Improperly managed HHW/CESQG hazardous wastes can pose a threat to human health and the environment. Removal of hazardous materials/waste from the solid waste stream, along with proper management, can mitigate these risks and reduce the toxicity of the waste stream.

Many communities across the United States, including Lincoln and Lancaster County provide programs to allow members of their community to safely manage hazardous materials and waste. The cost of these City-County toxics reduction programs is currently paid for from the Occupation Tax on refuse haulers and from State grants. The LLCHD's toxics reduction programs have received significant value from volunteer time and participation by corporate sponsors. Local business collection sites also reduce the cost to citizens and government. The CESQG program receives funds from waste generators to pay for material disposal.

There are many types of program options available and the collection and diversion options are essentially consistent with the Solid Waste Plan 2040 guiding principles and the most preferred options under the waste management hierarchy. Of the program options available, a permanent HHW/CESQG hazardous materials/waste facility (alone or in conjunction with existing periodic/ mobile collection events and local business collection site) appears to provide the greatest benefit in terms of increasing reuse, diversion, and minimizing disposal, by providing year round accessibility (increasing participation rates), increasing material management options, lowering risk associated with improper management of hazardous materials and waste, improving safety to users and staff, greater efficiencies of operation, and allowing integration with other existing (and future) programs.

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APPENDIX

Toxics Reduction/Hazardous Materials Management for Households and Small Businesses

- Existing Program Analysis

Target: Lincoln-Lancaster County Households (2010 Census – 108,755 Households)

Description: The Health Department coordinates 5 to 10 hazardous waste collections for households each year. Residents bring chemicals, such as pesticides, solvents, caustic cleaners and mercury, which pose a danger in the home and to our environment if not properly managed. Educating the public on choosing least toxic alternatives and proper disposal, and holding several collections each year reduces the amount of hazardous waste disposed in our landfill and is one of the best management practices cited in the city's NPDES MS4 (stormwater) permit. Two appointment only collections were held in FY10 and FY11 to assess the feasibility of the N 48th St. landfill site as an option for a permanent facility.

Partnerships & Efficiencies: Mobile HHW collections are efficient and maximize public access to dispose of hazardous waste. Business partners provide sites for collections along with trained and non-technical volunteers (upwards of 8 – 15 volunteers/event). The long term impact of ongoing public education/behavior change strategies is less hazardous waste being generated and proper reuse, recycling and disposal of hazardous waste. Only hazardous waste is accepted, and wastes which can be reused/recycled by local businesses, such as oil, lead acid batteries, button batteries, and antifreeze are not accepted at collections.

Waste Management Goal: Protect human health and the environment by: reducing exposures to hazardous materials; assuring proper management and disposal of special wastes; preventing hazardous waste from being illegally disposed of in the Bluff Road Landfill; reduce litter; and preventing illness and disease caused by improper waste management.

Indicator: Divert at least 100,000 pounds (50 tons) of toxic material from City of Lincoln and Lancaster County households. Make available toxics reduction education to all area residents.

Methods & Strategies:

- 6 to 8 HHW collections are held in various areas each year
- Each collection is promoted via signs and media releases
- Community education (behavior change) efforts focus on choosing least toxic alternatives and guiding the public on using up, reusing or recycling waste (media, Internet, brochures)

Staffing & Costs: In FY11, this program required 2.7 FTE and direct program costs were \$387,303 and total costs were \$490,954(2).

Funding/Source: Waste Hauler Occupation Tax; Grants in Aid; Supplemental Environmental Protection (SEP) Funds

Target: Lincoln-Lancaster County Conditionally-Exempt Small Quantity Generators (Small Businesses)

Description: The Health Department coordinates two small business hazardous waste collections each year to provide safe and economical disposal for small businesses and agencies as well as educational program, technical assistance and site visits. The collections reduce the risk of hazardous materials spills and fires, which can impact neighborhoods and our environment, and eliminate potential occupational exposures. Each business that participates saves from \$600 to \$1200 in mobilization fees, labor charges and transportation costs by participating. These collections have saved participants over \$150,000 over the past 6 years. The disposal cost is paid for by each business, but at significant savings since it is charged at the City's contracted cost. These efforts reduce the amount of hazardous waste disposed in our landfill and is one of the best management practices cited in the city's NPDES MS4 (stormwater) permit.

Partnerships & Efficiencies: Coordinating these collections saves small businesses thousands of dollars in disposal costs, reduces their liability, and decreases the likelihood that they will be in violation of Federal RCRA Hazardous Waste laws. Basically we are leveraging a very small amount of grant money into major costs savings for our business community. Both waste/risk reduction audits and the hazardous waste collections help to assure that business hazardous waste is not disposed of in the Bluff Road Landfill (a permit requirement) or illegally disposed on land, into water, into wastewater, or into our stormwater drainage system. This protects the city from liability and fines.

Waste Management Goal: Protect human health and the environment by: reducing exposures to hazardous materials; assuring proper management and disposal of special wastes; preventing hazardous waste from being illegally disposed of in the Bluff Road Landfill; and preventing illness and disease caused by improper waste management.

Indicator: At least 90% of small businesses that want to participate in hazardous materials collection events have access. Serve at least 30 small businesses and agencies each year. Divert at least 15,000 pounds (7.5 tons) annually of toxic material from small businesses/agencies.

Methods & Strategies:

- 2 CESQG collections are held each year (One at the N. 48th Street Transfer Station and the other at Woods Park in central Lincoln)
- Postcards detailing the event and required procedures are sent out to area businesses
- Staff provide technical assistance to identify toxic reduction options which include proper management and disposal of hazardous wastes.

Staffing & Costs: In FY11, the special waste program is coordinated by 1.0 FTE, a small portion of which involves planning and coordination of two small business (CESQG) waste collection events per year. CESQG event costs are minimal and have not been broken out of the total program costs. The hazardous waste contractor mobilization fee is funded by the waste hauler occupation tax and grants-in-aid. Participating small businesses cover all disposal costs for waste brought to the CESQG collection events.

Funding/Source: Waste Hauler Occupation Tax, Grants in Aid, Small Businesses (pay for own disposal costs)