

# Cook County Demolition Debris Diversion Ordinance



## **Policy Ordinance Markets And the CCLBA**

**January 30, 2014**

# Sustainability Supports the 4 Goals of Cook County



## 1. Fiscal Responsibility

Sustainability creates jobs and cost savings for taxpayers, residents, and businesses.



## 2. Transparency & Accountability

Benchmarking focus areas provides priorities for investment and ability to track and disclose impacts.



## 3. Innovative Leadership

Taking sustainable action today generates dollar savings and provides resources for the needs of future generations



## 4. Improved Services

Efficiency allows for spending on direct services and means healthier, more livable communities.

# Cook County Department of Environmental Control



... to improve the quality of the environment and protect the public health of the residents of Cook County.

- **Inspects and permits** business fuel burning equipment, building demolition, asbestos removal, open burning, gas station vapor recovery, dry cleaners
- **Monitor air quality** across the County for USEPA
- **Solid waste** planning and coordination in suburban Cook County - adding regulation of solid waste facilities
- Enhance **sustainability** of County operations and suburban communities

# Cook County Solid Waste Policies/Programs

## **Regulatory (Suburban):**

- Require recycling, reuse of building debris
- Information from haulers, transfer stations
- Regulation, inspection of landfills, transfer stations, recycling facilities
- Prosecute illegal dumping
- Proposed: Delegation of inspection, enforcement of landfills/transfer stations from State

## **Services:**

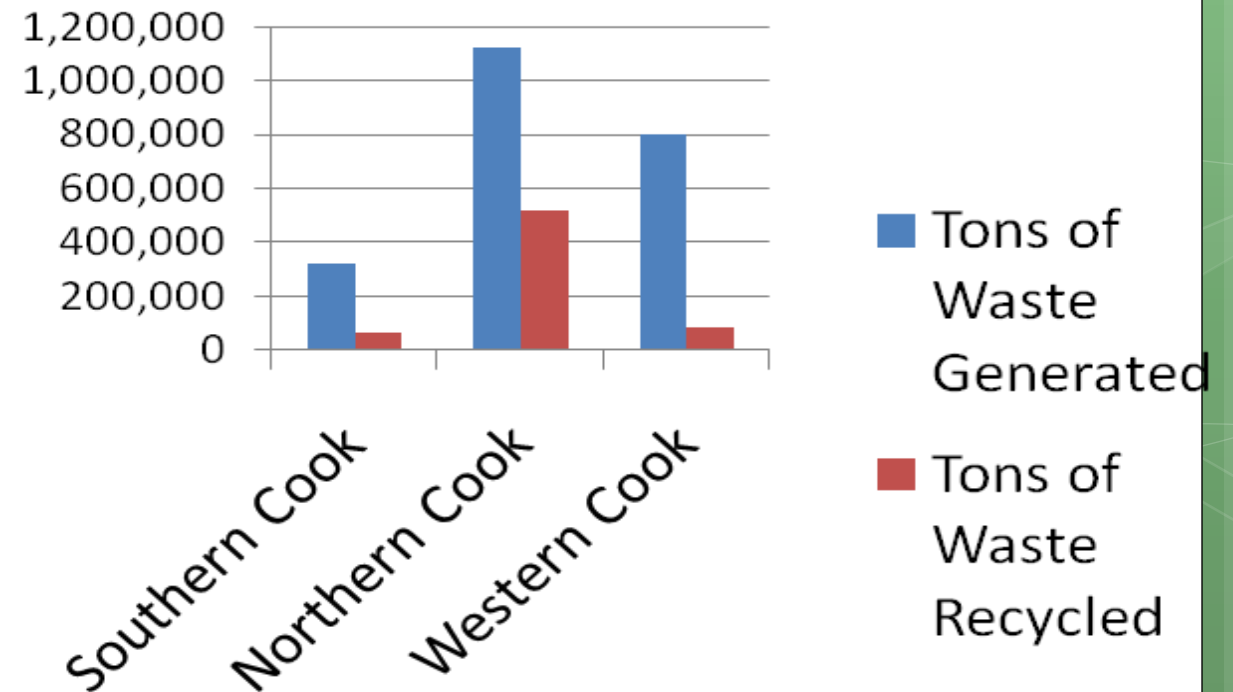
- Events, : e-waste, pharmaceuticals, HHW, etc.

## **Planning/Information:**

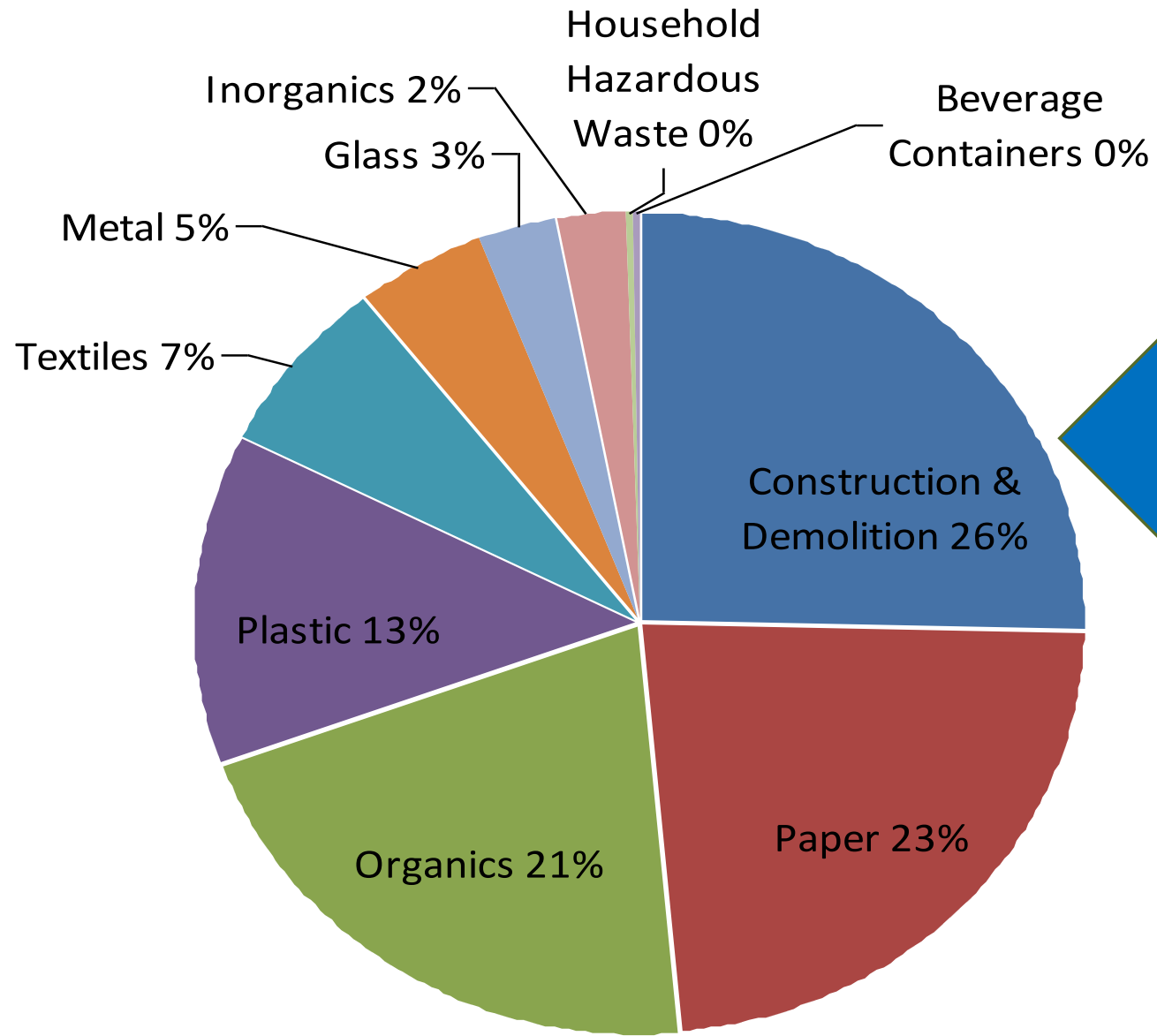
- 5 year plan
- Public info
- Municipal level recycling data

# Solid Waste Plan (2012)

- State requires minimum 25% recycling goal, other counties reach higher. 100% diversion – ideal. 50-70% - challenge.
- Some Cook County residents **create more than 7 pounds of waste per day**, more than the US average of 4.3 lbs., and **recycle less (29% vs. 33%)**.
- Only one open landfill remains in Cook County.
- **Waste generation up.**
- **Recycling rates declined** in South and West Cook.

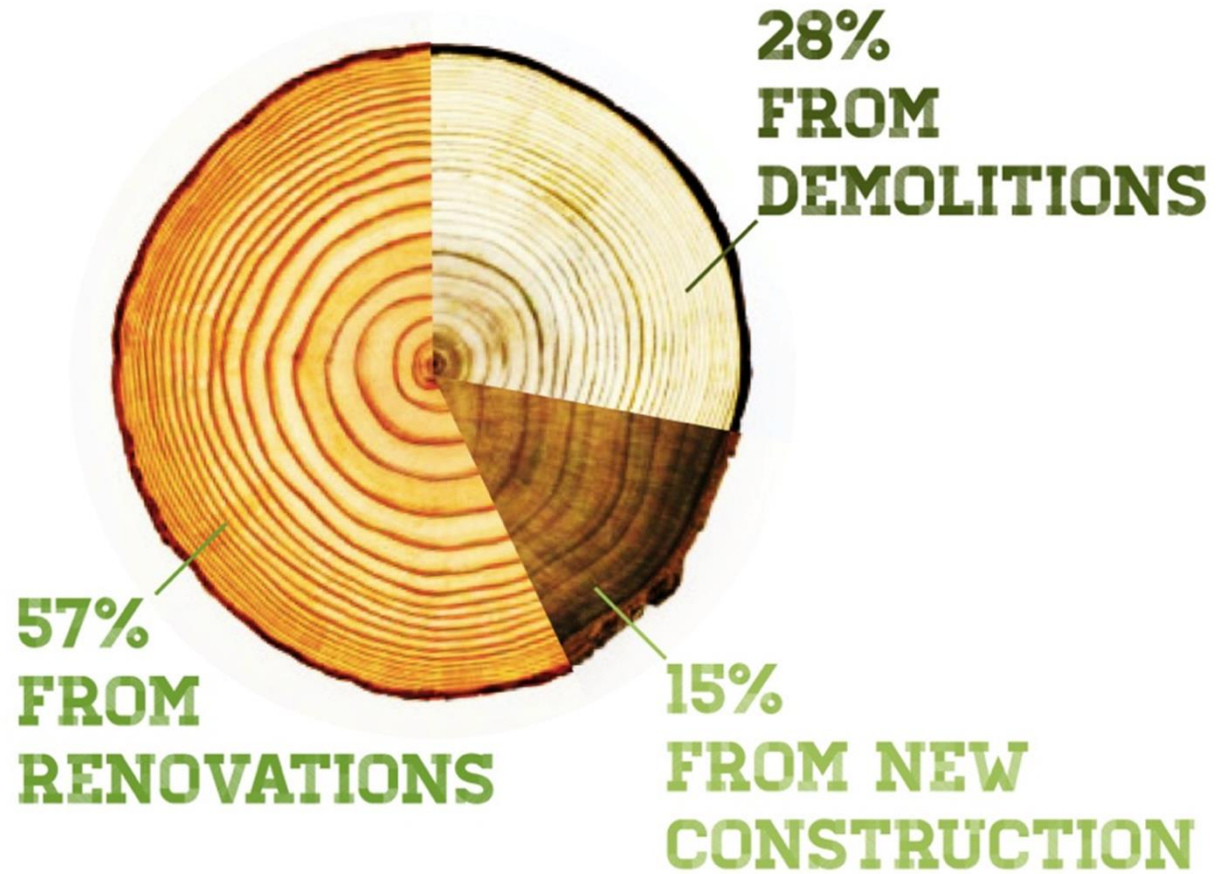


# Goals cannot be met without diverting all major waste categories

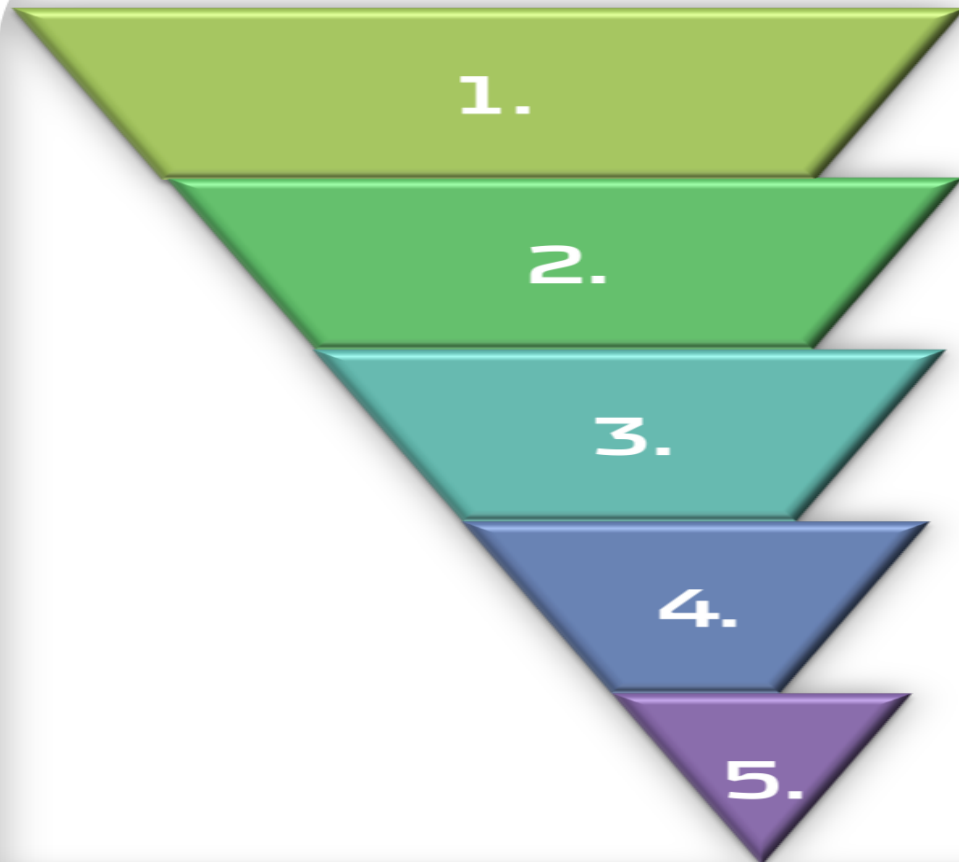


C&D largest category - Diversion Ordinance

# C&D Waste in Local Landfills



# WASTE HIERARCHY



- **REDUCE** what you can - if you can't reduce it then ...
- **RE-USE** what you can - if you can't re-use it then...
- **RECYCLE & COMPOST** what you can - some is then burned to...
- **CREATE ENERGY** for electricity or gas - the remainder is...
- **DISPOSED** of in landfill - this is the **LAST** option.



# Recycling vs Re-use of Building Materials

## Recycling:

Saves landfill space

Less new raw materials needed

Recovers some of the “embodied energy” used in original manufacture (extraction of materials, manufacturing, transportation)

## Reuse:

### Benefits of recycling plus:

Greater (95%) savings of original embodied energy; components used in closer to final form.

1.2 billion board feet of reusable lumber annually from homes demolished nationally (forest destruction = 20% of global greenhouse gas emissions).

Less dust/asthma.

# Demolition & Deconstruction

## Demolition

The process of dismantling or “knocking down” buildings (usually using heavy machinery); materials are afterwards landfilled or partially recycled.

## Deconstruction

The process of systematically dismantling a structure in an environmentally, economically and socially responsible manner to maximize recovery of materials for reuse and recycling.

- Traditional demolition uses smaller work crews and heavy equipment with a quicker project turnaround.
- Deconstruction emphasizes use of a trained labor force to manually extract material for reuse & sale.

# Growing constituency for deconstruction

- Environmental benefit
- Saves landfill capacity
- Cost competitive

... the high quality and lower cost of reclaimed materials. The Pottery Barn catalogue lists 24 separate furniture products made from reclaimed lumber. Large restaurant chains such as Rosebud and Lettuce Entertain You use reclaimed materials in fixtures, furniture and wall décor.

-Delta Institute

- “It’s what others are doing”
- Jobs:
  - Deconstruction
  - Retail, warehouse

Removing 30 homes creates 1.5 FTE demo jobs, 26 deconstruction jobs

Deconstruction jobs are an important potential new career path for those in the very neighborhoods where most vacancies exist.

-Faith in Place

# Cook County Demolition Debris Diversion (CCDDD) Ordinance

**Purpose:** The purpose of the CCDDD is to establish a program for recycling and salvaging of C&D waste, as prioritized within the Cook County Solid Waste Plan.

## **County Goals**

1. Reduce the overall amount of C&D material generated and prevent improper disposal of materials within Cook County.
2. Recover material value through reuse/recycling from materials that would have been otherwise discarded and value lost.
3. Reduced risk of vacant and distressed properties

# CCDDD Ordinance Standards

## Eligible Material

According to the CCDDD, eligible C&D debris refers to waste materials produced during the demolition, deconstruction or alteration of a structure.

## Requirements

- Residential structures (SF-1 up to 4 units): 70% diversion w/5% reuse
- Commercial/Industrial/Residential (4+ units) structures: 70% diversion

## Penalties and Fines

Violation of the CCDDD ordinance results in the imposition of penalties and/or fines.

# Dept. of Environmental Control's Role

- The review of the CCDDD application and submittal package
- The site inspection
- Technical support and resources for contractors and municipalities
- Supporting new material markets and reuse suppliers

# Municipal Role in Enforcement

- Convey the purpose and minimum requirements of the CCDDD
- Direct contractors to the new protocol for diversion
- Develop universal understanding of CCDDD across municipal building and housing staff (Code Enforcement, planners, zoning officials, etc.)
- Develop knowledge of procedural terms and requirements for application

# Contractor's Role

- Develop a demolition debris diversion plan (using the Green Halo System)
- Reintroduce materials into the economy
- Enter “actuals” data in Green Halo
- Educate their clients on the value of reusing/recycling demolition materials
- Spread the word of the 3D ordinance to their colleagues



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**MY GREEN HALO**  
CUSTOMIZED RECYCLING SOLUTIONS

## Green Halo News

### Chicago's Cook County enacts the Midwest's first ordinance to cut down C&D Waste

Tue. Feb 12th, 2013 at 10:05am

Cook County takes a big step toward their goals of zero-waste by enacting the first ever Ordinance that requires Demolition Debris to be reused. The Ordinance requires that at least 70% of C&D Debris must be recycled, and an additional 5% of it must be reused on residential structures. To help make sure this Ordinance is implemented smoothly and to make the process easier for both parties, Cook County will be using Green Halo's online Waste Tracking System to monitor and track C&D Projects and make sure that Recycling Requirements are met.



Read the full article about Cook County's new Ordinance below:

## Why this issue matters...

- New construction consumes 60% of all materials used in the nation's economy every year (excluding food and fuel)
- 40% of landfill waste comes from the built environment
- Cook County has 1 remaining landfill – less than a year of remaining capacity
- On average, 25% of a home's materials (by weight) can be reused, excluding brick, asphalt and concrete.

# Today's Building Cycle: A Flawed Loop



**Table 1: Landfill Tipping Fees (dollar per ton)**

Source: National Solid Waste Management Association, 2005

Region	1985	1986	1987	1988	1990	1992	1995	1998	2000	2002	2004
<b>Northeast</b> (CT, ME, MA, NH, NY, RI, VT)	12.66	17.11	52.41	61.11	64.76	65.83	73.17	68.68	69.84	69.07	70.53
<b>Mid-Atlantic</b> (DE, MD, NJ, PA, VA, WV)	16.99	22.08	26.32	33.84	40.75	47.94	45.68	44.11	45.8	45.26	46.29
<b>South</b> (AL, FL, GA, KY, MS, NC, SC, TN)	3.24	5.76	13.13	16.46	16.92	22.48	28.5	30.89	30.53	30.43	30.97
<b>Midwest</b> (IL, IN, IA, MI, MN, MO, OH, WI)	7.23	11.75	16.42	17.70	23.7	27.10	31.15	30.64	32.85	34.14	34.96
<b>South Central</b> (AZ, AR, LA, NM, OK, TX)	7.24	7.61	10.77	11.28	12.05	12.53	20.30	21.02	21.90	23.28	24.06
<b>West Central</b> (CO, KS, MT, NE, ND, SD, UT, WY)	5.36	6.21	7.23	8.50	11.06	12.62	23.29	22.51	22.29	23.40	24.13
<b>West</b> (AK, CA, HI, ID, NV, OR, WA)	10.96	11.10	13.92	19.45	25.63	27.92	37.69	36.08	34.54	38.90	37.74

Note that regional averages may not reflect tipping fees in specific states or counties, as some are considerably higher or lower than regional averages. For example, although the Midwest 2006 average is \$34.96, Indiana's rate is \$29.57 per ton, while Minnesota's is \$40 per ton (Arsova, L et al., 2008).

Source: "GO-Guide to Deconstruction & Reuse" by Delta Institute  
[www.delta-institute.org/goguides](http://www.delta-institute.org/goguides)

# Deconstruction Market Opportunity

- Old growth lumber gaining market value in the last 5 years
- New retailers and wholesalers in Cook County now carrying inventory.
- **2011 Cook County deconstruction strategy report** found that the deconstruction of 25-30 homes per year could support the operation of a reuse warehouse.
- Deconstruction, either driven by a tax deduction or material resale opportunity, with a hybrid approach being the most widely used.

# Employment Benefits

Job ratio is 7:1, recycling vs. traditional disposal



# Economic Benefits

Employment and sector job opportunities (FTE/PTE job creation)

- Collection (deconstruction, salvage, logistics, etc.)
- Sales and warehousing (retailing, consignment, etc.)
- Value-added (furniture, workshops, repairs, etc.)



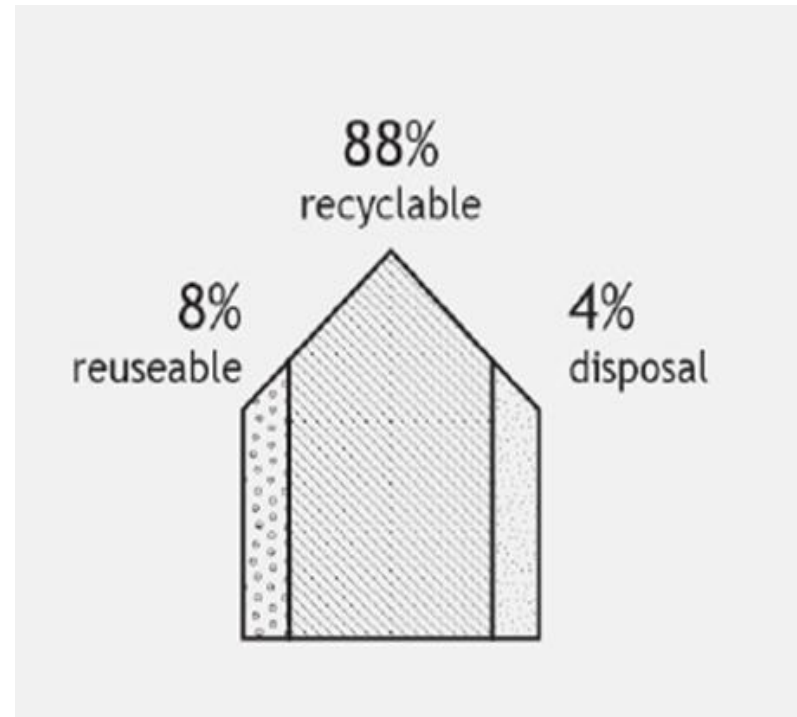
# Social and Environmental Benefits

- Reduces blight
- Reduces noise and air pollution
- Provides valuable materials for renovation and reconstruction
- Promotes local economic development

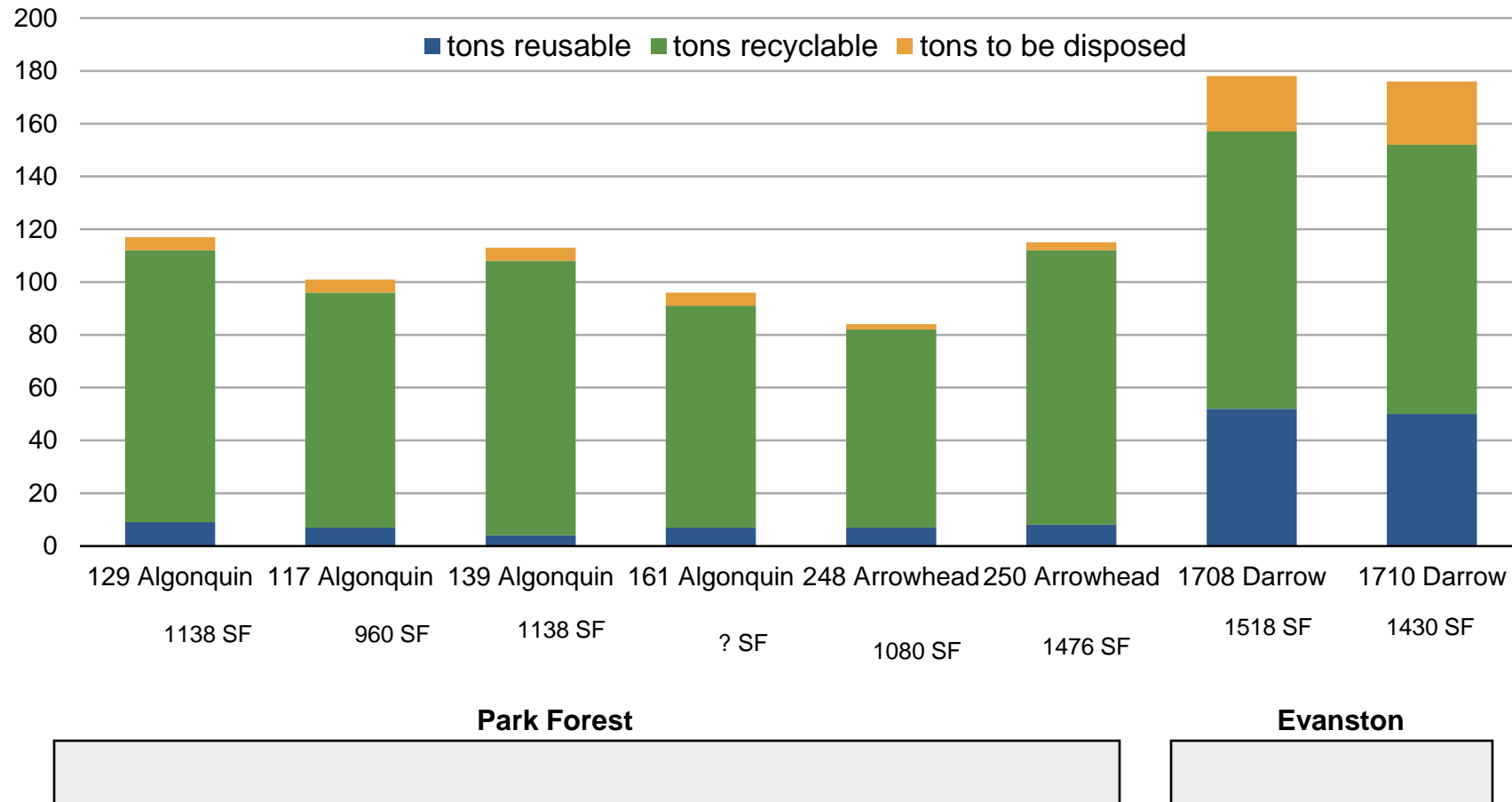


# 2012 Cook County Deconstruction Pilot

- Suburban Illinois homes deconstructed for technician level training and data collection
- 1,250 Average Square Foot
- Routinely exceeded 5% reuse baseline by as much as **20-30%** overage on some projects.



# C&D Material Audits – Cook County Deconstruction Program



The background of the image consists of several stacks of lumber, showing various wood grain patterns and colors from light tan to dark brown. The stacks are arranged in a way that creates a sense of depth and texture.

**R**



**REBUILDING  
EXCHANGE**

- 
- Project of the Delta Institute
  - Launched in 2009 to support the development of a deconstruction and reuse marketplace
  - Average growth rate of 75% per year.
  - \$1.2 million in annual sales.
  - Serve 16,000 customers per year.

**We advocate for better ways to take down buildings so that their component materials can be reused.**



We run a retail warehouse that drives demand for these materials.





We provide hands-on workshops to educate people on how to be resourceful with reclaimed materials.



We work to develop a trained workforce and provide job training programs.



**We create innovative models for reuse. Including our furniture line, RX Made.**



## 5-Year Impacts

- Creation of a strong local market for building materials reuse;
- Diversion of 22 million pounds of valuable material from landfill;
- Training of 82 people with barriers to employment in sustainable deconstruction;
- Launch of RX Made, a furniture line that offers design-build services with reclaimed building materials;
- Serving more than 16,000 customers per year with access to affordable building materials, dynamic programming, educational workshops and training.
- Leveraging over \$10 million in federal, state and local funding for building removal that turns tax-payer liability into assets for local residents.

# The opportunity for scaling C&D diversion efforts...

- Land Bank Authority provides big opportunity for coordinated effort with maximum impact.
- Potential to leverage training dollars and other federal resources for blight removal.
- New curriculum from BMRA available for training contractors.

# Contact



<http://blog.cookcountyil.gov/sustainability/>

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# Resources

- Cook County Demolition Debris Ordinance: [http://library.municode.com/HTML/13805/level3/PTIGEOR\\_CH30EN\\_ARTXDEDEDI.html](http://library.municode.com/HTML/13805/level3/PTIGEOR_CH30EN_ARTXDEDEDI.html)
- Cook County Solid Waste Plan: <http://blog.cookcountyil.gov/sustainability/2012-cook-county-solid-waste-management-plan/>
- GO Guide to Deconstruction and Reuse, 2<sup>nd</sup> Edition: [http://www.delta-institute.org/sites/default/files/DeconstructionAndReuseGoGuide2ndEd\\_Web.pdf](http://www.delta-institute.org/sites/default/files/DeconstructionAndReuseGoGuide2ndEd_Web.pdf)
- Deconstruction Opportunities Career Ladder: <http://www.delta-institute.org/sites/default/files/DeconstructionCareerLadderBook.pdf>
- Market Analysis of Construction and Demolition Material Reuse in the Chicago Region: <http://www.delta-institute.org/sites/default/files/2-DeltaUICMaterialReuseAnalysis.pdf>
- Building Materials Reuse Association: [www.bmra.org](http://www.bmra.org)