

Greening Cook County



Mike Quigley
Cook County Commissioner

April 2005



Endorsements

Jack Darin

Director, Sierra Club, Illinois Chapter

This is a visionary plan for making county government a leader in protecting our environment. Implementing these ideas will save taxpayers money while making Cook County a better place to live, in addition to setting an example for governments across the country and the globe to follow.

Environmental Law and Policy Center

Commissioner Quigley and his staff have laid out a comprehensive set of recommendations for greening Cook County government. This approach is win-win for the residents of Cook County—reducing waste and pollution within the County while saving taxpayers money that can be redirected to essential County programs and services. The Environmental Law and Policy Center looks forward to working with the Cook County Board to implement these recommendations.

Center for Neighborhood Technology

The Center for Neighborhood Technology is pleased that Cook County Commissioner Mike Quigley has produced the comprehensive report "Greening Cook County." Based on our review of much of the report prior to its publication, we commend you and your staff for taking this initiative and urge Cook County to begin its implementation as soon as possible.

The Center has been working to create tools for building sustainable communities for over 25 years. We realize that our goals for the Chicago Region can't be achieved without aggressive action by the major governments. Cook County's greening efforts during the last few years have already had a substantial impact on regional sustainability, and your ongoing leadership will provide stimulus for green policies and actions by the hundreds of municipalities in Cook County.

We look forward to working with Cook County and your office as you implement recommendations for "Greening Cook County."

Physicians for Social Responsibility, Chicago Chapter

Physicians for Social Responsibility/Chicago Chapter endorses "Greening Cook County" as authored by the Office of Cook County Commissioner Mike Quigley. It is a well thought-out document as to how any agency can take the necessary steps to begin healing the environment and land we inhabit and creating a relationship that is mutually beneficial and healthy. Environmental health is one key indicator in understanding a population's state of public health, and "Greening Cook County" is a prescription that helps one to examine and work towards preserving our communities' environmental and public health. Congratulations on your foresight!

Chicago Recycling Coalition

The Chicago Recycling Coalition enthusiastically endorses the Cook County Sustainability Report and especially supports the long overdue plan to establish quality recycling in all facilities, as well as address electronic waste and initiate composting programs. Cook County has been a recognized leader in its purchase of products with recycled content, and these new efforts will go a long way towards making County operations more environmentally AND fiscally responsible.

Jeri L. Knaus

Waste Management & Research Center, Illinois Department of Natural Resources

I have worked with Commissioner Quigley's staff on this environmental initiative and am excited to see the County move forward in their efforts to make Cook County the "greenest" county in the nation.

U.S. Green Building Council, Chicago Chapter

The LEED Green Building Rating systems will play an integral role in achieving the vision of a greener Cook County. We applaud the county for current and proposed green building initiatives, including innovative uses of the LEED rating system such as incentives that encourage private-sector green building.

Michelle Halle Stern

AIA, P.E., LEED Accredited Professional Associate, Delta Institute

This is an impressive effort. The implementation of this report will have a profound impact on Cook County as a public entity, and will also help transform the market in the private sector.

Katherine Blumenthal

Attorney and Environmental Activist

This is an ambitious report, thoughtful and thought-provoking. The voters of Cook County are challenged to demand that policies and procedures of local government conform to the principles of good stewardship which are the foundation of the sustainability initiative.

Landfills in the Chicago metropolitan area will be full within five years. The region's trash will then have to be shipped somewhere else, at considerable expense.¹

Maintaining traffic congestion in the Chicago area at its current level will require 152 miles of new roads or 241,000 additional transit and carpool trips.²

Asthma attacks send more than 70,000 Chicagoans to the emergency room yearly, and Chicago's hospitalization rate for children with asthma is 70% higher than the national average.³

Nearly half of the world's original forests are gone.⁴

Residents of the inner city are particularly vulnerable to the effects of climate change and global warming....Exposure to excessive heat caused over 8,000 deaths in the United States between 1979 and 1999, and the incidence of heat waves is expected to double by the middle of this century if heat-trapping pollution is not curtailed.⁵

Global water consumption rose twice as fast as global population in the 20th century, and over one-third of the world's population currently lives in an area experiencing moderate to high levels of water scarcity.⁶

If every person on earth consumed resources at the same level as the average American, we would need over five planets like Earth to sustain life.⁷

“Greening Cook County” is the latest report by Commissioner Mike Quigley to improve county government for the benefit of residents. “Reinventing Cook County,” released in late 2003, recommends restructuring County government to make service delivery more efficient, more accessible to citizens, and more fiscally responsible. Other reports from Commissioner Quigley make recommendations concerning the Forest Preserve District, Lake Calumet region, and Cook County Sheriff’s Office.

Sources

¹ Illinois Environmental Protection Agency, Bureau of Land, *Nonhazardous Solid Waste Management and Landfill Capacity in Illinois: 2003* (Springfield, Ill., 2004), R2.3.

² Texas Transportation Institute, “Performance Measure Summary for Chicago,” 2004, <http://mobility.tamu.edu/ums/congestion_data/tables/chicago.pdf>.

³ American Lung Association of Metropolitan Chicago, “Chicago Asthma Action Plan,” 2004, <http://www.lungchicago.org/default_plan.asp>.

⁴ World Resources Institute, “Fragmenting Forests: The Loss of Large Frontier Forests,” <http://pubs.wri.org/pubs_content_text.cfm?ContentID=1396>, from *World Resources 1998-99: Environmental Change and Human Health* (Washington, D.C.: World Resources Institute, 1998).

⁵ Centers for Disease Control and Prevention, “About Extreme Heat,” May 14, 2004, <<http://www.bt.cdc.gov/disasters/extremeheat/about.asp>>, and L.S. Kalkstein, “Saving Lives During Extreme Weather in Summer,” *British Medical Journal* 321 (2000): 650-651, quoted in Paul R. Epstein and Christine Rogers, eds., “Inside the Greenhouse: The Impacts of CO₂ and Climate Change on Public Health in the Inner City” (Boston: Center for Health and the Global Environment, Harvard Medical School, April 2004), <<http://www.med.harvard.edu/chge/green.pdf>>.

⁶ World Resources Institute, “Water: Critical Shortages Ahead?” <http://pubs.wri.org/pubs_content_text.cfm?ContentID=1030>, from *World Resources 1998-99: Environmental Change and Human Health* (Washington, D.C.: World Resources Institute, 1998).

⁷ Redefining Progress, <<http://www.redefiningprogress.org>>.

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Many thanks to all of the individuals and organizations who assisted with this report. We could not have succeeded in this effort without you.

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EXECUTIVE SUMMARY

Human activity is putting such strain on the natural functions of Earth that the ability of the planet's ecosystems to sustain future generations can no longer be taken for granted.¹

Although many indicators of human well-being have improved over the last few decades, overall the environmental health of the planet is not good. Some environmental problems seem nearly insurmountable; at the very least, they will all require sustained attention, international cooperation, and significant investment to solve. Here in Cook County, we are not only impacted by global problems, but also face a number of serious local environmental issues.

The motto “think globally, act locally” points out that the collective effect of smaller actions can be dramatic, particularly on the local level. This wisdom should motivate Cook County as it develops a strategy for “greening” itself. With a population of nearly 5.4 million, over 25,000 employees, a 68,000-acre forest preserve system, and a \$3 billion budget, Cook County is in a position to address the critical environmental issues facing the area and the world through public education, information sharing, informed public policy, and changes to its own operations.

“Sustainability” is the principle which should guide the County’s “greening” efforts. One widely known definition describes sustainability as “meeting the needs of the present generation without compromising the ability of future generations to meet their needs.”² The concept is applied most often to environmental decisions, but it can also illuminate questions relating to fiscal policy and social well-being. In essence, sustainability asks us to make decisions only after considering all of the consequences—short-term and long-term—and their impact on environmental, economic, and social conditions.

“Greening Cook County” explains how we can become the greenest county in the nation and a model for other local governments in Illinois and throughout the country. The report identifies eight major areas where we can make significant progress toward a more sustainable county. Each section identifies several opportunities to improve the way Cook County government does business—not only to benefit the environment, but also to improve the bottom line. Many of the ideas in this report are “green” in another sense: they save money.

GREEN ENERGY means using less electricity and buying power from renewable sources. Cutting the County’s electricity use by 10 percent will save more than \$10 million over five years. In addition, it will reduce carbon dioxide emissions by over 9,000 tons per year, which has the same

¹ Board of the Millennium Ecosystem Assessment, “Living Beyond Our Means: Natural Assets and Human Well-Being,” March 2005, <<http://www.maweb.org/en/Products.BoardStatement.aspx>>.

² “Sustainability,” *Wikipedia: The Free Encyclopedia*, <<http://en.wikipedia.org/wiki/Sustainability>> (20 April 2005).

effect as planting 1.3 million trees. If every state and local government in the nation similarly cut their energy use by 10 percent, they would save an estimated \$1.2 billion. A 10 percent cut would also reduce carbon dioxide emissions by 11 million tons—the same amount of CO₂ as 1.6 billion trees absorb each year. Ten or 20 percent of the County's remaining electricity needs could be provided by renewable energy sources, resulting in even greater emission reductions.

GREENER WASTE refers to generating less trash in the first place, through waste reduction and improved recycling. For example, a pilot program to improve recycling at the County Administration Building cut the cost of garbage disposal by more than 75 percent. Experts are ready to help the County and Forest Preserve District (FPD) improve recycling and reduce waste at all facilities. The County stands to save \$1.7 million over five years if it proceeds with this initiative.

GREENER TAX POLICY recognizes that the tax system should complement environmental goals, not work against them. For example, the County should levy its vehicle taxes on the basis of weight, which is a rough indicator of how damaging a vehicle is to the environment and to roads. Furthermore, the County should encourage private investment in green buildings by establishing a property tax classification and incentive for structures meeting green standards.

GREENING THE COURTS involves increased use of electronic filing, recycled paper, and double-sided copies to reduce paper use. According to some estimates, the average attorney in the US goes through one ton of paper every year. As it takes an average of 24 trees to produce one ton of office paper, the 41,000 attorneys in Cook County consume nearly one million trees per year. In addition, the average sheet of office paper today contains less than 5 percent post-consumer recycled content. The Circuit Court in DuPage County is exploring e-filing with a pilot program for one of its divisions; Cook County should follow suit. In the meantime, the County should require that all documents submitted to the Circuit Court be printed on recycled-content paper.

GREENING THE FLEET will require the County and Forest Preserve to reduce fossil fuel consumption, primarily by replacing the existing fleet with alternative-fuel and hybrid vehicles. According to estimates, cutting the County's vehicle fuel consumption by 10 percent will save over \$500,000 and cut carbon dioxide emissions by 3,000 tons over five years. If all state and local governments in the US reduced the amount of fuel used by their 3.3 million vehicles by 10 percent, they would save nearly \$170 million and cut carbon dioxide emissions by over 1 million tons—as much CO₂ as 145 million trees absorb annually. Efforts to move County/FPD employees out of their cars and onto public transit or into shared rides would also have a significant positive impact on the environment.

BUYING GREEN is buying smart. The County and Forest Preserve District spend hundreds of millions of dollars per year on goods and services. Collectively, state and local governments spend \$530 billion or more each year on goods and services. That's a lot of purchasing power—\$530 billion is larger than the entire US auto industry and more than three times the size of the US paper industry. By demanding more sustainable products of all types, state and local governments could

revolutionize not only the auto and paper sectors, but also create markets for many other kinds of sustainable goods.

GREEN BUILDINGS AND GROUNDS are better for the environment and save money over the long term. The County should revise its Green Buildings Ordinance to achieve an even higher level of certification than is currently required and should expand green building practices to existing buildings. The Forest Preserve District should also adopt green building legislation. Recent studies suggest that green buildings are no more expensive to build than conventional structures, but cost far less to operate: \$1 invested in green building design and construction yields \$10 or more in lifetime benefits. Reducing the impacts from building is important, since residential and commercial buildings account for over 36 percent of all energy use in the US and construction and demolition debris accounts for 25 percent or more of the total solid waste stream.

GREEN MANAGEMENT ensures that the County and Forest Preserve District continue to lessen their environmental impacts and save money along the way. The County should establish a small Office of Sustainability, headed by a Chief Sustainability Officer, to give environmental issues more prominence and to better coordinate and plan the County and FPD's efforts. "Green Teams" at each County/FPD facility will also foster innovation and cooperation among employees to meet environmental goals.

These and other ideas presented in the report will help to make the County and Forest Preserve District more sustainable over the long term. Implementation of just three of these recommendations—cutting electricity use, reducing vehicle fuel consumption, and implementing effective recycling—**would save the County and Forest Preserve District \$12.2 million over five years.** This savings is more than enough to pay for the remaining proposals. Given the ongoing annual deficits facing Cook County, it is important to point out that this report's "green" ideas are not only environmentally beneficial, but also fiscally responsible.

The major obstacle to change is not cost, but inertia. The status quo is comfortable and familiar—but it is also wasteful, inefficient and harmful to the environment. Given enough time, it is possible for an entire society to change its way of doing things. The same is true of government institutions. In both cases, enlightened leadership vastly increases the likelihood of success. For example, Mayor Richard M. Daley has spoken of his wish that Chicago become the greenest city in America. Similarly, the County—ideally with high-level support from the County Board, other County elected officials, and the County administration—should challenge itself to become the "greenest" county in America.

TRACK RECORD

The immense environmental challenges facing the world require determined action. Cook County is off to a good start. Enlightened administrators and elected officials have introduced several strong environmental laws as well as operational changes that have made real progress towards “greening” the County. These policies are a sound foundation for even more dramatic successes in the future.

Brookfield Zoo and Chicago Botanic Garden

The Brookfield Zoo³ has made the biggest strides towards sustainable operations. The Zoo’s comprehensive recycling program covers aluminum and steel cans, paper, glass, and plastic, as well as less typical items, such as batteries and shipping pallets. Employees are encouraged to bring recyclables to the Zoo to dispose, if their communities do not offer recycling programs. The Zoo also hosts household hazardous waste collection events. Furthermore, the Zoo recently consolidated several internal coordinating teams dealing with issues of water efficiency, paper recycling, and emergency management under one umbrella green practices task force.⁴

The Brookfield Zoo maintains an electricity generation facility, consisting of one diesel and two natural gas generators. The Zoo supplies its power needs during weekday business hours by running the natural gas generators. The electricity generated is not only cheaper than electricity from the Commonwealth Edison grid, but also a better environmental choice: much of the grid’s electricity comes from coal and nuclear plants. On weekends, when grid electricity is cheaper, the Zoo purchases electricity from ComEd rather than produce its own. The generators are also used to ensure the safety of animals during power shortfalls. This arrangement has been so successful that the Zoo may add an additional natural gas generator that would be designed to co-generate power for a chilled water unit serving the Zoo’s sea-life habitats.⁵

Furthermore, the Zoo’s vehicle fleet contains a number of low-emission vehicles powered by biodiesel or natural gas. The Zoo is also involved in public education efforts, distributing information on water conservation and other environmental issues to Zoo visitors. In addition, the Zoo plans to incorporate green building techniques in future construction projects. For its efforts, the Brookfield Zoo has won awards from the West Cook County Solid Waste Agency and the Illinois Recycling Association.⁶

The Chicago Botanic Garden⁷ has also moved to “green” its operations and activities. The Garden has had a recycling program in place for the past 15 years and a program to mulch landscape waste for 10 years. In September 2003, the Garden released a report on its environmental efforts that listed a large number of additional steps the Garden could take and laid out 11 strategies for action

³ The Brookfield Zoo is owned by the Forest Preserve District of Cook County and managed by the Chicago Zoological Society.

⁴ Stuart Strahl, testimony to the Cook County Board Environmental Control Committee, 12 March 2004.

⁵ Rich Soderquist, testimony to the Cook County Board Environmental Control Committee, 21 May 2004.

⁶ Strahl.

⁷ The Chicago Botanic Garden is owned by the Forest Preserve District and managed by the Chicago Horticultural Society.

in 2003 and 2004. Those strategies included establishing a “Green Team” at the Garden, reducing consumption of energy and paper, and stepping up efforts to educate and inform staff and visitors about environmental issues.⁸

County Legislation

Three examples of environmental legislation stand out as the County’s most important “green” efforts to date. The County Board passed the Recycled Product Procurement Ordinance in 1994, under the leadership of Cook County Commissioner John Daley. The law committed the County to purchasing recycled paper and paper products. As a result, the County quadrupled its recycled product purchasing rate, from 16.7 percent of all paper goods in 1994 to 66.3 percent in 1999. In 2000, the County Board strengthened the ordinance by adding such items as motor oil, office furniture, landscaping materials, transportation materials, insulation, and carpeting. The addition of new categories hastened the County’s progress; by 2002-03, the County’s recycled product purchasing rate increased to 87.9 percent, before dropping slightly to 83.6 percent in 2003-04.⁹

In late 2002, the County Board adopted another important environmental initiative, the Recycling Plan Ordinance. This ordinance called for the County to develop a plan to divert 25 percent of its waste from landfills through waste reduction and recycling measures. The County, working with a waste consulting firm, undertook a demonstration project at the Cook County Administration Building in 2003 that reduced the yearly bill for waste disposal and recycling collection from \$94,000 to \$22,000. That is a savings of \$72,000, or nearly 76 percent, for just one building. In 2004, the County Department of Environmental Control began developing individualized recycling plans for each of the County’s 61 facilities. At a proposed rate of 15 facilities per year, the process would take four years to complete.

The final example is the County’s Green Building Ordinance, passed in November 2002. This ordinance requires that County building projects conform to the requirements of the Leadership in Energy and Environmental Design (LEED™) for New Construction and Major Renovations (LEED-NC) green building rating system. The County’s new Domestic Violence Courthouse at 600 S. Clinton, currently nearing completion, is the first building constructed under the ordinance; when it opens, it will feature the largest solar electric installation in the Midwest. Although the ordinance only requires that buildings achieve a “Certified” rating (the lowest level), County construction officials believe the new courthouse may qualify for the next highest level, the “Silver” rating. Furthermore, the Cook County Department of Capital Planning and Policy successfully secured grants from state, corporate, and foundation sources to help finance the upfront costs of the building’s green elements. The County is already planning a second green building, a new pharmacy for Provident Hospital.

⁸ Chicago Botanic Garden, “Garden Conservation Practices,” September 2003.

⁹ Cook County Purchasing Agent, multiple letters to Commissioner Mike Quigley, 1999-2005.

Other County Initiatives

Several County departments have also taken steps on their own to improve environmental performance. The Department of Capital Planning and Policy, for example, first included a “green lights” program in the County’s capital budget in the late 1990s. The ongoing program replaces fluorescent lights and ballasts with more energy-efficient fixtures, thereby reducing the impact on the environment and lowering the County’s energy expenditures. As of March 2004, the County had begun upgrading suburban courthouses and the Cook County Administration Building. Capital Planning expects these lighting upgrades to pay for themselves in approximately three years.

The County also participates in Commonwealth Edison’s “load response” program, in which the County receives financial incentives for agreeing to reduce its power consumption during periods of high demand. Capital Planning is also investigating adding solar panels on some County facilities, in light of the successful incorporation of solar panels into the design for the new Domestic Violence Courthouse. In addition, the Department of Environmental Control and the Purchasing Agent are collaborating on a review of the County’s waste collection contracts, so that future agreements feature a strong recycling component.

Forest Preserve District

Environmental issues are at the core of the Cook County Forest Preserve District’s mission to maintain its holdings “in their natural state and condition, for the purpose of the education, pleasure, and recreation of the public.”¹⁰ The District’s 68,000 acres of preserve provide an oasis of green, fresh air, quiet, and natural beauty in the midst of one of the country’s most densely urbanized counties.

Several Forest Preserve District (FPD) initiatives stand out as particularly notable. The District has been using integrated pest control methods—a system of pest management that only uses chemical pesticides as a last resort—for three decades. Working closely with state and federal officials, the Forest Preserve District has successfully combated gypsy moths, the Asian long-horned beetle, and other species of invasive plants and animals. In addition, the District has worked with its private golf course manager, Billy Caspar Golf, to achieve Audubon International certification for the District’s links. Individual certification is based on the unique character of each golf course, but often involves careful water management, increased use of natural landscaping, reduced pesticide application, and other strategies.

The road to sustainability is a long, potentially difficult one. But the advances discussed above show that the County and Forest Preserve District can succeed in changing their environmental practices when the will exists.

¹⁰ Illinois, *Cook County Forest Preserve District Act*, 70 ILCS 810, Section 7.

GREENER ENERGY

Introduction

The modern world depends on energy—be it electricity, gasoline, or heating oil—to function. This energy powers transportation, communication, medical, and many other technologies that have improved the quality of life for billions of people, compared to the world of a century ago. However, this improvement does not come without a price. Fossil fuels burned to produce electricity and to power vehicles release many toxic pollutants and greenhouse gases into the atmosphere. Nuclear power emits little or no air pollution, but it produces radioactive byproducts which will remain dangerous for thousands, if not millions, of years. In addition, the mining and drilling necessary to extract the raw materials for these sources of energy often wreak severe environmental damage. Mountaintop removal coal mining has completely altered the natural landscape and ecology in many mining regions, for example.

The United States is particularly dependent on energy: while the United States is home to a mere four percent of the world's population, it consumes 24 percent of the world's total energy resources and 25 percent of the world's total electricity.¹¹ In the US, 51 percent of electricity is generated from coal, 20 percent from nuclear plants, 16 percent from natural gas, 7 percent from hydroelectric sources, and 6 percent from renewable energy and other sources. In contrast, Illinois generates nearly 96 percent of its power from two sources, coal and nuclear, each of which has extremely serious drawbacks.¹² Nuclear power plants, of which Illinois has more than any other state (11 reactors at 6 sites¹³), produce waste that will remain radioactive for thousands of years. Presently, the US lacks a safe, central depository for nuclear waste, and in the meantime canisters of such waste are piling up at nuclear plants around the country.

Coal plants, in contrast, do not harbor such concentrated environmental or national security risk factors, but they do belch immense quantities of pollutants into the air. In the Chicago area, coal power plants are a major contributor—along with vehicles—to air pollution so severe that Chicago has gained a reputation as the “asthma capital” of the United States. Despite decades of clear air programs, the US Environmental Protection Agency (US EPA) announced in June 2004 that the Chicago metropolitan area exceeded the national standard for soot pollution and had the fourteenth worst soot pollution in the country overall.¹⁴ According to the American Lung Association's most recent *State of the Air* report, Cook County itself ranks 17th on the list of worst counties in the nation for year-round particle pollution and 19th for short-term particle pollution. It also suffers from the worst ozone pollution in the state of Illinois.¹⁵

¹¹ Energy Information Administration, *Annual Energy Review 2003* (Washington, DC: Department of Energy, 2004), 298, 325.

¹² Energy Information Administration, “Table 12. Electric Power Sector Consumption Estimates, 1960-2001, Illinois,” 14 December 2004, <http://www.eia.doe.gov/emeu/states/sep_use/eu/use_eu_il.html>.

¹³ Energy Information Administration, “State Nuclear Industry—Illinois,” 18 March 2005, <http://www.eia.doe.gov/cneaf/nuclear/page/at_a_glance/states/statesil.html>.

¹⁴ Michael Hawthorne, Chicago Ranks 14th in Nation for Soot Pollution, *Chicago Tribune* 30 June 2004.

¹⁵ American Lung Association, *State of the Air: 2004*, (New York, 2004), 17, <http://lungaction.org/reports/sota04_full.html>.

The asthma epidemic in Chicago deserves special consideration. According to the Asthma Action Plan, devised by the American Lung Association of Metropolitan Chicago in concert with many other groups:

- Over 650,000 children and adults in Metropolitan Chicago have asthma
- Chicago's asthma death rate among African American children is double the national rate
- 70,000 Chicagoans go to the emergency room due to asthma each year
- Chicago's hospitalization rates for children with asthma are 70% higher than the national average.¹⁶

Estimates by the Harvard School of Public Health suggest that the Fisk and Crawford power plants (in the Pilsen and Little Village neighborhoods of Chicago, respectively) cause 40 premature deaths, 550 emergency room visits, and 2,800 asthma attacks each year.¹⁷ Another study by ABT Associates in 2000 linked power plant emissions in the Chicago statistical metropolitan area to 995 deaths, 21,400 asthma attacks, and 186,000 lost work days per year.¹⁸ In short, air pollution in the Chicago area contributes to a serious public health crisis. People will continue to succumb to illness and death until the region's air quality improves.

As a result of all the negative factors associated with fossil fuels and nuclear energy, there is increasing interest in renewable energy sources. Renewable energy, sometimes termed "green power," usually encompasses solar, wind, biomass, hydroelectric, and geothermal power.

- **Solar.** Photovoltaic cells, which produce an electric current when exposed to light, generate power directly; other solar technologies heat water or heat homes and other buildings.
- **Wind.** Windmills have been used for centuries to pump water, but their modern versions convert the wind's energy directly into electricity.
- **Biomass.** This term refers to organic materials burned for electricity or converted into fuels. The most common biomass technologies include ethanol, biodiesel, and landfill gas.
- **Hydroelectric.** The energy in flowing water is used to produce electricity. Typically, water trapped behind a dam is slowly released in order to spin turbines which generate electrical current.
- **Geothermal.** Heat from the earth's interior is used to heat buildings or generate electricity.

Very little hydroelectric or geothermal energy is harnessed in the Midwest, so most of the renewable energy options available to the County comes from solar, wind, or biomass sources.

Although it is undeniably important that energy supplies be sustainable, the consumption end of the equation should not be neglected. Energy efficiency measures have the potential to save significant amounts of both energy and money. Lower demand would have the additional benefit of reducing dependence on imported oil and dirty power plants.

¹⁶ American Lung Association of Metropolitan Chicago, "Chicago Asthma Action Plan."

¹⁷ American Lung Association of Metropolitan Chicago, "Fighting Air Pollution in Pilsen and Little Village," *Challenge* (Summer 2003): 7.

¹⁸ Abt Associates, Inc., "The Particulate-Related Health Benefits of Reducing Power Plant Emissions" (October 2000): A-15.

Cut electricity consumption.

Either alone or with the assistance of the state government, Cook County should embrace shared-savings agreements (also known as energy performance contracts). Performance contracting is an arrangement under which private-sector firms front the money for energy efficiency projects in exchange for a share of the savings that results from those projects over a fixed period. These contracts have saved the federal and state governments billions and millions of dollars, respectively.

The State of Illinois offers assistance to local governments seeking to reduce their energy expenditures through the Energy Performance Contracting Program. The state has also benefited directly from energy performance contracting, according to the Department of Commerce and Economic Opportunity. A pilot program saw \$20 million invested in energy-efficiency capital projects at seven state facilities, and “[i]n the first two years after implementation the pilot initiative is producing energy savings averaging greater than 27 percent of the \$9.4 million utility cost of the facilities and is generating over \$2.6 million in annual savings at the seven participating state agency and university facilities.”¹⁹

The federal government’s Federal Energy Management Program has been similarly successful. According to the US Department of Energy, “ESPC [Energy Savings Performance Contract] projects worth \$1.7 billion have been implemented by 18 different federal agencies and departments in 46 states. The improvements achieved through ESPCs save 13.6 trillion Btu [British thermal units] annually, equivalent to the

Cutting Electricity Consumption in Cook County: Current Situation

At present, Cook County has no policy on energy purchases. The County buys its electricity from Commonwealth Edison and its natural gas from People’s Gas and Nicor. In fiscal year 2003, the County used nearly 300 million kilowatt-hours of electricity at a total cost of more than \$20 million.^a

The County is a participant in one of ComEd’s “load response” programs that gives large customers financial incentives to voluntarily reduce electricity usage during periods of high wholesale prices. Though such reductions do conserve energy, the reductions are temporary, and requested only in periods of high demand. Nevertheless, these voluntary reductions help prevent involuntary reductions across the power grid—brownouts and blackouts.^b

In addition, the County has begun to improve energy efficiency in its facilities. The County’s Green Light Program is a capital program begun approximately 5-6 years ago that replaces existing fluorescent lights and ballasts with more efficient T8 fluorescent lights and electronic ballasts. The Department of Capital Planning and Policy estimates that the new lights and ballasts pay for themselves after three years. The program is ongoing, with additional buildings updated every year.^c

Finally, the Department of Capital Planning and Policy in March indicated that it would take a serious look at energy performance contracting. According to the department, vendors have approached the County in the past about energy performance contracting, but the department did not wish to proceed without an overall strategy in place. The Department is now engaged in that effort.^c

Sources: (a) Cook County Bureau of Administration, letter to author, 19 March 2004; (b) Exelon Corporation, “Smart Returns,” 2002, <http://www.exeloncorp.com/comed/customer_marketing_services/marketing/ecc_curtail.shtml>; (c) Michael LaMont, Cook County Department of Capital Planning, testimony to the Cook County Board Environmental Control Committee, 12 March 2004.

¹⁹ Illinois Department of Commerce and Economic Opportunity, “Energy Performance Contracting Program,” 2004, <http://www.illinoisbiz.biz/com/energy/private_sector_finance.html>.

energy consumed by 132,200 households or a city of a half million. These projects will save the government \$4.7 billion in energy costs. \$3.2 billion of the savings will be used to pay off project investment, leaving net savings to the government of \$1.5 billion.²⁰

Cutting the County's electricity use by 10 percent over the next several years should be relatively simple, if the County obtains the expertise of energy-performance contractors through shared-savings agreements. A 10 percent reduction would save more than \$10 million over five years and reduce carbon dioxide emission by over 9,000 tons per year, which has the same effect as planting 1.3 million trees.

If every state and local government in the nation cut their energy use by 10 percent, they would save an estimated \$1.2 billion. A 10 percent cut would also take 11 million tons of carbon dioxide out of the air—the equivalent of 1.6 billion trees. Planting that many trees would take up an area larger than land area of Connecticut.

Buy wind power.

For a small premium—approximately \$475,000, or 2.32 percent of the County's total fiscal year 2003 electricity bill—the County could get 10 percent of its electric power from wind energy. (The savings from cutting total electricity consumption by 10 percent would more than offset the additional cost of wind power.) The premium would essentially subsidize the power produced at a wind farm, which at present costs about 1.5 cents more per kilowatt to produce than energy

Table 1: Potential Cook County Wind Power Purchases

	kWh/year	Cost/kWh	Total Cost/Year	Cost Increase	CO2 (tons)	SO2 (tons)	NOx (tons)	CO2 Comparison	
								Trees	Cars Taken Off Road
10 percent	29,701,686	\$ 0.016	\$ 475,227	2.32%	16,476	73	40	2,241,661	4,871
20 percent	59,403,372	\$ 0.015	\$ 891,051	4.35%	32,952	146	80	4,483,322	9,742
100 percent	297,016,862	\$ 0.012	\$ 3,564,202	17.42%	164,762	732	402	22,416,610	48,711

produced conventionally at fossil fuel or nuclear energy plants. A 10 percent wind power purchase, based on the County's total fiscal year 2003 consumption, would reduce carbon dioxide emissions by more than 16,000 tons, sulfur dioxide emissions by 73 tons, and emissions of nitrogen oxides by 40 tons. To achieve the same reduction in carbon dioxide emissions would require the planting of 2.2 million trees or removal of 4,871 cars from the road.²¹

²⁰ US Department of Energy, Office of Energy Efficiency and Renewable Energy, "Super Energy Savings Performance Contracts (Super ESPCs)," 5 August 2004, <<http://www.eere.energy.gov/femp/financing/superespcs.cfm>>.

²¹ Community Energy, Inc., spreadsheet.

As wind power expands, economies of scale will develop, and the cost of producing wind power will drop further. A wind power purchase by the County would help hasten the day when wind power will be financially competitive with electricity generated by fossil fuel and nuclear plants.

Wind Power and Renewable Energy: Current Situation

As of early 2004, wind energy capacity in the United States totaled 6,374 megawatts, roughly equivalent to the amount of energy consumed annually by 1.6 million average households. Projects currently under construction or negotiation will add at least an additional 3,000 megawatts to that total in the next five years.^a

The federal government estimates that up to 20 percent of nation's electricity needs could be provided by wind power. In Illinois, Mendota Hills, located in Lee County, is the only wind project currently in operation. It has a capacity of 50 megawatts, enough to power 20,000 homes annually. The next major project to come online will be the Crescent Ridge wind farm in Bureau County, with a projected capacity of around 50 megawatts. ComEd has committed to purchasing Crescent Ridge's entire output for the next 20 years. In addition, according to the American Wind Energy Association, additional projects with a combined capacity of 48 megawatts are in the planning stages in Illinois.^c

Several municipalities in northeastern Illinois are among the first in the nation to commit to purchasing electricity from green sources, particularly wind power. The City of Chicago, for example, announced in 2001 that it would begin purchasing green power. The City committed to purchasing 20 percent of its electricity from renewable sources, including wind power, beginning in January 2005.^d

In addition, the municipal electric utilities in St. Charles and Naperville now offer their customers the option of purchasing electricity from renewable sources for a small additional cost. Research has not turned up any Illinois counties that have made the decision to purchase wind power, but there are examples from other states. Earlier this year, Montgomery County and Prince George's County, Maryland, just outside the District of Columbia, announced that they, along with several other DC-area governments, would begin purchasing 5 percent of their electricity from wind-powered generators. At the time, the purchase was the largest ever made by a unit of local government.^e

The State of Illinois has also begun purchasing renewable energy. In April 2002, then-Governor George Ryan issued an executive order to purchase at least 5 percent green power for all executive branch facilities by 2010 and 15 percent by 2020.^f

*Sources: (a) American Wind Energy Association, "Wind Web Tutorial—Wind Industry Statistics," 2004, <http://www.awea.org/faq/tutorial/wwt_statistics.html>; (b) American Wind Energy Association, "Wind Web Tutorial—Wind Energy Potential," 2004, <http://www.awea.org/faq/tutorial/wwt_potential.html>; (c) American Wind Energy Association, "Illinois Wind Energy Projects," 2005, <<http://www.awea.org/projects/illinois.html>> and Community Energy, Inc., "Wind Farms," <http://www.newwindenergy.com/windfarm_crescent.html>; (d) John Halley, Community Energy, Inc., conversation with author; (e) Cameron W. Barr, "Montgomery Leads Group Purchasing Wind Power," *Washington Post* 14 May 2004: B1; (f) Gov. George H. Ryan, Executive Order No. 6 (2002), <<http://www.epa.state.il.us/green-illinois/executive-orders/number-6-2002.html>>.*

Identify County and Forest Preserve District buildings suitable for solar installations.

The Chicago area is becoming a center for solar technology and solar equipment manufacturing. Two manufacturers, Spire Solar Chicago and Solargenics, have set up shop in Chicago, and dozens of solar energy projects have been installed on buildings in Chicago in recent years. The County's new Domestic Violence Courthouse will boast the largest rooftop solar electricity installation in the Midwest when it is completed, supplanting another solar installation in Chicago that currently holds the title.

The County owns 61 facilities in Cook County, and the Forest Preserve District several dozen more. Some of these buildings may be suitable for solar electricity or heating installations. 4545 West Cermak has been suggested as a possible site for a solar installation, given its large roof. In addition, small structures located relatively far from other buildings and electricity supply—such as sheds, restrooms, parking lots, and shelters on FPD property—may be ideal candidates for solar power.

The Department of Capital Planning and Policy should identify other County sites where solar electric or solar heating installations would be feasible. Furthermore, the possibility of installing solar systems should be included in any capital investment plans, and Capital Planning should actively pursue grants and other funding options to finance solar energy projects.

Join the Chicago Climate Exchange.

Chicago is home to the Chicago Climate Exchange (CCX), a pioneering effort to reduce the emission of greenhouse gases and prevent global climate change. According to its website, CCX is an emissions trading and reduction program in which participants make a voluntary, legally binding commitment to reduce their emissions of greenhouse gases.²²

Joining the CCX would provide the County with several benefits. First, it would give the County a proven framework for measuring its progress in reducing emissions. In addition, if the County can successfully reduce its electricity consumption—and, by extension, its greenhouse gas emissions—any emissions reductions beyond the CCX yearly targets could be sold on the exchange. Thus, membership in the Exchange would provide an extra financial incentive to proceed with projects that will reduce the County's energy usage and greenhouse gas emissions.

In addition, membership in the Chicago Climate Exchange will set an example for other units of government in the area—which will hopefully emulate the County's efforts to reduce greenhouse gas emission—and will bring attention to the issue of global warming even as the debate remains stalled on a national level.

²² Chicago Climate Exchange, "About CCX," 2004, <<http://www.chicagoclimatex.com/about>>.

GREENER WASTE

Introduction

Recycling is the environmental activity with the greatest level of direct participation by the public. Although recycling is today an established, everyday activity for millions of people, many more materials beyond the commonly recycled commodities could be recycled. This increase in recycled materials, along with other waste reduction and reuse measures, will be needed in the future to stem the tidal wave of trash produced by Americans. The United States generated over 229 million tons of municipal solid waste in 2001—roughly four pounds per person per day—and as the population continues to increase, so will the amount of trash, unless something is done to reduce it.²³

The first of many benefits of recycling is perhaps the most obvious: recycling reduces the amount of trash that must be disposed of in landfills or through incineration. Waste disposal is an enormous expense for local governments—the City of Chicago alone spends \$157 million a year²⁴—so waste reduction has a direct, positive impact on the bottom line. In addition, the less trash generated, the longer the lifespan of existing landfills; this is an important consideration, given that the Illinois Environmental Protection Agency reports that the landfills in the Chicago metropolitan area will reach capacity by 2009.²⁵

Another commonly recognized benefit of recycling is the conservation of natural resources, like water, minerals, and trees. In addition, recycling saves a great deal of energy. For example, it takes 95 percent less energy to manufacture aluminum cans from recycled aluminum than from virgin aluminum.²⁶ The energy savings from manufacturing goods with recycled rather than virgin materials is similar for other commodities:

- Paper—26 to 45 percent reduction, depending on type
- Recycled glass—31 percent reduction
- Reused glass—328 percent reduction
- Steel—61 percent reduction
- Plastics—57 to 75 percent reduction²⁷

The lower energy usage also means that fewer greenhouse gases and other atmospheric pollutants are emitted during the manufacturing process. In addition, recycled trash does not end up in a landfill or incinerator, both of which emit greenhouse gases. Further, trees that do not have to be cut down to manufacture paper absorb carbon dioxide, a major contributor to global climate change.

²³ US Environmental Protection Agency, Office of Solid Waste and Emergency Response, *Municipal Solid Waste in The United States: 2001 Facts and Figures—Executive Summary* (Washington, D.C., 2002), 1.

²⁴ City of Chicago, corporate budget.

²⁵ Illinois Environmental Protection Agency, R2.3.

²⁶ National Resources Defense Council, "Table 1: Energy Savings and CO2 Impacts from Recycling and Incineration," *Too Good to Throw Away: Recycling's Proven Record* (New York, February 1997), <<http://www.nrdc.org/cities/recycling/recyc/recytbls.asp>> .

²⁷ *Ibid.*

There are also significant economic impacts from recycling. Recycling is a major industry in the United States and in the state of Illinois more specifically. A report prepared for the Illinois Department of Commerce and Economic Opportunity estimates that 2,400 firms, employing 56,000 people, are engaged in the business of recycling in Illinois.²⁸ In addition, aluminum, paper, and other commodities are valuable commodities and can produce income for recycling programs.

One less obvious benefit of recycling is that it contributes to “closing the loop” of the production cycle. Without an adequate, affordable, constant supply of “raw” recyclable materials, manufacturers will find it economically unfeasible to produce competitively-priced goods made of those materials. Manufacturers will either be forced to charge significantly more for recycled-content goods or will return to using cheaper, unsustainable virgin resources. By recycling its waste and purchasing products made from recycled and recyclable materials, the County and Forest Preserve can help to ensure that this more sustainable manufacturing cycle continues to function and expand.

Perform waste audits and design recycling programs for all facilities within one year.

In 2002, the County Board passed the Recycling Plan Ordinance, which required the County to develop and implement a plan to reduce its waste stream by 25 percent. This plan is not yet complete. The Forest Preserve District has yet to adopt a similar recycling plan ordinance, much less implement it.

However, in 2004, the County Department of Environmental Control began performing waste audits and developing individualized recycling plans for 15 buildings a year. At this pace, all of the County’s 61 facilities will be addressed within four years. The Department of Environmental Control indicated in early 2004 that it would begin to issue quarterly reports on the status of the County’s recycling efforts, though none has been published to date.²⁹

Based on the results of a model program designed and implemented in the summer of 2002 by Solid Waste Solutions Corp. (SWS) for the Cook County Administration Building, a comprehensive recycling program should save the County a significant amount. The yearly bill for waste disposal and recycling collection at the County Administration Building prior to the audit was \$94,000; after the audit and the development of a recycling plan, however, that cost dropped to \$22,000. That represents a savings of \$72,000, or nearly 76 percent, for just one building.³⁰

²⁸ R. W. Beck, Inc., *Illinois Recycling Economic Information Study*, December 2001, ES-4.
<<http://www.illinoisbiz.biz/com/recycling/pdf/IL%20REI%20study%20DCEO.pdf>>.

²⁹ Kevin Givens, Department of Environmental Control, testimony to the Cook County Board Environmental Control Committee, 12 March 2004.

³⁰ Solid Waste Solutions Corp., “Waste Audit Report—Cook County Administration Building,” 5 June 2002, 5-6.

SWS has offered to audit and develop recycling plans for all County facilities within a year at no up-front cost to the County. Instead, this proposal employs the shared-savings concept, in which the consultant would be paid out of the savings accrued as a result of its work. SWS estimates that the County could save at least \$500,000 annually once waste reduction strategies are in place.³¹

The agreement proposed by SWS stipulates that the County will receive 50 percent of the savings in the first year of the contract, 60 percent in the second year, 70 percent in the third year, and 80 percent in the fourth and fifth years. It is likely that any other potential bidders proposing a performance-based contract would use a similar formula. Based on the conservative \$500,000 estimate from SWS, the net savings to the County would be \$1.7 million over the first 5 years of the contract.

The County should proceed immediately with a Request for Proposals (RFP) for the development of recycling programs at all County facilities within one year.

The Forest Preserve District should adopt a recycling plan ordinance immediately and then proceed to issue its own RFP for a shared-savings agreement, which should also address public recycling in the preserves.

Strengthen bulk material reuse and recycling processes.

The County already does a very good job reusing and disposing of furniture, computer equipment, and other large items. The Department of Central Services currently collects these unwanted items from County facilities and stores them in a warehouse at 23rd and California in Chicago until they are needed by another County office. Furniture that is in poor shape and cannot be reused is broken down by material and sold by the County to scrap dealers. Computers are dealt with similarly, with completely unusable equipment going to electronics recyclers who can dispose of it properly.³²

There are a few additional steps that would make the process even more effective. First, the collection service should be better publicized. Although many employees may be aware that items can be taken away, knowing what is available when additional furniture or computers are needed is more difficult. An online inventory of the contents of the bulk warehouse would remedy this lack of information, particularly if a photograph of each major item were included in the online listings.

In addition, each County facility, department, or office (depending on the size) could designate an unused or underused closet or room for unwanted office supplies. Smaller items could accumulate out of the way without each requiring an individual pick-up. Collection trips would be less frequent

³¹ Peter Lobin, Solid Waste Solutions Corp., conversation with author.

³² County bulk warehouse staff, conversations with author.

but more productive and might even be combined with pickups of large items, further reducing unnecessary effort and fuel use.

Join Hospitals for a Healthy Environment.

Established jointly by the American Hospital Association, US Environmental Protection Agency, American Nurses Association, and Health Care Without Harm, Hospitals for a Healthy Environment (H2E) is a voluntary program for health care facilities and other entities interested in educating health care professionals about pollution prevention and carrying out pollution prevention strategies. A Memorandum of Understanding signed by the American Hospital Association and US Environmental Protection Agency sets out three major goals for H2E:

- Virtually eliminating mercury-containing waste from health care facilities' waste streams by 2005
- Reducing the overall volume of waste (both regulated and non-regulated waste) by 33 percent by 2005 and by 50 percent by 2010
- Identifying hazardous substances for pollution prevention and waste reduction opportunities, including hazardous chemicals and other pollutants.³³

To achieve these goals, Hospitals for a Healthy Environment has developed a number of tools. They include model plans for reducing waste (solid, infectious, and chemical) and eliminating mercury. By joining H2E, County facilities will have immediate access to the pollution prevention strategies and tools that have already been developed at other facilities around the country.

Cook County's Oak Forest Hospital is currently a member of Hospitals for a Healthy Environment, and it should be commended for joining the program. However, none of the County's other hospitals is a member. Stroger Hospital does not participate, even though its fellow Illinois Medical District hospitals (the UIC Medical Center and Rush University Medical Center) are members of H2E.

Stroger Hospital, Provident Hospital, Cermak Health Services, and the Bureau of Health Services should join Hospitals for a Healthy Environment. Preventing pollution is not only environmentally responsible, but also fiscally responsible: it is almost always cheaper to prevent pollution than to clean it up after it has been produced. Health care facilities are meant to prevent and treat illnesses, not generate medical, chemical, and other wastes that cause illness.

³³ Hospitals for a Healthy Environment, "About H2E: H2E Overview," 25 September 2003, <<http://www.h2e-online.org/about/overview.htm>>.

Implement composting programs at County and Forest Preserve District facilities.

Composting is another way to divert usable waste from the waste stream. Given the size of Cook County's jail and its health care systems, food waste accounts for a significant part of the total waste stream. For example, at the County Administration Building, so-called "wet waste"—defined as food and beverage waste—made up 20 percent of the waste stream (it should be noted that the figures include waste from the building's food court). At jails and hospitals, which provide thousands of meals daily, food waste may account for an even larger proportion of the total waste stream. Regardless of the amount, most food waste can be composted; the County only lacks a workable system for collecting and composting. The Resource Center, a Chicago non-profit that has been a leader in local environmental projects for the last thirty years, offers a compost collection service to which the County could subscribe. It collects grass clippings, leaves, and other yard waste from landscapers, along with food from grocery stores, restaurants, and the University of Chicago cafeterias. The finished compost is then sold to customers (including the Chicago Botanic Garden, Green Corps, and the University of Illinois Cooperative Extension) or used in the Resource Center's urban agriculture efforts.

The first step in establishing a composting program would be to determine how much potentially compostable waste is generated by County facilities. This information would be available from the waste audits conducted by a waste consultant as part of a contract with the County (see above). Then the County would need to work with the Resource Center, another organization, or an internal team to devise a composting program for County facilities. The County's food service vendors would also need to be part of the discussions, given their role in generating food waste; future food service contracts could even include provisions requiring the vendors to provide for composting.

The County's purchasing ordinance should also be modified to include a preference for compost materials produced locally, in order to help create a market for compost and to encourage the wider adoption of composting programs throughout the county.

Encourage "extended producer responsibility."

There is increasing interest in the environmental community in a concept known as "extended producer responsibility," which requires manufacturers to provide for the disposal of their products at the end of their useful life. One particular advantage of this approach is that it leads manufacturers to design products that can be recycled easily and cheaply. The concept is widespread in Europe, where it is applied most notably to product packaging and electronic devices. However, there are few examples of this practice in the United States to date.

The County should generally encourage extended producer responsibility. Initial purchase prices rarely incorporate lifecycle and end-of-life costs; present pricing policies pass on those externalities to the consumer or the government. Although extended producer responsibility may not spread rapidly, the County should seek to be a leader on this issue, rather than a follower. Whenever possible, the County should favor companies that have adopted elements of extended producer responsibility, and if necessary, should make changes to the purchasing ordinance and other policies to support the practice.

Move routine internal transactions onto the Internet.

The California Performance Review, a comprehensive look at state government initiated by Gov. Arnold Schwarzenegger, has already suggested that the State of California transact more internal business online. The Review focused on administrative, contracting, accounting, personnel, and budget-preparation forms as particularly well-suited to online use.³⁴

A study by Open Archives Systems, Inc., referenced in the California Performance Review indicates how reliant organizations are on paper-based documents and what that reliance means in practice.

- Ninety percent of corporate memory exists on paper;
- Ninety percent of all the pages that get handled each day in the average office are merely shuffled;
- The average document gets copied 19 times;
- Companies spend \$20 in labor to file a document, \$120 in labor to find a misfiled document, and \$220 in labor to reproduce a lost document;
- Seven and a half percent of all documents get lost;
- Three percent of the remainder get misfiled; and
- Professionals spend 5-15 percent of their time reading information, but up to 50 percent looking for it.³⁵

Open Archives Systems estimates that an effective document storage and retrieval system could:

- Reduce the amount of time spent filing, locating, and retrieving documents by as much as 75 percent,
- Lower copying, overnight shipping, and filing supply costs by 50 percent, and
- Cut storage costs both on- and off-site by 75 percent.³⁶

The costs and benefits of electronic documents are worthy of further investigation. Paper use could be cut dramatically, processing times reduced, and records organized more effectively.

³⁴ "Ensure Interagency Business Transactions are Re-engineered and Moved to the Internet," Recommendation GG44, Chapter 1 ("General Government"), *Report of the California Performance Review - Government for the People for a Change*, Vol. 4 ("Issues and Recommendations"), 3 August 2004, <<http://report.cpr.ca.gov/cprpt/issrec/gg/eff/gg44.htm>>.

³⁵ Sandy Schiele and Betsy Delfosse, "Return on Investment' Sells Document Management to Executives," (Windham, NH: Open Archive Systems, Inc., n.d.), <http://www.openarchive.com/roi_paper.pdf>.

³⁶ Ibid.

The County/FPD administration should convene a task force consisting of representatives from the Purchasing Agent, Bureau of Human Resources, Bureau of Finance, and other departments which initiate routine internal transactions. The task force should investigate what possibilities exist for transferring recurring paperwork to the Internet and develop a plan for implementing such changes. Among the internal business transactions that might be moved online are:

- Personnel actions, such as applications, hiring approvals, and promotions;
- Payroll forms, such as timesheets;
- Financial activities, such as annual budget requests and expense reimbursements;
- Requests for motor pool vehicles and mileage reimbursement for personal vehicles used for County business.

GREENER TAX POLICY

Introduction

The tax system should complement environmental goals, not work against them. At best, most taxes currently levied at the federal, state, and local levels have a neutral effect on the environment. At worst, tax policy directly undermines efforts to reduce air and water pollution and to conserve land resources. The federal tax code in particular has some egregiously bad elements. The few eco-friendly elements of the tax code are far overshadowed by enormous tax breaks for extractive industries like mining, oil and gas production, and timber. In addition, compared to other advanced nations, the US has low fuel taxes, which do very little to discourage driving.

Cook County cannot do much about the federal tax code. However, it can adapt its taxes to support environmental goals. For example, the County should levy its vehicle taxes on the basis of weight, which is a rough indicator of how damaging a vehicle is to the environment and to roads. In addition, the County should encourage private investment in green buildings by establishing a property tax classification and incentive for structures meeting green standards.

Create a new property tax classification and incentive for green buildings.

Cook County has established a number of special property tax classifications which provide incentives for the construction of low-income housing, provision of low-income housing, historic preservation, and industrial development, among other things. Cook County should encourage the construction of green buildings by creating a property tax incentive for structures meeting Leadership in Energy and Environmental Design (LEED) for New Construction (LEED-NC) standards.

At present, commercial buildings are assessed at 38 percent of estimated property value and industrial properties are assessed at 36 percent. A green building incentive, by contrast, might reduce that assessment level by half for a specified period. Ideally, a property tax incentive would be structured so that the higher the LEED-NC standard achieved, the longer the property tax incentive would last. For example, industrial buildings meeting the LEED “certified” level could be assessed at 18 percent for 10 years, “silver”-level buildings for 12 years, “gold”-level buildings for 14 years, and “platinum”-level buildings for 16 years. The incentive would be non-renewable, because it is intended to provide savings in the first few years of the building’s existence in order to offset the higher initial costs of building to the LEED standards. Long-term relief is unnecessary and unwarranted, given that green buildings are often less expensive to operate and maintain than conventional structures on a long-term basis.

The advantage to using LEED standards as the criteria for property tax incentives is that the compliance would be verified by the US Green Buildings Council rather than the County—sparing the County a major administrative task.

In addition, there should be a way to encourage investments in energy-saving and environmentally-friendly building technologies that do not rise to the level where they would qualify for LEED certification. To encourage the building of “green” single-family homes and small multi-unit residential buildings, the state of Illinois could initiate a program similar to the historic preservation property tax freeze currently in place. Under that program, owner-occupants of single-family houses or multi-family buildings of six or fewer units who invest at least 25 percent of the value of their National Register-listed or locally-designated historic property in rehabilitation and restoration work are eligible to have the assessed value of the property “frozen” at the pre-rehab level for eight years and gradually returned to market value over an additional four-year period.

A program designed to encourage homeowners to invest in energy-saving, water-saving, and/or other environmental technologies could be designed to function similarly. For example, owners who invest 10 percent of the assessed value of their property in approved environmentally-beneficial technologies could receive a property tax freeze lasting three to four years with an additional period of several years to gradually return the property to market value. (The short lifespan of the freeze reflects the lower percentage investment required.)

Tax new vehicle purchases on the basis of weight, not number of wheels.

Cook County’s “New Motor Vehicle and Trailer Excise Tax Ordinance” levies a fee at the time of purchase of a new vehicle based on the number of wheels. In fiscal year 2003, the tax brought in \$3.6 million.³⁷ Currently, the new vehicle tax is levied as follows:

- \$7.50 on the sale of a 2-wheel motor vehicle
- \$11.25 on the sale of a 3-wheel motor vehicle
- \$15.00 on the sale of a 4-wheel motor vehicle
- \$22.50 on the sale of a truck, truck tractor, trailer, semi-trailer, or pole trailer

This tax does not distinguish between a small hatchback and a very large sport-utility vehicle—both are considered 4-wheel motor vehicles under this ordinance and both are taxed the same \$15.00.³⁸

Generally speaking, the heavier a vehicle, the less fuel-efficient it is, and the more damage it causes to roads. Given the County’s interest in limiting pollution and protecting its substantial investment in roads, therefore, it should tax new vehicle purchases on the basis of weight rather than number of wheels.

³⁷ Cook County, *Annual Appropriation Bill Revenue Estimates*.

³⁸ Cook County, *New Motor Vehicle and Trailer Excise Tax Ordinance*, <http://www.cookcountygov.com/Agencies/CC_NEWMOTOR_ORD.pdf>.

Charge for vehicle stickers based on vehicle weight.

Cook County collects vehicle registration fees for passenger and commercial vehicles based in unincorporated areas of the county. Presently, the County charges a flat \$25 annual fee for all passenger vehicles and assesses fees for trucks and tractor-trailers based on gross weight, ranging from \$35 for vehicles under 10,000 pounds to \$105 for vehicles between 50,000 and 75,000 pounds.³⁹ In fiscal year 2002, vehicle registration fees put \$1 million into County coffers.⁴⁰

As discussed above, heavier vehicles generally cause more environmental and roadway damage than lighter vehicles. The City of Chicago has addressed this issue by beginning to charge a higher price for vehicle stickers for sport-utility vehicles than for normal cars. The County should follow suit and eliminate the flat fee for passenger vehicles, instead levying the vehicle registration fee on the basis of weight, as is currently the case for trucks. In addition, the County should also consider adjusting the fees for trucks and tractor-trailers to reflect their disproportionately large environmental and road impacts.

³⁹ Cook County Department of Revenue, "Cook County Vehicle License Application."

⁴⁰ Cook County, *Annual Appropriation Bill Revenue Estimates*.

GREENER COURTS

Introduction

The average attorney in the US goes through one ton of paper every year. It takes an average of 24 trees to produce one ton of office paper; therefore, the 41,000 attorneys in Cook County consumer nearly one million trees per year. In addition, the average sheet of office paper today contains less than 5 percent post-consumer recycled content.

The incredible growth of paperless communication technologies, such as electronic mail and instant messaging and the widespread availability of information on the Internet in a wide variety of formats, call into question the traditional reliance on paper by government and the legal profession. Many states and even the federal government have begun accepting electronic filings of certain legal and regulatory documents. Some states and local governments have even begun moving purchase requisitions, personnel files, and other routine internal paperwork online. Cook County should begin the process of moving away from paper documents to electronic documents, particularly in the court system.

There are two tracks worth pursuing. The first employs low-tech measures to reduce paper use, and the second is the use of electronic filing for legal and other government documents.

Require all court documents to be submitted on recycled-content paper and encourage double-sided copying.

In the case of the first track—reducing paper use through existing technologies—the most likely strategies are (1) requiring documents submitted to courts and other branches of government to be on recycled paper and (2) permitting documents to be printed on both sides of the page—a practice that is not even allowed in many jurisdictions, let alone encouraged.

At present, there are few paper-reduction strategies at work in the Illinois judicial system. The rules of the Illinois Supreme Court state: “Except as otherwise provided in these rules, all papers filed in all courts of this State shall be 8-1/2 inches by 11 inches. The court encourages use of recycled paper.”⁴¹ However, use of recycled paper is not required, and there is no guidance on whether double-sided copies are acceptable. Lower courts in Illinois have not attempted to go beyond the Illinois Supreme Court’s minimal guidelines, though they appear to have some flexibility to do so if they choose.

⁴¹ Illinois Supreme Court, “Rule 10,” *Illinois Supreme Court Rules*, 4 January 2005, <http://www.state.il.us/court/SupremeCourt/Rules/Art_I/ArtI.htm#10>.

On the federal level, the US Supreme Court requires double-sided copies of most documents.⁴² However, this is more a reflection of the unique traditions of the Court rather than a conscious effort to be environmentally responsible. Indeed, most other federal courts require legal documents to be single-sided.

Other states have taken steps to lessen the impact of court operations on the environment. In California, regulations require the use of recycled paper in documents submitted to the courts; in addition, California allows double-sided documents at the appellate and supreme court level and permits lower courts to accept double-sided papers at their discretion.⁴³

Cook County should require that all documents submitted to the Circuit Court be printed on recycled-content paper. The Court should also adopt rules encouraging the use of double-sided printing.

Permit electronic filing of court documents.

Following her election as Clerk of the Circuit Court of Cook County in 2000, Dorothy Brown convened a Transition and Strategic Planning Committee, consisting of many legal professionals, community leaders, and other stakeholders to develop a plan for improving the office. At the time, the Circuit Clerk's office had telephones without voice mail and computers incapable of accessing the Internet or supporting e-mail. The "Blueprint for Change" issued in 2001 by Brown's committee called for sweeping reform in many areas, but one item stands out for its importance to sustainability efforts in the County: electronic filing and recordkeeping. The committee's report noted that existing regulations did not permit electronic documents to be used and urged further investigation of the issues surrounding e-filing and development of standards for the use of electronic media in official court proceedings.⁴⁴ However, it appears that this issue has receded in importance in recent years, and until recently, there seemed to be little movement in the state towards e-filing.

Presently, the Federal Rules of Civil Procedure permit e-filing: "A court may by local rule permit papers to be filed, signed, or verified by electronic means that are consistent with technical standards, if any, which the Judicial Conference of the United States establishes."⁴⁵ Evidence suggests that few courts have begun accepting e-documents in practice, but moves towards greater acceptance of e-documents have begun. Here in Chicago, the 7th Circuit Court of Appeals requires an electronic copy of briefs to be filed along with the paper version.⁴⁶

⁴² US Supreme Court, "Rule 33—Document Preparation: Booklet Format; 8 1/2- by 11-Inch Paper Format," *Rules of the Supreme Court of the United States*, 2003.

⁴³ State Bar of California, "Paper Reduction Project—Duplex-Printed Documents," 2005, <<http://tinyurl.com/btjar>>.

⁴⁴ Clerk of the Circuit Court of Cook County, *The 21st Century Clerk's Office: A Blueprint for Change—Report of the Transition and Strategic Planning Committee*, 2001, <<http://www.cookcountyclerkofcourt.org/gifs/transitionreportfinal.pdf>>.

⁴⁵ <<http://judiciary.house.gov/media/pdfs/printers/108th/civil2004.pdf>>

⁴⁶ US Supreme Court, "Rule 5(e):Service and Filing of Pleadings and Other Papers: Filing with the Court Defined," *Federal Rules of Civil Procedure*, 31 December 2004, <<http://judiciary.house.gov/media/pdfs/printers/108th/civil2004.pdf>>.

Courts in at least 19 states and DC have adopted some form of e-filing; Illinois is not among them. One of the most advanced systems belongs to the appellate court system in North Carolina, which now accepts electronic documents (such as petitions, briefs, and responses) in Portable Document Format (PDF) submitted over the Internet.⁴⁷

In September 2003, the Illinois Supreme Court gave the DuPage County Circuit Court permission to move forward with an e-filing pilot program. The high court finalized the regulations for the program in October 2004, and the new rules went into effect on November 15, 2004.⁴⁸ The Illinois Pollution Control Board, a quasi-judicial branch of state governments, also accepts electronic filing of many documents.⁴⁹

In addition, data standards for e-filing have been developed by the Conference of State Court Administrators and the National Association for Court Management. The standards are meant to ensure that regardless of the particular electronic filing system used by a court, all submitted documents will contain the identifying information needed for correct processing and storage.⁵⁰ The LexisNexis Group has used those standards to devise model e-filing rules for court systems (although LexisNexis offers a proprietary e-filing product, the model rules are for general application). The model rules address issues such as authorized users of an electronic filing system, registration requirements, time and effect of submissions, document format, filing fees, and signatures.⁵¹

Papers can be destroyed by fire or water damage, or even succumb to brittleness and fading in old age. Electronic documents also face longevity issues. How will they be archived and stored securely, safe from loss or alteration? What format will best allow such documents to be read in the future, when computing has adopted different storage media and file formats? These and other similar questions will need to be addressed in the transition to electronic documents, but e-filing's benefits—faster processing, improved access, and reduced costs—are too great to ignore.

The Cook County Judicial Advisory Council or another appropriate committee should immediately commence a study of electronic filing. Such a study should identify:

- Potential barriers to implementation of an electronic filing system in the Circuit Court of Cook County;
- How those barriers could be overcome;
- Changes to court rules, state laws, or County ordinances needed to allow the introduction of e-filing;
- A schedule for preparing and implementing e-filing in the Cook County Circuit Court.

⁴⁷ National Center for State Courts, "Electronic Filing—FAQs," 1 February 2005, <<http://www.ncsconline.org/WC/FAQs/ElFileFAQ.htm>>.

⁴⁸ Libby Sander, "E-Filing Debuts in DuPage County," *Chicago Daily Law Bulletin* 16 November 2004: 3.

⁴⁹ Illinois Pollution Control Board, "Clerk's Office On-Line," 2005, <http://www.ipcb.state.il.us/cool/external/filing_intro.asp>.

⁵⁰ National Center for State Courts.

⁵¹ Travis Olson, Marsha Edwards, and Arthur M. Monty Ahalt, "A Guide to Model Rules for Electronic Filing and Service" (Bellevue, WA: LexisNexis File & Serve, 2003), <http://www.ncsconline.org/WC/Publications/External_ElFileModelRulesLexisPub.pdf>.

Assign citizens to the nearest courthouse for jury duty whenever possible.

Jury duty is one of the most basic responsibilities of American citizenship, but that does not mean it is a popular activity. Assigning prospective jurors to the nearest courthouse whenever possible is one way to make the experience more convenient. It is also an environmentally responsible policy; minimizing the distance that jurors must travel will reduce private vehicle use and the oil consumption, pollution, and congestion associated with it.

Maricopa County, Arizona, uses a computer program to assign jurors to the nearest available courthouse:

The system randomly pulls a name from over two million potential jurors in the county, determines the zip code, and assigns that juror to the nearest courthouse. When the demand for jurors is fulfilled at a location, the computer continues to draw randomly to answer remaining needs at all court sites. National jury experts have endorsed this method, and court officials estimate that as much as \$200,000 may be saved in juror mileage costs. Not only does this save money for the court by helping to lower mileage expenses paid to jurors, but it also can help reduce the driving time and potential frustration jurors might experience.⁵²

Court employees also like the system, since there are fewer complaints from jurors about lengthy trips from distant parts of the county.⁵³

The environmental benefits of less driving, lower costs to the County, and increased satisfaction among jurors are more than enough reasons to adopt this jury selection technology.

⁵² Affiliated Computer Services, Inc., "Improving Jury Service Through Technology: Arizona Superior Court in Maricopa County Combines Several Technologies for One Innovative Solution," n.d., <<http://66.113.223.81/Documents/CaseStudies/Juror/Maricopa.pdf>>.

⁵³ Ibid.

GREENER TRANSPORTATION

Introduction

Motor vehicles are responsible for a significant part of the area's air pollution, which is so bad that the Chicago area regularly violates the federal Clean Air Act. (The problem of air pollution is discussed in greater detail in the "Greener Energy" chapter of this report.)

Cook County is also one of the most traffic-congested areas in the country. According to the Texas Transportation Institute (TTI) Urban Mobility Report, the leading national traffic study, Chicago has been the third most-congested city in the nation for at least the past 10 years.⁵⁴ The annual delay per traveler was 56 hours, up from 16 hours in 1982 and 43 hours in 1992. Congestion cost the area \$4.2 billion and 365 million gallons of excess fuel in 2002.⁵⁵

Congestion is likely to continue to worsen in the Chicago area. Just to maintain the current level of congestion, TTI projects that either 152 miles of new roads or 241,000 additional transit and carpool riders will be needed.⁵⁶ However, it is becoming more and more difficult to solve congestion by constructing new roads. Cook County is almost completely urbanized at this point, which means large road projects would almost certainly require the demolition of homes and businesses. It is also increasingly clear from traffic studies that new roads do not relieve congestion for long anyway.

Fortunately, the Chicago area boasts a public transit infrastructure that is much more extensive than in most US metropolitan areas. TTI estimates that public transit saved the area over 91 million total hours of delay—21 hours per year per peak-time traveler—and \$1.6 billion.⁵⁷

There are two main ways in which the County can help address the transportation problems of the region. One is by making changes to its own vehicle fleet and operations, and the other is by encouraging its employees to drive less.

Current Situation

The County Board finally passed its first-ever vehicle policy ordinance on January 5, 2005, more than four years after Board members originally requested that the County administration inventory the fleet and develop a fleet management policy. The Forest Preserve District Board passed a virtually identical ordinance one month later, in February 2005.

Both ordinances create a Vehicle Steering Committee, composed of administrators and Board committee chairs (or their representatives), to oversee implementation of the policies. Green

⁵⁴ Based on total traffic delays (person-hours).

⁵⁵ Texas Transportation Institute.

⁵⁶ Ibid.

⁵⁷ Ibid.

elements are part of both ordinances, but the County and Forest Preserve District still have a way to go before their fleet management practices can be accurately described as “green.”

Many local governments around the country have adopted “green” fleet management policies for economic and environmental reasons. The list includes Denver, Seattle, San Francisco, Los Angeles, Madison (Wisconsin), Ann Arbor (Michigan), and Alachua County, Florida (Gainesville).

The initial fleet inventory submitted to the County Vehicle Steering Committee contained 1,923 vehicles. The size of the Forest Preserve District vehicle fleet is not precisely known, but one can assume it contains a few hundred vehicles at least.

In addition, the County and Forest Preserve District have few, if any, active policies relating to commuting by employees. They do not officially encourage their employees to carpool, although isolated programs and informal arrangements among employees may exist at some County and FPD facilities. Furthermore, the long-delayed introduction of a transit benefit program, which would allow employees to purchase transit passes with pre-tax income, was postponed again in early 2005. It is unclear when this program will be implemented.

The County also fails to provide any amenities which might encourage employees to walk or bike to work. These amenities could include locker rooms; dedicated, secure bike parking; and emergency ride programs that allow employees who do not use private cars to get a ride home quickly in the event of an emergency.

Fully implement the new County and Forest Preserve Vehicle Policy Ordinances.

The County Board enacted Cook County’s first-ever vehicle policy ordinance in January 2005, and a month later the Forest Preserve Board passed a similar measure. Both ordinances contain the same three major environmental planks. First, the policies create environmental purchasing standards for vehicles. The standards are based on the “Green Score” developed by the American Council for an Energy-Efficient Economy, a respected non-profit organization. The Green Score is an environmental rating system that takes account of the greenhouse gas and pollutant emissions generated during vehicle manufacturing and the emissions expected during the vehicle’s lifetime based on its fuel economy and then expresses the total environmental impact as a single number on a scale of 0 to 100.⁵⁸

The new purchasing standards establish a “ladder” of nine categories based on the Green Score and the relative ranking of a vehicle within its class (compacts, midsize, etc.). In other words, vehicles should not only be as “green” as possible overall, but should also be rated Superior or Above Average—the two highest ratings—in their particular vehicle class. A department must request a

⁵⁸ American Council for an Energy-Efficient Economy, “Frequently Asked Questions,” 2005, <<http://www.greencars.com/faq.html>>.

vehicle from the first “rung” unless it can demonstrate in writing, to the Vehicle Steering Committee’s satisfaction, that no vehicle in that class would be suitable for the proposed use. If the reason given is valid, the department may move down to the next rung, and so on, until an appropriate vehicle is identified.

“Rungs”	Green Score	Class Ranking
I	50 or higher	Superior
II	50 or higher	Above Average
III	35 or higher	Superior
IV	35 or higher	Above Average
V	25 or higher	Superior
VI	25 or higher	Above Average
VII	Under 25	Superior
VIII	Under 25	Above Average
IX	All other vehicles	

The ordinance also requires that cost comparisons for vehicles be based on lifecycle costs, rather than on purchase price alone. Lifecycle costing takes account of all expenses associated with the purchase and operation of a vehicle over its entire lifespan, including sale price, fuel, tires, and maintenance.

Second, the new ordinance requires that County and Forest Preserve departments request the smallest possible vehicle that will serve the task(s) for which it is intended. For example, purchasing a sport-utility vehicle (SUV) to transport passengers would be inappropriate. An SUV is not only an extravagant waste of taxpayer dollars, but also dumps far more carbon dioxide and other pollutants into the atmosphere than is necessary.

Finally, the policies prohibit unnecessary idling of vehicles. Except for law enforcement vehicles, which are exempt, no County and Forest Preserve vehicles may idle for more than 5 minutes in any one-hour period. As Seattle’s green fleet plan explains, “Vehicle idling gets *zero* miles per gallon; unnecessary idling wastes fuel and pollutes. Running an engine at low speed (idling) also causes twice the wear on internal parts compared to driving at regular speeds. The break-even point for shutting off and re-starting gasoline engines or leaving it [*sic*] to idle is just 30 seconds—from the point of view of both emissions and fuel consumption.”⁵⁹ In addition, newer diesel vehicles often have much less need to idle before being driven or shut down. Fleet managers should develop specific guidelines for each class of vehicles that spell out when idling is appropriate and when engines should be shut down, and vehicle users should be educated about these rules.

In addition to the three explicit environmental policies described above, other provisions of the vehicle policy ordinances will also contribute to environmentally sound management of the fleets.

⁵⁹ City of Seattle, “A Clean and Green Fleet: An Action Plan for the City of Seattle,” April 2003, 9.

First, the ordinances instruct the vehicle steering committees to produce plans for centralized management of the fleets by June 30, 2005. Centralized management would allow for a much more comprehensive, coordinated approach to vehicle purchasing, use, and maintenance. Specifically, a centralized fleet would permit increased sharing of vehicles, bulk purchase of fuel and other supplies, and billing individual departments for their use of vehicles. In addition, a centrally managed fleet could be challenged to meet fuel reduction and emission targets set by administrators or the Board.

In addition, the vehicle policy ordinances require departments to demonstrate the need for additional vehicles. Departments able to squeeze additional efficiency out of their fleet through redeployment and effective scheduling are expected to do so before requesting new vehicles. In all likelihood, the County's current fleet is larger than is necessary. Ultimately, the County's fleet should be large enough to meet the County's needs—but no larger. As Seattle's green fleet plan states, "Eliminating excess vehicles discourages non-critical trips and encourages more efficient use of the remaining vehicles. Substantial cost savings are achieved by not having to purchase, maintain, depreciate, and park vehicles."⁶⁰

These measures should allow the County and FPD to reduce their fleet size, fuel usage, and emissions by 10 percent over time. By doing so, the County and FPD could collectively save over \$800,000 and emit 1.5 million fewer pounds of carbon dioxide annually.

Use car sharing to meet County fleet needs.

A smaller fleet means that there likely will be occasions on which the demand for County vehicles exceeds the supply. In anticipation of this situation, the vehicle policy ordinances require each Vehicle Steering Committee to develop strategies for the use of car sharing services.

Car sharing, which originated in Europe several decades ago and is now available in Chicago, New York City, Washington, Boston, Philadelphia, Denver, Los Angeles, San Francisco, Portland (Oregon), Seattle, and other cities, recognizes that many urban dwellers do not require full-time access to a car. Instead, many urban residents commute via public transportation rather than a personal automobile. They might like a car for trips to the supermarket or other errands, but this low level need is not enough to justify car ownership. That is where car sharing comes in.

In a typical car sharing program, drivers reserve a vehicle (usually through an online reservation system) and retrieve it at the appointed time from one of many designated locations. Typically, customers pay a monthly fee as well as a certain amount per mile. The fees cover the purchase, maintenance, fuel, and all other expenses associated with the car. To refuel, the driver uses a credit card kept in the vehicle which can only be used to purchase gasoline.

⁶⁰ City of Seattle, 10.

A growing number of businesses have begun turning to car sharing for their transportation needs. Car sharing relieves companies from the miscellaneous burdens associated with vehicle ownership, such as maintenance, fuel, parking, insurance, taxes, and bookkeeping. In addition, businesses participating in car sharing programs pay only for vehicles that are actually being used, rather than for company cars that may be in use or may be sitting for days or weeks at a time in a parking lot.

Furthermore, many local governments have begun using car sharing to supplement or even replace their fleets. For example, the City of Philadelphia announced in April 2004 the largest municipal car sharing initiative to date. The city government will reduce its 6,000-vehicle fleet by 400 and begin using the car sharing program run by PhillyCarShare, a local car sharing non-profit. This move will cut down on fuel use and pollution and save the city millions of dollars over the long run.⁶¹ Some time later this year, the City of Berkeley, California, will also retire part of its municipal fleet in favor of car sharing vehicles. Five hybrid cars provided through CityCarShare, the San Francisco area's car sharing non-profit, will replace fifteen city vehicles. Over three years, the program is expected to save \$250,000 in direct costs and \$150,000 in indirect expenses. Berkeley's program is also notable because its car sharing vehicles will be available to individual members of CityCarShare on evenings and weekends.⁶²

Other city governments are also enlisting commercial car sharing companies to help manage their fleets. They include Boston, Cambridge, Brookline, and Somerville, Massachusetts; Arlington and Alexandria, Virginia; Princeton and Hoboken, New Jersey; and Portland, Oregon.⁶³

The County should work with I-GO Cars, Chicago's car sharing provider, to identify ways in which car sharing might be used to improve the County's fleet operations. Established by the non-profit Center for Neighborhood Technology, I-GO currently has 27 cars at 24 locations in Chicago and is planning additional vehicles and locations.⁶⁴ A pilot I-GO program at one large County facility or several facilities located within a small geographical area would be a way to gauge interest in car sharing among County employees and to learn what unique issues car sharing would present to the County before adopting it on a wide basis. Possible locations include the Loop, currently home to three I-GO vehicles at two sites just blocks from the County Building, and the West Side Medical Center.

Use alternative fuels in conventional vehicles.

For many trucks and other specialized vehicles used in County operations, alternative-fuel versions may not be available for many years. When such models are introduced, the County should

⁶¹ City of Philadelphia, "City to Join PhillyCarShare, Cut 400 Vehicles," press release, 5 April 2004, <http://www.phila.gov/pdfs/City_to_Join_PhillyCarShare.pdf>.

⁶² City of Berkeley, Mayor's Office, "Berkeley and City CarShare to Make History—First Shared Municipal Fleet in the US," 15 July 2004, <<http://www.ci.berkeley.ca.us/Mayor/PR/pressrelease2004-0715.htm>>.

⁶³ Zipcar, <<http://www.zipcar.com>>, and Flexcar, <<http://www.flexcar.com/>>.

⁶⁴ I-GO, "I-GO—Vehicle Locations," 2005, <<http://www.flexcarnetwork.com/regions/allLocations.asp?nI=20&mlp=chicago-i-go&plp=14&thisRegion=I%2DGO>>

purchase them. In the meantime, certain fuels, particularly biodiesel, ultra-low-sulfur diesel, and ethanol, can be used in conventional vehicles with little or no adaptation required. Ideally, the County would fuel all existing diesel vehicles with B20 biodiesel (a blend of 80 percent conventional diesel with 20 percent biologically-based oils).

Encourage alternatives to solo commuting by car.

There is no means of commuting worse for the environment than solo travel in a passenger vehicle. Many County and Forest Preserve employees, out of environmental concern or for more practical reasons, already choose to commute using public transit or in a carpool. However, there are undoubtedly many other County/FPD workers who would be willing to change their commuting habits if properly encouraged.

The County has struggled since at least 2001 to introduce a pre-tax transit benefit program for its employees. Many deadlines have come and gone, and at present, it is impossible to say when this program will finally be implemented. Ideally, after the transit benefit is introduced, it will induce some County/FPD employees to make the switch to transit. However, the benefit will be much more effective if it is part of a comprehensive effort to encourage alternatives to driving.

Any serious effort to encourage alternatives to solo driving must begin with an assessment of County and Forest Preserve District employees' current commuting habits. This employee survey should collect information about commuting patterns and preferences, including:

- Origin, destination, and means of travel, not only for the main commute, but also for trips made during the day (work-related, lunchtime errands, etc.);
- Willingness of employees to consider alternative methods of commuting as well as reaction to proposed incentives or disincentives;
- Assessment of the parking situation at County facilities and public transit availability at both ends of the commute.

This baseline information will make it far easier for the County/FPD to design a commuting program, and it will enable planners to measure how well the program is meeting the intended objectives.

The exact design of a commuting alternatives program will depend on the results of the baseline survey, but it is likely to include some, if not all, of the following elements:

- **Support for carpools and vanpools.** The County has a variety of options available to encourage carpools and vanpools (the two are sometimes lumped under the term "ridesharing"). At a minimum, the County should provide ride-matching services to allow interested employees to locate "neighbors" with whom they could travel to and from work. In addition, the most convenient spots at County-owned parking facilities should be reserved for carpool and vanpool vehicles. At parking facilities operated by private firms, the County/FPD should negotiate reduced parking rates and reserve convenient parking spaces.

Finally, the County/FPD could provide a direct subsidy to carpools and vanpools, if they wished.

- **Emergency ride program.** This is a crucial element of any serious commuting program. Some employees may shy away from public transit or carpooling because they worry they might not be able to get home in case of an emergency or unscheduled overtime. The provision of emergency rides would alleviate this concern.
- **Parking cash-out** pays employees not to use employer-provided parking. This would apply to cases where the County/FPD leases parking spaces for employees' use.
- **Transit station shuttles.** In situations where transit stops are located beyond walking distance, the County/FPD could provide shuttle service between the stop and County/FPD workplace(s). This option would only make sense if there was sufficient demand, and regular service might only be provided at the beginning and end of the workday.
- **Bike accommodations.** For those County/FPD employees who wish to bicycle to work, the County/FPD should provide secure bicycle storage and changing rooms with showers and lockers.

Studies have demonstrated that alternative commuting programs are successful. According a study of 58 pilot projects in southern California, the most effective—and cost-effective—means of decreasing solo car travel are financial incentives and disincentives.⁶⁵ In addition, a study by the Transit Cooperative Research Board of several dozen employers across the country who employed an array of different commuting programs, found that the provision of commuting alternatives (e.g. carpools, public transit, and bike facilities) combined with financial incentives and disincentives could reduce the number of employee trips by up to 24.5 percent. According to the study, the average trip reduction was 15.3 percent, and the average cost was 75 cents per one-way trip reduced. Successful commuting programs provide another benefit: they have been shown to improve employee productivity, morale, retention, and absenteeism.⁶⁶

The Chicago Area Transportation Study offers a number of ridesharing services to employers; the County and Forest Preserve District should take advantage of these resources to design and implement an alternative commuting program. The CATS services available include:

- Online carpool/vanpool matching
- Promotional materials
- Staff training and support
- The Rideshare Hotline, (800) 920-RIDE

Other ideas that may be worth examining in the future include a program to help County/FPD employees purchase housing close to work, as well as a subsidy for employees willing to give up their cars entirely and use a combination of public transit and car sharing to meet their mobility needs.

⁶⁵ US Department of Transportation, *Commuter Choice Primer*. (Washington, D.C., n.d.), 41. <http://www.its.dot.gov/JPODOCS/REPTS_PR/13669/CommuterChoicePrimer.pdf>

⁶⁶ Dr. Raymond Navoco, cited in Chicago Area Transportation Study, "Employer Services," n.d., <<http://www.catsmpo.com/ride-employer-services.htm>>.

Consider alternatives to road salt near ecologically sensitive areas.

A salt truck is a welcome sight during one of Chicago's snowstorms—unless you are an animal or plant living near a road. When the snow and ice melts, the runoff carries road salt into nearby areas—often with devastating effects. The most common type of road salt, consisting of sodium chloride (better known as table salt), can increase natural chloride concentrations by a factor of 10 in surface water and a factor of 30 in groundwater. High chloride levels can kill plant roots and burn foliage. As salt accumulates in the soil, long-term plant growth is severely impeded. Animals, particularly fish and other aquatic life, are also negatively affected by high salt concentrations. Many salt-affected areas become barren; salt-tolerant invasive species can take over and further disrupt the local ecosystem. According to the Riversides Stewardship Alliance, “the United States Environmental Protection Agency estimates the annual cost of salt-related damage to roads, vehicles, bridges and vegetation is 15 times the cost of purchasing and applying the road salts.”⁶⁷

The Cook County Highway Department reports that over 90 miles of County-maintained roads under County jurisdiction pass through or next to Forest Preserve District property.⁶⁸ The County and FPD have never undertaken a comprehensive review of Highway Department salting activity and associated impacts on Forest District Preserve lands, but FPD ecologist Debbie Antlitz has identified three areas that are particularly susceptible to road salt damage. The Spring Lake Nature Preserve in northwestern Cook County is one example:

Spring Lake, a state-dedicated Illinois Nature Preserve, contains some of the richest sedge meadow, wet prairie and aquatic communities left in Cook County. Tributary streams that feed the creek are directly impacted by runoff from nearby roads. Near where road runoff enters the tributaries, virtually all plants have been eliminated, leaving dense stands of only a few species, such as the invasive giant reed and reed canary grass. Outside of the zones of impact, a rich native community still harbors native plants and butterflies. Left unchecked, the zone of impact will spread in time.⁶⁹

The other identified areas include Harms Woods along the North Branch of the Chicago River in northeastern Cook County and the Palos and Sag Valley Forest Preserves in southwest Cook County, one of the “few places left in the world where the federally endangered Hines Emerald Dragonfly can still be found.”⁷⁰

There are alternatives to common road salt, including calcium magnesium acetate and potassium acetate, which are less harmful to plants and animals. Unfortunately, these products cost roughly 15 to 25 times more per ton than sodium chloride. Nevertheless, the added expense may be warranted to prevent severe damage to natural areas.⁷¹

⁶⁷ Riversides Stewardship Alliance, “Municipal Low Salt Diet,” 2001, <http://www.riversides.org/review/riversides/low_salt_diet_impacts.htm>.

⁶⁸ Michael Hammer, Cook County Highway Department, e-mail to author.

⁶⁹ Debbie Antlitz, “Highlighted Areas Impacted by Cook County Highway Road Salt Usage,” unpublished document.

⁷⁰ Antlitz.

⁷¹ <http://www.enviroliteracy.org/article.php/709.html>

The Forest Preserve District should work with the County Highway Department to identify all environmentally sensitive areas that could be affected by road salt runoff. The two agencies should develop strategies to reduce road salt application near those areas, including less intense salting and the substitution of less damaging salts. Ultimately, the Forest Preserve District should seek to extend this initiative to the other local governments with jurisdiction over roads near District property.

Use rubberized asphalt for paving projects.

Asphalt-rubber (also known as “A-R” or “rubberized asphalt”) is a blend of asphalt cement, reclaimed tire rubber, and certain additives, in which the rubber component is at least 15 percent by weight of the total blend. A-R is routinely used in paving projects in Arizona, California, and Texas.⁷²

There are several environmental benefits to using asphalt-rubber in paving projects. First, increased use of asphalt-rubber will take scrap tires out of the waste stream. At present, disposal of scrap tires causes major headaches; the City of Chicago alone pays \$300,000 per year to dispose of scrap tires. In landfills, tires can rise to the surface and break the cap, bringing buried waste into contact with the environment. Furthermore, tire heaps are ideal breeding grounds for mosquitoes, which transmit the West Nile virus. In addition, the heaps are major fire hazards, as was demonstrated by the 1994 tire fire in East Chicago, Indiana, which burned for over a month, and forced the evacuation of 615 homes.

Those tire heaps would shrink with increased use of asphalt-rubber. Every lane mile of road paved with A-R requires 500-2,000 tires. The Rubber Pavements Association estimates that if 5 percent of the nation's roads were repaved annually with A-R, nearly all waste tires would be diverted from the waste stream.⁷³

In addition, according to a study conducted by Sacramento County, California, A-R reduces highway noise by 60 percent compared to conventional asphalt.⁷⁴ It is also more durable than conventional asphalt, saving maintenance money. Several recent studies have found that A-R has lower life-cycle costs than conventional asphalt. A study by the Arizona Department of Transportation found that 10-year maintenance costs for A-R were \$500 per lane-mile, compared to \$1,400 per lane-mile for conventional asphalt.⁷⁵

A-R has a proven track record in cold climates. Arizona uses A-R frequently in the Flagstaff area, where the elevation exceeds 7,000 feet and winter temperatures dip to -20 degrees Fahrenheit.

⁷² Rubber Pavements Association, “Frequently Asked Questions,” <<http://www.rubberpavements.org/faq.asp>>.

⁷³ Rubber Pavements Association.

⁷⁴ Sacramento County Department of Environmental Review and Assessment and Bollard & Brennan, Inc., “Report on the Status of Rubberized Asphalt Traffic Noise Reduction in Sacramento County,” November 1999, <http://www.asphaltrubber.org/ari/Noise/Sacramento_County_Noise_Study.pdf>.

⁷⁵ George B. Way, “OGFC Meets CRM: Where the Rubber Meets the Rubber,” 25 March 1998, <<http://www.rubberpavements.org/library/crm.asp#5>>.

California has used A-R in the Sierra Nevada mountains. The material has performed well in both areas.⁷⁶

The County Highway Department, other County departments, and the Forest Preserve District should use rubberized asphalt in place of conventional asphalt for all road, parking lot, and trail construction projects.

⁷⁶ Rubber Pavements Association.

GREENER PURCHASING

Introduction

Governments in the United States are among the largest purchasers of products in virtually every conceivable category. Collectively, state and local governments spent nearly \$530 billion in 2004 on goods and services.⁷⁷ That's a lot of purchasing power—\$530 billion is larger than the entire US auto industry and more than three times the size of the US paper industry.⁷⁸ This buying power gives units of government tremendous leverage to encourage producers to manufacture goods that are better for the environment.

The scope of environmental purchasing policies has broadened in the time since the County's purchasing ordinance was first amended to favor recycled paper. The current iteration of the concept is "environmentally preferable purchasing," which not only encompasses the purchase of recycled-content and recyclable goods but also products using fewer raw materials or less energy, containing fewer toxic ingredients, or reducing environmental impact in some other way. Life cycle costing, which takes into account the direct and indirect costs of a product over its entire lifetime (including acquisition, maintenance, and disposal), is one of the most common methods used to evaluate and designate environmentally preferable products. This is a good practice from an economic point of view as well, as it yields a much clearer picture of the true costs and benefits of a product—costs and benefits that may not be reflected in the sticker price.

More specifically, modern environmentally preferable purchasing policies are designed to:

- Conserve natural resources;
- Minimize environmental impacts such as pollution and use of water and energy;
- Eliminate or reduce toxic materials that create hazards to employees and the community;
- Support strong recycling markets;
- Reduce the amount of waste that is landfilled;
- Increase the use and availability of environmentally preferable products that protect the environment;
- Identify environmentally preferable products and distribution systems;
- Reward manufacturers and vendors that reduce environmental impacts in their production and distribution systems or services;
- Create a model for successfully purchasing environmentally preferable products that encourages other purchasers in the community to adopt similar goals.⁷⁹

⁷⁷ "Intermediate goods and services purchased." US Department of Commerce, Bureau of Economic Analysis. National Income and Product Accounts, Table 3.10.5. Government Consumption Expenditures and General Government Gross Output, Last Revised on March 30, 2005.

⁷⁸ 2003 figures. "Gross Output by Industry in Current Dollars," Gross-Domestic-Product-by-Industry Accounts, US Department of Commerce, Bureau of Economic Analysis

⁷⁹ Alameda County Waste Management Authority and Source Reduction and Recycling Board, "Environmentally Preferable Purchasing Model Policy," 2005, <<http://www.stopwaste.org/home/index.asp?page=439>>.

The US Environmental Protection Agency developed “five guiding principles” to assist federal agencies in adopting environmental purchasing practices. The guidelines, however, are general enough to be applicable for state and local governments as well. According to the EPA principles, environmental purchasing efforts should:

1. Include environmental considerations as part of the normal purchasing process.
2. Emphasize pollution prevention early in the purchasing process.
3. Examine multiple environmental attributes throughout a product’s or service’s life cycle.
4. Compare relevant environmental impacts when selecting products and services.
5. Collect and base purchasing decisions on accurate and meaningful information about environmental performance.⁸⁰

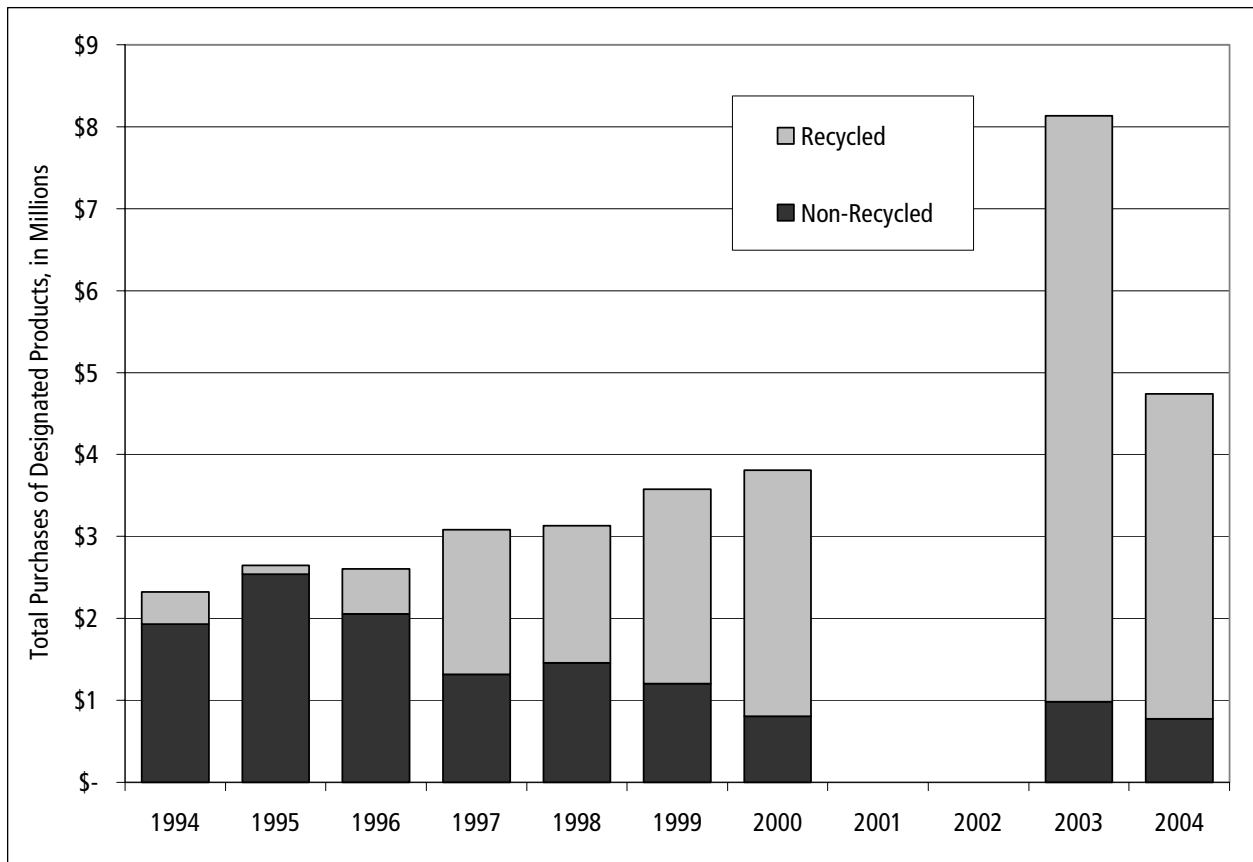
According to research by the Union of Concerned Scientists, certain types of goods lend themselves to environmental purchasing efforts because of the impacts associated with their manufacture, use, or disposal. These include vehicles, food, building operations (heating and air conditioning in particular), office equipment, and electricity generation.⁸¹

Thanks to its million-dollar appetite for goods and services, when Cook County talks with suppliers, it has a very loud voice. This clout has been used to further environmental ends since 1993, when the County Board passed the first recycled product purchasing ordinance. Under that first version of the recycled purchasing policy, which covered paper, printing, and paper products (such as paper towels and toilet paper), the percentage of recycled goods purchased rose from 16.7 percent in 1994 (the policy’s first year) to 66.3 percent in 1999. In early 2000, the ordinance was amended to include chlorine-free paper products and non-paper items. As a result, the percentage of recycled goods purchased in fiscal year 2000 reached a new high of 78.8 percent. Unfortunately, purchasing reports were not compiled for fiscal years 2001 and 2002, and the 2003 report uses a different format and reporting period (Sept. 2002 through Aug. 2003). Nevertheless, that report showed yet another increase in the County’s recycled product purchasing rate to 87.9 percent. The 2003-04 report witnessed a small drop in the County’s rate to 83.6 percent.⁸² If the recycling rate has indeed plateaued, it may be a sign that the existing ordinance has done as much as it can to foster environmentally-minded purchasing—and that a broader ordinance is needed to progress further.

⁸⁰ US Environmental Protection Agency, “The Five Guiding Principles,” 24 May 2004, <<http://www.epa.gov/oppt/epp/guidance/fivegp.htm>>.

⁸¹ Cited in Scot Case, “Establishing Green Purchasing Priorities,” *Government Procurement* April 2004, 34.

⁸² Cook County Purchasing Agent.



While the percentage of recycled products has increased, only \$4.7 million in County purchases was covered by the most recent recycled product purchasing report—that is just a fraction of the County’s overall purchasing. In fiscal year 2004, the County budget included \$155 million for “Supplies and Materials,” \$107 million for “Operation and Maintenance,” and \$219 million for “Capital Improvements.”⁸³ Many of the goods and services purchased by Cook County would still fall outside the scope of an environmentally preferable purchasing policy, but there are tens of millions of dollars’ worth of products that would and should be covered by an expanded policy.

Expand the County’s purchasing policy.

Unsurprisingly, the County’s environmentally preferable purchasing (EPP) focuses almost exclusively on recycled and recyclable products—as reflected by its title, the “Cook County Recycled Product Procurement Policy.” However, the existing County policy has a slightly broader scope than its title would suggest. For example, it forbids the County from purchasing products whose manufacturers place restrictions on the remanufacturing of their products by other businesses. Recent EPP policies from other state and local governments have looked far beyond recycling to other issues: the amount of packaging, disposal costs, distance from suppliers, health effects, and

⁸³ Cook County, *Annual Appropriation Bill*.

additional product characteristics. Taken together, those factors paint a much truer picture of an item's environmental impact.

A broader EPP ordinance would retain the spirit and many of the features of the current ordinance, but cover more products and allow for products to be added as new purchasing guidelines are developed by government agencies or third-party certifiers. Specifically, a revised ordinance should apply to all products for which:

- 1) The US EPA has recommended minimum recycled content standards; and/or
- 2) US EPA Energy Star certification and/or Product Energy Efficiency Recommendations (issued by the Federal Energy Management Program) are available; and/or
- 3) An independent third-party certification organization has issued publicly-available recommendations or certifications.

This covers a wide array of goods, including paper, office supplies, cleaning products, building materials, tires, carpeting, furniture, appliances, and many more items.

Adopt an environmentally-preferably purchasing policy in the Forest Preserve District.

Given the Forest Preserve District's mission to protect the natural areas it owns, it should without question have a purchasing policy that minimizes environmental harm. The Forest Preserve District Board should immediately adopt the County's current recycled product purchasing ordinance and should revise its policy to match any revisions enacted by the County in the future.

Establish cooperative purchasing agreements with other governments in the area to lower the cost of environmentally preferable products and services.

The current recycled product purchasing ordinance contains language permitting joint purchasing with other governments to reduce costs for recycled products, but to date the County has not aggressively pursued joint purchases of recycled goods with other entities. In order to bring costs down and to encourage other units of government to engage in environmentally preferable purchasing, Cook County should seek out opportunities for joint purchasing with other local governments as well as the state.

The State of Illinois Department of Central Management Services presently offers joint purchasing to any unit of government in Illinois that wishes to join its purchasing contracts, including Cook County. According to the Central Management Services website, "The State of Illinois develops the specifications, conducts the bid process, makes the awards and creates the contracts. Joint Purchasing Program members then place orders directly with the vendors." It goes on to say that

the program is purely voluntary and places no obligation on a participating local government to purchase goods through the state contracts.⁸⁴

However, the State's purchasing policy barely touches upon environmental concerns. Therefore, the County should only participate when the products available through the state's program meet the environmentally preferable purchasing requirements of the County's own purchasing ordinance.

The County should also encourage environmentally preferable purchasing by opening its contracts up to local governments in northeastern Illinois, just as the State of Illinois has done through its Joint Purchasing Program. Most units of local government in Cook County and the entire state, for that matter, are quite small and most likely incapable of developing and implementing extensive environmentally preferable purchasing policies on their own. Therefore, the County should make its purchasing process available to local governments in the area and allow them to piggyback on the County's contracts where appropriate.

The County will need to develop procedures for a joint purchasing program and will have to publicize this opportunity. It should also make the details of its purchasing policies and specifications available to local governments so that they may determine how to participate.

⁸⁴ Illinois Department of Central Management Services, "Local Government Services–Joint Purchasing Program," 2003, <http://www.state.il.us/cms/1_servicesg/jntpurch.htm>.

GREENER BUILDINGS AND GROUNDS

Introduction

According to the US Department of Energy, residential and commercial buildings account for 40 percent of the nation's total energy use. In addition, estimates suggest that construction and demolition debris may comprise 25 percent or more of the nation's solid waste. In the City of Chicago, around 40 percent of the waste stream is construction and demolition debris.

Recently, architects, builders, engineers, economists, and many others have realized that buildings can be built and operated in ways that have a much smaller impact on the environment than conventional construction and maintenance techniques.

The Leadership in Energy and Environmental Design (LEED™) standards established by the US Green Building Council (USGBC) are revolutionizing the building industry. The first LEED rating system to be developed, LEED for New Construction and Major Renovations, has already undergone one major and several minor revisions. LEED for Existing Buildings and LEED for Commercial Interiors standards were recently approved by the USGBC, and rating systems for Homes, Core and Shell projects, and Neighborhood Developments are scheduled for release during the next several years.⁸⁵

LEED standards employ a point system, which allows a building to incorporate the green elements and technologies most appropriate to its geographic location, site, intended use, and budget. Each green building feature is assigned a particular point value, with a specific total required to reach each rating level. For example, under the LEED-New Construction standards, a building must earn at least 26 points to qualify for a Certified rating. (At 33 points, a project earns a Silver rating; Gold requires 39 points; and Platinum, the highest level, 52 points).

Recent studies suggest that green buildings are no more expensive to build than conventional structures, but cost far less to operate: \$1 invested in green building design and construction yields \$10 or more in lifetime benefits.⁸⁶

Under the Green Buildings Ordinance adopted by the County Board in 2002, all future building projects undertaken by the County must achieve a LEED for New Construction and Major Renovations (LEED-NC) rating level of Certified (the most basic rating). The ordinance also sets a goal of obtaining eight or more points in the LEED Energy and Atmosphere category, "because achieving increasing levels of energy performance above the set energy code standards is the surest way of realizing significant operational cost savings."⁸⁷ The first County building to meet LEED-NC

⁸⁵ US Green Buildings Council, <<http://www.usgbc.org>>.

⁸⁶ General Services Administration, "LEED Cost Study: Final Report," October 2004; Greg Kats, "The Costs and Financial Benefits of Green Buildings: A Report to California's Sustainable Building Task Force," October 2003.
October 2003

⁸⁷ Cook County, *Cook County Green Buildings Ordinance*.

standards is the Domestic Violence Courthouse currently under construction at 600 S. Clinton. According to the Department of Capital Planning, the building might even exceed Certified and achieve a Silver rating, the next-highest category. Among its “green” features are a solar electric installation that will be the largest of its kind in the Midwest upon completion, a rainwater cistern located under the parking lot, and extensive use of recycled materials and materials obtained locally. The next County facility to be constructed under to LEED standards will likely be a new pharmacy on the Provident Hospital campus.⁸⁸

Environmental considerations should not stop at a building’s walls, however. Landscaping can affect the environment in many ways. Perhaps the most common “default” landscaping option, turf grass, has a very large impact on the environment—in terms of acreage, turf grass is the fifth most commonly grown crop in the United States. Though it has aesthetic appeal and positive recreational uses, turf grass also requires intensive maintenance, often involving heavy application of chemicals and substantial water usage. Pest control can also have highly negative side effects. Many of the toxic chemicals used to control insects are also harmful to humans. When improperly applied, insects can become resistant to the chemicals, rendering them ineffective.

Amend the County’s Green Buildings Ordinance to require LEED Silver ratings for all new construction.

The County will soon complete the Domestic Violence Courthouse, the first County building to be constructed to LEED-NC standards. The Courthouse will probably achieve a LEED Silver rating, although the County’s Green Buildings Ordinance only requires that it achieve the lower Certified rating. If a Silver rating can be earned on the very first attempt, why would the County wish to lower its sights for future buildings? Studies have shown that construction costs have less to do with LEED requirements (at any level) than with a building’s programmatic requirements.⁸⁹

The County Board should amend the existing Green Buildings Ordinance to require that new buildings meet the Silver rating standard, rather than Certified.

Pass a Green Buildings Ordinance for the Forest Preserve District.

Again, the Forest Preserve District should catch up to its sister government and adopt a green buildings ordinance. However, the ordinance should require future Forest Preserve District buildings to meet the LEED for New Construction rating level of Silver. (Please refer to the previous recommendation.)

⁸⁸ Elizabeth Melas, Cook County Department of Capital Planning and Policy, testimony to Cook County Board Environmental Control Committee, 12 March 2004.

⁸⁹ General Services Administration; Katz..

Adopt the LEED Rating System for Existing Buildings.

The LEED for Existing Buildings (LEED-EB) rating system focuses not on building construction or renovation, but rather on sustainable building operations and maintenance. LEED-EB encompasses many of the recommendations made elsewhere in this report. For example, LEED-EB calls for the use of less toxic cleaning supplies—something the proposed environmentally preferable purchasing ordinance would promote. Similarly, LEED-EB awards points for energy efficiency, public transit access, waste reduction and recycling programs, and integrated pest management. Other topics not specifically addressed by this report are also covered, such as indoor air quality and water efficiency.⁹⁰

The LEED-EB certification process would be a good framework for implementing and measuring the success of sustainable building operations. Certification of buildings at the Silver level would be an impressive accomplishment and a source of pride for the County and Forest Preserve District and their employees.

Complete Audubon Cooperative Sanctuary Program certification for all Forest Preserve District golf courses.

It is unlikely that the founders of the Forest Preserve District of Cook County imagined that golf courses would someday be a part of the preserves. Nevertheless, the Forest Preserve District does own 11 golf courses, and as long as they are part of the District, they should be operated in a way that minimizes their negative impact on the environment.

Conventional golf courses are among the least natural landscapes in existence. Most golf courses are pristine and groomed only as a result of intense, environmentally-damaging maintenance, including frequent mowing, substantial watering, and heavy application of pesticides, herbicides, and fertilizer.

Fortunately, an existing program stands ready to help the Forest Preserve District green its golf courses. The Audubon Cooperative Sanctuary Program (ACSP) is a project of Audubon International, a non-profit environmental group that works with homeowners, businesses, educational organizations, golf courses, and other landowners to promote environmentally beneficial practices.⁹¹ The ACSP for Golf Courses currently has a membership of over 2,300 courses in every state, Canada, and a number of countries.⁹²

⁹⁰ US Green Buildings Council, "LEED Rating System for Existing Buildings," 2005, <<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=141>>.

⁹¹ Audubon International should not be confused with the National Audubon Society, a separate organization, whose mission is to conserve and restore natural ecosystems.

⁹² Audubon International, "Golf Program," 2003, <<http://www.auduboninternational.org/programs/acss/golf.htm>>.

The Audubon Cooperative Sanctuary Program assists landowners in six main areas: environmental planning, wildlife and habitat management, chemical use reduction and safety, water conservation, water quality management, and outreach and education. The exact measures depend on the conditions specific to the golf course in question.

The Village Links of Glen Ellyn, a 27-hole public golf course located in DuPage County, joined the ACSP shortly after its inception in 1991. As a result of the program, Village Links increased its total area of wildlife habitat (prairie and oak woodland) from 4 acres to more than 75 acres, cut water consumption by 32 percent, and reduced pesticide use by 50 percent, among other accomplishments. Furthermore, the course estimates that \$5,000 invested in ACSP-recommended environmental projects has yielded \$30,000 in savings.⁹³

The Forest Preserve District should continue to work with Billy Casper Golf, the manager of the FPD's golf courses, to achieve certification for all FPD courses as Audubon Cooperative Sanctuaries. In addition, when the golf course management contract is next up for renewal, the FPD should include ACSP certification as a contractual requirement.

Use integrated pest management throughout County and Forest Preserve District operations.

Integrated pest management (IPM) controls agricultural pests through a set of complementary practices, including the use of natural predators and parasites, other biological controls, pest-resistant plant varieties, cultural practices, physical techniques, and, as a last resort only, pesticides. As a result, pesticide use can be curtailed or even eliminated.

The following list identifies the components of integrated pest management in descending order of preference. (In other words, only if number 1 proves insufficient should one advance to number 2, and so on.) The components of IPM are:

1. **Acceptable pest levels.** Wiping out an entire population may prove impossible, but there may be ways to reach an acceptable level of infestation that is minimally disruptive.
2. **Preventive cultural practices.** Choosing plant species appropriate for local conditions and maintaining their health.
3. **Monitoring.** Regular observation is essential to determining when pests exceed an acceptable level (see number 1).
4. **Mechanical controls,** such as simple hand-picking, vacuuming, physical barriers, and traps.
5. **Biological controls.** Many beneficial insects attack unwanted pests.
6. **Chemical controls.** Biological pesticides derived from plants or microorganisms would be preferred, with synthetic pesticides as a last resort.⁹⁴

⁹³ Audubon International, "Implementing the ACSP," Audubon Cooperative Sanctuary Program case study, 1997, <<http://www.auduboninternational.org/resources/casestudies/archives/Village%20Links%20of%20Glen%20Ellyn.pdf>>.

⁹⁴ "Integrated Pest Management," *Wikipedia: The Free Encyclopedia*, <http://en.wikipedia.org/wiki/Integrated_pest_management> (20 April 2004).

Applying toxic chemicals sparingly not only protects human health, but also reduces the risk that insects will develop resistance to the chemicals.

The Forest Preserve District has been using integrated pest control methods for over three decades. Beginning in the 1970s, District officials have worked closely with state and federal officials to combat gypsy moths, the Asian long-horned beetle, and other species of invasive plants and animals.⁹⁵

The Forest Preserve District should be supported in its ongoing efforts to use integrated pest management. Furthermore, the County should phase out any widespread use of pesticides on its property and begin using integrated pest management techniques instead.

Adopt natural landscaping principles.

With its heavy dependence on turf grass and other non-native ornamental plants, traditional landscaping has a profound environmental impact. According to the US EPA, five percent of US air pollution comes from gas-powered garden tools. In addition, the nation's forty million lawnmowers emit as much pollution as 440 million new cars and consume 200 million gallons of gasoline in the process. Furthermore, the 70 million pounds of pesticides applied to lawns every year in the US contaminate countless rivers and lakes, the groundwater supply, and endanger people and pets who may come into contact with the chemicals. Finally, the EPA estimates that 50 percent of water consumption in some urban areas is due to lawn irrigation alone.⁹⁶

In contrast, natural landscaping, which uses native plants, has a much more benign impact on the environment. According to the US EPA, "Native plants provide a beautiful, hardy, drought resistant, low maintenance landscape while benefiting the environment. Native plants, once established, save time and money by eliminating or significantly reducing the need for fertilizers, pesticides, water, and lawn maintenance equipment."⁹⁷

Specifically, natural landscaping has seven advantages over traditional landscaping. Natural landscaping:

- **Uses less water.** Because native plants have deeper root systems than ornamental species, they therefore require less frequent watering, resist droughts better, and absorb more runoff (thereby reducing flooding).
- **Does not require fertilizer.** In fact, native plants do not require fertilizers. They are already adapted to the conditions of their native habitat.

⁹⁵ Richard Newhart, Forest Preserve District of Cook County, conversation with author.

⁹⁶ US Environmental Protection Agency, "Landscaping with Native Plants Factsheet," 2004, <<http://www.epa.gov/greenacres/nativeplants/factsht.html>>.

⁹⁷ Ibid.

- **Uses fewer pesticides.** Unfavorable climate conditions may weaken non-native species, making them more susceptible to pest infestation. Native plants do not suffer from this problem.
- **Reduces air pollution.** Natural landscapes do not require mowing. Given that one gas-powered lawnmower emits 11 times the air pollution of a new car for each hour of operation, cutting back on mowing will help air quality.
- **Provides shelter and food for native animal species.**
- **Promotes biodiversity.** In many urban areas, few wild habitats remain. Natural landscaping provides the habitat needed to support native wildlife.
- **Saves money.** The EPA cites a study by Applied Ecological Services of Brodhead, Wisconsin, that found that 20-year maintenance of large properties landscaped with turf grass costs over six times more than maintenance of a prairie or wetland.⁹⁸

The County and FPD should begin converting their property to natural landscaping as soon as possible. Though turf grass may still be needed for specific uses—playing fields in FPD recreation areas, for example—every other conventionally-landscaped area should be replaced with natural landscaping.

⁹⁸ US Environmental Protection Agency, “Landscaping with Native Plants Factsheet.”

GREENER MANAGEMENT

Introduction

In recent years, local governments across the country have adopted sustainability as a goal and have made it one of their central organizing principles. Many have developed sustainability plans or environmental action plans which set out objectives and the steps needed to fulfill them. In a number of cases, governments have created new offices to coordinate sustainability efforts within their organizations and in the communities they serve, recognizing that it can be difficult to make progress on environmental issues without sustained attention, and internal advocacy. The local governments with offices or departments focusing on issues of sustainability include:

- **Portland, Oregon**, population 529,000, whose 12-person Office of Sustainable Development was established in 2000. The city was at the forefront of the sustainability “movement,” having developed its Sustainable City Principles in 1994.
- **Seattle, Washington**, population 563,000, which has an Office of Sustainability and Environment. The mayor of Seattle first developed an Environmental Action Agenda in 2001; it was updated in 2004.
- **Minneapolis, Minnesota**, population 383,000, where Environmental Management is responsible for sustainability issues. The city’s Sustainability Plan will be completed in 2004; it “creates indicators and performance measures related to air and water quality, transportation, operations and neighborhoods,” according to the city’s website.
- **Washtenaw County, Michigan**, population 323,000 (largest city and county seat: Ann Arbor), supports Sustainable Washtenaw, a group of private, public, and non-profit representatives dedicated to moving the county towards a sustainable future.

At present, Cook County has no office that looks at environmental issues in a comprehensive way. The County has a Department of Environmental Control, but its primary mission is monitoring air quality in suburban Cook County. To its credit, the Department has broadened its role in recent years by working to improve the County’s recycling efforts. In addition to working with a consultant on a pilot waste reduction and recycling project at the County Administration Building at 69 West Washington, the Department has also worked with the Purchasing Agent to review scavenger contracts and develop strategies for improving the recycling component of those contracts as they come up for renewal.

Establish a Cook County Office of Sustainability, headed by a Chief Sustainability Officer.

In a government as large as Cook County, it is hard to galvanize action on an issue like sustainability simply because the County’s size often makes communication and coordination difficult. An in-house advocate would help to promote and advance sustainability and to coordinate efforts of

various offices. Therefore, the County should establish an Office of Sustainability, headed by a Chief Sustainability Officer (CSO), to oversee the greening of the County.

The CSO would not necessarily require a large staff or supervisory authority over particular offices or departments (which most of the other chiefs who head County bureaus possess to some degree). In fact, the Office of Sustainability could consist of employees posted to the office for a set period (e.g. one year) from other departments, particularly from those most likely to be involved in sustainability efforts—the Purchasing Agent, Department of Environmental Control, Department of Capital Programs and Planning, and Forest Preserve District. This would not only minimize the financial impact of this office on the County, but more importantly it would create linkages between the Office of Sustainability and these important departments. Employees would return to their “home” departments with a greater understanding for and appreciation of sustainability and would carry that perspective with them in their normal duties.

However, there are also advantages to having a permanent staff: institutional memory, clearer lines of responsibility, and a wider pool of talent from which to hire. A combination of both models might be the best approach. This question of organizational design will have to be decided before the Office of Sustainability is established. In any event, it is likely that several of the initiatives described in this report will generate hundreds of thousands of dollars in savings, which could be used to finance the Office of Sustainability and other sustainability projects that are beneficial but do not have inherent savings.

The symbolic value of creating a new office reporting directly to the president should not be underestimated; it would represent a real show of commitment to sustainability and affirm the centrality of the sustainability concept to the County’s mission. The responsibilities of the CSO would include, but not be limited to:

1. Coordinating the County’s sustainability initiatives and proposing policies to County officials and the Board.

This is perhaps the most important role a County Sustainability Officer will play. At present, it difficult to focus the County’s attention on strategic, long-term issues such as the environment. As stated earlier, an in-house advocate for environmental issues will ensure that the County is always moving forward. To accomplish this goal, the CSO will examine existing practices and generate ideas for operational changes or County Board actions that would improve the County’s environmental performance. The CSO will be able to work with County employees and commissioners’ staffs to research and write proposed policies or legislation, respectively.

The CSO will also have an important role in coordinating the County’s environmental efforts. He or she should have the responsibility for convening meetings of department heads, key administrators, and others serving on the Countywide “Green Team” and other committees and task forces dealing with environmental issues.

The CSO will also work closely with individual administrators and departments to advance County environmental goals. For example, the CSO should assist the Purchasing Agent in developing environmentally preferable purchasing guidelines and product specifications.

2. Monitoring and assessing the progress of sustainability initiatives.

One of the most important initial tasks for the Chief Sustainability Officer will be the establishment of a system to measure Cook County's environmental performance. Many of the other proposals in this report will produce goals for the County to meet, and without a system for monitoring progress toward those goals, success or failure will be difficult to measure. Such measures should include both internal County government statistics and figures which measure trends in the county as a whole. Internal measures could include total energy consumption, energy consumption per square foot, tons of materials recycled, percentage of waste stream diverted, percentage of recycled goods purchased versus "virgin" goods, estimated carbon dioxide emissions from the County vehicle fleet, employee commuting trends, and others. Some external indicators might be the number of ozone alert days per year, annual number of beach closures, amount of household hazardous waste collected, public transit ridership, and countywide recycling rates.

Whatever measures are ultimately chosen, they should be selected with care to ensure that they are comprehensive, reflecting outcomes as well as outputs, quality as well as quantity. For example, say the County goes from recycling 30 percent of its waste to recycling 50 percent. That seems like a good thing. However, if over the same period, the total amount of waste doubles from 1,000 tons to 2,000 tons, the amount of waste sent to the landfill will increase from 700 tons to 1,000 tons—despite the higher recycling rate. All of a sudden, that 50 percent recycling rate is not as impressive as it was at first glance: more waste is produced and more ends up in a landfill. That is why it is important to select performance measures which paint a truly comprehensive picture.

3. Educating County employees and officials about the importance of sustainability and the reasons behind particular policies and actions.

The Office of Sustainability should work on a number of fronts to educate County officials and employees about sustainability, particularly those aspects that they might encounter in the course of a typical work day. This would include things like recycling procedures, double-sided copying, the long-overdue pre-tax transit benefit program and other alternatives to commuting by automobile, new fleet procedures, and in green buildings or buildings with green upgrades, information about those features. A variety of media should be used in this education and promotion effort, including signs, pamphlets, and websites.

4. Serving as a resource and information clearinghouse for municipalities, other local governments, businesses, non-profits, and individuals.

Another important role for the Office of Sustainability will be providing leadership and support for other local governments' green initiatives, as well as serving as an information clearinghouse and point of contact for businesses, non-profit groups, educational institutions, and citizens.

Most local governments in the county are quite small and lack the resources to devote much attention to environmental issues. However, the County can and should offer its services to these local governments, many of whom would probably be willing to take more environment-friendly actions if they had the proper information and support.

Much of what Cook County could do to assist local government can be done at little or no cost. For example, the County could allow local governments to participate in joint purchasing. The County could also make its environmentally preferable purchasing ordinance and other environmental legislation readily available as models for local governments to adapt to their own needs.

Similarly, the County should be able to provide information and other resources to businesses, nonprofit organizations, and individuals at little to no cost. As the County will be producing guides for its employees to explain the benefits and mechanics of recycling programs, green buildings, and other environmental actions, as well as lists of approved "green" products, little additional effort would be required to make these documents available to the general public. Furthermore, the County will be compiling lists of "green" vendors and contacts that could be useful to environmentally-minded businesses and consumers. Finally, by introducing the County and Forest Preserve District's programs and operations to more people, the County and FPD could have a larger pool of potential volunteers for forest preserve and other programs. The information-sharing might also benefit the County by encouraging nonprofits with expertise in environmental areas to offer further assistance to the County in its "greening" efforts.

5. Administering competitions for and presenting awards to County employees and departments for participation in sustainability programs.

In addition to providing education and information to County employees, the CSO should design and administer recognition and awards programs for County employees to further encourage participation in educational and informational programs. For example, the CSO could recognize the department and/or building with the highest recycling rate. In addition, employees should be encouraged to submit creative ideas for improving environmental performance, and if a suggestion is indeed adopted and proves successful, the employee who submitted it should be rewarded.

Establish a Cook County “Green Team” and Green Teams at each County facility.

Although an Office of Sustainability will make a major difference in the County’s environmental efforts, without participation by administrators and employees throughout Cook County and Forest Preserve District government, improved environmental performance will take longer to achieve. The education, information, and reward programs discussed above will help to bring County staff aboard, but more is needed. One excellent way to include more employees in this initiative is to create “Green Teams” in all County facilities and/or departments. They will help coordinate the environmental efforts at their particular location. In an institution as large as Cook County government, a single small office like the Office of Sustainability will find it impossible to keep tabs on all the activity and react to every nuance and unique situation at various facilities. Green Teams will be able to assist in the gathering and dissemination of information and will be able to develop plans and programs better suited to the unique needs of a particular office, department, or facility. Individual facilities might even become “idea laboratories,” where experimental programs and suggestions for improvement could be tested out. Should they prove successful and adaptable to other facilities, they could be expanded throughout the County.

Green Teams should seek to include representatives from all major units at a particular facility. For example, at a suburban courthouse, the Green Team should include staff members from the State’s Attorney, Clerk of the Circuit Court, Assessor, Treasurer, Sheriff, and any other major offices. One Green Team member at each facility should be designated as the liaison to the Office of Sustainability.

In addition, a Countywide Green Team consisting of elected officials, department heads, and administrators from the major divisions of Cook County and Forest Preserve District government, as well as those units concerned with environmental issues in some way—should be formed. By fostering communication and cooperation among all of the major stakeholders within County and Forest Preserve District government, the County/FPD Green Team would help coordinate and support County environmental efforts. It could also serve the important purpose of refining and adapting the ideas generated by the Office of Sustainability (or by individual facilities) for practical use in Cook County and the Forest Preserve District.

Establish a Forest Preserve District Board subcommittee to handle environmental issues.

Given the close relationship between the County and the Forest Preserve District, it would make sense for both governments to move forward with environmental initiatives simultaneously. To make joint action as efficient as possible, a permanent subcommittee of the FPD Finance Committee consisting of the same commissioners who sit on the County Environmental Control

Committee should be created. Hearings on any given issue would only need to occur once, since the membership of both the FPD and County committees would be the same.

The Forest Preserve District Board of Commissioners should create a full committee to handle environmental issues when the Board organizes itself following the 2006 elections.

Join voluntary environmental partnerships and initiatives.

Participation in voluntary efforts to improve environmental performance is an excellent way for the County and Forest Preserve District to share knowledge with other organizations seeking to become more sustainable. There are five entities with which the County and Forest Preserve District should affiliate themselves: Clean Air Counts, Illinois Green Fleets, the Chicago Area Clean Cities Coalition, Best Workplaces for Commuters, and ICLEI–Local Governments for Sustainability. Each is described briefly below.

- **Clean Air Counts** is a project of the Metropolitan Mayors Caucus, the City of Chicago, US EPA Region Five, and the Delta Institute to lower ozone-producing emissions in northeastern Illinois and thereby achieve compliance with the federal Clean Air Act. According to its website, Clean Air Counts “seeks to achieve specific and significant reductions in targeted smog-forming pollutants and major reductions in energy consumption.” Participants agree to pursue reductions in energy consumption and ozone-forming emissions in the areas of transportation, operations and maintenance, energy, and develop, and submit simple reports regarding these activities so that their efforts can be quantified and acknowledged. (www.cleanaircounts.org)

There are a number of specific Clean Air Counts strategies that could be particularly useful to the County’s sustainability efforts. These include the strategies on energy efficiency, low-volatile-organic-compound products, natural landscaping, retrofitting of diesel-engine vehicles, and commuting programs.

- According to its website, **Illinois Green Fleets** “is a voluntary program where businesses, government units, and other organizations in Illinois gain recognition and additional marketing opportunities for having clean, green, domestic, renewable, American fuel vehicles in their fleet. It is a program to recognize a fleet manager's progressive efforts in using environmentally friendly vehicles and fuels to improve air quality while promoting our domestic fuels for greater national energy security.” (illinoisgreenfleets.org)
- The **Chicago Area Clean Cities Coalition** is part of the Clean Cities program sponsored by the US Department of Energy. Members include governments,

businesses, educational institutions, utilities, fuel providers, and environmental organizations. The Coalition's goals are pursued through a number of objectives. These include public education, wide adoption of clean fuel vehicles in the Chicago area, coordination of funding efforts, support for legislation or regulations that promote clean fuel vehicles, and development of clean fuel infrastructure in the Chicago area. (chicagocleancities.org)

- The US Department of Transportation and US EPA sponsor **Best Workplaces for Commuters**, a program to support and recognize employers who provide a comprehensive commuter benefit program to their employees. Meeting the program's standards allows an employer to identify itself as among the "Best Workplaces for Commuters" in the US
- **ICLEI-Local Governments for Sustainability**, originally established as the International Council for Local Environmental Initiatives, is a network of local governments around the world actively promoting sustainable development. Membership would give Cook County access to a database of model programs as well as other information and program resources. The City of Chicago is a member of the organization, as are Miami-Dade County, Florida; Arlington County, Virginia; and the cities of New York, Los Angeles, Atlanta, and Denver, among many others.

Push for state action on environmental issues affecting the County.

In certain policy areas, the County is unable to act on its own and should instead work to promote changes to state law that would enable the County to act or would improve the environmental situation throughout the entire state.

- **Statewide "bottle bill."** "Since the first Earth Day in 1970, 2.3 trillion beverage containers have been wasted in (landfilled, littered, or incinerated) in the United States," the Container Recycling Institute reports. Recovery rates for aluminum cans and other beverage containers are extremely high in the 11 states with mandatory deposits on beverage containers (also known as "bottle bill states" or "deposit states"). The average recycling rate in deposit states is 72 percent, versus 28 percent in non-deposit states. Put another way, bottle bill states recycle 490 containers per capita each year at a cost of 1.53 cents per container, versus 191 containers per year at a cost of 1.24 cents per container in non-bottle bill states. As the Container Recycling Institute puts it, "For a minimal price increase, more than *two and a half times* as many containers are recovered [in deposit states]!"

Bottle bills also have a dramatic impact on reducing the amount of waste sent to landfills, given that the 120 billion beverage containers thrown away annually make up 5 percent of

all municipal solid waste generated. (Even worse, replacing those billions of containers takes 30 million barrels of oil a year, an amount equal to what a million cars consume in a year.)

Studies have also conclusively shown that bottle bills reduce litter. States with deposits saw beverage container litter reduced by between 70 and 84 percent, and total litter reduced by 34-47 percent.⁹⁹ Reduced litter, in turn, helps farms, which suffer an average of \$938 a year in crop and equipment damage, lost time, livestock injury, and feed contamination from beverage container litter.

- **Ban on electronics in landfills.** Computers now play such an important part in business and government that it is nearly impossible to imagine life without them. As anyone who uses a computer knows, they have a limited life expectancy. What happens to those computer components after they are no longer usable is an important question, because electronics often contain significant amounts of recyclable materials (glass, steel, plastic, etc.) and hazardous materials like lead, mercury, and chromium as well. According to the US EPA:

Electronics are a fast growing portion of America's trash - with 250 million computers destined to become obsolete by 2005. Electronics are made with valuable materials. In 1998, over 112 million pounds of materials were recovered from electronics including steel, glass, plastic, and precious metals. Plus, electronics can present an environmental hazard if they are disposed of improperly. With an average of four pounds of lead in many older TV picture tubes or computer monitors, along with other potentially hazardous materials, electronics call for special handling at the end of their lives.¹⁰⁰

Only California and Maine have banned cathode-ray-tube monitors and television from landfills and passed legislation to implement e-waste recycling.¹⁰¹

California will soon start charging a \$6-10 fee on the purchase of all computer monitors, laptop computers, and televisions to finance disposal of those products at the end of their lifespan. In contrast, beginning in 2006, the state of Maine will require manufacturers of electronic equipment sold in the state to establish a number of collection centers where local governments can send, at no cost, old televisions and computer components that would otherwise end up in landfills. A similar policy in place in the European Union has been lauded by environmentalists for giving "...companies a powerful incentive to design their products in such a way as to make recycling cost-efficient and easy."¹⁰² Many other states have considered mandatory electronics recycling, but only Maine and California have enacted such legislation.

⁹⁹ Bottle Bill Resource Guide (litter).

¹⁰⁰ US Environmental Protection Agency, "Plug-In to eCycling," 2005, <<http://www.epa.gov/epaoswer/osw/conserves/plugin/>>.

¹⁰¹ In addition, according to Minnesota law, "a person may not place in mixed municipal solid waste an electronic product containing a cathode-ray tube."

¹⁰² Katharine Mieszkowski, "Where Computers Go to Die," *Salon.com*, 17 August 2004, <http://archive.salon.com/tech/feature/2004/08/17/california_recycling/>.

The County should lobby the state to ban the disposal of electronic products in all Illinois landfills and encourage reuse or recycling. Alternatively, the state could grant counties the ability to ban electronics from landfills located within their borders. For instance, following the example set by the states of Maine and California, Illinois could ban monitors and televisions containing toxic materials from landfills. However, solid waste disposal is complex, subject to policies of the state government, County, solid waste agencies, and local governments. It is not clear what powers the County has to regulate what can and cannot be accepted at landfills or transfer stations. Nevertheless, because e-waste is such a critical issue, the County should determine what its authority is, and if necessary, seek changes to state law in order to pursue a landfill ban on e-waste.

- **Sprawl.** The County should oppose policies that encourage—directly or indirectly—further growth on the metropolitan fringe. As the central and most developed county in the Chicago metropolitan area, Cook County will benefit from policies that make exurban growth less appealing and infill projects more appealing.
- **Transit.** The County has strongly supported increased funding for the Regional Transportation Authority and public transit in northeastern Illinois. It should continue and even intensify these efforts.
- **Rehabilitation code.** New Jersey, Maryland, and Rhode Island are among the states that have adopted so-called rehabilitation codes. The codes are meant to encourage continued use or reuse of existing buildings by allowing repairs, renovations, and other changes that “maintain or improve the health, safety, and welfare in existing buildings,”¹⁰³ without requiring complete adherence to a state’s building and mechanical codes. Safety is not compromised, but buildings built under different rules are not required to fully comply with stricter modern standards. Rehabilitation codes, therefore, have the effect of improving the economic feasibility of reuse projects. In the states that have enacted rehabilitation codes, historic building reuse has shot up dramatically, and many older downtowns have taken on new life due to the increased activity from renovated structures.
- **Renewable energy portfolio standard.** Environmental advocates in Illinois recently attempted to persuade the Illinois General Assembly to mandate a “renewable portfolio standard” for the state’s electric utilities. The measure would have required that electric utilities and other suppliers generate or purchase 3 percent of their total energy sales from renewable sources by 2007, gradually increasing to 10 percent by 2012. However, the bill went nowhere in General Assembly during the 2003-2004 legislative period. Utilities may feel compelled to include renewable energy in their portfolios if large customers (local governments like Cook County, for example) make the move to green power of their own accord.

¹⁰³ Rhode Island Rehabilitation Code, Section 101.0.

Make more county services available over the Internet and improve the services already online.

Improving customer service and protecting the environment can go hand in hand. For instance, until recently, the easiest way to retrieve a copy of the deed to a property was to travel to the Recorder of Deeds' office in downtown Chicago. Last year, however, the Recorder's Office unveiled a new website¹⁰⁴ that allows a person to sit down at his/her computer and have a copy of that deed in hand within minutes (for a small fee). That is far more convenient—and much better for the environment. For many County residents, a trip to the Recorder's office would probably involve car travel, thereby contributing to congestion and producing harmful emissions.

In addition to recorded documents, the County has begun to make a number of other routine services available over the Internet. Current examples include:

- Property tax information and payment
- Ordering copies of birth, death, and marriage certificates
- Information about the County Board and other County elected officials
- General information about County and Forest Preserve District services and events
- Applications for Forest Preserve District picnic permits

These services represent a good beginning. However, the County and Forest Preserve District can and should do more. Candidates for additional Internet services include:

- Payment of property taxes by credit card¹⁰⁵
- Updates to voter registration information
- Routine zoning applications
- Payment of County traffic tickets

Bringing some of these services online may require changes to state law. In such cases, the County should lobby for changes to the applicable statutes.

If more County services were available online, citizens would benefit from greater convenience, the demand on County employees who provide services in person would be reduced, and the environmental costs of unnecessary car travel would be avoided.

Routine communications and transactions related to the contracting process might also be moved onto the Internet. The list of requests for proposals that the County currently posts on its website is a good first step in this direction.

In addition, some of the services presently offered online could be improved. For example, property information is dispersed across the websites of three County offices: the Assessor, Treasurer, and Recorder of Deeds. In a perfect world, all County property records and tax information would be available through a single website. Furthermore, a great deal of the information related to County

¹⁰⁴ <<http://www.ccrd.info>>.

¹⁰⁵ At present, property taxes cannot be paid online with a credit card. Only electronic payments from a checking or savings account are accepted.

Board activities is out of date, extremely difficult to navigate, or absent from the Internet. More frequent updating and user-friendly website design is needed.

Develop socially responsible investment guidelines for the County/FPD and their employee pension funds.

In recent years, the concept of “socially responsible investing” or “ethical investing” has become increasingly popular. Although people have varying notions of social responsibility and ethics, the term “socially responsible investing” usually means refusing to invest in companies which are involved in the manufacture and sale of weapons, operate in rogue nations, and/or have poor labor and environmental practices. Such policies may also favor companies which support their communities, sponsor the arts and cultural attractions, and have good employment policies and—most significant in terms of this report—good environmental records. Socially responsible investing may even include taking an active role in the shareholder governance of the companies in which funds are invested.

The County collects and spends over \$3 billion on its functions each year. Most of these funds are held for weeks or months and are therefore most likely to be invested in interest-bearing accounts or other short-term securities rather than stocks, bonds, or investment funds. In May 2004, for example, the County Treasurer held over \$350 million in deposit accounts (as well as nearly \$150 million in US government securities). Although these funds are not held for long periods, the County can and should direct its money to banks which are good corporate citizens. For example, banks with good records of investment in underserved communities should be favored over banks with less impressive records, all other factors being equal. (Inner-city investment may not seem at first glance to have anything to do with the environment, but retaining or increasing the population of already established urban areas diverts some of the demand for suburban housing and therefore helps to stem urban sprawl.)

Socially responsible investing will not endanger the returns earned on the County’s and Forest Preserve’s pension funds. In fact, socially responsible investments have performed very similarly to “typical” investments. For example, the Citizens Index and Domini Social Index, two stock indexes screened for environmental and social factors, had average annual returns closely tracking the Standard and Poor’s 500 Index.

While most of the County’s operational funds are in short-term accounts and securities, the County Employees’ and Officers’ Annuity and Benefit Fund of Cook County and Forest Preserve District Employees’ Annuity and Benefit Fund of Cook County make long-term direct investments in corporate stocks and bonds. With combined assets totaling over \$5 billion, the funds carry a significant amount of weight in the investment world. Adoption of socially responsible investment principles by the funds, therefore, will be noticed. It is unlikely that corporations which are poor citizens will change their practices as a direct effect of a policy change by the County and Forest

Preserve pension funds. However, the more important question is, do the County and its pension funds want to be investing in companies which profit from sweatshop labor, weapons, pollution, and urban sprawl, among other things?

If the answer is no, as it should be, the Cook County Board and administration should work with the Treasurer and the boards of the County and Forest Preserve pension funds to establish investment guidelines that avoid companies with poor social and environmental records and favors companies with good records.

CONCLUSION

These and other ideas presented in the report will help to make the County and Forest Preserve District more sustainable over the long term. Implementation of just three of these recommendations—cutting electricity use, reducing vehicle fuel consumption, and implementing effective recycling—would save the County and Forest Preserve District \$12.2 million over five years. This savings is more than enough to pay for the remaining proposals. Given the ongoing annual deficits facing Cook County, it is important to point out that this report’s “green” ideas are not only environmentally beneficial, but also fiscally responsible.

The major obstacle to change is not cost, but inertia. The status quo is comfortable and familiar—but it is also wasteful, inefficient and harmful to the environment. Given enough time, it is possible for an entire society to change its way of doing things. The same is true of government institutions. In both cases, enlightened leadership vastly increases the likelihood of success. For example, Mayor Richard M. Daley has spoken of his wish that Chicago become the greenest city in America. Similarly, the County—ideally with high-level support from the County Board, other County elected officials, and the County administration—should challenge itself to become the “greenest” county in America.

APPENDIX A: Methodology

Estimates of State and Local Government Electricity Usage

Direct state and local government electricity usage information could not be located. Total state and local government electricity usage was therefore estimated through five different scenarios.

Scenario 1		
	Cook County total budget (FY2004) ¹	\$ 2,988,481,859
divided by	Total state/local government spending in US, 2001-2002 ^{2,3}	\$ 2,048,718,695,000
equals	Cook County share of state/local government spending	0.15%
	County electricity use, in kWh ⁴	297,016,862
divided by	Cook County share of state/local government spending	0.15%
equals	Total state/local government electricity use, in kWh	203,616,426,875

Scenario 2		
	Cook County employment, fiscal year 2004 (full-time equivalent positions (FTE)) ⁵	26,505
divided by	Total state/local government employment in US, 2003 (FTE) ⁶	15,760,451
equals	Cook County share of state/local government employment	0.17%
	County electricity use, in kWh	297,016,862
divided by	Cook County share of state/local government employment	0.17%
equals	Total state/local government electricity use, in kWh	176,612,036,918

Scenario 3		
	Cook County population (2003) ⁷	5,351,552
divided by	US population (2003) ⁸	290,809,777
equals	Cook County share of US population	1.84%
	County electricity use, in kWh	297,016,862
divided by	Cook County share of US population	1.84%
equals	Total state/local government electricity use, in kWh	16,140,253,781

¹ Cook County, *2004 Executive Budget Recommendation*, vol. 1 (Chicago: Cook County, 2003).

² Table 1. State and Local Government Finances by Level of Government and by State: 2001-02, US Census Bureau, http://www.census.gov/govs/estimate/0200ussl_1.html, page created Oct. 13, 2004, last revised Oct. 14, 2004.

³ Each state and local government budget was counted only once. According to the Census Bureau, "The data for 2002 reflect individual government fiscal years that ended between July 1, 2001 and June 30, 2002." Source: "2002 Census of Governments—Finances: Technical Documentation," US Census Bureau, <http://www.census.gov/govs/www/02censustechdoc.html#fiscalyr>, page created Feb. 16, 2001, last revised Jan. 12, 2005.

⁴ Cook County Bureau of Administration.

⁵ Cook County, *2004 Executive Budget Recommendation*, vol. 1 (Chicago: Cook County, 2003).

⁶ US Census Bureau, "2003 Public Employment Data, State and Local Governments, United States Total," <http://ftp2.census.gov/govs/apes/03stlus.txt>

⁷ US Census Bureau.

⁸ US Census Bureau.

Scenario 4		
	State/local government GDP, 2003 ⁹	\$ 1,323,300,000,000
divided by	Total US GDP, 2003 ⁹	\$ 11,004,000,000,000
equals	State/local government share of GDP	12.03%
	Total 2003 US electricity retail sales, in kWh	3,500,000,000,000
multiplied by	State/local government share of GDP	12.03%
equals	Electricity retail sales to state/local government, in kWh	420,896,946,565

Scenario 5		
	US federal government 2003 electricity consumption, in Btus ¹⁰	189,300,000,000,000
divided by	Btu per kWh	3,412
equals	US federal government 2003 electricity consumption, in kWh	55,480,656,506
	Federal government GDP ⁹	\$ 752,200,000,000
	State/local government GDP ⁹	\$ 1,323,300,000,000
	Total government GDP ⁹	\$ 2,075,500,000,000
	Federal government share of total government GDP	36.24%
	State/local government share of total government GDP	63.76%
	US federal government 2003 electricity consumption, in kWh	55,480,656,506
divided by	Federal government share of total government GDP	36.24%
equals	Total government electricity usage, in kWh	153,084,422,466
multiplied by	State/local government share of total government GDP	63.76%
equals	State/local government electricity usage, in kWh	97,603,765,960

⁹ US Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts, "Table 1.1.5. Gross Domestic Product," <http://www.bea.gov>, last revised on March 30, 2005.

¹⁰ "Table 1.12 US Government Energy Consumption by Source, Fiscal Years 1975-2003."