

Harper Brush Works

CASE
SUMMARY

13



HARPER BRUSH WORKS

Fairfield, Iowa
Jefferson County



Intern: Bill Wombacher
Major: Environmental Engineering
School: University of Iowa

The Company

Harper Brush Works was founded in Fairfield, Iowa, in 1900. They manufacture industrial and household cleaning tools including brooms, brushes, mops, and squeegees. Harper Brush has grown from a local company to a nationally known manufacturer with products appearing in Home Depot and Lowe's stores across the country. Although headquartered in Fairfield, Harper Brush also has facilities in Greenville, North Carolina and Stockton, California.

Project Background

Harper Brush's Fairfield facility produces the majority of the wooden products they market; consequently, a considerable amount of wood waste is produced. The wood used for these products is kiln dried hardwood maple and the wood waste is produced in the form of sawdust, scrap edgings, and small blocks. The sawdust is used by turkey farmers in the area as bedding, but Harper Brush has had trouble finding a consistent market for the rest of the wood waste and has been sending it to a landfill. The intern investigated alternate disposal options as well as the installation of a wood-burning furnace.

Incentives to Change

Harper Brush is an environmentally conscious company that tries to recycle and sell the wood scrap locally as firewood when possible. Harper Brush desired a consistent environmentally friendly way to dispose of their wood waste, to reduce disposal costs, to recapture raw material value, and to reduce their environmental footprint.

Results

Use wood waste to produce colored mulch: \$34,460

The intern found a local pallet company who was partnered with a mulching company. It has been proposed that the pallet company accept Harper Brush's wood waste at no cost, to be used as colored mulch, under the condition that Harper Brush purchases new pallets from this supplier. The cost savings on this project includes disposal cost savings as well as considerable savings in pallet purchase price. This project has been recommended, but is waiting review by Harper Brush Works.





Wood burning furnace: \$18,000+

The installation of a wood burning furnace would result in two-way pollution prevention. The unit would divert wood waste from the landfill and reduce the amount of gas needed to heat the plant during the winter. The unit could easily reduce Harper Brush's gas bill by 50 percent. The savings associated with the unit will depend on Harper Brush's ability to forecast wood requirements in order to meet peak heat demands. The more wood that can be used as an alternative fuel, the more savings can be realized. This project has been recommended, but waits review by Harper Brush to determine whether the labor required will be prohibitive. The intern also worked on a Solid Waste Alternatives Program grant proposal to help fund the project.

Both Options Together: \$50,960

Implementing both the wood burning furnace and the pallet deal simultaneously would create the greatest economic and environmental impact. All of the wood waste would be either used as an alternative fuel or used to produce colored mulch. Consequently, Harper Brush would save on disposal costs as well as gas heating costs in the winter.

Project Summary Table

Project Description	Environmental Impact	Economic Cost Savings	Status
Colored mulch and pallets deal	300+ tons of wood waste diverted from landfill each year	\$34,460/year	Recommended
Wood burning furnace	150 tons wood waste/year 16,500 therms of gas/year	\$18,000+/year	Recommended
Both projects concurrently	300+ tons of wood waste/year 16,500 therms of gas/year	\$50,960+/year	Recommended