

**Intern Name:** Ashley Cohen  
**Major:** Environmental Studies  
**School:** Carleton College  
**Business:** Canyon Creek Cabinet Company  
**Industry:** Cabinet Manufacturer (NAICS 3371)  
**WASI Project:** Wood waste reduction



## Company Description

Canyon Creek Cabinet Company manufactures premium semi-custom cabinetry in Monroe, Washington, and markets its products to designers, builders, and a select network of independent dealers throughout the United States. Canyon Creek Cabinet Company has been a recognized leader in the kitchen and bath industry since 1981 and has won many industry awards for its cabinetry as well as for its commitment and efforts towards safer environmental practices.

## Incentives for Change

The company has focused on sustainable manufacturing for more than 30 years and constantly looks for better materials and ways to cut energy use and create less waste. Current manufacturing processes prioritize efficiency over the conservation of valuable materials. This prioritization cost the company a previously unquantified sum of money that could instead be invested into more environmentally and financially beneficial business practices.

Canyon Creek's emphasis on sustainability led them to look at the large quantity of wood scraps they were generating. Wood remnants that are larger than 9 x 5.5 inches are considered "usable scrap" and are recyclable. If a wood remnant is smaller than 9 x 5.5 inches, it is considered "scrap" and is not recyclable. The "scrap" is ground up and turned into wood chips or sawdust for easier transport out of the facility. Previously, Canyon Creek sold this waste as biofuel to a papermill that is now closed, so they are trying to minimize the amount of waste and find alternate disposal options.

## Project Description

This project aimed to identify and minimize wood waste from the Nested Based Cell (NBC) router process, focusing on usable wood scrap that could be recycled back into production. The project also included recommendations for improving waste reduction practices.

For each cabinet line, Canyon Creek uses different materials to produce the particular parts. The intern researched the potential of usable scrap by material. The largest quantity of the total usable scrap waste originated from ¾-inch material (56 percent), followed by the ½-inch material (20 percent). Many of the ¾-inch and ½-inch materials are high-volume and high-dollar materials, making recovery efforts more favorable.

# Results

Analyzing the recycling of usable scrap back into production revealed that recycling more of the usable scrap and optimizing for high-value parts could increase material and dollar recovery. If a 73 percent recovery rate is applied to all recyclable usable scrap, Canyon Creek could save \$464,675 annually by avoiding new material purchases. After eliminating the need for off-site disposal and energy to operate the grinder, Canyon Creek could save a total of \$537,104 per year.

## Recommendations

This project provides actionable insights for Canyon Creek Cabinet Company to enhance its waste reduction practices, increase material recovery, and achieve greater sustainability while realizing substantial cost savings. Implementing the following recommendations could position the company as a frontrunner in both environmental stewardship and operational efficiency.

### Direct 1/2-inch usable scrap to nailer production

Optimize 1/2-inch usable scrap for parts other than toe kicks, particularly focusing on nailer production. This could save over \$43,000 annually and reduce virgin material consumption.

### Implement a remnant management program

Establish a program to recycle material back into production, conserve materials, and inspire behavioral change among employees. This program has potential for total annual savings of \$537,104 and could be expanded within the company for additional savings.

#### Estimated annual effects from recovering usable wood scrap

Recommended P2 actions	Cost to implement (\$)	Recoverable solid wood waste savings (\$)	Wood grinder energy savings (\$)	Wood waste disposal cost savings (\$)
Recover NBC Usable Scrap	50,000	464,600	1,876	70,628

### Update data collection format and tools

Revamp data collection methods and tools to improve usability and trend analysis, supporting continuous improvement efforts and waste reduction strategies.

