

June 1997
Number 41

Governor's Pollution Prevention Award, 1996 Recipient

Mahoning County's Industrial Waste Minimization Project

Mahoning County's Industrial Waste Minimization Project has conserved more than 110,000 cubic yards of landfill space, and has saved the 23 participating companies more than \$900,000 in its first year.

The Governor's Awards for Outstanding Achievement in Pollution Prevention have been presented since 1986. The Mahoning County Industrial Waste Minimization Project was one of eight recipients to receive the Award in 1996. These awards recognize outstanding commitment to improve Ohio's environment through pollution prevention. Evaluation criteria for the awards include: the reduction of waste at the source, recycling or recovery of materials, cost-effectiveness, ability of the program to serve as a model for others, and effectiveness in promoting prevention as the preferred long-term approach.

What is Pollution Prevention?

Pollution prevention is the use of source reduction techniques to reduce risk to public health, safety, welfare and the environment and, as a second preference, the use of environmentally sound recycling to achieve these same goals. Pollution prevention avoids cross media transfer (of wastes and/or pollutants)

and is multi-media in scope, addressing all waste and environmental releases to the air, water and land.

Mahoning County's Industrial Waste Minimization Project

The Mahoning County Industrial Waste Minimization Project is a cooperative effort between the Technology Development Corporation (TDC), the Mahoning County Solid Waste Management District and Youngstown State University. The initial grant was awarded in January 1995, and the TDC, utilizing interns from Youngstown State University, began providing industry in Mahoning County with free waste minimization audits. Additional audits have been performed for companies in Trumbull and Columbiana counties for a nominal charge. The Mahoning County Solid Waste Management District created this model as a means to reach the generally reluctant industrial sector with the following goals: institute pollution prevention programs in industry, conserve



Governor's Pollution Prevention Award, 1996 Recipient

landfill space, quantify solid waste disposal volumes, establish a regional waste exchange and reduce solid waste disposal costs.

The waste audits focused on reduction, reuse and recycling to accomplish these goals. The TDC focuses on technical assistance, outreach and education, and research and development to assist in pollution prevention and provide an opportunity for companies to access University resources for these services.

Mahoning County's Industrial Waste Minimization Project was recognized for providing free waste minimization audits focusing on reduction, reuse and recycling waste for industries in Mahoning County. The Project completed 23 audits in the first year, thereby providing these companies with a potential total savings of more than \$900,000. In addition, these audits potentially reduced the amount of solid waste generated by more than 113,000 cubic yards. This would be an 85 percent reduction.

Pollution Prevention Activities

The Project demonstrated its environmental commitment through a successful, strategic approach to pollution prevention. This section briefly describes the major initiatives that have been instrumental in the Project's pollution prevention success.

Audits Conducted in 23 Companies

The Mahoning County Industrial Waste Minimization Project provides Mahoning County industries with free solid waste audits. The purpose of the audits is to reduce solid waste disposal volumes and costs, improve corporate environmental images and encourage environmentally friendly practices in industry. All audits are conducted by University interns majoring in engineering or environmental studies.

The interns solicit prospective companies and set up facility tours. During the facility tour, the audit teams develop an understanding of the processes involved in manufacturing and identify waste streams. Special attention is given to the flow of materials through the facility and waste streams generated at each step of the manufacturing process. The audit team then completes a written report. The report functions as a guide for companies, addressing waste streams and their corresponding costs, as well as minimization strategies and their corresponding savings. Audited companies take the report findings seriously as a low cost form of technical assistance.

Creation of a Newsletter

The Project operates a regional waste exchange service, the Mahoning Valley Industrial Materials Exchange (MVIME). An integral component of the

MVIME is a quarterly newsletter mailed to more than 1,000 regional companies. Issues such as environmentally conscious manufacturing, waste minimization successes and environmentally friendly products are covered in the MVIME newsletter. The waste minimization successes are particularly important, as one company's success can be used as a model for other companies.

Exchange of Waste Material

The Project generated successful exchanges of waste material with more than \$2,500 in economic impact. The Mahoning Valley Industrial Materials Exchange is proving to be an excellent mode of communication for industry. The MVIME developed a free and confidential materials exchange newsletter that helps manufacturers market their unusable materials to other industries as valuable resources. The goal of the MVIME is to assist local companies in reducing overhead disposal costs, virgin material expenditures, and the volume of reusable products being landfilled. The newsletter is delivered to more than 1,000 manufacturers and recyclers, and all inquiries are channeled through the TDC office. This service allows the TDC to continue assisting industry in their pollution prevention efforts and reach industries that cannot be reached through the audit program.

Mahoning County's Industrial Waste Minimization Project

Implementation of Recycling Program

The Project designed and assisted in the implementation of an office paper and cardboard recycling program for a large steel manufacturer. The program saved \$4,800 in the first year. Process analyses combined with common sense recycling opportunities for common waste streams, such as office paper, corrugated cardboard and wood scrap, can greatly reduce solid waste disposal rates for a company. The audits also recommend buying recycled products.

Seminars on Waste Minimization

The Project provided seminars to companies interested in waste minimization, pollution prevention loans and Climate Wise programs.

Educational Opportunities

The Project involved 20 Youngstown State University student interns, providing unique educational experiences and industrial contact. The Project is the first comprehensive waste minimization project to involve University students. Also, the nonprofit incorporated structure of the TDC gives companies the security of a confidential service. Few manufacturers would be interested in allowing groups that could not provide confidentiality to perform this task. The TDC at YSU looks forward to future

progress with this project to help companies become more profitable and continue working toward responsible environmental operations.

Environmental and Economic Benefits

The Project has provided Mahoning County and the entire Mahoning Valley region with an excellent foundation for pollution prevention. The project has achieved significant results in the first year of this project. More than 110,000 cubic yards of landfill space has been conserved and the participants have reduced disposal costs by more than \$900,000. The Project assisted in developing the Mahoning Valley Industrial Materials Exchange. The Project instituted pollution prevention programs in 23 manufacturing facilities involving more than 4,000 employees. Lastly, it provided internships for 20 Youngstown State University students.

Transferability

The information gathered from audit reports is transferable to other industries utilizing similar processes. The TDC is working on tracking typical waste streams generated by specific industry types and sizes. By arriving at a model for predicting typical waste generation rates, the information gathered will be easily transferable to other manufacturers. Information gathered from audits is stored in

databases for easy reference. Using this approach, data can be sorted and accessed by the industry sector. Additionally, the waste minimization successes featured in the MVIME newsletter are important, as one company's success can be used as a model for other companies.

For More Information

Laura A. Lyden
Manager of Environmental and Analytical Services
YSU-Technology Development Corporation
One University Plaza
Youngstown, Ohio 44555
(330) 742-2742

This is the 41st in a series of documents Ohio EPA has prepared on pollution prevention. For more information, call the Office of Pollution Prevention at (614) 644-3469.

The Office of Pollution Prevention was created to encourage multi-media pollution prevention activities within the state of Ohio, including source reduction and environmentally sound recycling practices. The Office analyzes, develops, and publicizes information and data related to pollution prevention. Additionally, the Office increases awareness of pollution prevention opportunities through education, outreach, and technical assistance programs directed toward business, government, and the public.

Office of Pollution Prevention WWW address: www.epa.ohio.gov/opp