

TO: Senator Paul G. Pinsky, Chair of the Education, Health & Environmental Affairs Committee
FROM: Amanda P. Siciliano, UMD Global STEWARD Fellow
DATE: March 2nd, 2022
SUBJECT: Updating the Definitions of “Wood Waste” under the Maryland Recycling Act

Summary

The wooden pallet industry, which employs over 3,000 small family businesses in all 50 states, represents an underexplored recycling and energy market¹. With increasing concern for climate change and lumber shortages, the recycling of wooden pallets provides a new mechanism for profitably saving the planet and efficiently salvaging waste materials. In the 2019 fiscal year, the Port of Baltimore handled a record-breaking 11.1 million tons of general cargo, most of which was carried using wooden pallets². Despite the heavy reliance of wooden pallets in today’s economy, there currently exists no proper legislation for the recycling of nature’s most valuable resource. To recognize the environmental and business potential of wooden pallet recycling, the Maryland Department of the Environment (MDE) should expand the current understanding of “wood waste” within the definition of “recyclable materials.” This policy should alter the language of the Maryland Recycling Act (MRA) Section 9-1701 to provide opportunities for recycling initiatives, solid waste diversions, and sustainable product creations³.

Problem Statement

In 2018, the Environmental Protection Agency estimated that landfills received nearly 18.1 million tons of wood for municipal solid waste (MSW)⁴. Though the current MDE Section 9-1701 legislation accounts for “natural wood waste,” the language does not properly account for the recycling and disposal of other wood sources including furniture, durable goods, and packaging (e.g., crates, pallets)³. Wooden pallets, or shipping crates composed of structurally supportive lumber, compose over 90% of shipping packaging⁴ with over 1.8 billion pallets in service every day¹ in the United States. Internationally, over \$400 billion worth of American trade is exported annually on wooden pallets¹. In fact, the global market size for wooden pallets is anticipated to reach \$15.7 billion by 2026, growing at a compound annual growth rate of 6.0% from 2021 through 2026⁶. Despite the potential for environmentally friendly waste recovery, only 17.1% of wooden pallets used in 2018 were recycled, with the majority ending up in landfills¹. Wood is the only entirely recyclable and reusable resource and thus poses countless environmental possibilities. As a result, wooden pallets provide opportunity for recycling within landscaping, construction and agricultural industries where the chipping of pallets can create sustainable garden mulch, particleboard material, and animal bedding¹.

Criteria & Policy Approaches

To address the recycling challenges associated with wood waste management, the MDE must review, evaluate, and implement additional waste management techniques. Some criteria for finding a solution should include:

1. Any prospective solution must be focused on effective solid waste diversion such that the effect on human health and the environment is considered. Lowering the greenhouse gas emissions associated with solid waste is of the utmost importance when considering MSW management techniques.

2. All relevant stakeholders must be included in the discussion of best practices, as the topic affects shipping companies, MSW facilities, local business owners, conservation organizations, and environmental scientists alike.
3. Any effective solution must evaluate the short-term and long-term environmental and fiscal effects on statewide waste redirection and recycling goals. The effect of such efforts must be examined from state, local, and small business perspectives.

Policy Approach 1: One approach expands the definition of wood waste within the Maryland Environmental statutes. According to the Section 9-1701 of the MDE legislation, “recyclable materials” is defined as those materials that (1) would otherwise become solid waste for disposal in a refuse disposal system and (2) may be collected, separated, composted, or processed and returned to the marketplace in the form of raw materials or products³. Though recent alteration efforts have included construction and demolition debris in the form of rubble, scrap material, and land clearing debris, the current language does not properly reflect the recycling of various woods products⁶. Presently, “natural wood waste” solely refers to organic vegetative waste including tree stumps, brush and limbs, root mats, logs and other natural vegetative material³. Altering the statutes under the MRA to include “wood waste” can assist in tackling wooden pallet recycling and management. Furthermore, the inclusion of wooden pallets would provide additional opportunities for individual counties to meet solid waste reductions and mandatory recycling rates, as the guidelines set forth by the MRA state that an elective statewide waste redirection goal of 60% and a recycling goal of 55% must be accomplished⁶. Based on formerly approved bills, recycling research, and landfill avoidance, I highly encourage implementing this policy approach.

Policy Approach 2: The alternative, and more ineffective policy approach, is to create legislation that outlaws the use of wooden pallet shipping containers in favor of a material with a pre-existing recycling program. In particular, the MDE already has MRA legislation regarding the use of paper products like corrugated cardboard. Some states, such as Oregon, have explored initiatives to replace wooden pallets with corrugated cardboard pallets, citing environmental friendliness and light weight advantages. A 2017 Oregon Department of Corrections study discovered that not only could corrugated cardboard pallets offer reduced shipping costs, as cardboard pallets were 65-75% lighter than wooden pallets, but also corrugated cardboard pallets could offer improved health and safety conditions due to their splinter, nail, and mold-free design⁷. Ultimately, the corrugated cardboard pallets would be unable to withstand heavy loads and changing environmental conditions - a necessity in shipping industries where good types and weights can vary. Though this policy approach has the potential to significantly reduce greenhouse gas emissions, it would ultimately create further logistical, cost, and storage issues; therefore, I strongly advise against implementing this policy approach.

Recommendation

In summary, the MDE should alter the language of Section 9-1701 to incorporate additional wood sources beyond “natural wood waste.” Expanding the statute definition to include a broader understanding of “wood waste” can provide opportunities not only for recycling initiatives and solid waste diversion, but also for the creation of sustainable products across a plethora of farming, construction, agricultural, and economic industries.

References

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