



Waste to Wealth Program 2006 Activities

Institute for Local Self-Reliance

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INTRODUCTION

Since 1974, the Institute for Local Self-Reliance (ILSR) has been dedicated to developing and implementing environmentally sound economic development strategies. Our Waste to Wealth Program helps communities convert wastes from environmental and economic liabilities to valuable resources that provide community development opportunities.

In 2006, we expanded the influence of our Waste to Wealth Program through direct technical assistance, technical manuals, public appearances and participation in a wide array of networks in the community, government and private sectors. As a result, we have helped birth new companies (for profit and not for profit), introduce new policies and strengthen coalitions throughout the US. This year we continued our building deconstruction work, launched our sustainable plastics initiative, published a regional guide to recovering building materials, and organized and held the first Mid-Atlantic Organics Summit.

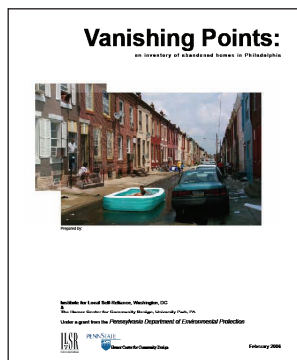
Deconstruction: Recovering Building Materials and Training Workers for New Communities

Deconstructing buildings recovers valuable building materials, reduces pressure on virgin resources, and trains workers for skilled jobs and small business development. Deconstruction has proven to be a discrete economic engine in each community and city where new enterprises arise. ILSR estimates that 350 such companies now exist in the US and about 50 in Canada. These for-profit and non-profit companies employ from 10 to 40 workers each, pay above minimum wage (from \$10 to \$18 per hour) and reduce the costs of self-help and small renovation companies by supplying excellent used building materials at lower prices than new materials. These companies also train low-income workers for successful careers in the construction trades. All in all, deconstruction enterprises are a boon to the local economy while reducing energy use and the extraction of virgin materials.

In 2006, ILSR continued its work with the City of Philadelphia's Neighborhood Transformation Initiative to demonstrate the viability of deconstruction as an important strategy for managing the city's huge abandoned housing stock. Under a grant from US EPA and in partnership with the City of Philadelphia and Pennsylvania State University's Hamer Center for Community Design, ILSR deconstructed an abandoned residential

rowhouse, demonstrating that valuable materials such as bricks, lumber, metal, and architectural features, could be recovered cost-competitively using hand demolition.

In a related project for the Pennsylvania Department of Environmental Protection, ILSR partnered with the Hamer Center to inventory abandoned homes earmarked for demolition in order to document the potential for recoverable materials. The inventory of 311 homes, published as *Vanishing Points: An Inventory of Abandoned Homes in Philadelphia*, indicated that one million bricks with a potential value of more than a quarter million dollars could be salvaged. Reclaiming lumber could add another \$200,000 in potential market value. Architectural



This report by ILSR and the Hamer Center documents the potential materials that could be recovered from 311 abandoned housing units in Philadelphia.

elements added a further \$150,000. These homes represent only a fraction of the abandoned structures in Philadelphia slated for demolition.

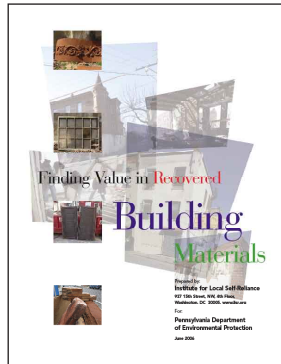
ILSR also completed its market study on construction materials for The Pennsylvania DEP. Our June 2006 report, *Finding Value in Recovered Building Materials*, assesses the current supply and demand of construction materials in Southeastern Pennsylvania, and recommends policies to support recovery of residential building materials in the state.

Across the river in New Jersey, ILSR's deconstruction team completed a pilot project for the Housing Authority of Camden. ILSR has also assisted Dynasty

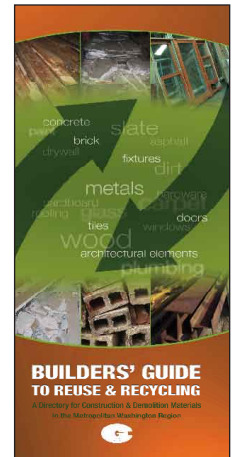
Deconstruction in Lakewood, Ohio, and the Green Project and MercyCorps in New Orleans. In the United Kingdom, ILSR facilitated a successful deconstruction joint venture between a social enterprise and a private demolition company.

In 2006, ILSR also researched, designed, and produced *Builders' Guide to Reuse & Recycling: A Directory for Construction & Demolition Materials in the Metropolitan Washington Region*. Funded under a contract with the Metropolitan Washington Council of Governments, the guide is available online as a searchable database at BuildersRecyclingGuide.com.

Report to the PA Dept. of Environmental Protection assessing the supply and demand for reclaimed construction materials in southeastern Pennsylvania.



This 44-page pocket-sized directory produced by ILSR lists 110 businesses recycling building materials in the Washington, DC region. It also includes Tips for Recycling Success at the Job Site and Frequently Asked Questions on how to recycle construction and demolition materials.



Ending Incineration and Advocating Zero Waste Communities

ILSR has been at the forefront of advocating zero-waste alternatives for industry and cities. Besides speaking at events and providing assistance via the Internet, this year ILSR's work has focused on two areas: Frederick County (Maryland) and Delaware.

In Frederick, ILSR worked with an ad-hoc coalition of citizens, environmentalists and small businesspeople to introduce an alternative to government-sponsored landfill and incinerator proposals. By participating in a once-per-month series of talks held at local libraries, business meetings and colleges, we educated and increased awareness in the community. ILSR's work with local

grassroots networks focuses on fighting incinerators using economic arguments. We train activists to analyze and compare incinerator costs to alternative investments in recycling and composting.

In Delaware, the community-based environmental group Green Delaware invited ILSR to a series of public presentations, which led to meetings with the state Department of Natural Resources and Environmental Control and legislative committees. These talks resulted in ILSR being engaged to complete a review of current policies and make recommendations for state initiatives to reduce waste.

Community Economic Development

In addition to the new companies and scores of workers employed through deconstruction, ILSR has continued to assist the formation of joint ventures in other industrial sectors. ILSR has been working for three years in southeast Chicago with People for Community Recovery. PCR is now negotiating for industrial brownfield acreage to site five firms committed to clean manufacturing in this formerly highly polluted community.

The Green Energy Collaborative is a partnership comprised of four interdependent companies making energy-producing rooftops, internal panels

and outdoor construction material. The Collaborative will require over 100 jobs to be filled by recruitment and training through the Instituto Progresso, a well-respected training facility in southeast Chicago. A national organic food distribution company is also on the project agenda. This company will increase food security in the area by making good food available at reasonable prices.

ILSR continues to work with the TIRECYCLE™ network of companies, which processes old industrial rubber (including tires) into virgin-quality rubber compounds for remanufacturing. Since 2000

Tirecycle™

A typical Tirecycle™ recycling plant recycles 1.5 million tires, saving the economy \$11.5 million by reducing imports (105,000 barrels of oil and 3.6 million pounds of natural rubber). The plant would create over 100 jobs plus another 100 outside the factory. Other dividends include environmental savings and extended landfill capacity.

one plant has operated in Milwaukee in a host community arrangement with nearby community development organizations. The technology will be installed in a new plant in Vidalia, Louisiana, which will require 60 new jobs.

ILSR has also advocated a new approach to computer and electronic discard refurbishing and recycling. We are unique in viewing this issue through a local economic lens. We have presented data and initiated discussions with environmental and product stewardship networks, underscoring the critical importance of retaining valuable parts and materials for local community development in order to create skilled jobs and sustain small businesses. Industry- and government-proposed solutions to the "e-waste" dilemma would create subsidized, concentrated multimillion-dollar facilities serving large geographic regions under the control of original equipment manufacturers. ILSR supports far smaller operations at the local level, which require \$25,000 to \$50,000 in start-up capital. This approach to electronic discard management keeps dollars circulating within local economies and sustains local jobs.

For the 14th year, under EPA region 3 funding, we resumed our coordination role of the Mid-

Atlantic Consortium of Recycling and Economic Development Officials (MACREDO) serving the five Mid-Atlantic states and the District of Columbia that comprise EPA Region 3. As part of our MACREDO work in 2006, ILSR organized and held a one-day Mid-Atlantic Organics Summit focused on how to expand the food scrap recovery infrastructure in our region. The event complemented our efforts to compost leaves in the nation's capital, reach closer to zero waste, and promote bioproducts as alternatives to fossil-fuel based products.



More than 70 local and state officials, composters, and other stakeholders came together in MD, at the USDA's Beltsville Agricultural Research Center, to discuss how to expand food scrap recovery in the Mid-Atlantic Region.

Sustainable Plastics

Petroleum-based plastics threaten the environment and public health. They endanger marine life, can leach toxic chemicals such as bisphenol A and styrene, represent a growing part of the waste stream, and are recycled at a paltry level. At the same time, consumption soars.

One solution to the plastics plague is bioplastics – plastics made from plant matter such as corn starch and soy protein. The bioplastics industry is developing quickly; many products are on the market, including deli containers, single-use beverage cups, beverage bottles and eating utensils. Many carry a "compostable" logo certification. Yet many issues remain unresolved: Will bioproducts promote genetically modified crops, or increase pesticide use and reliance on monoculture? Will bioplastics interfere with conventional plastics recycling systems? Is the infrastructure to collect and compost bioproducts within reach? To address this information gap and guide the development and appropriate use of safe bioplastics, in 2005 ILSR unveiled its Sustainable Plastics Initiative.

In 2006, ILSR launched its Sustainable Plastics Web site, participated in numerous stakeholder meetings and conference calls, made presentations at four conferences, and identified more than a dozen programs utilizing and composting bioplastics. We collaborated with Clean Production Action, the Institute for Agriculture and Trade Policy and the Healthy Building Network to produce Sustainable

Biopolymer Purchasing Guidelines. ILSR is now helping to coordinate an ad-hoc coalition of groups interested in shaping the burgeoning bioplastic market. The coalition is promoting bioplastics made from sustainably grown GMO-free feedstocks, produced free of nanoparticles, and introduced to facilitate recycling or composting. In addition, ILSR has brought its recycling expertise together with its bioproducts knowledge in working with a network of recycling professionals to address obstacles to recycling and composting bioplastic beverage bottles. In October, this recycling network called for a moratorium on bioplastic bottles until the biopolymer manufacturing industry addresses specific recycling issues.

In a related effort, ILSR has been assisting the Earth Resources Foundation (ERF) and the California Coastal Commission in the development of programs to halt the release of plastics into the ocean environment. One particular initiative is helping ERF negotiate with a national food chain to eliminate plastics from its discard stream. Efforts have led to a highly successful workshop for environmental team employees in one of the company's regions. Employees readily integrated "zero waste at the checkout counter" into their goals for the company over the next two years. ERF has been asked to conduct more training for this region. ERF and ILSR have been invited to prepare similar workshops and training programs for other regional offices of this company.

Our Home Town

ILSR started as a neighborhood organization in the Adams Morgan/Dupont Circle neighborhoods of Washington, DC. Even as we became a national organization in the mid-1980s, ILSR has always maintained projects in the District of Columbia.

In 2004, ILSR teamed with US EPA compost expert Dr. Rosalie Green to help the District of Columbia Department of Public Works start a pilot project for composting fall leaves. In 2005, this project was shifted to a larger site in order to handle a greater portion of the 9,000 tons of leaves generated each year in the city. In 2006, ILSR continued to monitor the compost operation, taking and recording temperatures and sampling product quality. We

also are working to establish a permanent facility to handle the entire "harvest" of leaves in the city. ILSR will carry on this effort under the new administration, which will take office in January 2007.

ILSR has also been asked to help the transition team for Mayor-Elect Fenty, particularly with planning and implementation of recycling and composting in public schools and with financing of enhanced recycling initiatives.

As mentioned earlier, ILSR completed *Builders' Guide to Reuse & Recycling* for the Metropolitan Washington Council of Governments. Close to 8,000 copies have been distributed since June 2006.



Taking temperatures of the compost windrows (March 2006)



Meeting with DPW staff at the compost site (May 2006)



Screening compost made from 2005 fall leaves (July 2006)

Networking

In the past year, we have worked closely with many organizations, including:

Earth Resource Foundation/The Campaign Against the Plastic Plague: This campaign addresses plastic discards and their impact on oceans and rivers.

Clean Production Action: ILSR works with this nonprofit on sustainable purchasing guidelines for bioplastics.

The Computer Take-Back Campaign: This campaign promotes producer responsibility for electronics.

The Construction Materials Recovery Coalition-National Capital Region: Government officials, builders, developers, architects, recyclers and nongovernmental organizations working to divert construction materials from disposal.

DC Department of Public Works: ILSR has worked closely with this agency to compost the city's leaves.

Dynasty Deconstruction: Start-up deconstruction company serving Cleveland.

The Future 500 Group: Its Bio-Economy Project is working with the private sector to use bioproducts.

The Global Anti-Incinerator Alliance/Global Alliance for Incinerator Alternatives (GAIA): International grassroots alliance promoting sound alternatives to incineration.

The GrassRoots Recycling Network: We co-

founded this network of recycling and zero waste activists.

Green Project/MercyCorps: New Orleans deconstruction company devoted to affordable housing and community recovery.

The Institute for Agriculture and Trade Policy: ILSR has worked closely with IATP coordinating nongovernmental organizations' input on bioplastics issues.

Philadelphia Neighborhood Transformation Initiative: ILSR has partnered with this City initiative to demonstrate the viability of deconstructing abandoned housing.

People for Community Recovery: This Chicago-based environmental justice organization represents 2,000 families in public housing.

Plastic Redesign Project: ILSR joined forces with this coalition of local and state recycling interests in calling for a moratorium on bioplastic bottles until end-of-life issues are resolved.

Second Chance Newark/New Community Corporation: New deconstruction venture focused on workforce development through deconstruction.

This year ILSR was featured in the following media: NPR, BioCycle, InBusiness, Plastic News, Waste Age, Waste News, Warmer Bulletin, Recycling Today, and Waste Management News.