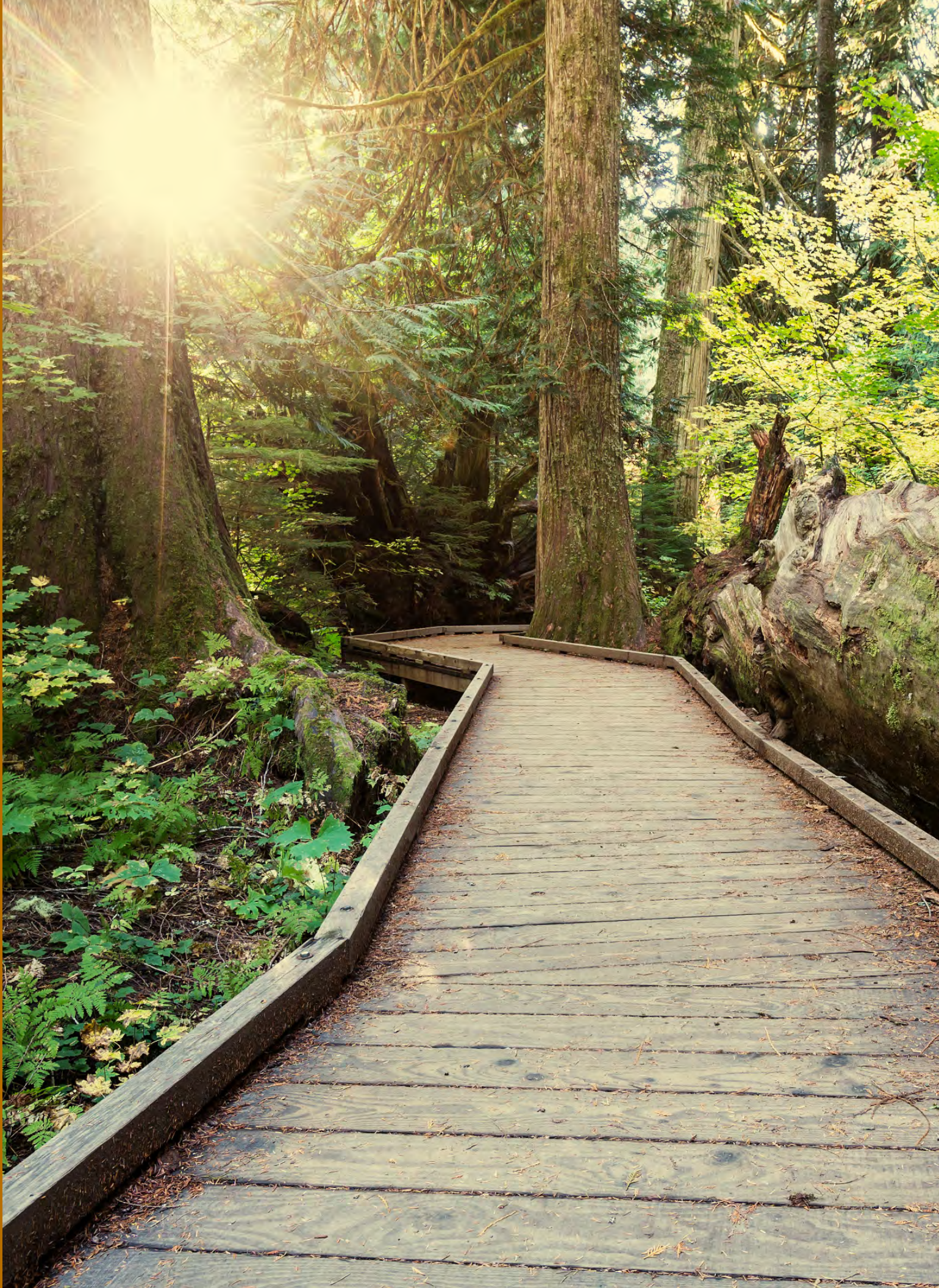




PRESERVED WOOD:  
*Wood that lasts*

PRESERVATIVE-TREATED WESTERN WOOD  
*for Commercial, Industrial, Marine & Residential Construction*





## Preserved Western Wood

Wood is a remarkable building material that is versatile, strong and environmentally-friendly. As a natural material, wood can be attacked by insects, decay fungi and other organisms that seek to break down the wood fiber. Pressure-treating, which infuses preservatives deep into the wood fiber, can protect the wood from these threats.

Wood that has been preservative-treated is long-lasting and its effective service life can reach 50 years or more. Preserved wood comes from sustainably-managed forests and help extend our wood resources. New trees can grow over time to become the source for new products to replace the preserved wood at the end of its useful life.

## Applications for Preserved Wood

Preservative-treated wood provides long-lasting durability where structural or decorative wood members are subject to potential attack from insects or decay fungi. There are many levels of protection available, including those which can protect wood that is buried or in contact with the ground, submerged or in contact with water, or exposed to conditions of constant wetting and drying.

The American Wood Protection Association (AWPA) defines “Use Categories” to provide a simple way of selecting the proper preserved wood product. These categories range from UC 1 and 2 for wood used in interior applications, to UC5A, 5B or 5C for the most demanding application of continuous salt water exposure.

All preserved wood products can be placed in one of the five categories. The amount of preservative in the product, or the retention, and depth of penetration of the preservative in the wood are guided by these categories.



## Aquatic Installations

Experience has shown that preserved wood is one of the best materials for construction in and around aquatic environments. It is resilient enough to withstand battering by the ocean and ships, yet naturally resistant to the destructive forces of salt water. Wood doesn't rust or spall and is significantly less affected by corrosion than other materials.

With its additional benefits of protection against decay fungi and local wood-destroying marine organisms, properly treated wood assures safe and long lasting performance in both fresh and saltwater installations.

WWPI Members are committed to the protection of water resources and the ecological diversity supported by lakes, streams, estuaries, bays and wetlands. This commitment is reflected in the development of Best Management Practices, or BMPs.

BMPs assure products are manufactured in a way that minimizes any potential migration of preservatives into the environment that can have adverse impacts on ecological systems. These guidelines were developed through a consensus process and are based on the core philosophy of minimizing chemical use.





## Commercial & Industrial Applications

- Retaining walls
- Sound barriers
- Vehicular bridges
- Railway ties & trestles
- Foundation pilings
- Foundation sill plates
- Poles & columns
- Highway construction
- Highway safety barriers
- Sign posts

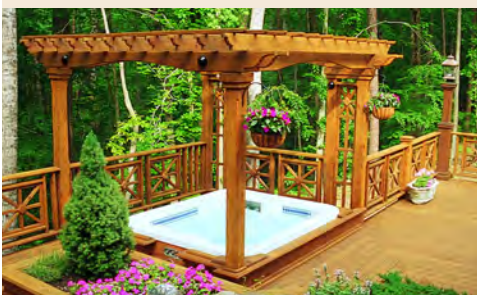
- Permanent Wood Foundations
- Solid & laminated beams exposed to weather
- Sidings
- Trim
- Exterior decks & railings
- Agricultural fencing, posts and rails
- Docks, wharves & piers, bulkheads, dolphins, wing walls & fenders



## Parks & Recreational Applications

- Pedestrian bridges
- Gazebos
- Observation towers
- Outdoor amphitheaters
- Bleachers & benches
- Marinas
- Bulkheads
- Light standards
- Boardwalks

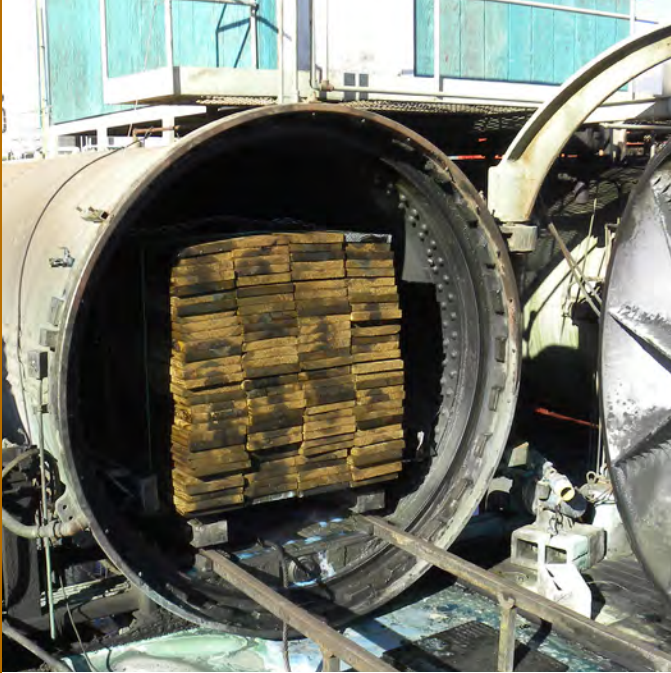
- Steps & stairways
- Railings
- Retaining walls
- Landscape structures
- Boat houses



## Residential Applications

- Outdoor decks
- Deck framing & railings
- Landscaping & garden structures
- Retaining walls
- Raised flower & vegetable beds
- Arbors
- Gazebos
- Greenhouse frames
- Sill plates

- Siding & exterior trim
- Permanent Wood Foundations
- Exterior stairways
- Interior framing
- Storage sheds
- Planter boxes
- Fences
- Underlayment for wet floors
- Carports



## Preserved Wood Standards

Preserved wood products made by WWPI Members are produced in accordance with AWPA standards. During the pressure-treatment process, wood products are placed in a closed cylinder, or retort, which is filled with preservatives. Pressure is applied inside the retort, infusing preservatives into the wood fiber to give it lasting protection.

In the Western United States, the most common species that are preservative-treated are Douglas fir and Hem-Fir (a combination of Western Hemlock and several of the true firs). Other treated products are available in Ponderosa and Lodgepole pines.

Douglas fir and Hem-Fir products treated for ground contact are incised with small slits made on the surface of the wood prior to treating. This creates paths for the preservative to penetrate deeply into the dense cell structure of these woods.

AWPA standards define the minimum amount of preservative, or retention, and the depth of penetration for wood products depending on the intended use. For example, wood used in contact with the ground or in a marine environment will have higher preservative retention and penetration requirements than above ground-treated used as railings or deck boards.

## Quality Assurance

The American Lumber Standard Committee (ALSC) is responsible for the oversight and accreditation of third party inspection agencies for preservative-treated wood. To meet U.S. building codes, preserved wood must be identified by the quality mark of an accredited ALSC inspection agency.

Currently, five agencies in the western U.S. are authorized under the ALSC Treated Wood Program to inspect treated wood. To easily find their mark, look for the CheckMark™ in the quality mark, stamp or end tag on preserved wood products.



## Preservatives

There are two types of preservatives available: *waterborne* and *oil-type*. Waterborne preservatives are commonly available in the retail marketplace. Oil-type preservatives are most often used in commercial/ industrial applications.

The most common waterborne preservatives include ACQ (*Ammoniacal Copper Quat*), ACZA (*Ammoniacal Copper Zinc Arsenate*), CCA (*Chromated Copper Arsenate*), CA (*Copper Azole*) and SBX-DOT (*Boron*). Carbon-based preservatives such as PTI and EL2 are also available.

As the name notes, oil-type preservatives use oil to carry the preservatives into the wood. They are suited for demanding exposures where the maximum protection is needed. Oil-type preservatives are Copper Naphthenate, Creosote, Pentachlorophenol and IPBC.

## Environmental Aspects

All preservatives used to make American preserved wood products have been approved by the U.S. Environmental Protection Agency (EPA). The standards for safety that must be met to receive EPA approval are exceedingly high. The research required for these preservatives must show they can be used without causing unreasonable adverse effects to human health or the environment.

Recognized international life cycle assessments show preservative-treated wood has less of an impact on the environment than alternative materials. A number of studies, done according to ISO 14044 standards and peer reviewed, shown preserved wood has less energy and resource use, less fossil fuel use and generates lower environmental impacts.

## Specifying Products

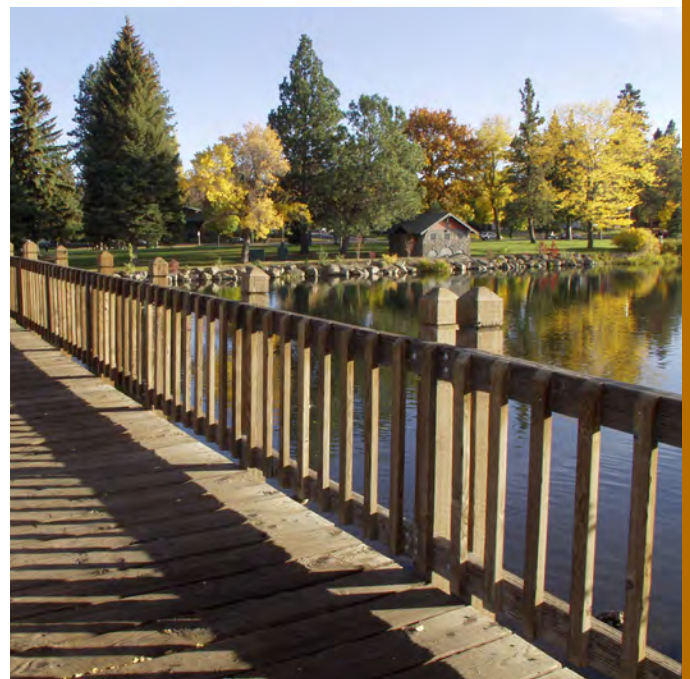
While treating standards and related building codes vary by country, region and even from city to city, the Institute may be contacted at any time to answer questions and help direct specifiers and buyers to the most appropriate products for their intended applications.

## Safe Handling

Guidelines\* for safe handling of preserved wood are the same as those for untreated, natural wood. Follow these guidelines for handling preserved wood:

- Use gloves and wear a dust mask when sawing or cutting to avoid inhalation of sawdust;
- Wash clothing separately from other laundry;
- Wash exposed skin before eating or using tobacco products; and
- Do not burn treated wood scraps in open fires of any kind (generally wood may be disposed of as a non-hazardous waste).

*\*Comprehensive information on the safe handling of treated wood products and recommendations for on-site fabrication, job site care and storage, field treating application methods, protecting cut ends, site precautions and disposal are available from WWPI at [www.preservedwood.org](http://www.preservedwood.org).*



The **Western Wood Preservers Institute** (WWPI) represents the preservative-treated wood industry in western North America. The Institute provides information, conducts research and supports programs to assure the proper, safe and environmentally appropriate use of preserved wood.

Since 1947, the Institute has supported engineers, architects, specifiers, builders, government agencies, port authorities, exporters, importers and others in properly selecting and using preserved wood products.



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