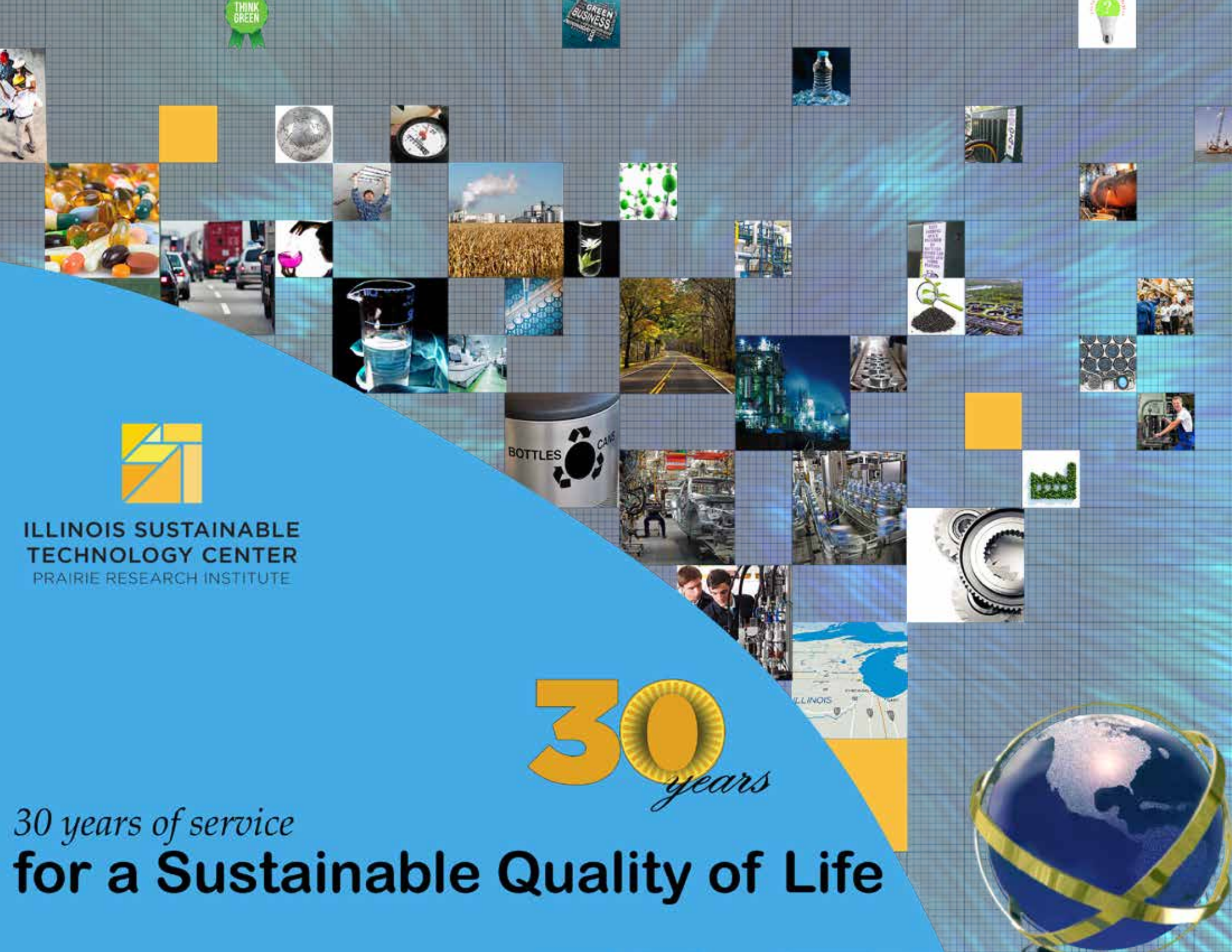


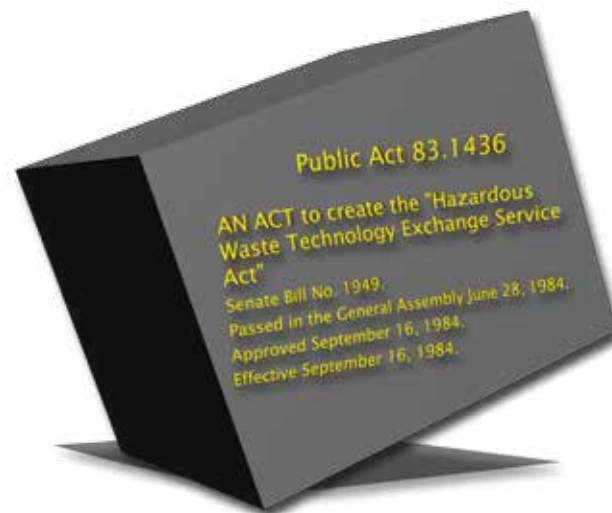
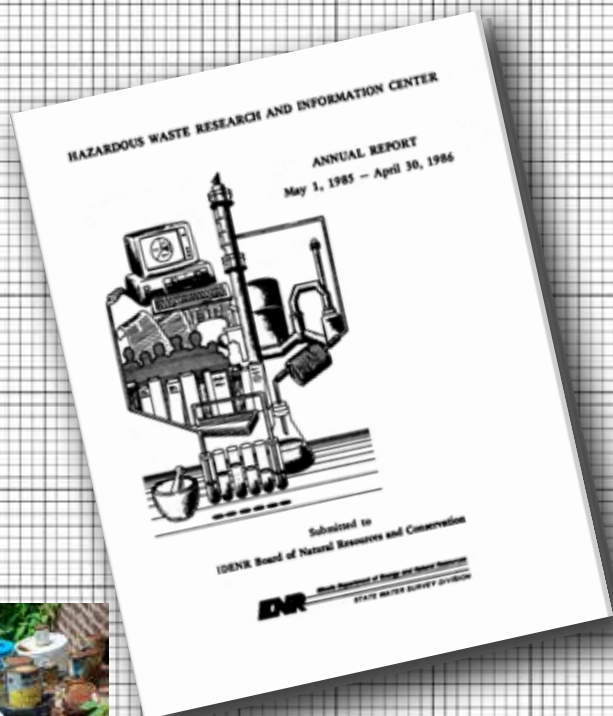


ILLINOIS SUSTAINABLE
TECHNOLOGY CENTER
PRAIRIE RESEARCH INSTITUTE

30
years

30 years of service
for a Sustainable Quality of Life





1984

In September 1984, the Illinois General Assembly passed the Hazardous Waste Technology Service Act (20 IL 1130/1) mandating the Department of Energy and Natural Resources (DENR) to establish a Hazardous Waste Technology Exchange Service Program.

1985

The Program was first administered under the guidance of the Illinois State Water Survey (ISWS). Mike Barcelona of the ISWS was named the interim director. Funding was appropriated through the General Revenue Fund and the Hazardous Waste Research Fund.

The first staff was hired in January 1985 and the first director, David L. Thomas, was hired in May 1985.





1985

The program was initially housed in temporary offices on the corner of 6th St. and Springfield Ave. in Champaign, Illinois. It was relocated in October 1985 to temporary offices at 1808 Woodfield Dr. in Savoy, Illinois.

Its mission was to combine research and education; information collection, analysis, and dissemination; and direct technical assistance to industry, agriculture, and communities in a multidisciplinary effort to solve Illinois' hazardous waste problems.

The program became known as the Illinois Hazardous Waste Research and Information Center (HWRIC).

To achieve its mission, HWRIC established three closely linked programs – Research; Industrial and Technical Assistance (ITA); and Information Services. Data Management and Laboratory Services were added later.

Early Characterization and Assessment Projects

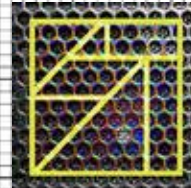
- Statewide Hazardous Waste Generation Study
- Initiation of the Hazardous Waste-Related Inventory Database
- Statewide Landfill Inventory
- Special Waste Characterization Study
- Taxing Hazardous Waste
- Underground Injection Control
- Industrial Wastes in the Calumet Area, 1869-1970: A Historical Geography
- Atmospheric Research and Monitoring Study of Hazardous Substances
- Regional Ground Water Contamination in Illinois

1987

HWRIC organized and funded the state's first household hazardous waste collection drive in Champaign in September 1987 as the state legislature began banning hazardous materials from municipal landfills.

The Center developed WRAS — the Waste Reduction Advisory System, “one of the oldest software packages for pollution prevention (1987).... the simplicity of the tool and the quick access to pollution prevention strategies make it a very good program to have.”

(Moving Beyond Environmental Compliance: A Handbook for Integrating Pollution with ISO 14000, (1998) by Thomas Elliott Welch.)



1986

The Center worked on developing the design for a new \$9 million Hazardous Materials Laboratory to house its operations, with state-of-the-art analytical capabilities and pilot-scale engineering labs.

The Governor's Innovative Waste Reduction Awards were established to encourage waste reduction/minimization by Illinois waste generators by recognizing the waste reduction successes that businesses, industry, trade associations, communities, and others were making.

Awards were given to four businesses in 1986. The primary wastes reduced or recycled by award applicants were solvents, other degreasers, and heavy metals.

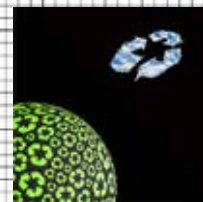
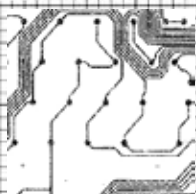
The Center's research studies on Waukegan Harbor began — the first of a number of broad coalitions of organizations to evaluate and mitigate legacy pollutants from Illinois' most polluted sites and brownfields including East Saint Louis/Granite City, DePue Wildlife Management Area, and Lake Calumet.

1988

The Center was very active with the National Roundtable of State Waste Reduction Programs and helped write waste reduction legislation before Congress. This became the Pollution Prevention Act of 1990.

With the Center's help, Illinois was one of the states selected to receive RCRA (Resource Conservation and Recovery Act) Integrated Training and Technical Assistance (RITTA) grant funds which provided training in waste reduction, increased technical assistance efforts, and promoted waste reduction to industry in the state.

Groundbreaking occurred in July for the new \$9 million Hazardous Materials Laboratory.



1989

Through legislation (20 ILCS 1130/4), the Center was officially named the Hazardous Waste Research and Information Center (HWRIC) and legislatively separated from the State Water Survey Division and made a new division of the Department of Energy and Natural Resources.

The Center was designated as an "allied organization" at the University of Illinois.

Mandated by the 1989 Toxic Pollution Prevention Act (TPPA, Public Act 86-915) to expand its waste reduction efforts to include a Toxic Pollution Prevention (P2) Assistance Program, the Center officially established its Pollution Prevention Program.

The first Governor's Pollution Prevention Awards were handed out (name changed from the earlier Innovative Waste Reduction Awards).



1993

The Center collaborated on the Illinois Critical Trends Assessment, a joint partnership of IL Department of Energy and Natural Resources, other State Surveys, and IL State Museum. The partners developed data collection tools and programs to monitor trends in Illinois ecosystems, completing an atlas of the state's land cover, an inventory of resource-rich areas, data on waste generation and management, and 30 watershed assessments.

Began Greater Chicago P2 Project with the Metropolitan Water Reclamation District of Greater Chicago, Illinois Environmental Protection Agency, U.S. Environmental Protection Agency, Department of Commerce and Consumer Affairs, NORBIC, Citizens for a Better Environment, Chicago Legal Clinic, and others.

1990

Construction of the Hazardous Materials Laboratory was completed; staff moved into the new headquarters.

Laboratory Dedication was held on Earth Day, April 20.

1992

As a top producing state for paint and coatings, the Illinois General Assembly mandated a thorough study of the industry's practices and ways to minimize their toxic or hazardous wastes. "Paint Waste Reduction and Disposal Options" was published by the Center in 1992, as a compendium of strategies to reuse, recycle and repurpose sludges, solvents and excess materials.



1994

The Center's Chicago-based office opened – the Clean Manufacturing Program (CMP). This was co-located with the Chicago Manufacturing Center.

The Center became a charter member of the Great Lakes Regional Pollution Prevention Roundtable (GLRPPR). The Center became the host agency for GLRPPR in 1996 and continues in that role today.

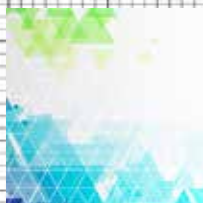
Research funded by the Center pioneered landfarming, an innovative method to remediate land contaminated with pesticides. The technology involves spreading a thin later of contaminated soils and turning it over to stimulate aerobic microbial activity while adding minerals, nutrients and moisture.

The Center funded five research projects 1990-98 to identify the extent of PCBs and other contaminants in fish, benthos, and other wildlife at Crab Orchard National Wildlife Refuge near Marion, Ill. Following remediation efforts and a fishing advisory, today the CDC has determined that there is no apparent public health hazard to the general population.

1995

By Governor's Executive Order #2, the Center and the other State Surveys were transferred under the Department of Conservation. The organization was renamed the Department of Natural Resources (DNR).

The Printers' National Environmental Assistance Center (PNEAC) was established as a partnership between industry, government, and university technical assistance providers to serve one of the world's largest industries – the printing industry. The Center has directed the PNEAC program since that time.



1997

GLRPPR became a member of the Pollution Prevention Resource Exchange (P2Rx). P2Rx is a network of eight regional pollution prevention information centers coordinating regional P2 information, resources and expertise and making it available nationally.

The Chicago-based Clean Manufacturing program was incorporated into the Center's Pollution Prevention Program.

The Center opened a Springfield-based office when a remediation manager was hired to deal with problems associated with state-owned contaminated lands. The Springfield office was later transferred to another division of DNR in 2002.

Public Act 90-0490 passed in the Illinois legislature which included language officially changing the Center's name from HWRIC to Waste Management and Research Center (WMRC).

Dr. David Thomas resigned to become the Director of the Illinois Natural History Survey.

Dr. Gary Miller was named Acting Director.



1998

Dr. George Vander Velde was named Director.

The Illinois River Project (aka Mud to Parks) began, revising our view of dredge 'spoil' into a valuable reclaimed resource. ISTC's Dr. John Marlin helped pioneer the harvesting of river sediments to serve as rich topsoil in parks and other sites across the state.

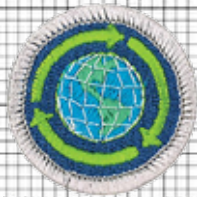
The Center published "Recommendations for a National P2 Information Network" in 1998, building on regional and national efforts to design the best model for interstate and inter-regional cooperation. The U.S. EPA funded the three-year pilot project involving information sharing between Great Lakes and Northeastern states. This publication formed the basis for what would eventually become the National Pollution Prevention Information Network Program (PPIN).

The Chicago Technical Assistance Program office moved to Oak Brook.

1999

An office was opened in Alton with a staff member under the Center's Pollution Prevention (P2) Program, primarily to serve the southern Illinois area. Today that office is located at Lewis & Clark Community College in Brighton.

Launched ADOP2T program for metal finishing industry in Chicago (Accelerated Diffusion of Pollution Prevention Technologies).



2001

ADOP2T program was expanded to include the printed wiring board industry in Illinois.

Developed improved analytical methods to study arsenic problems in Illinois drinking water and worked on the "Arsenic in Mahomet Aquifer" project with the Illinois State Water Survey.



2002

The 2002 Critical Trends Assessment Program Report, which the Center worked on, was published (http://www.ecologyactioncenter.org/mCLEANwater/wp-content/uploads/2012/03/Critical_Trends_Assessment_Report_20021.pdf).

2003

The Greening Schools Project began in fall 2003 to make schools healthier and improve their learning environment by improving their physical environmental conditions, and also providing teachers with tools to introduce concepts of waste reduction and pollution prevention (<http://www.greeningschools.org/>).

2004

The first large-scale “Mud to Parks” project was officially launched along the Illinois River. Dr. John Marlin spearheaded efforts to remove mud clogging the river at Peoria and take it to locations needing topsoil. In April, the first barges arrived in Chicago where sediment-derived soil was used for a lakefront park. Subsequent projects used sediment from several waterbodies to revitalize old industrial sites, strip mines and other areas.

U.S. EPA funding piloted ADOP2T as a national program, leveraging efforts to diffuse innovative technologies into targeted sectors. These included fiber reinforced plastics, coatings and paint, printed wiring board, and metal finishing.

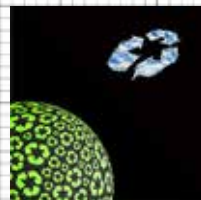
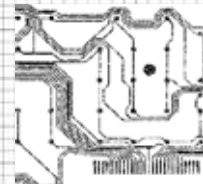
WMRC opened an office in Peoria, co-located with the State Water Survey. The staff member was with the Center’s Pollution Prevention Program and assisted with technical assistance efforts. That office remains active today.

2005

Biodiesel initiative began (http://www.wmrc.uiuc.edu/main_sections/tech_assist/biodiesel.cfm). This has evolved into our current work on a variety of biofuels produced from various feedstocks.

2006

Green Construction and Design Program began (http://www.wmrc.uiuc.edu/tech/green_development.cfm).



2007

The Center's Sustainability Seminar series began with a presentation by Dr. William Sullivan titled "Sustainability on the UI Campus." There have been over 120 seminars to date and these are all archived on the ISTC website.

ISTC research continued to look for ways to improve industrial processes so they use less material or replace toxic or hazardous materials with more benign substances. For example, Joe Pickowitz co-invented, with Steve Rundell and Tim Lindsey, a patented method to clean machine parts. It revolutionized what had been a complex and costly process using dangerous chemicals.

2008

Dr. George Vander Velde retired as Director. Dr. Gary Miller was named Interim Director.

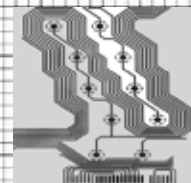
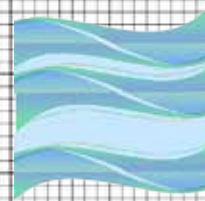
The Pharmaceutical and Personal Care Products (PPCPs) symposium "PPCPs in the Illinois Environment" was held at the Center in response to the rising concerns by the Illinois EPA and U.S. EPA about PPCPs in the water as evidenced by a landmark U.S. Geological Survey study of the nation's lakes and rivers. The topic continues to be a major research area at the Center.

The governor transferred the Center and Surveys to be under the University of Illinois (SB970). The Center's name was changed to the Illinois Sustainable Technology Center (ISTC). The University formed the Institute of Natural Resource Sustainability (later renamed the Prairie Research Institute in 2011) to house the Surveys and the Center. The Institute is under the Vice Chancellor of Research.

Center scientists began studying biochar.

ISTC developed the Illinois Conservation of Resources and Energy Program (ICORE) to help Illinois businesses and communities make energy and water conservation improvements. ICORE focuses on populations in small, rural communities in parts of the state which have had little access to such technical assistance programs.

The Center organized, with other partners at the U of I, a national conference on Biofuels and Sustainability which took an in-depth look at the lifecycle of biofuels and biofuel's current status and future.



2010

Dr. Manohar Kulkarni became Director of ISTC.

The Sustainable Electronics Initiative hosted the "Electronics and Sustainability: Design for Energy and Environment" symposium in February and initiated the International E-Waste Design Competition for students to explore solutions to e-waste generation and disposal (<http://www.sustainelectronics.illinois.edu/education/competitions.cfm>).

2009

Dr. Gary Miller left ISTC to become Interim Associate Executive Director at the Institute of Natural Resource Sustainability. Dr. John Marlin was named Acting Director of the Center.

The Sustainable Electronics Initiative (SEI) was established at the Center. Its original objectives were to conduct collaborative research; facilitate networking and information exchange among participants; promote technology diffusion via demonstration projects; and provide forums for the discussion of policy and legislation on sustainable electronics and electronic waste. SEI's mission has evolved over time (<http://www.sustainelectronics.illinois.edu/about/mission.cfm>).



2013

2012

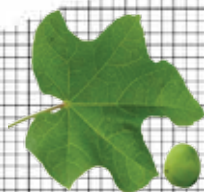
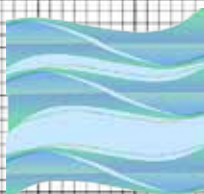
The Indoor Climate Research and Training (ICRT) program became part of ISTC. The program and its three researchers were transferred from the U of I School of Architecture. University officials felt that the program nicely complemented the energy and assistance programs that already existed at ISTC.

Dr. David Thomas was named Interim Operating Director of the Center.

The state legislature expanded ISTC's mandates to include support for sustainable development and practices.

The legislation also established a State Pollution Prevention Scientist position at the Center. Dr. Kishore Rajagopalan was named to that position and is to act as spokesperson on matters of fact and policy on pollution prevention for the Center, the Institute and the State of Illinois while providing information on the advances in methods, practices, research, and policies to governmental agencies, industries, other scientists, and the public at large.

In December 2013, Dr. Kevin O'Brien became the Director of the Center.



2015

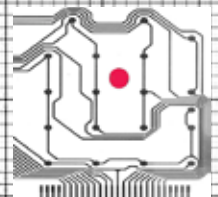
2014

The Center initiated the Billion Gallon Water Challenge to promote water conservation in the state (<http://www.istc.illinois.edu/water.cfm>).

ISTC staff organized the Illinois homecoming football game as a zero waste event as part of the National GameDay Challenge and diverted 60 percent of the day's trash from landfills. It was part of "Zero Waste Illinois," a new initiative of the Center's Technical Assistance Program.

Center researchers made progress in turning waste, especially biomass and hard-to-recycle plastics, into valuable oil products through pyrolysis.

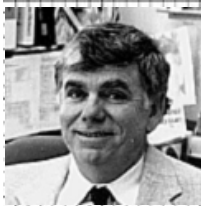
Illinois Green Office Challenge was launched in central Illinois (<https://www.illinoisgoc.com/index.cfm>).



ZERO WASTE
ILLINOIS

ISTC Directors

David Thomas
(1985-1997)



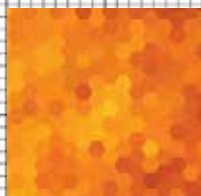
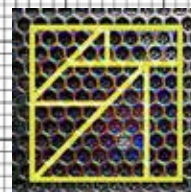
George Vander
Velde
(1998-2008)



Manohar Kulkarni
(2010-2013)



Kevin O'Brien
(2013-)



30 years



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1 Hazelwood Dr.
Champaign, IL 61820

istc.illinois.edu