



The Baltimore Wood Project: Finding New Lives for Urban Wood and Rowhome Properties



Rowhome removal is enabling the creation of green community areas in Baltimore, including this one near McKean Avenue. Photo by USDA Forest Service.

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Creating Bright Spots in Underserved Communities

Change has come to a block in west Baltimore. Some locals call it the Easterwood/Sandtown Park and Playground; others call it the McKean Miracle.

The park and playground is located on McKean Avenue, on land that had been occupied by abandoned rowhomes and a local dumping ground. Today, it's a green, landscaped community space used for picnics, chess games, live performances, a farmers' market, and more. According to Lauren Marshall, who manages the USDA Forest Service's Urban and Community

Forestry Program, "Every time I go there I notice a small improvement, like a Little Free Library box. The park is incredibly maintained and clean. You can tell it's a point of pride in the community."

Two years ago, a crew of workers came to this block. They cleared the rubbish and carefully dismantled the rowhomes, often one beam at a time. Their goal was to salvage valuable wood and to clear the space for eventual community use. Similar efforts are taking place in Baltimore neighborhoods, as part of a much bigger project that involves employment, urban renewal, sustainability, and repurposing urban tree waste.

SUMMARY

While abandoned rowhomes in Baltimore have long been a sign of blight, they've recently become an opportunity for social improvement — on multiple levels. By working with city, state and federal agencies, along with nonprofits and commercial enterprises, the USDA Forest Service is helping to drive employment, urban renewal, and improved sustainability through an ongoing initiative called the Baltimore Wood Project. In one case, rowhome deconstruction on Baltimore's McKean Avenue has provided jobs, wood for furniture, and space for a community park. The next step is to expand and replicate the initiative in other cities around the country as part of a business model that the Forest Service calls an Urban Wood and Restoration Economy.

The Fall of a Forest, the Rise of a City

For a project of this scope, it's probably best to start at the beginning. It's a story that includes destruction and disappointment, as well as creation and hope. In the last few years, it's also become a story of cooperation. And cabinets.

This story begins hundreds of years ago, with a vast pine forest that covered hundreds of millions of acres from Texas to Maryland. As the United States developed during the 1800s, great swaths of southern yellow pine forests were cut down to build housing and infrastructure, as well as to make way for development.

While the forest dwindled, Baltimore grew into the sixth-biggest city in the country, driven by waves of German, Polish, and Italian immigrants. Throughout the city, thousands of two-story rowhomes — many less than a dozen feet wide — were built to house these families.

Later, starting around 1950, Baltimore's population began a long, slow decline. The number of people living in the city eventually fell by more than a third—a trend that left thousands of vacant houses. Empty yards became dumps; plywood sheets over broken windows did little to deter squatters, drug-dealers, and arsonists. Property values fell while crime increased, feeding a widening cycle of urban decay.

Project C.O.R.E. and the Baltimore Wood Project

A few years ago, city and state managers decided to take a new and ambitious approach to this problem. Today, through a 4-year initiative called Project C.O.R.E., Maryland and Baltimore are spending millions of dollars to demolish 4,000 of these buildings. Project C.O.R.E., which is short for Creating Opportunities for Renewal and Enterprise, also generates opportunities to incorporate social and environmental benefits—opportunities that

are being addressed through a partnership called the Baltimore Wood Project. With a partnership list that includes city, state, and federal agencies, nonprofits, and commercial enterprises, the Baltimore Wood Project is helping Baltimore to be smarter about its urban wood resources.

A Third Life for Lumber

Through the Baltimore Wood Project, lumber from 1,000 Baltimore rowhomes is being salvaged and repurposed in a way that gives the wood a third life to follow its first two lives: as trees and as construction material. It's an approach that was described in detail in a 2007 book by Robert Falk, a research general engineer with the USDA Forest Service, and Brad Guy. In the book, "Unbuilding: Salvaging the Architectural Treasures of Unwanted Houses," Falk says, "As the son of a Depression-era remodeler, my father taught me early on that building materials can live more than one life.... In our resource-rich nation, there's a wealth of high-quality building material available for salvage. The windows, doors, cabinets, fixtures, lumber, trim, and hardwood flooring that often end up in the landfill can all be easily salvaged and reused; and these items can be of much higher quality than those found in new construction."



Abandoned Baltimore rowhomes contain hidden treasure: old-growth wood that can no longer be harvested in quantity. Photo by Humanim, used with permission.

Driving Sustainability Efforts with Old-Growth Lumber

Baltimore's rowhome lumber isn't your everyday wood. Much of it is "old growth," which is lumber from trees that were grown naturally and over hundreds of years. These trees grew slowly due to competition from other trees, which limited the light they received. Because of this slow growth, the growth rings on the trees were packed very tightly together. In comparison, trees on modern "tree farms" grow fast, with limited competition from other trees. Tree farm trees are generally harvested just a few decades after they're planted. Compared to most lumber on the market today, old-growth lumber is more stable, stronger, and more resistant to rot and termites. In addition, the boards are often longer and wider than what is commonly available today.

"The windows, doors, cabinets, fixtures, lumber, trim, and hardwood flooring that often end up in the landfill can all be easily salvaged and reused."

—Robert Falk



By clearing abandoned rowhomes, land is made available for green areas and other community uses. Photo by Humanim, used with permission.



Finding Employment for the Hard-to-Employ

While salvage is more expensive and slower than demolishing homes with backhoes and excavators, salvage tends to be more environmentally friendly, and it creates jobs. This is where an organization called Humanim comes in. This Maryland-based nonprofit organization employs a local workforce largely made up of people with barriers to employment such as felony convictions, past addiction, or lack of a high school diploma.



Baltimore workers trim and treat salvaged lumber for use in furniture. Photo by Humanim, used with permission.

In putting these people to work, Humanim trains them and equips them with skills they can use in other jobs. In many cases, they work in struggling neighborhoods where unemployment rates are near 30 percent. According to Jeff Carroll, director of Humanim's Details Deconstruction division, "The work itself has really strong environmental and social impact. If you can do it [while] making it an employment vehicle for people who've got some challenges getting back into the workplace—now, not only do you have a socially impactful service or product, but you're doing it in a socially impactful way."

Putting the Wood to Use

The yellow pine salvaged from Baltimore rowhomes hardly exists any more, according to Max Pollock, director of Humanim's Brick and Board division: "It was overharvested, so only about 3% of those old longleaf pine trees remain. It grew very tall, very straight and very slow, and it has a nice, rich yellow-orange-amber color. The heartwood has a rich, deep-orange color that sometimes borders on purple; it's got a tight grain and a great fragrance. And all of it was hundreds of years old when it was cut down to build these houses about 130 years ago."

The wood's quality and appearance are just part of the reason why Minneapolis-based furniture manufacturing company Room & Board agreed to repurpose the wood. According to Gene Wilson, Room & Board's director of merchandise and vendor management, "The U.S. Forest Service contacted us about an interesting project: reusing salvaged urban wood. The project has social benefits as well as environmental benefits and we were very intrigued by the opportunity, so we called them back right away."

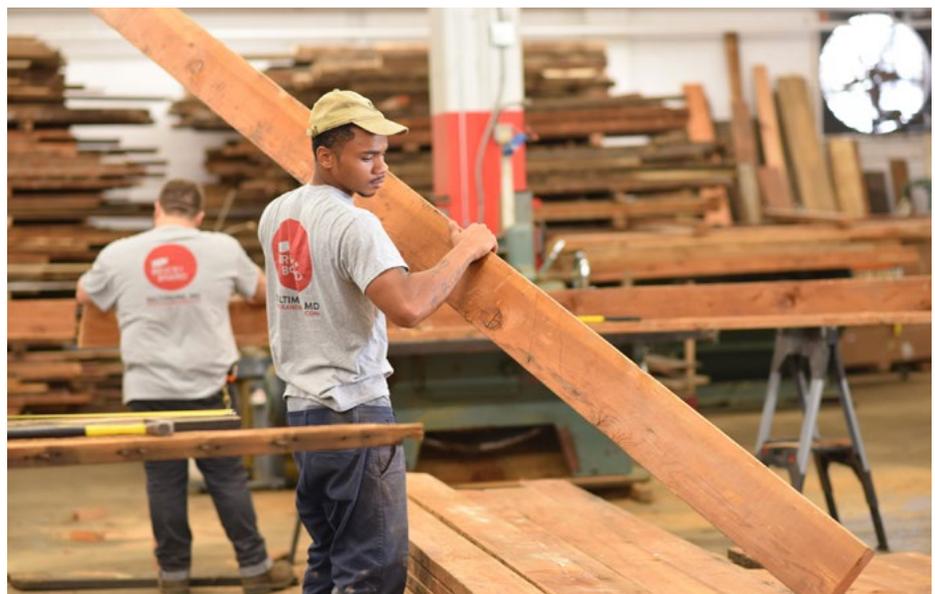
So far, Room & Board has created two new product lines for their "Urban Wood Project: Baltimore" collection. One of



Room & Board's McKean cabinets are made from yellow pine salvaged from Baltimore rowhomes. Photo by Room & Board, used with permission.

these, named McKean after the street in Baltimore, is a cabinet that features yellow pine from Baltimore rowhomes. The cabinets have a modern, streamlined style that allows the wood's natural beauty to stand out.

It's a fitting product line for a company that's a founding member of the Sustainable Furnishings Council, a group of organizations that are committed to making the home furnishings industry more ecologically friendly. According to Michael Brotman, Room & Board merchandise manager, "The environmental perspective alone is incredible ... I've been surprised and shocked in the best possible way. This has the most heart of anything I've gotten to work on. Our customers love the story as well as the character of the



A Baltimore nonprofit organization called Humanim employs a local workforce to salvage valuable lumber from abandoned rowhomes. Photo by Humanim, used with permission.



pieces. We're looking forward to using the material in new ways." Room & Board is interested in expanding its product line by using urban wood from other cities.

In addition, much of the salvaged wood is shipped to rural communities in West Virginia, Pennsylvania, and Vermont, where it is repurposed into products. According to Sarah Hines, who coordinates the Forest Service's Urban Field Station Network, "We're creating jobs in Baltimore and in rural areas through a whole wood economy. Urban wood is valued for its character, not its structure, so it doesn't compete with rural wood. Instead, it's helping to sustain rural manufacturing and support the U.S. wood industry. This complimentary model can be replicated in other regions."

Transforming Neighborhoods a Block at a Time

Yet another Baltimore Wood Project partner is taking the lead in transforming reclaimed land for community use. Founded in 1984, a Baltimore nonprofit called the Parks and People Foundation works with communities to create parks and green spaces. According to Parks and People community grants program director Valerie Rupp, "We get involved at the tail end of this process, after demolition or deconstruction has occurred, by helping communities conceptualize the project. We help with site plans and designs, with securing funds by recommending grant sources, and by creating an implementation plan."



Baltimore's Camp Small Zero Waste Initiative helps put logs, chips and brush to use. Photo by Andy Cook, Baltimore City Government, used with permission.

Rupp sees the McKean Avenue Park as one of many success stories related to the Baltimore Wood Project. "With that park," she explains, "the community now has an active, well-programmed space that really suits their needs. They're already looking to phase two for geographic and programmatic expansion. People get the bug for greening and they want to keep going. I think that's what makes it a success: In order to achieve a green space that really serves a community, the green space needs to come from the community."

What About Fresh-Cut Urban Tree Waste?

For cities that are wondering what to do with wood waste from fresh-cut urban trees and brush, Baltimore has another solution: a wood waste collection program called the Camp Small Zero Waste Initiative. According to Camp Small yard master Shaun Preston, "We've been able to get our logs into local markets to support local businesses: timber and trees for building projects and wood chips for community greening efforts."

Prior to the initiative, site cleanup at Camp Small used to cost the city about \$60,000 per year. Now Baltimore earns revenue from the sale of compost, mulch, wood chips, and logs. And although the initiative is just a few years old, there's plenty of room for growth. Preston says, "We're expanding our program, including getting a sawmill and kiln so we can do some production ourselves in cooperation with local nonprofits."

KEY FINDINGS

- For decades, Baltimore has faced a challenge of how to deal with crime and blight centered around abandoned buildings. A recent state and city initiative called Project C.O.R.E. is demolishing thousands of these buildings.
- The USDA Forest Service and other agencies, nonprofits, and commercial enterprises are working together in Baltimore to repurpose wood from abandoned rowhomes and other urban waste.
- This initiative, called the Baltimore Wood Project, is helping to drive employment, urban renewal, and improved sustainability.
- The next step in the process is to work with other organizations to accomplish the same goals in other cities around the country.

MANAGEMENT IMPLICATIONS

- Abandoned buildings tend to drag down their neighborhoods, as they often become focal points for urban blight as well as arson, drug-dealing, and other criminal activities.
- In Baltimore, government agencies are working with commercial enterprises and nonprofit agencies to convert abandoned properties and other urban waste resources from liabilities into assets.
- Home salvage and community-driven land planning can drive employment, economic development, and urban renewal while lowering crime and improving lives.
- Through a recent partnership with a company called Quantified Ventures, the USDA Forest Service is hoping to replicate its Baltimore success story in cities around the country.





Through an effort led by the U.S. Forest Service and many partners, Baltimore rowhomes are providing old-growth wood for high-end furniture and other uses. Photo by L.F. Chambers, USDA Forest Service.

“We knew that Baltimore rowhomes were being deconstructed and we also knew we wanted to minimize waste, maximize profit, improve employment, and restore the land and water.”

–J. Morgan Grove

Putting the Puzzle Together

Behind all of these partners is a coordinating agency: the USDA Forest Service, which is building what it calls an Urban Wood and Land Restoration Economy and conducting scientific research to monitor and measure the outcomes. It's a business model that creates jobs, attracts private-sector businesses, enables land and ecosystem restoration, promotes economic development, and improves lives in urban and rural communities.

According to Morgan Grove, a research scientist at the Forest Service's Baltimore Field Station, “We knew that Baltimore rowhomes were being deconstructed and we also knew we wanted to accomplish several things: We wanted to minimize waste, maximize profit, improve employment, and restore the land and water. It was like putting a giant puzzle together, but we've found ways to accomplish all of these things using both salvage and fresh-cut material. We've found great partners to work with and we're engaged in research to measure social-ecological outcomes and impact.” It's all part

of an effort to ensure the health, diversity and productivity of the nation's forests, using urban forest resources as a driver.

The Next Step: Replicating the Process

In 2017, the Forest Service brought in a company called Quantified Ventures that specializes in facilitating social change in the environmental, health, education, and workforce development sectors. For this initiative, Quantified Venture's directive is to expand the Baltimore Wood Project through Pay-for-Success financing, to increase project benefits and provide a model for other cities. The Forest Service sees tremendous potential, with city managers in Detroit and other cities watching the Baltimore project closely. According to Quantified Ventures CEO Eric Letsinger, “We're taking what was learned in Baltimore and scaling it up massively so it can be used by other cities around the country. When you consider that we waste more wood in urban areas than what we harvest off of our National Forests, and that we can create jobs while we address that waste issue, it's certainly a worthwhile cause.”

FURTHER READING

Srinivasan, N., Hines, S.J., Marshall, L., Grove, J.M. Forthcoming. “Reclaiming Wood, Lives, and Communities: How do we turn an urban wood waste stream into an asset that revitalizes cities?” Michigan Sustainability Cases, www.learn.gala.com, University of Michigan.

Grove, J.M.; Galvin, M.; Hines, S.J.; Marshall, L. In preparation. The Urban Wood Workbook: A Framework from the Baltimore Wood Project. To be published as a Northern Research Station general technical report.

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FOREST SERVICE PROFILES



MORGAN GROVE is a research forester with the USDA Forest Service's Northern Research Station at the Baltimore Field Station and the lead social scientist for the Baltimore Ecosystem Study, a long-term ecological research project funded by the National Science Foundation. He was the first social scientist from the Forest Service to receive the President's Early Career Award for Scientists and Engineers. Morgan has several degrees from Yale University: a doctorate in social ecology, a master's degree in community forestry, and bachelor's degrees in urban planning and environmental studies.



SARAH HINES is the coordinator of the Urban Field Station Network with the USDA Forest Service's Northern Research Station. Sarah has spent her career in the Forest Service linking scientists and scientific information with communities and decision-makers at local and regional scales to inform stewardship of everything from our National Forests to the local parks and forests in our communities. Sarah received a bachelor's degree in biological anthropology from Harvard University and master's degrees from the University of Michigan.



LAUREN MARSHALL is a landscape architect and the national program manager for Urban and Community Forestry with the USDA Forest Service. Lauren leads design and planning challenges across scales, ranging from designing vacant properties to maximize nature's benefits, to building artisan and construction markets for salvaged and sustainably harvested wood products, to increasing landscape-scale collaborative planning of U.S. forests. Lauren received a bachelor's degree in plant sciences from Cornell University and a master's degree in landscape architecture from the University of Michigan.

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