

# Reuse & Recycling Plan



**Project Location:** 217 North 1st Street, Madison, WI

**Project Owner:** City of Madison

**Project Managers:**

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Madison, WI / Milwaukee, WI

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**I. Facility/Scope of Project**

The vacant 1,048 square foot single family home was purchased by the City of Madison and will be demolished later this year. A bike path will be constructed after demolition.

**II. Reuse & Recycling Plan**

This Reuse and Recycling Plan is divided into three phases in order to coordinate with the project timeline.



- a. **Reuse Phase:** The first priority for material reuse and recycling involves salvaging reusable items prior to demolition.
- b. **Pre-Demolition Phase Recycling:** Prior to full demolition, hazardous and regulated materials must be removed for proper disposal. These items include lighting, batteries, refrigerants, appliances, hazardous chemicals, mercury thermostats, and electronics.
- c. **Demolition Phase Recycling:** Recycling building materials during demolition can reduce negative environmental impacts and reduce landfill fees. Recyclable materials include concrete, metal, and wood.

**III. Reuse Phase**

Reusing an item is the most environmentally friendly form of recycling. Accordingly, the reuse phase of this plan involves determining which materials can be used again in their original form for the same or different purpose.

WasteCap conducted an inventory of reusable items in the building and around the site. The following organization was identified for their reuse.

**Habitat ReStore of Dane County**, 208 Cottage Grove Rd., Madison, WI 53716  
 Contact: Frank Byrne, Demolition Manager (608) 712-0737  
 Materials: Solid wood doors, built-in cabinets, handrails, light fixtures.

Reusable Materials	
	
Built-in cabinets	Light fixture

#### IV. Pre-demolition recycling

For all materials removed during the pre-demolition phase, the demolition contractor shall provide evidence of proper handling. Receipts or other proof of recycling shall include the date(s), material, quantity, weight or volume, and recycling or disposal company contact information. As demolition contractor, it is their responsibility to ensure that all documentation of recycling and disposal is given to WasteCap.

Asbestos testing and abatement must be completed before demolition. Anyone involved in demolition should be familiar with the findings from the asbestos and lead reports and take the necessary safety precautions.

State hazardous waste regulations provide guidance for recycling the following items after the reuse phase is complete and prior to building demolition.

- Fluorescent Lighting
- Batteries
- Refrigerants
- Appliances and HVAC equipment
- Hazardous chemicals, including paint
- Thermostats containing mercury
- Computers and Electronics

#### Lighting

- *Background Information:* State hazardous waste regulations require all light bulbs and ballasts containing mercury or polychlorinated biphenyls (PCBs) to be recycled. If not reused, bulbs and ballasts must be taken to a recycler or consolidator. The consolidator or recycler must be licensed and in compliance with applicable environmental regulations. Potential materials of concern include:
  - **Fluorescent bulbs:** Fluorescent tubes contain mercury and are required to be recycled.
  - **Fluorescent lamp ballasts:** Each fluorescent lamp fixture contains a built-in ballast, which may contain PCBs. Any ballast containing PCBs must be recycled. Ballasts manufactured after 1979 with a “NO PCBs” label can be landfilled. WasteCap recommends that all ballasts are recycled to reduce future liability. Efficient electronic ballasts should be reused whenever possible.
  - **Compact fluorescent lights (CFLs):** CFLs contain mercury and must be recycled if not reused. CFLs should be reused when possible.
  - **High intensity discharge (HID) lamps:** HID lamps contain lead and mercury (except for low pressure sodium lamps, which contain only lead). HID lamps containing mercury are required to be recycled. WasteCap recommends recycling all types of HID lamps to reduce future liability.

- **Capacitors in HID fixtures:** Each HID fixture has a capacitor that may contain PCBs. Capacitors manufactured after 1979 with a “NO PCBs” label can be landfilled. WasteCap, however, recommends recycling all capacitors to reduce future liability.
- **Incandescent bulbs:** Though these bulbs contain lead, they are not required to be recycled. However, WasteCap recommends recycling all types of bulbs to reduce future liability.
- *Site Materials:* Incandescent bulbs were the only light bulb identified. However there was a lot of debris throughout the house. Attention should be paid to possible florescent bulbs and should be recycled at one of the following recyclers.
- *Recyclers:*  
PKK Lighting, Inc. 7182 Hwy 14, Middleton, WI 53562; (608) 836-7821
  - **Cost:** Price varies depending on the size of the bulbs and ballasts. Discounts are available for large quantities.
  - **Logistics:** Materials can be dropped off at PKK Lighting, Inc., or PKK Lighting, Inc. will pick them up.
  - **Details:** PKK Lighting, Inc. offers barrels and boxes to consolidate materials on site.

Midwest Lamp Recycling 3224 Kingsley Way, Madison, WI, 53713; (608) 275-6766

- **Cost:** Price varies depending on the size of the bulbs and ballasts. Discounts are offered for large quantities.
- **Logistics:** Materials can be dropped off at Midwest Lamp Recycling, or Midwest Lamp Recycling can pick them up for a \$25 charge.
- **Details:** Midwest Lamp Recycling offers barrels and boxes to consolidate materials on site.

## Batteries

- *Background Information:* Batteries may contain toxic heavy metals and chemicals, including nickel, cadmium, manganese, mercury, lead, and sulfuric acid, which threaten our environment if not properly handled.
- *Site Materials:* No batteries were identified. If any batteries are found they should be recycled at one of the following recyclers.
- *Recyclers:*  
Midwest Lamp Recycling 3224 Kingsley Way, Madison, WI, 53713; (608) 275-6766
  - **Cost:** Midwest Lamp Recycling charges \$0.70 per lb for alkaline, \$0.95 per lb for nickel-based, \$4.75 per lb for lithium, and \$0.35 per lb for lead based batteries.
  - **Logistics:** Materials can be dropped off at Midwest Lamp Recycling. For Madison customers, there is a \$25 transportation fee.
  - **Details:** Midwest Lamp Recycling offers barrels and boxes to consolidate materials on site. Will take all kinds of batteries including car batteries and works with a registered E-cycle recycler.

PKK Lighting, Inc. 7182 Hwy 14, Middleton, WI 53562; (608) 836-7821

- **Cost:** PKK Lighting, Inc. charges \$2.50 per pound for standard battery recycling and \$10 per pound for lithium batteries.
- **Logistics:** Materials can be dropped off at PKK Lighting, Inc., or PKK Lighting, Inc. will pick them up.
- **Details:** PKK Lighting, Inc. offers barrels and boxes to consolidate materials on site. They will take all kinds of batteries including alkaline batteries. They do not accept automotive batteries. They work with a registered E-cycle recycler.

### Refrigerants

- *Background Information:* Refrigerants are used in cooling equipment such as air conditioners and refrigerators. Wisconsin Administrative Code NR 488 regulates handling and disposal of refrigerants. It requires all commercial entities handling and recovering these refrigerants and coolants to register with the Wisconsin DNR and annually certify that they will transport items in a manner that prevents refrigerant releases. Documentation of proper handling must be retained for three years.
- *Site Materials:* The refrigerator in the kitchen and dehumidifier in the basement will be recycle.
- *Recycler:*  
Kruser Recycling 6421 Edna Taylor Parkway, Monona, WI, 53716; (608) 223-9220
  - **Cost:** \$10 per appliance, regardless of the type of appliance.
  - **Logistics:** Appliances must be dropped off at their yard.
  - **Details:** The refrigerator can be dropped and \$10 deposited into the dropbox. You will need to put a note with the cash/check to indicate you want a receipt mailed to you.

### Appliances and HVAC equipment

- *Background Information:* Wisconsin Statute 287.07 requires the recycling of major appliances including clothes washers and dryers, dishwashers, air conditioners, stoves, ovens, microwave ovens, freezers, refrigerators, water heaters, furnaces, dehumidifiers, and boilers. All of these appliances are banned from landfills as of 1991. Microwave ovens may be landfilled only if the capacitor has been removed. Most major appliances are made primarily of high quality steel. They also may contain glass, plastic, rubber, copper, aluminum, and several hazardous materials that require special handling. Any appliances that have refrigerants or coolants must be handled according to instructions in the refrigerants section. All appliances less than ten years old and in good working condition should be removed for resale or reuse by WasteCap or Habitat ReStore.
- *Site Materials:* This property contains a stove, water heater, furnace, and washing machine. All appliances are older than 10 years and will be recycled.
- *Recyclers:*  
Kruser Recycling 6421 Edna Taylor Parkway, Monona, WI, 53716; (608) 223-9220
  - **Cost:** \$10 per appliance, regardless of the type of appliance.

- **Logistics:** Appliances must be dropped off at their yard.
- **Details:** The appliances can be dropped and \$10/appliance deposited into the dropbox. You will need to put a note with the cash/check to indicate you want a receipt mailed to you.

### **Paints, Stains, and Other Chemicals**

- *Background Information:* Oil-based paints, products containing organic solvents, and latex paint cans that are more than half full are considered hazardous waste and must be taken to a designated recycler for disposal. Latex-based paints can be properly hardened and disposed of in the trash if the can is less than half full.
- *Site Materials:* There were chemicals including paint, cleaning supplies, and aerosol cans throughout the house.
- *Recyclers:*  
Dane County Clean Sweep 7102 US Hwy 12, Madison WI 53718
  - **Cost:** There is a \$10 charge for individuals dropping off hazardous waste at Dane County Clean Sweep. Businesses are charged a fee based on quantity of materials and pay with Mastercard or Visa at the time of the scheduled drop off appointment.
  - **Logistics:** Small business appointments will be scheduled Tuesday-Friday. Small businesses can do an online registration form or print and mail the application.
  - **Details:** When bringing a load to Dane County Clean Sweep, products and materials should be packaged to keep them from spilling or breaking in transit. Leave materials in their original containers.

### **Thermostats Containing Mercury**

- *Background Information:* Mercury-containing thermostats hold mercury equivalent to the amount in 200-300 fluorescent bulbs and must be recycled. Though mercury is a hazardous waste, the Universal Waste Rules allow thermostats to be recycled without going through a hazardous waste permitting process. Care must be taken not to break the glass bulb containing the mercury during demolition and transportation.
- *Site Materials:* There was one mercury thermostat identified by WasteCap.
- *Recyclers:*  
Madison Gas and Electric, 133 South Blair Street, Madison, WI, 53703; (608) 252-7117
  - **Cost:** MG&E accepts thermostats for recycling free of charge.
  - **Logistics:** Deliver thermostats in a box to their reception area.

### **Computers and Electronics**

- *Background Information:* Commonly referred to as e-waste, most electronic equipment contains toxic heavy metals and should be disposed of at an appropriate recycler.
- *Site Materials:* There were two old TVs.
- *Recyclers:*  
Midwest Lamp Recycling 3224 Kingsley Way, Madison, WI, 53713 (608) 275-6766
  - **Cost:** \$0.50/lb for TV and monitors. \$0.35/lb for other electronics.

- **Logistics:** E-waste must be dropped off at their facility.
- **Details:** Hours 8am-3:30pm Monday – Friday.

## V. Demolition Phase Recycling

WasteCap has prepared this document as a guide for the demolition contractor to follow. WasteCap will be documenting the percentage of recycled materials for this project. The demolition contractor is required to ensure that all documentation of recycling and disposal is given to WasteCap. The documentation shall include: the date, material, weight, quantity or volume, and hauler, as well as recycling, diversion, or landfill information.

This section includes information for the recycling or proper disposal of the following:

- Brick
- Concrete or Concrete Block
- Metal
- Cardboard, Paper, Cans, and Bottles
- Wood

### **Brick**

- *Background Information:* Brick can be salvaged whole or crushed, or used as clean fill. Recycling brick costs significantly less than sending it to the landfill.
- *Site Materials:* There was a small amount of unpainted brick in the basement.
- *Recycler:*  
Homburg, 6106 Milwaukee Street, Madison, WI, 53704 (608) 241-1178
  - **Cost:** Homburg charges \$2/ton for brick that is dropped off at their quarry to be used for fill.
  - **Logistics:** Homburg can arrange to haul the materials or they can be dropped off at Homburg's quarry.
  - **Details:** Brick must be free of all paint.

### **Concrete and Concrete Block**

- *Background Information:* Clean concrete and concrete block may be crushed and used as fill, aggregate in roadbeds, or for recycling into new concrete. "Clean" means that concrete is free of dirt, clay, wood, and any paint. Recycling these materials costs substantially less than hauling them to a landfill.
- *Site Materials:* Concrete foundation and sidewalks are recyclable.
- *Recyclers:*  
Homburg, 6106 Milwaukee Street, Madison, WI, 53704 (608) 241-1178
  - **Cost:** The price depends on the quantity and type of concrete. Homburg charges \$3.10/ton if it is dropped off at their quarry to be used as fill.
  - **Logistics:** Homburg can arrange the hauling, or materials can be dropped off at their quarry.
  - **Details:** In order to be recycled to use as aggregate, concrete must be free of rebar. If it contains rebar, it will be used as clean fill. Homburg has a staffed scale and can provide receipts.

## Metal

- *Background Information:* Though not required by law, we recommend recycling all metals. Painted metal, even if it contains lead-bearing paint, is typically recyclable.
- *Site Materials:* The building had multiple sources of metal; ducts, pipes, hand railings, wiring, miscellaneous metal debris in the house.
- *Recyclers:*  
All Metals Recycling, 1802 South Park St, Madison, WI 53713; (608) 255-0960
  - **Cost:** All Metals Recycling generally does not charge a bin placement, but charges \$100 per pull. They offer a rebate per ton, depending on the type of metal.
  - **Logistics:** Haulers such as Waste Management also haul their bins of metal to All Metals for recycling. Therefore, it is **financially beneficial to contract directly with All Metals Recycling** for hauling, as opposed to going through a third party hauler. All Metals Recycling has 12, 20, 30, and 40 cubic yard bins.
  - **Details:** They accept all types of metal for recycling, including iron, steel, aluminum, and copper. Metal must not be contaminated with materials such as cement, plastic wrap, or wood. They also accept metal appliances if the refrigerants and coolants have been removed.

## Cardboard, Paper, Cans, and Bottles

- *Background Information:* Cardboard, paper, cans, and bottles must be recycled under Wisconsin law.
- *Site Materials:* There was lots of debris that potentially could be recycled but it would be difficult because of the conditions in the house.
- *Recycler:*  
City of Madison- Residential Recycling
  - **Cost:** No charge for recycling.
  - **Logistics:** Place recyclables in clear plastic bags on curb.
  - **Details:** Pellitteri collects trash from this location weekly and if recyclables are in clear plastic bags will pick up materials for free. Estimated charge for a 2 yard dumpster would be \$250.

## Asphalt Shingles

- *Background Information:* Asphalt shingles have been banned from the Dane County Landfill. This material can be processed and used as part of a mix to manufacture new asphalt.
- *Recyclers:*  
Dane County Landfill 7102 US Hwy 12, Madison WI 53718; (608) 838-9555
  - **Cost:** Dane County Landfill will be accepting business and residential asphalt shingles. The rates are as follows: Mixed Loads - \$60.00 per ton (up to 20% wood, roof vents, flashing, etc.) Clean Loads - \$38.00 per ton (only asphalt shingles, nails, and tar paper)
  - **Logistics:** Monday - Friday: 7:00 - 3:00. No loads accepted after 2:45 - must be unloaded and out by closing.
  - **Details:** Shingles can be mixed with roofing debris but must be less than 20%.