



IOWA WASTE REDUCTION CENTER  
University of Northern Iowa

# ANNUAL REPORT

2002

prescribing  
pollution prevention

# Table of Contents

Introduction .....	1
House Calls.....	2
Iowa Air Emissions Assistance Program.....	4
Iowa Waste Exchange .....	6
Small Business Pollution Prevention Center .....	8
Pollution Prevention for Painting and Coating Compliance Enhancement.....	12
Spray Technique Analysis and Research.....	14
Small Business Compliance Alliance .....	16
Watershed Projects .....	18
Student Interns .....	20
Foreign Students .....	22
Staff .....	23
Advisory Committee.....	27
Funding .....	28

# INTRODUCTION

**T**he Iowa Waste Reduction Center (IWRC) is an environmental assistance provider of free, confidential and non-regulatory services to Iowa small businesses. Just as a medical expert provides quality care and service excellence to his patients, the IWRC takes pride in offering the best professional service possible to our valued clientele. By offering pollution prevention informa-



**John Konefes, Director**

tion and regulatory compliance treatment in just the right doses, the IWRC waste reduction specialists and staff help to keep small businesses aware of the often complex and constantly changing environmental stipulations required by the government.

By conducting applied research, offering training and education opportunities, and by providing effective pollution prevention and waste reduction assistance to Iowa clients, the IWRC is a national leader in small business environmental assistance and has provided innovative technology education to many businesses in Iowa and throughout the United States. To advance the support and credibility of our various programs, the IWRC has initiated partnering opportunities with trade associations, community colleges, Councils of Government, solid waste agencies and the Iowa Department of Natural Resources.

Discovering a need for small business environmental assistance, the IWRC was established under the Groundwater Protection Act of 1987. Since our inception in 1988, we have conducted nearly 2,300 multi-media on-site reviews in all 99 Iowa counties, maintaining a valuable service to help promote and preserve our natural environment.



**[Above]** Ana Maria Nanra (left) peering into a barrel of metal shavings as she determines its waste potential. **[Below]** Jim Olson (left) offering advice to a small business owner during an on-site review.

**O**n-Site Reviews (OSR's) are a beneficial service offered to Iowa small businesses with 200 employees or less. At the request of a small business, an IWRC waste reduction specialist visits the client's site, much like the old-fashioned house calls made by yesterday's doctors, to evaluate current pollution prevention and regulatory compliance by reviewing existing air emissions, wastewater, solid and hazardous wastes, recordkeeping and other management practices.

After the visit, the specialist prepares a confidential report prescribing advice on how to correct problems, reduce wastes, and cut disposal costs for the client. Once this confidential report is directly mailed

# USE CALLS

to and received by the business, a follow-up phone call is conducted to offer any additional advice or answer questions the client might have about the IWRC's suggestions in improving the business' environmental health.

Visiting 182 clients this year alone, the total number of OSR's conducted by the IWRC throughout its history is nearing 2,300. Expanding target markets to areas such as golf courses, community colleges, hospitals and appliance recyclers has proven to be an important aspect to the growth of the number of OSR's conducted throughout 2002. The success of this program is often attributed to the confidentiality and personal one-on-one philosophy practiced by the IWRC staff.

Last spring, the IWRC partnered with the Institute for Decision Making (IDM) at the University of Northern Iowa and the Charles City Area Development Corporation (CCADC) to implement a community-wide pilot program providing OSR's to all qualifying Charles City small businesses and industries. The partnership between the IWRC, the IDM, and the CCADC served as a trusted bond that area business could rely on to utilize the IWRC's quality services.

The IWRC will again be partnering with the IDM in the spring of 2003 to conduct a second community-wide project with the Iowa Great Lakes Corridor of

Opportunity in the Spencer/ Spirit Lake area. This project will be engaged similarly to the Charles City pilot, as well as provide new additional initiatives such as a mercury collection effort.

This coming fiscal year, the IWRC will begin implementing a new OSR program that provides second-step visits to trial businesses. The second-step visit will combine the original on-site routine with a second visit to assist the client in the actual implementation of pollution prevention and regulatory compliance ideas.



**Chris Horan (left) discussing environmental information with an IWRC client.**



**Dan Nickey (left) and Lisa Hurban (center) assist an Iowa newspaper publisher during an on-site review.**

**C**lean air is a prescription for Iowa's future health. For this reason, air emissions regulations have been created to protect the condition of both our health and environment. The Iowa Air emissions Assistance Program (IAEAP) at the Iowa Waste Reduction Center (IWRC), supported by the Iowa Department of Natural Resources (IDNR), was developed to assist small Iowa business to understand and comply with existing regulations.

IAEAP staff offers such assistance as determining permit status, applying for permits, and helping

businesses meet permit conditions. Through on-site visits, IAEAP staff can gather information pertinent to both the interested business' compliance and our ability to protect and support the environment. An ongoing goal of the IAEAP is to each year become more efficient and provide our clients with quality assistance.

### **Emissions Inventory Assistance**

IAEAP assists Iowa small businesses in completion of the Minor Source Emissions Inventory Questionnaire (MSEIQ). The purpose of this inventory is to gather data about the sources and quantities of air pollutants emitted into the atmosphere by businesses. Collectively, the information accumulated will assist the IDNR in continuing to manage our air resources, which includes planning pollution control programs, identifying general emission levels, and locating monitors to ensure our air quality meets federal health standards. Also, the data collected in this inventory will assist Iowa and other states in the management of pollution that drifts across state borders and into different regions of the nation.

The IAEAP staff completed 165 inventories for businesses this year alone, focusing on the central part of Iowa. Future MSEIQ's will again be aimed at small-to medium-sized businesses, but will be located in Western Iowa. To complement this, IAEAP staff will conduct three workshops located in Spencer, Carroll and Sioux City.

# I A E A P

## sions Assistance Program

The IDNR has established the State Permitting and Air Reporting System (SPARS) to act as a library where all MSEIQ information in the state can be stored for utilization in current and future decision making processes. A current goal of the IAEAP is to have each MSEIQ this year submitted electronically to the IDNR using SPARS.

### **Dry Cleaner Initiative**

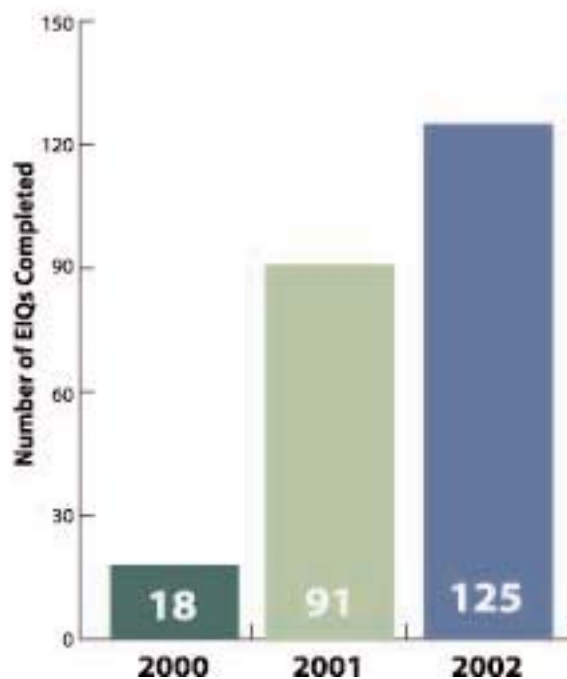
In past years, the IWRC developed a manual for drycleaners to aid in environmental compliance, waste reduction and pollution prevention. Because this manual is somewhat out of date, the IAEAP began to research recent developments and industry need in order to develop and publish a new drycleaners manual. In addition, the IAEAP plans to develop a compliance assistance calendar that will remind



drycleaners of deadlines for regulations, requirements and other information.

**Tim Trumbull (left) and a client discuss permitting requirements for a vent.**

### EIQ Detailed Assistance



The Iowa Waste Exchange program is a cooperative effort between the Iowa Waste Reduction Center at the University of Northern Iowa, Recycle Iowa at the Iowa Department of Economic Development, Iowa Department of Natural Resources, Iowa Community Colleges, Local Councils of Governments, and Iowa Solid Waste Agencies.

The Iowa Waste Exchange was created to provide Iowa industries with prescriptions for waste management alternatives and business assistance services

that result in both economic and environmental benefits, including waste reduction from Iowa landfills.

Since its inception in 1990, the program has helped thousands of businesses find new uses and new users for industrial materials and by-products. In addition to avoiding disposal costs, companies may also realize savings in avoided purchases, reductions in transportation costs, increased storage space, and other benefits.



Kristi Peterson (left) and Jeff Beneke (right) discuss waste-related issues with a client at an Iowa facility.

In the past fiscal year (July 1, 2001 to June 30, 2002), the Iowa Waste Exchange program found uses for nearly 500 materials, diverting over 100,000 tons of waste from disposal. Based on Iowa Department of Natural Resources tonnage fee estimates, the associated savings to state businesses resulting from avoided disposal costs is over 3.8 million dollars. The Iowa Waste Exchange far surpassed its goal of diverting 75,000 tons of waste materials from state landfills this year.

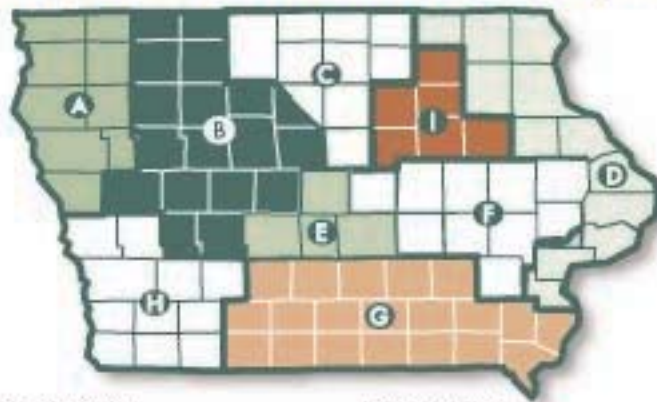
# I W E

## Iowa Waste Exchange

Listed on the following page are just a few examples of successful matches the IWE program has had over the course of the year:

- ✓ Matched polypropylene sheets from 3-M to Delta Plastics. The match resulted in a diversion of 146.5 tons of material from the landfill, resulting in a \$7,000 savings in disposal costs.
- ✓ Diverted eight tons of books from West Des Moines Schools to Mid-America Recycling.
- ✓ Matched two computers and a printer from the Belmont Independent newspaper to Charlie Brown Daycare Center.
- ✓ Diverted 600 tons of wood waste from All American Homes of Iowa to a wood recycler. The wood waste was ground into sawdust and used as animal bedding.

### Iowa Waste Exchange Representatives by Region



**A: PERRY NELSON**  
Western Iowa Tech Community College  
(712) 274-8733 Ext. 1560

**B: FRED KESTEN**  
Region XII Council of Governments  
(712) 792-9914

**C: OPEN**  
North Iowa Area Community College  
(641) 422-4352

**D: JULIE PLUMMER**  
Eastern Iowa Community College  
District  
(563) 336-3319

**E: DENNIS HAYWORTH**  
DMACC - Business Resources  
(515) 964-6346

**F: RICK MEYERS**  
(Linn County only)  
and  
**JOHN KOCH**  
Kirkwood Training and Outreach  
Services  
(319) 398-5665, (319) 398-4904

**G: JIM REIMER**  
Indian Hills Community College  
(641) 683-5269

**H: BILL PENDGRAFT**  
Iowa Western Community College  
(712) 325-3309 Ext. 3309

**I: SARAH SMITH**  
Iowa Northland Regional  
Council of Governments  
(319) 235-0311

# Small Business Pol



**Jeff Beneke (right) discusses pollution prevention opportunities at a local healthcare facility.**

**T**he Small Business Pollution Prevention Center is the only center in the United States that conducts applied research and educational outreach specifically designed to meet the needs of small business. The SBPPC is funded by the Environmental Protection Agency. The primary objective of the SBPPC is to discover practical pollution prevention solutions for small business, and deliver those solu-

tions to small business owners and operators directly or through technical assistance professionals.

The SBPPC develops research projects based on the needs of small businesses by using the IWRC's constant interaction with businesses and trade associations as a means to diagnose small business priorities. Research projects are designed and tested at Iowa small businesses. Following the success of the project, the recommendations developed are then shared with small businesses and technical assistance providers throughout the country.

## **Education and Training**

### **1) Hospital Pollution Prevention**

In prescribing pollution prevention, the SBPPC has diagnosed treatment for improving the environmental health of Iowa hospitals. Opportunities for pollution prevention at hospitals will be developed and shared with small Iowa hospitals. Hospitals generate small quantities of a wide variety of wastes and require varied management and disposal.

The IWRC in cooperation with Health Enterprises of Iowa conducted five on-site assessments at hospitals with fewer than 200 employees to develop a baseline. The baseline was utilized to develop tools to assist small hospitals in achieving environmental regulatory compliance and implement waste reduction plans.





**Marci Carter** presenting to the Advisory Committee the different aspects of an EMS Service Center.

### 3) Environmental Management Systems Services

EMS Services continues to work with Iowa businesses in the development of an EMS. An EMS is a comprehensive plan that businesses can use to address all aspects of waste management. We provides hands-on assistance to Iowa businesses by conducting facility audits and providing training. EMS Services is currently working on developing sector specific assistance packages by working with meat processors, soybean growers, pork producers and automotive suppliers.

### 4) Teacher's Resources

Teaching tools were developed in an attempt to educate emerging professionals on applicable environmental regulations. Previously, two community college curricula were developed: the

Vehicle Maintenance Pollution Prevention Curriculum for automotive repair programs and the Lithographic Printing Pollution Prevention Curriculum for printing programs. The material was recently converted to WebCT, an internet-based training forum that is used by community colleges. Additionally, the Kid's P2 project took an innovative approach to introducing small business environmental issues and the benefits of pollution prevention to 7-12 graders by creating a curriculum that includes three board games simulating small business ownership.

### 5) Used Oil Workshop

A used oil workshop was conducted in Davenport,



**The Used Oil Workshop** highlighted the costs and benefits of a used oil furnace.

IA, on February 27, 2002, to help small business owners that generate used oil evaluate the costs and benefits of implementing a used oil-fire furnace at their facility. The next workshop is planned for April 2003.

### **Applied Research**

#### **6) Spontaneous Combustion of Used Paint Booth Filters**

This laboratory research project identified the cause of spontaneous combustion of used paint booth filters. Filter management guidelines were created to advise body shops to handle used filters in such a way as to minimize the potential for spontaneous combustion.

#### **7) Cost Calculators for Auto Body Shops**

Online cost calculators were developed to help auto paint shop owners easily identify potential savings if pollution prevention recommendations are implemented.

#### **8) Energy Aspects of Pollution Prevention**

The study of the energy consumption of pollution prevention techniques has recently been completed. The project evaluated the use of a fan speed regulator as a means to reduce energy consumption. The findings were very encouraging, with the greatest potential for impact if the regulators were added to standard equipment.

#### **9) Storm Water Pollution Prevention Plans for Scrap Yards**

Working in conjunction with the Iowa Auto Recyclers Association, we devised a mechanism of meeting the storm water permit regulatory requirements, and produced a convenient software program that generates a Storm Water Pollution Prevention Plan (SWPPP) for automotive scrap yards. With this software, the plan can be ready for use in about 20 minutes. The IWRC also conducted the required annual monitoring at several automobile salvage yards in Iowa.



**Sue Schauls takes a manual storm water sample from an Iowa salvage yard.**

# Pollution Prevention for Painting and Coating

**P**ollution Prevention for Painting and Coating Compliance Enhancement (P<sup>2</sup>PAC<sup>2</sup>E) continues to provide effective remedies for the painting and coating industries by improving the efficiency of their operations and discovering pollution prevention opportunities. It is a cooperative effort with U.S. EPA's Design for the Environment program.



Jeff England reviews some intricacies of the powder coating process with a training class.

Through excellent hands-on training opportunities, on-site technical assistance, equipment resource availability, and ongoing research efforts, the program proves to be a tremendous resource for businesses with painting and coating operations.

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## Process Training

The P<sup>2</sup>PAC<sup>2</sup>E Process Training program uses a multifaceted approach based on education, demonstration and research to improve efficiency, pollution prevention and environmental compliance at businesses with spray finishing operations. Process training is a three-day, hands-on training course that covers a variety of painting and coating processes ranging

from pretreatment to powder coating. An emphasis is placed on spray operator training and application efficiency, since these factors play a significant role in pollution prevention.

These training sessions target small business representatives, technical assistance providers and regulatory personnel. Process Training is currently being held on a monthly basis with attendees from as far as Alaska to Puerto Rico.

Special classes, tailored to a specific business and its employees, are also held at the Process Training facility. These "business specific" classes typically focus on the application equipment, coatings and/or substrates used in the business' spray finishing



John Whiting demonstrates spray gun set-up and its effect on atomization, finish quality and efficiency.

# P<sup>2</sup>PAC<sup>2</sup>E

## and Coating Compliance Enhancement

process. Business specific training may also investigate the use of alternative coatings or application technologies on the business' product.

The training sessions are held at P<sup>2</sup>PAC<sup>2</sup>E Process Training facility, which is an 8,000 square foot building located in the Cedar Falls Industrial Park. Equipment housed at the facility is available for use to businesses interested in improving their coating operation, trying out alternative technologies/coatings or starting a finishing operation. Some equipment may also be loaned out for trial use, allowing businesses to evaluate alternative technologies under their operating conditions.

### **Second Step Technical Assistance**

At the request of a business, Process Training staff will work directly with Iowa business employees at their facility providing assistance with a hands-on approach. On-site efforts include assistance with equipment setup and operation, spray technique training, equipment modification and equipment demonstrations. This past year, three businesses in Mississippi also received Second Step Assistance in a combined effort of the Iowa Waste Reduction Center and the Mississippi Technical Assistance Program.

### **Outreach Programs**

#### **✓ Publications**

The *Ahead of the PAC<sup>2</sup>E* newsletter is published

twice a year and consists of articles written by IWRC staff and industry experts.

Articles address issues important to the spray finishing industry and include case studies. IWRC staff also publish articles in popular trade magazines.

#### **✓ Educational Outreach**

Special powder coating classes were held for the University of Northern Iowa Capstone class, a class focusing on environmental and technology issues in today's world. Classes were also held for the auto body program at Hawkeye Community College in Waterloo, IA.

#### **✓ Special Events**

A special Tech Day event was held at the Process Training facility. A cooperative effort between the IWRC, Graco Incorporated, and Dove Equipment Company Incorporated, it included presentations on environmental and efficiency issues facing the spray finishing industry.



**Brian Gedlinske makes a fluid pressure adjustment during a demonstration on pressure-feed airspray equipment.**

# Spray Technique Analysis

Family physicians encourage parents to teach their children the importance of using proper posture in daily activities to avoid potentially serious health problems. In many ways the Spray Technique Analysis and Research (STAR<sup>®</sup>) program uses the same “train the trainer” approach with spray instructors at community colleges.

The STAR<sup>®</sup> team at Iowa Waste Reduction Center acts as the family physician as they encourage college instructors to stress to their students the many benefits of using proper spray technique. Spray technicians can avoid the negative results stemming from poor technique such as excess overspray, poor transfer efficiency (TE), inconsistent finish quality, increased material costs and harmful air emissions. The goal of STAR<sup>®</sup> training is to improve the overall efficiency of manual spray coating operations.

Results from STAR<sup>®</sup> training in Iowa show that, on average, TE

improves from 49 to 60%, and there is a 20.5% decrease in material consumption following training. This means that less paint is being wasted because a higher percentage of the paint is being directly applied to the part rather than wasted through overspray.

STAR<sup>®</sup> training begins with the spray technician performing a pretest. Once the test is completed, the classroom begins with an analysis of the spray technician’s technique through video footage. Overspray, amount of paint used, VOC emissions and transfer efficiency (the amount of material hitting the target compared to the amount of material sprayed) are calculated to compare with post-training results. STAR<sup>®</sup> trainers then introduce alternative spray techniques and equipment, such as the Laser Touch<sup>™</sup> targeting device and high-volume low-pressure (HVLP) spray guns. Technicians are then given the opportunity to experiment with the equipment and improve their spray tech-



**Chris Lampe (left corner) demonstrating a Laser Touch<sup>™</sup> unit and a Laser Training gun.**

# STAR<sup>®</sup>

## Analysis and Research Program

nique. After a final spraying session, overspray, VOC emissions and transfer efficiency are then recalculated and compared to pre-training results.

The IWRC is establishing a STAR<sup>®</sup> training network throughout Iowa by setting up training sites at all community colleges that offer an automotive repair program. This became the framework for national training network. Wisconsin and Hawaii are the most recent states to establish STAR<sup>®</sup> training sites, and instructors from Minnesota have been certified, but have not yet begun training. To date, there are now training sites established at 30 sites in 16 states.

California's Air Resources Board (CARB) Automotive Refinishing Pollution Prevention Outreach Program has completed the training of 34 automotive refinishing technicians, three assistants and two instructors. CARB has partnered with the Centre City/Skills Center (or San Diego Skills Center), located in the San Diego neighborhood of Barrio Logan, Contra Costa Community College in the Oakland area, and Los Angeles Trade-Technical College, located in Los Angeles to provided STAR<sup>®</sup> training. The goal of the CARB Automotive Refinishing Pollution Prevention Outreach Program is to decrease environmental impacts from automotive refinishing operations by providing the STAR<sup>®</sup> program's hands-on spray technique training and innovative pollution prevention technology like the Laser Touch<sup>™</sup> in low-income, minority communities in California.



**[Above] Rick Klein (right) assisting one of the IWRC's many small business clients. [Below] Bill Zimmerle (right) demonstrates a Laser Touch<sup>™</sup> unit and proper spray distance.**

## Small Business

The IWRC worked with other assistance providers to develop the Small Business Compliance Alliance, a program that coordinates environmental, Occupational Safety and Health Administration (OSHA) and Internal Revenue Service (IRS) compliance resources to diagnose regulatory relief for small businesses. Our SBCA partners, Texas and Nevada, have developed IRS and OSHA models, respectively.

The IWRC has developed a model by providing environmental regulatory assistance and increased coordination with other assistance providers and regulatory agencies. Services to small businesses must be both individual and coordinated.

The Environmental Assistance Model was developed to provide assistance and tools to existing environmental assistance programs. Existing programs can utilize the tools developed by the IWRC to enhance their ability to address small business issues. First, the IWRC establishes a relationship with an

existing state environmental assistance provider, such as Small Business Assistance Program (SBAP), Pollution Prevention (P2) program, and/or Small Business Development Center (SBDC), etc. As the relationship proceeds, the organization begins evaluating the matrix of environmental tools to determine integration into its current program. Representatives from the organization visit the IWRC for Blueprint



Carolyn Prins, the IWRC web designer, working on the SBCA website.

# SBCA

## Business Compliance Alliance

for Environmental Technical Assistance (BETA) training. The IWRC reviews how to incorporate BETA training tools into their program. The partner or participant integrates the model within their current program.

The following environmental assistance activities are included in our model.

### **Blueprint for Environmental Technical Assistance (BETA):**

BETA is comprised of a compliance assistance and pollution prevention on-site review training guide that includes checklists, regulatory summaries, vendor information, a client entry database, and example on-site reports from a variety of business sectors. The training guide, in conjunction with on-site business visits, has formed the basis for training technical assistance providers from other states including Kentucky and Maine. A typical BETA training visit includes two on-site reviews with IWRC staff, a review of regulatory summaries, training with the client tracking database, and training on how to access vendor information.

Since environmental assistance programs already exist to some degree in every state, IWRC has developed several different modules of an overall environmental model. This allows existing programs to implement only those modules they do not already

have in place, or find most useful for the needs of their state. The modules developed include: On-site technical assistance training, a client tracking database, workshops and a website template with regulatory and waste type summaries.

### **Workshops:**

The workshop portion of the implementation manual contains printouts of the slides used in our most recent workshops (foundries, manufacturing and environmental with OSHA focus). During these workshops, hazardous and solid waste, air permitting, water regulations, record-keeping and pollution prevention issues are addressed. This year the IWRC held two workshops: one in Davenport and the other in Ankeny.

### **Small Business Outreach and Assistance:**

IWRC has been developing small business environmental outreach via the Internet. The IWRC website is designed to provide the small businessperson with content, rather than the program brochure format. The content of the environmental assistance model has been structured so that businesses can click on their specific business sector, and then proceed to either regulations or specific waste streams generated by their industry. The regulatory and waste stream summaries that were developed in years one and two are currently available.

# WATERSHED

**T**he IWRC Watershed Project is another example of how we prescribe pollution prevention to help rebuild and create a healthy Iowa.

A watershed is a geographic area from which water drains. It is made up of several smaller subwatersheds. This year, the IWRC's watershed efforts have continued in the Lake Delhi Restoration Project (LDRP).

Lake Delhi, centrally located between Dubuque, Waterloo and Cedar Rapids, is a heavily used yet scarce public recreational resource. Industrial, agricultural and recreational users have adversely impacted the lake. Similar to other lakes, the main pollutant is sediment from agricultural, stream bank and shoreline erosion. However, a close second is nutrient enrichment caused by storm water runoff, containing elevated levels of chemicals from lawns and gardens and from agricultural practices in the watershed. High levels of bacteria are an emerging concern. Bacteria can contaminate a body of water from feedlot runoff, wildlife and pet wastes, and outdated or malfunctioning septic systems.

The LDRP is primarily focused on pollution prevention, stormwater runoff control and erosion control in urban areas, lake shorelines and farmlands. Funded by a grant from the Department of Natural Resources, the Lake Delhi Recreation

Association is able to research and conduct numerous activities. Listed below are activities conducted since last year:

- ✓ A soil erosion specialist, in partnership with the Delaware County Soil and Water Conservation District and the Natural Resources Conservation Service, exclusively works with landowners in the Lake Delhi watershed.
- ✓ Cost share funds are provided to landowners to install or implement erosion control best management practices.
- ✓ United States Geological Survey (USGS) completed a formal diagnostic feasibility study of Lake Delhi. A USGS/IWRC fact sheet, and a Water Resources Investigation Report, will be available to the public in 2003.
- ✓ IOWATER trained volunteer water quality monitors who collected water quality data at eight sites twice monthly from April to November. Data on turbidity, nitrate, nitrite, phosphorous, dissolved oxygen, pH, temperature and aquatic species present assists lake residents in understanding water quality of Lake Delhi and provides motivation for improved management practices.

# ED PROJECTS

- ✓ The LDRP completed year three of the collection of sediment and stream flow data. We now have three years of data on the sediment load entering the Lake from the Maquoketa River, available at [www.umesc.usgs.gov/data](http://www.umesc.usgs.gov/data).
- ✓ An extensive bathymetric study has been completed by USGS and a map is being produced showing detailed bottom evaluations.
- ✓ Twenty sediment cores were drilled in the lake and evaluated for toxic metals and pesticides.
- ✓ A 'mini-grant' project was established with up to \$500 available for homeowners to help prevent soil erosion from their own shoreline or lakeside lots.
- ✓ A shoreline demonstration plot was installed using three different techniques to prevent erosion and hold soil along the shoreline – a traditional hardscaping approach, native plantings and rip-rap, and a new permeable interlocking paving system.

Long-term results of the watershed project will be decreased soil erosion and sedimentation, improved stormwater management, preserved recreational opportunities, aquatic habitat

improvement and a blueprint for future urban and farm cooperative watershed efforts in Iowa. For more information on Lake Delhi visit [www.lakedelhi.com](http://www.lakedelhi.com).



**Sue Behrns (right) discusses options for stormwater runoff management with a business owner.**

# STUDENTS

The IWRC offers UNI students the opportunity to gain occupational knowledge and experience through various programs. As interns, students become involved with the Iowa Air Emissions Assistance Program (IAEAP), the Iowa Waste Exchange, and numerous other IWRC programs. By providing assistance in the creation and maintenance of databases, web development, writing and promotional activities, and by conducting research for various projects, students gain valuable hands-on education and support.



(left to right) Jason Ebensberger, Kelsie Kidder and Kristen Bohnenkamp.

## Pete Badding

A junior Management Information Systems major, Pete maintains and creates several of the IWRC databases. Recently, this Carroll, IA, native redesigned the Manuals database and developed a Grant database for the IWRC.

## Kristen Bohnenkamp

Originally from Remsen, IA, Kristen worked on survey assessments, updated client databases and assisted in grant research and writing. A Communications major with a Business Training emphasis, Kristen graduated in May and was recently hired on as a Research Assistant for the IWRC.

## Jason Ebensberger

A senior Management Information Systems major, Jason maintains and updates the Iowa Waste Exchange database. Throughout 2002, this Greene, IA, native has been consequential to the advancement of the 2003 Fiscal Year PASS systems management, Storm Water Pollution Prevention Plan software, and Linux networking.

## Nate Guy

Nate, a senior Health Promotions major, conducts internet research for SBPPC programs and updates the vendor database. This year he assisted in the organization of the summer MOPP tour, MOPP promotional materials, and the Storm Water Sampling Project. Nate is originally from Washington, IA.

## Kelsie Kidder

Born and raised in Waterloo, IA, Kelsie is a freshman Biology major. At the IWRC, she is currently working on the vendor database by finding various products for paint, powder coating and environmentally safe industrial needs.

# NT INTERNS

## **Shannon Laughlin**

A senior Management Information Systems major, Shannon maintains several of the IWRC databases along with internet/intranet responsibilities. Shannon was imminent in the development of the Program to Enhance Environmental Recordkeeping (PEER) database this past year.

## **Britni Gookin**

While working towards her graduate degree in Accounting, Britni assists the IWRC with budget database upkeep, provides statements of accounts, fulfills billing duties, and helps with clerical tasks. Britni is from Wilton, IA, but currently lives in Cedar Falls with her newly wed husband and fellow employee, Chad.

## **Traci McCollom**

Originally from Rudd, IA, Traci updates the IWRC web site with small business environmental news and assists in the writing of newsletters and other outreach materials. As a senior Public Relations major, Traci helped promote the 2002 MOPP Tour this past summer as well as promotions for other IWRC programs.

## **Mark McConnell**

Mark assists in maintaining and updating the IWRC web site and intranet as well as developing web applications for various IWRC programs. One of Mark's current projects is creating java based online calculator applets to generate instant cost comparisons of various spray painting techniques. Mark is a

senior Computer Science major and Financial Services minor from Mediapolis, IA.

## **Amber Thill**

Amber, a senior Public Relations major, helps promote IWRC programs in numerous ways. She assists with the writing of newsletters, annual reports and other outreach materials as well as provides editing expertise as needed by the IWRC staff.

## **Jeremiah Treloar**

A senior Management major and Environmental Science minor, Jeremiah serves as the Air Emissions Assistant for the IAEAP. Formerly from Clear Lake, IA, Jeremiah works with the EIQ Emissions inventory and other related Iowa Air Emission Programs.



(left to right) Jeremiah Treloar, Traci McCollom, Mark McConnell, Britni Gookin and Pete Badding.

## Foreign Students

The IWRC, in cooperation with Chalmers University of Technology in Gothenburg, Sweden, provides engineering students the opportunity to work at our facility. This partnership is made possible through the American-Scandinavian Foundation by promoting international understanding through educational and cultural exchanges between the United States and Scandinavian countries. The IWRC has cooperated with this program since the summer of 1990 and due to its incessant success, plans to continue this partnership throughout the next several years.



Chalmers University of Technology, Gothenburg, Sweden.

This summer, Elisabeth “Betty” Warren-Bugge, an engineering student from Chalmers University of Technology, assisted IWRC staff with the STAR® Training Program. Throughout her eight-week internship at the IWRC, Betty was able to assist

during on-site visits, work closely with STAR® training technicians, and complete necessary follow-up client materials.

“Working at the IWRC gave me valuable insight to the activity performed in the environmental field.

This experience will undoubtedly benefit me in any future career I choose. Working with STAR®-training helped me realize there is much work to be done in the automotive business, especially in terms of how small businesses actually handle waste issues and comply with existing regulations.”

“Rules and regulations are slightly different in Europe, but the bottom line is that we are basically in the same situation-- we all have to work together to make this planet a cleaner place.”

# S T A F F

## **John Konefes**

John has been the director of the IWRC since its inception in 1988. He is continually searching for new ways to focus the IWRC on small business needs and using innovative funding. John is currently renovating eight acres of prairie at his rural Butler County homestead.

## **Diane Albertson**

Originally from South Dakota, Diane is the Information Technology Specialist. She manages IWRC databases, provides support for PC software and hardware, and offers data management support for the IWE. At home, Diane enjoys sewing quilts for her children and grandchildren as well as ballroom dancing with her husband.

## **Sue Behrns**

Sue conducts on-site reviews focusing on water issues, heads the Lake Delhi Restoration Project, works on ICE and the Compliance Alliance, and is writing an implementation Manual for Agricultural Environmental Management Systems for the Iowa Soybean Association. She is on the planning committee of the Iowa Strategic Goals Program for metal finishers, and is on the Iowa Environmental Council Board. She and her husband John are avid gardeners and in 1999, converted their lawn to perennial flowerbeds and native plantings thus eliminating the need to mow.

## **Jeff Beneke**

Jeff is the Technical Manager for the Iowa Waste Exchange. In addition to conducting on-site reviews,

Jeff assists with the SBCA, the Hospital P2 Program, discarded appliance demanufacturing, and the ICE project. He graduated from the University of Wisconsin with his BS in Reclamation and a minor in Biology. Outside of work, Jeff coaches youth soccer.

## **Marci Carter**

Employed by the IWRC since 1994, Marci has completed over 100 on-site audits at commercial and industrial facilities. As well as heading the IWRC's Environmental Management System Service Center, she has been a participant of the Multi-State Working Group for Environmental Management Systems for four years and is the current Chair of the membership committee. Marci is a certified RAB ISO 14001 auditor and has her BS in Chemical Engineering from UCLA.

## **Jeff England**

Originally from Cedar Rapids, IA, Jeff is Quality Assurance Manager at the Center. Throughout this year, Jeff completed a painting equipment energy efficiency study, worked on a research project measuring paint gun transfer efficiency, and examined the advantages of using an ozone generator for on-site wastewater treatment. Jeff served as a student employee at the IWRC before he graduated from UNI with his BS in Physics in 1998. He is currently working towards his second BA in Computer Science with a minor in Mathematics.

## **Brian Gedlinske**

Brian coordinates the Pollution Prevention for Painting and Coating Compliance Enhancement Process Training program and related activities, con-

ducts on-site reviews, and develops the Ahead of the PAC<sup>2</sup>E newsletter. Originally from Iowa City, IA, Brian has his BS in Geology from ISU and his BA in Environmental Technology from UNI. Outside of work Brian enjoys fishing, kayaking and serves as a volunteer at his children's elementary school.

### **Chad Gookin**

Chad is the Public Relations Specialist at the IWRC. As well as managing promotional activities, he also coordinates the production of newsletters, annual reports, and other outreach materials. Chad, a native of Wilton, IA, enjoys participating in men's summer softball league as well as spending time with his wife, Britni.



**Glee Kidder coordinating office activities.**

### **Chris Horan**

Chris is a Program Manager with his BS in Biology and his MS in Environmental Science from University of Northern Iowa. Joining the IWRC in 1995, Chris works with clients to help them complete air permit applications, conducts on-site reviews, maintains our local computer network, and teaches an Environment, Technology & Society general education class at UNI.

### **Lisa Hurban**

Lisa performs on-site regulatory and pollution prevention audits for small businesses, presents workshops regarding Environmental Management Systems, conducts research for and has written manuals for the lithographic industry, and provides assistance regarding TRI Reporting and the Community Right to Know Act. As well as being RAB certified as a provisional auditor for ISO 14001, she is a graduate of Rutgers University in New Jersey with her BS in both Agricultural Engineering and Environmental Studies.

### **Glee Kidder**

Glee serves as Office Manager for the IWRC. She directs the office staff, maintains the purchasing and accounting records, and works with the Compliance Alliance. Originally from Waterloo, IA, Glee enjoys spending time with her family, golfing and traveling.

### **Rick Klein**

A native of the Cedar Valley, Rick is a Senior Research Technician. He co-manages the STAR<sup>®</sup> training program and is most recently involved with

the STAR® for Defense development. He is currently assisting California Air Resources Board (CARB) and Massachusetts Office of Technical Assistance in setting up STAR® training sites in environmental justice areas. Rick has a BS in Environmental Engineering from Kennedy-Western University, is a Stakeholder on EPA's Environmental Technology Verification Board, and is a member of the National Pollution Prevention Roundtable's Technology Transfer Committee.

### **Chris Lampe**

Chris has been with the IWRC since December of 1999. He conducts on-site reviews, assists with MOPP demonstrations, and conducts training sessions all over the US as a STAR® instructor. He graduated from UNI with a BA in Environmental Geography and a Program Certificate in Cartography and Geographic Information Systems (GIS).

### **Ana Maria Nanra**

Originally from Indianola, IA, Ana started at the IWRC as an intern and has been an employee here since her graduation in 1996. As well as conducting on-site reviews, Ana has been involved with the Emissions Inventory under IAEAP and the Cost-Benefit Analysis for HLVP spray guns under SBPPC. When not diligently working, Ana enjoys gardening, sewing and cooking.

### **Dan Nickey**

In addition to conducting multi-media on-site reviews, Dan serves as Program Manger of the Iowa Air Emissions Assistance Program (IAEAP). Originally from Pennsylvania, Dan joined the IWRC in 1994.

### **Jim Olson**

Jim manages the IWRC on-site review program and has been with the Center since 1988. He provides on-site technical assistance to Iowa small businesses, conducts research and demonstration projects, and presents information at training programs and workshops. Jim has his BA in Biology from UNI and his MS in Thermal and Environmental Engineering from Southern Illinois University. Originally from Hampton, IA, Jim is an adjunct instructor at UNI and enjoys playing guitar in his spare time.

### **Kristi Petersen**

Currently a Program Assistant, Kristi started at the IWRC in March of 2001 as an Air Research Specialist. As an Air Research Specialist, Kristi assisted with air permits and emission inventories for small businesses. She has received Uniform Air Quality Training Program certification while in the IAEAP and has recently begun working with the RCRA on-site program. Kristi just completed the CHMM certification course and is working on the PEER project. Kristi graduated from UNI with a BA in Biological Resource Management.

### **Carolyn Prins**

Carolyn serves as Web Site Manager for the IWRC. She designs web pages, manages sites with the help of student interns, and is currently in the process of redesigning the entire IWRC web site. Born and raised in Waterloo, IA, Carolyn also teaches a black and white photography class twice a week at the Hearst Center in Cedar Falls.

### **Julie Reinitz**

Julie, a native of Davenport, IA, is the graphic artist for the IWRC. She designs annual reports, the PAC<sup>2</sup>E newsletter, the Closed Loop, brochures for various workshops and programs, as well as designs curriculum materials and manuals. Before joining the IWRC in 2000, Julie attended St. Ambrose University and has a BA in Art.

### **Sue Schauls**

Originally from Waterloo, Sue has a certificate in Computer Programming and her BA in Science: Environmental Planning from UNI. Hired at the IWRC in 1996 as an intern, Sue is now a Waste Reduction Specialist. She has taken the MOPP to 17 states and worked in 63 Iowa counties. In addition to MOPP duties, Sue serves as Program Manager of the



Diane Albertson conducts training on the IWE database.

SBPPC and helped project staff complete 17 P2 projects last year. Recently, Sue created Storm Water Assistance specifically designed for Auto Salvage yards.

### **Tim Trumbull**

Prior to moving to Iowa, Tim worked at the University of South Carolina as a Research Assistant in the Neuroscience Department. At the IWRC, Tim is active in the IAEAP by assisting with construction permit applications, organizing our emission inventory questionnaire assistance program, and assisting clients in air quality issues and permits. Currently working towards his MBA at UNI, Tim is married, has a daughter, and enjoys learning to play the guitar.

### **John Whiting**

Originally from northern Minnesota, John works extensively with the Pollution Prevention for Painting and Coating Compliance Enhancement (P<sup>2</sup>AC<sup>2</sup>E) Process Training program and as well as conducts second-step detailed assistance and applied research. When not at the IWRC, John enjoys gardening and working to make his house ecologically friendly.

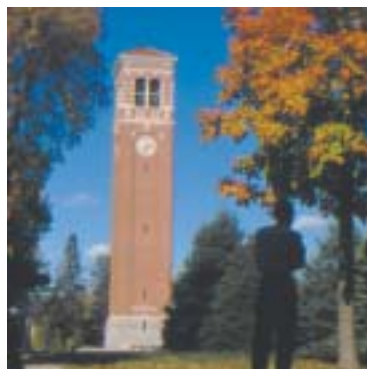
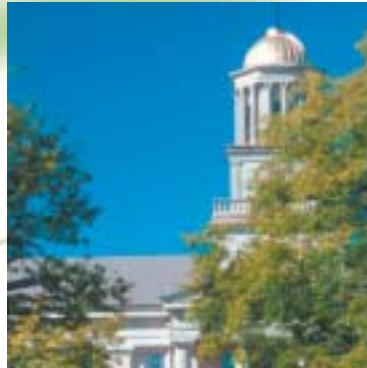
### **Bill Zimmerle**

Bill manages the STAR<sup>®</sup> training program, conducts STAR<sup>®</sup> training sessions around the nation, is most recently involved with STAR<sup>®</sup> for Defense, and conducts on-site reviews for the IWRC. He is from Grand Junction, IA, and is working towards his MA in Industrial Technology. Bill has ridden in RAG-BRAI, an annual bike ride across Iowa, the last four years as a representative of the IWRC.

# ADVISORY COMMITTEE

The Advisory Committee for the IWRC has provided appreciated oversight and direction for the past 15 years. Meeting annually, the Committee helps formulate important policy decisions that guide the work of the IWRC.

We greatly appreciate the time and effort of Committee members. Several have been members of the Committee since its inception, and all have helped the IWRC to grow and prosper.



## Advisory Committee Members

- ❖ Representative Clyde Bradley, CAMANCHE
- ❖ Lee Casten, Barton Solvents, DES MOINES
- ❖ Liz Christiansen, Iowa Department of Natural Resources, DES MOINES
- ❖ Doug Elam, Kirkwood Community College, CEDAR RAPIDS
- ❖ Senator Bill Fink, CARLISLE
- ❖ David Inyang, Iowa State University, AMES
- ❖ Senator John Jensen, PLAINFIELD
- ❖ Debbie Neustadt, Sierra Club, DES MOINES
- ❖ Representative Don Shoultz, WATERLOO
- ❖ Jim Thomson, Small Business Administration, CEDAR RAPIDS
- ❖ Sharon Timmons, Iowa Department of Economic Development, DES MOINES
- ❖ Jim Walker, University of Iowa, IOWA CITY
- ❖ Maureen Collins-Williams, University of Northern Iowa, CEDAR FALLS

# FUNDING

**F**unding for IWRC services comes from a variety of sources. With the help of our small business clients and others, we were successful in maintaining strong support for our assistance, applied research and education programs.

Nearly 40% of our budget comes from state resources. Our basic program of assistance and on-site reviews is supported by fees collected on solid waste disposal. Of the \$4.25 per ton collected at most Iowa landfills, we receive \$.25 for an annual budget of \$575,000.

The Iowa Air Emissions Assistance Program was funded by the Iowa Department of Natural Resources at a level of \$373,450. The management of the Iowa Waste Exchange is provided through \$30,000 of solid waste fees every year.

State funds are needed as matching resources to obtain federal funding for applied research and training programs that serve Iowans and small businesses nationally. We have secured \$1.59 for every state dollar invested in the IWRC.

The Small Business Pollution Prevention Center was supported by the federal EPA with \$500,000. The EPA's Design for the Environment program funded the Pollution Prevention for Painting and Coating Compliance Enhancement at a level of \$750,000. The Small Business Administration provided \$303,000 for our partnership in the Compliance Alliance.

Successful funding means the IWRC can meet your needs and prescribe practical solutions for small businesses in Iowa and nationally.

# Thank You To:

Small Business Clients

Iowa's Congressional Delegation

Iowa Department of Natural Resources

U.S. Environmental Protection Agency

Iowa Legislature

Governor of Iowa

EPA Design for the Environment

EPA Region 7

# IOWA WASTE REDUCTION CENTER

University of Northern Iowa

