

# Butler, Hamilton and Montgomery County Solid Waste Districts Pollution Prevention (P2) Internship Program

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**Overview:** Butler, Hamilton, and Montgomery County Solid Waste Districts formed a collaboration to create the Southwest Ohio Pollution Prevention (P2) Internship program in 2007. The goal of the program is bring together academia and the industrial sector to increase recycling rates and participation, and decrease waste being sent to landfills.

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**Target Audience:** Industrial Sector

**Social Marketing Strategy:** Convenience

**Goal/Objective:** For solid waste districts to provide an effective resource to the manufacturing sector by identifying and providing Ohio undergraduate students with Pollution Prevention (P2) expertise.

**State Plan Goal:** Goal 2 and 4

**Summary:** Butler, Hamilton, Montgomery County Solid Waste Districts' P2 Internship Program began in 2007. The program is a collaborative effort of the districts with long-term financial support from the United States EPA Region 5 Office of Pollution Prevention. The program brings together exceptional Ohio undergraduate engineering students to perform a 12-week internship with local manufacturers. The goal of the internship is to improve operational efficiencies, reduce energy use, and implement pollution prevention principals. The solid waste districts have partnered with TechSolve to serve as a technical advisor to the program, in addition to offering a one-week intensive P2 training for interns. The long-term goal of the Southwest Ohio P2 Program is to build capacity for P2 expertise and P2 practices, and to provide a new generation of Ohio engineering students with in-state professional opportunities.

Each county underwrites a portion of the internship costs. The internship pairs students with a local manufacturer to increase environmental and economic benefits. Students are recruited using career center websites within state and private universities (Ohio, Kentucky, and Indiana). All potential interns submit applications through Hamilton County SWMD's website. All the Districts then review and select applicants based on "best fit" with industry P2 projects. Top candidates are selected based on GPA, areas of specialization, work experiences, and leadership skills. The top candidates are then interviewed by phone and in person by the partner industries.

Industries are invited to participate in the P2 internship through recruitment letters, follow-up phone calls, and face-to-face

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meetings. Each SWMD has funds reserved for up to two interns each summer. The Districts fund 75% of the intern wages, while the company funds the remaining 25%.

Throughout the internship, interns report weekly to the designated SWMD where their internship is located. The SWMD and on-site industrial project supervisor communicate regularly to discuss the intern's success and project progress.

Since its inception this innovative private-public partnership has demonstrated collective savings of over \$1.6 million dollars to participating industries. Past industry partners include Ohio's automotive manufacturers, pharmaceutical industries, food and beverage manufacturers, and chemical processors.

## **Barriers to Desired Behavior:**

- Programs within the industrial sector are difficult to effectively implement.

## **Barriers with Implementation:**

- Companies need to agree to partner with the internship
  - Supervisor or project manager needed to mentor intern and oversee project
  - Projects within company need to be available
  - Money needed to pay intern

## **Considerations:**

### Overall Goals:

- Implement cost-saving solutions
- Help companies meet environmental and efficiency goals
- Encourage economic development in Butler, Hamilton, and Montgomery counties

### Environmental Benefits:

- Prevent pollution
- Reduce waste at the source
- Increase recycling
- Increase energy efficiency

### Economic Benefits:

- Reduced operating and compliance costs
- Improved worker safety
- Improved company image
- Increased productivity

### Interns have come from:

- The Ohio State University
- Ohio University

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- University of Dayton
- Miami University
- University of Kentucky
- Indiana University
- Purdue University

Butler County companies that have collaborated with the internship:

- Skyline Chili (2007)
- MillerCoors (2008 and 2009)
- Hamilton Caster (2009)
- Deceuninck North America (2011)
- Tedia Co. (2012)
- Valeo Climate Control (2012 and 2014)

## **Measurement Methods:**

The success of the internship is measured based on the effectiveness of the projects that the student and business implement. Projects are evaluated on the following terms: “recommended”, “implemented”, and “not feasible” (often due to constraints such as time, capital, cost, and return on investment) status. The projects that have been implemented are evaluated based on annual cost savings and environmental results. Any project that has been recommended for implementation will have correlated annual cost savings and the environmental impact calculated or predicted.

## **Overall Results and Metrics:**

In 2014, Valeo Climate Control partnered with Butler, Hamilton, and Montgomery County Solid Waste Districts. The project consisted of making recommendations for lighting efficiency, shutdown procedures, air compressor energy reduction, and installing a variable frequency device. Six projects were evaluated. Of the six projects, one was implemented and five were recommended. The implemented project was to replace an aerosol degreaser. The annual savings of the project is \$624, and eliminates 18.75 gallons of hazardous waste. The five recommended projects have an estimated total savings of \$197,185, and an energy savings of 2,999,408 kilowatts.

**Wrap Up:** Butler, Hamilton, and Montgomery County Solid Waste Districts’ P2 internship will continue to be offered in the future. The solid waste districts value the private public partnership model and believe the long-term results of the P2 collaborative benefit manufacturers, the solid waste districts, and Ohio’s undergraduate students. Several P2 interns have advanced to full time employment in manufacturing in the state of Ohio following their P2 experience.

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