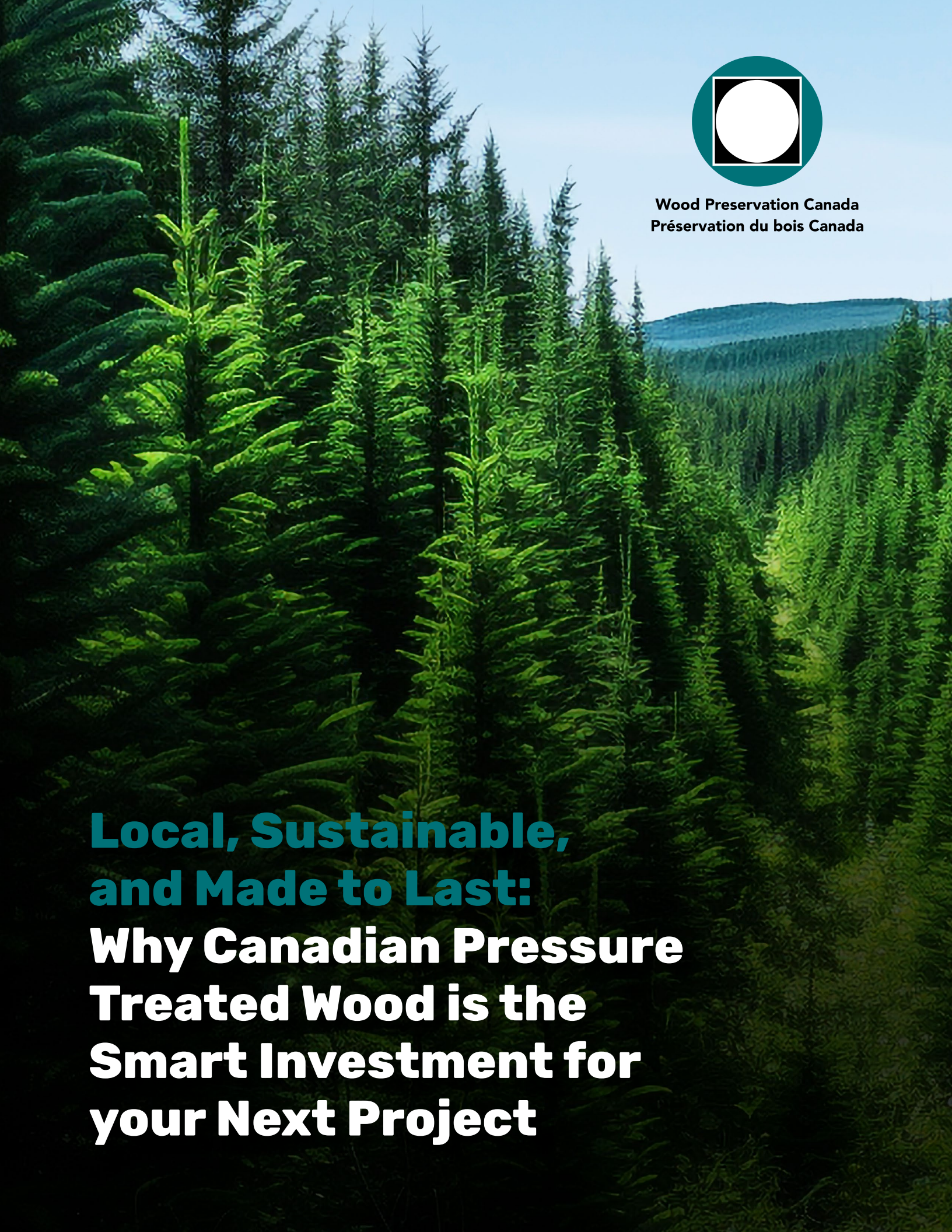

Wood Preservation Canada
Préservation du bois Canada

Local, Sustainable, and Made to Last:

Why Canadian Pressure Treated Wood is the Smart Investment for your Next Project

Introduction to Pressure Treated Wood

Canada's roots in forestry and wood product manufacturing run deep. It is an industry that helped build the nation, literally and figuratively, and to this day it contributes significantly to the economic health of the country and plays a vital role in the success and sustainability of the built environment.

In addition to familiar residential and agricultural applications, Canadians also rely on pressure treated wood to keep goods and people moving — through railway ties for trains, bridges for roads, and marine pilings for water transport — and to deliver essential services such as electricity and telecommunications via utility poles.

Widely used in outdoor construction, critical infrastructure, and industrial applications, this document discusses the benefits of using pressure treated wood, emphasizing Canadian production, environmental impact, and long-term performance across diverse applications.

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Key Benefits

Local Expertise and Better Economic Outcomes

Investing in locally or regionally manufactured pressure treated wood is a smart, strategic choice. Farmers, utilities, and general contractors have relied on pressure treated wood for generations in applications such as fencing, utility poles, retaining walls, and structural supports. By choosing Canadian-made products, you ensure access to trusted materials, supported by local expertise and engineered to perform in Canada's diverse climates. Reducing reliance on imported materials also strengthens domestic supply chains, helping businesses avoid price fluctuations and supply disruptions.

Supporting regional pressure treated wood manufacturers delivers benefits beyond quality and service — it drives local job creation, sustains businesses, and fuels economic growth. Every dollar spent on local products ripples through the economy, supporting industries from forestry and milling to treatment and transportation. Locally owned manufacturers often demonstrate strong corporate citizenship by investing in their communities through job creation, sponsorships, charitable giving, and workforce development programs. Choosing renewable products such as wood over more carbon-intensive materials also reduces environmental impacts by lowering transportation emissions and promoting sustainable forestry practices.

THE CANADIAN ADVANTAGE

Choosing locally manufactured pressure treated wood products offers significant economic advantages, starting with the support of sustainably sourced materials. When wood is harvested and processed close to home, it reduces transportation costs and the associated carbon footprint while ensuring compliance with responsible forestry practices. This strengthens regional supply chains, providing builders and consumers with reliable access to high-quality materials at competitive prices. Additionally, local production helps stabilize market prices by reducing reliance on volatile global supply chains, keeping construction costs more predictable and manageable.

Beyond material benefits, investing in local manufacturing strengthens communities by creating and sustaining jobs in forest management, harvesting, transportation, and wood treatment. These businesses provide skilled employment opportunities and generate tax revenue that supports schools, infrastructure, and essential services. Local manufacturers also tend to reinvest in their communities through sponsorships, charitable contributions, and apprenticeships. By choosing Canadian-made pressure treated wood products, consumers and businesses contribute to a resilient, self-sustaining economy, reinforcing the economic well-being of their region while ensuring access to durable building materials that last.

Certified Products

Canadian producers are trusted for their compliance with rigorous certification programs for environmental, health, and safety requirements.

The Canadian Wood Preservation Certification Authority Program (CWPCA) is unique to Canada, and ensures that all wood treatment plants across the country adhere to strict certification standards, guaranteeing consistency, and compliance with best practices in wood preservation operations and procedures. The CWPCA certification underscores Canada's commitment to responsible wood treatment and environmental stewardship.

Low-Carbon Materials

A key advantage of Canadian pressure treated wood is its sustainability. Canada's forestry industry is one of the most carefully regulated in the world, with policies emphasizing sustainable harvesting, reforestation, and biodiversity conservation.

Canada's forest laws are among the strictest in the world. They protect our forests and ensure that sustainable forest management practices are followed across the country. This means that consumers can be confident that the wood products they buy from Canadian sources were obtained legally and harvested under a system of sustainable forest management[1].

GIVING BACK – PRINCETON WOOD PRESERVERS COMPANY PROFILE

Princeton Wood Preservers (PWP) is a family-owned and operated company with nearly 50 years of experience as a fully integrated mill producing pressure treated roundwood products, including fence posts, grapevine stakes, tree stakes, trellising, poles, and doweled post-and-rail fencing.

Located in Princeton, BC, the company has 37 enthusiastic employees and is the community's third largest industrial employer. PWP is a steadfast supporter of local service groups, schools, charitable organizations and youth sporting events.

***Elizabeth Marion**, Owner and President of Princeton Wood Preservers Ltd. with her son **Bill Everitt**, General Manager*

"We have been purchasing wooden poles for our blueberry and raspberry farm from Princeton Wood Preservers for many years now. Their product has exceptional quality and lasts significantly longer when comparing their poles to other suppliers. Other suppliers' poles tend to snap when we use our post pounder to dig the poles into the ground. We have never had this issue with PWP. In addition to the great quality of their poles, their customer service is far superior to other suppliers as well. We have built a great relationship with PWP and we only plan to purchase our poles from them going forward."

Arvin Neger
Nature's Touch

Trees play a key role in the carbon cycle by absorbing carbon dioxide (CO_2) from the atmosphere and using the process of photosynthesis to store the carbon as wood fibre, while releasing oxygen back into the air[2]. When trees are sustainably harvested and find new life in wood products, this carbon is effectively removed from the carbon cycle and remains stored in the wood for the life of the product instead of being released back into the environment. New trees are then planted to replace the harvested ones, continuing the cycle of carbon absorption. Unlike concrete and steel, which produce large amounts of CO_2 during extraction and manufacturing, wood products have a much lower carbon footprint and can even act as carbon sinks, helping to reduce greenhouse gases. This makes sustainably managed forests and wood products an important part of fighting climate change[5,6].

The preservation process extends the lifespan of lumber by providing protection against decay, insects, and weathering, thereby enhancing its durability, reducing the frequency of replacement, and minimizing waste. In this way, treated wood helps conserve natural resources by decreasing the demand for newly harvested lumber. This aligns with Canada's commitment to sustainable resource management and climate change mitigation.

Furthermore, pressure treated wood is compatible with green building initiatives, including Leadership in Energy and Environmental Design (LEED) certification. Many treatment facilities incorporate best practices for reducing waste and emissions, further enhancing the environmental credentials of pressure treated wood products.

WEST FRASER: A STRONG COMMUNITY PARTNER

Through its Cochrane and Sundre operations, West Fraser demonstrates what it means to be a good neighbour. The company invests approximately $200,000 annually in local initiatives, with a strong focus on youth education. From hosting mill tours for students and speaking about sustainability in schools, to supporting programs like Building Futures and Women in Outdoor Careers, West Fraser is helping build brighter futures – while also giving back through donations, local events, and community sponsorships.

Cochrane Building Futures

Sundre Women in Outdoor Careers

Sundre Visit to River Valley School

Durability and Performance in Canadian Climates

One of the most compelling reasons for choosing pressure treated wood in Canada is its ability to withstand diverse and extreme climate conditions. Canadian manufacturers understand the unique demands of our sectors. Their products are designed to withstand our climate, ensuring you get reliable, high-performance materials.

From the harsh winters of the Prairies to the wet coastal environments of British Columbia, Canadian pressure treated wood products are engineered to resist fungal decay and pest infestations. Pressure treated wood is commonly used for residential, agricultural, and industrial/commercial applications, demonstrating its resilience in challenging outdoor climates. Proper maintenance further extends its lifespan, ensuring that it remains a reliable building material for decades.

Versatile Solutions

The versatility of pressure treated wood makes it a valuable material for many different industries. Homeowners and contractors use it extensively for decks, fences, pergolas, and retaining walls. In infrastructure, it plays a crucial role as utility poles, railway ties, and marine pilings. Agricultural and industrial applications include barns, bridges, support structures for crops, and outdoor storage structures.

The adaptability of pressure treated wood extends to customization, with different treatment levels available based on exposure conditions and load-bearing requirements. Consumers can select from different types

DECADES OF FIELD TESTING DEMONSTRATE THE LONGEVITY OF TREATED WOOD

For nearly a century, long-term field testing at the Petawawa Research Forest in Ontario has provided invaluable data on the durability of wood preservatives. Roundwood posts treated with creosote, copper naphthenate, pentachlorophenol, copper abietate, and chromated copper arsenate (CCA) have all demonstrated that with adequate preservative retention, all these systems can achieve service lives exceeding 50 years.

***Petawawa Research Forest**, Post Test Site, 2021[3].*

One striking finding is the exceptional performance of CCA-treated Jack Pine, having achieved a service life of 72 years (and counting). These treated posts exhibit strength comparable to steel, highlighting their robustness in structural applications requiring longevity, such as utility poles, fencing, and foundation supports[3].

Similar long-term field tests at the Harrison Experimental Forest in Mississippi, running since 1964, confirm that properly treated industrial wood posts – especially those treated with CCA – maintain durability even in extreme biodeterioration conditions.

These findings reinforce preservative-treated wood as a durable, cost-effective choice for critical infrastructure. By extending service life, these treatments reduce replacement needs, conserve forest resources, and enhance sustainability[4].

of preservative treatments, including those certified for direct contact with soil or water, further enhancing the wood's longevity in demanding applications.

More detailed information on the commercial preservatives registered for use in Canada is available on Wood Preservation Canada's website, woodpreservation.ca/en/non-residential-sitemap/registered-preservatives/.

Economic & Environmental Efficiency

Several studies have been conducted on specific product classes such as utility poles and railway crossties, comparing the treated wood option to alternative materials. A Life Cycle Assessment (LCA) comparing creosote-treated wood railway ties to concrete and plastic composite (P/C) ties found that wood is the most cost-effective choice over its life cycle, offering significant overall advantages[7]:

Lower Initial & Maintenance Costs Pressure treated wood costs less upfront and requires less material and labour for installation than concrete or P/C ties.

Long-Term Value Lower production and disposal costs make pressure treated wood more economical over time than concrete or P/C, which have higher manufacturing, adaptation, and end-of-life expenses.

Environmental Savings Wood ties use less fossil fuel and water during production, generate 5–6 times fewer greenhouse gas emissions, and can be recycled for energy, unlike concrete, which requires energy-intensive disposal.

Infrastructure Compatibility Wood ties integrate seamlessly into existing rail networks, while concrete requires infrastructure modifications that increase costs.

The assessment concluded that pressure treated wood crossties offer a lower-cost, lower-carbon option, and are more easily maintained when compared to concrete and plastic composites. Their proven durability, recyclability, and cost efficiency make them the most economically and environmentally responsible choice for long-term infrastructure investments.

Another Life Cycle Assessment comparing the environmental impact of chromated copper arsenate (CCA)-treated wooden utility poles and reinforced concrete poles used in electricity distribution networks reached similar conclusions, highlighting the comparatively lower costs of pressure treated poles over their life cycle[8].

Service Life and Replacement Costs Wood utility poles, when properly treated, can last longer than concrete poles. A longer service life means fewer replacements, reducing labour and material costs over time. In addition, they are readily available in large numbers, which is critical when it comes to restoring power and telecommunications services quickly after a natural disaster.

Material and Production Efficiency Concrete poles require significantly more raw materials, such as cement, steel reinforcement, and aggregates, which increases manufacturing and transportation costs. In contrast, wood poles, sourced from sustainably managed forests, involve less energy-intensive processing, making them more affordable to produce and transport.

End-of-Life and Recycling Considerations

Wood poles can be reused, repurposed, or converted into biomass energy, offsetting fossil fuel usage. Concrete poles, on the other hand, are difficult to recycle and require energy-intensive crushing and disposal, adding to their end-of-life costs. Wood utility poles have a comparatively lower overall cost over their life cycle due to their longer service life, lower material and production costs, and more sustainable end-of-life options.

Addressing Misperceptions

Despite its widespread use, pressure treated wood is sometimes misunderstood. Let's set the record straight on its safety, durability, environmental impact, performance, and value compared to alternative materials.

Safety: Rigorously Tested and Environmentally Approved

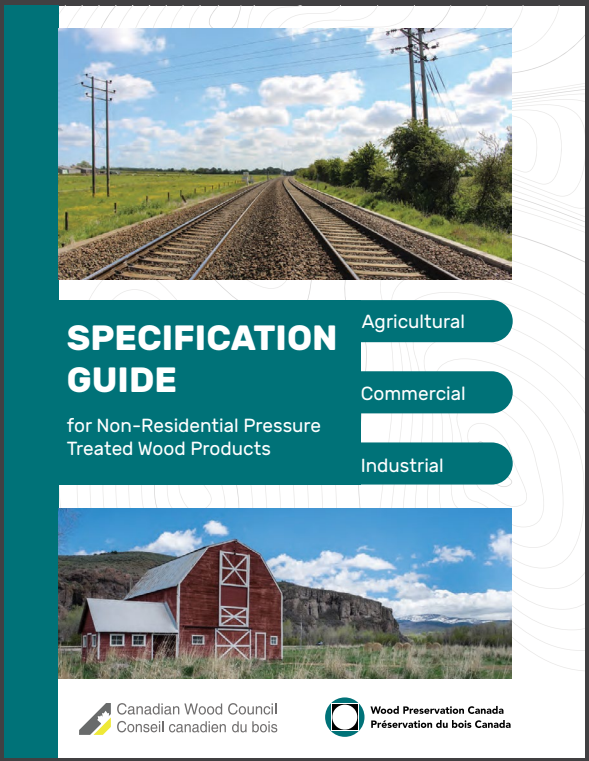
Pressure treated wood is manufactured under strict environmental and health regulations, using preservatives approved by regulatory agencies such as Health Canada's Pest Management Regulatory Agency (PMRA). Wood preservatives are carefully tested to ensure worker safety, environmental compatibility, and long-term product performance. Additionally, third-party certification programs like the Canadian Wood Preservation Certification Authority (CWPCA) enforce high safety and environmental stewardship standards across the industry.

Preservative stabilization, or fixation in CCA treated products, ensures the safety and stability of pressure treated wood products. Modern wood preservatives undergo chemical reactions that securely bind them within the wood fibres, minimizing leaching and making them safe for handling. While some may worry about exposure, treated wood can be handled

ADDITIONAL REFERENCE MATERIAL FROM WOOD PRESERVATION CANADA

Specification Guide for Non-Residential Pressure Treated Wood Products

This Specification Guide provides comprehensive information on pressure treated wood products for agricultural, commercial, and industrial applications. It outlines the benefits of pressure treatment, and details treatment processes, wood species selection, preservative types, and performance standards, referencing CSA O80 and National Building Code of Canada (NBC) requirements. The guide also covers quality control, environmental benefits, handling and safety precautions, and disposal guidelines. Designed for engineers, specifiers, and construction professionals, this resource ensures informed decision-making for durable, sustainable, and code-compliant wood applications.



Download a copy: woodpreservation.ca/wp-content/uploads/2022/10/WPC-SpecificationGuide.pdf

just as safely as raw wood using standard PPE: gloves to prevent splinters, a dust mask when cutting or sanding, and safety glasses for eye protection. These are the same precautions recommended for all wood products, reinforcing that pressure treated wood is a safe and reliable choice for construction and outdoor projects.

Durability: Built to Last

One of the biggest misconceptions is that pressure treated wood does not last when compared to competing materials. In reality, when properly treated and maintained, pressure treated wood products can remain in service for well over 50 years. Long-term studies, such as field tests conducted at the Petawawa Research Forest in Ontario and the Harrison Experimental Forest in Mississippi, have proven that CCA-treated wood and other preservative systems deliver exceptional durability in demanding environments. This longevity makes pressure treated wood a clear choice for a wide range of applications including utility poles, fences, marine pilings, railway ties, and other outdoor structures.

Environmental Impact: A Lower-Carbon Alternative

Compared to steel, concrete, and plastic composites, pressure treated wood has a smaller carbon footprint because it is sustainably sourced, requires less energy to produce, and stores carbon throughout its lifespan. Life Cycle Assessments (LCA)[5] also demonstrate that wood uses significantly less fossil fuel and water during production and generates 5–6 times fewer greenhouse gas emissions than steel, concrete, or plastic alternatives. Furthermore, end-of-life options such as bioenergy conversion help minimize environmental impact, unlike other materials that are more likely to end up in landfills.

THE BIG PICTURE – WHY CANADIAN PRESSURE TREATED WOOD MATTERS

Canadian pressure treated wood is an essential material for a wide range of uses. It provides the strength and longevity needed for demanding applications while supporting Canada's economy and environmental goals. Here's why it stands out:

Local Economic Benefits Choosing Canadian-made pressure treated wood supports jobs, strengthens regional economies, and provides purchasers with a stable, cost-effective supply that is less vulnerable to global market fluctuations.

Proven Performance Engineered for long-term performance, pressure treated wood resists decay, withstands extreme weather, and has been proven to last for decades in real-world applications such as utility poles, fencing, and marine infrastructure.

Sustainable Sourced from sustainably managed Canadian forests, pressure treated wood is a renewable, responsible choice that also has a smaller carbon footprint than steel, concrete, and plastic composites. By storing carbon throughout its lifespan and requiring less energy-intensive production, it helps reduce overall environmental impact. Many of the copper-based wood preservatives manufactured today are made using recycled copper.

Trusted Industry Standards The CSA 080 Standard governs the pressure treated wood industry and the Canadian Wood Preservation Certification Authority (CWPCA), ensuring quality, safety, and environmental responsibility.

Performance and Practicality: Strong, Adaptable, Easy to Work With

Compared to concrete and steel, pressure treated wood is lightweight, adaptable, and easy to install with conventional tools – key advantages that reduce labour costs and construction time. It also absorbs impact better than rigid materials, making it a preferred choice for infrastructure like railway ties, where flexibility and shock absorption are critical. Additionally, locally sourced wood products provide greater supply chain reliability compared to imported materials, offering a practical and cost-stable solution for builders and industries.

Cost vs. Value: The Smart Long-Term Investment

While steel, concrete, and composite materials claim to be more durable, they often have considerably higher upfront costs. Pressure treated wood offers a balance of affordability, durability, and sustainability. Studies on infrastructure projects show that wood consistently delivers lower life cycle costs due to its lower manufacturing expenses, ease of installation, and long service life. When factoring in lower environmental impact, local economic benefits, and ease of disposal or repurposing, pressure treated wood stands out as a cost-effective, high-value choice for long-term applications.

A SATISFIED CUSTOMER

"As a longtime orchardist managing both my 75-acre home orchard and 1,258 acres of OSF orchards in Washington, I've relied exclusively on pressure treated wood posts from Princeton Wood Preservers for the past 15 years — and for good reason. Across 600 acres of shade and hail structures, I've used a variety of PWP posts, including 22-foot, 12-inch diameter posts capable of supporting over 6,000 pounds of cable and structure. Their strength and durability have been unmatched.

"When I took on lease orchards in 2010, I quickly saw that infrastructure upgrades were needed. I went with pressure treated wood posts from PWP because my original orchards with PWP posts have had zero trellis issues, even after 27 years. PWP has consistently delivered quality, longevity, and reliability with their wood products — something I wouldn't compromise on when it comes to the backbone of my orchard infrastructure."

Joel Carter
Orchard Operations Manager
Okanagan Specialty Fruits

Conclusion – A Call to Action

Canadian pressure treated wood delivers a powerful combination of local expertise, sustainability, and durability. With a responsible supply chain, strict environmental standards, and proven resilience in harsh climates and challenging conditions, pressure treated wood remains essential for projects across the country. Choosing Canadian-made pressure treated wood supports sustainable forestry, strengthens local economies, and ensures access to a reliable, long-lasting building material.

Farmers, homeowners, contractors, and utility providers can make a smart, ethical investment in their businesses and communities by choosing Canadian pressure treated wood products. In a time of volatile global markets, relying on locally sourced materials means greater price stability, supply chain resilience, and dependable local support. It's not just about securing materials for today – it's about ensuring a stable industry and reliable product availability for the future.

Unlike more carbon-intensive alternatives, pressure treated wood is a sustainable, renewable, low-carbon option that reduces environmental impact while delivering exceptional performance and durability. Investing in a proven, locally produced material helps de-risk projects, ensuring long-term reliability, predictable costs, and expert local service. The outcomes are clear: a thoughtful choice today not only achieves positive project outcomes in the short term but also leads to better environmental outcomes and other desirable long-term benefits.

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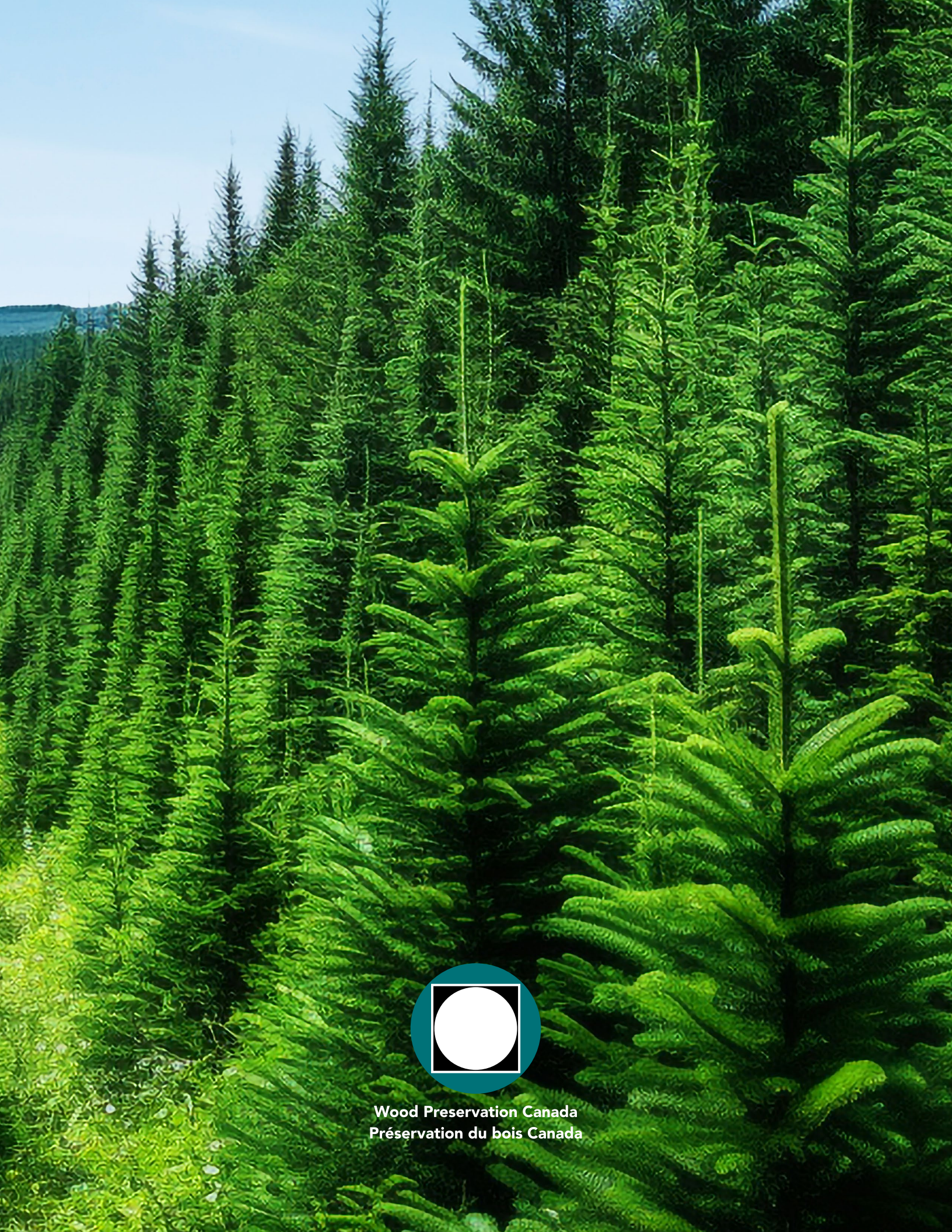

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