

NEWS WAVES



A Sea Grant Extension Newsletter for Economic Development and Environmental Enhancement

In This Issue

Page 1 & 2

Feature Article:
*The Bottom Line of
Pollution Prevention*

Page 3

For More Info

Page 4 & 5

Local Happenings

Page 6

Waterwise:
Maumee "Area of Concern"

Page 7

Web Surfing

Page 8

**Resources from Extension
and Sea Grant**

Newswaves is designed to foster an understanding of environmentally enhanced economic development. It is written for development professionals and public officials in Northwest Ohio. Newswaves is produced quarterly by the Ohio Sea Grant College Program, a partnership of government, universities, industry, and the public to help citizens understand and sustainably use our Great Lakes resources for long-term economic growth.



The Bottom Line of Pollution Prevention

by Mary Bielen

The Pollution Prevention Act of 1990 established the basis for the United States Environmental Protection Agency (US EPA) to change its focus from pollution control to pollution prevention-- a major shift in national environmental protection policy. Targeting pollutants as they occur in manufacturing and other production processes is preferable to later treatment or disposal. Pollution prevention and source reduction are terms that are often used interchangeably. Pollution prevention (or P2) calls for reducing or eliminating waste and pollution at its source whenever feasible. However, if wastes and pollutants are generated, the second component of this waste management hierarchy is to recycle and reuse wastes and pollutants in an environmentally sound manner. The next option is the treatment of pollutants. Disposal or other release into the environment is considered a fourth or last resort.

The Governor's Awards for Outstanding Achievement in Pollution Prevention have been presented since 1986 to recognize Ohio companies that have instituted model P2 initiatives demonstrating cost-effective ways of reducing waste at the source and/or recycling materials. Several Northwest Ohio Companies are past award recipients. Chrysler's Machining Plant in Toledo established a waste management team whose efforts resulted in a reduction of more than 137 million pounds of waste from 1990 to 1996. Another award winner was Whirlpool in Clyde, the largest automatic washing machine plant in the world. They initiated a plant-wide pollution prevention program that resulted in a 70 percent reduction in solid and hazardous waste. This meant a reduction in waste in 1995 from 4.57 pounds to 1.36 pounds generated per washing machine.

The US EPA and Ohio EPA have both helped implement pollution prevention policy through dissemination of information, technology transfer and financial assistance programs. (See Web Surfing, page 7.) Ohio EPA provides information to businesses via telephone hot lines, fact sheets, newsletters, and the Internet. Education is provided through seminars and courses. Technical assistance can be provided by telephone, e-mail or through on-site consultation. Ohio EPA offers a Pollution

Continued on Page 2



Because more customers now include environmental performance as a standard in selecting suppliers, companies report market advantages as a result of having adopted pollution prevention strategies. Also, because Ohio EPA recognizes those companies that make voluntary commitments to pollution prevention, businesses are enhancing their public image by implementing and publicizing their P2 activities.

Bottom Line of Pollution Prevention *Continued from Page 1*

Prevention Loan Program to businesses to assist them with implementing P2 projects. Voluntary programs such as US EPA's WasteWise is designed to give businesses, trade associations and the public sector an opportunity to implement a comprehensive solid waste reduction program. Many state EPA programs also integrate pollution prevention into their regulatory programs to encourage businesses and the general public to reduce the amount of pollution generated.

Among the most cited economic benefits to individual businesses of implementing P2 practices are the reduced costs of 1) overall production due to better management, 2) waste treatment and disposal, and 3) environmental permits, monitoring, and enforcement compliance. Also, because more customers now include environmental performance as a standard in selecting suppliers, companies report market advantages as a result of having adopted pollution prevention strategies. Because EPA publishes details of companies' waste and pollution prevention efforts through the Toxics Release Inventory and recognizes those companies that make voluntary commitments to pollution prevention, businesses are enhancing their public image by implementing and publicizing their P2 activities.

The public benefits of pollution prevention include a more protected and enhanced environment and improved human health resulting from reduced risks and reduced worker exposure to toxic chemicals. When public benefits are added to individual business benefits, pollution prevention makes even more economic and environmental sense.

Despite reduced business costs, environmental benefits and a number of outstanding case examples, barriers to pollution prevention exist in the current regulatory, economic, and informational framework. Regulatory requirements need to be flexible enough to encourage research and investigation of P2 possibilities. A case study analysis undertaken by Resources for the Future, a nonprofit and nonpartisan think tank that conducts independent research on environmental and natural resource issues, suggests corporate P2 opportunities are more likely to grow if environmental policies give companies the flexibility to experiment with innovative "pollution solutions."

Economic factors can be substantial barriers, too. The Ohio EPA Pollution Prevention Loan Program and other financial programs (See For More Info, p.3) can provide firms with the necessary capital for making initial investments in source reduction technologies. The Resources for the Future case studies suggest that corporate efforts to retrofit obsolete production facilities may offer the most optimal win-win situations. Companies benefit from the efficiencies of equipment upgrades while the cleaner technologies of more modern equipment often result in environmental benefits. Businesses also need information and technical assistance in order to institute P2 practices. Firms that have been successful with P2 can be especially helpful to other companies by sharing their P2 "trade secrets." Although barriers exist they may be overcome in the future through continued education, partnerships, and other initiatives focused on pollution prevention. NW

For More Info

US EPA Environmental Finance Guidebook

This guidebook provides the private and public sectors with tools and strategies for financing environmental projects. An entire chapter is devoted to P2 financing. Fifteen tools including traditional State and Federal assistance programs, investment strategies and financial management techniques that encourage conservation and reuse are reviewed. Each tool is described with its advantages and limitations. An evaluation matrix is provided which rates each tool according to its actual use, potential use, cost savings, and administrative ease. It can be downloaded from the US EPA web site: <http://www.epa.gov/efinpage/guidbk98/index.htm>. NW

Great Lakes Environmental Finance Center (EPA Region 5)

The Center is financed by the U.S. EPA and based at Cleveland State University. Technical assistance to cities, businesses and private sector interests on financing pollution prevention and other environmental projects is a major focus. For more information visit their web site at <http://www.csuohio.edu/glefc/>. Contact Donald Iannone, Executive Director, Great Lakes Environmental Finance Center, Urban Affairs Building, Room 215, Cleveland State University, Euclid Avenue at East 24th Street, Cleveland, OH 44115. Phone: 216-687-6947. NW

US EPA Small Business Ombudsman Program Toll-free Hotline

This program serves as a liaison between small businesses and US EPA to promote understanding of EPA policy and business needs and concerns. The program operates a toll-free hotline for the convenience of small businesses and trade associations seeking free, confidential help regarding regulatory and technical information. A member of the Ombudsman's staff will answer between 8:30 AM and 4:30 PM. All calls are personally handled on a fast turn-around basis. Toll-free phone: (800) 368-5888. Web site: <http://www.epa.gov/sbo/>. NW

Ohio's Materials Exchange (OMEX)

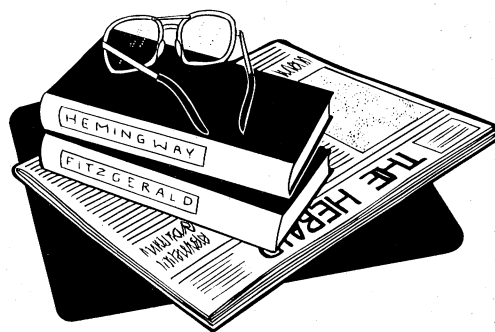
This free, statewide service provides a mechanism for one company's unwanted materials to supply another company's needs through recycling and reuse. This service can result in cost savings to both donor and receiver. The donor avoids the cost of disposal and the receiver obtains raw material at considerably lower costs. OMEX maintains available and requested materials listings in 23 categories. To place a free listing or for more information contact: Ohio's Materials Exchange, c/o Waste Alternatives, P.O. Box 70, Mount Vernon, OH, 43050. Phone: 888-718-6639. E-mail: Tryomex@aol.com. Web site: <http://www.epa.state.oh.us/opp/recyc/omex.html>. NW

Pollution Prevention Video

"An Ounce of Prevention: The Advantages of Reducing Waste" is a 24-minute video available from Ohio EPA. Five small business owners discuss how and why they undertook P2 initiatives. Tapes are available for loan at no charge. Contact: Chris Cotton, Ohio EPA, Southwest District Office, 401 E. Fifth Street, Dayton, OH, 45402-2911. Phone: (937)-285-6093. NW

The Environmental Finance Handbook

includes fifteen financial tools that encourage conservation and reuse. Each tool is described with its advantages and limitations. An evaluation matrix is provided which rates each tool according to its actual use, potential use, cost savings, and administrative ease.



Local Happenings

The Orphan Chemical Recycling Program is coordinated by Bowling Green State University, which maintains a web site with a listing of unused or (orphan) chemicals available at no charge to the interested party. The orphan list is available to anyone having access to the Internet. Changes to the Internet listings are made following each transaction. All chemicals remain at the originating facility until they are claimed. The program is a past recipient of the Governor's Pollution Prevention Award.

The Edison Industrial System Center (EISC) helps meet the technological needs of industry through research, development and a variety of services. It is one of seven technology centers that are part of Ohio's Thomas Edison Program. A public/private partnership, the Edison Program builds on the state's strength in technological research and development to create new job opportunities and long-term economic growth. EISC's primary customer base is Northwest Ohio. In addition to their main location, satellite offices are located throughout Northwest Ohio bringing immediate access to EISC services for manufacturers. The Lake Erie Manufacturing Extension Partnership, one of EISC's programs provides a full range of workshops, seminars, and services in addition to performing waste reduction assessments, environmental compliance assessments and contaminant assessments. Contact: Stan Carson or Charles Alter, Edison Industrial Systems Center, 2600 Dorr Street, Toledo, OH 43607-3237. Phone: (419) 535-6000 or Toll-free (877) 668-EISC. <http://www.eisc.org/NW>

The Waste Analyses and Minimization Research Project a joint venture between the Lucas County Solid Waste Management District and the University of Toledo, is designed to assist companies in the reduction, reuse, and recycling of solid waste through cost effective engineering methods. They also provide waste minimization assessments, free of charge to Lucas County businesses and manufacturers. Teams of graduate and undergraduate engineering interns conduct the assessments and prepare the final report. They also operate an online material Commodities Exchange for businesses interested in acquiring or trading raw materials and by-products. In addition to also being a resource for recycling and waste minimization information and reference materials they provide planning and implementation assistance as well. Contact: Jim Walters at 419-213-6477 or Dr. Bob Bennett at 419-530-8202. <http://recycle.utoledo.edu/lcswmd/programs/WasteAnalLab.html> NW

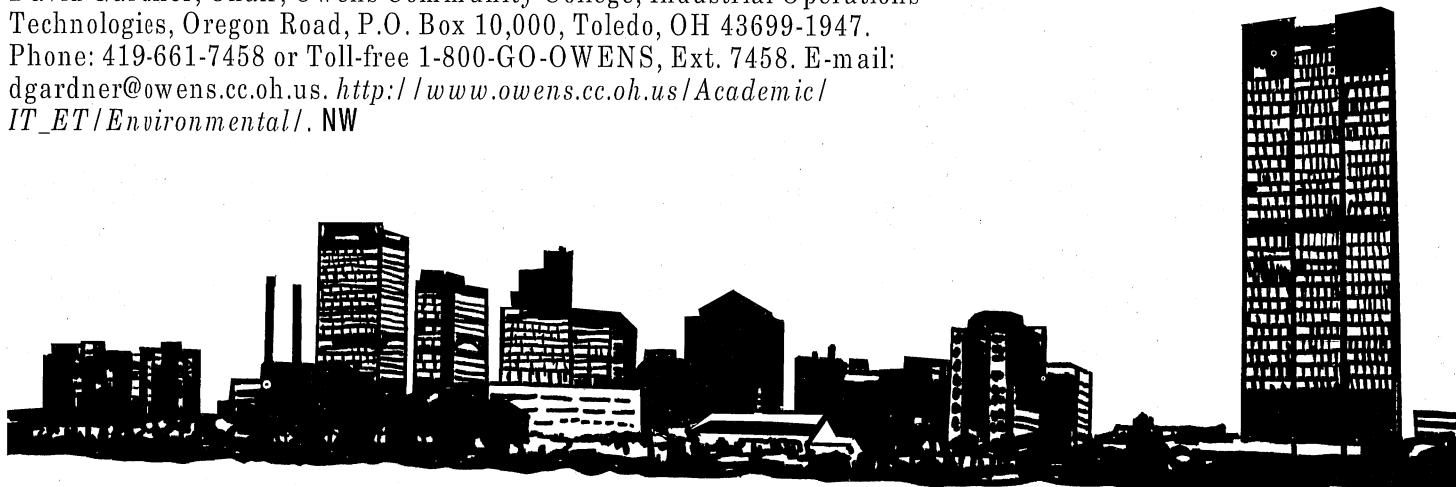
The Orphan Chemical Recycling Program is coordinated by Bowling Green State University, which maintains a web site with a listing of unused or (orphan) chemicals available at no charge to the interested party. Each participating institution or facility selects an individual to serve as their contact, who subsequently conducts an inventory of their chemical stocks. This inventory is then posted on the web site. The orphan list is available to anyone having access to the Internet. Changes to the Internet listings are made following each transaction. All chemicals remain at the originating facility until they are claimed. A facility wanting to obtain an

item on the list is responsible for initiating the transfer. Handling procedures during the transfer of these orphan chemicals normally follow Department of Transportation shipping requirements. The Orphan Chemical Recycling Program is a past recipient of the Governor's Pollution Prevention Award. Contact: Dave Heinlen, Safety and Health Coordinator, Dept. of Environmental Health and Safety, Bowling Green State University, Bowling Green, Ohio 43403. Phone: (419) 372-2173. E-mail: daveh@bgnet.bgsu.edu. <http://www.bgsu.edu/offices/envhs/orphmain.htm>. NW

The Northwest Ohio Pollution Prevention Team is a partnership of Ohio EPA, the City of Toledo, University of Toledo, Bowling Green State University, Owens Community College, the Maumee River Remedial Action Plan (see Waterwise, page 6) and other organizations concerned with the environment. The team has created a web page with information on how to dispose of various wastes and where to recycle in Northwest Ohio. Although designed, at present, for the use of homeowners, future expansion of the page will provide P2 information for business and industry. From this web page it is possible to link to the web site of Environment Canada - Atlantic Region which maintains "A Guide to Creating an Environmentally Friendly Office," which has detailed information on what can be done to prevent pollution at the office. It includes tips on reducing paper waste to buying environmentally friendly products. Also included are examples of businesses that have initiated P2 programs and realized cost savings. Contact: Northwest Ohio Pollution Prevention Team, Ohio EPA, 347 N. Dunbridge Rd., Bowling Green, OH 43402. Phone: 800-686-6930. <http://www.bgsu.edu/recycle/>. NW

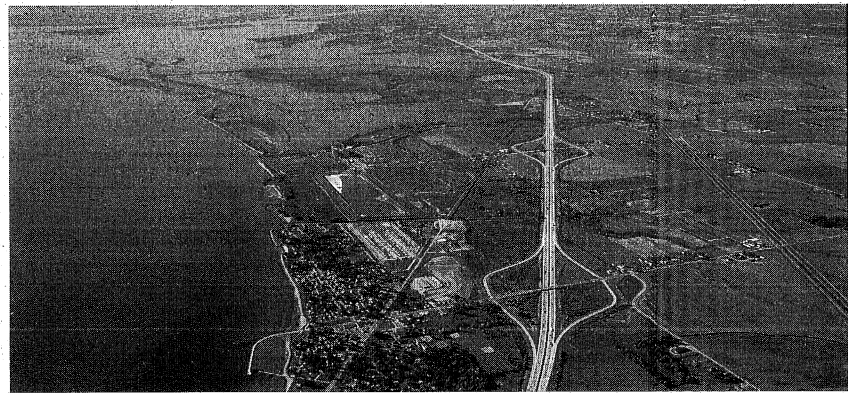
The Owens Community College Department of Environmental Management offers an Associate of Applied Science degree in Environmental Management Technology. Students in the program are required to conduct pollution prevention audits that actually reduce or eliminate a waste stream at an industrial site. Potential employers interested in students seeking an opportunity for field experience (i.e. performance of a pollution prevention audit, environmental sampling, wastewater or water treatment opportunities, etc.) may e-mail their position information to Dave Gardner at the address below. For further information on the program or to inquire about a free audit conducted by a student contact David Gardner, Chair, Owens Community College, Industrial Operations Technologies, Oregon Road, P.O. Box 10,000, Toledo, OH 43699-1947. Phone: 419-661-7458 or Toll-free 1-800-GO-OWENS, Ext. 7458. E-mail: dgardner@owens.cc.oh.us. http://www.owens.cc.oh.us/Academic/IT_ET/Environmental/. NW

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The involvement of business, industry, local organizations, citizens, and many volunteers enables the Maumee RAP to carry out a wide array of projects designed to restore beneficial use of the lower Maumee River basin. Other factors have contributed to improved area water quality in the 1990s. Pollution control laws enacted in the 1970s have been a major factor. Many industries have improved their processing methods, whether voluntarily or through enforcement efforts, by using less hazardous materials and changing waste disposal customs. Although area water quality has improved thanks to these factors, much remains to be done.

Waterwise



Maumee Bay (Photo courtesy of Toledo-Lucas County Port Authority)

Maumee “Area of Concern”

Water pollution in the Maumee Bay comes from several sources: 1) industrial and municipal discharges; 2) runoff from urban and agricultural land; 3) landfills which leach toxic substances, particularly PCBs; 4) contaminated sediments that have accumulated at the bottom of streams; 5) combined sewage overflows; and 6) the air, or “atmospheric deposition.”

In 1985 the lower Maumee River basin was classified as an “Area of Concern” along with 42 other Great Lakes areas. This designation from the International Joint Commission (IJC) was assigned to geographic areas with degraded water quality. The IJC established in 1909 by the United States and Canadian governments, functions as an advisory body on issues related to their common border. As water pollution became more of a concern, the Great Lakes Water Quality Agreement (GLWQA) was established by the two countries and monitored by the IJC. As part of the GLWQA, Remedial Action Plans (or RAPs) were established as the local mechanism for planning restoration and instituting cleanup. The Maumee RAP activities are coordinated by the Ohio Environmental Protection Agency (Ohio EPA) and the Toledo Metropolitan Area Council of Governments (TMACOG). The involvement of business, industry, local organizations, citizens, and many volunteers enables the Maumee RAP to carry out a wide array of projects designed to restore beneficial use of the lower Maumee River basin.

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Web Surfing

Ohio EPA's Office of Pollution Prevention

<http://www.epa.ohio.gov/opp>

The Ohio Environmental Protection Agency (Ohio EPA) Office of Pollution Prevention's web page provides full information on free pollution prevention assessments for businesses. These on-site surveys help companies evaluate their opportunities for reducing waste and pollution. The web page also contains information on financial assistance in the form of grants, loans and tax incentives for undertaking pollution prevention or waste minimization projects. Recycling/Recycler services and vendors are also listed here. Learn more about voluntary environmental management systems, conferences, and awards. Read *Prevention Quarterly*, the office's newsletter, on-line. NW

Small Business Environmental Home Page

<http://www.smallbiz-enviroweb.org>

This web page is maintained by Concurrent Technologies Corporation, a private consulting firm which provides a variety of services to businesses. The page focuses on small business assistance with environmental compliance and pollution prevention information. Features include links to information on environmental regulations, industry specific information, funding help, publications, videos and environmental management systems. NW

US EPA's Small Business Gateway

<http://www.epa.gov/smallbusiness/>

The United States Environmental Protection Agency (US EPA) maintains this web page as a resource for small businesses seeking assistance with environmental compliance. This web page features links to information on industry specific compliance, financial and technical assistance programs, and environmental laws and regulations. It also includes links to software for environmental awareness that can be downloaded and a section on frequently asked questions. NW

Pollution Solutions

<http://www.epa.gov/glnpo/p2/pollsolu/pp2cover.htm>

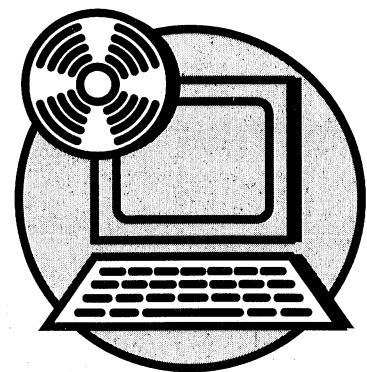
This web page is a report on the results of the Pollution Prevention Grant Program in the Great Lakes Basin. The US EPA Great Lakes National Program Office (GLNPO) awarded \$1.6 million in grants between 1992-1995 in support of pollution prevention projects sponsored by public and private nonprofit agencies and organizations. The seed money invested by GLNPO induced a number of innovative projects with lasting impact. Information on the GLNPO grant program can be found at: <http://www.epa.gov/glnpo/fund/glf.html>. NW

WasteWise

<http://www.epa.gov/epaoswer/non-hw/reduce/wstewise/>

This web page is maintained by the US EPA WasteWise Program. Businesses, trade associations, schools, colleges, universities, and state, local, and tribal governments are all eligible to join WasteWise by making a 3-year commitment to implement a comprehensive solid waste reduction program and track progress. It is a free, voluntary program for which the joining member receives publicity. NW

US EPA's Small Business Gateway features links to information on industry specific compliance, financial and technical assistance programs, and environmental laws and regulations. It also includes links to software for environmental awareness that can be downloaded.



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Resources from

Extension & Sea Grant

Information on pollution prevention and water quality is available from Ohio State University Extension and Ohio Sea Grant. Extension fact sheets may be obtained from your local county OSU Extension office or from the web site "Ohioline" at <http://ohioline.ag.ohio-state.edu>. Sea Grant fact sheets are available from Ohio Sea Grant Extension Offices in Toledo (419-249-6554) and Port Clinton (419-635-4021, Ext. 6217). Many Sea Grant fact sheets and back issues of *Twine Line*, an Ohio Sea Grant newsletter can be found on the Ohio Sea Grant web site at: <http://www.sg.ohio-state.edu/osgrant/f-osgrant.html>.

Extension Fact Sheets

Non-point Source Pollution: Water Primer (AEX-465-93) explains the difference between point and non-point sources of water pollution. Other water resource terminology is also explained and discussed including contamination, loading, delivery ratios, hydrologic cycles, best management practices, pollution abatement, and the Clean Water Act.

Sea Grant Fact Sheets:

Lake Erie Water Quality: Past, Present and Future (FS-046) gives an historical prospective on the Lake's water quality. It discusses point and non-point pollution sources, current pollution problems, and toxin effects.

Ohio's Areas of Concern (FS-041) discusses the four most polluted areas along the Lake Erie Coast—the Maumee, Black, Cuyahoga and Ashtabula rivers. It explains how these areas came to be polluted and how clean-up efforts are progressing

Twine Line:

What is Water Quality? (Twine Line, August 1993) reviews the meaning of water quality, explains how standards are set, and describes threats to water quality including toxic substances from industrial discharges and urban runoff.