

COOK COUNTY SUSTAINABILITY REPORT 2018



PREPARED BY THE COOK COUNTY GREEN LEADERSHIP TEAM

Dear Cook County Resident,

Now more than ever, local government has a crucial role in sustainability and promoting green practices. I have embraced that responsibility since taking office.

Local action is effective. Cook County has significantly reduced greenhouse gas emissions from our buildings by 32 percent since I took office in 2010. In only a few short years, we are already exceeding our goals.

Local action is efficient. Our energy reductions over seven years saved Cook County taxpayers more than \$6.8 million dollars.

Local action is equitable. Every resident of Cook County should have the benefits of a clean environment, no matter their income or where they live. That's why we are taking action to make all of our communities more sustainable, resilient and healthy.

Sustainable Communities are one of the six focus areas for the County's Policy Roadmap. It places a priority on environmental justice, livable and sustainable land use and the job and economic potential of sustainability. We will use these priorities to help shape our work to increase the County's own sustainability as well and improve our communities through projects like community solar, brownfield redevelopment and sustainable economic development.



Toni Preckwinkle,
Cook County Board President

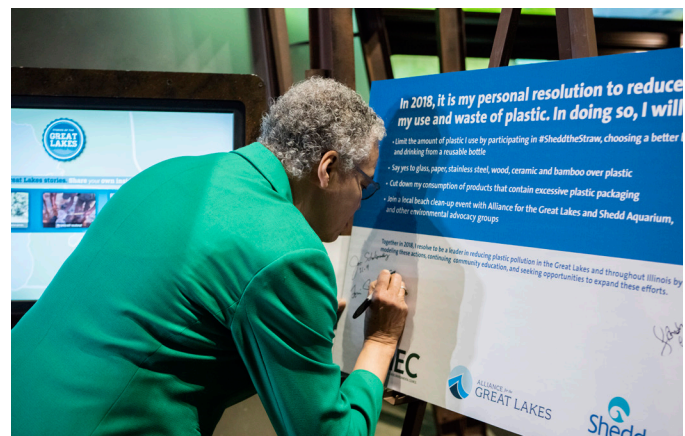


Figure 1 Cook County Board President Preckwinkle signs the Shedd Aquarium's Single-Use Plastics Pledge, promising to reduce plastics use in 2018

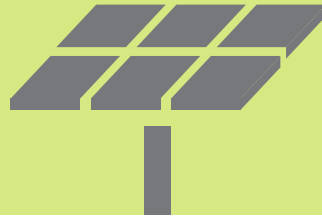
9%



Decrease in GHG emissions from County Buildings in 1 year

2+MW

of new solar installation in unincorporated Cook County

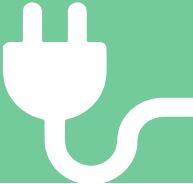


Energy reductions saved taxpayers

\$6.8

MILLION

since 2010



32%



Decrease in GHG emissions from County Buildings since 2010

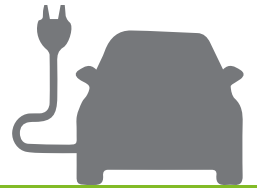
6%

Decrease in County facility water use



117

electric vehicle drivers used County charging stations



300

Fewer personal printers



6



County LEED Facilities



\$1.35

MILLION

in Grants awarded for Brownfield Assessment and Clean-up - largest amount in US!

20%

Green wind power electricity purchase



3.6 MILLION GALLONS



of diesel fuel/year projected savings by 75th St. Corridor Improvement Project

NEW NAME REFLECTS NEW RESPONSIBILITIES

In 2017, the Cook County Department of Environmental Control was renamed the Department of Environment and Sustainability to better align with its broader role and increased focus on sustainability. Traditionally, the department was a regulatory agency for suburban Cook County, focusing on environmental inspections and monitoring of County air quality. New responsibilities include a waste and recycling inspection program as well as a focus on sustainability. The department serves as a leader on issues such as energy efficiency and works to ensure sustainability is incorporated into the County's work on transportation planning, economic development and resiliency and disaster recovery. "With a broader, more strategic focus, the Cook County Department of Environment and Sustainability is making a greater impact for the residents of Cook County," President Preckwinkle said.

2017 ILLINOIS ENVIRONMENTAL COUNCIL'S ENVIRONMENTAL LEADERSHIP AWARD

Cook County Board President Toni Preckwinkle and Cook County Chief Sustainability Officer Deborah Stone each received Environmental Leadership Awards for their efforts in advancing sustainability in Cook County. IEC represents 80 environmental and community organizations and nearly 300 individuals throughout Illinois.

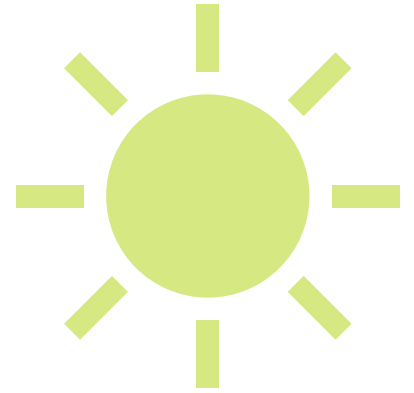
"A sleeping local government sustainability giant awoke [when President Preckwinkle took office.]"

Brian Urbaszewski, Director of Environmental Health Programs at Respiratory Health Association



Figure 2 Brian Urbaszewski, Deborah Stone, Toni Preckwinkle, Jennifer Walling, Anne McKibbin and Andrew Szwec at the IEC annual dinner

Sustainability in the Community



PROPERTY ASSESSED CLEAN ENERGY

On June 25, the Cook County Board passed a resolution indicating an intent to create a new clean energy financing program for private properties in suburban Cook County. Property Assessed Clean Energy (PACE) is a voluntary financing mechanism that enables low-cost, long-term funding for energy efficiency, renewable energy and water conservation projects. PACE financing is repaid as a voluntary assessment on the property's regular tax bill. Illinois enacted a law in 2017 enabling local governments to create PACE programs for commercial, industrial and multi-unit residential properties of five or more units. No County dollars will be spent on this program. The program will start in 2019.

CMAP 2015 GHG EMISSIONS INVENTORY

This year the Chicago Metropolitan Agency for Planning (CMAP) issued their latest Greenhouse Gas (GHG) inventory for the Chicago Region. The inventory uses 2015 data and shows a 7 percent decrease in GHG emissions in the Chicago Region from the 2010 inventory.

Suburban Cook County's emissions decreased from 39.12 Million Metric Tons of CO₂E (MMTCO₂E) in 2010 to 36.09 MMTCO₂E in 2015, a 7.7 percent decrease.

Although suburban Cook County has the largest share of emissions by county, emissions per capita for suburban Cook were less than Lake and Will Counties' emissions and on par with DuPage County. Stationary emissions (building electricity and natural gas use) account for the largest portion of emissions from the region, representing 69 percent of total emissions.

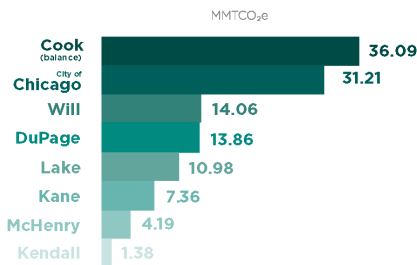
— CHICAGO REGION — 2015 GREENHOUSE GAS EMISSIONS



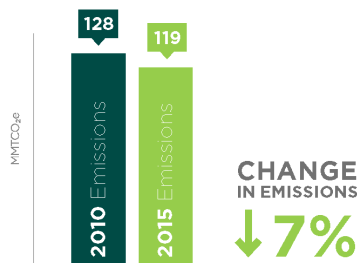
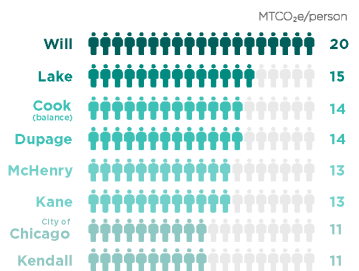
2015 Emissions by Sector



2015 Emissions by County



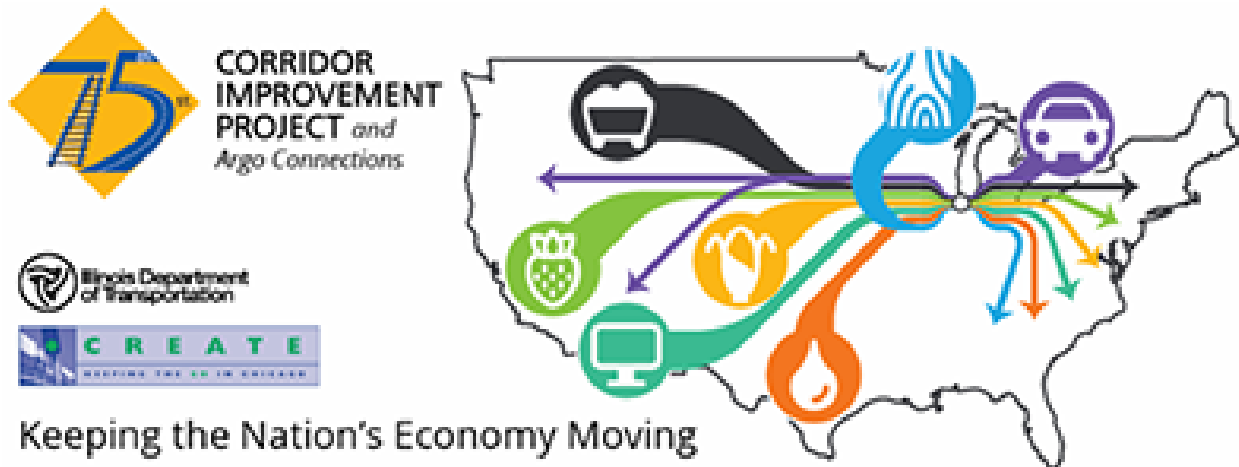
2015 Per Capita Emissions by County



CONNECTING COOK COUNTY

75th Street Corridor Improvement Project

As a partner in the Chicago Region Environmental and Transportation Efficiency (CREATE) Program, Cook County's Department of Transportation and Highways committed nearly \$80 million for the 75th Street Corridor Improvement Project (CIP), leveraging a \$132 million federal grant CREATE had already received for the project. The corridor is currently the County's – and the nation's – most congested freight bottleneck.



This funding will be used to help separate passenger and freight lines that intersect in the Eglewood, Aubrun-Gresham and West Chatham neighborhoods, creating significant delays, causing train idling, congestion and air pollution. This project will help increase reliability and efficiency nationally while spurring economic development locally.

My administration has prioritized investments in transit and supporting our region's role as North America's freight capital. This \$132 million grant improves both passenger and freight mobility for the most congested rail bottleneck in Cook County and the nation. Additional rail capacity makes it easier for employees to get to work and for businesses to move their products to market in the U.S. and overseas efficiently, it also supports thousands of jobs," President Preckwinkle said.

Estimated Environmental Impacts from 75th Street Project

- Fuel Reduction:**
Corridor improvements are anticipated to save nearly 190,000 gallons of gas and over 3.6 million gallons of diesel fuel annually.
- Air Quality and Noise:**
Reduced train idling in the Project area will result in localized air quality improvement and a reduction in noise pollution in affected neighborhoods.
- Stormwater Management:**
Viaduct improvements will incorporate stormwater drainage improvements that will likely reduce basement flooding that impacts area homes.
- Community Mobility and Access:**
The Project will improve 36 viaducts and construct one new viaduct, improving accessibility to local schools, libraries, parks and other neighborhood amenities.

Invest In Cook

In 2017, Invest in Cook received the National Association of Counties' annual Achievement Award, which recognizes innovative county government programs.

Invest in Cook seeks projects consistent with the priorities detailed in Connecting Cook County:

- Prioritize transit and other transportation alternatives
- Support the region's role as North America's freight capital
- Promote equal access to opportunities
- Maintain and modernize what already exists
- Increase investments in transportation

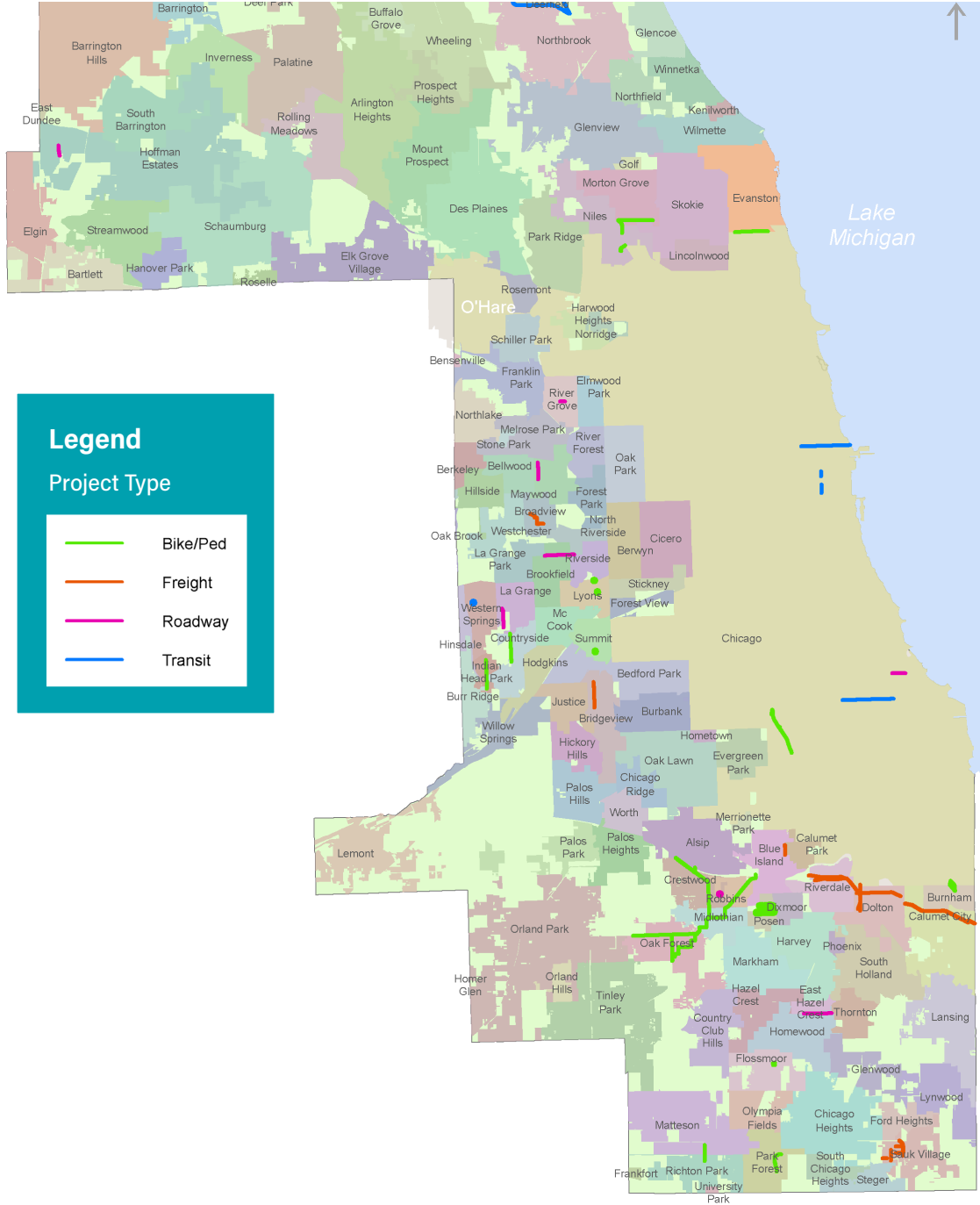
In keeping with these priorities, the Invest in Cook program has so far helped fund 11 transit, 25 bicycle/pedestrian, 13 freight and 15 road projects in its first two years of operation.

Invest in Cook is an initiative of Connecting Cook County, the County's Long-Range Transportation Plan, which guides how the County invests in transportation to attract and retain businesses, people, capital and talent.



	Invest in Cook 2017	Invest in Cook 2018
Number of Projects	30	34
\$ Funded	\$7.2 million	\$7 million
\$ Leveraged	\$7.6 million	\$26.8 million
# of Municipalities Participating	24	29

2018 Invest in Cook Program Investments



SOLSMART

Cook County's Department of Building and Zoning received a Bronze designation from the national SolSmart program for making it faster, easier and more affordable for homes and businesses to install solar. This designation recognizes Cook County for taking bold steps to encourage solar energy growth and remove obstacles to solar development.

SolSmart is led by The Solar Foundation and the International City/County Management Association (ICMA) and funded by the U.S. Department of Energy Solar Energy Technologies Office. More than 150 cities, counties, and small towns have achieved SolSmart designation since the program launched in 2016. As a SolSmart designee, Cook County is helping solar companies greatly reduce the cost of installations and pass those savings on to consumers. These actions will encourage solar companies to do business in the area, driving economic development and creating local jobs. This allows even more local homes and businesses to obtain affordable, clean and reliable electricity through solar.

To receive designation, cities and counties make changes to their building permit, planning and zoning processes to reduce the time and money it takes to install a solar energy system. Since receiving the designation, the County's Department of Building and Zoning has processed seven permits for a total of 2.056 MW of new solar in unincorporated Cook County.



Figure 4 Staff from the Department of Building and Zoning proudly display the plaque with the SolSmart Bronze Designation Pictured: Rubina Alam, Sean Pierce, Ian Friemuth and Commissioner Tim Bleuher

COMMUNITY SOLAR

The Cook County Department of Environment and Sustainability and its partners completed the first-ever assessment of community solar in Cook County. The report can be found at www.cookcountyil.gov/communitysolar.

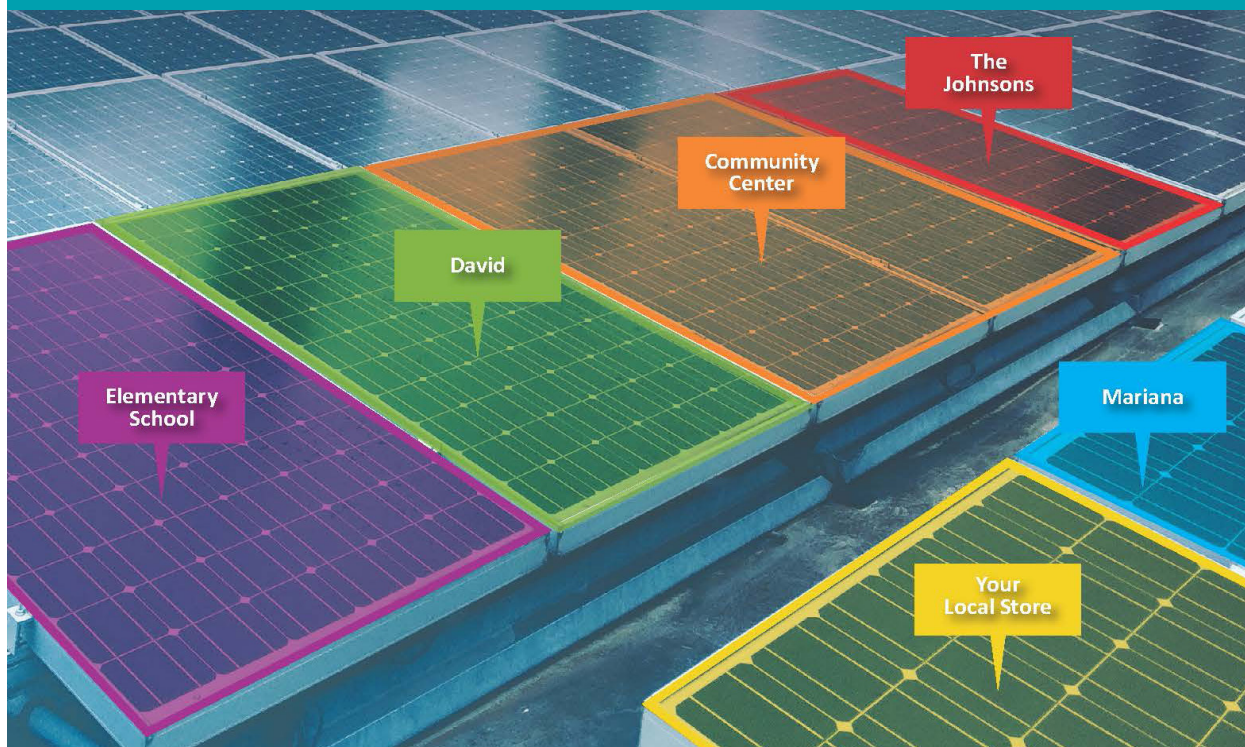
Community solar projects can bring the environmental benefits and job creation of a traditional solar installation, with the added benefit of increased equity, to Cook County.

Community solar could provide access for the approximately 75 percent of County residents currently excluded from the benefits of solar energy due to technical, site-control or financial barriers.

Community solar can be economically viable on a wide variety of sites typically found within the County. If Cook County can capture a large share of this new market, these projects could provide up to 10,000 construction jobs and generate \$1.39 billion in construction investment over the next three years.

“Community solar is emerging as the way to expand access to solar energy. Cook County’s exciting approach to jumpstart the market in Illinois will help to ensure the region is catapulted to a national leadership role in community solar,” said Deb Perry, program director for the Institute for Sustainable Communities.

Community solar is a sun-powered electric system that provides energy and/or financial benefits to multiple parties; and expands access to solar power for renters, condominium owners, those with shaded roofs and those who choose not to install a residential system on their home, business or other building for financial or other reasons.



BROWNFIELD ASSESSMENTS

Cook County was awarded two brownfield grants from the U.S. Environmental Protection Agency to assess possible contamination on vacant or underused properties with the goal of returning the properties in selected south and west suburban communities to productive use; creating jobs, bolstering the local tax base and creating other local economic development benefits.

"I am grateful that Cook County is the recipient of these grants," President Preckwinkle said. "Overall, the funding presents us with a great opportunity to improve the environment as well as encourage economic development and create jobs. The work that these grants will fund builds on our partnerships with local communities and local leaders and continues Cook County's work to position these south and west suburban areas for growth."

Brownfield sites generally are real property whose expansion, redevelopment or reuse of the property may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight and takes development pressures off greenspaces and working lands, according to the U.S. EPA.

A \$600,000 Brownfields Coalition Assessment grant will allow properties in south suburban Chicago Heights, Ford Heights and Sauk Village to be assessed for potential contamination. The Lincoln Highway Logistics Corridor Strategic Plan prepared by the Department of Transportation and Highways produced preliminary environmental assessments on 21 industrial sites and prioritized 10 for further investigation. Sites to be assessed under the Brownfields Grant will be chosen cooperatively with the local municipalities. The grant will allow initial assessments of about 40 sites and final assessments of 20 of those 40 sites.

In addition, Cook County was awarded a \$751,000 Brownfield Revolving Loan Fund grant that will provide resources to redevelop and reuse brownfield sites through loans for cleanup in Chicago Heights, Ford Heights and Sauk Village. West suburban brownfield sites already assessed in Bellwood, Maywood, Schiller Park and Franklin Park are also eligible for the funding.

A tank farm in Franklin Park has been redeveloped into brand new warehouse space after brownfield assessments were done by the Cook County Department of Environment and Sustainability.



BEFORE



AFTER

ENERGY EFFICIENCY

The Illinois Science and Energy Innovation Foundation provides funding for a full-time energy efficiency community outreach coordinator in the Department of Environment and Sustainability to teach residents on how to save energy at home and reduce their utility bills. As a part of that initiative the County works with a variety of other local governments, non-profits and advocacy groups to make sure that as many people as possible know what they can do in their own homes to lower their energy use and make sure they're able to take full advantage of incentives provided by the utilities.



Figure 5 Cook County and Citizen's Utility Board sponsored energy efficiency presentations at the Grande Prairie Crossing Library in Hazel Crest and Hanover Township where drawing winners received smart thermostats to help lower their energy use.



FOREST PRESERVE DISTRICT

DOCKLESS BIKE SHARE

Integrating new dockless technology into its bikeshare program, the Forest Preserves of Cook County is making it even easier to enjoy more than 300 miles of paths and trails. Through a pilot program in partnership with dockless bike company HOPR and Bike and Roll Chicago, Cook County residents can “Bike the Preserves” without hauling a bike from home. With 500 dockless bikes to share (up from 50), and 50 hubs planned throughout the FPCC’s 70,000 acres of wild and wonderful, more families from across Chicago and Cook County can get active with fun, affordable biking in the Forest Preserves.



Dockless bikes ready for use in the Forest Preserve District.

“Not everyone who comes to the Forest Preserves owns a bike, so this is a great opportunity for Cook County residents and visitors.” said Forest Preserves of Cook County President Toni Preckwinkle. *“Expanding our bikeshare program is a great way to get more people to enjoy the outdoors and our beautiful trails.”*



SUSTAINABILITY AND CLIMATE RESILIENCY PLAN

In September 2018, the Cook County Board of Commissioners adopted the Forest Preserves of Cook County’s Sustainability and Climate Resiliency Plan. The plan, drafted in partnership with the Prairie Research Institute at the University of Illinois, not only adopts an overall goal to reduce the Forest Preserves’ GHG emissions by 80 percent by 2050 from a 2016 baseline, but also identifies a roadmap for the Forest Preserves’ lands to be resilient in a changing climate. With nearly 70,000 acres of land, the Forest Preserves’ ecosystems absorb 1,544,887 tons of CO2 annually. The Sustainability and Climate Resiliency Plan will help the Forest Preserves sequester more CO2 from the atmosphere. The plan is based on the vision, described in the Forest Preserves’ Next Century Conservation Plan, of being a leader in sustainable practices. As an important part of the Forest Preserves’ founding mission to protect and preserve our public lands and waters, they commit to using sustainable and low impact practices in its operations, and challenges itself to consistently perform all of its functions in the most environmentally responsible ways.

Sustainability in County Operations



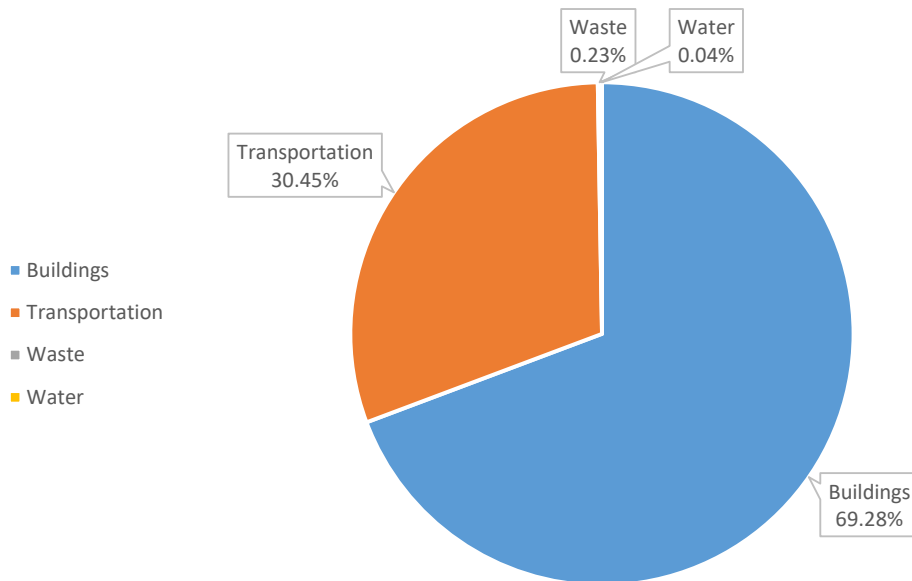
GREENHOUSE GAS EMISSIONS FOR COUNTY OPERATIONS

Cook County has been reporting GHG emissions for buildings since the baseline year of 2010. In 2016, we incorporated the Carbon Reduction Plan and began tracking GHG emissions against carbon reduction targets for buildings, transportation, water and waste to align with our overall goal of an 80 percent reduction of GHG emissions by 2050.

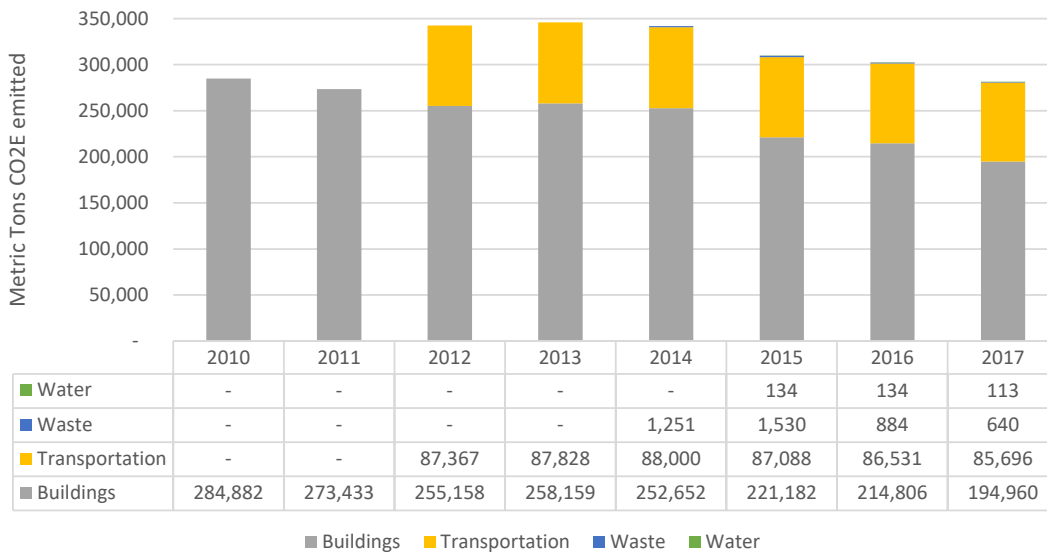
In FY2017, the County reduced GHG emissions by 20,946 metric tons of CO₂ equivalent or 7 percent over 2016 emissions, comparable to GHG emission from 4,485 passenger vehicles driven for one year.

Mirroring the GHG portfolio in CMAP’s GHG inventory, the County’s largest portion of emissions are also from building operations, where GHG emissions decreased by 9 percent over FY2016.

FY2017 GHG emissions for County Operations by Sector



Metric Tons CO₂E emitted from County Operations



ENERGY

With a 32 percent decrease in GHG emissions from building energy use over the baseline year of 2010, Cook County remains well ahead of target. Increased efficiency results in lower energy costs. Cook County has saved \$6,833,158 on energy costs since 2010¹.

Demand Response

Cook County participates in a program run by PJM (the regional energy transmission organization) to reduce load during peak grid usage to avoid having to turn on older, dirtier "peaker plants."

County Participation:

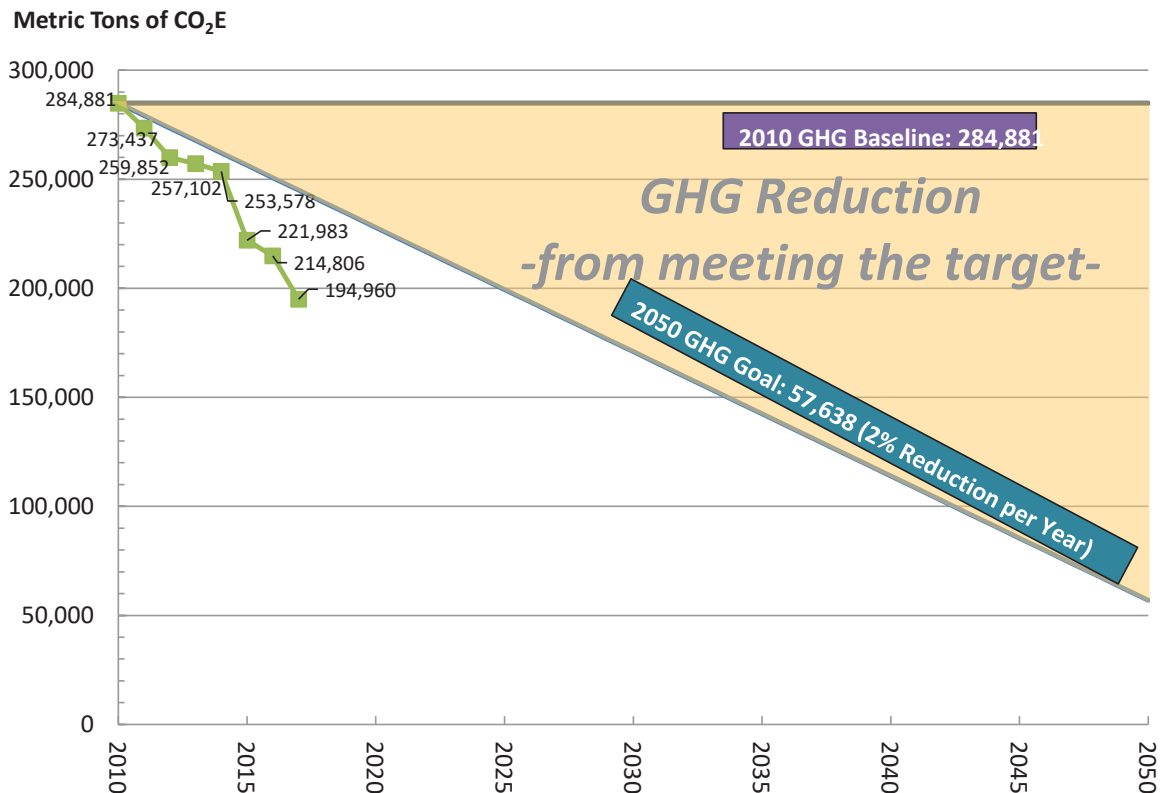
- 6 Buildings
- 5,727.05 kW load reduction per 1 hour event
- \$123,000 in revenue to the County for participation.

In FY 2017 Cook County received \$1,691,522.40 in rebates from utility companies for energy efficiency upgrades.

Building Energy GHG Emission Reductions

Actual: 32% since 2010
(a 9% reduction from 2016-2017)

County Building GHG Abatement and the 2050 GHG Goal



¹ Cost avoidance due to energy reductions by comparing current usage to the baseline year and multiplying by current utility rates.

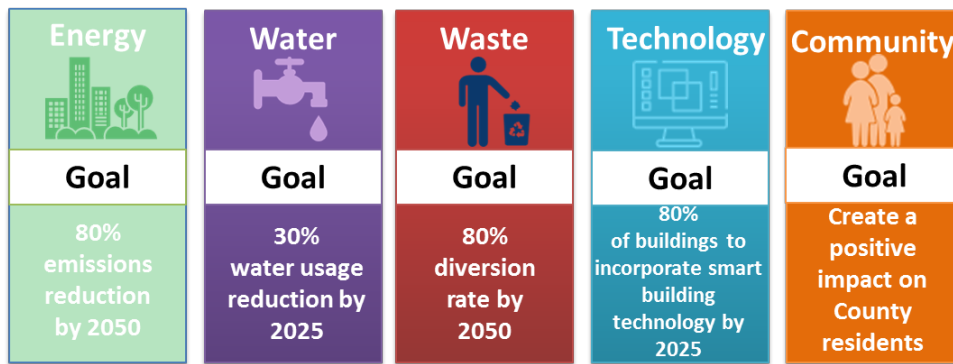
Green Buildings Program

The Bureau of Asset Management created the Green Buildings Program to look holistically at the design, space utilization, operations and lifecycle impact of County-owned properties with the goal of becoming a model for sustainable asset management.

Starting in 2018, each facility will receive a score from 0 to 100 ranking its adherence to the Green Buildings Program goals. Year-over-year improvement will be a key performance indicator for evaluating the Green Buildings Program success.

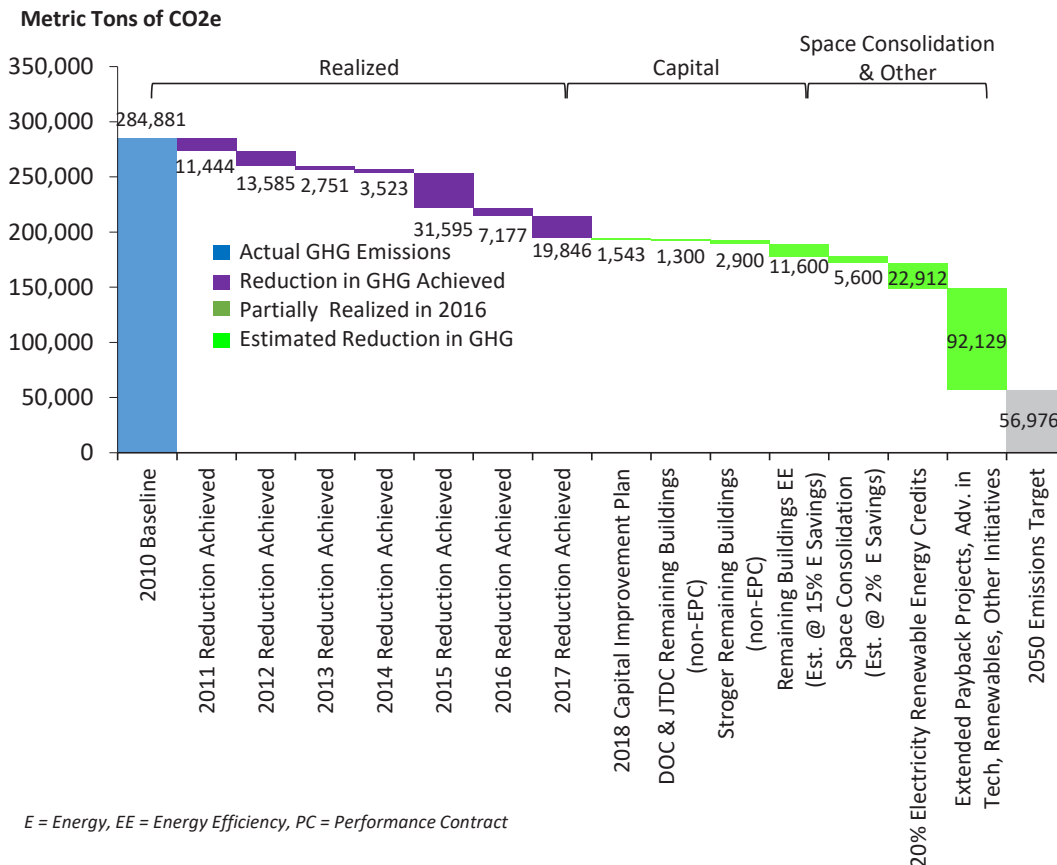
The 5 Pillars of the Green Buildings Program

Every change made to County properties should use these pillars and goals as part of the decision-making process.



Cook County Facilities 2050 GHG Reduction Strategy

- Estimated GHG Reductions of Energy Initiatives -



Energy Behavior Change Program

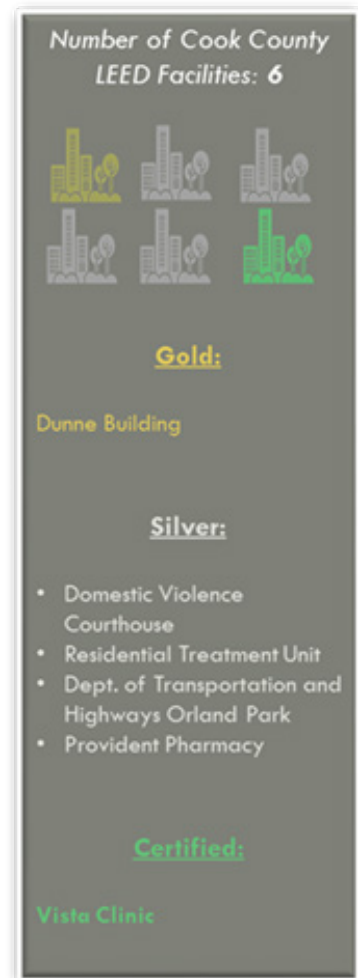
The Department of Environment and Sustainability and the Bureau of Asset Management have partnered to tackle energy behavior change at work and at home. A pilot program is occurring at the Domestic Violence Courthouse and the Maywood Courthouse, where larger energy efficiency retrofits are also taking place. The goal is to learn how employees use energy at work, change those behaviors to be more energy-conscious and ultimately reduce energy usage at these courthouses.

Employee work spaces were assessed during the daytime and the evening to determine how employees were using energy. Based on those results, specific messaging was crafted to let employees know how to save energy at work and also at in their homes. A second work space assessment will track actual behavior change based on the information campaign. If the pilot is successful, additional County buildings will be added to the program.

Renewable Energy Credits

The Cook County Board approved purchasing Green-e Energy certified renewable energy certificates (RECs) sourced from wind generation equivalent to 20 percent of its electricity needs for 2019 and 2020. This action moves the market, and the County, away from reliance on fossil fuel power plants which contribute to GHG emissions as well as particulate and other forms of air pollution.

The estimated total cost for electric power purchase starting in 2019, including the RECs, is actually less than the County is paying for electricity in 2018.



Bureau of Asset Management 2018 Capital Improvement Plan

- Estimated GHG savings of 1544 metric tons Co2E from 7 projects.
- Equivalent to GHG emissions from 331 Passenger vehicles driven for one year or 538 Tons of waste recycled instead of landfilled.

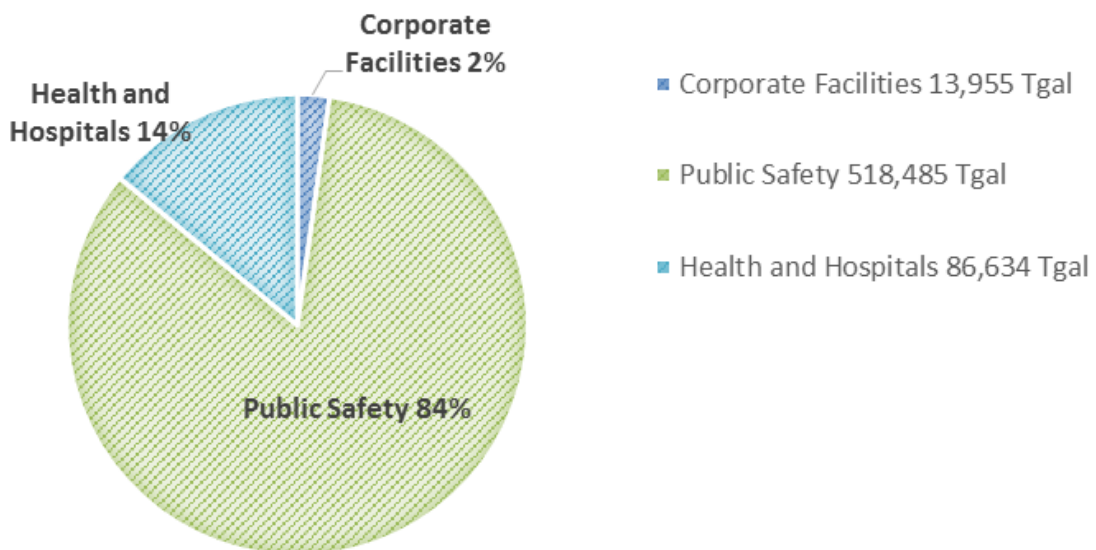
WATER

Water use declined by 6 percent from FY2016 - FY2017. The County has continued to improve data collection on water use at its buildings, allowing us to better track changes over time. The Guaranteed Energy Savings Projects (GESPs) which were implemented at the courthouses and County administration buildings included water savings projects, such as replacing fixtures, which contributed to this decrease.

Total Thousands of Gallons of Water Used

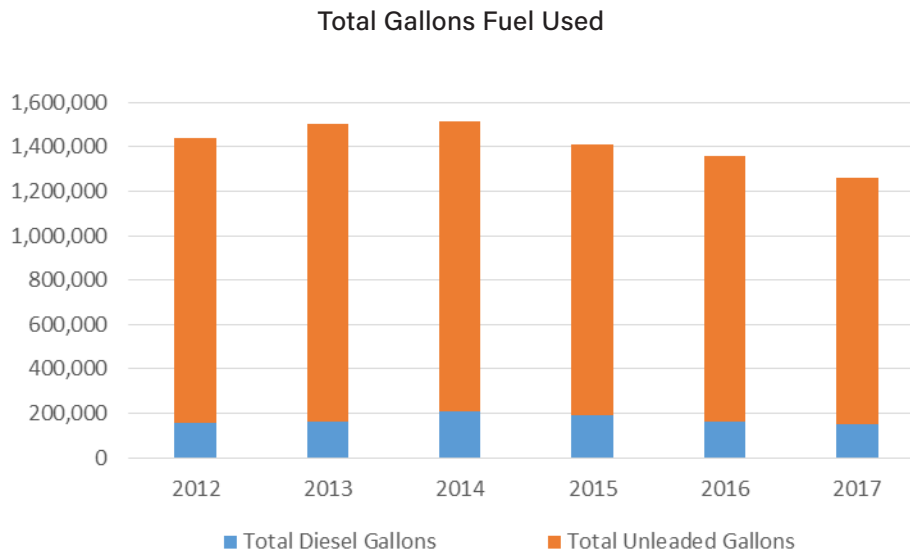
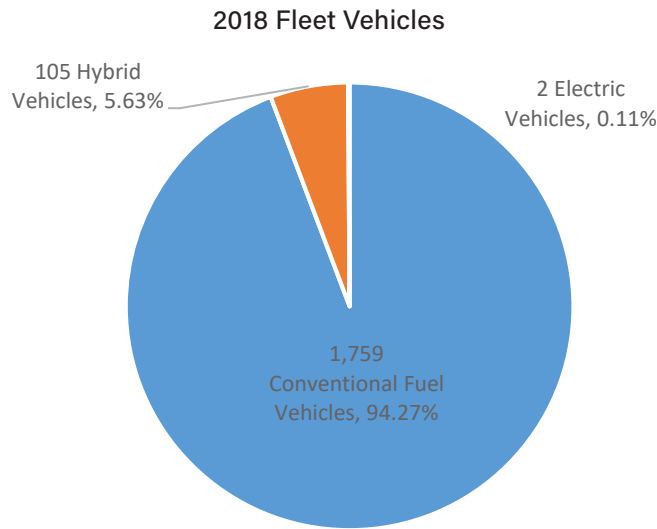


Total Water Usage by Facility Type



TRANSPORTATION

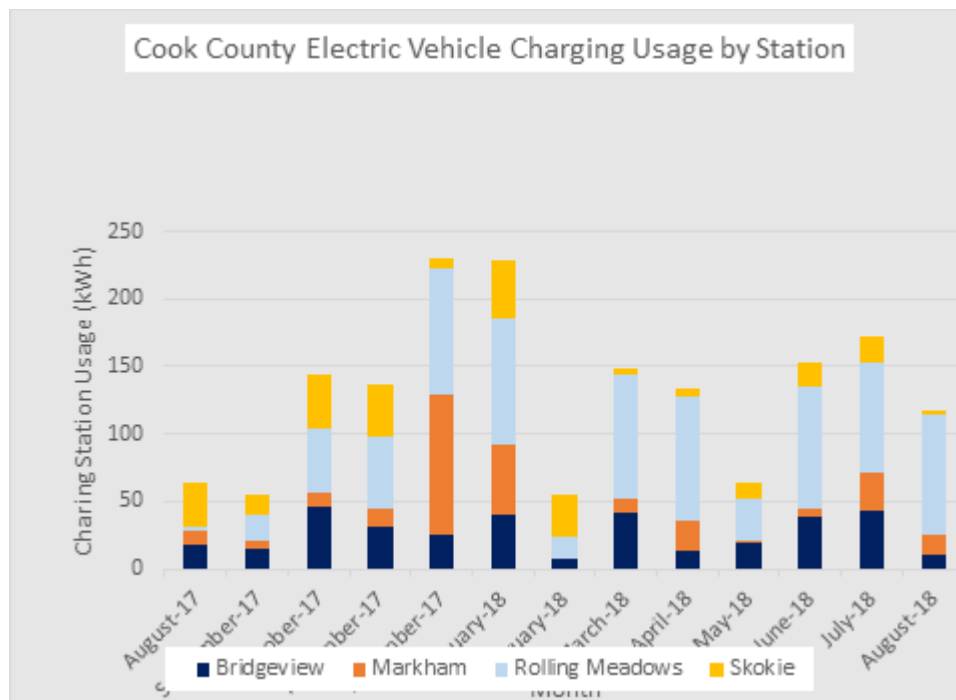
Total fuel use for the County's fleet continues to decrease as the fleet size is reduced and vehicles become more fuel efficient. Fuel used in FY2017 decreased 7 percent from FY2016 and 12 percent from the baseline year of 2012. Between 2014 and 2018 the make-up of the fleet has changed with an increase from 3 hybrid vehicles to 105. Hybrid vehicles now make up almost 6 percent of the fleet. In order to take a comprehensive approach to reporting transportation emissions, GHG emissions that result from County employee trips that don't occur in a County vehicle as well as daily commutes are also included in our reporting. The number of miles driven for County business in private vehicles has decreased by 9.47 percent since 2011. Emissions from commuting miles make up the largest percentage of the transportation GHG inventory portfolio and work on projects in the community such as the Invest in Cook Program help County employees access public and active transportation as well.



In the first year of operation, Cook County's electric vehicle charging stations had 553 charge events, by about 117 unique drivers. The use of Cook County's electric vehicle charging stations displaced approximately 1,147 kg of CO₂e emissions.



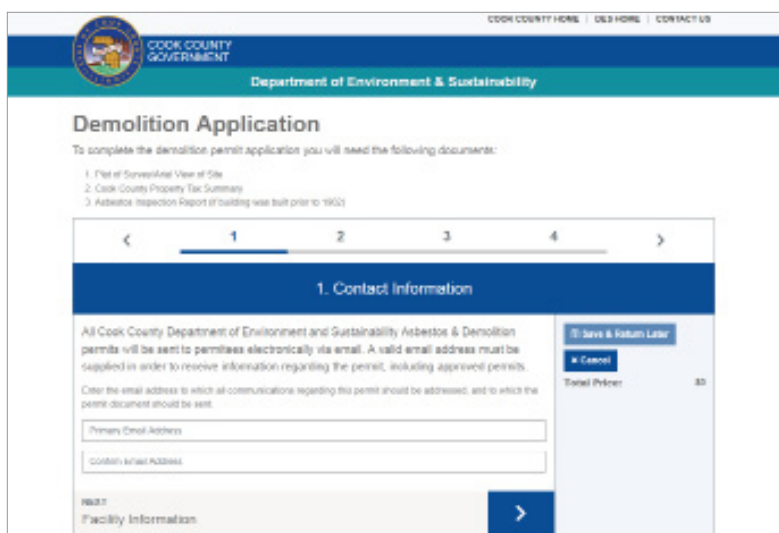
*The first year of data for the 6 Cook County ChargePoint stations was from August 2017-August 2018.



WASTE AND RECYCLING

Going Digital and Reducing Paper

The Department of Environment and Sustainability is following in the footsteps of the Building and Zoning Department to implement a digital permit application system. Requiring online application and payment decreases the need for paper for both the County and applicants and cuts down the need for a drive downtown to expedite paperwork. Applications for demolition and asbestos permits went online in September of 2018 and other units will be fully digital by the end of 2019.



Online billing for Asbestos and Demolition permits alone will cut down the amount of paper the Department of Environment and Sustainability uses by 11,000 sheets each year.

That saves:

- 818 lbs of CO₂e
- 1,140 gallons of water
- 63.4 lbs of solid waste

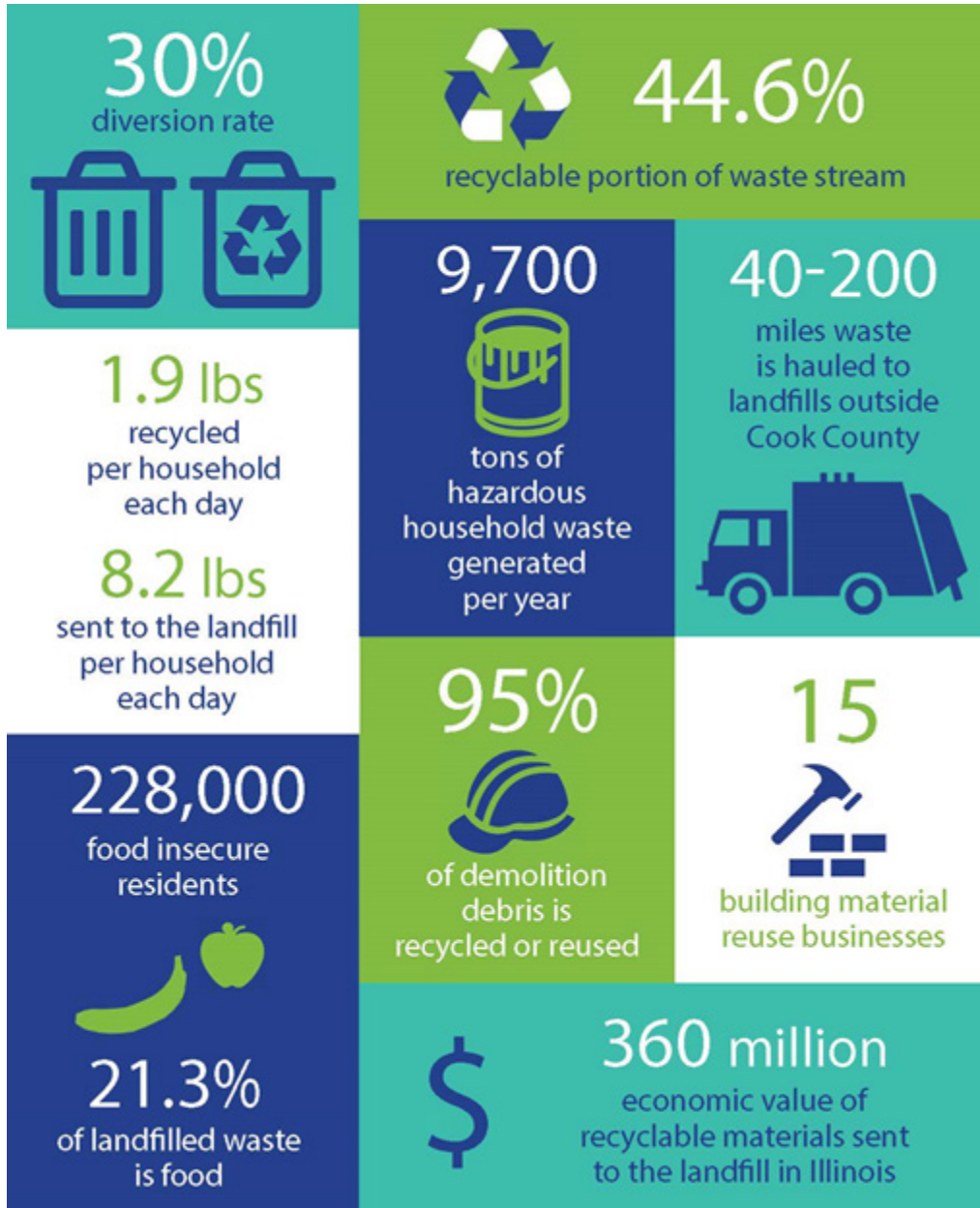
Environmental impact estimates were made using the Environmental Paper Network Paper Calculator Version 4.0. For more information visit www.papercalculator.org.

In 2017, the Bureau of Technology (BOT) worked through the County's Performance Management system to reduce the number of personal printers in the County by 300. As part of their semi-annual performance management report, each department was asked to identify personal printers that were no longer needed based on updated guidelines from BOT. Personal printers have impacts across the GHG emissions reporting structure as they increase plug load and increase waste due to ink cartridges and paper use.

Solid Waste Management Plan Update

The Cook County Board approved an update to the Suburban Cook County Solid Waste Management Plan this year. The update sets priorities to promote safe, practical, environmentally beneficial and economically sound solid waste management practices for suburban Cook County. It addresses issues and opportunities in curbside recycling, food scrap composting, household hazardous waste, electronic waste and construction and demolition debris.

Solid Waste and Recycling in Suburban Cook County



COOK COUNTY GREEN LEADERSHIP TEAM

Appointed by Cook County Board President Toni Preckwinkle

Lanetta Haynes-Turner

Chief of Staff, Chair

Ann Kalayil

Chief, Bureau of Asset Management

Tom Lynch

Chief Information Officer

Martha Martinez

Chief Administrative Officer

Ammar Rizki

Chief Financial Officer

Jay Stewart

Chief, Bureau of Economic Development

Deborah Stone

Chief Sustainability Officer

Sam Williams

Executive Director, Facilities Cook County Health and Hospitals System

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COOK COUNTY BOARD OF COMMISSIONERS

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Cook County Board President

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Commissioner, 1st District

Dennis Deer
Commissioner, 2nd District

Bill Lowry
Commissioner, 3rd District

Stanley Moore
Commissioner, 4th District

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Commissioner, 5th District

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Alma E. Anaya
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Bridget Degnen
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