Pollution Prevention Institute

GRANDVIEW CABINETRY

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Company background
Grandview Cabinetry was established in 1946 in Grandview, Missouri, and later moved to Parsons in 1965. Grandview employs about 250 workers and manufactures wooden kitchen and bathroom cabinets. The company is dedicated to using mainly USA-made products to manufacture their cabinets and promises that integrity is ingrained within every process.



Project background
Grandview tasked the PPI intern with identifying projects that would help reduce its waste output. The intern examined the facility's entire process, specifically the paint line, distillery unit and assembly line, to identify the company's biggest sources of waste and develop ways to reduce emissions while also generating cost savings.

Incentives to change
Grandview prides itself on its sustainability efforts, which include wood and cardboard recycling, use of low VOC and HAP paints and used solvent recovery. The company respects natural resources and works to minimize its impacts on soil, wildlife and plants.

PROJECTS REVIEWED FOR P2 POTENTIAL

Solvent recovery
Grandview uses solvents to clean paint gun nozzles and flush out paint lines. The company previously installed a solvent recycler with the goal of recovering as much solvent as possible, especially lacquer thinner.

Overt time, the company has shifted towards using more hybrid- and water-based materials, and they now employ a multi-stream waste system in which harsher, more volatile materials are flushed out and disposed of as hazardous waste. Grandview has attempted to recover solvents from the harsher materials, but there has been little success as the current recycler is not equipped for the company's waste output. The current solvent recycler is restricted to lacquer thinner, and when harsher, more volatile materials are introduced, chemical reactivity occurs and the recycler boils over, causing operational inefficiencies and solvent loss.

The intern recommended Grandview invest in a more robust solvent recycler that is equipped for the company's current waste streams. This would result in more reclaimed solvents and cost savings for the company.

Waste stream utilization/finished materials
For this project, the intern characterized the solid waste stream produced by each department within Grandview, looking for opportunities to reduce what the company was sending to the landfill. The intern identified causes of waste generation and evaluated ways the company could reduce waste, mainly looking at source reduction and implementing smaller, low-cost changes within established processes.

Through hands-on research and interviews with staff within each department, several source reduction opportunities were identified, ranging from smaller scraps to high-end defected and finished cabinetry.

PROJECTS REVIEWED FOR P2 POTENTIAL, CONTINUED

Cabinet Waste Diversion

Finished material that is defected/damaged during handling is one of the most problematic types of waste at Grandview, causing the company to dispose of 40-66 finished cabinets each month. Handling issues can happen in many different stages of production, but are mainly found within the paint line, assembly line and sanding. Due to Grandview's high-quality standards, any visual problems such as scratches, holes, paint splotches, or sanding ridges cause the product to be completely scrapped and replaced. When this occurs, the defected material is disposed of and sent to local landfills. The intern found Grandview's production process is most vulnerable to errors when products transition between different departments and processes, and recommended additional employee training, the use of shock-absorbent material to protect from rough handling, and improved waste documentation.

Wood Utilization

Grandview is currently facing issues related to defected lumber it receives from vendors. The company mainly uses hardwood and plywood to build its cabinets, which can come as "brown," or with defects. The location of the defects, combined with part specifications can cause the lumber to be unusable and wasted. Defected lumber also causes issues in the staining process. If the cabinet is stained, the finish will not completely cover defects, and the product cannot be used. But if the cabinet is painted, the defects will be covered up, and no wood will need to be wasted. The intern concluded that the amount of wood wasted due to defects is completely dependent on part specifications, and more research is needed to find a solution to this issue.

SUMMARY OF 2026 P2 INTERN RECOMMENDATIONS

Project	Annual estimated environmental impact	Estimated cost savings ($/year)	Status
Solvent recovery	26,519 lbs. of VOC 79 kWh 10 $MTCO_2e$	$21,594	Recommended
Waste stream diversion study	2 $MTCO_2e$	$5,808	More research needed
Total[1]	**26,519 lbs. of VOC 79 kWh**	**$21,594**	
GHG reductions[1,2]	**10 metric tons CO_2e**		

[1]Does not include projects "Not recommended" or where "More research needed" or "Previously implemented."
[2]EPA P2 GHG Calculator with Cost, 29 November 2022 & EPA WARM Tool- Version 16, December 2023