



CWC

Best Practices in Wood Waste Recycling

Identifying Generations Streams of Wood Waste Materials

Material: Wood Waste

Issue: *Wood-waste generators use single roll-off box containers or large dump trucks when hauling to solid-waste collection facilities. The facility does not necessarily identify the wood-waste generator because the wood-waste delivery might be mixed with other material. Nor do disposal fees at collection facilities account for source generators.*

Private landfills and transfer stations collect most wood waste. For billing, personnel at their scale-houses usually record the quantity of waste delivered and who delivered it. Typically, this method to account for waste conceals the identities of the actual generators. Most facilities do not separate wood-waste nor charge unique fees. They commingle wood waste with garbage in drop boxes that can be (un)loaded automatically. These are either front-end loader boxes from small- to mid-sized generators or big roll-off boxes from larger generators.

However, private recyclers introduced and now provide source-separation and separate hauling systems. Those in competitive markets rapidly developed separating systems, which have become common. Many wood-waste materials that solid-waste facilities never-before handled (such as landclearing stumps and brush or orchard prunings) are now increasingly processed and marketed by private facilities. When using separating systems, identifying and sorting the wood portion of the waste stream becomes critical.

Best Practice: To implement a separating system, identify the generating sources from which to collect wood waste. This Best Practice recommends using state and local databases, which list statistics about the typical composition of industrial waste, to classify prospective regional generators by their Standard Industrial Classification (SIC) codes. Every private company has a four-digit SIC code that federal, state, or local governmental databases can provide. Then, cross-reference their SIC codes against others that have the highest rates of waste-wood generation (e.g., pallet repair, home builders, cabinet manufacturers, lumber yards, etc.). National databases and county business patterns publications from the U.S. Department of Commerce, Bureau of the Census, document the number and types of companies that exist within each state. These publications contain detailed data about the businesses per county: They list the SIC codes, present local chamber-of-commerce business data, and contact names. Use this data to cull out the wood-waste generators in the region by identifying location, size, and generating tonnage.

Besides the number of establishments, use waste-generating data for initial estimates. When no other site-specific data is available, a good initial gross estimate could be 1.5 pounds per capita (ppc) per day based on a 1993 Solid Waste Association of North America (SWANA) publication. It presented waste-generating data about construction and demolition that varied from 0.12 to 3.52 ppc per day. This waste could be from about 30 to 40 percent wood waste depending on the amount of road and bridge work underway. The actual quantity and mix of these materials vary regionally because of demographics, the age of buildings and construction materials, and the business base.

Data published in a report by M. L. Smith Environmental, Inc., about urban wood-waste quantities provided the following annual generation rates:

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- Residential Urban Wood Waste in Mixed Solid Waste -- 0.009 tons per capita per year
- Commercial/Industrial Wood Waste in Mixed Solid Waste -- 0.013 tons per capita per year
- Brush/Logs -- 0.020 tons per capita per year
- Urban Wood Waste in Construction and Demolition -- 0.081 tons per capita per year
- Wood pallets -- 0.029 tons per capita per day
- Agricultural wood waste -- 3 to 10 tons per acre per year

Implementation: Obtaining statewide county business patterns publications provides statistics for an initial database. Find the relevant facilities, and cross-reference to the primary wood-producing industries. This research will help identify the number, but not the names, of the potential county sources. Local calls to the county chamber of commerce can help add the contact name, address, and telephone number to the database.

As the project moves from its pre-feasibility investigation to its implementation, this initial raw data could cause concern about contingency and variability. It thus becomes critical to compile the project's specific field data and to learn about its waste streams and material sources. The specific quantity and quality of waste could vary depending upon the generators' sales and product mix. Additionally, other wood-waste users might be planning or implementing unannounced projects.

Develop a current wood-waste generation and economics database by conducting focused telephone interviews. To understand the existing industry, identify key regional characters and related service fees. Also, call the larger generators within a project region to identify those who have signed long-term contracts for waste services. Such contracts could negate the capability to construct a new or enlarge an existing operation.

Benefits: A single wood-waste supply source will not necessarily support a reuse-recovery system. However, developing a detailed profile of a larger geographic region within a reasonable time and cost will help potential processors formulate estimates of supply sources. In addition, processors could focus their subsequent detailed discussions directly with generators of wood waste. All this information is necessary to justify the viability of an operation in a business plan, develop an understanding of the competition, secure supply accounts, and satisfy investors.

Application Site: This Best Practice applies to wood-waste processing facilities.

Contact: For more information about this Best Practice, contact CWC, (206) 443-7746, e-mail info@cw.org.

References:

1. Brickner, Robert, Gershman, Brickner & Bratton, Inc., Falls Church, VA.
2. Smith, M. L., M. L. Smith Environmental, Inc., Tinley Park, IL.
3. Solid Waste Association of North America (SWANA), *Construction Waste & Demolition Debris Recycling...A Primer*, October 1993.
4. Department of Commerce, Economics and Statistics Administration, Bureau of the Census. *County Business Patterns*.

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