

# Letter from the President



# Dear Cook County Resident:

The fight against climate change begins at the local level. Cook County government has a responsibility to combat the devastating effects climate change will have in our region. We must pay particular attention to our most vulnerable neighbors who will feel impacts of this environmental crisis most acutely.

That is why Cook County is stepping up our work to combat climate change, setting the ambitious goal of making all County government buildings and other operations carbon neutral by the year 2050 by drastically reducing greenhouse gas emissions.

This initiative aligns with my vision outlined in the Cook County Policy Roadmap, to create a fairer, more equitable Cook County by building vibrant, sustainable and inclusive communities where people want to live, learn, work and play.

The Roadmap, my five-year strategic plan which sets the agenda for Offices Under the President, has as one of its main goals to:

"Support healthy, resilient communities that thrive economically, socially and environmentally."

I am extremely proud of how far Cook County has come in its sustainability journey since 2010 when we started this work. By implementing the Policy Roadmap, we will continue to lead in the quest for healthy, resilient communities.

Toni Preckwinkle, President

Cook county Board of Commissioners

12% decrease in County facility water use



electric vehicle drivers used County charging stations



over \$33
million
tax dollars saved
from energy
reductions

40%
reduction in computer monitors left on overnight after behavior change pilot

69 Cook County homeowners installing solar due to Solarize Chicagoland



14%
reduction in fuel use since 2012 for County fleet



2050

year Cook County will be carbon neutral for its building operations

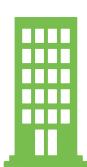


409,869

MMT of CO2E avoided cumulatively since 2010 by reductions from baseline



59% recycling rate at Dunne building



5
pillars of Green
Buildings Program



recycling message for Illinois



# **EXECUTIVE SUMMARY**

Cook County prioritizes sustainability and combating climate change at the local level, both within the community as well as within County operations. This annual sustainability report provides an update on those actions. Highlights from the report are listed below.

#### Cook County:

- Sponsored Solarize Chicagoland, which enabled 69 residents to install solar panels at their homes
- Adopted a resolution that spotlights and promotes the Good Food Purchasing Program, focusing
  on food procurement that advances a healthy, sustainable and equitable food system
- Updated our target to be carbon neutral for County buildings by 2050
- Reduced greenhouse gas (GHG) emissions by 2.2% over 2017 emissions (from buildings, transportation, waste and water)
- Avoided 409,869 million metric tons of carbon dioxide equivalents (MMTCO2e) in total GHGs by reductions in emissions since 2010
- Reduced the County's water usage by 12% since 2017

# ROADMAP TO SUSTAINABLE COMMUNITIES



In 2018, Cook County Board President Preckwinkle issued the Policy Roadmap, to lay the foundation for the next five years of work by the Offices Under the President. The Roadmap was created with input and feedback from employees, residents, community groups, other governmental agencies and partners in the nonprofit, civic and private sectors. There are six policy goals, including to support healthy, resilient communities that thrive economically, socially and environmentally by pursuing five objectives:

- 1. Ensure environmental justice and a healthy environment for all people and places
- 2. Promote livable sustainable land use, transportation policy and economic development
- 3. Reduce climate change and provide ways to mitigate its effects
- 4. Capture the job and economic growth potential of making Cook County more sustainable
- 5. Create enduring capacity in government and communities to build a sustainable and resilient future

All accomplishments profiled in this report contribute to promoting sustainable communities throughout Cook County.



# SOLARIZE CHICAGOLAND

Cook County partnered with the Midwest Renewable Energy Association (MREA) and the Citizens Utility Board (CUB) to make solar energy more accessible and affordable for County residents. The partnership coordinated a residential solar group buy program called Solarize Chicagoland.

The program takes advantage of volume purchasing, which can significantly reduce the upfront costs of installing solar energy on homes. The more people that participate, the lower the cost.



The purpose of the program was to both make solar more affordable as well as educate the general public about solar energy for their homes. CUB hosted 31 free Solar Power Hour information sessions throughout Cook County for residents and helped explain the logistics of solar for your home as well as the federal and state tax credits available.

Sixty-nine Cook County residents participated in this inaugural group buy program with 136 participants overall throughout the four-county region. 422.65 kW of solar energy were installed, resulting in tremendous savings for program participants.

# **COMMUNITY SOLAR**

The County convenes environmental advocates, local governments and communities, energy companies, utilities, regulators and others to foster the growth of community solar, which allows people who cannot put solar energy on their own homes due to physical or financial barriers, to benefit from the cost savings and other benefits of renewable energy.

Bob Leah of Geronimo Energy listens to Rev. Tony Pierce of CTP-Power at one of Cook County's Community Solar Stakeholder gatherings.

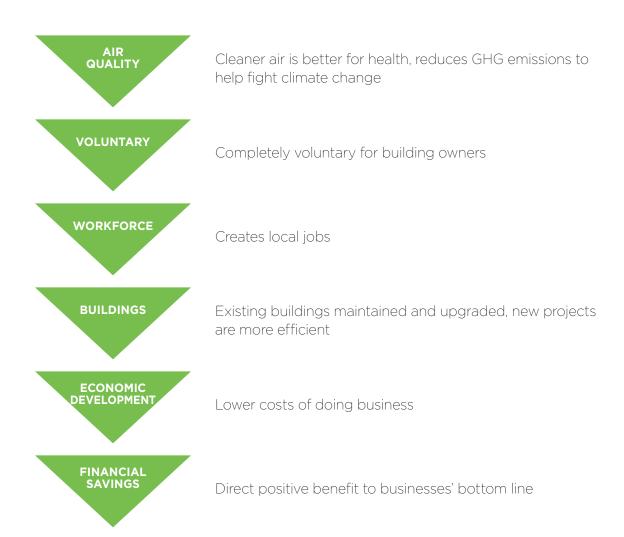


# CLEAN ENERGY FINANCING FOR COMMERCIAL BUILDINGS

Cook County's Bureau of Economic Development is launching a program that creates a Property Assessed Clean Energy (PACE) financing tool which will positively impacts the bottom line of local businesses, creates local jobs, preserves building stock and helps the environment. Eligible suburban Cook County property owners will have access to low-cost, long-term funding for clean energy as well as energy and water efficiency projects.

This tool will use no public funds or subsidies, and instead is paid back by a voluntary property assessment, with no liability to the County. PACE legislation passed in Illinois allows local governments to create PACE programs (which have become common in many other states) for commercial, industrial and nonprofit properties, including residential properties of five or more units.

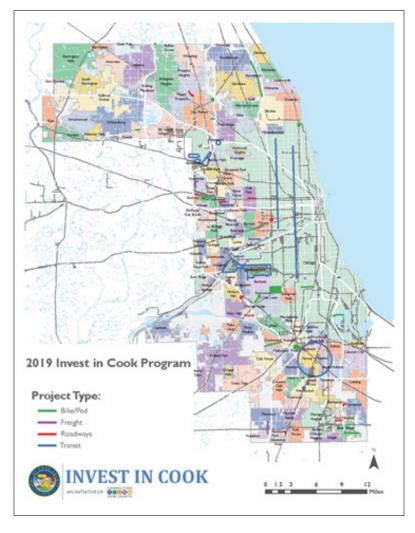
#### BENEFITS OF PACE ENERGY FINANCING



# INVEST IN COOK PROJECTS ANNOUNCED

Invest in Cook is an initiative of Cook County's Department of Transportation and Highways that strengthens partnerships with local communities by strategically matching funding from various sources to complete projects vital to a stronger economy and more livable communities. Invest in Cook seeks projects consistent with the priorities (such as promoting transit and other transportation alternatives) detailed in the County's long-range transportation plan, Connecting Cook County.

Invest in Cook has helped fund 16 transit, 39 bicycle/pedestrian, 20 freight and 23 road projects in its first three years. The 2019 awards included funds to study the feasibility of the Lake Calumet Trail which would link historic Pullman, the East Side Neighborhood and Big Marsh Park, one of Chicago's newest green spaces. A Bedford Park pilot will help scale up creative last-mile mobility solutions such as ride sourcing and micro-transit. Ford Heights' funds will create a more attractive and user-friendly environment for access to shops, bus routes and neighborhoods. And the Blue Line Rosemont train station and the City of Harvey will both pilot late-night ride-hailing service when regular bus service is not available, to make thousands of jobs more accessible in areas difficult to serve with regular service.



Map of the 2019 Invest in Cook projects

# COMMUNITY DEVELOPMENT BLOCK GRANT: Bike and Pedestrian Path Improvements in Park Forest

Each year, Cook County's Bureau of Economic Development and Department of Planning and Development solicit applications for Community Development Block Grant funding. From 2011-2018, these grants supported \$45 million of capital improvement projects and \$12 million of social services in suburban Cook County. As part of these grants, the Village of Park Forest was awarded \$200,000 to improve eight mid-block pedestrian cut-throughs. Important goals were to improve walkability and bicycling within and to downtown Park Forest,



to community destinations, to the Metra stations and Pace bus stops and to the regional trail system.

# **GREEN FAIR**

Cook County held its first Green Fair at the Bridgeview Courthouse in September 2018. Residents recycled e-waste and their shredded paper. Cook County Board President Toni Preckwinkle took advantage of the opportunity to recycle an old television at the e-recycling station run by the Cook County Sheriff's Office. Approximately 750 pounds of e-waste were collected. Residents also test drove an electric vehicle courtesy of Chicago Area Clean Cities, signed up for rain barrel with the Metropolitan Water Reclamation District, explored local wildlife with the Cook County Forest Preserves and found ways to save on their utility bills with Citizens Utility Board.

The Bridgeview Courthouse parking lot is home to 12 solar trees for a total array size of 201.6 kW and home to a dual port Level II Electric Vehicle Chargepoint networked station. During the Green Fair, Cook County offered free charging for the day and also for the month of September to celebrate Drive Flectric week



President Preckwinkle attends the first annual Cook County Green Fair, pictured here near the electronics recycling.

# CLIMATE FUNDAMENTALS ACADEMY

Cook County helped local officials and businesses learn how to recognize when climate change affects their organization, assess risks and lead organizational change. Along with the Metropolitan Mayors Caucus and the Metropolitan Planning Council, the County partnered with the Association of Climate Change Officers to offer the Climate Fundamentals Academy over four days in February and May of 2019, covering climate science, energy and water management, law and policy, risk management and economics.



# GOOD FOOD PURCHASING PROGRAM

Cook County adopted a resolution promoting the Good Food Purchasing Program (GFPP) in May 2018, becoming the third local government in the U.S. to do so. GFPP provides a metric-based framework for food procurement that advances a healthy, sustainable and equitable food system through five value categories: local economies, valued workforce, environmental sustainability, nutrition and animal welfare.

Cook County's resolution emphasizes purchasing food from business owners of color and low- to moderate-income communities to build economic sustainability for all. Over time, food service vendors that supply food to Cook County government sites will work to meet higher Good Food Standards in each value category. Cook County Department of Public Health's Food Summits in 2018 and 2019 engaged key stakeholders in cultivating a vision for GFPP's implementation and impact.



Vegetables grown at the Proviso Partners for Health Giving Garden in Maywood.

# FOREST PRESERVES GREEN FLEET PLAN

As the land manager of nearly 70,000 acres of open space, including the operator of more than 400 public buildings, the Forest Preserves of Cook County uses hundreds of vehicles and equipment to restore and conserve lands. As a result of the recently approved Sustainability & Climate Resiliency Plan, the Forest Preserves is implementing a Green Fleet and Equipment Plan. The goal of this plan is for the Forest Preserves to run all its vehicles and equipment on green alternatives to gasoline and diesel fuels as resources become available, new and affordable technologies are produced and existing vehicles and equipment are replaced.

This will include only purchasing electric or hybrid vehicles, or vehicles that have the capability of being retrofitted into running on bio and/or propane fuels. As existing gasoline vehicles and equipment retire, they will be replaced with cleaner alternatives. These green alternatives will dramatically reduce the Forest Preserves GHG emissions contributions. Currently, the Forest Preserves has 24 alternative fueled vehicles in their fleet of 386 vehicles.

One of the electric turf utility vehicles being phased in at the Forest Preserves of Cook County, replacing current gasoline and diesel vehicles.



# Sustainability within County Operations



# **GREENHOUSE GAS EMISSIONS FOR COUNTY OPERATIONS**

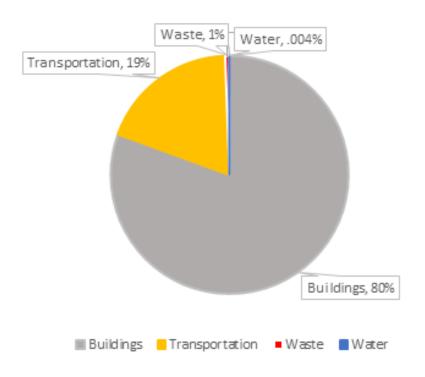
Cook County has reported GHG emissions for buildings since the baseline year of 2010. Since 2016, Cook County has tracked emissions from all the major sectors - transportation, waste, water and buildings. In FY2018, the County reduced GHG emissions by 5,673 metric tons of CO2e or 2.2% over 2017 emissions, comparable to CO2 emissions from 679 homes' energy use for one year.

# **Metric Tons CO2E Emitted from County Operations**



<sup>\*</sup>Blank spaces represent unavailable data for those years.

# FY2018 GHG Emissions for County Operations by Sector

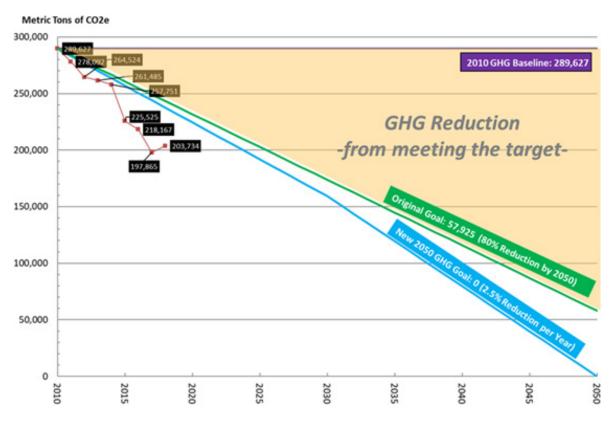


Breakdown of the County's GHG emissions by sector

In 2019, Cook County Board of Commissioners passed a resolution officially increasing the goal from an 80% reduction to carbon neutrality for all County government buildings and other operations by 2050. The County is ahead of its target to meet this new goal and will release shortly a Clean Energy Plan, outlining the steps to carbon neutrality.

#### **ENERGY**

# County Buildings GHG Reductions with Carbon Neutral 2050 Goal



County's updated path to carbon neutrality by 2050 for building GHG emissions

Even though there were improvements at many of our properties, there was an overall increase in energy usage by 5%. There was a national increase in energy use of 4% in 2018, the largest increase since 2010, according to the U.S. Energy Information Administration.

For Cook County facilities, weather was a significant factor in 2018's energy use increase. Cooling degree days\* were up 30% over the previous year. The cooling degree days total of 1,290 in 2018 is the second highest cooling degree day total since 1970. The heating degree days were up 17 percent over the previous year. These increases draw further attention to the need for a more robust approach to energy conservation, hence the plan for carbon neutrality by 2050.

<sup>\*</sup> Degree days are measures of how cold or warm a location is. A degree day compares the average high and low outdoor temperatures recorded for a location to a standard temperature. The more extreme the outside temperature, the higher the number of degree days. A high number of degree days generally results in higher levels of energy use for space heating or cooling.

# **CLEAN ENERGY PLAN**

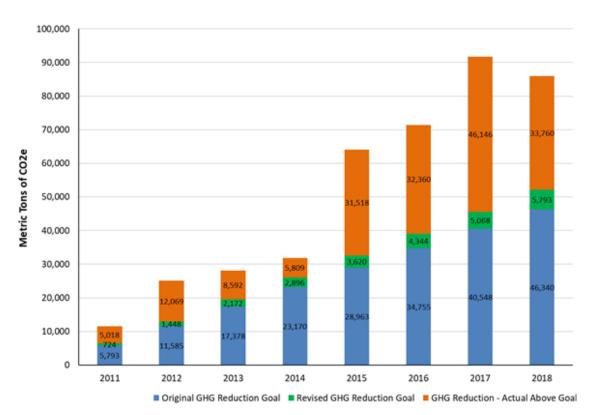
In conjunction with the resolution for County-owned buildings and other operations to be carbon neutral by 2050, President Preckwinkle also directed County staff to develop a 100% renewable plan for electricity usage at County buildings to reduce the County's reliance on non-renewable energy sources. The County is creating a Clean Energy Plan as a pathway to achieve both carbon neutrality and 100% renewable energy for the County buildings' electricity. The plan focuses on reducing our overall energy use through energy efficiency improvements and high-performance building design, adding onsite solar where applicable and increasing the purchase of renewable energy.

# CUMULATIVE GHG REDUCTIONS TO DATE

Since GHGs stay in the atmosphere causing climate change for hundreds of years, we looked at the cumulative reductions in GHGs from emissions at County buildings.

With a 30% decrease in GHG emissions from building energy use over the baseline year of 2010, Cook County remains ahead of its target towards becoming carbon neutral by 2050. The cumulative total GHGs avoided by reductions in emissions since the baseline year of 2010 is 409,869. Of that, the total GHG emissions avoided because of the new, more ambitious target for each year is 234,597MMTCO2e. And the cumulative total GHGs avoided by reductions beyond the new more ambitious target is 175,272 MMTCO2e. That is over 175,000 MMT of GHGs not emitted because the County's performance was better than its annual target.

# Total County Buildings GHG Emission Reduction from 2010 Baseline



# **Overall, Cook County** has saved over \$33 million

cumulatively on energy costs since 2010\*\*.

(\*\*Cost avoidance due to energy reductions by comparing current usage to the baseline year and multiplying by current utility rates).

# **Demand Response**

Cook County has participated for the past 3 years in a program to reduce load during peak grid usage to avoid having to turn on older, dirtier "peaker plants."

# **2018 County Participation**

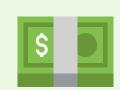


properties participated



reduction was received was **7,131.95 kW** \$194,169

Total load



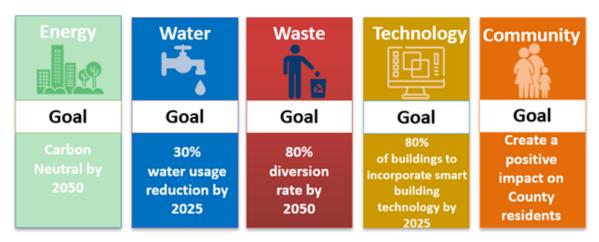
Revenue

# GREEN BUILDINGS PROGRAM

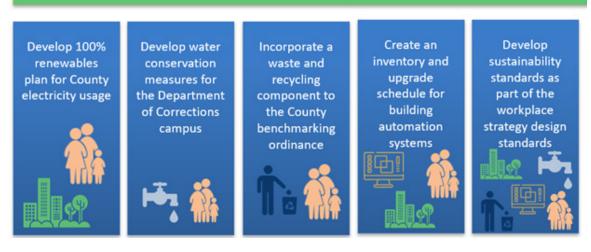
To minimize the environmental impact of County-owned buildings, the Bureau of Asset Management (BAM) developed the Green Buildings Program (GBP). This framework looks holistically at the design, space utilization, operations and life cycle impact of County-owned properties to become a model for sustainable asset management that minimizes environmental impacts, improves the health and wellness of communities and increases the value of County assets to optimize taxpayer dollars.

Each change made to County properties should use these pillars and goals as part of the decisionmaking process. Using a point-based system that evaluates each capital project on its adherence to the pillars and associated goals, a Facility Sustainability Condition Index score, from 0 (worst) to 100 (best), will be generated for each project. Each of the County's 171 buildings will complete an annual survey and receive a score. Year-over-year improvement of the average score will be a Key Performance Indicator for evaluating 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.



# 2019 Green Buildings Program Initiatives



# EMPLOYEE ENERGY BEHAVIOR CHANGE PROGRAM

The Department of Environment and Sustainability (DES), Bureau of Technology (BOT), and BAM are working to make sure employees turn off their computer monitors at the end of their workday. DES and BAM piloted an energy behavior change program at the Domestic Violence and Maywood Courthouses to learn how employees use energy at work, change those behaviors to be more energy conscious and reduce energy use. The number of monitors left on, dropped by approximately 40% during the campaigns. Next steps include expanding to other County buildings and sustaining the change over time.









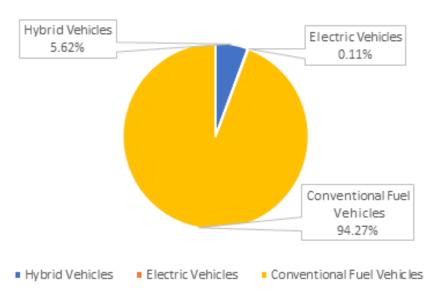
Examples of the various communication pieces from the "Turn Off Your Monitor" campaign used to remind employees as they leave work for the evening.

# **TRANSPORTATION**

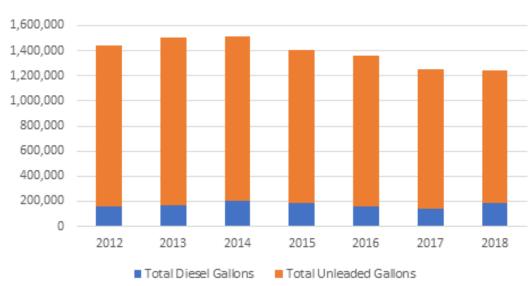
The emissions from the County's fleet vehicles, employee trips that don't occur in a County vehicle as well as employee daily commutes are all included in the County's transportation GHG emissions reporting. Emissions from employee commuting miles make up the largest percentage of the transportation GHG inventory portfolio.

Total fuel use for the County's fleet continues to decrease as vehicles become more fuel efficient. Fuel use in FY2018 decreased 1.3% from FY2017 and 14% since the baseline year of 2012.





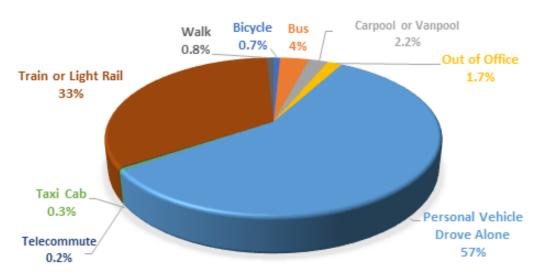
#### **Total Gallons Fuel Used**



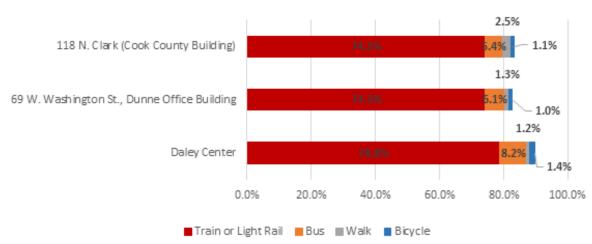
Total gallons of fuel used from 2012-2018

Over 80% of County employees at the Daley Center, Dunne Building and Cook County Building commuted via public and active transportation with most taking CTA or Metra trains. Only 57% of County employees as a whole drove alone to work, less than the 7-county regional average of 69%.

#### **Overall Percentage by Commuting Transportation Mode**



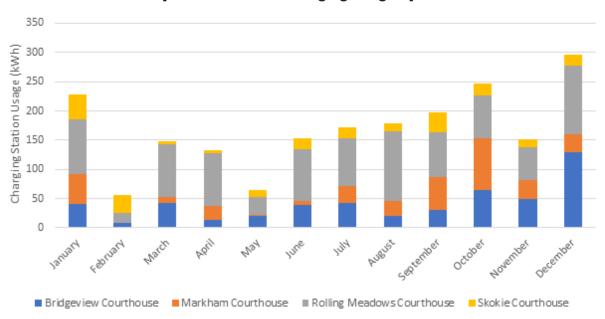
# Top Three Public and Active Transportation Sites for County Employee Commuters



# **ELECTRIC VEHICLES:**

Cook County has electric vehicle charging stations available for public use at four courthouse locations: Bridgeview, Markham, Rolling Meadows and Skokie. During 2018, Cook County's four electric vehicle charging stations had 673 sessions with 119 unique drivers. The most frequently used station was Rolling Meadows with 236 charging sessions. The use of Cook County's electric vehicle charging stations saved an estimated 1,375 kg GHG emissions during this time frame which is equal to the CO2 emissions from charging 175,202 smartphones.

#### Cook County Electric Vehicle Charging Usage by Location 2018



The charging stations usage by month and by location, showing an upward trend in usage through the first complete year since installation

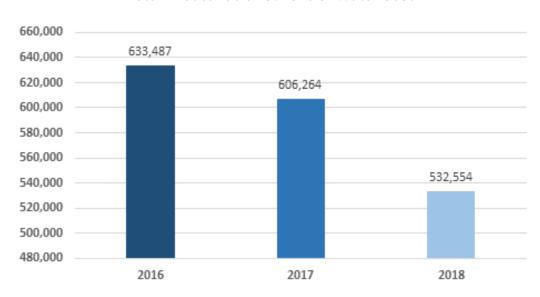


Cook County shared fleet electric vehicle charging at one of 6 Cook County facility charging stations.

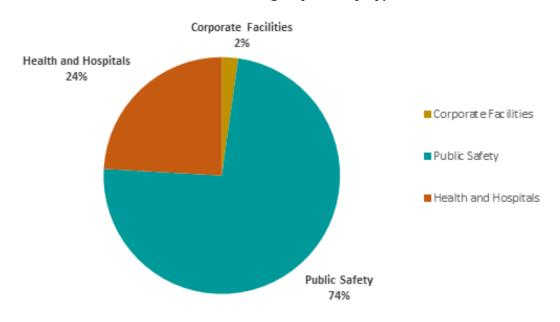
# WATER

Water use declined by 12% from 2017 to 2018. Water data was based on available billing information which contains some sites with estimated billing. Water use data collection at County buildings has continued to improve, allowing for better tracking. Additionally, the Guaranteed Energy Savings Projects at the County building, Skokie Courthouse and Markham Courthouse all led to larger reductions in water use, while changes in operations led to decreased water use at Maywood Courthouse and Dunne Building.

#### **Total Thousands of Gallons of Water Used**



#### Total Water Usage by Facility Type



# WASTE

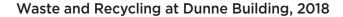
# **Recycling Guidelines:**

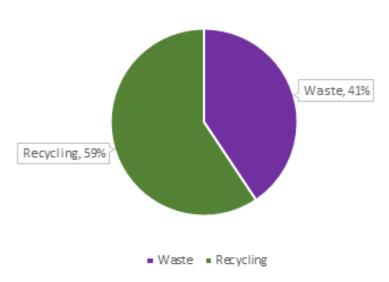
Did you know that one in four items placed in recycling cans is not recyclable? This increases contamination which slows down recycling sorting facilities, reduces prices received for recycling commodities and increases costs for local governments and residents. To tackle recycling contamination, DES along with a statewide task force, created recycling guidelines to educate residents about what items should and should not be placed in recycling cards.



# **Building Highlight:**

The Dunne Building, located at 69 W. Washington St., had a recycling rate of 59% for 2018, a small increase from 58% in 2017. DES will work with employees in Dunne Building as well as throughout the County to increase recycling towards the County's goal of 80%waste diversion by 2050.





#### E-Waste Collection:

Cook County supported e-waste collection events in River Forest, Leyden Township and Elmwood Park in 2019 through Illinois's Consumer Electronics Recycling Act. A total of 81,000 lbs. of e-waste was collected.

#### **Printer Cartridge and Toner Recycling:**

BOT and DES created an Imaging Consumables Recycling Policy which states that all toners, cartridges, fusers and drums are to be recycled through Toshiba's Close the Loop program. Fifteen departments and elected officials are participating so far with more expected to join.



# **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 Administration Officer

#### Ammar Rizki

Chief Financial Officer

#### **Xochitl Flores**

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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Industrial Engineer Office of Research, Operations and Innovation

#### Jerry Pray

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Commissioner, 1st District

Dennis Deer

Commissioner, 2<sup>nd</sup> District

Bill Lowry

Commissioner, 3<sup>rd</sup> District

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Donna Miller

Commissioner, 6<sup>th</sup> District

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