

# Permanent Household Hazardous Waste Collection Facility Feasibility Study

Stage 2  
November 2024 (Stakeholder Draft)



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# Section 1. Introduction

## 1.1 Purpose

This report summarizes the Stage 2 feasibility evaluation of a permanent household hazardous waste (HHW) collection facility for McLean County, Illinois. The feasibility analysis was commissioned by the Ecology Action Center (EAC).

## 1.2 Summary of Stage 1 Evaluation

A Stage 1 evaluation was completed in April, 2024 and included case studies of the five (5) existing permanent HHW collection facilities in Illinois, along with other research into alternative methods of managing HHW. The following points summarize the findings of the Stage 1 evaluation:

- ❑ Illinois currently has 5 permanent HHW collection facilities (Naperville, SWALCO, Chicago, Rockford and Madison County). There are no permanent sites in central Illinois, although Champaign County is pursuing development of a facility in Urbana. The City of Bloomington is located approximately 54 miles (one-way) from the City of Urbana. Household participation at HHW facilities tends to decline when distances exceed 10 miles.
- ❑ A recent statewide task force on the advancement of materials recycling in Illinois recommended the development of 4 permanent HHW collection facilities in central Illinois.
- ❑ Neighboring states have a larger network of permanent HHW collection facilities than Illinois: Indiana (10), Iowa (28), Missouri (32) and Wisconsin (17). Each of the neighboring states has a smaller population than Illinois.
- ❑ Illinois has historically relied on one-day collection events to manage HHW. However, IEPA funding for one-day events has varied significantly over the past 35 years, with fewer events receiving funding during the last 10 years compared to the 1990s and 2000s. This variability may be mitigated somewhat going forward in that IEPA has entered into agreements with 8 local "hub" communities - including the City of Bloomington - to more consistently provide an HHW collection event each year. However, the long-term availability of funding to hub communities has yet to be demonstrated.
- ❑ Permanent HHW collection facilities in Illinois typically operate under an intergovernmental agreement with the IEPA. These agreements provide two important benefits to permanent facilities: 1) the IEPA accepts "generator" responsibility for the HHW collected; and, 2) the IEPA pays for transport and final disposal of the collected HHW.

These benefits would also apply to one-day collection events funded by the IEPA; however, McLean County has had to self-fund four of the seven one-day collection events held in the County since 2012.

- ❑ In terms of efficiency, benchmark unit costs (e.g., cost per participant, cost per gallon, and cost per pound) of one-day HHW collection events in McLean County have been comparable to permanent collection facilities (e.g., SWALCO), when disposal costs are included. However, these are unit costs. Because permanent collection facilities manage larger quantities of HHW, aggregate costs are higher than for one-day events.
- ❑ A permanent HHW collection facility in McLean County would also entail up-front capital costs. Development costs for the Naperville and SWALCO facilities ranged from \$1,185,000 to \$1,500,000, although Naperville secured a \$900,000 state grant to defray construction costs. Champaign County is budgeting \$2,000,000 to \$2,500,000 in capital costs for its proposed permanent HHW collection facility.
- ❑ A permanent HHW collection facility in McLean County is projected to increase both household participation and collected HHW quantities compared to historical one-day collection events.

### 1.3 Overview of Stage 2 Evaluation

This Stage 2 evaluation builds upon the research conducted during Stage 1 and includes the following more detailed analyses:

- A. An analysis of the various federal and state regulations governing the management of HHW including permitting requirements (Section 2).
- B. A conceptual HHW collection facility design that is sized to handle the quantities of HHW projected to be recovered from McLean County households (Section 3).
- C. A preliminary site screening analysis to identify potentially suitable areas for development of the HHW collection facility within McLean County (Section 4).
- D. An analysis of the potential local traffic impacts from a permanent HHW collection facility and design features to mitigate those impacts (Section 5).
- E. An analysis of the initial capital costs and annual operating costs for a permanent HHW collection facility (Section 6).

- F. A comparison of alternative staffing methods for operating a permanent HHW collection facility (Section 7).
- G. A qualitative analysis of potential local economic benefits to other businesses induced by residential users of a permanent HHW collection facility (Section 8)
- H. An implementation schedule for developing a permanent HHW collection facility in McLean County (Section 9).
- I. An analysis of “dual permitting” (i.e., collection of residential and commercial materials at the permanent HHW facility) as a possible revenue generating mechanism to subsidize facility costs (Section 10).
- J. Summary findings of the Stage 2 evaluation (Section 11).

## Section 2. Regulatory Analysis

### 2.1 Hazardous Waste Regulatory Framework

Hazardous waste is regulated at the federal level under rules (40 CFR 261) adopted pursuant to Subtitle C of the Resource Conservation and Recovery Act (RCRA). That law is intended to control the management of hazardous waste from the point of generation to final disposal (“cradle-to-grave”). Under federal authorization, the state of Illinois has also adopted regulations governing the management of hazardous waste (35 IAC 700-739). Both sets of rules require hazardous waste from commercial and industrial generators (unless in small amounts) to be disposed or treated at a facility that is permitted to accept hazardous waste.

Although many household products (i.e., HHW) contain chemical constituents similar to those present in commercial and industrial waste, residential HHW is exempt from hazardous waste regulations due to a household exemption contained in RCRA (40 CFR 261.4). Pursuant to this exemption, HHW is excluded from the definition of hazardous waste provided that:

1. The waste is generated by individuals on the premise of a temporary or permanent residence; and
2. The waste stream is composed primarily of materials found in wastes generated by consumers in their homes.

While HHW is not regulated as a hazardous waste, it is regulated under Subtitle D of RCRA as a solid waste. Because of this, a permanent HHW collection facility would be required to have a non-hazardous solid waste facility permit.

Businesses that generate less than 220 pounds of hazardous waste and no more than 2.2 pounds of acute hazardous waste per month are categorized as Very Small Quantity Generators (VSQGs). Because such establishments generate “very small” quantities of hazardous waste, they may dispose of the material at a permitted non-hazardous waste facility. However, this does not apply to “universal” wastes (batteries, pesticides, mercury-containing thermostats, hazardous waste aerosol cans), which are prohibited from disposal at municipal waste landfills.

The RCRA household exclusion noted above does not extend to long-term liability under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, another federal law more commonly known as Superfund). Residential HHW materials, whether collected as part of normal trash collection services or at a permanent HHW collection facility, could have potential CERCLA liability. Therefore, permanent HHW collection facilities must employ measures to mitigate that liability.

One such measure is to secure an intergovernmental agreement (IGA) with the Illinois Environmental Protection Agency (IEPA) to manage the transport and ultimate disposal of materials collected at a permanent HHW facility. All five of the existing permanent collection sites in Illinois operate under such IGAs. Pursuant to these IGAs, the IEPA pays for disposal of the HHW materials. In addition, the IEPA accepts generator status and takes title to the HHW materials when they are picked up for disposal.

The IEPA separately contracts with a hazardous waste company to properly transport and dispose of the HHW collected at the permanent sites. As part of that agreement, the IEPA requires its contractor to maintain comprehensive liability insurance naming the permanent HHW collection facility (and IEPA) as additional insured and providing coverage and indemnifying both parties against any claims for damages or cleanup costs relating to: exposure to wastes; spills or releases of waste; or fires or explosions resulting from any acts or omissions caused by, arising out of, or occurring in connection with the contractor's picking up HHW from the facility and subsequent transport and disposal.

The IGA therefore offers important liability protections as it pertains to the transport and disposal of HHW materials *from* the permanent HHW collection facility. However, the permanent collection site would still have liability for the HHW collection and storage activities that occur at the facility.

## 2.2 Local Siting Approval

Facilities in Illinois that handle solid waste from more than one generator are defined to be “pollution control facilities”. Under Illinois law, pollution control facilities are required to obtain local siting approval pursuant to Section 39.2 of the Illinois Environmental Protection Act (415 ILCS 5/39.2).

The local siting approval process supersedes the zoning process that is typically used for other types of property development. Once an application for local siting approval is prepared, the unit of government with jurisdictional authority has 180 days to approve or deny the application, which must be evaluated based on nine criteria specified in the statute. A public hearing must be held between 90 and 120 days of the filing of the application. Local siting can be controversial, time consuming and costly.

Permanent HHW collection facilities are exempt from local siting provided that the unit of government with jurisdiction waives the local siting process (415 ILCS 5/22.16b(d)):

*The Agency shall establish household hazardous waste collection centers in appropriate places in this State. The Agency may operate and maintain the centers itself or may contract with other parties for that purpose. The Agency shall ensure that the wastes collected are properly disposed of. The collection centers may charge fees for their services, not to exceed the costs incurred. Such collection centers shall not (i) be regulated as hazardous waste facilities under RCRA nor (ii) be subject to local siting approval under Section 39.2 if the local governing authority agrees to waive local siting approval procedures.*

If the responsible unit of government waives the local siting process, the permanent HHW collection facility must obtain zoning approval instead (refer to Section 2.3 below).

Note that a permanent HHW collection facility that intends to take hazardous waste from VSQGs (i.e., commercial materials as distinct from residential HHW) would be required to obtain local siting approval.

## 2.3 Zoning Approval

Assuming that a waiver from the local siting approval process is obtained from a local jurisdiction, a permanent HHW collection facility would require zoning approval. For the purposes of this Stage 2 evaluation, the zoning codes for Unincorporated McLean County, the Town of Normal, and the City of Bloomington were reviewed.



None of the zoning codes specifically identify permanent HHW collection facilities as a land use. However, the zoning codes do identify solid-waste related uses that can be used as a reference point. The zoning districts identified for solid waste uses are summarized in Table 1.

Generally, solid-waste related uses in Bloomington and unincorporated McLean County are restricted to the M-2 zoning district. In the County, certain solid waste facilities are also allowed in the M-1 district as a special use. For the Town of Normal, waste-related uses are restricted to the S-1 (University District) or S-2 (Public Lands and Institutions District) special-service districts.

<b>TABLE 1. ZONING DISTRICTS FOR WASTE-RELATED LAND USES</b>			
Jurisdiction	Waste-Related Land Use	Zoning District	Zoning Type
City of Bloomington	Recycling Facility	M-2	Special Use
	Refuse Disposal Services	M-2	Special Use
	Sanitary Landfills	M-2	Special Use
	Solid Waste Disposal Area	M-2	Special Use
	Waste Transfer Station	M-2	Special Use
Town of Normal	Refuse	S-1, S-2	Permitted Use
	Recycling	S-1, S-2	Permitted Use
	Sanitary Landfill	S-1, S-2	Permitted Use
Unincorporated McLean County	Construction/Demolition Debris	M-2	Permitted Use
	Landfill	M-2	Special Use
	Landscape Waste Composting	M-1, M-2	Special Use
	Solid Waste Collection/Processing	M-1, M-2	Special Use
	Waste Transfer Station	M-1, M-2	Special Use (M-1) Permitted Use (M-2)

Where designated as a “permitted” use by the zoning code, a solid-waste facility is allowable provided that the facility complies with the development requirements of the zoning code. A “special” use is typically a more intensive zoning review process.

It is apparent that the three local jurisdictions prefer that solid-waste related uses (presumably including a permanent HHW collection facility) be located in industrial areas or a special-service district. Development standards in the zoning codes may impose additional requirements. The City of Bloomington, for instance, requires solid waste facilities to be located at least 500-feet from the lot line of a dwelling or to a residential-district boundary line. The intent of these zoning

provisions is to locate solid-waste related uses away from residences and residentially-zoned areas.

This is consistent with the zoning of the five existing permanent HHW collection facilities in Illinois, as shown in Table 2. All of the existing facilities are located in manufacturing/industrial zoning districts, with the exception of the Madison County facility which is located in a community business district.

<b>TABLE 2. ZONING OF EXISTING PERMANENT HHW COLLECTION FACILITIES</b>	
Facility	Zoning District
City of Chicago	PMD-3 (Planned Manufacturing District)
Madison County (Wood River)	B-2 (Community Business District)
City of Naperville	I (Industrial)
City of Rockford	I-1
SWALCO (Gurnee)	I-2

If a suitable property in McLean County is available but is located outside a manufacturing or special-service district, it may still be possible to develop the property as a permanent HHW collection facility. However, that would require a map amendment from the host jurisdiction, an additional step in the zoning process.

Based on the foregoing, once a candidate property (or properties) is identified for potential development as a permanent HHW collection facility, consultation with the appropriate unit of local government will be essential to:

1. Determine their willingness to host such a facility;
2. Verify the anticipated designation of such a facility as it pertains to their ordinances or whether a variance or amendment to an ordinance may be needed;
3. Confirm zoning requirements and restrictions; and,
4. Understand the full zoning application process, timeline, and required documents.

## 2.4 IEPA Permit Approval

Once local zoning approval (or, alternatively, local siting approval pursuant to 415 ILCS 5/39.2) is obtained, two permits will be required from the Illinois Environmental Protection Agency (IEPA): a development permit and an operating permit.

The HHW facility will be permitted as a treatment and/or storage facility. The development permit application will need to include the following information:

- Application forms
- Notifications
- Owner/operator details
- Location information
- A plan sheet of the site
- Building design details, including containment features
- Waste treatment and storage design
- A narrative description of the site's operation, including the days and hours of operation
- Stormwater management plans
- Emergency response/contingency plans
- Closure plan
- Proof of compliance with zoning requirements

The review period for this type of development permit application is 90 days, although the IEPA can request an extension in that time period. The development permit is required before construction of the HHW facility can commence.

Once the development permit is issued and construction completed, an application for operating permit must be submitted to IEPA. The review period for operating permits is 45 days.

## 2.5 Other Permits

In addition to the IEPA development and operating permits, other permits will be required. A building permit will be required from the unit of local government in which the permanent HHW collection facility is located.

In addition, an NPDES (National Pollutant Discharge Elimination System) permit may be required because the facility will handle HHW materials. The purpose of the NPDES permit is to regulate surface water discharges from the completed facility.

## Section 3. Conceptual Design

Figure 1 presents a conceptual site plan for a HHW facility that can accommodate the projected HHW quantities that were forecast in the Stage 1 report. This concept is depicted on a generic rectangular site. While it was prepared without consideration of a particular location or specific site geometrics, it can be used to inform the approximate size of a property needed for facility development. As shown, this concept is on a site that exhibits an approximate area of 1.6 acres. A site of this size can accommodate the depicted building (or similar) with sufficient parking, queuing, maneuvering area, loading/unloading activities, and stormwater infrastructure. As a comparison, lot sizes for other permanent HHW facilities in Illinois are listed in Table 3 (as estimated from aerial photography). Note the Rockford facility is currently being relocated to another site.

<b>TABLE 3. SIZE PARAMETERS OF EXISTING PERMANENT HHW COLLECTION FACILITIES</b>			
Facility	County	Lot Size (acres)	Building (sq. ft.)
City of Chicago	Cook	2.3	24,000
Madison County/Wood River	Madison	3.6	6,200
City of Naperville	DuPage	2.1	7,800
Rockford/Four Rivers Sanitation Authority	Winnebago	1.0	11,800
SWALCO	Lake	1.3	7,200
Notes:			
1. All sizes are estimates based on measurements from aerial photography.			
2. SWALCO and Naperville facilities incorporated new building construction. Other facilities were developed in existing buildings.			
3. Chicago facility is also used to collection electronic waste.			

The developed concept includes an approximate 13,692 square foot building with an attached, covered, drive-through unloading area (not included in square footage), caged exterior area for storage of select solid wastes and gas cylinders, and a loading dock. It should be noted that the loading dock depth and design will need to be evaluated in consideration of a water table depth investigation as part of the final design process.

## FIGURE 1. CONCEPTUAL SITE PLAN

The building interior includes 9,380 square feet of household hazardous waste material acceptance, sorting, bulking, storage/containment, and loadout area. Also included within the building is 4,312 square feet of administration and support area, including reception, main office, staff work stations, conference room, break room, bathrooms, a garage for indoor vehicle parking, and a material swap shop. The swap shop is an area where HHW products that are still useable, in good condition, and have their original labels, can be organized and displayed and offered free of charge to community members, promoting reuse rather than purchase of new products. Residents can browse available products, take what they need, and leave what they no longer use, making it a convenient system of reuse.

Paved passenger vehicle parking areas are shown for 19 vehicles to accommodate facility employees and visitors, and including two handicapped parking spots. The facility will need to be fenced and gated to restrict access when closed.

Traffic for the conceptual facility is envisioned as counterclockwise, though could be mirrored depending on ultimate selection. Such one-way traffic flow is recommended to avoid traffic conflicts. As shown, facility employees and users would enter the property at the lower left corner. Employees or those customers wanting to access the swap shop would either access the parking area on the left or bottom sides of the building. Those customers wanting to deliver HHW materials would circle counterclockwise to the canopied unloading area. The design will allow for unloading of up to 4 vehicles simultaneously under canopy. While not illustrated, the distance between the entrance and the unloading area is approximately 560 feet which will allow for queuing of up to 60 vehicles if two lanes are created with pavement striping and traffic cones. All vehicles would exit at the top left corner.

Once accepted in the covered unloading area, the materials would be moved into the building, segregated, and separately stored by hazard type. It is assumed that the majority of the bulked liquid materials will be stored in 55-gallon drums, although some bulked liquids may be desired to be stored in larger capacity containers (e.g. transportable totes or exterior above ground tanks). Other materials may be stored in pallets and/or Gaylord boxes, storage shelves/cabinets, or roll-off (or shipping) containers.

It should be noted that while the layout and storage configuration depicted on Figure 1 was generally designed for the projected 150,000 to 210,000 pounds of material annually as determined through the Stage 1 evaluation, it is for conceptual illustration purposes only. As previously indicated, the ultimate design will need to be developed in coordination and consultation with an architect and design team.

It is recommended that the floor within all sorting, processing, and storage areas be constructed of epoxy-coated concrete with water-stops and sloped to spill collection points. Adequate

secondary spill containment will need to be provided for different hazard types as necessary to prevent any potential mixing hazards or spills from escaping the building. Secondary containment measures may include concrete barriers, zero discharge foundation design, sumps, spill containment pallets, and/or double wall tanks. Ventilation will be required in areas where bulking of flammable liquids is performed.

It should be reiterated that this design is conceptual. Upon site selection, a new HHW facility design will ultimately need to be developed in coordination and consultation with an architect and design team and will need to incorporate structural, electrical, and mechanical engineering elements into the facility design.



## Section 4. Preliminary Site Screening Analysis

A preliminary site screening analysis was performed to identify potential candidate sites for a permanent HHW collection facility in McLean County. A number of siting criteria were used to perform this analysis:

- ❑ As described in Section 3, the conceptual facility design requires approximately 1.6 acres of property. More property would be required in the event that a parcel has unusual geometry (i.e. if it is triangular in shape or otherwise has features that would render some portions inefficient or unusable).
- ❑ Based on the research performed in the Stage 1 evaluation, participation at HHW facilities declines rapidly when the facility is located further than 10 miles from the population center. As a reference point, the population centroid within McLean County is located near the intersection of Rowe Drive and IAA Drive in the City of Bloomington. To promote greater participation, an HHW facility would preferentially be located within 10 miles of that centroid.
- ❑ HHW facilities should also be located with convenient access to public roads.
- ❑ Based on the preliminary zoning analysis in Section 2.3, the M-2 and S-1/S-2 zoning districts are likely most suitable for development of a HHW facility. Further, it is preferable (and sometimes required) that HHW facilities be located on properties that do not have adjoining residentially-zoned parcels.

Using the above general parameters, a site screening of all parcels in unincorporated McLean County, the Town of Normal, and the City of Bloomington was performed to identify potential candidate sites for facility development. The screening analysis was performed using ArcGIS Geographic Information System (GIS) software, using GIS parcel data from the three units of local government.

The initial screening identified 525 sites meeting the zoning designations identified above (and within 10 miles of the population centroid). These were further screened to identify parcels with a size of 2 to 5 acres, which reduced the number of potential sites to 84 parcels.

The identified parcels were further filtered by first eliminating those that had ownership that would make procurement of the parcel unlikely (e.g. Illinois Department of Transportation) and then by visually reviewing and eliminating those parcels exhibiting geometry not conducive to development (e.g. long and skinny), or which are already developed with a substantial building and operating business. Parcels that adjoin residentially-developed areas were also excluded. During this evaluation and through review of the larger parcel array (525 sites), select larger

parcels (greater than 5 acres) but otherwise meeting the other screening criteria were added to the list of candidate sites. Such parcels may be viable if they can be subdivided.

Ultimately, 9 candidate sites meeting the screening criteria were identified through the GIS-screening.

While the GIS-evaluation incorporates land use and other siting criteria, certain site-specific factors such as availability (for purchase), and more detailed site-specific conditions (topography, drainage/stormwater discharge, and utilities) were not considered in this evaluation. These additional site-specific factors would have to be evaluated prior to proceeding with final site selection and development, which could be accomplished by retaining a land realtor.

To further assess potential candidate sites, properties listed on the Bloomington-Normal Economic Development Council (BNEDC) website were reviewed, resulting in an additional 11 candidate properties.

These sites are presumably available for development. Although generally too large for development of a HHW collection facility, several of the property listings indicated that smaller subdivided lots may be available. While most of the sites do not have M-2 or S-1/S-2 zoning, a map amendment to modify the zoning could be discussed with the appropriate unit of government. On balance (and subject to the caveat on zoning), it may be more schedule efficient in terms of identifying a suitable site to initiate property discussions with BNEDC first as opposed to engaging a realtor to ascertain availability of candidate sites identified through the GIS-screening.

## Section 5. Traffic and Throughput Analysis

Based on facility demand projections developed in the Stage 1 evaluation (e.g., number of potential households using a HHW facility), estimates of vehicle traffic for a permanent HHW collection site in McLean County were developed.

The Stage 1 evaluation estimated that 3,000 households would attend a permanent HHW collection facility on an annual basis. The projected traffic associated with this participation was estimated to be approximately 3,000 vehicles per year, corresponding to one vehicle per participating household. While it is anticipated that some households may access the facility more than once per year, it is also anticipated that some vehicles accessing the facility may deliver waste from more than one household.

Assuming that the facility is open two to eight days per month<sup>1</sup> (which is typical for existing HHW collection facilities in Illinois), the facility may be open 25 to 100 days per year. This will equate to an average vehicle count per event of 30 to 120 vehicles. As previously described, the conceptual facility was designed to accommodate unloading of up to 4 vehicles simultaneously and for queuing of up to 60 vehicles – more than half of (or the entirety of) the projected daily vehicle traffic at any one time. Nevertheless, it is advantageous and common for these types of facilities to operate on an appointment basis which minimizes traffic and wait times for residents. In either case, the concept facility has been designed to assure safe and efficient operation.

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<sup>1</sup> Some Illinois facilities operate 2 days per week, which corresponds to approximately 8 days per month. Refer to discussion in Section 7.

## Section 6. Cost Evaluation

### 6.1 Capital Costs

A permanent HHW collection facility in McLean County would entail up-front capital costs. As discussed in the Stage 1 evaluation, development costs for the Naperville facility (redeveloped in 2015) and the SWALCO facility (built in 2002) ranged from \$1,185,000 to \$1,500,000. Escalating these initial development costs for inflation to the present time results in estimated capital costs of \$1,576,000 and \$2,629,000, respectively, in current dollars. Based on the building sizes for each facility (refer to Section 3), capital costs range from \$200/square foot to \$365/square foot. The SWALCO facility includes the administrative offices of SWALCO in addition to the HHW collection operation, which may account for the higher square foot cost of that facility. Note that these costs do not include land or design and permitting costs.

The City of Chicago developed its permanent HHW collection facility in a former animal incinerator building (refer to case study in Stage 1 evaluation). The renovation costs to convert the building to the HHW collection operation were estimated at \$3,800,000 (in 2006 dollars). Escalating to 2024 and based on a building size of 24,000 square feet, the renovation costs for the Chicago facility in current dollars are estimated at \$248/square foot.

As discussed in the Stage 1 evaluation, Champaign County Environmental Stewards (CCES) is pursuing development of a new HHW collection facility in Champaign County. CCES purchased a 4.78 acre vacant parcel for \$442,500 to serve as the site for the facility (\$92,500/acre). Although still in development, CCES is budgeting \$2,000,000 to \$2,500,000 for capital costs including facility design, site improvements, building construction and permitting. Building size information for this proposed facility is not available. These costs are generally consistent with the costs of the Naperville and SWALCO facilities.

The conceptual design presented in Section 3 includes a building of 13,692 square feet. This is larger than the Naperville (7,800 square feet) and SWALCO (7,200 square feet) facilities, but the concept design includes additional features that are not employed (or not as extensively employed) as at the two existing facilities. In addition to the HHW collection/storage area (9,380 square feet), the concept design features an approximately 4,312-square foot administration and support area which includes a reception area, main office, staff work stations, conference room, break room, bathrooms, a garage for indoor vehicle parking, and a material swap shop. Using the square foot cost information from above, the capital cost of the conceptual facility is estimated at \$2,738,000 to \$4,998,000.

Land costs were estimated using information from the property listings obtained from the Bloomington-Normal Economic Development Council (refer to Section 4). Available parcels had

listing prices that correspond to land costs of \$35,000/acre to \$171,000/acre. For the 1.6 acre conceptual facility, this would correspond to a total estimated land cost of \$56,000 to \$274,000.

Total estimated initial development costs, including allowances for permitting and architectural design fees, are summarized in Table 4:

<b>TABLE 4. ESTIMATED CAPITAL DEVELOPMENT COSTS</b>	
Land	\$56,000 - \$274,000
Construction (building and site improvements)	\$2,738,000 - \$4,998,000
Permitting/Zoning	\$100,000
Architectural/Engineering Design	\$219,000 - \$400,000
Total	\$3,113,000 - \$5,772,000
<p>Note:</p> <ol style="list-style-type: none"> <li>1. Land costs based on 1.6 acres and land cost of \$35,000/acre to \$171,000/acre.</li> <li>2. Construction based on 13,692 square feet and construction costs of 200/sq. ft. to \$365/sq. ft. HHW collection/storage area is approximately 70% of total building area. Administration/support area is approximately 30% of total building area.</li> <li>3. Architectural/engineering design costs estimated at 8% of construction cost.</li> </ol>	

## 6.2 Operating Costs

As detailed in the Stage 1 Report, the Naperville and SWALCO permanent HHW collection facilities have annual operating costs ranging from approximately \$280,000 to \$342,000. CCES, which is proposing a new HHW collection facility in Champaign County, is budgeting \$173,000 in annual operating costs. Operating costs include labor (permanent and contracted), supplies, equipment rental, and facility repairs and maintenance. Note that operating costs do not include disposal/recycling costs for collected HHW materials (see discussion in Section 6.3 below).

## 6.3 HHW Disposal/Recycling Costs

Each of the five existing permanent HHW collection facilities in Illinois operates under an intergovernmental agreement (IGA) with IEPA, under which IEPA arranges (through a separate contract with a hazardous materials service provider) to dispose or recycle the collected HHW materials. As discussed in Section 2, the IEPA pays for transport and final disposal of the collected HHW, reducing the cost to operate a permanent HHW facility.

Another benefit of the IGA is that the IEPA, through its HHW disposal contractor, will provide training for the personnel staffing the permanent HHW collection facility, at the IEPA's expense. The training consists of a minimum two-day course of no less than 15 hours and addresses:

- ❑ Federal and state legal requirements pertaining to HHW handling.
- ❑ The methods of collecting HHW from the public and identifying unknown materials.
- ❑ Bulking procedures, the use of different types of containers, record keeping, storage procedure, and fire safety and emergency precautions and procedures.
- ❑ Procedures for waste shipment, including packaging, labelling and manifest preparation.
- ❑ Procedures for long-term record keeping, including records of waste received, manifests and disposal information.
- ❑ The development of an emergency plan addressing spill clean-up and first aid in the event of a release or spill, and police and fire protection.
- ❑ Field practice in waste segregation, bulking, packaging and record keeping.

In return for paying HHW disposal costs, the IGA requires that any permanent HHW collection facility receiving IEPA funding must be available to any resident of the State of Illinois. Further, IEPA will not pay for the disposal of certain types of materials including ammunition, explosives, radioactive materials, lead-acid batteries, latex paints, compressed gas containers (other than aerosol containers), controlled substances, potentially infectious medical wastes, and non-special, non-contaminated wastes including trash and non-hazardous debris.

Finally, the IEPA will only pay for disposal of *residential* HHW materials. The IGAs for the five existing permanent HHW collection facilities stipulate that the facilities shall reject all wastes from business, institutional, industrial, agricultural, government or commercial entities unless agreed in writing by the IEPA and the facility. Thus, while not strictly prohibiting a permanent HHW collection facility from accepting hazardous materials from commercial sources, the IEPA will not pay for disposal of those materials<sup>2</sup>.

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<sup>2</sup> As discussed in Section 2, acceptance of commercial hazardous materials from VSQGs would also require a permanent HHW collection facility to obtain local siting approval pursuant to 415 ICLS 5/39.2.

## 6.4 Financing

As noted in Section 6.3, the IEPA will pay for disposal of HHW materials collected at a permanent HHW collection facility pursuant to an IGA. However, the IGA covers disposal costs only, and capital costs are expressly excluded.

All of the five existing permanent HHW collection facilities in Illinois were developed by local governments using local funds. Some of the facilities defrayed development costs using grant funding, as noted in the Stage 1 evaluation:

- ❑ Naperville paid for a portion of the \$1,185,000 capital cost to redevelop its HHW facility (in 2015) using \$900,000 in grant funding from the Illinois Department of Commerce and Economic Opportunity.
- ❑ Chicago paid for a portion of the \$3,800,000 renovation cost to convert a former animal incinerator into an HHW facility (in 2006) using financial support of \$1,096,000 from the IEPA, Illinois Department of Commerce and Economic Opportunity, and the Illinois Clean Energy Fund.

The federal Bipartisan Infrastructure Law (2021) provided \$275,000,000 in national funding (to be administered by U.S. EPA) to stimulate additional investment in recycling infrastructure. Through the end of federal fiscal year 2026 (10/2026), the U.S. EPA will be distributing “Solid Waste Infrastructure for Recycling” or “SWIFR” grants on a competitive basis. SWIFR grants can be used for HHW collection facilities, provided that the HHW materials are recycled. Household batteries (lithium, NiCad), compact fluorescent tubes, and mercury-containing wastes are recycled under the IEPA’s disposal contractor agreement. In addition, the HHW swap-shop feature included in the conceptual design (refer to Section 3) may also qualify as a “recycling” activity. Individual grants of up to \$5,000,000 are available, and these grants are specifically intended for capital costs.

As discussed in Section 6.1, CCES is pursuing the development of a new permanent HHW collection facility in Champaign County. CCES has raised initial funding of approximately \$1,075,000 from three units of local government to help defray initial capital costs: Champaign County (\$650,000), City of Urbana (\$175,000) and City of Champaign (\$250,000). Champaign County and the City of Urbana used funds from the federal American Rescue Plan Act for their contributions. The City of Champaign used money from its general operating fund to pay for its contribution.

## Section 7. Operating Strategies

### 7.1 Operating/Staffing Considerations

This section evaluates alternative operating strategies<sup>3</sup> for a permanent HHW collection facility, including contracted operations, in-house staffing, and intergovernmental agreements with nearby communities. For the purposes of evaluating operating strategies, it is useful to summarize the operating parameters of the five existing permanent HHW collection facilities in Illinois (refer to Table 5) as discussed in the Stage 1 evaluation.

<b>TABLE 5. OPERATING HOURS (EXISTING ILLINOIS PERMANENT HHW COLLECTION FACILITIES)</b>	
Facility	Monthly Operating Schedule
City of Chicago	Tuesday: 7:00 am to 12:00 pm Thursday: 2:00 pm to 7:00 pm First Saturday of Month: 8:00 am to 3:00 pm
Madison County/Wood River	Third Friday of Month: 8:00 am to 12:45 pm First Saturday of Month: 8:00 am to 12:45 pm
City of Naperville	Saturday: 9:00 am to 2:00 pm Sunday: 9:00 am to 2:00 pm
City of Rockford/Four Rivers Sanitation Authority	Saturday: 8:00 am to 4:00 pm
SWALCO	Two Saturdays per Month: 7:00 am to 1:45 pm

Two of the existing facilities (Madison County and SWALCO) operate two days per month. Two of the existing facilities (Chicago and Naperville) operate two days per week (or approximately eight days per month), with the Chicago facility adding one additional monthly collection on the first Saturday of the month. One facility (Rockford) operates four days per month.

From a staffing perspective, these operating schedules present two considerations that must be balanced. First, because the HHW facilities are open two days per week or two days per month, full-time employment is not required<sup>4</sup>. On the other hand, to manage customers during the days when an HHW facility is open, more than one person is typically required. Thus, operating an HHW

<sup>3</sup> This section evaluates operating alternatives. The ownership of a permanent HHW collection facility would also need to be determined. The IEPA intergovernmental agreements discussed in Section 2.1 and Section 6.3 are authorized by the Intergovernmental Cooperation Act and therefore require that a permanent HHW collection facility be owned by a public agency such as a unit of local government.

<sup>4</sup> SWALCO does have a full-time employee to manage its HHW facility. However, that person performs other duties for SWALCO in addition to HHW operations.



facility requires multiple, part-time staffers. In addition, there will be administrative aspects to manage a permanent HHW collection facility (e.g., scheduling of appointments, record keeping, etc.), which would typically occur outside normal facility operating hours.

## **7.2 Contracted Operations**

Contracting operations involves hiring a private company (or other entity such as a not-for-profit) to staff the HHW collection facility and handle the collection and storage of HHW materials. This can be a beneficial approach as private contractors often have specialized knowledge and experience in handling hazardous waste, including compliance with environmental regulations. Contracted services may also be more cost-efficient by avoiding the need to recruit, train, and manage specialized staff. Further contractors may carry their own insurance and regulatory responsibilities, reducing liability for the municipality. Finally, it can be a flexible approach as contract terms can be adjusted to reflect changing needs, seasonal demand, or service frequency.

Contracted operations would not, however, eliminate the need for oversight and management responsibilities for the owner of the HHW collection facility.

To implement contracted operations, a Request for Proposal (RFP) would be developed and issued to potential service providers. As part of the RFP document, a services agreement (i.e., contract) would have to be developed.

## **7.3 In-House Staffing**

In-house staffing involves hiring and training employees of the facility owner to operate and manage the HHW facility directly. Due to the limited operating days for HHW collection facilities, in-house operation would necessitate the hiring of multiple employees on a part-time basis. Further, those part-time employees would have to be trained on proper handling of HHW materials. The part-time nature of the work, combined with the need for specialized training, could present challenges to recruiting and retaining employees.

As noted above, SWALCO does have (one) full-time employee to manage its HHW facility and oversee administrative aspects of the facility. That employee also performs other functions for SWALCO. To address the labor needs on scheduled operating days for the HHW collection facility, SWALCO contracts with a private company (currently Veolia Environmental Services) to provide service technicians. Typically, seven service technicians are contracted for the Saturday collection events (two per month) hosted at the SWALCO facility.

## 7.4 Intergovernmental Agreements

Intergovernmental agreements (IGA) involve collaboration with other units of government to share resources and responsibilities for HHW collection at a permanent facility. The City of Naperville's facility, for instance, is managed by the City but is staffed by fire department personnel. Such personnel typically have extensive training in safely managing hazardous materials.

Intergovernmental agreements share many features with contracted operations in that an "agreement" for staffing is negotiated with a unit of government (or government department) to provide the necessary staffing. Like private contracting, however, the owner of the HHW facility would have to provide management and oversight of the facility and operations.

As noted in Section 6.1 (and the Stage 1 evaluation), Champaign County Environmental Stewards (CCES) is pursuing development of a new HHW collection facility in Champaign County. As discussed in the Stage 1 evaluation, that facility would be too far (approximately 54 miles one-way) to effectively serve McLean County residents. However, because Champaign County is located in the same region as McLean County, there could be an opportunity for some type of joint-staffing arrangement between the two facilities, particularly with respect to service technicians. That type of arrangement would require coordinating (i.e., staggering) operating days for the two facilities, but could be formalized through an intergovernmental agreement.

Further, IGAs may be required to fund development of a permanent HHW collection facility in McLean County, as capital costs may need to be spread across multiple units of local government. CCES is pursuing this type of development strategy for the Champaign County facility, as discussed in Section 6.4.

## Section 8. Traffic-Induced Economic Benefits

EAC's scope of work for this feasibility analysis of a permanent HHW collection facility includes consideration of whether an HHW facility could potentially provide induced economic benefits for nearby businesses. In particular, could existing commercial businesses obtain some benefit by residential users of the HHW facility passing by their businesses enroute to the HHW facility?

Qualitatively, this is plausible because the HHW facility will bring increased traffic to the area where it is located. As previously described in Section 5, a HHW facility in McLean County is projected to attract an average vehicle count of 30 to 120 vehicles per collection day. All of the five existing HHW collection facilities operate on weekends, when households typically perform errands including trips to stores.

However, as discussed in Section 2, local zoning codes (City of Bloomington, Town of Normal, unincorporated McLean County) indicate a preference for waste-related land uses to be developed in industrial or special-service zoning districts. As a general matter, therefore, zoning requirements may limit the extent/frequency to which users of the HHW facility pass by commercial businesses.

One of the sites identified through the preliminary site screening (Section 4) is a property listed by the Bloomington-Normal Economic Development Council. This approximately 11.5 acre parcel is located adjacent to a retail store in a commercial corridor. Here, there are potentially mutual benefits to an HHW collection facility (i.e., households making a shopping trip to the store could also drop-off HHW materials at the collection facility and vice versa).

However, this would require additional consultation with other stakeholders. The site is located in the Town of Normal and is zoned B-1. The Town of Normal would have to be willing to consider a map amendment to rezone a portion of the property to an S-1 or S-2 designation (the Town may prefer to have another retail operation developed on the site). While an HHW facility would bring more customer traffic to the retail store, the retailer's opinion as to whether that is beneficial (or detrimental to their current store operations) would have to be considered. Property costs would also have to be assessed: commercially-zoned properties may have higher purchase costs than industrially-zoned lots. This 11.5 acre parcel would also have to be subdivided into an approximately 1.6 acre lot for the conceptual HHW facility, and subplot opportunities would have to be discussed with the property owner.

## Section 9. Implementation Schedule

Should EAC determine to move forward with the development of a permanent HHW collection facility in McLean County, the following implementation steps would be required:

1. Present feasibility analysis to local units of government (City of Bloomington, Town of Normal, McLean County). The purpose of this step is to ascertain local government interest in sponsoring and/or hosting a permanent HHW collection facility, and to develop cost-sharing arrangement for initial development costs. The ownership of the property and the HHW facility by a unit of local government or some other public agency would also have to be determined. This step would also include consultation with IEPA on a draft IGA for disposal services.

Duration: 3 - 6 months

2. Property acquisition. This step would entail engaging a property realtor and/or meetings with the BNEDC to identify a preferred site for the HHW collection facility. Optioning or purchasing a parcel would require funding to be in-place.

Duration: 3 months

3. Zoning process. This step would involve preparation of zoning documents and the zoning approval process. A waiver from local siting approval (415 ILCS 5/39.2) would also have to be obtained from the host unit of local government.

Duration: 4 - 6 months

4. IEPA development permit. This step would involve preparation of the IEPA development permit application and review of the application by IEPA.

Duration: 6 months

5. Construction procurement. A determination will have to be made as to whether to use design-bid-build or design-build as the method of project delivery. Design-build is typically a faster method of project delivery and is assumed for the schedule.

Duration: 3 months

6. Final design/construction (assuming design/build). This step would entail contracted services with a design-build firm to prepare final engineering/architectural design plans, secure building permits, and construct the facility.

Duration: 12 – 18 months

7. IEPA operating permit. This step is to submit and secure an IEPA operating permit following substantial construction of the HHW facility.

Duration: 2 months

The above steps result in a total estimated implementation schedule of 33 – 44 months. This schedule assumes that all steps are performed in a serial (i.e., sequential) manner. It is possible that the overall schedule could be reduced if certain steps are performed in parallel. For instance, there could be partially overlapping schedules for zoning (Step 3) and the IEPA development permit application (Step 4). However, the IEPA may require final zoning authorization prior to issuing a development permit.

Procurement of a design-build contractor (Step 5) may also overlap with the IEPA development permit process (Step 4). However, securing the IEPA development permit would be recommended prior to commencing the final architectural/engineering design (Step 6) of the HHW facility and the development permit will be required prior to starting construction.

Pursuing the two overlapping steps noted above in parallel might reduce the overall implementation schedule by 6 months.

## Section 10. Dual-Permitting Analysis

EAC's scope of work for this feasibility analysis includes consideration of dual-permitting of the permanent HHW collection facility to accept commercial materials (i.e., VSQG) in addition to residential HHW. The rationale for dual permitting would be to accept some quantity of commercial waste as a potential source of revenue to support overall facility operations.

Accepting hazardous materials from VSQGs would pose several challenges:

- ❑ The permanent HHW collection facility would have to be approved through the local siting processing (415 ILCS 5/39.2), which is more time consuming and costly than zoning.
- ❑ The manager of the permanent HHW collection facility would have to verify the status of the commercial waste generator as a VSQG in order to accept the material.
- ❑ The IEPA will only pay for disposal of *residential* HHW materials pursuant to its intergovernmental agreement (IGA). Disposal of VSQG waste would have to be separately arranged for, and paid by, the permanent HHW collection facility.
- ❑ Further, the IEPA may not extend the liability protections of the IGA to commercial materials. As a result, the permanent HHW collection facility would have to secure equivalent comprehensive liability insurance and indemnification from the private contractor hired to separately transport and dispose of the commercial materials. Even if this were obtained, the IEPA will assume generator status only for *residential* HHW materials under its IGA. It is not clear whether a local unit of government would accept generator status on behalf of private businesses in the community.

As noted previously, none of the five existing permanent HHW collection facilities in Illinois accept hazardous materials from commercial sources.

## Section 11. Findings

Based on the research and analysis presented in the prior sections, the following findings are made with respect to the Stage 2 feasibility evaluation of a permanent HHW collection facility in McLean County:

- ❑ A permanent HHW collection facility would be regulated as a non-hazardous solid waste facility and would require an IEPA development permit and operating permit.
- ❑ Solid waste facilities in Illinois require local siting approval pursuant to the siting process specified in Section 39.2 of the Illinois Environmental Protection Act (415 ILCS 5/39.2). That process can be costly, time-consuming and controversial. However, a permanent HHW collection facility can avoid the Section 39.2 process provided that the facility handles only residential material and provided that a waiver is obtained from the host unit of government. If those two conditions are met, a permanent HHW collection facility would require zoning approval instead of the more laborious Section 39.2 local siting approval.
- ❑ In order to provide convenient access to residents, a permanent HHW collection facility should be located within 10 miles of the population centroid of McLean County. Potential host jurisdictions within this radius include the City of Bloomington, the Town of Normal, and unincorporated McLean County.
- ❑ The zoning ordinances for those jurisdictions generally confine the development of solid waste facilities (assuming the Section 39.2 siting process is waived) to industrial or special service zoning districts. Development of a permanent HHW collection facility in other zoning districts would necessitate a map amendment, an additional step in the zoning process.
- ❑ A permanent HHW collection facility that is sized to meet the anticipated demand from McLean County residents would consist of an approximately 13,692 square foot building on a 1.6 acre property.
- ❑ A GIS-based screening analysis of land parcels within a 10-mile radius of the population centroid identified 9 candidate sites which have the required industrial or special service district zoning. The availability of these sites for purchase would have to be further evaluated by engaging a realtor.
- ❑ In addition, properties listed by the Bloomington-Normal Economic Development Council were reviewed, resulting in an additional 11 candidate sites. All of these sites are larger than required, although several listings indicated that smaller sub-divided lots may be available. In addition, most of these sites did not have the requisite industrial or special

service district zoning, and therefore map amendments for those properties would have to be discussed with the jurisdictional zoning authority. Notwithstanding the additional zoning effort, these properties have the advantage of being available for development.

- ❑ Capital costs for a permanent HHW collection facility, including land, permitting, design and construction are estimated at \$3,113,000 to \$5,772,000. The five existing permanent HHW collection facilities in Illinois were developed by local governments using local funds. Some of the jurisdictions defrayed a portion of development costs using grant funds.
- ❑ Annual operating costs for a permanent HHW collection facility (excluding disposal costs) are estimated at \$280,000 to \$342,000 per year.
- ❑ Disposal costs for HHW materials can be paid through an intergovernmental agreement (IGA) with the IEPA (provided that state-funding is made available). The five existing collection facilities in Illinois all have such agreements. An additional benefit of the IGA is that the IEPA assumes generator status for the collected hazardous materials. However, only residential HHW (not commercial waste) is covered by the IGA.
- ❑ Existing permanent HHW collection facilities typically operate a couple of days per week, and in some cases a couple of days per month. Because of these limited operating hours, and because facility staff must receive specialized training, some form of contracted labor is anticipated (versus full-time employees), although a facility manager may be employed on a full-time basis.
- ❑ A permanent HHW collection facility is estimated to attract 30 to 120 household users per operating day, with equivalent passenger vehicle traffic. A site size of 1.6 acres would provide adequate queuing space for half or more of these vehicles, preventing vehicle backups onto public roads and mitigating potential traffic impacts. Since HHW facilities typically operate on weekends, when households also perform shopping errands, there could be a beneficial impact to other nearby businesses if users of the HHW facility combine their trip with other shopping errands. However, this induced benefit may be limited to the extent that the HHW facility is restricted to an existing industrially-zoned area.
- ❑ Implementation of a permanent HHW collection facility will necessitate multiple development steps (e.g., property acquisition, zoning and permitting, design, construction) and is anticipated to take 33 – 44 months if each step is undertaken sequentially. This schedule could perhaps be reduced by about 6 months if certain overlapping steps are performed in parallel.



- ❑ The first implementation step entails EAC presenting the feasibility study to local units of government (City of Bloomington, Town of Normal, McLean County) to ascertain local government support for developing a permanent HHW collection facility and/or potentially hosting the facility.
  
- ❑ Dual-permitting of the facility to accept both residential HHW and hazardous materials from small commercial generators would have multiple, significant challenges to overcome including a more intensive regulatory approval process and potentially increased liability exposure.