



PLANNING YOUR DEMOLITION OR RENOVATION PROJECT:

A Guide to Hazard Evaluation, Recycling and Waste Disposal

(Formerly called Pre-Demolition Environmental Checklist)

INFORMATION ON IDENTIFYING, HANDLING AND PROPERLY DISPOSING OF HAZARDOUS MATERIALS

PLANNING YOUR PROJECT

- ✓ Conduct a walk-through of the project building(s) and grounds to **identify items that contain harmful materials** and other site-related concerns.
- ✓ **Identify and quantify harmful materials at your job site** with specialized inspectors or contractors, if necessary
- ✓ **Notify the DNR of** demolition or renovation activities prior to starting any demolition or renovation work.
- ✓ **Hire specialized consultants, contractors or transporters** to remove and properly manage harmful materials prior to starting your project.
- ✓ **Request and file all receipts** for the disposal of harmful and non-harmful materials related to the project to avoid potential enforcement action.

Before beginning any demolition or renovation project, it is important to know about harmful materials that may be present on your project site.

This guide walks contractors and building owners through the steps to identify harmful materials commonly found at project sites and to handle and dispose of them safely. It also offers proper ways to manage recyclable and reusable materials and other wastes that are common in demolition and renovation projects.

The Resources section on the last page has links to websites with more information.

Note: This document is not intended as a substitute for reading the rules, regulations, and statues related to handling demolltion and renovation debris. It is simply a guide to assist you in determining how they apply to your demolition or renovation project.

COMMON HARMFUL MATERIALS

Buildings can contain a number of harmful materials that may expose workers and the public to serious health risks and pollute the air, land and water if handled or disposed of in an unsafe way. Five of these harmful materials are common on project sites and need special care in identification and handling:

- ▶ **Asbestos**
- ▶ **CFCs (chlorofluorocarbons) and halons**
- ▶ **Lead**
- ▶ **Mercury**
- ▶ **PCBs (polychlorinated biphenyls)**

FIVE STEPS TO A SUCCESSFUL DEMOLITION OR RENOVATION PROJECT

STEP 1. Conduct a walk-through of the project building(s) and grounds to identify items that contain harmful materials and other site-related concerns.

Identifying hazardous materials before starting work on a project site protects worker health and safety, building occupants, and the financial viability of the project. Doing this up front can help you choose the appropriate inspectors, consultants and contractors and avoid costly change orders or project delays.

Before you begin any demolition or renovation project, thoroughly inspect and inventory the project site for the following items:

- **Appliances:** Appliances may contain CFCs, mercury or PCBs. Appliances that contain CFCs or PCBs must be processed by an appliance de-manufacturer registered with the DNR.
- **Building materials and fixtures that may contain asbestos:** All layers of materials, behind walls, ceiling spaces, etc., should be inspected and sampled unless they are assumed to contain asbestos. The following building components may contain asbestos, but this list is by no means all-inclusive:
 - **Caulking:** Used around windows, doors, corrugated roofing and other places where two materials are joined. PCBs have also been found in caulking materials. Schools and industrial buildings constructed or renovated between 1950 and 1979 are suspected to contain PCB-containing caulk.
 - **Ceilings:** Including acoustical tiles and adhesives, and the materials listed under "Interior and exterior walls" below. All ceiling layers and any spaces above the ceiling where drop ceilings are present should be checked. Insulation debris may also be lying on top of ceiling tiles.
 - **Electrical systems:** Insulators; spark arrestors and transite panels in electrical boxes; wiring insulation; ducts/conduits (transite pipe); and light fixtures.
 - **Flooring:** All sizes of vinyl floor tile, sheet flooring, and linoleum, and felt paper used under hardwood floors.
 - **HVAC systems:** Duct, pipe, and joint insulation because elbows/joints are often coated with asbestos; fiberglass insulation on the straight runs; forced air dampers; wall, floor and chimney penetrations; lining and mortar; fire brick; fire-proofing materials such as transite sheets or heavy paper; boiler insulation; flexible fabric connectors; packing/gaskets and adhesives; paper backing; mastic/adhesives (floor tile, carpet, etc.); and grout and felt paper under hardwood floors.
- **Insulation in ceilings and walls:** Blown-in, spray-applied, and block.
- **Interior and exterior walls:** Wall plaster; joint compound; patches; transite wallboard and siding; fire doors; window putty/glazing/caulking; mortar; asphalt shingles/siding; felt under siding, stucco, textured paint, and other spray-applied materials. Paint containing asbestos is rare except in commercial applications, where it was usually applied as a very thick, often silver-colored coating or added to textured paints.
- **Miscellaneous:** Appliances with a heating element, especially older models; fire curtains and blankets; laboratory tabletops; fume hood linings; blackboards; and fire-resistant clothing like gloves, hoods, aprons, etc.
- **Plumbing:** Pipe wrap, pipe joints, transite counter tops in bathrooms, faucets, packing gaskets, and adhesives.
- **Roofing:** Asphalt shingles; tar-type coatings which are often around vents, chimneys, etc.; transite shingles; roofing felts that are often under a layer of other material; flashings; and mag-block type material found under other material. Check all roof areas and roofing layers.
- **Lighting fixtures/ballasts and bulbs/lamps:** Switches for lighting may use mercury relays. Look for any control associated with exterior or automated lighting systems, such as "silent" wall switches. Several types of light bulbs or lamps contain mercury and must be properly legitimately recycled or disposed of as hazardous waste. These include:
 - **Fluorescent lights:** Even the newer lamps with green-colored ends contain mercury.
 - **High Intensity discharge:** metal halide, high pressure sodium, mercury vapor.
 - **Neon**
- **Meters and switches:** Mercury may be found in thermometers, barometers, thermostats, blood-pressure devices, and fluorescent and other types of light bulbs. Any equipment used for measurement of vacuum, pressure, fluid level, temperature, or flow rate could contain mercury. These devices are

most commonly associated with commercial and industrial equipment systems, including tanks, boilers, furnaces, heaters, electrical systems, water cleaning systems, and systems for the movement or pumping of gas (air) or liquids (water). In addition, mercury containing devices are also common in certain agricultural operations such as dairy, and may be present in older model consumer appliances and residential properties, especially larger multi-unit properties.

- **Oil:** Used oil in containers or tanks, hydraulic oils in machinery, electrical transformers and capacitors, and elevator shafts. These oils may contain PCBs and may need to be tested to determine if the oil can be recycled or must be properly disposed of.
- **Paint:** Residential and industrial paints may contain lead, solvents or asbestos. Some industrial paints may contain PCBs.

In addition to the items listed above, be aware of these other site-related concerns:

- **Abandoned wells:** Unused and improperly abandoned wells are a significant threat to groundwater quality. If not properly filled, abandoned wells can directly channel contaminated surface water into the groundwater. State law requires that all wells and drill holes be properly filled prior to any demolition or construction work on the property.
- **Batteries (non-lead-containing):** Batteries may be found in smoke detectors, emergency lighting systems, elevator control panels, exit signs, security systems and alarms. Batteries should be separated from other wastes and taken to a recycling facility or a business that accepts batteries for recycling.
- **Computers and other electronics:** Most electronics are banned from Wisconsin landfills and must be recycled. These can contain hazardous materials such as lead, cadmium, chromium, and mercury and, if not recycled, may be regulated as hazardous waste.
- **Exit signs:** Many self-luminous exit signs contain tritium, a radioactive material. All self-luminous exit signs must have a permanent label that identifies it as containing radioactive material. The label will also include the name of the manufacturer, the product model number, the serial number, and the quantity of tritium contained. It is illegal to abandon or dispose of these signs except by sending them to the manufacturer or to others licensed by the U.S. Nuclear Regulatory Commission.

► HAZARDOUS AND UNIVERSAL WASTES

Some wastes, such as used or unused solvents, sanitizers, paint wastes, chemical wastes, pharmaceuticals, gas cylinders, aerosol cans and pesticides, may be hazardous waste and regulated by the EPA and DNR. Hazardous wastes must be removed from a project site prior to demolition or renovation and be disposed of according to specific rules. Read the DNR publication "Is Your Waste Hazardous?" (WA-1152) at <http://dnr.wi.gov/files/pdf/pubs/wa/wa1152.pdf> to determine if a waste is hazardous. See *Handling and Disposal Choices* on page 7 for information on how to dispose of hazardous wastes on a project site.

Universal wastes are hazardous wastes that can be collected and transported with fewer regulations. Universal wastes include hazardous waste batteries, certain pesticides, mercury thermostats and other mercury-containing equipment and some lamps (light bulbs). In Wisconsin, antifreeze can also be managed as a universal waste if it is recycled. See chapter NR 673 of Wisconsin Administrative Code for more details on recycling and reusing universal waste.

- **Painted concrete:** Walls and foundations often contain painted concrete. With prior DNR approval, contractors can grind the concrete and use it on-site or nearby under a new building or road.
- **Smoke detectors:** The smoke detectors that contain a small amount of radioactive material will be labeled and should be returned to the manufacturer for disposal. Otherwise, smoke detectors may go in the trash.
- **Soil contamination:** A qualified environmental consultant can conduct environmental property assessments including identification of contaminated soil.
- **Spills:** In Wisconsin, all spills of hazardous substances that negatively affect or threaten to negatively affect public health, welfare or the

► REUSE AND RECYCLING OF MATERIALS

Many materials, fixtures and components can be donated or sold for reuse or recycled prior to demolition. As you inventory the project site for harmful materials, take note of materials that can be reused or recycled and remove them from the project site before demolition work begins.

- The Wisconsin Business Materials Exchange is a web service that facilitates the reuse of surplus or unwanted items or materials among businesses, institutions, and organizations. You can use this tool to post items that are available and request an item you may need.
- Consider holding an auction as a way to reuse building materials, fixtures and components once all the harmful materials have been removed.
- Clean brick, building stone, concrete and asphalt can be stockpiled for crushing and reusing in future building projects.
- Clean, untreated wood can be recycled or chipped for mulch or ground cover.
- Many items such as appliances, electronics, paper and cardboard, glass containers and vehicle items are banned from Wisconsin landfills and must be recycled. For a complete list of these items, go to dnr.wi.gov and search "what to recycle."
- The online Wisconsin Recycling Markets Directory contains a list of self-identifying businesses accepting recyclable materials. Make sure your chosen recycler meets local, state and federal regulatory requirements.
- Demolition debris may be taken to a construction and demolition recycling facility if all harmful materials, including all types of asbestos, are removed prior to demolition or renovation.

► OPEN BURNING

It is illegal to burn painted, treated or unclean wood, asphalt, plastics of any kind, oily substances, tires and other rubber products, garbage, recyclables, wet rubbish, and other materials. Demolition materials that cannot be burned include: roofing materials, all kinds of flooring materials, insulation, plywood and other composition board, electrical wiring, cabinetry and countertops, and plastic plumbing.

Burning of clean, unpainted and untreated wood is allowed with a DNR burning permit using DNR-approved methods. When burning this type of wood from demolition waste, you must separate out all of the illegal materials, including painted or treated wood, before any burning occurs. The DNR encourages chipping clean, untreated wood for mulch or ground cover.

If you do decide to burn clean, unpainted and untreated wood, it is your responsibility to know what restrictions apply in the area where you are burning. Remember, you must also follow local burning ordinances that may be more restrictive than state law. Contact your local fire department, town chairperson, or local municipal official for more information on local burning rules.

It is illegal to burn unwanted buildings in Wisconsin. The only exception is for a fire department training exercise. For more information on how to prepare a building for a fire department training exercise, contact the DNR asbestos program coordinator at (608) 266-3658.

environment *must* be immediately reported to the DNR via the Spills Hotline, 800-934-0003.

- **Tanks:** Chemical tanks (underground and aboveground) and septic tanks should be assessed, emptied and decommissioned.
- **Tires:** Tires should be reused or recycled. Your local landfill may collect them for recycling or you can check WisconsinRecyclingDirectory.com and search for "motor vehicle items" and then "tires."

STEP 2. Identify and quantify harmful materials at your job site with specialized inspectors or contractors, if necessary

Asbestos and lead have specific requirements from the Department of Natural Resources and the Department of Health Services for their identification and testing on a project site. See the sections on asbestos and lead in this step for those requirements.

You can identify other harmful materials on a project site, such as CFCs and halons, mercury, and PCBs, by doing an inventory of the building systems and fixtures for the items listed here and in Step 1. You may need some testing to confirm the presence of these materials. The DNR recommends hiring an inspector or consultant who has sufficient experience identifying these materials and can collect samples, if necessary, that will help in identification.

If you have a large or complex project, it may make sense to hire a consultant to oversee the coordination of all waste identification and disposal activities.

► **Asbestos**

Health risks: Asbestos is a known human carcinogen that can cause serious health problems when disturbed and inhaled. Historically, asbestos was commonly used in industrial, commercial, and residential structures. Asbestos is still used today but to a lesser extent.

Location and/or materials: Asbestos is used in more than 3,000 building materials. Asbestos is commonly found in HVAC systems, electrical systems, interior and exterior walls, roofing materials, ceilings, plumbing, and flooring insulation. It is also found in appliances with a heating element, fire curtains and blankets, laboratory tabletops, fume hood lining, blackboards and fire resistant clothing. Refer to Step 1 for a detailed list of building materials and locations that may contain asbestos.

Identification and testing: The Department of Health Services requires licensed inspectors to identify asbestos. Inspectors can assume asbestos to be present, or they can identify it through testing. The DNR requires an asbestos inspection for certain projects and recommends it for others.

Required projects:

- Two or more contiguous single family homes
- Homes that are part of a larger demolition project
- Multi-family housing with five or more units
- Industrial, manufacturing or commercial buildings including bridges, farm buildings, and churches
- Any structure being prepped for a fire training exercise

Recommended projects:

- Single family homes
- Multi-family housing with 2–4 units

Inspection must be completed and asbestos materials must be removed before beginning any demolition or renovation activities.

► **CFCs (chlorofluorocarbons) and halons**

Health risks: CFCs and halons damage the earth's protective ozone layer high in the atmosphere, allowing greater exposure to the sun's dangerous ultraviolet rays. Some of the harmful effects of increased UV exposure include increased risk of skin cancer, eye cataracts, immune system deficiencies, and crop damage.

Location and/or materials: CFCs can be found in refrigerants in rooftop, room and central air conditioners, refrigerators, freezers, and chillers, dehumidifiers, heat pumps, water fountains and drinking coolers, walk-in coolers (refrigeration or cold storage areas), vending machines and food display cases. Halons are found in fire extinguishers and other fire control equipment.

► **Lead**

Health risks: Inhaling or swallowing lead dust can cause serious health effects, including kidney disease, neuropathy, infertility, heart and cardiovascular disease, stroke, memory problems, and Alzheimer's disease.

Location and/or materials: Lead plumbing and lead-based paint are commonly found in many older buildings. Lead may be found in paint on woodwork and metal equipment, leaded glass, lead window-sash weights, lead flashing molds, roof vents, lead pipes and solder. Lead is found in both indoor and outdoor applications. Lead is also found in lead-acid batteries associated with older lighting, exit signs, and security systems.

Identification and testing: The Department of Health Services requires licensed inspectors and risk assessors to identify lead paint. When building surfaces or components are being renovated in any residential and child-occupied buildings built before 1978 (such as private homes, rental units, day care centers, and schools), lead paint must be assumed to be present or identified through testing.

Lead paint sampling is recommended on commercial and industrial projects. The US discontinued manufacturing lead paint for residential use by 1978, but lead is still used in specialty paints in commercial and industrial applications. Most buildings have multiple layers of paint, and all layers should be considered.

► Mercury

Health risks: Liquid mercury evaporates slowly at room temperature and gives off harmful vapors that are invisible and odorless. Breathing these vapors causes the most harm to people, but mercury can also be harmful when it comes in contact with broken skin or when it is swallowed. Women and children are most at risk from mercury poisoning, which can cause brain and nerve damage, resulting in impaired coordination, blurred vision, tremors, irritability and memory loss. Mercury poisoning also causes birth defects.

Location and/or materials: Mercury may be found in thermometers, barometers, thermostats, dental offices, blood-pressure devices, and fluorescent and other types of light bulbs. Any equipment used for measurement of pressure, fluid level, temperature, or flow rate could contain mercury. These devices are most commonly associated with commercial and industrial equipment systems, including tanks, boilers, furnaces, heaters, electrical systems, water cleaning systems, and systems for the movement or pumping of gas (air) or liquid (water). In addition, mercury containing devices are common in certain agricultural operations such as dairy, and may be present in older model consumer appliances, vehicle light switches and residential properties, especially larger multi-unit

properties. Dental offices use mercury-containing amalgam that may be found in sink drain traps. Mercury can also be found as part of older wastewater treatment plant trickling filters.

► PCBs (polychlorinated biphenyls)

Health risks: PCBs may cause cancer in humans and can disrupt hormone and nervous system function. PCBs are persistent in the environment and stay in animals' and humans' systems. PCBs are a source of contamination in fish and have caused fish consumption advisories for humans.

Location and/or materials: PCBs can be found in electrical oils (e.g. transformers and capacitors in appliances) electronic equipment, heat transfer equipment, hydraulic fluids, light ballasts, industrial paints, specialty paints (e.g. swimming pools) and caulking materials. Sumps, oil traps and concrete flooring in facilities that used or manufactured PCBs may be contaminated with PCBs as well. Electrical devices manufactured prior to 1978 should be assumed to contain PCBs.

Identification and testing: You may be able to determine PCB concentrations in electrical equipment oil using identification labels, documents from the manufacturer indicating the PCB concentration at the time of manufacture, or service records showing the PCB concentration measured when the equipment was serviced. If a manufactured date and PCB content label are not found on a transformer or capacitor, the oil should be tested to determine the PCB content prior to dismantling and disposal. Oil-filled electrical equipment labeled "No PCBs" may still contain PCBs, but at a concentration lower than what the EPA regulates. The oils in this equipment should still be tested to see if they contain PCBs and then handled appropriately.

Testing of specialty paint, epoxies and caulks in buildings built or renovated between 1950 and 1979 is recommended. High levels of PCBs are being found in these materials across the country. Once testing is complete, boldly label all surfaces and items that were found to contain PCBs so they are handled appropriately during renovation or demolition.

STEP 3. Notify the DNR of demolition or renovation activities prior to starting any demolition or renovation work.

Notification to the DNR is required for all demolition projects meeting any of these categories:

- Two or more contiguous single-family homes
- Homes that are part of a larger demolition project
- Multi-family housing with five or more units
- Industrial, manufacturing or commercial buildings including bridges, farm buildings, and churches
- Any structure being prepped for a fire training exercise

DNR notification is also required for renovation projects meeting any of these criteria, if asbestos removal is involved.

For demolition projects

All demolition projects meeting the previously listed criteria require DNR notification 10 working days before the project work begins.

For renovation projects involving asbestos

All renovation projects meeting the previously listed criteria that involve asbestos require DNR notification 10 working days before the project begins.

Note: While plans to demolish or renovate a single-family home do NOT require DNR notification, it is recommended you take the precautionary steps outlined in this publication.

► HANDLING AND DISPOSAL CHOICES

You have a few options for handling and disposing of lead, mercury, PCBs and other wastes from your project site that qualify as hazardous waste. Identifying these options prior to beginning the project can help you schedule transportation and disposal and maintain the overall project schedule.

- **Hire a waste management contractor** to pick up and dispose of hazardous wastes. This takes the guess work out of handling these types of wastes. Contractors have properly trained personnel that will determine appropriate packaging, shipping and vehicle licensing and have established relationships with disposal facilities.

Other choices provide you with reduced regulation and may change depending on the amount of hazardous waste generated in a month. As a contractor, you may manage hazardous wastes you generate at temporary job sites only according to the following options. For more details on these options, see the DNR publication "Pilot Project for Management of Contractor Generated Hazardous Waste" (WA-654) at <http://dnr.wi.gov/files/pdf/pubs/wa/wa654.pdf>.

- **Hire a licensed hazardous waste transporter** to transport the hazardous waste to a licensed or permitted hazardous waste treatment, storage and disposal facility. In this case, you must follow the applicable generator requirements in chapters NR 660-679 of Wisconsin Administrative Code.
- **Leave containerized hazardous waste for the site owner to properly manage.** In this case, the site owner must follow the applicable generator requirements in chapters NR 660-679 of Wisconsin Administrative Code. If you choose this option, be sure to include this in your contract with the site owner.
- **Transport the containerized hazardous waste yourself** directly from the temporary job site to a Household and Very Small Quantity Generator (VSQG) Hazardous Waste Collection Facility. This includes county or municipal Clean Sweep locations. If the total quantity of hazardous waste generated by your company in one month is less than 220 lbs. (about half of a 55-gallon drum), you would be a VSQG and your hazardous waste may be taken to a Clean Sweep location for handling and disposal. Contact your local Clean Sweep coordinator for information on possible fees, accepted materials, and other details.
- **Transport the containerized hazardous waste yourself to your central business location.** This option is currently available under a pilot project. Waste handled in this manner is subject to the pilot project conditions. See the publication referenced above for more information.

STEP 4. Hire specialized consultants, contractors or transporters to remove and properly manage harmful materials prior to starting your project.

Hiring the right consultant, contractor or transporter is important to ensure safe handling practices and disposal options. This section will help you determine who to hire. Links to lists of licensed consultants, contractors and transporters are on the last page under Resources.

► **Asbestos**

Handling practices: Asbestos professionals trained and certified by DHS are required to perform asbestos removal in most multi-unit residential and all commercial, industrial, manufacturing and government buildings. Most types of asbestos-containing materials must be removed from the building prior to demolition or renovation.

Disposal: The asbestos removal contractor is responsible for disposing of the asbestos materials at a licensed landfill approved to accept asbestos waste. Not all landfills accept asbestos materials, so contractors should call the landfill to find out what materials are accepted and the hours of operation.

In some situations, non-friable asbestos materials (materials that are resistant to crushing), such as floor tile and roofing, may remain in place during the demolition activities. When this is done, the debris must be taken to a municipal or construction and demolition landfill. Debris containing non-friable asbestos materials may not be taken to a construction and demolition recycling facility.

► **CFCs (chlorofluorocarbons) and halons**

Handling practices: Keep units that contain refrigerants in place for a certified transporter to remove them. Moving them may cause an accidental release of refrigerants. Certified transporters include waste haulers, community recycling programs, and appliance salvage businesses. State law requires that anyone transporting salvaged refrigeration units must certify to the DNR that they will transport items in a way that prevents refrigerant releases. Technicians who remove refrigerants from units must be registered with the DNR and use approved equipment.

Check both portable and installed fire suppression systems for labels indicating halons. Trained technicians are also needed to remove halons. Contact local fire suppression equipment companies or the Halon Recovery Corporation for more information. Do not discharge halon fire extinguishers; intentionally releasing these substances is prohibited under federal regulations.

Disposal: Once the refrigerants are recovered, the unit may be taken to a metal scrap recycling facility. If you send halon-containing equipment offsite for disposal, it must be sent to a manufacturer, fire equipment dealer or recycler operating in accordance with National Fire Protection Association standards.

► **Lead**

Handling practices: DHS-certified lead-safe contractors are required for any renovations, repairs, painting or other paint-disturbing services on or in the regulated buildings that contain lead paint. These contractors must use lead-safe practices at these properties.

State law prohibits the sale or transfer of any fixture or other object that contains lead-bearing paint if children would have ready access to the fixture or object in its new location.

Disposal: Dispose of in a landfill any painted wood or building components that contain lead paint. Do not burn or chip wood that contains lead paint or use it for landscaping.

Lead paint waste, such as lead paint chips or lead paint removed from commercial or industrial buildings, must be tested to determine if it is a hazardous waste for disposal purposes.

See Handling and Disposal Choices on page 7 for handling and disposal options.

► **Mercury**

Handling practices: You may collect intact mercury-containing devices and bring them back to your primary business location or bring them directly to an off-site mercury recovery facility. Do not remove mercury ampoules or free liquids from the device. Store devices in a covered plastic container to prevent them from breaking. Label the container to assist proper handling and disposal.

If any mercury is spilled or released during handling, report the spill immediately by calling the DNR 24-hour Spills Hotline: (800) 934-0003. Mercury spreads quickly, and even a small spill can cause big cleanup costs in a short period of time.

Disposal: Trained professionals and specific equipment are needed for safe removal of mercury from ampoules and devices. Mercury must be transported by a licensed hazardous waste transporter to a mercury facility to be recycled or reclaimed.

See *Handling and Disposal Choices* on page 7 for handling and disposal options.

► PCBs (polychlorinated biphenyls)

Handling practices: The EPA recommends that caulk containing PCBs be removed during planned renovations and repairs (when replacing windows, doors, roofs, ventilation, etc.). It is important to ensure that PCBs are not released into the air during renovation or repair of affected buildings.

Oils with PCB content greater than 50 ppm are prohibited from being mixed with other materials to reduce the PCB content.

Disposal: PCBs must be transported either by your company, a licensed hazardous waste transporter or a full-service contractor. PCBs and PCB-containing wastes must be taken to a licensed disposal facility or directly to a licensed incineration facility. Arrangements for accepting PCBs must be made with these facilities ahead of time.

See *Handling and Disposal Choices* on page 7 for handling and disposal options.

STEP 5. Request and file all receipts for the disposal of harmful and non-harmful materials related to the project to avoid potential enforcement action.

As materials are removed from the project site, ask your contractors for disposal receipts to document the disposal or recycling of your wastes. This is an important step in protecting your company. If materials are illegally dumped, the DNR will investigate to determine where the materials came from. Part of the investigation process would be to identify projects in the area that may have been the source of the illegally dumped materials. Receipts show that your project wastes were disposed of appropriately and protect you from liability issues and fines and/or forfeitures.

► DEMOLITION AND RENOVATION WASTE

Disposal options for demolition and renovation wastes depend on the type of waste and, in some cases, the amount generated. Solid wastes such as trash, painted wood, and fiberglass insulation can be disposed of at solid waste transfer stations and landfills, including construction and demolition landfills.

If demolition wastes are going to a construction and demolition landfill, all non-building components, such as books, furniture and trash must be removed before you begin demolition (note that most of these non-building components can be reused or recycled). Non-building components may stay in the building if the demolition waste is going to a municipal solid waste landfill. Check with local landfills prior to demolition to determine how to manage your wastes.

Demolition debris may be taken to a construction and demolition recycling facility if all asbestos materials and other harmful materials have been removed prior to demolition or renovation.

To find a list of these facilities licensed in Wisconsin, go to dnr.wi.gov and search "licensed waste haulers and facilities."

Once the harmful materials have been removed from the project site and the notification to DNR is submitted with the appropriate dates of demolition, demolition may begin. This includes first removing materials for reuse or recycling. If all harmful materials, including all types of asbestos, have been removed from the building or structure before demolition, the resulting debris may be taken to a construction and demolition recycling facility.

RESOURCES

Asbestos

- DNR asbestos program requirements: dnr.wi.gov, search "asbestos"
- DHS Wisconsin Asbestos Program: www.dhs.wi.gov/asbestos/
- DHS-certified asbestos companies: at the link above, look for "certified company" in the left-hand margin

Brownfields

- DNR brownfields redevelopment: dnr.wi.gov, search "brownfield"

CFCs and halons

- DNR refrigerant recovery program: dnr.wi.gov, search "refrigerants"

Demolition debris, waste, transporters, landfills and other licensed facilities

- DNR demolition, construction & renovation information: dnr.wi.gov, search "demolition"
- DNR waste and materials management: dnr.wi.gov, search "waste"
- DNR list of licensed haulers and facilities: dnr.wi.gov, search "licensed waste haulers and facilities"
- Contact the DNR: 608-266-2111 or DNRWasteMaterials@wisconsin.gov

Hazardous and universal wastes

- DNR hazardous waste information: dnr.wi.gov, search "hazardous waste"
- "Is Your Waste Hazardous?" (DNR publication WA-1152): <http://dnr.wi.gov/files/pdf/pubs/wa/wa1152.pdf>
- Handling and disposal of hazardous wastes – "Pilot Project for Management of Contractor Generated Hazardous Waste" (DNR publication WA-654): <http://dnr.wi.gov/files/pdf/pubs/wa/wa654.pdf>.
- Wisconsin Administrative Code chapter NR 673 – Universal Waste Management Standards: http://docs.legis.wisconsin.gov/code/admin_code/nr/600/673/

Lead

- DHS Lead-Safe Wisconsin: www.dhs.wi.gov/lead/
- DHS-certified lead companies: at the link above, look for "certified company" in the left-hand margin
- DNR Application for Low Hazard Waste Exemption for Reuse of Concrete Coated with Lead-Bearing Paint -- Form 4400-274 (R 2/12) <http://dnr.wi.gov/files/pdf/forms/4400/4400-274.pdf>

Mercury

- EPA information on mercury: www.epa.gov/hg/consumer.htm

PCBs

- EPA information on PCBs: www.epa.gov/wastes/hazard/tsd/pcbs/
- Wisconsin Administrative Code chapter NR 157 – Management of PCBs and Products containing PCBs: docs.legis.wisconsin.gov/code/admin_code/nr/100/157/

Reuse & recycling

- DNR recycling program: dnr.wi.gov, search "recycling"
- WasteCapDIRECT – a centralized, online directory of construction and demolition recycling processors, haulers and end markets: www.wastecap.org
- Wisconsin Recycling Markets Directory: www.wisconsinrecyclingdirectory.com

Storage tanks

- Department of Safety and Professional Services storage tank database: <http://dsps.wi.gov/online-services/storage-tanks>

Wisconsin Administrative Code

- Wisconsin Legislative Documents: <http://docs.legis.wisconsin.gov>

WISCONSIN DNR



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