Public Engagement

As the nation’s longest running environmental recognition program, ISTC’s Illinois Governor’s Sustainability Awards program has recognized the successful efforts of Illinois industry, community groups, and educational institutions since 1987.

The Sustainability Seminar Series features experts in the fields of sustainability, energy, and the environment. The seminars are open to the public and are streamed live on the ISTC website, where more than 80 seminars are archived.

The Great Lakes Regional Pollution Prevention Roundtable (GLRPPR) is headquartered at ISTC. GLRPPR is a professional organization dedicated to promoting information exchange and networking with pollution prevention professionals in the Great Lakes region of the United States and Canada.

ISTC is the coordinating agency for the Printers’ National Environmental Assistance Center (PNEAC), a national publishing and packaging collaboration to help the printing industry lessen their environmental impact.

ISTC is the host agency for the Illinois Biochar Group. The group’s goals are to encourage research in production and use of biochar; assess the impact of biochar on soil ecology and processes; and inform others about biochar’s potential applications in agriculture, site remediation, and carbon sequestration.

ISTC educates the public on important sustainability issues by hosting a booth at the Prairie Research Institute’s Naturally Illinois Expo, Urbana’s Market at the Square, and various museums, as well as at sustainability fairs on the University of Illinois campus and with other organizations.

Areas of Expertise
Advanced Analytical Chemistry
Biochar Development and Use
Biofuels from Biomass
Biolubricants
Indoor Climate Research and Weatherization Training
Manufacturing Process Improvement for Waste Reduction
Pharmaceuticals and Personal Care Products in the Environment
Pollution Prevention
Public Outreach and Education
Sediment Reuse
Water and Energy Use
Since 1985, the Illinois Sustainable Technology Center (ISTC) has helped organizations and citizens implement sustainable solutions to environmental and economic challenges. ISTC’s mission is to encourage and assist citizens and businesses to prevent pollution and reduce waste to protect human health and the environment in Illinois and beyond. Our vision is to be a catalyst for change toward more sustainable technologies, processes, and practices through our integrated program of research, demonstration projects, technical assistance, and communication.

Research and Service

ISTC provides expertise in a wide array of areas. Examples of current projects include:

Water Use & Reuse

ISTC is examining ways to reduce water use and advocate water reuse. These efforts include research in the areas of more efficient water use for industry and communities; use of treated water for landscape and crop irrigation; water recycling; and membrane technology and desalinization.

Pollution Prevention

ISTC’s Sustainable Electronics Initiative (SEI) is dedicated to the development and implementation of a more sustainable system to design, produce, remanufacture, and recycle electronic devices. It sponsors the International Sustainable Electronics Competition, encourages curriculum incorporating sustainability concepts, and funds research projects.

Researchers are studying the fate and transport of pharmaceuticals and personal care products, toxic compounds such as polycyclic aromatic hydrocarbons (PAHs), pesticides, herbicides, and metals to understand ways to prevent adverse effects on the well-being of humans, plants, animals, and habitats. They are also experimenting with methods to mitigate the detrimental effects of high concentrations of nutrient runoff from agricultural fields.

Materials Use & Reuse

ISTC is developing an extraction process to produce high-grade bio-oils from waste plastic. One use may be as a replacement for food oils in bio-lubricants. Other research on waste byproducts is related to the use of biochar (a carbon-enriched solid material) as a soil amendment for agriculture and site remediation, as well as for carbon sequestration and in supercapacitors for energy storage.

ISTC is a leader in the Mud to Parks project to revive the Illinois River. Researchers are removing sediment from the river and reusing the dredged sediment as top soil to create parks and wildlife areas from abandoned industrial sites, landfills, and degraded land.

Technical Assistance

ISTC identifies and implements energy and water efficiency opportunities in industrial, commercial, institutional, and governmental sectors. Researchers offer on-site expert assistance in waste reduction, pollution prevention, carbon footprinting, life cycle analysis, water and energy conservation, systems engineering, fluid purifications, and pilot testing. ISTC has saved Illinois businesses and communities millions of dollars over the years through water, energy, and waste reduction measures.

ISTC’s Indoor Climate Research & Training program focuses on training and certifying assessors who perform weatherization work, conducting indoor air quality research on lead in paints and radon migration, and evaluating energy savings and indoor air quality.

Technology Demonstrations

ISTC researchers are experimenting with the use of in-stream hydro turbines for energy generation at various sites in Illinois, including wastewater treatment plants. Osmotic dewatering is being tested in another wastewater treatment plant as a simple cost-effective method for reducing the volume of water in the sewage stream. In addition, ISTC is investigating a variety of renewable feedstocks, such as *Jatropha* seed oil and algae, to produce biofuels.