

Grizzly Wood Value Proposition

January 2023

www.AlaskaPlasticRecovery.com



Making Grizzly Wood™



Plastic Ocean Waste



Post Industrial Resin



Post Consumer Resin



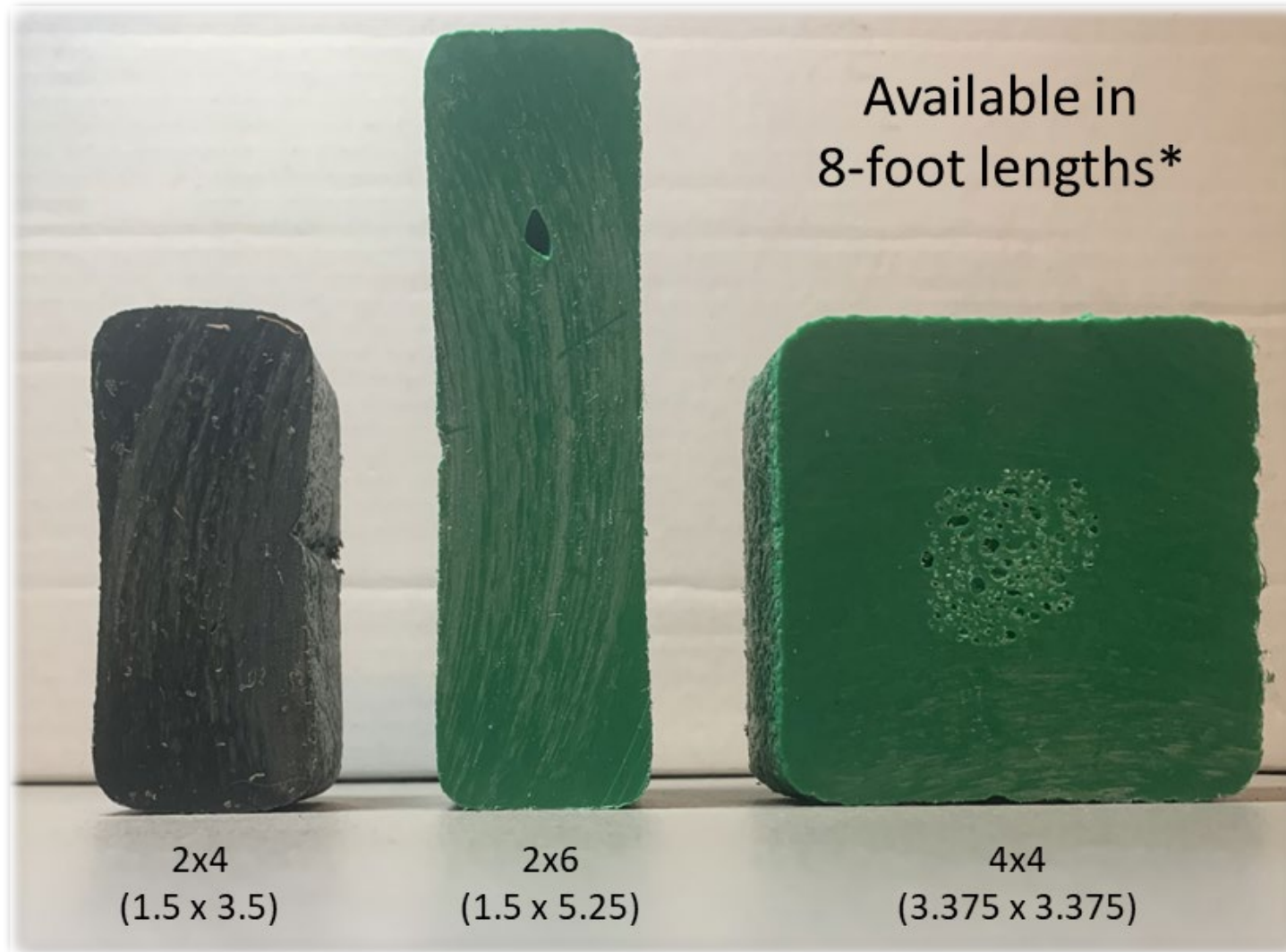
Sort, Shred, Extrude



Recycled Plastic Lumber



The Product – Grizzly Wood™



Priced at \$2/lb.

8-foot 2x4: \$30

8-foot 2x6: \$42

8-foot 4x4: \$62



*Color varies depending on material source




Retail Pricing Comparison



BestPLUS 4 in. x 4 in. x 8 ft. Black Recycled Plastic Lumber Timber Edging G-Grade (2 Per Box)
Model# BP547016451
★★★★☆ (11)
\$123⁰⁰ /box

\$1.98/lb



BestPLUS 2 in. x 6 in. x 8 ft. Black Recycled Plastic Edging Lumber G-Grade (4 Per Box)
Model# BP547013651
★★★★☆ (3)
\$191⁰⁰ /box

\$2.27/lb



BestPLUS 2 in. x 4 in. x 8 ft. Black Recycled Plastic Edging Lumber G-Grade (3 Per Box)
Model# BP547013451
★★★★☆ (4)
\$107⁰⁰ /box

\$2.38/lb

Grizzly Wood™ Applications



Decks, Boardwalks, and Railings



Retaining Walls



Fencing



Outdoor Furniture



Grizzly Wood™, Comparison, Decking

Advantages

- 100% recyclable (high LEED value)
- Grizzly Wood decking is resistant to rot, mildew, mold, insects and stains
- Never needs to be finished or refinished, sanded or sealed
- Extremely durable
- Very low-maintenance

Disadvantages

- More expensive than wood when NOT considering lifetime of product
- Can get very hot in sunny areas
- Can expand/contract, causing joints to loosen
- Requires screw fasteners during construction, making construction time a little slower



Grizzly Wood™, Comparison, Fencing

Advantages

- Does not need painting or staining (they come pre-colored, with a variety of colors available)
- Resists the elements (including intense sun, rain, snow, etc.)
- Does not warp, bend, or shrink (significantly) with temperature
- Does not rot with moisture
- Resistant to pests
- Easy to wash/clean
- It does not splinter; fasteners are not exposed

Disadvantages

- Initial price is higher than wood
- Less sturdy/strong than decorative steel or aluminum
- Harder to get custom styles and colors
- The homeowner still knows that it is not a “traditional” wood fence



Benefits of Grizzly Wood™

Rot-Resistant

Even treated timber rots over time, particularly when used in an outdoor environment; however, plastic lumber will last a lifetime without showing any signs of degradation.

Cost-Effective

Although Grizzly Wood may have a higher purchase price, when you figure the installation, replacement, disposal, and maintenance costs into the equation, you realize that recycled plastic lumber actually saves you good money over its lifetime. There have been several studies that have confirmed this premise, see later slides.



Benefits of Grizzly Wood™

Environmentally Friendly

Plastic lumber is made from high-quality, recycled secondary plastics that can help to reduce the strain on landfill. Plastic lumber can also be recycled when it is no longer required, so it will never need to end up in landfill. Using real timber of course means that trees need to be cut down. However, we know that trees play an extremely important part in reducing CO2 emissions and therefore chopping down trees in an unsustainable manner is harmful to our environment.

Moisture Resistance

Another major benefit of plastic lumber over its real wood counterpart is that it will not swell or shrink due to exposure to moisture. This is a common problem with real wood and can result in movement that may damage your garden feature. Moisture and sunlight exposure can also cause real wood to split and crack, which can cause an unsightly appearance and weaken the timber.



Benefits of Grizzly Wood™

Low Maintenance

Unlike real wood, plastic lumber never needs treating to keep it looking at its best. This is a particularly big advantage for those who have decking. Real wooden decks, particularly those made from softwood, typically need treatment every year to keep them looking in tip-top condition. With composite plastic, however, it's literally a case of lay it and leave it, as it will never need any form of treatment, making it extremely low maintenance. The low-maintenance nature of plastic lumber will save you time and energy, giving you more spare time to do the things you enjoy in life.



What is the Actual Cost of Grizzly Wood™?

$$\text{Life Time Ratio [LTR]} = \frac{\text{Life of recycled plastic lumber (Years)}}{\text{Life of wooden lumber (Years)}}$$

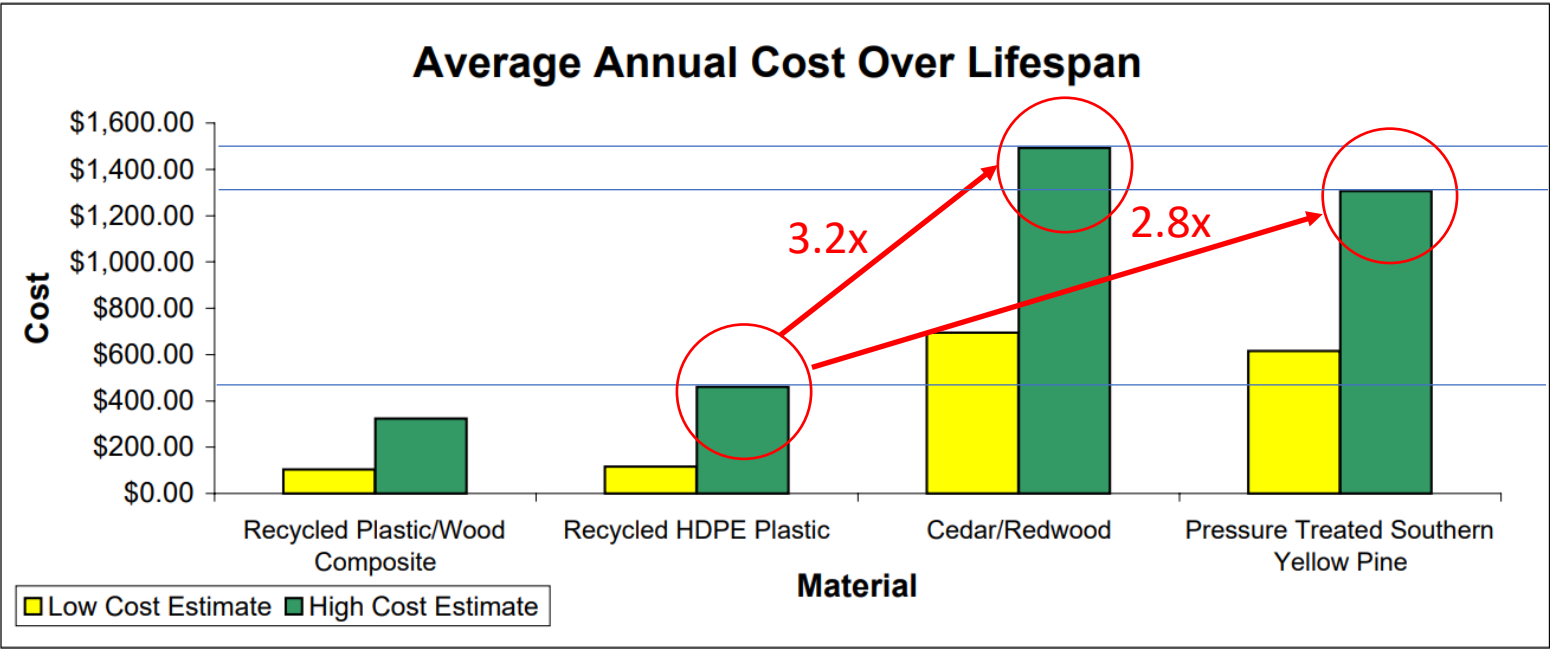
- Typical lifespan of wood lumber for decking is 10 to 15 years
- Lifespan for Grizzly Wood is 25 to 50 years
- Grizzly Wood LTR ranges from a low of (1.67 = 25/15) to a high of (5 = 50/10), with an expected LTR of 3, meaning it will last 3 times longer than traditional wood decking
- In high moisture environments, such as those in coastal Alaska, this is expected to be closer to the LTR of 5 (5x lifespan)



Grizzly Wood™, Cost Over Lifetime

In a study by the EPA, the cost of using Recycled Plastic Lumber was compared against traditional lumber products

This study found that traditional wood decking was three times more expensive than RPL over its lifespan

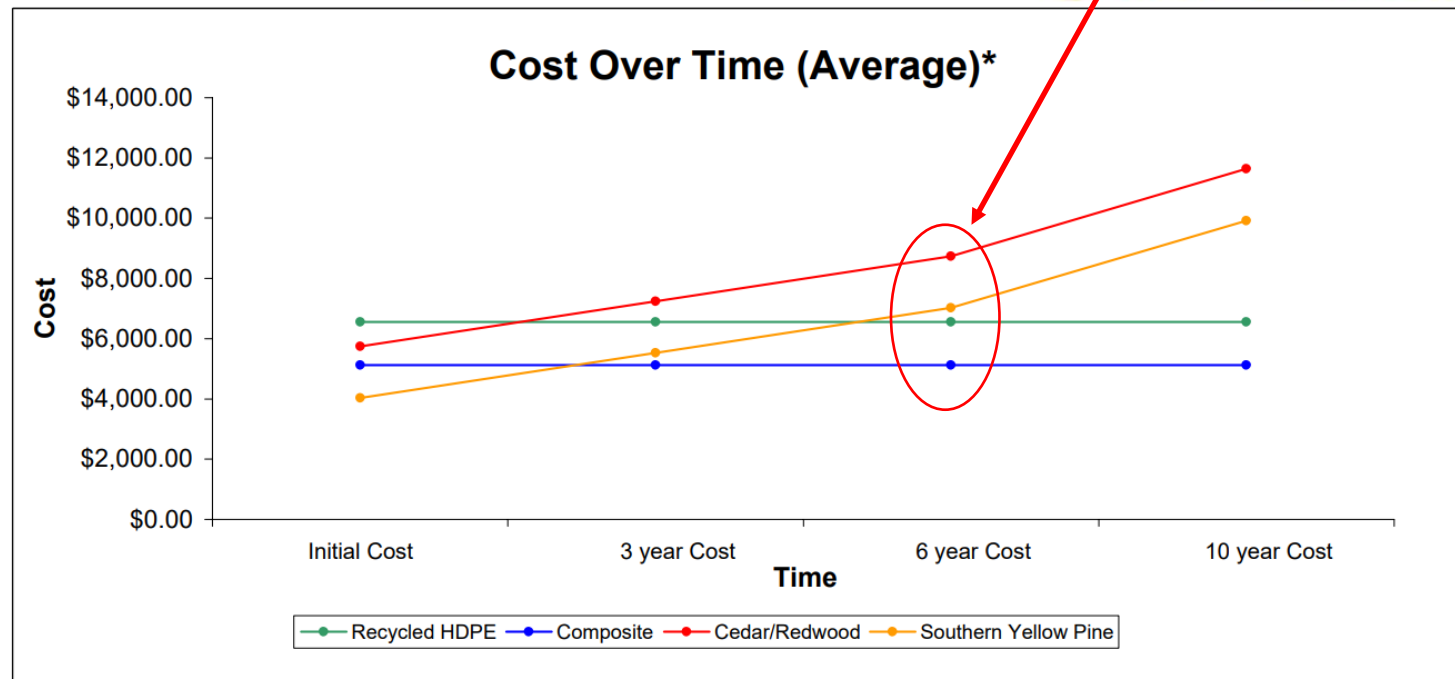


<https://archive.epa.gov/wastes/conservation/tools/greenscapes/web/pdf/decking.pdf>



Grizzly Wood™, Breakeven Cost vs. Wood

For most outdoor applications, such as decking, fencing, and outdoor furniture, the breakeven cost for Grizzly Wood is 6 years when compared with traditional wood materials



<https://archive.epa.gov/wastes/conservetools/greenscapes/web/pdf/decking.pdf>



Grizzly Wood™, Cost Comparison, Walkways

Typical Example

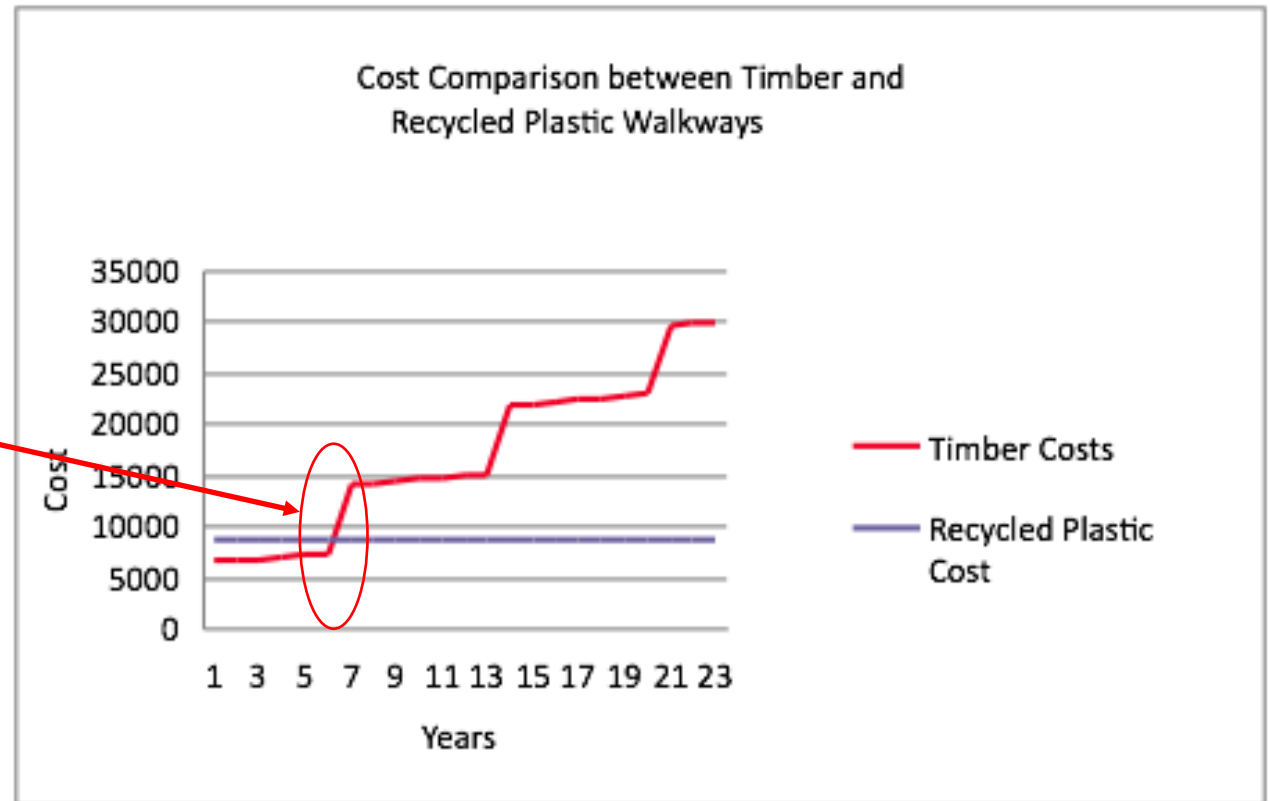
This example compares the whole life costs of Recycled Plastic to Wood in the construction of a walkway. These results equally apply anywhere that wood and recycled plastic would be permanently outdoors at the mercy of the elements, and even continuously immersed in water or exposed to wet conditions.

The Assumptions

Expect wood to be replaced approximately every 7 years. Maintenance on wood structures is generally required each year beginning after the 2nd year from initial installation. Inflationary figures are not calculated in this assessment.

Conclusions

Recycled plastic is higher initially, but the long-term, whole life costs are very significantly lower compared to treated wooden materials.



Additional Studies

Lynch, J. K., Nosker, T. J., Renfree, R. W., Krishnaswamy, P., & Francini, R. (2001). Weathering effects on mechanical properties of recycled HDPE based plastic lumber. *SPE-ANTEC technical papers*.

The results of the LCCA over a forty-year service life indicate that the cost of the wood structure is \$883 versus \$636 for RPL. It is important to note that the structure under consideration represents a small section of a larger boardwalk or platform and, therefore, the life cycle cost advantage for RPL would be significantly higher for a total structure.

Plastic Pallets, <https://www.trienda.com/industry-news/are-you-valuing-plastic-vs-wood-pallets-fairly>

Plastic may initially be [roughly three times more expensive](#) than wood, but they last at least 10-12 times longer. That yearly savings will flow straight to your bottom line. When plastic pallets do reach the end of their lifespan, they can be returned and recycled for credit toward replacements to replenish your pool.



For More Information

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