



# Waste Reduction and Energy Efficiency Wenger Corporation

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**Driven to Discover<sup>SM</sup>**

# Wenger Corporation Background

- Manufactures and sells products for music and theatre education, performing arts and athletics
- Founded in 1946
- Located in Owatonna, MN
- Fun fact: Wenger Corp. has provided multiple locker room set ups to U of M sporting teams



# Project Overview

## Current Situation

- 1,200 tons of solid wood waste annually
- Disposal at a local landfill
- 6.5 million kWh of electricity used annually

## Goals

- Reduce solid wood waste
- Find a more economic and environmentally friendly disposal method
- Decrease energy consumption by focusing on major equipment



# Approach

- **Observed wood waste producing processes and major energy using equipment**
- **Identified options that showed the most potential for opportunity**
- **Worked with staff, management and outside consultants to develop well rounded recommendations**



# Primary Recommendation

## Recycle Solid Wood Waste

- Wenger Corp. lost services of the only local recycler
- Researched alternative services
- Worked with new vendor to identify new recycler on border of MN and WI
- 40-yard dumpster collection to semi-trailer dumpster
- Overall expect to go from 210 loads and \$101,000 annually to 60 loads and \$56,000 annually

# Solutions

Recommendation	Annual reduction	Total cost	Annual savings	Payback period	Status
Recycle wooden block spacers	37 tons wood	\$0	\$2,400	0 days	Implemented
Recycle wood waste	1,200 tons wood	\$0	\$45,000	0 days	Implementing
Lower compressed air system pressure	62,000 kWh	\$0	\$3,700	0 days	Recommended
Reuse leftover heat from air compressors	N/A	N/A	N/A	N/A	Investigating
Upgrade office fluorescent bulbs to LED	36,200 kWh	\$15,600	\$5,100	3.1 years	Recommended
Upgrade exterior fluorescent lights to LED	36,400 kWh	\$46,200	\$10,000	4.6 years	Recommended
Minimize blow air guns for cleaning	117,100 kWh	\$212	\$6,900	12 days	Recommended
Change existing pneumatic hand tools to electric equivalents	296,270 kWh	\$5,000	\$17,500	3 months	Recommended

# Personal Benefits

- Combined engineering knowledge with business mindset
- When and where to apply skills



# Anecdote

- Met incredible employees who showed me kindness, creativity and funny senses of humor

