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# FACT SHEET

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## PRESSURE-TREATED WOOD MANAGEMENT

### What Is Pressure-Treated Wood?

The American Wood Preserver's Institute describes pressure treatment as forcing chemical preservatives deep into the wood's cellular structure in a closed cylinder under pressure.

Pressure treatment creates a chemical barrier against termites and decay for long periods of time, and gives treated wood its light green color. Several treated wood manufacturers on the mainland guarantee their treated wood products to resist decay and termite attack for 40 years or longer.

The preservatives used in the pressure treatment process also act as pesticides, and fall into three broad categories: water-borne, creosote, and oil-borne preservatives.

**Water-borne preservatives** The most common water-borne preservatives used to treat wood include *Chromated Copper Arsenate (CCA)*, *Ammoniacal Copper Quat (ACQ)*, *Ammoniacal Copper Zinc Arsenate (ACZA)*, as well as the less-toxic, inorganic borate compounds. Wood treated with water-borne preservatives is used in a variety of indoor and outdoor residential, commercial and industrial products and applications. For example, water-borne preservatives are used to construct residential decking and walkways, fences, gazebos, docks, playground equipment, highway noise barriers, utility poles and retaining walls.

**Creosote-treated wood** Wood containing creosote is used mainly for timbers in bridges, railroad tracks, fences, and docks. Coal tar creosote is widely used to preserve wood in the United States.

**Oil-borne preservatives** Common varieties of oil-borne preservatives include pentachlorophenol, or "penta," and copper naphthenate. "Penta" is the most widely used oil-borne preservative. Penta is still used in industry to preserve power line poles, railroad ties, cross arms, and fence posts. It is no longer found in wood preserving solutions or insecticides and herbicides that are bought for home and garden use.

To prevent treated wood from causing adverse health and environmental impacts, it is necessary to select, use and dispose of treated wood wastes properly.

### State of Hawaii Law

Because treated wood comes from construction industry activities, waste treated lumber is considered "construction & demolition" (C&D) waste. Chapter 11-58.1, HAR defines C&D waste as solid, largely inert waste, resulting from the demolition or razing of buildings, of roads, or other structures, such as concrete, brick, bituminous concrete, wood, and masonry, composition roofing, and roofing paper, steel, plaster, and minor amounts of other metals such as copper.

**It is illegal to discard, dispose of, deposit or dump waste treated wood anywhere on land, streams, or coastal waters, except at landfills permitted by the Department of Health.**

Illegal dumps are created when uncaring people want to avoid both tip fees, and the time and attention needed to dispose of waste properly. For more information on illegal dumping, ask for or download a copy of the

Fact Sheet entitled, How to Prevent Illegal Dumping in Your Community.

**Do NOT recycle treated wood into fill material.** The wood is considered organic material by the Department of Health, and therefore is prohibited as fill material. HRS Chapter 342H defines “inert fill material” as “earth, soil, rocks, rock-like material such as cured asphalt, brick, and clean concrete less than eight inches in diameter, except as specified by a licensed soils engineer with no exposed steel reinforcing rod. *The fill material shall not contain vegetation or organic material, or other solid waste.*”

The improper use of waste treated wood may impact human health and the environment, and subject responsible parties to penalties and liabilities allowable under state solid waste regulations, and/or county grading ordinances.

## Problems from Pressure-Treated Wood

The majority of wastes found in open dump sites come from commercial construction and demolition activities. Several human health and environmental concerns arise from the improper use of waste treated wood, either by burning it, or by grinding it for direct mixture with soil as a soil amendment.

- C **Pressure-treated wood is preserved with pesticides containing inorganic arsenic, creosote, and penta.** Exposure to either inorganic arsenic, creosote or penta may present certain hazards. Therefore, precautions must be taken when handling or determining where to use or dispose the treated wood.

**NOTE: Arsenic-treated lumber that is used for compost or mulch creates human health risks.** Treated wood that is ground for use as mulch or in compost significantly exceeds cancer-risk action guidelines set by the Environmental Protection Agency Region IX, for exposures to both industrial soil and residential soil. Therefore, use of arsenic-treated lumber in compost or mulch is not allowed.

- C **Burning pressure-treated wood may release toxic gases** from the CCA or ACZA preservatives used to treat the wood, and create unnecessary exposure for neighboring businesses and residents to these fumes. Burning treated wood will also significantly increase the concentration of toxic substances in the ash. The cost to dispose of the ash may also increase significantly, because of the need to transport the ash to hazardous waste landfills on the mainland. Landfills in Hawaii do not accept incinerator ash that meets the definition of hazardous waste.
- C **Pressure-treated wood can decompose.** If illegally processed for use as fill material, the waste wood may lead to settlement of the soil surface and create unstable conditions for structural foundations and future site development. Unlike the wood itself, the treatment chemicals within the wood do NOT degrade, but persist in the environment. Only landfills permitted by the Department of Health may receive treated wood.

The Department regulates landfills within the state to ensure that discarded treated wood is properly buried and sealed from exposure to rain, weather, scavenging, or other prohibited acts.

## How to Manage Waste Pressure-Treated Wood

To protect human health and the environment, waste management options for residents, contractors, and design professionals in Hawaii are limited to the following:

- < **Dispose** at permitted landfills on your island. Until more environmentally-friendly recycling opportunities for treated wood are developed, **disposal** remains the most environmentally-responsible method for treated wood in Hawaii.

**Do NOT burn** treated wood on site, in fireplaces, or in wood stoves. Large commercial volumes of CCA, ACZA, creosote-treated wood or pentachlorophenol-treated wood waste are not accepted for incineration in Hawaii.

**Do NOT recycle** treated wood for use as fill material, or by grinding it and applying it to soil as a soil amendment, as compost or as mulch.

Contact the landfill to be sure of their disposal requirements. Contact the Office of Solid Waste Management at (808) 586-4240 for a current listing of permitted landfills, or:

- < **Reuse** treated lumber scraps according to its intended end use. When you use treated wood, it is helpful to consider: Will it be used indoors or outdoors? Will it come into direct contact with people or animals? Will it come into contact with a drinking water source, bodies of water such as streams, or with ground water? Is there a less toxic, or nontoxic alternative to the use of treated wood?
  - < **Save** large, new treated wood scraps generated in new construction projects for reuse on a future project, as long as it still meets building design requirements; or
  - < **Keep these scraps separate** from other C&D waste, and from weather. (NOTE: Treated lumber that does not meet design requirements for new construction projects **MUST** be disposed at landfills permitted by the Department of Health);
  - < **Reuse small or warped pieces of dimensional lumber** as blocking, bracing, shims, back framing, or form stakes, if allowed by design requirements. Store these pieces in a central cutting and storage area.
  - < **Follow general use and handling guidelines** set by the U.S. Environmental Protection Agency and the wood-treating industry. These guidelines are available as *Consumer Information Sheets* and may be available from your lumber supplier. Some of these federal guidelines are:
    - C Do not use any type of treated wood where the wood would come into direct or indirect contact with drinking water supplies. (Incidental contact, such as with docks or bridges, is acceptable under the federal guidelines).
    - C Penta- and creosote-treated wood are not recommended for structural uses inside homes, on decks, in playground equipment, or in areas where wood will come in contact with drinking water for domestic animals and livestock. Wherever possible, consider alternatives to treated wood.
    - C Do not use CCA, ACZA, penta- or creosote-treated wood in circumstances where the preservative may come into contact with human or animal food, with beehives, or for cutting boards or countertops.
    - C Handle treated wood safely by cutting it outdoors. Wear a dust mask, gloves and safety glasses, and use only treated wood that is free of visible residue. After working with treated wood, wash clothing and areas of exposed skin thoroughly.
    - C Use the smallest amount of treated wood necessary, and make as few cuts as necessary to reduce the amount of wood waste.

Best management practices and checklists addressing how contractors and design professionals may reduce, reuse, recycle or dispose of construction wastes may be found in [A Contractor's Waste Management Guide](#), published by DBEDT.

## **Use Alternatives to Pressure-Treated Wood**

The Department of Health encourages the use of lumber products that are of lower toxicity than pressure-treated products, wherever appropriate. The use of less-toxic substitutes will also help prevent future waste disposal concerns with treated wood.

Several treated lumber substitutes sold in Hawaii are becoming more popular: wood with borate preservatives, light-grade structural steel, and recycled plastic lumber products.

For further information, contact the Department of Health, Office of Solid Waste Management, 919 Ala Moana Boulevard, Room 212, Honolulu, Hawaii 96814. Phone: (808) 586-4240. Fax: (808) 586-7509.

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