

# Handling & Disposal of Construction & Demolition Waste

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## **Solid Waste Program**

*Division of  
Environmental Health*

**Department  
of  
Environmental  
Conservation**

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Anchorage, AK 99501  
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### **Fairbanks Office:**

610 University Ave  
Fairbanks, AK 99709  
(907) 451-2108  
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Juneau, AK 99801  
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<http://dec.alaska.gov/eh/sw>

This guidance document is intended to give building owners, inspectors, and contractors information on how to best handle the materials and wastes resulting from the construction, demolition, and renovation of buildings. Federal regulations require the removal of all asbestos-containing materials and all hazardous or toxic materials before demolition or renovation of a building begins. Contractors will provide a safer environment for their workers and the public by giving proper attention to the wastes generated by a project before demolition or renovation begins.

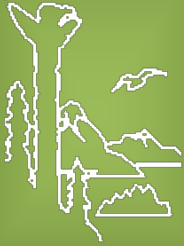
### **Topics Covered**

- The First Step: The Building Survey
- What if a Building Has Asbestos?
- What about Hazardous Waste?
- What if I Want to Burn the Woody Debris?
- How Do I Dispose of Non-Hazardous Waste?
- What Wastes Can be Disposed Without an ADEC Solid Waste Permit?
- Contact Information

### **The First Step: The Building Survey**

As mentioned above, the federal regulations require the removal of all asbestos-containing materials and hazardous or toxic materials prior to beginning a building demolition or renovation. Identifying the location and approximate amounts of these materials is most readily accomplished by completing a building survey. Once each waste type is identified and located, it can then be removed from the building according to appropriate state and federal regulations and best management practices and recycled or disposed in the most appropriate manner. A building survey does not need to be complicated and there are different methods for doing a survey. You should develop a method that best fits your needs.





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Removal of asbestos and hazardous wastes **after** demolition is difficult and expensive. By knowing the types and quantities of all wastes that will be generated, you can plan ahead and figure out how to recycle or dispose of those wastes in the most efficient and safest manner. Even though it may be difficult to correctly identify all the material, a thorough investigation can save you many headaches later.

Once you have surveyed your project and know all the types and amounts of materials that will be generated, you can determine which materials can be recycled, burned, or disposed. The most common methods for disposing of different wastes will be discussed in this document. Please contact your local landfill, recycling facility, or sponsoring organization for recycling information. Some common recyclable wastes include piping, conduit, fixtures, timbers, windows, and doors.

Federal law requires that you contact EPA before demolition begins, regardless of the type of waste involved. Contact them after you have identified the types of wastes the project will generate.

### What if a Building Has Asbestos?

Regulated Asbestos-Containing Material (RACM) must be removed prior to the demolition of a building and must be disposed at a landfill permitted to accept RACM wastes.

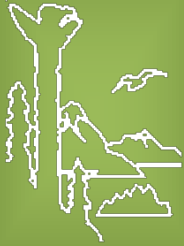
RACM waste is any asbestos-containing material that contains more than 1% asbestos, and that when dry, can be crumbled or reduced to powder by something as minor as hand pressure. If it can be crumbled or reduced to powder relatively easily, it is called “friable”.

Non-RACM waste, on the other hand, is asbestos-containing material that is not friable or is not likely to become friable during the demolition or renovation activities. In other words, it is material that when dry cannot be crumbled, pulverized, or reduced to powder by hand pressure or by the demolition or renovation process. Non-RACM waste can be disposed at a permitted construction and demolition waste landfill or at a permitted municipal solid waste landfill provided the operator is willing to accept the waste.

For projects in rural areas without a nearby permitted landfill, the project may qualify for an authorization for the one-time disposal of asbestos waste. Such authorizations are described in greater detail in the section “How Do I Dispose of Demolition Waste?” ADEC Solid Waste Program staff can help you determine if this is an option for your project.

You will typically find asbestos-containing material in anything that was intended to retard fires. Specifically look at door gaskets, duct insulation, and the tape at duct connections of furnaces, boiler, and wood stoves. Hot water pipes inside walls and the tees, valves, elbow, and cross connections should also be checked. Wall board; mastic, acoustical tile or sprayed-on ceilings; roof felt and shingles; window putty; cement asbestos board siding and undersheeting; electrical equipment such as





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lamp sockets, outlet and switch boxes, recessed lighting units, and old-fashioned wiring insulation, and older electrical appliances may be additional sources for asbestos-containing material.

It is important in older facilities such as HUD housing, FAA buildings, and military facilities to survey the flooring. Many floors had 1½ to 3 inches of material stacked on top of one another. Asbestos-containing material may be in some or all of the layers.

Asbestos waste may not be burned because it does not burn but just becomes airborne. Therefore, it is important to remove all asbestos-containing materials if your intention is to burn debris after a building is demolished. Note that if non-RACM waste catches fire, it becomes regulated by EPA under the National Emission Standards for Hazardous Air Pollutants (NESHAP) program.

Once you have identified and located any RACM waste, you must arrange for a certified contractor to remove it. The contractor will package and ship it to a landfill that is permitted for RACM waste. Contractors certified to remove RACM waste can be found in the telephone directory, usually under environmental/ecological services.

Remember to notify EPA before any asbestos removal or building demolition begins. The EPA requires notification ten working days in advance so they have an opportunity to inspect the job. They can provide greater detail as to what is or is not considered RACM waste. The regulations can be complex, and EPA welcomes the opportunity to provide clarification and assistance. You can contact EPA at the Alaska office at 907-271-3688 or 800-781-0983, or the Seattle office at 206-553-4226.

## What about Hazardous Waste?

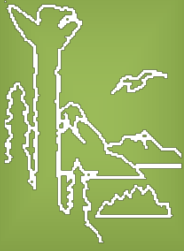
Federal regulations define what materials are considered hazardous waste and how these materials must be disposed. Contact EPA at 907-271-6329 or 800-781-0983 for more information.

Hazardous wastes commonly found in a demolition project include:

- Some lead painted materials;
- Some fluorescent tubes and spent incandescent bulbs;
- Lead pipe and solder
- Mercury switches;
- Lead based paint;
- Some liquid paint wastes;
- Unused solvent based paints;
- PCB containing transformers (classified as toxic);
- PCB containing light ballasts (classified as toxic).

Federal and State occupational safety and health regulations may apply if your project involves hazardous materials, such as asbestos- or lead-containing products, and your workers may need to be certified or specifically trained. Please contact Alaska Occupational Safety and Health for more information.





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If you are demolishing a building which has an air conditioning system, you must recover the refrigerant, something that may only be done by a certified technician. Simply venting the refrigerant into the air is prohibited.

Burning hazardous wastes or any materials that may emit a toxic gas when burned is prohibited. This includes such things as certain chemicals, tars, linoleum, plastic, foam insulation, rubber, toxic waste, lead pipes, and PVC plastic piping.

When determining the amount of hazardous waste that will be generated, you must include all the hazardous products used for removing building materials.

State law generally prohibits the disposal of hazardous waste in the state. However, small quantity generators of hazardous waste (those that generate less than 220 pounds per month per site) can dispose of their hazardous wastes at a permitted Class I or II landfill. If you are registered with the EPA as a small quantity generator, contact your local landfill to find out if it is a Class I or II landfill with a current permit and is will to accept “conditionally exempt small quantity generator” waste.

If the local landfill does not have a Class I or II permit, you may be able to transport the waste to another Class I or II landfill for disposal, if that landfill accepts hazardous waste from outside its municipal boundary. Contact the landfill and/or ADEC Solid Waste Program for more information.

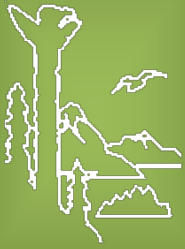
If your demolition project produces more than 220 pounds of hazardous waste in a month, you will need to ship this waste out of state to an EPA-registered treatment, storage, and disposal facility.

### **What if I Want to Burn the Woody Debris?**

Controlled burning of clean, woody debris from construction, demolition, or land clearing projects is allowed in most areas of Alaska, but it needs to be conducted in a manner that doesn't create a nuisance or become a health hazard to local residents. “Clean woody debris” means wood that has not been treated with a paint containing cadmium or lead, or with a weatherizing preservative (such as pentachlorophenol or creosote).

It is important to note that burning is not considered to be complete disposal for construction and demolition waste because the ash and unburned debris must be disposed at a permitted landfill. You may also be required to test the ash and debris in order to verify that it is non-hazardous (see previous section for hazardous waste management).





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Ash from the burning of land clearing waste is not a solid waste and is therefore not required to go to a landfill. However, if you are burning greater than 40 acres of land clearing debris, or if black smoke will be produced, you will need a permit from ADEC's Air Quality Program. Some areas in Alaska require coordination with and permits from the local authorities. For instance, if your project is located in Fairbanks, Anchorage, Ketchikan, Homer, or Juneau, you need to contact local government authorities for approval. In some areas, the Alaska Department of Natural Resources, Division of Forestry may also require a burn permit. It is always wise to contact the local fire department to let them know you will be burning in the area.

To learn more about burning woody debris in your project area, please contact the ADEC Air Quality Program at: Interior 907-451-2114 or South Central and Southeast 907-269-6847. Or visit their website at <http://www.dec.state.ak.us/air/ob.htm>.

## How Do I Dispose of Non-Hazardous Waste?

If the waste you generate is not an EPA-regulated hazardous waste and is not exempt from state permit requirements (see next section), you must dispose of it at a permitted solid waste landfill. This may be an existing facility or a landfill specifically permitted for your project. A solid waste permit ensures that waste is disposed at a suitable location and in a way that will minimize the likelihood of pollution or associated health problems. If you plan to take waste to a permitted facility, you should contact them directly. If you want to permit a project-specific landfill, contact the nearest ADEC Solid Waste Program office regarding whether you will need an inert waste landfill permit or an asbestos landfill permit. Program staff will discuss your situation with you and help you determine which option is best for the project. The permit application review and public notice process will begin after a completed application and the required fee is received.

Another option that may apply to your project is obtaining an authorization for a one-time disposal of either inert or asbestos waste. These authorizations come with strict limitations on the amount of waste allowed in the one-time disposal so not all projects will qualify for these. ADEC provides two types of one-time authorizations for remote construction and demolition projects:

- **Authorization for one-time disposal of asbestos-containing waste.** This authorization allows the disposal of up to 250 cubic yards of RACM and non-RACM waste that is generated on the project site. This authorization pertains only to projects in locations that do not have year-round road access to the national highway system and are more than 50 miles from a permitted landfill. If your situation does not fit these conditions, you will need to apply for an asbestos waste monofill permit. You should also contact EPA to determine if any federal regulations will apply to the project.





- Authorization for one-time disposal of inert waste.** This authorization allows the one-time disposal of up to 1,000 cubic yards of building debris and other inert wastes, but does not include asbestos waste or non-salvageable scrap metal debris. This authorization may only be used for disposal of wastes in locations that are 100 miles from the nearest permitted landfill that can be reasonably accessed or if all reasonably-accessed landfills within 100 miles refuse to accept the waste. If your situation does not fit these conditions, you will need to apply for an inert waste monofill permit.

## What Wastes Can Be Disposed Without an ADEC Solid Waste Permit?

Most building construction and demolition debris is considered “low risk,” which means that it has little or no potential to cause pollution problems. Some wastes such as concrete, brick, and mortar are considered “very low risk” and are usually not regulated. This “exempt” waste does not need to go to a permitted landfill, as long as it is not mixed with other wastes. Examples of exempt wastes that you might encounter during demolition, renovation, or construction projects include:

- Land clearing waste, including excavated dirt, rock soil, butt ends, limbs, stumps, or other foliage;
- Portland cement type concrete and associated steel rebar that can’t be easily removed;
- Crushed glass except for television tubes, fluorescent light tubes, or computer monitors;
- Crushed asphalt pavement used in:
  - A building pad or parking area as road base or pavement; or
  - As a material to construct a containment berm for a tank farm

Contact the ADEC Solid Waste Program for more about different disposal options and exempt waste.

<b>Contact Information</b>	
<u>Asbestos</u> EPA, Alaska Operations Office 907-271-3688 or 800-781-0983 EPA, Seattle 206-553-4226	<u>Alaska Occupational Safety and Health (AKOSH)</u> Anchorage: 907-269-4940 or 800-770-4940
<u>Hazardous Waste, Recycling</u> EPA, Alaska Operations Office 907-271-6329 or 800-781-0983	<u>Burning, ADEC Air Quality Program</u> Interior: 907-451-2114 South Central & Southeast: 907-269-6847
<u>Lead Paint &amp; Refrigeration</u> EPA, Seattle 206-553-4226	<u>ADEC Solid Waste Program</u> Anchorage: 907-269-7802 Fairbanks: 907-451-2108 Juneau: 907-465-5318

