

STRATEGY 4.


REDUCED WASTE & INDUSTRIAL POLLUTION

GOAL:

PREVENT, REDUCE, REUSE AND RECYCLE

CO-BENEFITS:  reduced energy costs

 jobs

 improved air quality and health

 water quality



Recycling diverts waste from landfills while providing a supply of materials to local businesses.

STRATEGY 4. REDUCED WASTE & INDUSTRIAL POLLUTION



While we reduce emissions, we must prepare for the changes already happening.

Actions

1. Reduce, reuse and recycle
2. Shift to alternative refrigerants
3. Capture stormwater on-site

For more information, see Chicago 2020 Mitigation and Adaptation Strategies chart on page 50.

Few Chicagoans ever see where the city's waste goes, yet an estimated 3.4 million tons of it (62 percent of the total) winds up in landfills every year. We must reduce the amount of waste sent to landfills. A "Three R" initiative—reduce, reuse and recycle—is one way to achieve this goal. It is essential that both individuals and businesses join in the effort, and there are many opportunities to do so. Companies can reuse their industrial byproducts and can research methods to responsibly dispose of food and landscape waste. Consumers can recycle packaging materials and learn about home composting from programs already in place at the Shedd Aquarium and Garfield Conservatory. The payoff will be significant: a 90 percent reduction in waste trucked to landfills by the year 2020 could net about a .84 MMTCO₂e drop in emissions.

To help individuals recycle, the City will continue to educate residents about recycling and roll out its Blue Cart program across Chicago. Rapid Blue Cart expansion will help reduce the amount of waste produced, while allowing the waste that is produced to be safely returned to nature. Major steps to educate the public about this and other aspects of Chicago's waste reduction initiative are being planned.

The waste reduction strategy also requires that Chicago restructure its methods of garbage pickup and transport. Hauling and disposing of waste releases significant amounts of CO₂, mostly generated by trucks that service residential and

commercial buildings. Currently, building owners in the same area contract with many different private haulers. New approaches are being explored to reduce the emissions from heavy-duty trucks that haul waste.

HFCs: Recovering a potent greenhouse gas

Hydrofluorocarbons (HFCs) are potent greenhouse gases used primarily in air conditioners, refrigerators and freezers. One ton of HFC-134a has the same global warming impact over 100 years as 1,300 tons of CO₂. HFCs produce greenhouse gases when they leak out of refrigerators or air conditioners. The City is developing partnerships to recycle this highly potent gas from discarded appliances. The City will also explore a range of options to entirely phase out the use of HFCs by 2020, netting a drop in greenhouse gas emissions of 1.16 MMTCO₂e. A national or international ban on HFCs would assist in meeting this goal.

Using green infrastructure

By capturing raindrops where they fall, stormwater can be managed using rain gardens, swales, permeable pavement and other low-impact approaches. This practice, called green infrastructure, reduces the amount of storm and waste water that must be treated, and accounts for a .10 MMTCO₂e reduction. In 2007, the City passed a stormwater ordinance that requires large developments to capture the first half-inch of rainfall on-site.

For more information on Chicago's Climate Action Plan, visit www.chicagoclimateaction.org.

KEY FACTS:
REDUCING WASTE
REDUCES COSTS
TO BUSINESSES AND
CONSUMERS.

Reduce

Amount of waste
reduced



Waste
removal cost



Avoided
removal costs

Reuse

Amount of supplies
not purchased



Unit price



Total avoided
purchase cost

Recycle

Amount recycled



Unit price



Annual revenue



In 2007, the City of Chicago worked with the Chicago Manufacturing Center to launch a Waste to Profit Network, which has diverted 14,000 tons of solid waste from landfills and resulted in new innovative products, such as recycled glass countertops. Through the Network,

which will expand to 100 companies in 2008, unrecyclable plastics from Baxter Healthcare and Sherwin Williams are being reused. Network member Curb Appeals Materials developed a technology to recycle mixed and contaminated plastics into an extrudable building material.

The result? Curb stops made and used by the City and Cook Composites and Polymers in their respective facilities. In addition, a sound wall was made for Sherwin Williams to contain equipment noise from the factory floor.



Vermicomposting—the practice of using worms to turn organic food waste into fertilizer—is a great way to compost in an urban setting. The worm bins can be kept inside and will not smell or attract flies if prepared correctly. Food scraps make up 12 percent of the waste that Americans generate every day. Vermicomposting diverts waste from landfills and creates a rich soil, which can then be used in home gardens.

STRATEGY 4.
REDUCED WASTE &
INDUSTRIAL POLLUTION

LEADING BY EXAMPLE:

TREATING WASTEWATER / MWRD



Wastewater treatment plants operated by the Metropolitan Water Reclamation District (MWRD) in Chicago and nearby in Cook County utilize digester gas to supply one-third of their total energy

utilization, 920 million kilowatt hours in 2006. Digester gas is produced by the fermentation of sewage sludge, a process that turns a waste product into power. MWRD will undertake projects to increase

its utilization of digester gas, 81 percent in 2006, to more than 95 percent, and will begin to utilize solar power in the coming years to offset the purchase of electricity and natural gas.

LEADING BY EXAMPLE:

KATHY REGALDO



As youth program director at Faith in Place, an organization in Chicago's East Garfield Park neighborhood that partners with all religious faiths to promote clean

energy, Kathy Regaldo takes kids on field trips to learn about composting, recycling and sustainable farming. "The children begin to see how our actions leave

a footprint," she says. "We explore our attitudes about how much we consume and the need to recycle garbage. We all need to be more mindful of energy efficiency."