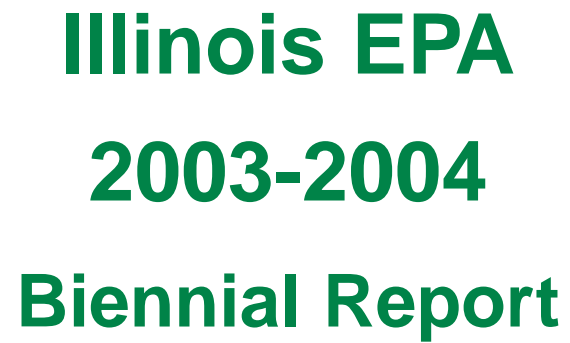


Rod R. Blagojevich, Governor

Renee Cipriano, Director



Illinois
Environmental
Protection Agency

June 2005

www.epa.state.il.us



"There is no real economic security, opportunity or quality of life for our citizens if we do not place a high priority on protecting the environment."

Rod R. Blagojevich
Governor of Illinois

ACKNOWLEDGEMENTS

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Article XI-Environment

Section 1: PUBLIC POLICY- LEGISLATIVE RESPONSIBILITY

The public policy of the State and the duty of each person is to provide and maintain a healthful environment for the benefit of this and future generations. The General Assembly shall provide by law for the implementation and enforcement of this public policy.

Section 2: RIGHTS OF INDIVIDUALS

Each person has the right to a healthful environment. Each person may enforce this right against any party, government or private, through appropriate legal proceedings subject to reasonable limitation and regulation as the General Assembly may provide by law.

— *From the Constitution of the State of Illinois /Ratified Dec. 15, 1970*

***"By thy rivers gently flowing,
Illinois, Illinois***

***O'er thy prairies verdant growing,
Illinois, Illinois***

Comes an echo on the breeze."

— *From "Illinois" (Official State Song)
written by C. H. Chamberlain*

To Provide and Maintain a Healthful Environment

Illinois Environmental Protection Agency

Biennial Report, 2003-2004

June 2005

State of Illinois
Environmental Protection Agency
Office of the Director
Springfield, Illinois



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MESSAGE FROM THE DIRECTOR

This document, covering calendar years 2003 and 2004, is the first of its kind for the Illinois EPA and one of the first of its kind for an Illinois state agency. It is intended to provide a more reader-friendly and less technical overview of IEPA activities for all the citizens of Illinois. It evolves from and replaces the Annual Environmental Conditions Report we have issued in recent years. It also appropriately corresponds to the first half of Governor Rod Blagojevich's term in office and reflects his commitment to making state government more accessible and responsive. You will read in the first section of this report the many other steps IEPA has taken in the past few years to implement that commitment and challenge.

It is appropriate as well that this report is being issued shortly after the 35th anniversary on April 22, 2005, of the first Earth Day that raised the consciousness of America about the threats to our environment from pollution. Here in Illinois, our leaders also responded in 1970 by creating the first state environmental protection agency in the nation, and included a safe and healthy environment as a fundamental right and public policy in Article XI of the new (1970) state constitution, reflected in the title of this report: "To provide and maintain a

healthful environment." To quote Abraham Lincoln, "it is altogether fitting and proper," to reflect on how far we have come in those 35 years towards a healthier environment, even as we set new goals and face new challenges.

For example, in 1972, an assessment of Illinois streams found only 11 percent were characterized as in "good" condition – now it is more than 62 percent. Outdoor air quality improvement has been even more dramatic. In 1976, for example, the federal one-hour health standard for ozone (smog) was exceeded 208 times just at a single location in Madison County and 181 times at an air monitoring station in Lake County and thousands of times statewide that summer. In comparison, last summer (2004) there were no violations of that standard anywhere in the state.

That progress has come not only as a result of government regulations and improved technology but the willingness of business and industry, local government, and citizens, to take responsibility for protecting the environment. They include the hundreds of volunteer lake monitors across the state that have partnered with us for 25 years, the thousands of participants in Green Pays on Green Days who took actions to reduce air pollution in the summer in the Chicago metro area, and the nearly half million Illinoisans who have participated in our household hazardous waste disposal events.

Since Governor Rod Blagojevich took office in January 2003, he has strongly supported these partnerships and exciting new initiatives to continue to make Illinois a national leader in protecting our environment.

In the past few years, we are breathing easier, as air pollution from factories and power plants has continued to decline. We have encouraged the expanded use of cleaner burning fuels and helped school districts reduce hazardous soot from diesel buses. The Governor and Illinois EPA have advocated more protective federal air pollution regulations and the Governor has taken the leadership in pursuing a common-sense regional approach by Midwestern states to further reduce emissions from older power plants, while encouraging clean coal technology. Through the Governor's leadership, all but four Illinois hospitals have gone to better alternatives for medical waste disposal than operating their own incinerators.

Our rivers and lakes are getting cleaner through partnerships with citizens and local officials to reduce sources of contamination and through better planning for growth that takes into account potential urban and agricultural runoff into watersheds. The Governor has kept a commitment to seek a reduction in phosphorus discharges from larger sewage treatment plants and launched new initiatives to protect drinking water supplies and other

resources for communities relying on Lake Michigan and the Mississippi River.

The cleanups of contaminated sites have also accelerated in Illinois the past two years, with thousands of acres at more than 400 sites cleaned up for redevelopment or natural habitat usage, making these “brownfields” into “fields of dreams” once again.

The power of citizens and volunteers have been mobilized by a record number of household hazardous waste collections and waste tire collection events, mercury collections, and assistance to volunteer groups cleaning up litter along riverbanks or protecting watersheds.

In keeping with his priority commitments to education and public safety and health, the Governor’s “Safe and Healthy Schools Initiative” has provided unprecedented multi-faceted partnerships with our schools across the state. The Governor’s Clean School Bus program has provided grants and educational materials to reduce harmful soot from diesel buses through cleaner fuels, emission controls and discouraging idling. Hundreds of schools are becoming more “green” through small grants, workshops and school hazardous waste pickups.

Finally, reflecting the commitment of Governor Blagojevich and IEPA to make state

government more responsive to citizens, Illinois EPA has made a vast library of readily accessible information and interactive databases available on the Internet to Illinois citizens to help them deal with potential environmental threats and help the environment themselves.

While this progress is important, we must all work together to insure that increased growth and demand for resources will be managed to protect the gains we have made since that first Earth Day and the launching of the Illinois Environmental Protection Agency back in 1970.

I have been privileged to serve as Director of the Illinois EPA since August 2001, a job I will be wrapping up in June 2005 to return to the private sector, at about the time this report is issued, so this is a bit of a swan song. I want to thank the dedicated professionals at the Agency who work every day to implement the public policy elaborated in Article XI of our state constitution. I am especially grateful to the countless individual citizens, local officials, organizations, and businesses that take environmental stewardship in Illinois seriously and without whom none of the progress we have achieved in the past 35 years would have happened. It has been an honor working with all of you.



“Assuring clean air, land and water depends on all of us – citizens, industry and government – continuing to work together for a cleaner and greener Illinois.”

Renee Cipriano
Director, IEPA

PUBLIC OUTREACH AND CITIZEN INVOLVEMENT

IEPA expands interaction
with schools, citizens and
diverse communities.

Illinois EPA Connects With Illinois Citizens

During 2003 - 2004, Illinois EPA took a number of steps to use technology to share information more efficiently with citizens, students, the regulated community and others, and to help implement Governor Blagojevich's commitment to making state government more accessible and accountable. The Agency has added a number of more convenient new features to our website:

"Citizens Information Center"

This on-line feature provides quick access to a variety of useful environmental information, services such as nearby recycling and safe disposal locations, practical "green tips" for daily living, a special section on "Green Schools" that includes Governor Blagojevich's Clean and Healthy Schools Initiative, and links to databases with information on environmental conditions in your community. There are also links to special sections on our website for kids and teachers, and the many Agency publications.

On-line Environmental Complaints

In order to make it easier for the public to lodge a complaint for investigation by the Illinois EPA, an electronic complaint form was posted on the Agency's website during 2003 in both English and Spanish. Citizens can now submit their complaints with just a click of the mouse, and the Illinois EPA tracks the complaints to ensure they are addressed. The Agency received nearly 425 on-line complaints in 2004.

Toll-Free Environmental Helpline

For those who do not have ready access to the Internet, there is also a toll-free Illinois EPA "Environmental Helpline." The Agency received over 564 calls in 2004.

New Outreach Initiative Breaks Down Language Barriers

Environment protection is important to people from all cultures and backgrounds, but for those who do not speak English it can be difficult to participate in environmental decisions or learn about issues that are important to them. Under Governor Blagojevich's administration, the Agency has started a new outreach campaign to citizens who speak languages other than English, with an initial focus on those who speak Spanish. Approximately 1.6 million people in Illinois speak Spanish, and about half of them rate their English skills as poor.

In 2003, the Agency:

- Created and distributed Spanish language publications and press releases;
- Completed an inventory of all the Agency's

non-English language materials and identified publications that should be translated into other languages during 2004;

- Published Spanish language public notices in newspapers (Spanish-language and English) on permitting and remediation decisions, and provided a Spanish-speaking translator at public hearings in Hispanic communities;
- Participated in the Team Illinois community fair in East Aurora and provided Spanish language materials and Spanish-speaking staff at our booth; and
- Translated the Environmental Justice and Community Relations web pages into Spanish.

Pollution Prevention Program Helps Businesses Find More Cost Effective Ways to Reduce Waste and Emissions

Since Governor Blagojevich took office, Illinois EPA's Pollution Prevention Office has provided on-site technical assistance to over 160 industrial, institutional and agricultural facilities around the

December, 2002

Illinois Environmental Protection Agency

Office of Waste Management
1701 West 101st Street
Skokie, IL 60076-0270
1-888-312-1000

Manejo y Reducción de Desperdicios de Lavadores de Repuestos

El fin de la información presentada en esta publicación es para proveer un entendimiento general de los requisitos regulatorios y prácticas de manejo de los lavadores de repuestos. El lector debe consultar con un experto en cumplimiento de las leyes para obtener más información.

¿Qué es un lavador de repuestos?

Los lavadores de repuestos comúnmente se usan en la industria manufacturera o en las operaciones de mantenimiento. Los lavadores de repuestos incluyen unidades de limpieza, unidades de despiece al vapor y unidades de despiece con corrientes de aire. Los lavadores de repuestos se usan para limpiar en las unidades de despiece los siguientes:

- **Solventes:** Los solventes limpian al disolver el sucio. Estos incluyen solventes a base de petróleo tales como "mineral spirits", solventes "noddler" y resina de petróleo, y solventes orgánicos tales como el tricloroetano, tetracloroetano, benceno y xileno.
- **Limpieza ultrasónica:** Los limpiadores ultrasónicos son soluciones de pH neutral o alcalinas a base de agua que destruyen y remueven el sucio de los repuestos. También existen soluciones semiautomáticas que contienen cantidades pequeñas de solventes.

CONSEJO

¿DÓNDE PUEDO OBTENER MÁS INFORMACIÓN?

En documentos como éstos para entender qué requisitos legales, por sus siglas en inglés, presenta parte de la información que es necesaria para clasificar el peligro del químico y determinar el método correcto de despiece para su manejo. Los productos comerciales y químicos. Pregunte a su vendedor acerca de los comentarios de los productos que usted usa y pida una copia del documento MSDS.

¿Cuáles son los requisitos de los reglamentos de desperdicio tóxico?

¿Por qué nos preocupan los lavadores de repuestos?

state to help them implement waste reduction and energy efficiency projects that save money and improve efficiency. Pollution prevention includes using safer raw materials, converting to cleaner production processes and enhancing operating practices so that pollution is not generated in the first place.



Pollution Prevention Intern Brent Engel on the job

Environmental Education Programs Foster Eco-Appreciation

Illinois EPA sponsored a number of programs that helped our youth gain a deeper appreciation of the environment:

- In April 2003 Governor Blagojevich and the Illinois EPA honored 50 fifth and sixth-grade winners in the Agency's art, prose and poetry contest. The theme was "Clean Water Everywhere for Everyone." In April 2004

Governor Blagojevich and the Illinois EPA honored 50 fifth and sixth-grade winners in the Agency's 17th annual art, prose and poetry contest. The theme was "Pitch In—Put Waste In Its Place."



2004 top poster submitted by Emily Heinz, Hampsire Middle School

- The Illinois EPA co-sponsored the 12th annual "Earth Stewardship Day" for Sangamon County fourth graders in May 2003 at the Illinois State Fairgrounds. More than 1,100 fourth grade students from 21 area schools participated. In 2004 the 13th annual Earth Stewardship Day event attracted more than 1,000 4th grade students representing 18 Sangamon County schools.
- Governor Blagojevich and the Illinois EPA awarded Environmental Excellence Awards to nine students at the 2003 and 2004 State Science Fairs, hosted by the Illinois Junior Academy of Science in Champaign.
- The Agency's Environmental Pathways Curriculum was used by at least 200 Illinois 5th

and 6th grade teachers in 2003, and a survey completed in 2003 found that 100 percent of the teachers who use the curriculum believe it is a useful supplement to their classroom curriculum. In 2004, the Agency's Environmental Pathways Curriculum was used by more than 17,000 Illinois 5th and 6th grade students.

- In 2004 the Agency changed the name of the Green Youth Awards to the "Governor's Green Youth Awards" in honor of the Governor's commitment to the environment and education. In 2003 and 2004 approximately 3,500 Green Youth Award applications were mailed to Illinois schools. The Illinois EPA presented Green Youth Awards to a total of 11 outstanding environmental protection and conservation projects for those years.

Internship Programs Cultivate Tomorrow's Environmental Leaders

Governor's Environmental Corps

- Governor Blagojevich and the Illinois EPA continued the annual Governor's Environmental Corps summer internship program, which is privately funded by Illinois corporations and places college students to work with IEPA staff mentors. The 2003 program included 34 students and the 2004 program had 38 students

Pollution Prevention Internships

- In 2003 Illinois EPA recruited and placed 22 college interns to work full time during the summer at businesses and local governments on pollution prevention projects. Together, these projects have the potential to divert 150 tons of

waste from landfills, reduce energy costs by \$670,000 and save over 200 million gallons of water a year. The interns are trained to help facilities implement waste reduction and energy efficiency projects that reduce pollution and save money. One of the interns who worked for the Champaign Department of Public Works identified several energy saving opportunities that could save the city \$11,000 annually. These projects include replacing incandescent lights with compact fluorescent lights, installing light emitting diodes or LED lights in building exit signs and utilizing waste heat from a natural gas-driven engine to heat water.

- In 2004, Illinois EPA recruited and placed 18 college interns in the field to work on pollution prevention projects at businesses and institutions during the summer. The interns are trained to help facilities implement waste reduction and energy efficiency projects that save money. Together, these projects have the potential to divert over 17,000 tons of waste from landfills, reduce energy costs by \$322, 547 and save facilities over \$2.5 million in operating and disposal costs. One of the interns who worked at the Sarah Bush Lincoln Health Center in Mattoon identified several lighting efficiency opportunities that could save the hospital \$53,000 annually, with a payback period of 2.5 years. The intern also recommended several ways to enhance the facility's recycling program that could save \$34,114 in avoided waste disposal costs.

Illinois EPA Supports Team Illinois

In 2003 as part of the Governor's Team Illinois initiative, Illinois EPA provided education and assistance to help communities address environmental issues and strengthen their economies. Children and adults alike were wowed by the agency's exhibit on mosquito breeding and the West Nile virus with suggestions for reducing mosquito breeding. The agency also helped Team Illinois communities remove thousands of tires that had been illegally dumped, fix a broken wastewater treatment facility, and to identify funding to upgrade wastewater and drinking water systems. Illinois EPA will continue to work with the Illinois Department of Human Services to address the environmental concerns in the Team Illinois communities.

Safe and Healthy Schools Program Helps Schools Across Illinois "Make The Grade"

During Governor Blagojevich's administration, the Illinois EPA developed a "Safe and Healthy Schools" Program to help schools take the first step in "greening" their buildings and operations.

Educational Workshops

In 2003 and 2004 Illinois EPA co-sponsored a series of 14 workshops to train K-12 teachers on safe handling and storage procedures for using chemicals in laboratory experiments. The workshops also provided teachers with alternative laboratory or "green chemistry" experiments that do not rely on the use of toxic chemicals in science curriculum. Over 360 science teachers from across the state attended the one-day workshops.

Mercury/Chemical Waste Collections

In March of 2003, the Illinois EPA launched a program as part of Governor Blagojevich's Safe and Healthy Schools Initiative, to collect hazardous and dangerous chemicals from schools. To date, 216 schools have been able to clean out their school laboratories, workshops, and classrooms of mercury-containing items, poisons, corrosives, reactives, and flammable liquids resulting in more than 518 fifty-five gallon drums of hazardous educational waste collected. Of the 518 fifty-five gallon drums, 53 drums were exclusively mercury and mercury containing compounds. This program provides thousands of students a safer environment to attend school and learn.

Facility Assistance Program

In 2003 the Illinois EPA provided 60 free on-site assessments to help schools identify areas where they can reduce waste, save energy and improve indoor air quality. In 2004, the Illinois EPA and Illinois Waste Management and Research Center jointly conducted nine free on-site assessments to help schools identify areas where they can cost-effectively reduce waste, save energy, minimize storm-water and improve indoor air quality.

Green Schools Video

In 2003, Illinois EPA produced a video profiling four Illinois schools that have adopted programs to improve the physical environments of their facilities to help save money and improve learning conditions. The video, which is on loan through the Agency library, identifies steps

schools can take to reduce waste, save energy and improve indoor air quality.

Indoor Environmental Coordinator Grants

In 2004 Illinois EPA awarded Indoor Environmental Coordinator Grants to the Jackson/Perry Counties' Regional Office of Education and Illinois School District U-46, which serves several communities, including Elgin, Carol Stream, Hanover Park and Bartlett. The two grants are part of an innovative pilot program that is unique to Illinois. The grants will fund an indoor environmental coordinator position to assist local schools in improving the environmental efficiency of their buildings and operations, with a strong focus on waste reduction, indoor air quality and lighting efficiency. The environmental coordinators will facilitate trainings and workshops for school-teachers and staff, organize environmental assessments of school facilities, and provide follow-up assistance to help schools implement specific improvement projects.

Greening Schools Grant Program

In 2004, the Illinois EPA initiated a small grant program to help schools improve indoor environmental quality, reduce waste and save energy. The grants, generally ranging from \$500 to \$2,500, funded the purchase of solar energy equipment, efficient lighting devices, rain gardens, reusable dinnerware, and recycling and composting equipment.

Illinois Launches Groundbreaking Environmental Justice Initiative to Address Environmental Justice Concerns

Environmental Justice (EJ) is based on the principle that everyone has the right to a clean and healthy environment, regardless of a person's race or income. In support of Governor Blagojevich's pledge to promote EJ, the Agency launched its landmark Environmental Justice Initiative in March 2003 by adopting an interim EJ Policy, holding a Stakeholders Forum on EJ, and appointing an EJ Officer to serve as the Agency's point person on such issues.

The interim policy, which is being refined based on input from stakeholders throughout the state, is intended to ensure an equitable administration of the State's environmental programs and to provide everyone with meaningful opportunities for public involvement with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Consistent with the Agency's policy, steps were taken to address EJ concerns, including:

- creating an EJ web page on the Agency's website, with the interim EJ Policy in both English and Spanish;
- training staff on EJ issues;
- utilizing maps that identify EJ areas in Illinois, to ensure that EJ policies are applied to Agency decisions that affect EJ communities;
- conducting EJ assessments when reviewing permits; and helping EJ communities with local environmental problems.

Illinois EPA Kicks-off Aggressive Burn Barrel Education Campaign

To ensure that Illinois citizens are fully aware of the hazards of burning household waste, the Illinois Environmental Protection Agency kicked off an educational campaign to make citizens more aware of safer and healthier alternatives for disposing of unwanted materials and trash. The Burn Barrel Education campaign includes radio Public Service announcements, newspaper ads and information over the Internet with the message "If you burn it, you breathe it." Themes include "It's not your grandfather's garbage," noting that trash today contains plastic, metals, rubber, chemicals and other materials that can release toxic chemicals potentially harmful to health when burned in the open and breathed at close range. The campaign also emphasizes safe alternatives to backyard burning such as following the basic principals of reduce, reuse, and recycle and using local waste disposal services. Information is available from the website www.illinoisburnbarrel.org and includes more detailed information on alternatives and contacts, explanations of Illinois law concerning open burning, brochures, model ordinances for local governments, and technical and scientific reports. The website also helps residents and businesses find local waste haulers and recycling centers.

Green Communities Program Helps Local Governments Plan for a More Sustainable Future

Sixteen communities awarded demonstration Green Communities Grants from the Illinois EPA in 2002 completed their two-year environmental

visioning process. The state grants, ranging from \$12,177 to \$110,000, helped pay for the costs of engaging citizens and interest groups in developing a 20-30 year action plan to improve local environmental conditions and protect natural resources. The visioning plans were quite diverse, including provisions to restore natural areas, enhance recycling programs, improve environmental infrastructure, encourage sustainable development, manage stormwater and educate citizens on steps they can take to reduce air and water pollution. At the direction of the Governor, the Agency is working with the Green Communities to help identify funding and technical assistance resources to implement their environmental plans.

Mercury Fever Thermometer Prohibition Act

The Illinois EPA and U.S. EPA have identified mercury as a priority pollutant. The Illinois EPA's Bureaus of Land and Water are working together to reduce the amount of mercury released into the environment. The Bureau of Land is focusing on reducing mercury in waste and consumer products collecting mercury-containing material from homes and schools. The Bureau of Water is focusing on reducing the releases of mercury in waterways.

Public Act 93-605, effective July 1, 2004, created the Mercury Fever Thermometer Prohibition Act. This law prohibits the retail sale and distribution of mercury fever thermometers in Illinois. The Mercury Fever Thermometer Prohibition Act does not apply to mercury thermometers sold to health care facilities, such as hospitals, clinics,

and nursing homes. The law also bans the manufacture of mercury thermometers in the State, effective July 1, 2004. In addition, the law prohibits the deliberate sale of mercury-added novelty items after July 1, 2004.

Assistance to Small Businesses

The Illinois EPA's Office of Small Business provides resources and assistance to help small businesses better understand their regulatory responsibilities and find answers to their compliance questions through the toll free and online helplines and "plain language" environmental fact sheets.

COMMUNITY RELATIONS: A VITAL LINK TO THE PUBLIC

The mission of the IEPA's Office of Community Relations (OCR) is to facilitate open communication and informed public participation in Agency decisions and activities.

The Illinois EPA recognizes that strong environmental decision-making must not only be based on sound technical information. Decisions must also consider the values, knowledge and perspectives of people who will be affected. The key is two-way communication between the public and the agency. The Office of Community Relations

was formed to open this dialogue—not only giving the public information on the agency's programs and decisions but also soliciting public comments, questions and concerns.

The agency's programs can be extremely complex. Biologists, chemists, engineers, geologists, toxicologists and attorneys may all lend their expertise to a specific decision. A basic responsibility of OCR is to make technical information available to the public in non-technical language — sometimes in the form of fact sheets; other times in face-to-face conversations or public meetings.

A second basic OCR responsibility is to make sure that the agency fulfills legal requirements for public participation. These requirements often apply to permit decisions and remedy selection at Superfund sites. Sometimes these requirements are simple. For example, OCR may be required to place a newspaper advertisement notifying the public of an upcoming agency decision and advising the public on how to submit written comments. For other decisions, OCR may be required to set up local repositories of information so the public can have easy access to documents that are the basis for agency decisions. In many cases, OCR is required to arrange public hearings so the public can give oral, as well as written, comments on a pending agency decision.

In many cases, however, the law does not require formal participation in agency activities. Where there is a significant environmental concern or

public interest, but no legal requirement, OCR may still become involved.

OCR has found that the best way to open a dialogue with a community is usually to contact local officials and community leaders. Questions OCR may ask are: “Does the community receive information from television, the newspaper or other sources?” “Are public meetings or face-to-face conversations the most efficient and effective way to interact with the community?” Is there a need for an interpreter?”

With this and other information, OCR will develop and implement a community relations strategy for that specific community.

When OCR receives comments and questions from the public, the OCR coordinator’s role is to make sure these comments and questions are directed to the appropriate agency staff. Together with these staff, OCR identifies possible responses that will respond to the public’s concerns. For example, former employees of a facility may know the location of buried waste on a site, and the agency uses this information to help focus an environmental investigation. Often the public has significant health concerns. OCR, with the agency toxicologists and Illinois Department of Public Health staff, may engage in an ongoing conversation with the affected public – giving and receiving information about routes of exposure to contamination, health effects and other health-related issues.

Sometimes, because of legal or technical considerations, the agency cannot respond in the way the public requests. For example, a landfill permit cannot be denied because the applicant meets all technical and legal requirements. In these cases, it is important that OCR keep open the lines of communication between the public and the agency. The goal is that the public knows that the agency has heard its concern and made modifications, where possible, and that the public understands why the permit must be issued. The case studies below give a flavor of community relations activities during three projects that occurred or were ongoing in 2003 and 2004.

Community Relations in Action: **Three Case Studies**

Downers Grove Groundwater Investigation

This site represents an example of past industrial practices that contaminated groundwater and, consequently, created major problems for Illinois residents. When discovered, it affected three unincorporated areas within Downers Grove. The extent of community relations needs became apparent once Illinois EPA realized how many families would have important life decisions to make to reduce their exposure to unsafe drinking water. Lessons learned in Downers Grove will prepare Agency staff to effectively deal with citizens’ needs relative to similar sites in the future.

Background: A groundwater investigation conducted by Illinois EPA and U.S. EPA in Lisle during 2000 and 2001 led to subsequent sampling of private wells in Downers Grove. Contaminants

of concern were from a family of chemicals known as Volatile Organic Compounds (VOCs). Trichloroethylene (TCE) was the contaminant of concern for the Lisle area; it turned out that both TCE and tetrachloroethylene (PCE) were present in Downers Grove.

Nearly 900 private wells were affected or had the potential to be affected by solvent contamination in unincorporated areas within Downers Grove. Illinois EPA worked with area citizens, U.S. EPA, DuPage County, the Village of Downers Grove, the Illinois Department of Public Health (IDPH), area legislators (both state and federal) and other officials as well as the Potentially Responsible Parties (PRPs) between 2001 and 2003 to develop a plan to provide safe public water to the private well owners.



Officials announced in August 2004 completion of 900 Downers Grove public water supply hookups.

Testing of Private Wells: Private wells were located and sampled over a large area by Agency staff and the Village of Downers Grove Public Works personnel helped go door-to-door to assemble a list of 850 addresses of potential wells to sample.

Community Relations staff did three walk-throughs in the areas of concern, placing flyers on doors asking for homeowners to call if they were still using private wells for drinking water. The Agency made a commitment to sample every homeowner's well in the area of contamination that wanted this done.

OCR participated in the sampling for more than 550 wells, helped set up the sampling teams by providing private well locations and well owner specifics, and arranged the locations geographically. OCR also provided risk communication during sampling events in July, September, October, November and December 2001 and January 2002.

As the liaison between Illinois EPA and IDPH regarding dissemination of private well testing results, OCR provided data electronically to IDPH so that letters to well owners could be expedited. OCR also made personal phone calls to residents about sampling results when the results reached an agreed-upon number close to the health-based comparison value.

Facilitation/Mediation Expertise: Early on, OCR and other staff met with officials from the Village of Downers Grove and DuPage County

Board to provide a heads up on the investigation and to request cooperation and assistance with aspects of the investigation work. Throughout the entire investigation, OCR acted as liaison between Illinois EPA and the Village and the County about site-related activities.

Responding to complaints from private citizens about the water connection costs, OCR researched information and responded to citizen concerns. OCR encouraged citizens from the unincorporated areas to meet directly with the Village (or the County) to voice questions and concerns. OCR actively sought and evaluated information from multiple sources, interpreted issues, and looked for both red flags and areas to encourage better communication.

Governor's Action Team – a New Concept: In December 2001, Illinois EPA Director Cipriano, with the concurrence of the Governor, established a Governor's Action Team of local, state and federal elected officials, the state and federal environmental agencies and health departments, and citizens from the unincorporated areas. The unincorporated areas of private wells are governed by DuPage County, which is not a member of the DuPage Water Commission, and cannot supply Lake Michigan water to residents. This was a major stumbling block, since most of the citizens did not want to be annexed into the municipality but needed a safe public water supply.

This diverse intergovernmental group was effective in working through issues such as

annexation, cost of public water supply water connections to private well owners, water rates, and acquiring additional funding through federal and state legislatures. By working together, the group was able to find a practical solution to the very real issue of safe water for private citizens. This was the first time such a model was used to solve this type of problem in our state. A settlement with PRPs in July 2003 allowed work to begin in November that year on installing water mains and water connections.

Helping Citizens Make Important Decisions: OCR worked with citizens to research information about issues that affected their lives. For example, OCR assisted citizens in evaluating whether obtaining a public water supply connection would be more expensive than keeping a well and having to treat the water. OCR contacted the Water Quality Association and others for advice and to name a source for citizens to call with questions about treatment systems. Annual well fees and costs for testing, in addition to purchasing and maintaining a treatment system, made the water connections costs seem the better option.

Some citizens made the difficult choice to connect to the PWS prior to the settlement being available to them and had to fund the cost of connections out of pocket. They had concerns about young family members being exposed to even low levels of TCE. OCR encouraged those citizens to discuss the issue with IDPH and with his or her family physician, since many of the associated health effects for TCE and PCE are

not demonstrated to occur at the low levels observed in the Downers Grove groundwater investigation.

Community Relations established a Public Repository at the library in Downers Grove so the public could have easy access to documents as the site investigation progressed. In addition, all documents mailed out were placed on the agency web site and four public availability sessions were held to respond to questions, such as using well water on gardens or in swimming pools.

Community Relations also published five fact sheets to updated site contact lists over the course of the investigation, in partnership with U.S. EPA.

All public water supply connections to the 900 homes were completed by July 2004.

Formosa Plastics of Illinois Site, Illiopolis

On April 23, 2004, an explosion occurred at the Formosa Plastics Corp. plant in Illiopolis, located between Springfield and Decatur along I-72 that resulted in five deaths and numerous injuries. Illinois EPA's Emergency Operations Unit staff were on site before midnight and began monitoring the air around the plant and in the community. During the weekend and the next week, other Illinois EPA staff worked with the Village of Illiopolis' public water supply operator to test and insure the safety of the drinking water supply and monitored water quality in streams that carried water away from the site.

The Office of Community Relations has been involved with the site since three days after the explosion. OCR was part of the Illinois EPA team that was present at a public meeting called by the Village of Illiopolis at the community high school on April 27, 2004 where many citizens voiced a variety of concerns about not only current environmental conditions, but about plant safety and whether the catastrophe could have been avoided.

After the initial shock and concern from the blast and subsequent fire, people began having concerns about whether it was safe to return to homes that were affected by smoke from the blaze. Residents wanted to know whether they should have their homes professionally cleaned. They asked about the safety of the outdoor air in and around Illiopolis. They questioned the safety and integrity of the public water supply system, which is maintained in part on the plant property. Citizens also questioned whether private wells were affected by contamination from the site and whether their garden produce would be safe to eat.

Fact sheets responding to these and other questions were prepared and delivered to all Illiopolis mail boxes and to residents of other nearby communities in May and June 2004, and an information repository of documents was established at the local library.

Understandably, after the explosion and fire, residents were especially sensitive to any activity



Devastation is visible after the April 2004 explosion in Illiopolis at Formosa Plastics.

originating at the site. So, for example, when the level of the gasholder that contains water and some waste vinyl chloride monomer and other chemical residues began to rise because of temperature changes, residents became alarmed. The Bureau of Air involved Community Relations in the permit process discussions for the plant to drain off tank contents and construct a (backup) flare. In addition, OCR met with Village officials beforehand (along with the environmental engineer from the plant) to explain exactly what the problem was and how they proposed to solve it. Residents close to the plant were personally contacted, so the flare wouldn't surprise them.

A Public Availability Session in conjunction with IDPH, Sangamon County Health Department, the Village and Formosa was held at the local high school on June 4, 2004. Citizens were able

to see photos, maps and information about the site and to voice questions and concerns with appropriate agency staff or with Formosa.

In July 2004, access was granted to sample at nine private properties identified by technical staff for the presence of dioxin, and news releases were issued on the testing. More recently, OCR arranged for private well testing to look for site-related Volatile Organic Chemicals (VOCs) that are showing up in the on-site monitoring wells.

IEPA Community Relations staff continue to be the main point of contact for citizens with site-related concerns about demolition activities, long-term investigation and cleanup and regarding possible exposures that could have occurred right after the blast and during the subsequent



After removal of contaminated soil, clean fill soil is brought in, to be followed with topsoil and sod application in this yard, near the former St. Louis Smelting and Refining facility.

fire. Citizens are still calling about sick animals, safety of eating garden produce and results from environmental sampling.

St. Louis Smelting and Refining

Between 1904 and 1933 the St. Louis Smelting and Refining Co. operated a lead smelter on portions of the current Collinwood and Pine Lake subdivisions in Madison County. The smelting process created large amounts of lead waste called slag. Lead slag was discarded in large piles on the site. Parts of the piles were removed while other portions were leveled, leaving the soil polluted.

Cleanup activities began at the site, which is composed of approximately 149 residential properties, began in September 2004, and included the removal of soil and vegetation from contaminated yards., signaling an increased need for community relations. While the site progressed through the clean-up process, multiple entities (U.S. EPA, responsible parties, consultants and contractors) become involved and the IEPA Community Relations Coordinator was designated the main point of contact to provide a sense of consistency to residents.

The contaminated material is taken to an approved landfill for disposal. The yard is then backfilled with clean soil, graded to the proper contours and returned to its original state by the application of sod. The contractor waters the sod until it has established roots into the soil below it.

During the site investigation, which lasted for more than two years, the community relations coordinator spoke to residents “one on one” and worked to obtain access agreements for residential soil sampling. The access agreements not only provided the agency with the needed documentation to enter the property but the coordinator also worked with the home owner to provide sampling staff with a narrative description of the property. This narrative was used to target sensitive areas of the property such as gardens and avoid fixtures such as underground utilities. The description also included information about the composition of the family occupying the property so that explanations of the sample results, prepared by the Department of Public Health, could tailor any risk statements and precautionary measures to the family that lives on the property.

Information critical to the completion of the project was communicated between the Illinois EPA’s Office of Site Evaluation, Collinsville Field Office and Office of Community Relations, and the Illinois Department of Public Health, so that all involved agencies and offices had current and relevant information. Information from access agreements, sample results and general communications related to the site were logged into a database to track site activities. This database, while providing a convenient way to access sample results and homeowner information, also provided an important tool for maintaining consistency in communications with site residents. The database was also used to ensure that all questions and concerns received a

response. When the site moved toward the remediation stage, a copy of the database was provided to U.S. EPA.

Due to the structure of this neighborhood “one on one” communications were heavily employed at this site. However, several public availability sessions and meetings were held in order to provide residents with a history and overview of the site conditions. These events gave the agencies an opportunity to get feedback from the residents so that resident concerns could be incorporated into the remediation work plan. These events, which were coordinated by the community relations coordinator, were comprehensive, and included Illinois EPA and U.S. EPA project managers and the Illinois Department of Public Health toxicologist. Attendance at these events ranged from 75 to approximately 200 people. From attendance records at these events and extensive neighborhood canvassing activities, mailing lists and contact lists were developed. These lists were used for mailing fact sheets and site information to homeowners on the site and a buffer area surrounding the site.

Illinois EPA Community Relations Contacts Take Many Approaches:



Informal availabilities for Q & A



Formal public hearings



One-on-one contacts



Informational displays



*“By thy rivers gently flowing,
Illinois, Illinois.”*

CLEAN WATER

The Illinois EPA through its Bureau of Water oversees programs to protect and improve the state’s surface and groundwater, as well as the development, construction and operation of facilities to collect, treat and discharge sewage, oversight for the development, construction and operation of drinking water treatment plants, low interest loans to fund these projects, and administers a variety of federal permit and grant programs to ensure safe use of Illinois waters recreationally and as essential components of good health and a healthy state environment.

Clean Water Act

In July 1970, the Illinois Environmental Protection Act was signed and the Illinois Environmental Protection Agency was created. Six months later, in December 1970, the U. S. Environmental Protection Agency was created. Both recognized the need for organized responses to mounting public concern over the conditions of the nation’s air, land and waters.

Illinois’ Water Wealth

It is estimated that Illinois’ surface water resources has only about 10 miles of water less than the combined lengths of the Nile, Amazon, Yangtze (Changjiang) and Volga Rivers.

Illinois has 87,110 stream miles of rivers and streams, 91,400 inland lakes and ponds within its borders, and 1,089 miles of major rivers make up part of its borders. The state has jurisdiction over a million acres of Lake Michigan. Illinois is a water-rich state with resources adequate to meet most existing and future demands.

Surface water in Illinois provides navigation, wildlife and aquatic habitats, waste dilution, drinking water, industrial and other commercial use, power generation, agriculture and irrigation. Groundwater is also plentiful in Illinois with high quality water available throughout the state from numerous aquifers.

Natural and human-related activities can threaten full use of these resources, and in recognition of

Governor Blagojevich’s commitment to assuring plentiful clean and safe water for all citizens, ongoing thoughtful evaluation of current usage is needed.

Illinois receives an average 100 billion gallons of water a day from precipitation, with about 77 billion gallons of water each day returned to the atmosphere as evaporation from water and land surfaces, and transpiration from growing plants.

Overall, surface water meets most drinking water needs, with Lake Michigan the major water source for the state’s most densely populated areas in and around Chicago, and with communities in the southern half of the state relying on rivers, lakes and reservoirs to meet their water needs.



Illinois has vast water resources

The quality of all these water resources can be affected by:

- naturally occurring radioactivity, salinity, biologic organisms, and substances present in the state's geologic makeup;
- industrial or agricultural discharges and spills,
- overuse of farm and industrial products that contaminate groundwater and surface waters, and
- human activity that causes sediment runoff and causes accumulation that reduces reservoir capacity.

Illinois' growing population, with dense concentrations in some areas, increases demand for water, while a growing awareness of environmental issues, and the unpredictability of floods or droughts, all challenge agencies and programs charged with protecting the state's water resources.

The Illinois Environmental Protection Agency has responsibility for overseeing the state's public drinking water programs, programs that deal with waste water disposal, and protection and improvement of water quality in lakes, rivers and streams that furnish natural habitat and human recreational resources.

Surface waters that supply Community Water Supplies are sampled every three years as part of the Illinois EPA's Ambient Lake Monitoring Program, with samples analyzed for pesticides, volatile organic compounds and inorganic compounds. Between 1999 and 2004, approximately 64 percent of the lakes and reservoirs used for drinking water supplies that were tested

showed some impairment, and 1,073 miles, or 78 percent, of the tested surface water sources were impaired. In most cases, impairments include lawn chemicals, pesticides and some naturally occurring chemicals. Contaminants chiefly come from farming, mining and urban development. The contaminants can usually be safely removed during the drinking water treatment process but that can be costly.

Threats

Past practices and emerging challenges require continuing vigilance on a variety of specialized fronts.

Mercury Contamination of Fish Tissue

Illinois routinely tests fish tissue to identify levels of toxic substances that tend to accumulate in fish and could pose health risks to the public eating locally-caught fish. In 2002, Illinois issued a statewide fish consumption advisory, cautioning children and women of childbearing age to limit their intake of Illinois fish, because of mercury contamination. In 2004, tests indicated that fish in eight lakes and over 1,000 stream miles had mercury levels that warranted additional, specific consumption warnings. Mercury can enter water from industrial or municipal wastewater, from historical contamination of sediments or can be deposited from the air (mainly power plant or industrial emissions). Illinois EPA will need to develop plans to reduce the amount of mercury entering the state's lakes and streams.

Illinois EPA Proposes

Discharge Limits on Wastewater

Discharges to Fulfill Governor's Pledge

In May 2004 the Illinois EPA petitioned the Illinois Pollution Control Board to adopt additional nutrient restrictions on discharges from municipal and industrial wastewater facilities into the state's streams and rivers. Excessive nutrient concentrations (particularly phosphorus) are one of the leading causes of impairment to aquatic ecosystems throughout the state. Extensive scientific research is being undertaken to fully understand the complex chemical and biological interactions of phosphorus and other nutrients in stream and river environments and ultimately quantify the nutrient needs and limitations of healthy streams through numeric water quality standards. While this research and standards development is proceeding, pending its completion and results, the Agency has developed and is implementing an interim phosphorus control program that will protect streams and rivers throughout the state from additional phosphorus loading. This program meets Governor Blagojevich's campaign commitment to address nutrient water quality problems in Illinois in a timely manner.

Revamped Storm Water Program

Addresses Storm Water Pollution

The Agency has implemented an entirely new program meeting federal requirements to reduce storm water pollution from industries and construction sites. This includes all stages from permitting thousands of new sources to follow up compliance activities, including a new

partnership with local organizations. Following re-issuance of the NPDES permits regulating storm water in 2003, IEPA implemented public notice on the Illinois EPA website and public participation during processing of the general permits for storm water. The Agency contracted with six county Soil and Water Conservation Districts (Winnebago, McHenry, DeWitt, Macon, Madison, and St. Clair Counties) to perform inspections of construction sites requiring NPDES storm water permits. The primary purpose of the visits is to provide technical compliance assistance to site owners and contractors, utilizing the erosion and sediment control expertise of District staff. Permit violations observed during the visits will be referred to Illinois EPA for compliance/enforcement follow up.

Indications so far are that the inspections are generally going well. One significant outcome of this partnership is that in Macon County, two large developers have hired new staff specifically to monitor their compliance with storm water requirements.

Watersheds

Snapshots of current conditions in individual rivers and streams provide vital information needed for protecting and improving the state's waters.

A watershed is the area that drains to a water-body (a river, lake or stream). Illinois has 33

separate, defined watersheds, identified in the adjoining map. Almost all watersheds deliver a variety of pollutants to their downstream water-bodies. Rarely are surface waters impacted by only one source of upstream pollution, since with few exceptions, every land-use activity is a potential source of water pollution. Because of their importance in overall water protection efforts, the Illinois EPA is focusing on watershed management to reduce water pollution.

Rivers and Streams Assessment

The quality of the state's surface waters plays a fundamental role in the overall health of the environment and has a direct bearing on the



economic and recreational opportunities available. Public interest in water quality has increased significantly in recent years.

The miles of rivers and streams that are assessed by the Illinois EPA have increased tremendously since passage of the federal Clean Water Act in 1972. Likewise, the quality of river and stream resources has improved dramatically due to ongoing efforts to control both point source (“end of pipe”) and nonpoint source (runoff) pollution control efforts.

Because of the large number of Illinois lakes and streams, they must be assessed on a rotating basis, so ratings from specific years do not convey complete overall appraisals, but long term data between initial conditions in 1972 and the present provide a good comprehensive look at improvements.

In 1972, the percentage of miles of streams assessed as being in “good” condition was only 11.3 percent. Today, 62.3 percent are assessed in good condition.

Cleaning Up Impaired Waters

TMDLs = The largest amount of a given pollutant a water body can receive without violating water quality standards or becoming unavailable for its designated uses.

Water quality in some Illinois lakes, rivers, and streams has been impaired by pollutants from a

variety of sources. Since the signing of the federal Clean Water Act (CWA) in 1972, water quality has improved greatly, mostly by regulation of point source discharges (discharges from an identifiable “end of pipe” source). Other degraded lakes, streams, and rivers still need attention to maintain a healthy environment and ensure these waters remain safe for all to use and enjoy.

- TMDL is short for Total Maximum Daily Load. It is the greatest amount of a given pollutant that a water body can receive without violating water quality standards and its designated uses.
- TMDLs take a voluntary, incentive-based approach to set goals for pollution reduction necessary to improve the quality of impaired waters, weighing all potential sources to determine the pollutant load allowed in a given lake or stream. It also takes into account a margin of safety, and the effects of seasonal variation.

The Clean Water Act does not require an Implementation Plan as part of a TMDL, but Illinois EPA has taken the initiative to include Implementation Plans for every TMDL that is developed.

Section 303(d) of the federal Clean Water Act requires states to identify waters that do not meet applicable water quality standards or do not fully support their designated uses such as swimming, boating, fish consumption or providing drinking water. States are required to submit a prioritized list of these waters to the U.S. Environmental Protection Agency for review and approval. The

CWA also requires that a TMDL be developed for each pollutant of an impaired water body. Illinois EPA is responsible for carrying out the mandates of the Clean Water Act for the state of Illinois.

After reduced pollutant loads have been determined, a plan is developed that spells out limits for point source discharges and recommends best management practices for nonpoint sources. It estimates associated costs and lays out a schedule for implementation. Commitment to the plan by the citizens who live and work in the watershed is essential to success in reducing pollutant loads and improving water quality.

Since development of TMDLs began in 2000, 47 TMDL evaluations have been started, and in 2003 and 2004, 16 were finalized. Two were completed in 2002. Work on the others is at various levels of completion.

Nonpoint Source Pollution Control Program

Nonpoint source pollution carries contaminants from many urban and rural sources into surface water, groundwater and wetlands.

Precipitation moving over and through the ground picks up pollutants from farms, cities, mined lands, and other landscapes and carries these pollutants into rivers, lakes, wetlands, and groundwater. This is nonpoint source or NPS pollution. Major sources in Illinois are agricul-

ture, construction erosion, urban runoff, hydrologic modifications, and mining.

Under Section 319(h) of the Clean Water Act, the Illinois EPA receives federal funds to implement NPS projects, working with local units of government and other organizations for corrective and preventative best management practices (BMPs) on a watershed scale; demonstration of new and innovative BMPs on a smaller, non-watershed scale; and the development of information/education programs on NPS pollution control.

NPS Categories for Section 319 Funding

Funding for the Section 319 program allocates dollars to projects related to agriculture, construction erosion, urban runoff, hydrologic modifications, and mining. Each has its own characteristics and problems, which may include soil erosion, loss of storage capacity due to sedimentation, impaired water quality from excessive nutrients that speed the aging process of a water body, as well as bacterial problems, and color, taste and odor impacts.

Hydrologic modifications like dredge and fill, wetland drainage, streambank and lakeshore alteration, dam construction, stream channelization, flow regulation, bridge construction, and removal of riparian or lakeside vegetation can affect the biological, chemical, and physical properties of ground and surface waters and adjacent habitats.

Section 319 funding also supports programs for:

- public education about nonpoint source

pollution and its effects; implementation of structural or vegetative practices, or administrative programs that promote NPS pollution controls like streambank stabilization, wetland creation or restoration, terraces, waterways, green roofs, etc.;

- planning, including documentation of nonpoint source pollution problems and related resource concerns, and development of strategies to protect and restore water resources impacted by nonpoint source pollution, and
- research to assess NPS water quality problems and improve NPS control techniques.

Some of the funding also supports staff and overhead expenses for administering the programs.



Children in Elgin stenciled a drain to reduce nonpoint source pollution.

Funding for Illinois NPS Programs in 2003 and 2004

In 2003, Illinois Section 319 programs received a total of \$9,579,800 in funding for all categories.

In 2004, these programs received a total of \$9,484,000, for a combined total of \$19,062, 800 for the two years.

These grants supported efforts that prevented 4,820 tons of sediment, 139,302 pounds of total suspended solids, 4,369 pounds of phosphorus, and 9,546 lbs of nitrogen being discharged to Illinois water bodies in 2003.

In 2004, NPS efforts resulted in 311 tons of sediment, 5,053 pounds of total suspended solids, 307 pound of phosphorus and 622 pounds of nitrogen being prevented from entering state waters.

Additional reductions are expected to occur in future years as the projects begun in 2003 and 2004 are fully implemented.

Since 2003, more than 19,000 volunteers have worked together to clean up Illinois lake shores and streambanks in their areas.

The Illinois EPA's Streambank Cleanup and Lakeshore Enhancement Program helps volunteers around the state conduct productive cleanups of stream banks and shorelines in their areas.

Using federal funding that provides grants ranging from \$500 to \$3,500 the Illinois EPA's Streambank Cleanup And Lakeshore Enhancement (SCALE) Program is providing financial help to local volunteer groups around Illinois for cleanups of stream and river banks and stretches of lake shore.

In the program's first two years, more than 90 cleanups were conducted.

Recipients' concerns range from finding boots that kids can keep on, to washing glass before recycling, to keeping *really* accurate data. At Hyde Park School, Waukegan, Mrs. Asma's 5th grade class used the SCALE funds to purchase boots in sizes that fit the students. In previous years, she said, students spent more time retrieving errant adult sized boots, loaned by the local park district, than the litter that they were trying to collect.

At Dixon, high school honor students linked with the Dixon Park District, Dixon Kiwanis Key Club members and local volunteers to collect more than four dump truck loads of trash.

When the Friends of the Chicago River held their annual “Chicago River Day,” they estimated that 3,000 persons helped to clean up approximately 100 miles of river bank. Some were in boats, some on land, some halfway in between, all retrieving types of materials classified as grocery or food related, car-related, or bedding materials. The Lake Michigan Federation had 1,323 people help to clean up 30 miles of lake shore. This group works in teams - one person collects while the other tabulates. So when they report for SCALE - they can say without doubt that they collected: over 23,000 cigarette butts, over 9,000 food wrappers, over 5,500 caps and lids, over 3,100 straws and stirrers and over 5,200 beverage bottles. The total number of recorded items for the Lake Michigan Federation for 2004 is 63,000!

SCALE numbers

| Year | 2003 | 2004 |
|----------------------|-------|-------|
| Applications | 38 | 42 |
| Organizations Funded | 37 | 49 |
| Dollars Spent | 33500 | 38000 |
| Participants | 9004 | 10205 |
| Miles | 704 | 754 |
| Acres | 76 | 605 |
| Tons | 288 | 269 |



Young people clean up Chicago River shoreline during a 2004 SCALE event.

The Hegewisch Chamber of Commerce coordinates their cleanup on Wolf Lake with their neighbors from the east - Indiana. The lake straddles the state line, and so does the litter. A total of 125 people worked to clean up a 4.5 mile area of lake shore.

The Friends of the Illinois River even dedicate volunteer time to wash bottles before separating the items into recycle bins.

The Northern Illinois Anglers Association had 375 volunteers on land and water to collect an estimated 52 tons of litter from the Kankakee River and tributaries.

All recovered material is recycled when possible, and disposed of properly if recycling is not an option.

In 2003's program, 9,004 participants from 38 groups removed 288 tons of litter and debris from 704 miles and 76 acres of state waterfronts. During 2004, 42 groups involved 10,205 participants in cleanups that removed 269 tons of garbage from 754 miles of streambank and 605 acres of lakeshore.

The Lake Education Assistance Program (LEAP)

The Lake Education Assistance Program (LEAP) is a grant program that offers up to \$500 to schools and not-for-profit organizations for the study of lakes/ponds and their watersheds. The funds may be used to buy equipment, educational materials, pay for transportation for field trips and even pay for substitute teachers.

In 2003, 113 applicants received \$42,028.88 for lake projects and education. In 2004, 92 applicants received \$39, 693.57.

The projects ranged from building a small pond on the school grounds to making a study of a community lake by a fifth grade class and making a report to the city council as to the health of the lake.



Students from St. Ambrose School in Godfrey collect macroinvertebrates to help determine the "health" of a lake, as part of a LEAP grant.

IEPA'S Volunteer Lake Monitoring Program Enlists Citizens to Assess Water Quality

The Illinois Volunteer Lake Monitoring Program (VLMP) is one of the oldest programs of its kind in the nation. In 2004, the Illinois VLMP celebrated its 24th anniversary and is one of the Agency's most successful and long-standing programs.

The VLMP serves as an educational gateway for citizens to learn more about factors that affect lake water quality. By learning more about cause-and-effect relationships with their watershed and lake, volunteers are more likely to take an active

role in protecting their lake by encouraging better lake management.

In recent years, the number of participants in the VLMP has averaged 300, monitoring approximately 165 Illinois lakes. In addition to the duties and responsibilities of the VLMP, many of our volunteers take part in global monitoring activities, such as the Great North American Secchi Dip-In and World Water Monitoring Day.

All VLMP participants measure their lake's water clarity using a Secchi disk. Although there are variations to what a Secchi disk looks like, it is typically an 8" diameter metal or plastic disk with alternating black and white quadrants. There is either a rope or measuring tape attached to easily mark the depth at which the Secchi disk can no longer be seen once lowered into the water. This is called the Secchi Depth or Secchi Transparency. How far the Secchi can be seen into the water column gives lake scientists a general idea of water quality and the productivity of the lake. Varying amounts of sediment and/or algal cells can yield different transparency results. VLMP volunteers use a color chart to try to explain further what their lake's transparency is telling them. Is their transparency limited more by algae or by sediment?

Some VLMP participants are in the Advanced Water Quality portion of the program. These volunteers collect additional parameters, such as, chlorophyll, suspended solids and nutrients – total phosphorus, nitrate-nitrite nitrogen and ammonia nitrogen. These parameters provide

more detailed information for the lake scientist to consider when deciding the factors that may be affecting the lake.

All of this data gives volunteers insight into what may be taking place in their lake and watersheds and will help them to make more informed decisions to better manage their lakes. Illinois EPA also uses this data in making general water quality use assessments.



Longtime VLMP participant Kim Cambron of the Champaign County Forest Preserve District uses a Secchi disk in Sunset Lake.

Infrastructure Planning and Assistance Loan Program

Loan program recycles state and federal dollars to help communities provide safe drinking water and minimize sewage pollution in their streams and rivers.

Since the late 1980s, the Illinois EPA has administered a low interest revolving loan program that has distributed more than \$2 billion in state and federal funds to communities to install or expand sewage and drinking water services to residents while achieving or maintaining compliance with state and federal regulations. Congress authorized the wastewater program starting in 1989, and the drinking water program starting in 1997.

Through 2004, a total of 409 wastewater and 187 drinking water infrastructure loans have been made, and the joint programs have topped \$2 billion in loans.

During 2003, 41 applicants were approved to receive \$63.4 million in drinking water project loans under the program. In fiscal 2004, \$51.4 million was awarded for drinking water projects, out of a total of \$139.2 million in new loan awards.

Eighty percent of the funding comes from the federal government with a 20 percent state match and the repayments on the loans are used to fund additional infrastructure projects.

Wastewater loans in 2004 included:

| | |
|--------------------------------|--------------|
| Kankakee River | |
| Metropolitan Agency | \$5,549,159 |
| Metropolitan Water Reclamation | |
| District of Greater Chicago | \$57,162,399 |
| Mt. Vernon | \$703,176 |
| Neponset | \$55,921 |
| Peoria Greater Sanitary | |
| and Sewage Disposal District | \$14,158,800 |
| Salt Creek Sanitary District | \$8,262,165 |
| Urbana Champaign | |
| Sanitary District | \$20,320,427 |
| Verona | \$291,073 |

Wastewater loans in 2003 included:

| | |
|--------------------------------|--------------|
| Altona | \$159,958 |
| Carbondale | \$11,675,384 |
| Dakota | \$299,500 |
| Decatur Sanitary District | \$553,527 |
| Decatur Sanitary District | \$2,906,037 |
| Evanston | \$5,186,142 |
| Evanston | \$9,595,457 |
| Evanston | \$3,960,548 |
| Flossmoor | \$2,577,633 |
| Fox River WRD | \$2,037,611 |
| Glenbard Wastewater Authority. | \$5,230,340 |
| Granite City | \$3,938,240 |
| Harrisburg | \$2,487,224 |
| LaSalle | \$2,832,565 |
| MWRDGC | \$58,000,000 |
| St. Charles | \$10,000,000 |
| Trento | \$88,217 |
| Urbana Champaign | \$3,871,176 |
| Urbana Champaign | \$25,000,000 |
| Western Springfield | \$926,135 |

Some loans allow clearly visible improvements that benefit those served by the facilities. In the Kane County community of Batavia, for instance, a \$3.4 million loan awarded in 2004 allowed the community to upgrade its treatment plant to remove iron and manganese from shallow well water and remove radium from deep well water. Iron, while not a health threat, at high levels causes staining of fabrics and fixtures and produces "pink water" that is unattractive to drink. Preparations for the radium removal project revealed extensive deficiencies in the community water distribution system, and a second loan, for \$6.7 million, allowed installation of more than 41,000 feet of new water mains.

Some loans pay for less dramatic improvements. In 2004, a \$410,000 loan to the Knox County community of Knoxville allowed the town to link into the water supply of the nearby community of Galesburg in order to meet state and federal standards for radium in drinking water.

Drinking water loans in 2004 included:

| | |
|--------------------------------|--|
| Batavia (<i>three loans</i>) | \$6,707,121, \$549,283 and \$3,438,502 |
| Bellwood | \$1,388,914 |
| Bloomington | \$3,878,710 |
| Breese | \$7,507,739 |
| Caseyville | \$2,132,497 |
| Centralia | \$1,926,957 |
| Eldorado | \$322,385 |
| Forrest | \$600,000 |
| Forsyth | \$5,552,032 |

| | |
|--|-------------|
| Galena | \$2,539,372 |
| Homer | \$647,622 |
| Lake of Egypt Water Dist. | \$6,618,281 |
| Marquette Heights | \$578,551 |
| Mason | \$69,105 |
| Metamora | \$201,561 |
| Millstadt | \$556,151 |
| New Memphis Water Dist | \$393,796 |
| Oswego | \$1,772,543 |
| Ramsey | \$69,928 |
| Round Lake Beach | \$2,603,807 |
| Saline Valley CD/ Gallatin-White WD | \$420,000 |
| Scott-Morgan-Greene Water Coop. | \$184,589 |
| South Highway Water Dist. | \$674,407 |
| Toluca | \$587,300 |

Drinking water loans in 2003 included:

| | |
|-----------------------------|-------------|
| Bushnell | \$1,212,103 |
| Carlinville | \$740,396 |
| Channahon | \$1,835,000 |
| Chicago's South Water Plant | \$2,602,918 |
| Crest Hill | \$1,425,000 |
| Forsyth | \$761,833 |
| Gifford | \$400,000 |
| Gillespie | \$1,168,760 |
| Granville | \$564,767 |
| Henderson | \$156,865 |
| Illinois-American Water Co. | \$1,829,240 |
| Kewanee | \$8,500,000 |
| Knoxville | \$410,326 |
| Lockport | \$5,346,113 |
| Macomb | \$2,004,167 |
| Mapleton | \$143,985 |

| | |
|------------------------|--------------|
| Mason | \$74,245 |
| Murdale Water District | \$859,862 |
| Oblong | \$691,073 |
| Oneida | \$875,000 |
| Percy | \$500,000 |
| Sorento | \$100,000 |
| Sparta | \$2,201,360 |
| Spring Valley | \$3,000,000 |
| Sugar Grove | \$1,352,534 |
| Sycamore | \$780,495 |
| Trenton | \$632,319 |
| Vandalia | \$700,000 |
| West Chicago | \$11,000,000 |



Forsyth water plant

Unsewered Community Grants

In addition to the low interest loan program, the Illinois EPA has a grant program for unsewered communities. In 2004, approval was given for four projects. Onarga and Norris were awarded grants of \$294,000 and \$74,550, respectively, for the design phase of development, and Nepsonset and Verona were approved for \$2,995,192 and \$699,329 respectively, for construction.

Facility Planning Area Efforts Taking a Watershed Approach

Implementing the best approach to meeting local wastewater treatment needs often casts the Illinois EPA in the role of mediator. A new approach is redefining the area boundaries for these sometimes emotion-charged issues.

Rock River Basin

The Kishwaukee and Green River watersheds in the Rock River Basin in northern Illinois will be the site of pilot projects implementing comprehensive state and local watershed protection planning efforts recommended by an advisory group to the Illinois Environmental Protection Agency. The Basin Management Advisory Group (B-MAG), which included a broad range of stakeholders, completed its report in 2004 and Illinois EPA will now be implementing its recommendations, starting with the pilot “watershed teams” in the Rock River basin.

B-MAG included representatives from agriculture, developers, industry, environmental groups and government bodies. The group evaluated the Facility Planning Area process, which determines boundaries for wastewater treatment facilities and recommended new approaches that will de-emphasize boundary war/new growth competition among communities and focus more on protecting watersheds. While IEPA will develop river basin assessment plans and set up “watershed teams” for better coordination, the pilot, as B-MAG has recommended, will give

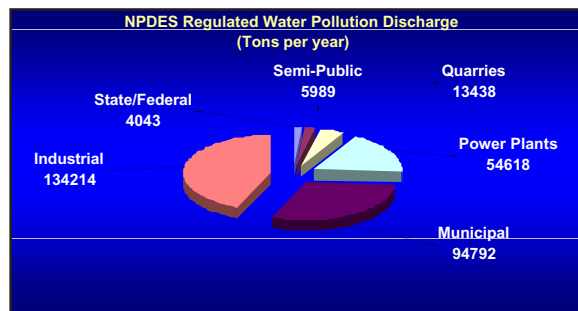
local stakeholders, both government and non-government, ultimate responsibility for developing and implementing watershed plans.

Illinois Water Pollution Control - Compliance Program

Ongoing monitoring and reporting help ensure wastewater treatment operations are meeting the limitations built into their specific permits.

Background

The Clean Water Act of 1972 established a permit program for wastewater discharges, called the National Pollutant Discharge Elimination System permits. The permits, known as NPDES permits, set out requirements for both a national minimum level of treatment for various categories of industrial wastewater and domestic sewage, and any stricter limitations set by a state or necessary to meet water quality goals. In 1977, the Illinois EPA was delegated authority to issue the permits, including authority for compliance monitoring, enforcement, regulatory consistency, reporting, and public participation.



This chart illustrates the number of tons of pollutant load discharged per year in Illinois from industrial, municipal, power plants, quarries, semi-public, and State/Federal NPDES permitted dischargers. Industrial facilities are largely made up of manufacturing facilities. Municipal dischargers include publicly owned wastewater and drinking water systems. Power plants are facilities which generate electric energy. Quarries mine sand and gravel. Semi-public facilities include utility companies, residential subdivisions and homeowners associations. State/Federal facilities include public parks, campgrounds, prisons, and military installations.

Compliance/Enforcement Activities

Sustained compliance is supported by monitoring, and timely, appropriate enforcement action for noncompliance. Early identification of potential compliance problems through field inspections and self-monitoring, and the timely issuance of Noncompliance Advisories and Violation Notices to achieve compliance, are key to the success of the compliance assurance program. Compliance monitoring activities include both field inspections of regulated and potentially

regulated facilities, and in-office reviews of self monitoring reports such as Discharge Monitoring Reports (DMRs) and other information required to be submitted to the Illinois EPA.



Mechanical screws carry finished effluent from a wastewater treatment plant up an incline for discharge into a nearby receiving stream.

Field Inspections

The Clean Water Act and federal regulations require each state with an approved NPDES program to implement inspection and surveillance procedures to determine compliance or noncompliance with its applicable requirements. The Illinois EPA's field staff performs numerous types of inspections, including evaluation, sampling, reconnaissance, pretreatment, grant/loan, livestock, stormwater, operator assistance, and emergency response.

In 2003, there were 10,463 inspections conducted, and in 2004, field staff made 9,618 inspections, the bulk of them for reconnaissance, followed by compliance evaluations. Livestock complaints generated 389 inspections in 2003, and 359 visits in 2004, and stormwater issues led to 237 inspections in 2003 and 273 follow-ups in 2004. Other categories included emergency responses, 86 and 103, for 2003 and 2004 respectively; operator assistance, 74 and 39 respectively, and inspections linked to pretreatment, grant and loan approvals and others.



Hands-on inspections of facilities let Illinois EPA field staff identify problems and deal with operators' questions.

Self-Monitoring and Reporting

The self-monitoring portion of the NPDES permit sets forth sampling requirements as well as flow monitoring, analytical, and data reporting

requirements. Much of the information is reported to the Illinois EPA through Discharge Monitoring Reports. A goal of self-monitoring and reporting is to produce data necessary for the Illinois EPA to determine facility compliance with NPDES permit requirements. Violations can result from

- reported DMR data (discharges exceeding NPDES permit limits),
 - failure to report required data,
 - unachieved or late compliance requirements of NPDES permits, compliance commitment agreements (CCAs), and enforcement orders.
- The compliance rates with NPDES permit limits for Illinois major dischargers has been 97 percent, 96 percent, and 97 percent for calendar years 2002, 2003, and 2004 respectively.

Discharge Reports Can Now be Submitted Electronically

National Pollutant Discharge Elimination System (NPDES) permit holders submit approximately 3,500 signed Discharge Monitoring Report (DMR) forms to the Illinois EPA on a monthly basis. The DMR forms include results of sample analyses pertaining to surface water discharges required to be reported under terms of the NPDES permit. Beginning in April 2004, the Illinois EPA implemented a system to web-enable the DMR process into a paperless electronic submission process over the Internet. There are currently 418 operators using the system to submit eDMRs for 557 NPDES facilities. Reduced paperwork and improved speed and accuracy in reporting have resulted from eDMR implementation.

Safe Drinking Water Act

Oversight, testing and analysis are all required to ensure that water delivered to the user's tap meets state and federal standards for safety.

The federal Safe Drinking Water Act was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. Amended in 1986 and 1996, the law requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. (SDWA does not regulate private wells which serve fewer than 25 individuals.)

Under the SDWA, the United States Environmental Protection Agency sets national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. US EPA, states, and water systems then work together to make sure that these standards are met.

Drinking water safety cannot be taken for granted. There are a number of threats to drinking water: improperly disposed of chemicals, animal wastes, pesticides, human wastes, wastes injected deep underground for disposal, and naturally-occurring substances can all contaminate drinking water. Likewise, drinking water that is not properly treated or disinfected, or that travels through an improperly maintained distribution system, may pose a health risk.

Originally, SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments greatly enhanced the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach ensures the quality of drinking water by protecting it from source to tap.

Illinois Public Water Supplies' Drinking Water Quality

Persons Served by Compliant Water Supplies

The federal Safe Drinking Water Act gives the U.S. Environmental Protection Agency responsibility for setting national drinking water standards to protect the health of the 250 million people who get their water from public water systems.



Currently, EPA has set national safety standards for more than 80 contaminants that may occur in drinking water. These standards are enforced in Illinois by the Illinois Environmental Protection Agency.

Maximum Contaminant Levels (MCLs)

In nature, all water contains some impurities. At certain levels, minerals, just like man-made chemicals, are considered contaminants that can make water unpleasant or even unsafe. Some

contaminants come from erosion of natural rock formations. Others are discharges from factories, chemicals applied to farmlands, or materials used by consumers in their homes and yards. Sources of contaminants might be in your neighborhood or might be many miles away. Maximum Contaminant Levels (MCLs) are set to ensure that drinking water be free of contaminants with the potential to cause either short term or long-term health effects.

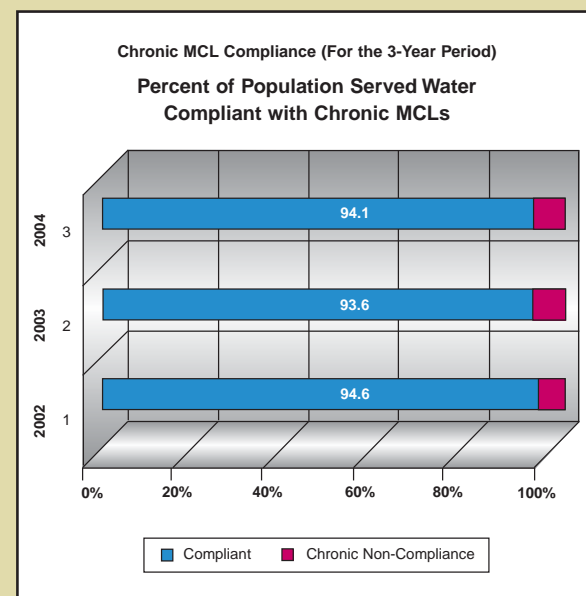
On average, 91 percent of the total population receiving drinking water was served water that complied with limits on regulated impurities. This high percentage was maintained despite the start up of new rules on naturally occurring radium in drinking water and on substances resulting as by-products from disinfection of source water.

Acute vs. Chronic Health Effects

Contaminants fall into two groups according to the health effects that they cause:

ACUTE/CHRONIC Acute effects occur within hours or days of the time that a person consumes a contaminant. People can suffer acute health effects from almost any contaminant if they are exposed to extraordinarily high levels (as in the case of a spill). In drinking water, microbes, such as bacteria and viruses, are the contaminants with the greatest chance of reaching levels high enough to cause acute health effects. Most people's bodies can fight off these microbial contaminants the way they fight off germs, and these acute contaminants typically don't have

permanent effects. Nonetheless, when high enough levels occur, they can make people ill, and can be dangerous or deadly for a person whose immune system is already weak due to HIV/AIDS, chemotherapy, steroid use, or other reasons. Chronic effects occur after people consume a contaminant at levels above EPA's safety standards for many years. The drinking water contaminants that can have chronic effects are chemicals (such as disinfection by-products, solvents, and pesticides), radionuclides (such as radium), and minerals (such as arsenic). Examples of the chronic effects of drinking water contaminants are cancer, liver or kidney problems, or reproductive difficulties.



Drinking Water Compliance Monitoring

Contaminants can make drinking water unattractive or unpleasant, as well as unsafe; frequent monitoring, testing and reporting provide important information on the quality of each community drinking water supply.

To provide safe, clean, adequate water to consumers, public water supply operations must be properly constructed, operated and maintained. However, these alone cannot demonstrate the safety or quality of the water so it is necessary to collect representative water samples for analysis by certified laboratories on a routine basis. Sampling, proper operation, operational testing, record keeping, and periodic facility inspection are effective means of documenting the safety and quality of the water reaching the consumer. The Illinois EPA requires all community water systems to analyze for specific contaminants as required by the Safe Drinking Water Act of 1974.

Treatment Techniques

When there is no reliable method of measuring a contaminant at particularly low concentrations that is economically and technically feasible, a Treatment Technique is used rather than an MCL. A treatment technique is an enforceable proce-



Taking test samples is essential for drinking water quality evaluation.

cedure or level of technological performance which public water systems must follow to ensure control of a contaminant. For example, treatment techniques have been established for viruses, some bacteria, and turbidity (cloudiness).



Piping in a home's plumbing system isn't glamorous but it's essential to a comfortable, healthy life.

Lead and Copper Rule Compliance

Lead and copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10 percent of water samples collected in users' homes exceed the lead action level (15 parts per billion of lead) the water supply must implement a corrosion control treatment plan or procedure that would prevent possible adverse health effects and ensure that lead or copper is controlled in the drinking water.

Reporting Violations and Consumer Awareness



Every community water supply (CWS) must provide an annual report (sometimes called a Consumer Confidence Report or CCR) to its customers. The report provides information on your local drinking water quality, including the water's source, contaminants found in the water, and how consumers can get involved in protecting drinking water. If the consumers have been looking for specific information about their drinking water, this annual report will provide them with the information they need to begin the investigation.

In addition, some community water supplies must also provide educational materials to the public regarding certain contamination. For example, supplies that exceed the lead action level must distribute lead public education materials (a brochure) to consumers. The materials spell out steps consumers can take to reduce the lead levels within their homes until the CWS has a chance to install or adjust treatment.

In both these cases, the CWS must report and provide examples of the materials distributed to the Illinois EPA which checks them to ensure they meet state and federal requirements.

For each violation described in the previous sections, public notification must be made. Public notification protects public health, builds trust with consumers by openly sharing information, and establishes ongoing, positive relationships with the community. Public notice also helps consumers understand rate increases and builds support for increased funding needed for drinking water treatment and protection. Properly done notices work for the benefit of the public water supplier as well as the public. If a problem occurs, educated consumers are more likely to understand the problem and support the actions a water utility must take. During 2004, 89 percent of CWS required to issue public notice did so in a timely and appropriate fashion. Of the remaining 11 percent, more than 75 percent issued public notice, but the notice did not meet all of the public notice requirements.

Radium

The radium of concern to drinking water professionals occurs naturally in the earth's crust, where it has existed for millennia and can contaminate deep wells as it slowly leaches into the water.

In December of 2000, after more than 10 years of study, U.S. EPA confirmed a standard of 5 picoCuries per liter as the maximum acceptable amount of naturally occurring radium in drinking water from deep wells. The problem is not found in shallow wells or in surface water such as Lake Michigan.

Prolonged exposure to high levels of several types of naturally occurring radium-related materials, jointly known as “radionuclides,” can slightly increase chances of some kinds of bone cancer. In the case of radium in drinking water, U.S. EPA has defined extended exposure as a consumer drinking two liters (about two quarts) of water containing radium in excess of the standard of 5 picoCuries per liter every day over a 70-year lifetime.

Community water supplies were given until early in December of 2003 to come into compliance with that standard, though some community water supplies were given extensions to allow them time to design proper treatment facilities, obtain necessary funding, follow required bidding procedures and complete construction.

Source Water Assessment and Protection (SWAP)

Waters that provide drinking water receive special scrutiny; new technology is improving the way information is available, and on-line links to programs let consumers find data specific for their water systems.

Public water supplies in Illinois rely on both surface water and groundwater as source water. The Illinois EPA has completed a source water assessment and protection program (SWAP) required by 1996 amendments to the federal Safe Drinking Water Act. Illinois' ambitious assessment program was one of the first in the country

to obtain U.S. EPA approval. The program was completed in 2003.

Goals of the SWAP program were to:

- Identify source water areas that supply water to public water supplies,
- List possible sources of contamination,
- Determine how susceptible the source water is to contamination, and
- Inform the public of the results of these assessments.

Assessments were conducted on all public water supplies in the state by May 2003, including both the approximately 1,800 community water supplies and more than 4,100 other supplies classified as non-community water supplies. The Agency is evaluating community water supplies source water protection programs to help minimize risks posed by identified potential sources of contamination.

SWAP will help communities decide on important decisions for protecting their drinking water and its sources. This benefits not only consumers, but the health and economy of the community, and preserves natural resources.

All communities, whether they rely on groundwater or surface water for drinking water, are encouraged to take an active part in continuing to assess their drinking water supplies and institute protective measures. Information on community water supplies, regulated by the Illinois EPA, can be obtained by contacting the Source Water Protection staff at 217-785-4787. Information about non-community supplies can be obtained

from local health departments or the Illinois Department of Public Health at 217-782-5830. Additional information can also be obtained online at <http://www.epa.state.il.us/enfo/>.

Accessing Safe Drinking Water Information Made Easier

The Safe Drinking Water Information System (SDWIS) Consumer Confidence Reporting and Monitoring Schedules web portal gives communities the ability to query those documents specific to their water systems. The access of the reports on the Internet has saved the Agency valuable resources over the course of the year, and assisted the systems.

Environmental Facts On-Line (ENFO) Improves Access to Agency Programs

New information management technology is being used to make Agency programs more accessible and responsive. New internal Agency policies and external requirements are being established based on the utilization of this new technology. The Source Water Assessment and Protection Internet geographic information system cornerstone of the ENFO (Environmental Facts Online) suite of environmental information, is now being used by every project manager overseeing a cleanup site to screen for potential or known impacts to off-site groundwater and potential potable well users. ENFO is also being used to screen sites to submit to a new agency-wide Contaminant Evaluation Group (CEG). The CEG is using this new technology to determine areas where, at a minimum, notification should be provided to off-site private drinking water well

owners. In addition, the Agency is requiring environmental consultants to use this technology under new amendments proposed to Pollution Control Board regulations.

Governor's Upper Mississippi River Initiative *Some major sources provide drinking water to consumers in more than one state — the Mississippi River is one of them.*

In July 2004, Governor Blagojevich joined the governors of Minnesota and Wisconsin in calling for joint efforts to restore and protect water quality on the Upper Mississippi River. In addition to joint efforts with Minnesota, Wisconsin, Iowa and Missouri, Illinois EPA is focusing assistance efforts on the twelve Illinois communities that use the Mississippi River as a source of drinking water. They are:

Rock Island County

East Moline
Moline
Rock Island Arsenal
Rock Island

Hancock County

Nauvoo
Hamilton
Warsaw

Adams County

Quincy

Randolph County

Chester

Madison County

Illinois American Water Co./Alton
Illinois American Water Co./Granite City

St. Clair County

Illinois American Water Co./East St. Louis

Source water protection includes identifying and managing activities that threaten to contaminate a lake, stream or groundwater used to supply drinking water. Major threats on large rivers include spills and urban or agricultural runoff. The assistance effort began in Quincy in September 2004 with a tabletop emergency response exercise focused on spills and a planning activity for reducing non-point source pollution in the watershed. Financial assistance was offered to implement source water protection activities. Partnering with the Illinois Rural Water Association and county soil and water conservation districts, targeted assistance efforts are planned in 2005 for the Rock Island County communities.

Groundwater Assessment

Groundwater assets underly much of Illinois, offering drinking water resources to consumers in all parts of the state.

Groundwater comes from wells that tap into aquifers at varying depths. Owing to Illinois' geology, the northern third of the state has several high-yielding aquifers and most communities there rely upon groundwater. These aquifers include numerous sand-and-gravel aquifers above the bedrock surface, shallow bedrock dolomite and limestone aquifers (less than 300 feet deep), and deep bedrock limestone and sandstone aquifers (more than 300 feet deep). Water quantity and its quality varies greatly among aquifers. Farms and rural residents all across Illinois rely on private shallow wells for their water supply.

Northeastern Illinois, the state's major consumer of water, depends heavily on water from Lake Michigan. Groundwater pumpage is also a large source of water for many Chicago suburbs. Diversion of lake water averages about 2 billion gallons per day of which 1.1 billion gallons per day is for public water supply, which represents 41 percent of Illinois' total water withdrawals for all purposes, excluding power generation. Water usage values for Illinois must be used with caution because reporting is voluntary, and many users do not report amounts used.

Groundwater quality is a high priority in Illinois. Water quality degradation or contamination resulting from point and nonpoint sources throughout the state is of concern. In many industrialized parts of the state (including the metropolitan areas of Chicago, Rockford, and East St. Louis) groundwater in glacial deposits and bedrock aquifers has been degraded by improperly contained or disposed of chemicals. In some agricultural areas, the quality of groundwater in the underlying shallow aquifers has been degraded by the routine application of agricultural chemicals. Surface water quality has been degraded in some areas because of the influx of contaminated groundwater. To this end, the Illinois EPA continues to evaluate the question of how good is the water by implementing an ambient monitoring network of community water supply wells.

The Illinois EPA utilizes this Ambient Network to:

- Provide an overview of the groundwater conditions in the CWS wells in Illinois;
- Provide an overview of the groundwater conditions in the major aquifers in Illinois;
- Establish baselines of water quality within the major aquifers in Illinois; and
- Identify trends in groundwater quality in the major aquifers in Illinois.

Water quality parameters sampled for include: field temperature, field specific conductance, field pH, field pumping rate, inorganic compounds (IOC), volatile organic compounds (VOC), and synthetic organic compounds (SOC).

In addition to the Illinois EPA's Ambient Network, the Illinois Department of Agriculture has implemented a monitoring well network for pesticides in shallow groundwater aquifers to assist with implementation of Illinois' Generic Pesticide Management Plan that has been endorsed by the United States Environmental Protection Agency (U.S. EPA).

Private Well Owners Notified About Potential Contamination

Private well users, who fall outside other water regulatory boundaries, are now being notified of potential contamination threats to their drinking water.

In 2004, Illinois EPA notified 5,092 persons believed to be private well owners about the potential for groundwater contamination. Press releases warn the private well owners about the potential for groundwater contamination, and recommend that they sample their wells for volatile organic chemicals. At a minimum, local health departments have issued these press releases for three consecutive weeks to private well owners within the area delineated by Illinois EPA. These notices are developed and provided as agreed under Illinois' Groundwater Contamination Response Strategy, developed by the Interagency Coordinating Committee on Groundwater, and as statutorily required.



*"O'er thy prairies verdant growing,
Illinois, Illinois."*

CLEAN LAND

Illinois EPA's goals are to protect human health and the environment to assure that hazardous and solid waste will be managed in a sound manner, and to reduce or control risk to human health and the environment by overseeing the cleanup of contaminated sites.

Prior to 1970, waste disposal and management practices in Illinois were regulated by the Department of Public Health. Regulations at that time were limited to performance-based

standards that prohibited obvious threats to human health and the environment, such as blowing litter, odors, and vermin. These controls were not effective in protecting one of the most important natural resources in Illinois, its groundwater. In 1970, the Illinois General Assembly established the Illinois Environmental Protection Agency to ensure that important resources are protected and that interrelated environmental problems are addressed through a multimedia approach.

Throughout the first 25 years, the Illinois EPA emphasized the development of new regulations and programs necessary to perform its mission to protect human health and the environment by (1) ensuring that wastes are managed in a safe manner and (2) that contaminated sites posing a risk to human health and the environment are cleaned up. The development and enforcement of the clean land regulations has resulted in a significant improvement in environmental conditions.

Uncontrolled disposal of hazardous wastes has practically been eliminated, hundreds of contaminated sites have been cleaned up and returned to productive use, hazardous waste generation has been significantly reduced, and all landfills meet Illinois standards for design and performance that protect groundwater quality.

Although the mission has not changed, the maturation of the Clean Land programs within the Bureau of Land has required a shift over the past decade from regulatory development and enforcement to increased citizen involvement if they are to more fully accomplish their goals.

Recent initiatives include:

- Establishment of the Office of Brownfields Assistance, which administers one of the pioneering and most successful brownfield redevelopment programs in the nation.
- Creation of one of the first Household Hazardous Waste Collection programs in the nation that provides homeowners and consumers with a safe and appropriate alternative for disposal of their hazardous and toxic wastes.
- Expansion of the Used Tire Program in response to serious health threats such as West Nile Virus and other forms of encephalitis.

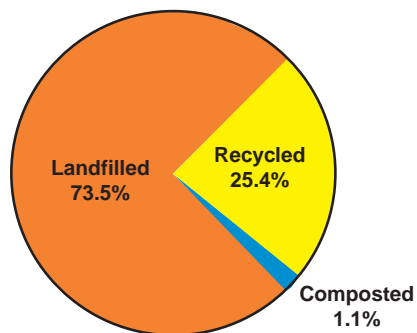
Safe Waste Management

In 2003, Illinois residents generated 78 million cubic yards of municipal solid waste. This volume would fill eight football fields to a depth of one mile. In Illinois, municipal solid waste is managed and disposed primarily through four types of operations:

- **Landfills:** 57 million cubic yards of municipal solid waste was disposed in 50 landfills in Illinois. One of these landfills also accepted hazardous waste.
- **Compost Facilities:** 1.2 million cubic yards of landscape waste was processed at 38 compost facilities in Illinois.
- **Recycling:** Local government officials estimate that approximately 19.7 million cubic yards of municipal solid waste was diverted from disposal through recycling.

- **Transfer Stations:** 91 transfer stations processed nearly 20 million cubic yards of municipal waste for either disposal or recycling.

MUNICIPAL SOLID WASTE HANDLING 2003



Other solid wastes such as hazardous waste, tires, and medical wastes are separated from the municipal waste stream and managed separately, because they pose particular risks to human health and the environment and require special handling. In 2003, these operations included:

- **Hazardous Waste Landfills:** Over 187,000 tons of hazardous waste was disposed at a commercial hazardous waste landfill in Illinois.
- **Underground Injection Wells:** Nearly 490,000 tons of liquid waste was disposed at two private injection wells.
- **Hazardous Waste Treatment:** Over 500,000 tons of hazardous waste managed at 20 commercial facilities.
- **Used & Waste Tire Storage/Treatment Facilities:** 17.5 million Passenger Tire Equivalents (PTE = 25 pounds) were managed at 120 facilities in Illinois.

• Potentially Infectious Medical Waste

Facilities: Over 18,600 tons was managed at one commercial facility with over 30 percent of the waste imported from out-of-state. Another 4,200 tons was managed at the point of generation.



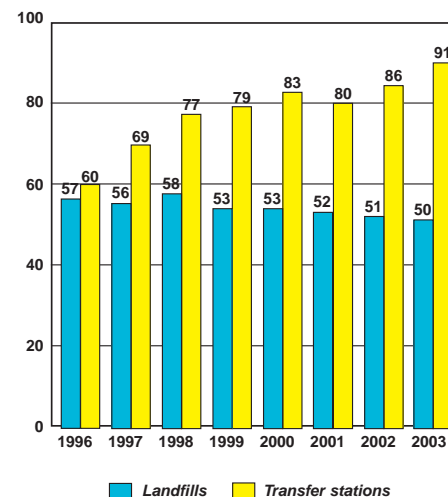
Compaction and spreading of garbage at a municipal waste landfill

Trends in Solid Waste Management

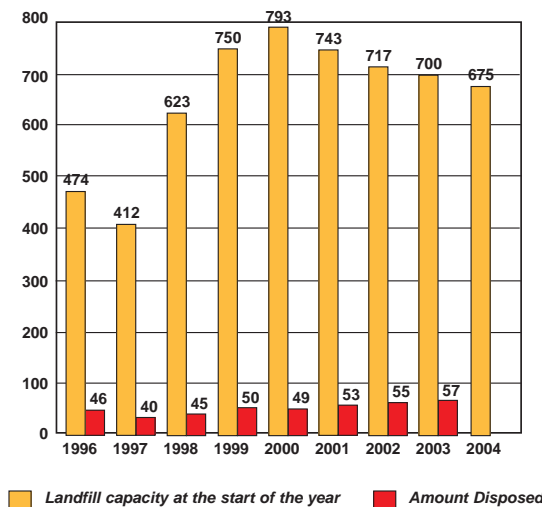
The trend in Illinois is towards fewer, but larger, regional municipal solid waste landfills complemented by a greater number of localized transfer stations. In 1991, 110 landfills accepted municipal solid waste in Illinois. By 1995, the number of landfills accepting municipal solid waste had dropped to 58; while at the same time 66 transfer stations were established (mainly in the Chicago Metropolitan Region) to consolidate wastes for transport to other solid waste management facilities. By 2003, the number of municipal waste landfills dropped to 50 and the number of transfer stations increased to 92.

Sixty-seven percent of these transfer stations are located in the Chicago Metropolitan Region.

NUMBER OF LANDFILLS & TRANSFER STATIONS



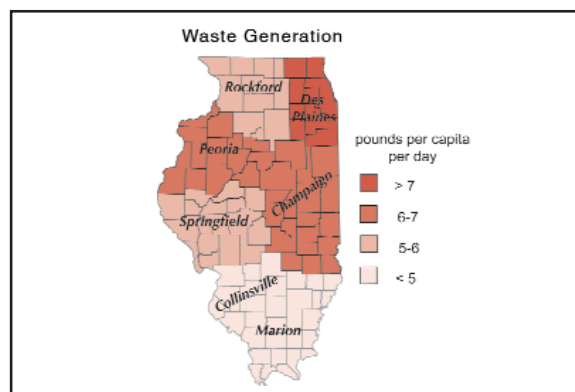
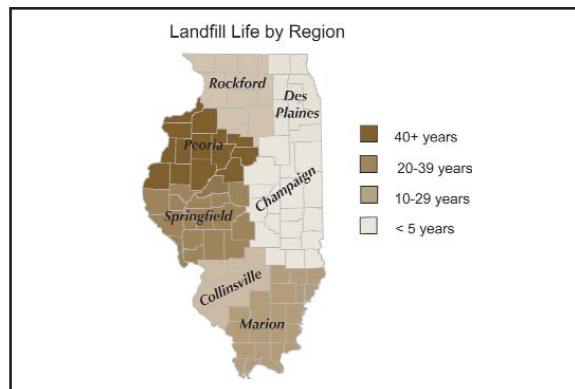
LANDFILL CAPACITY & ANNUAL DISPOSED (MILLIONS OF CUBIC YARDS)



Between 2000 and 2003, landfill disposal capacity steadily decreased because the construction of new landfills and landfill expansions failed to keep pace with annual increases in municipal waste disposed. Landfill expansions and new constructions approved in 2004 should add an estimated 152 million cubic yards of landfill capacity, thereby offsetting the trend in increased annual waste generation of recent years.

Municipal waste generation rates and landfill disposal capacities vary widely within the various geographic areas of the state. The Chicago Metropolitan area generates more pounds of waste per capita per day (7.6) than any other area of the state and has nearly the lowest landfill life expectancy at 5 years (based on 2003 data). The Peoria/Quad cities area has a lower waste generation rate of 6.7 pounds per capita per day, but has the highest remaining landfill capacity at 180 million cubic yards (or 41 landfill life years). The Chicago Metropolitan area is currently using up landfill capacity at a rate eight times that of the Peoria/Quad cities area.

Over 1.2 million tons of hazardous waste was treated and/or disposed in Illinois. Over 674,000 tons of hazardous waste was disposed in Illinois, an increased of 15% over the previous year. The remaining 585,000 tons of hazardous waste was incinerated, treated (with the residuals managed as pollution control waste), or recovered.



Illinois EPA's Regulatory Role

Each solid waste management facility is unique in terms of its location, design, and operation. All of these factors must be taken into consideration through the permitting process. Between 1991 and 1995, the Illinois EPA received 1,829 permit applications for new facilities or for modifications of existing facilities; of these, 355 (or 19 percent) were denied for deficiencies. In 1996, the Illinois EPA implemented a "One-Time Permitting Process" aimed at assisting permit

applicants and reducing the number of permit denials. Since this process was adopted, the number of denials has decreased significantly. In 2003 and 2004, the Illinois EPA received 965 permit applications and denied only 29 requests (or 3 percent).

The Illinois EPA ensures compliance with permit requirements and state and federal environmental regulations through routine inspections and response to complaints. In 2003 and 2004, the Illinois EPA and delegated authorities conducted over 6,000 inspections at permitted solid waste facilities and hazardous waste generators with an overall compliance rate of 76 percent.



Methane gas controls at landfill

DELEGATED INSPECTION PROGRAM

The Illinois EPA has delegated inspection authority to 17 county agencies, the Ambraw Valley Solid Waste Agency, and Chicago. This program takes advantage of additional staff resources at the local level.

Delegation agreements authorize these agencies to conduct many of the duties that would otherwise be performed by an Illinois EPA field office: investigating suspected violations of land pollution laws and reports of open dumping, and inspecting landfills, transfer stations and compost facilities permitted through the Illinois EPA. Inspections can also include industrial landfills and monofills (private facilities that do not accept municipal solid waste.)

Thousands of inspections of pollution control facilities and other sites were completed by delegated agencies during 2003 and 2004. These efforts at the local level stimulate the regulated community to take all necessary steps to comply with environmental regulations. Also, prompt response by local authorities does much to curtail open dumping.

In 2003 and 2004, Illinois EPA staff responded to 1,406 complaints of illegal waste operations. Inspections conducted by both Illinois EPA and their delegated partners uncovered over 1,500 new open dumping cases for the same time

period. Since 1997, over 6,800 open dumping cases have been investigated and 5,466 of these open dumps have been cleaned up. Governor Blagojevich's Fiscal Year 2006 Budget proposes funding for Project IRID (Illinois Removes Illegal Dumps), a new initiative targeting the cleanup of open dumps and regulation of construction debris disposal sites.

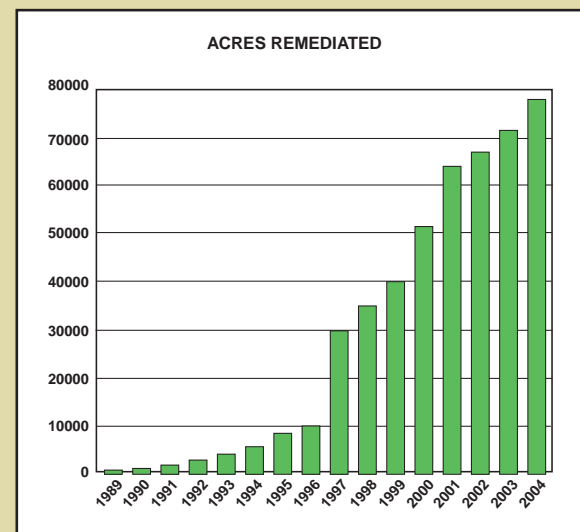


Open dumping is an ongoing environmental problem.

Cleanup of Contaminated Properties

Hazardous Substances & Petroleum Cleanups

The Illinois EPA administers six programs that address clean up (or remediation) of hazardous substances and petroleum. Remediated sites are contaminated properties at which health risks have been successfully reduced, controlled, or eliminated. In 2000, the Illinois EPA committed, through an agreement with U.S. EPA, to remediating at least 80,200 acres by 2005. At the end of 2004, over 77,000 acres (or 96 percent of the cleanup goal) had been remediated.



| PROGRAM | DESCRIPTION |
|---|---|
| LEAKING UNDERGROUND STORAGE TANK PROGRAM | Directs the cleanup of properties where petroleum or hazardous substances have leaked from underground storage tanks and the Illinois Emergency Management Agency has been notified. |
| SITE REMEDIATION PROGRAM | Provides the opportunity to voluntarily clean up contaminated sites with Illinois EPA oversight. |
| SUPERFUND PROGRAM | Investigates and cleans up uncontrolled, abandoned, hazardous waste sites as authorized by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. |
| FEDERAL FACILITY PROGRAM | Provides assistance to federal agencies responsible for conducting cleanups and provides assurances to local communities that federal facility sites have been cleaned up satisfactorily. |
| RCRA CORRECTIVE ACTION PROGRAM | Directs the investigation and cleanup of hazardous wastes at RCRA facilities. |
| RESPONSE ACTION PROGRAM | Investigates and cleans up uncontrolled abandoned hazardous waste sites not addressed by other programs. |

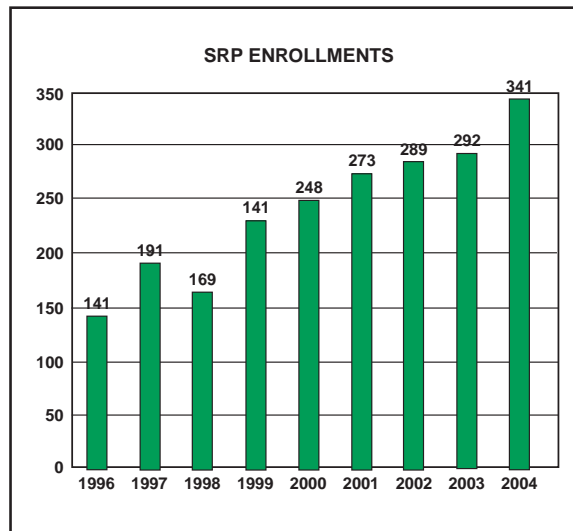
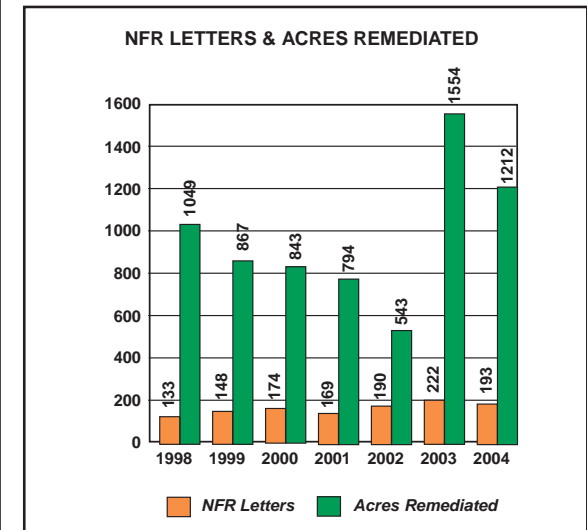
Trends in Cleanups

Leaking Underground Storage Tanks (LUST)

program: The year 2003 marked the 15th anniversary of the LUST program in Illinois. Since its inception in 1989, over 19,000 acres (or 11,245 sites) have been remediated, surpassing the program's objective of remediating 14,000 acres by the year 2005. Over the past four years, the program has closed more sites than the number of new releases reported.

Site Remediation Program (SRP - Voluntary Cleanups): Illinois EPA's voluntary cleanup program is one of the oldest in the nation (one of two that started in 1989). To date, over 2,800 sites have been enrolled into the program, with 633 sites (or 25 percent of all sites) enrolling in 2003 and 2004. Since Governor Blagojevich took office, the program has issued over 413 No Further Remediation Letters (or 31 percent of all

Letters issued) designating successful completion of cleanup activities. In 2004, the voluntary cleanup program exceeded its objective of remediating 9,400 acres by 2005.



Superfund (National Priorities List) Program:

As the Superfund program finished its twenty-fourth year, construction had been completed at 22 of the 48 NPL sites in Illinois. Completion of construction qualifies the site for deletion from the NPL. This represents over 4,700 acres remediated towards the 2005 goal of 6,000 acres remediated (or 79 percent of the goal). Construction projects are ongoing at 9 NPL sites. The Superfund program has a longstanding "enforcement first" policy to pursue viable, responsible parties to pay for or carry out cleanups. In Illinois, 78 percent of the NPL construction projects underway are lead by Potentially Responsible Parties.

Federal Facilities Program: Sites addressed by the Federal Facilities Program include some of the largest properties undergoing remediation in Illinois. These sites offer tremendous potential for economic redevelopment and restoration of wildlife habitats. Since 1995, at least partial remediation has been completed at 23 federal sites (or 36,000 acres) in Illinois.

RCRA Corrective Action Program: This program directs owners and operators of hazardous waste management facilities in the cleanup of releases from regulated units, such as tanks, impoundments, landfills, and drum storage. Since 1996, over 9,000 acres have been remediated under the requirements of this program.

Response Actions Program: This program takes preventive or corrective remedial action, particularly where other cleanup programs may lack the ability to take short-term remedial actions. During 2003 and 2004, the program performed investigations and cleanups at old manufacturing plants, former waste oil recycling operations, contaminated agricultural facilities and other sites where surface water, groundwater, soil and air are contaminated with hazardous substances. By the end of 2004, over 1,000 acres were remediated by this program.

The program also concentrated its efforts on stabilizing 33 abandoned landfills as part of a five-year statewide public works program. At the end of 2004, 20 of these landfills had corrective action completed, three were undergoing

construction, and 10 were in various stages of planning.

Examples of Hazardous Substances & Petroleum Cleanups

CASE STUDY #1

Special Brownfields LUST Fund

Locations: Streator, Rock Island, Monticello, Belleville

Area: 5 acres (total)

The Illinois EPA administers the U.S. EPA Special Brownfields LUST Fund to help communities address contamination associated with leaking underground storage tanks. In 2004, the Illinois EPA awarded \$100,000 to four communities (Streator, Rock Island, Monticello, and Belleville) to assist in the removal of nine underground storage tanks.

- The City of Streator was awarded \$45,000 for the removal of four underground storage tanks from a former gasoline station next to the Streator Public Library. A portion of the site will become a commercial building and the remainder will become a parking lot serving both the library and the municipal building complex.
- The City of Rock Island received \$10,000 for the removal of four cone-shaped underground storage tanks located at former drycleaner site.

Following cleanup, plans are to convert this property into a downtown restaurant/coffeehouse.

- The City of Monticello received \$17,500 for the removal of a 12,000-gallon underground storage tank at the former Pepsin Syrup Company site in westside downtown area. The site has considerable appeal to commercial developers because of its location near downtown Monticello.
- The City of Belleville received \$25,800 to remove a 7,500-gallon underground storage tank located at the RUST Company site. Community leaders hope to convert the area into a business corridor.



Belleville



Streator
(Photo courtesy of the City of Streator)



Rock Island

CASE STUDY #2

Chicago Manufacturing Campus LLC

Location: Southeast Chicago

Area: 115.6 acres

This site is in an industrial corridor on the south side of Chicago between Wolf Lake and the Calumet River. Originally the site and the surrounding areas were wetlands. In 1941, Republic Steel purchased the site and began filling the wetlands with steel processing slag. CenterPoint Properties Trust acquired the site with the intention of redeveloping it into an industrial manufacturing campus containing warehouses and support businesses for the expansion of Ford Motor Company.

For the purposes of evaluation and cleanup, CenterPoint divided the site into eight parcels and enrolled them between 2003 and 2004 into the Site Remediation Program. Remediation of the various parcels has included the excavation and removal of hazardous and special wastes and the reliance on engineered barriers and institutional controls to minimize risks to future users of the site. Between 2003 and 2005, the Illinois EPA issued No Further Remediation Letters for the eight parcels for a total of 115.6 acres. The site is restricted to industrial/commercial land use.

The site is particularly attractive for redevelopment because it is located in Enterprise and Empowerment Zones, is a planned development with all new infrastructure, and has ready access to I-94. Businesses locating on the campus include: Tower Automotive, ZF Lemforder, Brose

Chicago, Inc., Lear Operations Corporation, Summit Polymers, Inc., S-Y Systems, VC Regional Assembly & Manufacturing LLC, and Ford Motor Company



Grading and filling at the Chicago Manufacturing Campus



Restored and rerouted Wolf Creek

CASE STUDY #3

Byron Salvage Yard

Location: Ogle County

Area: 140 acres

The Byron Salvage Yard and the adjacent Dirk's Farm site located near the City of Byron accepted industrial waste including electroplating wastes and other materials (oil sludge, paint sludge, cutting wheels, solvents, and scrap metal) during the 1960s and early 1970s. On-site disposal of wastes included impoundments, dumping on the ground, spraying on nearby dirt roads for dust control, or burying in drums (which later corroded and leaked).

A series of regulatory actions culminated in the Byron Salvage Yard being placed on the National Priorities List (i.e., Superfund) in 1982. In 1984, the U.S. EPA constructed a fence to prohibit site access and provided bottled water to local citizens. In 1985 and 1986, the Illinois EPA disposed of approximately 11,000 drums and excavated, disposed or treated roughly 3,000 cubic yards of highly contaminated soils. In 1986, the Illinois EPA installed carbon filtration systems in affected homes to replace the bottled water supplied previously by U.S. EPA. In 1988, Illinois EPA connected approximately 180 homes to the Byron municipal water supply. In 1998, U.S. EPA extended municipal water services to 27 additional homes.

Investigations at the Byron Salvage Yard indicated that similar waste disposal practices occurred at the adjacent Dirk's Farm site. In

2002, excavation and off-site disposal of contaminated soil from the site was completed and long-term groundwater monitoring was initiated.

Construction was completed at both sites in August 2003. A five-year review is scheduled in 2008 to determine if additional groundwater remediation is necessary.



Decontaminating sampling equipment

CASE STUDY #4

Savanna Army Depot

Location: Carroll & JoDaviess counties

Area: 13,062 acres

The Savanna Army Depot was founded in 1917 for ammunition manufacturing, testing and storage. In 1995, the Depot was placed on the U.S. Army's base closure list and officially closed in 2000. The U.S. Army is pursuing the cleanup of metals, pesticides, explosives, lead-based paint chips, and organic chemicals to allow increased management and public recreational use. To date, remedial actions have included

excavation and disposal of contaminated soils, incineration, and stabilization and disposal of lead contaminated soils. The cleanup is estimated to cost \$350 million.

The site contains 7,000 acres of uplands and 5,500 of bottomlands. At least 47 Illinois Endangered and Threatened animal and plant species have been observed at the Depot. The U.S. Fish & Wildlife Service is scheduled to receive over 9,000 acres to become the Lost Mound Unit of the Upper Mississippi River National Wildlife and Fish Refuge. In 2003, over 3,000 acres were transferred to the U.S. Fish & Wildlife Service. The remaining acreage will be transferred in the future as parcels are certified clean from environmental contaminants.

In 2004, over 500 acres were approved for transfer. Approximately 370 acres were transferred to the JoCarroll Depot Local Redevelopment Authority for industrial and commercial ventures. The remaining 177 acres were transferred to the U.S. Army Corps of Engineers for recreational purposes and access to the levee.



Removal of chemical waste disposal trench

CASE STUDY #5

BP Main Plant

Location: Wood River

Area: 600 acres

Constructed in 1907 and closed in 1981, the BP Refinery in Wood River was considered an unusable industrial brownfield. However, a partnership that includes BP, Triad Industries, RLJ L.L.C., the City of Wood River, U.S. EPA, and the Illinois EPA has undertaken the redevelopment of this site. In 2001, the project was selected as one of five RCRA Brownfield Prevention pilot projects to showcase the flexibility of the RCRA corrective action program. BP has invested more than \$70 million for remediation. No federal or state money has been involved in the cleanup.

In 2002, a groundbreaking ceremony was held for Phase I of the redevelopment project including the American Commons, a six-acre business and retail park, and the 30-acre Deer Park Wildlife Habitat. The Deer Park includes an observatory and a walking trail.

To date, the Illinois EPA has issued No Further Action determinations for five areas of the site totaling 156 acres.



Wood River Refinery (1954)



Deer Park Pavillion

CASE STUDIES #6 and #7

Waste Hauling Landfill

Location: Decatur

Area: 40 acres

During 1998 and 1999, an inventory of problem landfills in Illinois placed a high priority on the need for corrective action at the Waste Hauling Landfill. Located less than one-quarter mile south of the Sangamon River and north of Rock Spring Road, the landfill had significant erosion problems. Visible leachate was observed on three sides of the landfill, which drained into a stream flowing into the Sangamon River. The case is currently under enforcement action by the Illinois EPA and the Illinois Attorney General's Office for operation violations.

Corrective action on the landfill was initiated in 2002. Major activities included reshaping the landfill to create slopes that were more stable and less susceptible to erosion, correcting leachate seeps, creating a proper storm water drainage collection system, installing groundwater monitoring wells and a landfill gas venting system, and also the installation of a cap consisting of 2 feet of clay and 18 inches of topsoil. In 2003, the landfill was seeded with a native prairie vegetation cover to stabilize the cap soils.

Fulk Property

Location: Marion County

Area: 5 acres

In July 2002, complaints from neighbors of open burning on this site triggered an investigation by

the Illinois EPA. The site consisted of a residence surrounded by scrap metal, used tires, batteries, drums, and junk vehicles. Among the refuse were drums containing hazardous wastes. In 2004, because the property owner and operator had not taken action as directed, the Illinois EPA initiated removal of the hazardous wastes for off-site disposal. A total of ten drums, six five-gallon buckets, 15 one-gallon cans, and 27 automotive batteries were collected and removed. The property owner is removing the remaining debris from the site.

**“ILLINOIS EPA CONTINUES TO
CLEAN UP SITES THROUGHOUT
THE STATE WHERE THE SOIL AND
GROUNDWATER ARE THREATENED.”**

— Renee Cipriano, Illinois EPA Director



Waste Hauling Landfill



Drum of hazardous waste at Fulk Property

Cleanup of Used and Waste Tires

Between 1989 and 2002, the Illinois EPA cleaned up or collected more than 10 million used tires. In 2003 and 2004, the Illinois EPA cleaned up more than 29,000 tons (or 2.3 million passenger tire equivalents) through enforcement actions and county-wide collection events. In 2004, Illinois raised the tire user fee from \$1 to \$2.50 on each new and used tire sold. Monies collected will be used for tire-pile cleanups, inspection and enforcement activities, market development for tire-based products, and mosquito research and control.

Improperly managed tires pose significant environmental risks as prime breeding habitat for disease-carrying mosquitoes (e.g., West Nile Virus) and fire hazards. The Illinois EPA conducts over 600 inspections at used tire facilities and responds to over 700 complaints from local officials and citizens annually. To crack down on illegal tire dumps, “Project TREAD” (Tire Reduction, Education and Disposal) was launched under Governor Blagojevich’s administration to recruit citizens and local officials to report improperly discarded tires to the Illinois EPA and local enforcement officials. For information on Project TREAD, contact the Illinois EPA’s Used Tire Program (217/785-8604) or visit the Project TREAD website at <http://www.epa.state.il.us/land/tires/images/project-tread.pdf>

Public Outreach

Public outreach supports the Clean Land objectives by raising public awareness, informing interested or affected individuals, and involving the public in regulatory and program decisions.

Improved Waste Disposal Habits

Although households are allowed to dispose of small quantities of hazardous materials, such as waste oils, solvents, paints, and pesticides,

significant quantities are disposed annually in municipal solid waste landfills. Illinois EPA has implemented a variety of programs to promote cleaner and safer disposal practices by diverting hazardous materials generated by households, schools and small businesses from municipal waste landfills. Some of these materials are recycled, reused or managed by permitted hazardous waste facilities.

Household Hazardous Waste Collections: With the assistance of local governments, the Illinois EPA sponsored 68 household hazardous waste collections in 2003 and 2004 at a state cost of over \$3.4 million that does not include Illinois EPA administrative expenses or the costs to local co-sponsors for publicity, traffic control, or other local service. Over 9,200 drums (enough to fill over 100 semi-truck trailers) of waste was collected. Since the program began in 1989, 360 one-day collections have been held, with more than 62,000 drums being collected from approximately 315,000 households and disposed at permitted hazardous waste facilities or recycled.

Illinois EPA assists communities with the costs of disposal of household hazardous waste collected at long-term collection facilities and locally sponsored collection events. Long-term collection facilities operate in Naperville (since October 1992) and Rockford (since 1995). The Solid Waste Agency of Lake County conducts Household Chemical Waste collections at various locations in the county. In 2003 and 2004, the Illinois EPA provided over \$1.3 million for the

disposal of almost 8,000 drums of household hazardous waste at these operations.

School Hazardous Waste Collections: In 2003 and 2004, the Illinois EPA, in partnership with 220 schools, collected over 525 drums of hazardous materials, such as laboratory wastes, expired chemicals, unstable compounds, mercury-containing items, toxic or flammable materials, at an average annual state cost of \$175,000. Since 1996, the Illinois EPA has conducted 342 hazardous waste collections serving 247 communities. In 2004, the Illinois EPA expanded the school hazardous waste collections program to assist up to 600 schools through June 2007.

Partners for Waste Paint Solutions: About 25 percent of the waste collected during the Household Hazardous Waste Collections is paint. To address this large volume item the Illinois EPA has initiated the “Partners for Waste Paint Solutions” Program in 1995. These partnerships offer consumers the opportunity to deliver



Household hazardous waste drop off



Items collected at a school hazardous waste collection

unwanted paint to local participating paint retailers where it will be reformulated or remixed for reuse. Unusable paint is managed by the Illinois EPA. In 2003 and 2004, the Illinois EPA coordinated with 21 paint retailers to collect, reformulate and reuse over 43,000 gallons of unwanted paint products from the public. The reformulated paint was donated or resold. Another 65,000 gallons of paint was bulked for fuel blending or disposal. The cost incurred in 2003 and 2004 by Illinois EPA for this program was almost \$285,000.

Industrial Materials Exchange Service: Illinois EPA maintains an Industrial Materials Exchange Service (IMES) to provide a clearinghouse for businesses to offer waste by-products, off-spec items, and overstocked, damaged or unwanted materials for reuse, rather than disposal. Since 1981, over 656 million gallon equivalents have been diverted from disposal at an estimated cost saving of \$232 million. In 2003, the IMES

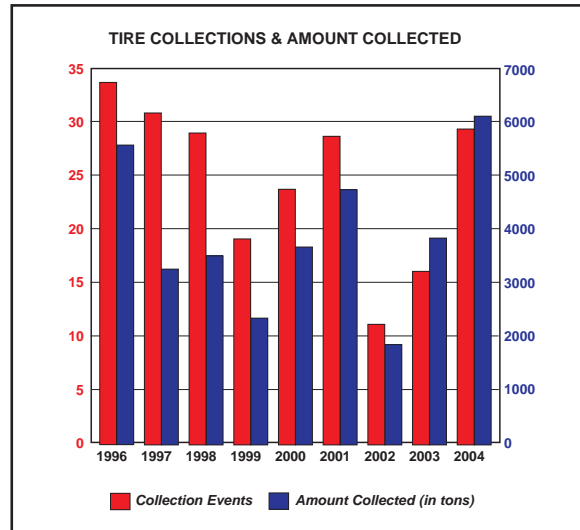
contained 466 material listings. Of these listings, 101, or a total of 83.7 million gallon equivalents, were diverted from disposal. The estimated cost savings to industry was estimated at \$14.5 million.

Countywide Waste Tire Collections

Over the past 14 years, the Illinois EPA has co-sponsored 405 countywide collections, resulting in the collection and disposal or recycling of more than 56,000 tons of waste tires. In 2002 and 2004, the Illinois EPA conducted a total of 45 collections resulting in over 9,800 tons of waste tires, the equivalent of more than 487,000 passenger car tires, at state cost of \$1.36 million. The majority of the waste tires collected are converted into tire-derived fuel and burned for energy recovery in utility boilers. Other uses for the waste tires include recycling into playground flooring, crumb rubber for use on athletic fields, and rubber products in the automotive and home improvement industries.



Waste tires to be recycled



Brownfields

Brownfields are properties at which redevelopment is hindered by the presence or perceived presence of environmental contamination. In 1998, the Illinois EPA created the Office of Brownfields Assistance to provide technical and financial support for the redevelopment of Brownfields.

Financial Support

Municipal Brownfields Redevelopment Grant Program:

Illinois EPA offers municipalities grants up to \$240,000 for investigation and cleanup of brownfields. To date, 106 municipalities have been awarded over \$13 million. In 2003, \$600,000 was awarded to 11 municipalities, while in 2004 over \$1.6 million was awarded to 22 municipalities.

Grants issued:

Municipality (Grant Amount)

Alton (\$206,706); Arthur (\$50,412); Aurora (\$119,994); Barrington Hills (\$199,474); Bartlett (\$240,000); Bartonville (\$119,959); Bedford Park (\$240,000); Belleville (\$44,116); Belvidere (\$240,000); Braidwood (\$30,106); Broadview (\$240,000); Brookfield (\$16,432); Burnham (\$120,000); Calumet City (\$88,305); Canton (\$240,000); Carbon Cliff (\$42,277); Chicago (\$119,369); Chicago Heights (\$240,000); Cicero (\$105,486); Collinsville (\$119,258); Crete (\$95,526); De Kalb (\$77,866); Des Plaines (\$36,590); Dixon (\$111,610); Downers Grove (\$183,600); Du Quoin (\$54,819); East Moline (\$239,943); East Peoria (\$240,000); East St. Louis (\$52,666); Effingham (\$33,005); Elgin (\$114,975); Eureka (\$62,016); Farmington (\$51,514); Franklin Park (\$224,137); Freeport (\$240,000); Fulton (\$68,623); Geneva (\$9,220); Gillespie (\$103,820); Glencoe (\$240,000); Glen Ellyn (\$14,264); Grayslake (\$45,344); Harrisburg (\$79,784); Harvey (\$120,000); Havana (\$92,469); Hoopeston (\$96,413); Justice (\$25,891); Karnak (\$97,495); Lacon (\$240,000); La Grange (\$120,000); Lansing (\$240,000); Le Roy (\$83,902); Lemont (\$125,055); Lincolnshire (\$25,253); Lockport (\$109,113); Lynwood (\$46,757); Machesney Park (\$107,341); Macomb (\$49,245); Marion (\$114,840); Markham (\$120,000); Mattoon (\$56,136); Mendota (\$66,487); Minooka (\$39,529); Moline (\$109,916); Monticello (\$195,701); Morton Grove (\$56,382); Mt. Carmel (\$96,618); Mt. Vernon (\$138,037); Naplate (\$38,335); New Athens (\$36,814); Normal (\$111,451); North Chicago (\$120,000);

Olney (\$240,000); Palatine (\$240,000); Park City (\$119,598); Park Forest (\$120,000); Peoria (\$88,622); Pittsfield (\$84,802); Plano (\$211,715); Posen (\$120,000); Princeton (\$82,599); Quincy (\$69,198); Rantoul (\$51,721); Riverdale (\$240,000); Robbins (\$120,000); Rockford (\$240,000); Rock Falls (\$120,000); Rock Island (\$210,799); Rosemont (\$46,597); Rosiclare (\$119,939); Rossville (\$146,950); Silvis (\$216,935); Skokie (\$59,684); South Beloit (\$119,996); South Chicago Heights (\$240,000); St. Charles (\$116,973); Sterling (\$239,625); Streator (\$196,467); Summit (\$129,361); Sycamore (\$119,479); Thornton (\$145,103); Wauconda (\$101,210); Waukegan (\$119,900); Wheeling (\$119,734); Woodstock (\$87,631); Yorkville (\$57,906); Zion (\$237,714)

Brownfield Cleanup Revolving Loan Fund:

Illinois EPA administers this fund providing loans up to \$425,000 per site to municipalities to clean up former industrial sites. In 2003 and 2004, loans totaling over \$1.5 million were granted to 5 municipalities.

Brownfield Site Restoration Program: This program, administered by the Illinois EPA and the Illinois Department of Commerce & Economic Opportunity, provides reimbursement to persons who voluntarily remediate brownfields if the remediation leads to a “net economic benefit.”



Dan Lorentzen (right) tells IEPA Director Cipriano of his plans to open a coffee house/cafe in a former abandoned drycleaners cleaned up with help from an IEPA brownfields grant to Rock Island.



Director Cipriano presents Brownfields grant check to Gillespie Mayor Dan Fischer.

Technical Support

Brownfield Representatives: Brownfields representatives act as a liaison for communities to various Illinois EPA technical, financial, and regulatory staff. In 2003 and 2004, representatives assisted 33 municipalities on 67 brownfields projects.

Targeted Site Assessments: Illinois EPA offers limited site evaluations services to municipalities (free of charge) to determine the potential costs and to identify potential environmental obstacles for brownfields redevelopment. To date, 47 targeted site assessments have been completed. Of these, 11 were conducted in 2003 and 2004.

Statewide Illinois Brownfields Conference: Each year, the Illinois EPA sponsors a statewide Illinois Brownfields Conference to promote the cleanup and reuse of brownfields. Attendees are informed about strategies for site selection and land acquisition, updated on regulatory changes affecting cleanups, presented new financing strategies and funding opportunities, and introduced to new remediation technologies.



"Comes an echo on the breeze."

CLEAN AIR

The Illinois EPA continues to strive towards improved air quality through regulatory efforts and numerous other programs enlisting citizens and organizations to benefit communities, residents, and especially children.

Air quality has been a priority in the State since the formation of the Illinois EPA in 1970. Since that time, the Agency, through its Bureau of Air, has worked to improve the overall air quality by identifying air pollution problems, and working

with sources to reduce air pollution, which includes reviewing and issuing permits and inspecting facilities. IEPA also oversees the vehicle emissions testing program in the Metro-East and Chicagoland areas.

Air pollution comes from a number of sources throughout the nation. Pollution can travel from one state to another, or remain stagnant in the location it was emitted. In Illinois, the highest levels of air pollution exist in the state's largest metropolitan areas, Metro-East St. Louis and Chicago. However, those areas continue to experience an on-going trend of decreased pollution.

The Illinois EPA has worked aggressively to target all sources of pollution. For some time, the main target included major sources such as refineries and power plants and other large businesses. While those types of operations continue to be the primary focus and have had regulations tightened over the past several years, additional focus has been placed on individual contributions to air pollution. Individuals contribute to air pollution through everyday activities, especially driving.

In Illinois, vehicles are the single largest source of air pollution. Although newer vehicles run much more efficiently, there are now many more on the road. The IEPA's newest programs are addressing vehicle emissions along with other individual activities to aid in improving the State's air quality. Those programs include:

- The Green Pays on Green Days Program offers Chicago area residents the opportunity to win environmentally friendly products by pledging to take clean air actions.
- The Illinois Clean School Bus Program provides grants to Illinois schools to clean up their diesel powered school bus fleets, providing a healthier environment for the students and communities.
- Cleaner domestic fuels are becoming increasingly popular among fleet owners and individuals. The Illinois Green Fleets and Alternate Fuel Rebate Programs continue to expand and offer great incentives to those purchasing cleaner vehicles and fuels.
- The launch of a lawnmower buy-back and gas can exchange program brings awareness to residents in the state's most polluted areas, while offering them an option to their outdated lawn equipment.
- Streamlining the vehicle inspection and maintenance program to incorporate advanced technology.

Individuals are now more aware of their impact on the environment than ever before. The Illinois EPA will continue to reach out to the general public; however, the principal goal is to meet national ambient air quality standards (NAAQS). Illinois officials continue to work on numerous issues to help achieve this goal, including working directly with industry or, if necessary, challenging federal proposals that may negatively impact Illinois air quality.



Air quality in the Chicago area is better than many other metro areas.

Illinois Air Quality Continues to Improve

Illinois continues to see an ongoing trend toward improved air quality, especially in Illinois' largest metropolitan areas. In the 33rd Annual Air Quality Report, released in 2004, the Illinois EPA noted that air quality in the state remained good or moderate 94 percent of the days in 2003, up five percent from the previous year. In the upcoming 2004 report, to be issued later this year, air quality once again improved with the state having good or moderate days 98 percent of the days. The reports are based on information gathered through the Agency's extensive air monitoring network of more than 200 air quality monitors. Through the network, pollutants such as particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide and ozone are monitored throughout the year.

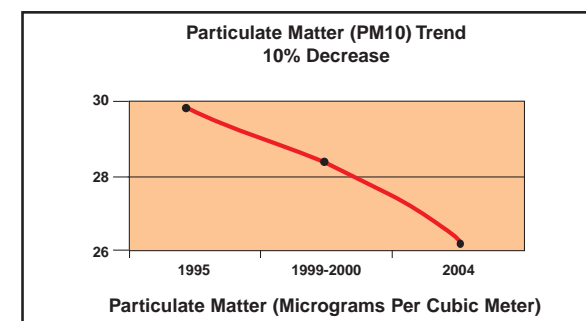
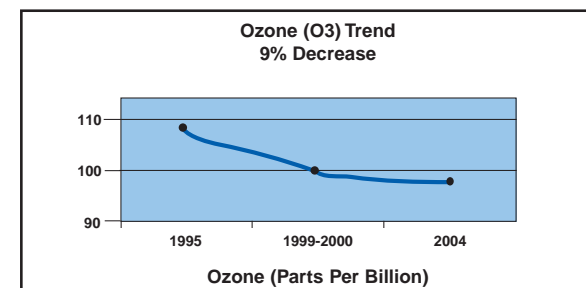
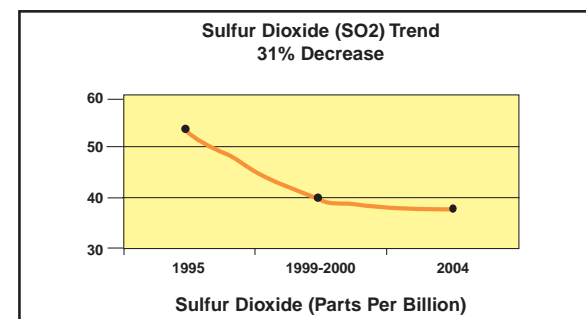
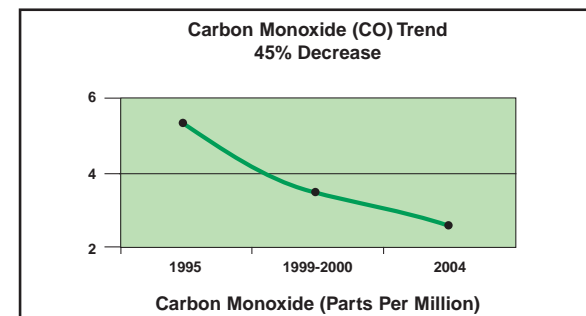
The data in the report also shows that none of the air quality monitors in Illinois in 2003 recorded levels of ozone above the federal one-hour health standard. Additionally, 2004 marked the first year since monitoring has begun that there were no days where levels were recorded above the more stringent federal eight-hour health standard.

Illinois officials expect to meet the federal one-hour standard for ozone in the Chicago metro area following the 2005 ozone season. Additionally, work will continue to bring the state in compliance with the federal 8-hour and fine particulate matter standards.



Illinois EPA official working with monitoring equipment in the Chicago area

State officials continue to work to bring the Chicago area air quality to federal standards by implementing numerous voluntary programs and other regulatory efforts.



Illinois EPA and Partners For Clean Air Rewards Chicago Area Residents

In September 2004, Illinois EPA Director Renee Cipriano, Chicago's NBC-5 Meteorologist Tammie Souza and Clean Air Superhero, Breathe Easy Man, presented the keys to a 2005 Toyota Prius to Mr. Gene Surace of Mount Prospect. Mr. Surace was the Grand Prize winner of the



Gene Surace with Tammie Souza and Breathe Easy Man

Green Pays on Green Days program co-sponsored by the Illinois EPA and the Chicago area Partners for Clean Air.

Since 2002, the Illinois Environmental Protection Agency and the Partners for Clean Air have joined forces to implement the Green Pays on Green Days program, which runs from June through early September each year, the primary months of the summer air pollution season. The program was designed to inform individual citizens and businesses in the greater Chicagoland area about air quality and actions

that can reduce air pollution, and in 2003 received a national award from U.S. EPA.

In a partnership with NBC-5 in Chicago and other media outlets, Chicago area residents are



Toyota Prius electric hybrid

able to "take the Clean Air pledge" by committing to one or more green actions to reduce air pollution. In return, those individuals are entered into a contest, which awards environmentally friendly products when daily air quality is forecasted to be good or "green" according to the national Air Quality Index. Since the creation of the program, the Illinois EPA and Partners for Clean Air have received more than 63,000 pledges from area residents.

At the close of the 2004 Green Pays on Green Days program, a select group of Chicago area businesses were also recognized for their efforts to reduce air pollution through Partners for Clean Air and Rideshare Excellence awards. Awards were also presented to eight entities for their participation in air quality improvement programs. The recipients for Partners for Clean Air awards were the Village of Northbrook, the American Lung Association of Metropolitan Chicago, E.W. Inman, Ltd., and Abbott Laboratories. Rideshare Excellence award

winners were Blue Cross Blue Shield, Prairie Stone Transportation Management Association, the Federal Aviation Administration and CDW Corporation.

The companies recognized are part of the Chicago area Partners for Clean Air coalition which implements an Action Day program to alert area businesses and residents when air quality levels reach the unhealthy levels. The Air Pollution Action Day (formerly Ozone Action Day) Program has been in place for 10 years. For the first time since the program began, 2004 marked the first year in which no Ozone or Air Pollution Action Days were called.



To achieve the greatest air quality benefits, the Green Pays on Green Days targets individuals in areas that do not meet current national air quality standards. The contest was open to residents in Cook, DuPage, Grundy, Kane, Kendall, Lake, McHenry and Will counties in Illinois. Green Pays on Green Days has been funded for three consecutive years from financial and product contributions from numerous Illinois businesses and organizations.

Illinois EPA Helps School Buses “Make the Grade”

In October 2003, Director Renee Cipriano announced the creation of the Governor’s Illinois Clean School Bus Program. The program was created to offer grants to Illinois school districts to improve their diesel-powered school bus fleets by incorporating clean-diesel technologies and fuels.

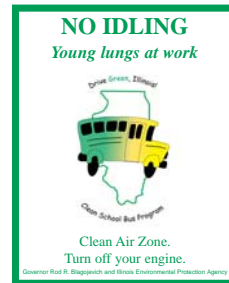
Since the creation of the Clean School Bus Program, the Illinois EPA has provided grants to more than 40 school districts throughout the state, totaling more than \$1.6 million. School districts receiving funds have incorporated various “clean-diesel” options including installing diesel oxidation catalysts, particulate filters, non-idling equipment and cleaner fuels



such as biodiesel and ultra-low sulfur diesel (ULSD).

A key component to the program involved educating school district personnel regarding the school bus idling. This was achieved through the

development of informational materials, and anti-idling video and anti-idling posters and stickers to be placed on school buses. The IEPA video features options available under the Clean School Bus Program as well as testimonies from school district personnel on the benefits of eliminating unnecessary idling and retrofitting school buses. The Illinois EPA is distributing the video to school districts in an effort to further reduce emissions from school buses. Additionally, many school districts have sought and received funds for non-idling equipment to be used on their buses.



As a result of the Clean School Bus program, more than 600 Illinois school buses are running on one or more clean-diesel options.



Diesel oxidation catalyst mounted in muffler



Chatham students helped launch the Clean School Bus Program.

476 Buses Retrofitted with Diesel Oxidation Catalysts

An oxidation catalyst is a type of advanced catalytic converter for diesel vehicles. Oxidation catalysts can perform on either regular diesel or Ultra-Low Sulfur Diesel fuel. This type of retrofit can reduce particulate matter (PM) by 20-30 percent, hydrocarbons by 50 percent and carbon monoxide by 40 percent.

49 Buses Retrofitted with Particulate Filters

Particulate filters are installed between the engine and the exhaust pipe of a diesel-powered bus. It is necessary for buses equipped with particulate filters to use ultra-low sulfur diesel fuel. The filters are effective in reducing PM emissions by 60-90 percent.

49 Buses Running on Ultra-Low Sulfur Diesel (ULSD) Fuel

ULSD can be used in any diesel vehicle. It has significantly less sulfur content, resulting in reductions of fine PM up to 10 percent.

266 Buses Running on Biodiesel Fuel

Biodiesel is a mixture of diesel fuel with soybean or vegetable oil based products. A standard diesel engine is capable of operating on biodiesel mixtures up to 20 percent without modifications. PM emissions can be reduced by 10 percent.

175 Buses Equipped with Non-Idling Equipment

Engine manufacturers have developed devices to allow diesel bus engines to be warmed up without the vehicle being started. Such devices can be set on timers allowing school buses to be warmed up without emitting unnecessary air pollutants in an around schools.

The Governor's Clean School Bus Program is funded through a number of sources including federal grants, corporate contributions through the Agency's Adopt-a-Bus Program and supplemental environmental projects received as a result of Illinois EPA enforcement cases.

Additional information on the Illinois Clean School Bus Program and the new Anti-Idling Video is available on the Illinois EPA's website at www.epa.state.il.us/air/cleanbus or by calling 217/557-1441.



Dennis Weaver and a caravan of alternate fuel vehicles traveled from St. Louis to Chicago in May of 2003 as part of the "Honorary Illinois Green Fleet."

Illinois Green Fleets Gaining Attention And Expanding

In May 2003, the Illinois EPA and the Chicago Area Clean Cities Coalition hosted actor Dennis Weaver and his caravan of alternate fuel vehicles as they drove from St. Louis to Chicago. Illinois EPA Director Renee Cipriano designated the caravan as an "Honorary Illinois Green Fleet." Mr. Weaver worked with the Illinois EPA and Chicago Area Clean Cities in promoting clean, domestic fuels and vehicles in Illinois, drawing much media attention.



In May 2004, the Illinois Green Fuels Program was launched as part of the Illinois Green Fleets campaign. Filling stations offering E-85 fuel in the Chicago area sold E85 for 85 cents as a one-day promotional event. As part of the announcement, all of the E85 stations were declared "Illinois Green Fuel" Stations and were highlighted in press releases and on several websites. Most major television, radio, and newspaper media in the Chicago area covered the story and told residents how to identify whether their vehicle could use E85 and which stations in the metropolitan area sold the fuel. The media also advertised the Illinois EPA's Green Fleets website at www.illinoisgreenfleets.org, which contains the vehicle and fuel information.

As a result of the increased attention, the website had more than 20,000 hits from residents looking for E85 information. The Illinois Corn Growers Association, with assistance from the Chicago Area Clean Cities Coalition and the Illinois EPA sponsored the "E85 for 85 cents" campaign.

Alternate Fuels Rebate Program Provides Incentive for Clean Fuels and Vehicles

In 2004, businesses, local governments, and individual citizens received more than \$370,000 in rebates from the Illinois Alternate Fuels Rebate Program. This program promotes the use of motor vehicles that run on clean, alternative fuels such as E85, natural gas, propane, biodiesel and electricity. In addition, the Illinois EPA continues to provide educational materials and conducts outreach to local governments and businesses on this program.



E-85 offers substantial cost savings over regular gasoline.

Since the Alternate Fuels Rebate Program began, the Illinois EPA has provided rebates in excess of \$2 million for more than 800 vehicles. With the launching of the Illinois Green Fuels program and E85 information on the program's website, the Agency has received a large number of calls concerning E85 fuel and the types of vehicles that can run on the fuel.

Lawnmower Buy-Back and Gas Can Exchange Programs Launched

Portable gas cans, like those used to fuel lawnmowers, and gas-powered lawnmowers account for a significant amount of smog-forming emissions escaping into the air every day. To help

reduce those emissions, the Illinois EPA held eleven gas can exchange and lawnmower buy-back events during the summer of 2004. Those events allowed citizens in the Chicago and Metro East areas of the state to trade in old gas cans and/or lawnmowers to receive a free environmentally friendly gas can and a \$150 rebate towards the purchase of an electric, rechargeable or push lawnmower.



Gas-powered mowers ready for scrapping

Emissions from gas cans occur from evaporation and spilling from overfilling of power equipment fuel tanks. In transporting and storing cans, emissions are also released through holes and cracks. By using newer gas cans, which are made of materials that minimize losses and include features such as no secondary vent holes and spill-proof shut off valves, harmful gasoline fumes can be reduced by 75 percent or 16.8 tons per day of volatile organic compounds (VOCs).

For every 1,000 four-stroke mowers replaced by a new electric or manual mower, the area would

achieve a reduction in the first year of 4.4 tons of pollutants that contribute to formation of ground-level ozone or smog. The reductions would be 3.7 tons in the second year and 2.9 tons in the third year.

As a result of the 2004 exchange events, 691 mowers were retired and 1,917 gas cans were exchanged. The total estimated volatile organic compounds or VOC reduction from Gas Can Exchange/Lawnmower Buyback Program is 12.26 tons per year, which is equivalent to removing 289 cars from the highway.

Cost Savings In Vehicle Testing Program

In 2004, an agreement was reached that saved the state \$31 million in the cost of the federally mandated vehicle emission-testing program in the Chicago and Metro East areas of the state. This agreement, negotiated by the Illinois EPA with the emissions testing contractor, Envirotech Illinois, Inc., allows the state to take advantage of the efficiency of computer-based on-board diagnostics (OBD) testing now used for 1996 and newer vehicles. This allowed six of the existing 35 testing stations to be closed without impacting service to vehicle owners.

The federally mandated program is part of the state's ongoing program for clean air progress in the Chicago and Metro East areas. The testing program results in a reduction of more than 12 percent in the pollutants from cars that contribute

to smog in the air. That translates into 26 tons per day of smog-forming volatile organic compounds, the equivalent of the emissions from 650,000 cars or 375 medium-sized factories. In addition, the testing results in an estimated yearly reduction of 260 tons of benzene, which has been linked to cancer.

In a recent report, the American Lung Association identified Chicago as one of 14 cities in the United

States where vehicle inspection programs have led to significant gains in air quality. The ALA deemed the Air Team program a “valuable tool for the improvement of air quality,” noting that it delivers “meaningful reductions both of air toxics and criteria pollutants that harm both the environment and human health.”

Thirty-four states have vehicle-testing programs. In Illinois, the cost of the program is paid for from a portion of state motor fuel taxes and federal grant funds.

By modifying the vehicle emissions testing network to reflect new testing technologies, the IEPA and Envirotest have produced the additional



On Board Diagnostics (OBD) testing is done by connecting to the vehicle's on board computer and retrieving information about the vehicle's emission control equipment.

savings, while maintaining the integrity and effectiveness of the state's clean air program.

In addition to some station closures, testing lanes were reconfigured to offer OBD Express service at each station. With the capacity to test more vehicles, OBD Express lanes make it possible to reduce the total number of stations while also providing reduced test times and improved test speed for many motorists. 1996 or newer vehicles, accounting for about 55 percent of the total number tested, began receiving the OBD test exclusively starting on January 1, 2004. The percentage of vehicles getting OBD testing is expected to steadily rise to 72 percent by 2007. As a result, stations can be closed while maintaining the ongoing integrity and effectiveness of the emissions program and offering a reduction in overall program costs to the state.

The station closures were based on a careful network analysis to determine the least impact on motorist convenience. The network will continue to meet the contract requirement that at least 80 percent of vehicle owners subject to testing will be within five miles of a testing station and 95 percent will be within 12 miles of a station. Prior to the station closures, vehicle owners were notified of alternate stations they may visit.

The agreement gives IEPA the flexibility and time it needs to consider ongoing emissions control strategies and ways to reduce air pollution in the future. The U. S. Environmental Protection Agency is expected to establish new criteria for vehicle testing in August 2005, making it

infeasible to implement a system consistent with the new USEPA criteria, without interruption, in February 2006.

Information about station hours and locations are available on the program website <http://www.epa.state.il.us/air/vim/> or by calling IEPA's Air Team hotline at (847) 758-3400. For added convenience, each Envirotest station continues to operate a toll free number for motorists to call in on for real-time information about the station they are preparing to visit. The numbers are provided in the test notices and on the web site.

Illinois Works to Eliminate Hospital Incinerators

In September 2004, Governor Blagojevich called on the eleven hospitals throughout the state that that still burn medical waste to voluntarily shut down cease operation of their incinerators. With the announcement, Governor Blagojevich resolved to eliminate the practice of incineration at hospitals. As Governor Blagojevich noted when he urged hospitals to shut down their incinerators, “Hospitals are supposed to provide health care, and hospitals are supposed to promote health care. Hospitals are supposed to not undermine public health.”

The Governor's action was in response to growing concerns raised by communities near the incinerators and emerging scientific data about hazardous health effects from exposure to toxic medical waste incinerator emissions. Combustion

processes such as incineration of medical waste causes the formation of a variety of toxic pollutants, including hydrochloric acid, dioxins and furans, and toxic metals such as lead, cadmium, and mercury. All of these pollutants are hazardous, but dioxins and furans are a major cause of particular concern and as there is no established safe level of dioxin exposure. Dioxins have been linked to cancer, birth defects, and other health problems.

Pursuant to the federal Clean Air Act, federal emission standards for medical waste incinerators were adopted by Illinois in 1999. The new standards led to the shutdown of 99 incinerators across the state and were expected to reduce air emissions from regulated sources by 75 percent to 98 percent from historic levels. The hospitals that continued to incinerate waste either upgraded or retrofitted equipment their incinerators with control equipment in order to meet the stricter standards.

Since the Governor's request that the remaining eleven hospitals with incinerators cease on-site incineration and convert to cleaner, healthier waste disposal methods such as, autoclaves, which sterilize waste in preparation for disposal at a landfills, the Illinois EPA has secured commitments from seven hospitals to discontinue the use of their incinerators.

The Illinois EPA continues to work with the hospitals that continue to incinerate waste to ensure that they comply with all applicable emissions standards, and they investigate environmentally sound methods to dispose of

their waste, especially waste that does not require incineration. Illinois EPA is emphasizing better waste management practices, such as recycling and waste segregation, to ensure that the amount of waste incinerated – and thus the amount of hazardous pollutants emitted into the air – is kept to a minimum.

Through the implementation of the hospital incinerator rules and Governor Blagojevich's call for remaining hospital incinerators to cease operation, Illinois has gone beyond federal requirements and is approaching the goal of eliminating the practice of incinerating waste at hospitals.

**Governor Blagojevich Urges
Bush Administration to Develop
Stronger Mercury Regulations
without Hurting Illinois' Coal Industry**

In 2004, Governor Rod Blagojevich and Illinois EPA officials called on President George W. Bush to reconsider a U.S. EPA proposal on mercury from coal-fired power plants that could have a negative impact on the environment, public health and Illinois' coal industry.

The Governor noted the proposed mercury standards clearly gave an unfair advantage to coal mined in western states, putting coal mined in Illinois and other Midwestern and eastern states at a competitive disadvantage. The Governor highlighted Illinois' concerns with rules proposed by the U.S. EPA on December 15, 2003.

"My administration is very committed to reducing mercury in the environment and we are also aggressively encouraging clean-coal technology that will allow our abundant coal reserves to be used in an environmentally-responsible manner," Gov. Blagojevich wrote the President. "The rule proposed by U.S. EPA will set back both these efforts."

The Governor noted that EPA's proposal imposes less stringent mercury reduction requirements on coal mined in western states creating an uneven playing field for Illinois coal. The proposal could reduce demand for Illinois coal and encourage the use of western coal that which may lead to increased mercury emissions. Western coal typically contains a type of mercury that is harder to remove from smokestacks than mercury found in Illinois coal.

The Governor urged President Bush and U.S. EPA to "recognize the importance of adopting standards that encourage the use of state-of-the-art control equipment to achieve reductions of mercury in the environment without unfairly pitting regions against each other."

The Governor also expressed his concern that U.S. EPA's proposal could endanger public health by leading to mercury hotspots near coal-fired power plants that do not reduce their emissions.

"I am sure you agree that mercury reductions must protect public health and should be a national responsibility that does not rest on the

backs of Illinois and other Midwestern coal miners,” the Governor’s letter concluded.

The Illinois EPA, on behalf of Governor Blagojevich, also submitted formal written comments to U.S. EPA expressing in detail the state’s concerns with the proposed mercury rule.

Illinois Environmental Protection Agency Director Renee Cipriano earlier testified at a U.S. EPA hearing in Chicago on behalf of the Governor about the inadequacies and unfairness of the proposed rule on mercury emissions from power plants. In addition, Cipriano and Bill Hoback, Bureau Chief of the Office of Coal Development in the Department of Commerce and Economic Opportunity, also represented the Governor in a meeting hosted by U.S. Sen. Dick Durbin (Il.) on the issue in March 2004 that included representatives of both labor and management in the Illinois coal industry.

Gov. Blagojevich commended U.S. Senator Durbin for working to assemble a coalition in Congress on this issue.

IEPA LABS PROVIDE KEY ANALYTICAL CAPACITY:

Facilities in Champaign and Springfield analyze several thousand samples yearly.

The Division of Laboratories at the Illinois Environmental Protection Agency encompasses two analytical laboratories, one in Springfield and one in Champaign, and the Certification Unit which certifies commercial laboratories, to ensure that those laboratories meet national accreditation standards. The Division has been analyzing environmental samples since the 1970s, and this experience allowed rapid response when the Formosa plastic factory in Iliopolis exploded in April of 2004. Samples were routinely reported out within 12 hours of reaching the laboratory, allowing judgments on water quality to be made quickly.

Two significant accomplishments occurred at the Illinois Environmental Protection Agency’s Division of Laboratories in 2003-2004. The first was the replacement of both the Springfield and Champaign laboratories LIMS (laboratory information management system). The LIMS computer system is used to track sample entry into the laboratory, recording the date of collection, location of sample site, which analyses are requested, and the Agency bureau for whom the work is being done. The LIMS system issues a laboratory sample identification number, and uses that number to track sample data, and issue the sample report. The new system replaced a computer system that had been in service since 1982, and with this system, historical tracking of sample data became possible. By the end of 2005, installation and training for the laboratories and the Agency will allow web-based access to data, as well as immediate alerting of Agency personnel when regulatory criteria are exceeded.

The second major accomplishment of the Division of Laboratories was the recertification by the National Environmental Laboratory Accreditation Program. This is a national program that has brought national certification to the environmental laboratory field. In the past there had been little standardization of environmental laboratories, and this rigorous system of analysis and documentation allows data users to have confidence that the analytical results produced meets criteria.



Preparing lab samples

The Springfield and Champaign laboratories analyze many of the same types of samples, but the preparation, equipment, and types of analysis done and results generated are completely different. The Champaign Inorganic laboratory analyzed 274,000 samples in 2003 and 287,000 in 2004, looking for nutrients such as phosphate and nitrates, metals, cyanide, fluoride, sulfate, hardness, etc., as well as total coliform analysis for microbial contamination.

The Springfield Organic Laboratory analyzed 20,000 samples in 2003 and 19,500 samples in 2004, looking for organic contaminants such as pesticides, herbicides, PCBs (polychlorinated biphenyls), MTBE (methyl tert-butyl ether),

benzene and other volatile solvents, and a wide variety of other organic industrial chemicals. The samples ranged from drinking water, to fish, to soil, river, lakes, and drums of unknown materials. While some of these samples could be directly analyzed in water, many of the samples involved preparing a sample extract for analysis.

EMERGENCY OPERATIONS UNIT:

*Long hours and risk are part of job
of IEPA's first responders.*

Long hours, unpredictable events, and an element of risk are all part of the job for the Illinois EPA's Emergency Operations Unit (EOU) staff. EOU, which began in 1970, handles approximately 2,000 incidents a year that range from small incidents such as a one hundred gallon diesel spill to large incidents like the deadly Formosa Plastics plant explosion in Illiopolis in 2004.

In 2004 EOU handled 1,777 incidents, nine of which caused the evacuation of 1,578 people, and 11 of which involved 20 fatalities and 37 incidents resulting in 83 injuries. The release at a majority of incidents — 1563 — was a leak or spill, while 33 were a fire or explosion, 120 a gas or vapor cloud, and 56 had water contamination. In 2003, the Unit handled 2,058 incidents, 14 of which involved evacuations of 328 individuals,

and six that resulted in nine fatalities, as well as 74 incidents resulting in injuries to 189 persons. In 2003, leaks or spills were involved in 1,641 incidents, 39 explosions or fires, 138 gas or vapor clouds and 96 involved water contamination.

EOU works in cooperation with Illinois State Police, Illinois Emergency Management Agency, Illinois Department of Public Health, State Fire Marshall inspectors, and other key agencies to provide a disciplined yet coordinated response to emergency situations. In addition, EOU responders often consult and work with other IEPA staffers, including toxicologists, and field inspectors.

In their capacity as first responders to an incident, EOU staff must be able to quickly assess a situation and determine the appropriate course of action to take. This requires a thorough knowledge of regulations, and a familiarity with all technical aspects of the job, such as the properties of chemicals and the capabilities of the monitoring equipment. At times they assume a role similar to a detective at the scene of a crime: interviewing people, surveying the scene, and determining the reality of the situation. At other times they are simply members of a team working towards the common goal of preventing and remedying environmental damage, and providing vital technical assistance to on-scene commanders.

The Unit has specially equipped vehicles that allow responders to monitor or sample, air, water, or soil with containers and proper protective clothing.

The Emergency Operations Unit has nine members based in Springfield, Des Plaines, and Collinsville. The responders are a diverse group, possessing varying backgrounds and specialties, such as chemistry, geology, and biology. Most of their expertise was not learned in a textbook or a training course, but on the job. Through their expertise and dedication, the responders help to ensure the protection of the public health and the environment.

The Illinois Emergency Management Agency serves as the central initial contact and then calls in agencies with specific expertise, including IEPA's Emergency Operations Unit, for assistance. Those calls can come at any time of the day or night and the EOU member may have to stay on the scene for several hours before being relieved. Typically, their role at the scene includes advising other responders on safely containing and handling hazardous materials and providing oversight and monitoring of proper clean up by responsible parties, as well as providing documentation of potential violations for follow-up enforcement action, and providing recommendations on evacuations.

EOU responsibility includes oil and hazardous material spills on water or land; releases of harmful quantities of toxic substances into the air; emergencies involving wastewater treatment and public water supplies; emergencies involving solid waste disposal sites; fish kills caused by pollutants; emergency disposal or treatment of hazardous materials; and abandoned hazardous waste incidents posing immediate hazards.



Overturned truck contaminating drainage area

Additionally, even before the events of 9/11 the EOU staff was involved in terrorism related activities, participating in the science component of the State Weapons of Mass Destruction Team (SWMDT). As part of the SWMDT the responders are helping to protect the people of Illinois from terrorist activities. Recently the SWMDT received the prestigious 2004 Mitretek Innovations Award in Homeland Security. The SWMDT competed with other programs across the country, and beat out finalists from Portland, Oregon and the U.S. Navy, among others.

The Illinois SWMDT has refined their skills at periodic training exercises. The role of the EOU at these exercises varies, and has included using their scientific and technical expertise to evaluate intelligence information on possible threats or dangers to personnel who go into hot zones, as well as use of sophisticated monitoring equipment.

Enforcement Program Helps Insure Laws to Protect the Environment Are Carried Out:

*Penalties Finance Benefits;
Information Made More Accessible.*

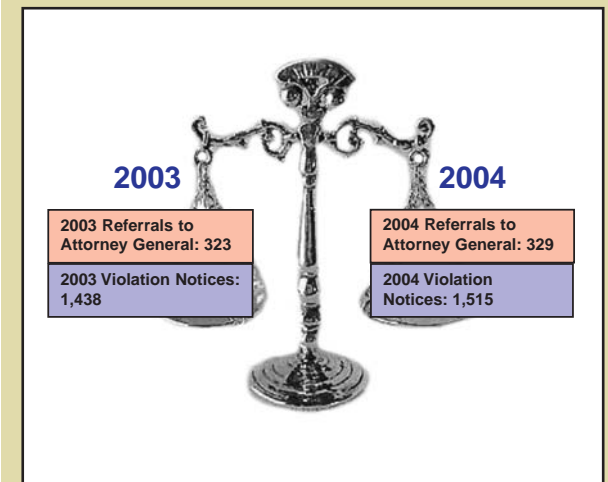
Illinois EPA Takes Vigorous Enforcement Action Against Violators

The Illinois EPA's Division of Legal Counsel works with other Agency staff to carry out Governor Blagojevich's commitment to enforcing state and federal laws protecting the environment. The Agency works with the Attorney General's Office to seek appropriate remedies and penalties to correct environmental or public health hazards and make sure companies do not receive an



Emergency responders don protective gear.

unfair benefit from violating the law. Some of the high-profile cases in 2003 included several facilities involving improper removal of asbestos, an abandoned factory with hazardous materials and discharges resulting in significant fish kills, as well as a variety of other violations. More than \$4.1 million in penalties were assessed during 2003 and an additional \$10 million worth of Supplemental Environmental Projects (SEPs) were obtained that year. In 2004, penalties totaled more than \$4.8 million and SEPs were more than \$3 million. Several cases also included requirements to install additional control equipment to prevent odors, excessive air pollutants and improper waste disposal.



Illinois EPA Takes Lead Role in Landmark Settlement with Archer Daniels Midland

In April 2003, an unprecedented joint enforcement effort between the federal government and 14 state and county entities resulted in a landmark Clean Air Act settlement with grain industry giant Archer Daniels Midland Company (ADM). This settlement grew from an enforcement action initiated by Illinois EPA, and the Agency played a lead role in expanding the case nationwide. The settlement covers operations at 52 plants in 16 states and cost the company an estimated \$340 million. ADM will implement sweeping environmental improvements at plants nationwide that will eliminate at least 63,000 tons of regulated air pollutants a year. ADM facilities in Illinois involved are in Decatur, Peoria, Taylorville, Galesburg, and Quincy.

Under the settlement, ADM will install state-of-the-art controls on a large number of units, shut down some of the oldest, dirtiest units, and take emission limits on others. Additionally, ADM's oilseed operations will accept new, more stringent emission limits that will set new standards for the industry.

The settlement included a Supplemental Environmental Project that includes \$3.2 million to IEPA for the Governor's Clean School Bus program to reduce potentially harmful diesel emissions from school buses, and \$250,000 for IEPA grants to watershed protection groups. Both grants were targeted to portions of the state in the vicinity of the ADM facilities.

Agency Compliance and Enforcement System

The Illinois EPA utilized a "One Stop Grant" from the U.S. EPA to assist in developing an integrated facility management system, known as the Agency Compliance and Enforcement System (ACES), which became operational in July 2003. It is anticipated that ACES will improve the Agency's operational processes by making data readily available for decision making, establishing common process approaches and definitions, and improving the accuracy and efficiency of generating necessary documents pertaining to all steps involved in inspection, compliance and enforcement activities.

Prior to development of ACES, each of the Bureaus, Divisions and Offices involved in compliance and enforcement had been utilizing their own database tracking systems to monitor these activities. ACES will eliminate duplicate data entry and will assist in determining enforcement actions based upon Agency-wide input. Furthermore, inquiries from the press, legislators and others about facility compliance status can be answered rapidly and accurately with the facility-wide compilation of data provided by ACES.

Illinois EPA Implements New "Enforcement Management System" (EMS) System

The Illinois EPA implemented a uniform Enforcement Management System (EMS) in August 2003. The EMS gives all Agency employees involved in compliance and enforcement a structured approach to moving violations through the process either to resolution or formal

enforcement. Since the approach is consistent across all programs, the deadlines are easier to track, the decision-making is improved and actions are timelier. Consistency and timeliness improve the fairness to the regulated community as a whole, and increases the deterrent value of the action taken. This also enhances the complementary tools of compliance assistance and formal enforcement. The maintenance of a fair but credible enforcement threat will improve the level of voluntary compliance.

Enforcement Outreach

Illinois EPA in December 2003 became one of the first state environmental agencies to make the full texts of enforcement orders readily available for review and downloading on the Agency's web site. IEPA was commended by the national Environmental Integrity Project for leadership among the states in making enforcement information more accessible. In addition, citizens and organizations are invited to submit funding project ideas on-line to the "SEP (Supplemental Environmental Project) Bank" for consideration for funding as part of resolution of environmental enforcement cases.



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Responsibility for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination requirements implemented by 40 C.F.R. Part 7 (Nondiscrimination in Programs or Activities Receiving Federal Assistance from the Environmental Protection Agency), including Title VI of the Civil Rights Act of 1964, has been designated to:

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