

# Environmental Stewardship in Columbus: An overview



THE CITY OF  
**COLUMBUS**  
ANDREW J. GINTHER, MAYOR

---

DEPARTMENT OF  
PUBLIC UTILITIES

## Columbus Green Team

- **Advise** the City on sustainability efforts and educate the public about environmental stewardship efforts taken or that are underway. The Team formulates actions, makes recommendations for such actions and supports programs.

### **Working Groups:**

- Climate Change & Energy
- Community Engagement
- Built Environment & Transportation Infrastructure
- Branch Out Columbus

# Climate Change & Energy

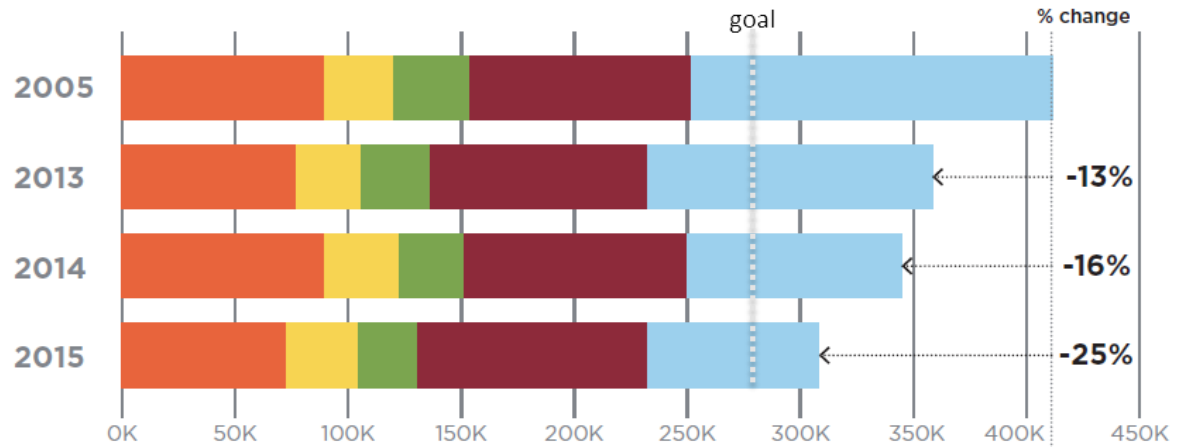


In 2015, the City of Columbus procured 44,743,289 KW of green wind energy to power 15.6% of its energy needs.



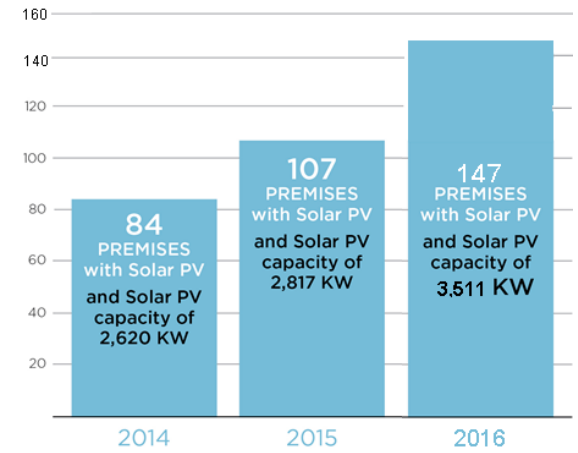
## Government Operations Inventory - Summary by Sector

	Buildings & Facilities	Street Lights & Traffic Signals	Vehicle Fleet	Solid Waste Facilities	Water & Wastewater Treatment Facilities	total ghg (mtCO2e)
2005	87,930	29,134	33,965	97,244	160,091	408,364
2013	76,430	26,749	30,281	97,217	124,895	355,572
2014	87,308	32,441	29,458	98,596	94,581	342,384
2015	71,215	30,824	26,184	102,290	75,336	305,849



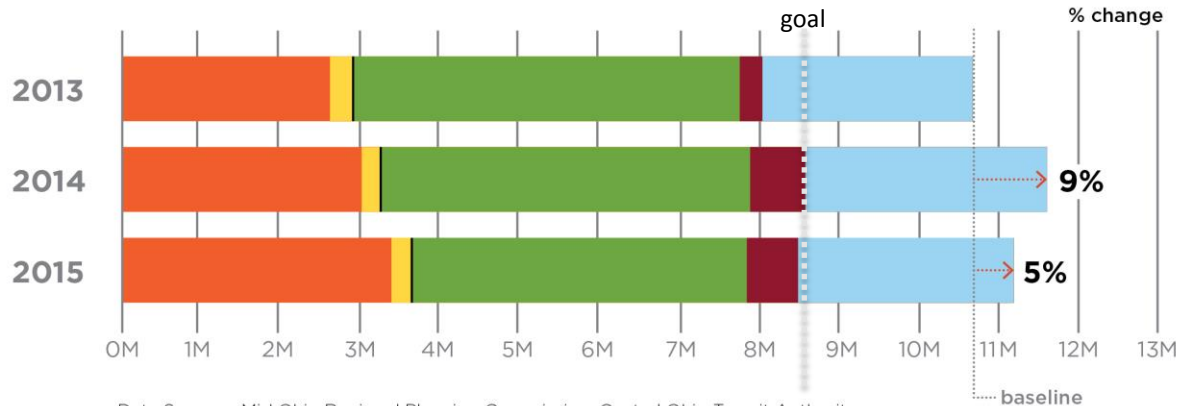
Data Source: City of Columbus utilizing the ICLEI Clear Path tool following the Local Government Operations Protocol.

# Climate Change & Energy



## Community Inventory - Summary by Sector

	Transportation & Mobile Sources	Solid Waste	Water & Wastewater	Commercial Energy	Industrial Energy	Residential Energy	total ghg (mtCO2e)
2013	2,630,029	249,006	3,196	4,883,763	287,151	2,641,935	10,695,080
2014	3,005,279	249,876	2,336	4,640,653	713,266	3,020,840	11,632,250
2015	3,389,086	244,372	2,195	4,216,227	657,966	2,700,722	11,210,568



Data Sources: Mid Ohio Regional Planning Commission, Central Ohio Transit Authority, City of Columbus, AEP Ohio, Columbia Gas of Ohio; utilizing the ICELI Clear Path tool following the Global Protocol for Community Scale Greenhouse Gas Emission Inventories.

THE CITY OF  
**COLUMBUS**  
ANDREW J. GINTHER, MAYOR

DEPARTMENT OF  
PUBLIC UTILITIES

2016 data unavailable at this time.

# Climate Changes and Impacts in Columbus, Ohio

## Rising Temperatures

### Average Temperature



Average temperatures warmed by 2.3°F from 1951 through 2012, faster than the national and global rates. Models project this trend will continue, with temperatures rising approximately 3-5°F by mid-century.

## Increasing Precipitation

### Heavy Precipitation



Between the 1951-1980 and 1981-2010 periods, the number of very heavy precipitation events increased by 32%.

The number of days per year that saw more than 1.25" of precipitation increased by 78% from 1951-2012.

### How the Future Climate of Ohio Compares to Current Climates Elsewhere



### Sustaining Scioto Study Area



### Understanding potential impacts of climate change to the region's water

The Upper Scioto Basin provides drinking water **for close to 2 MILLION PEOPLE** in Central Ohio and beyond

Surface water from the Scioto River and its tributaries provide almost

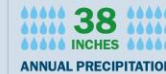


Recent trends and models of future conditions indicate

**THE HISTORICAL RECORD WILL NOT BE A RELIABLE PREDICTOR**

of future patterns to be used as the basis for such plans and decisions.

On average, Central Ohio receives just less than



Today, water utilities use historical weather records to make long-range plans about infrastructure, operations, and maintenance.

**SUCH PLANS TAKE YEARS TO IMPLEMENT AND CAN BE VERY COSTLY.**

### Threats & Vulnerabilities

These are just a few of the threats and vulnerabilities that were identified:

- Reduced Water Volumes
- Increased Economic Burden of Repairs
- Increased Energy Bills
- Damage to Infrastructure
- Loss of Power
- Increased Water Demand
- Lower Water Quality



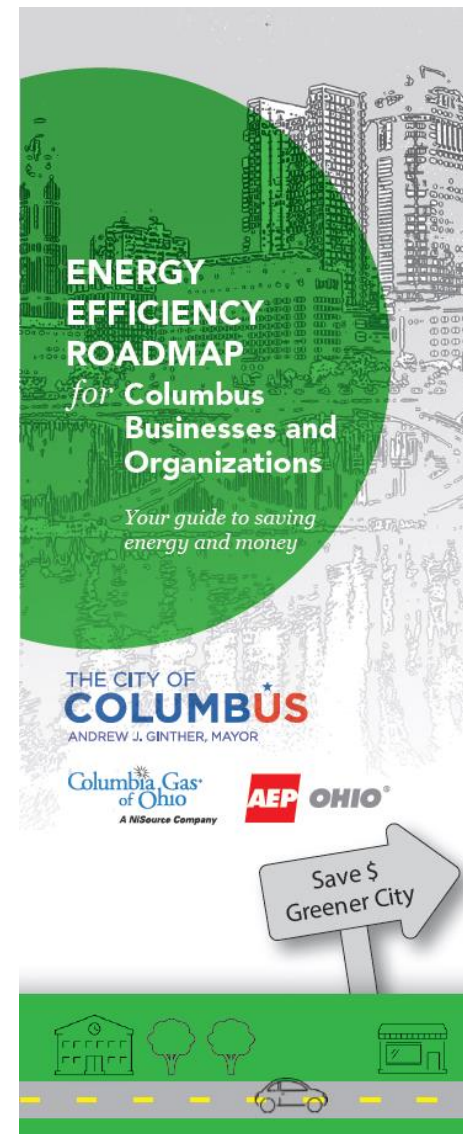
THE CITY OF  
**COLUMBUS**  
ANDREW J. GINTHER, MAYOR

DEPARTMENT OF  
PUBLIC UTILITIES

Reprinted with permission from the Mid Ohio Regional Planning Commission.

# Climate Change & Energy

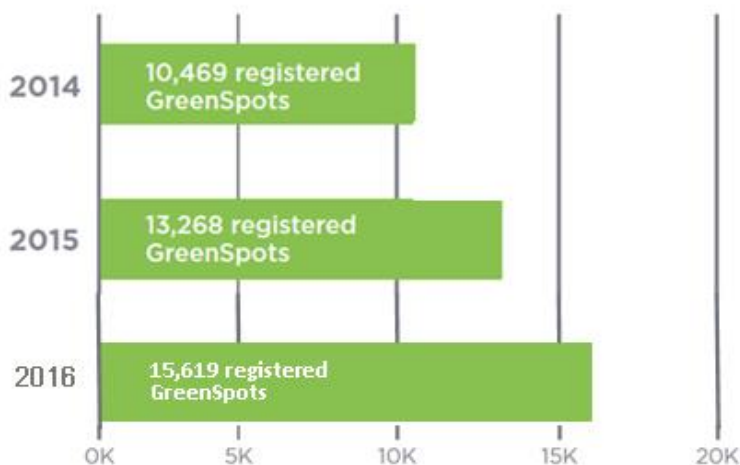
- Columbus Energy Challenge and the Energy Efficiency Roadmap
- Community Energy Savers (2017)
- City commits to reducing energy usage in facilities 20% by 2020



# Community Engagement

## GOAL

Increase GreenSpot membership to 20,000



2,482 likes



325 followers

- GreenSpot Backyard Conservation Program
- 946 residents educated
  - 182 rain barrels
  - 65 compost bins
  - 122 native trees
  - 77 native plants

GreenSpot Corporate Sustainability Initiative

- 30 graduates
- 9 enrolled

GreenSpot Neighborhoods

- Discovery District
- Sawmill Place

GreenSpot Kids

- 50 schools, 100 classes
- GreenSpot and the Dots book distribution

GreenSpotLight Awards

# Built Environment & Transportation Infrastructure



LEED logo is the property of, and provided courtesy of, the U.S. Green Building Council.

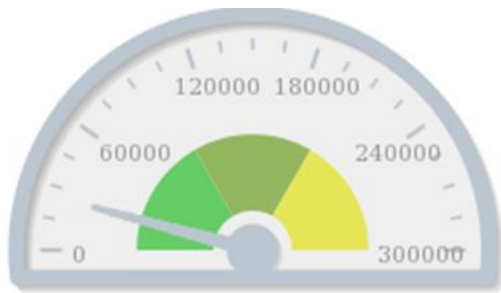
*Open Space Best Practices Report*- a scan of other cities and researchers methods used to gain open space or have better connectivity to existing open space in urban high density areas undergoing redevelopment; and how cities have defined and designed open space to ensure the space is assessable and usable.



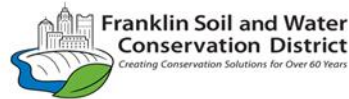


# Branch Out COLUMBUS

300,000 Trees by 2020



25099 of 300,000



# Urban Tree Canopy Assessment Columbus, Ohio



page left intentionally blank

<ALLOWS LAYOUT VIEW IN WORD. DELETE PRIOR TO PUBLISHING>

- 22% tree canopy (31,171 acres) with 63% possible.
- Providing \$12.1 million value annually
- Under threat, EAB etc. anticipate 200,000 trees will be lost
- Low income areas have less trees
- 60,000 acres of land available (PPA)- mostly private property
- Set a goal to 27% canopy by 2020= 300,000 medium sized trees need planted.



## Weinland Park's

# Urban Tree Nursery Branch Out COLUMBUS

300,000 Trees by 2020

For more information about the Tree Nursery or to volunteer contact 614-470-4101.

For more information about Branch Out Columbus contact 614-645-3111 or visit [www.columbus.gov/branchout](http://www.columbus.gov/branchout)

Made possible by the following program partners:

THE CITY OF  
**COLUMBUS**  
ANDREW J. GINTHER, MAYOR



THE CITY OF  
**COLUMBUS**  
MICHAEL B. COLEMAN, MAYOR



AMERICAN SOCIETY OF  
LANDSCAPE ARCHITECTS



DEPARTMENT OF  
PUBLIC UTILITIES



# 1000 FREE TREES

**Saturday  
October 22  
10am – 2pm**

**available to  
Columbus  
residents! Register  
for your tree today.**

As part of the Branch Out Columbus initiative, the City of Columbus, SWACO and Kurtz Bros. have teamed up to give 1,000 free trees and compost to Columbus residents in an effort to increase the city's tree canopy.

**Tree  
Planting  
Demos**

**Fun Kid  
Activities**

**& More!**





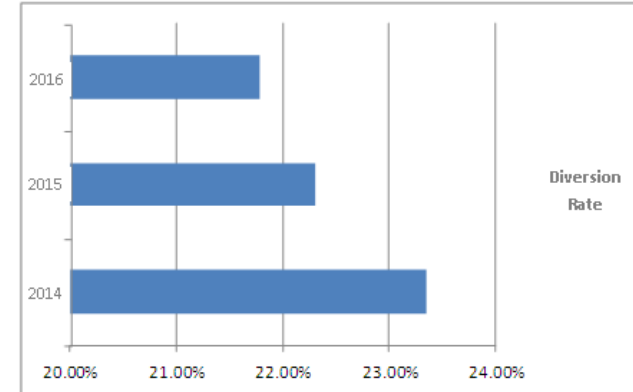
MORPC Green Collaborative  
Achievement Award

# Waste Reduction

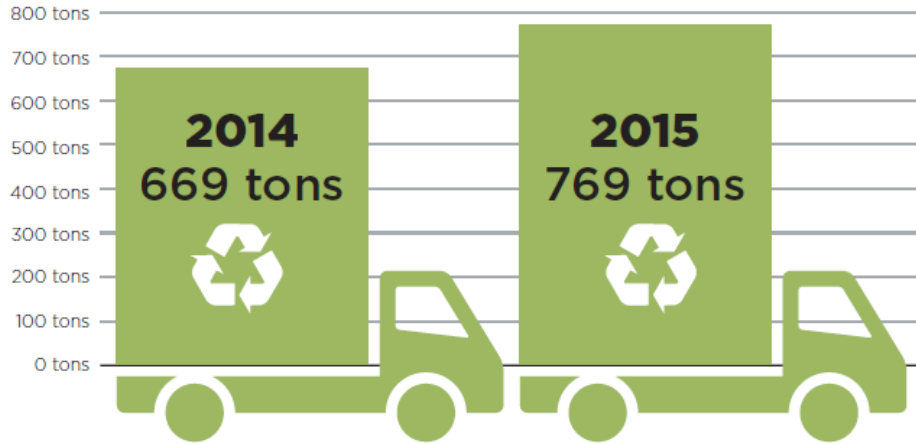
## RECYCOLUMBUS

We were meant for each other.

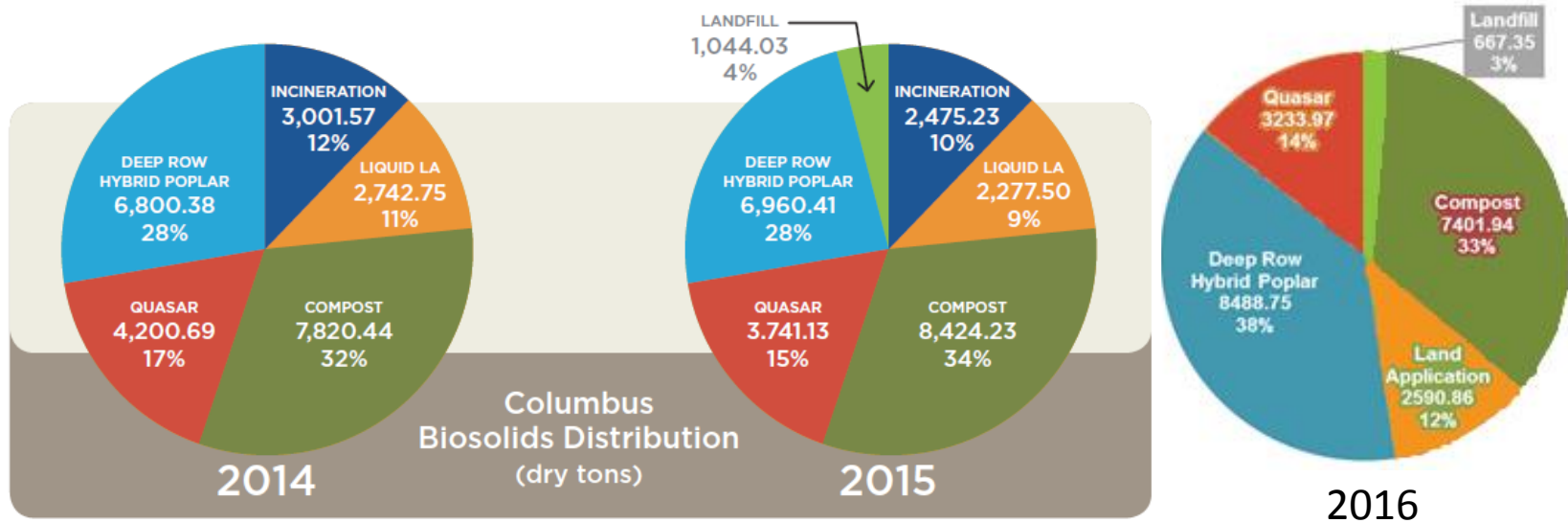
Tonnage Report - residential recycling and yard waste collected. Data Source: Rumpke Inc.



## City Operations: Office Recycling



Data Source: City of Columbus, Keep Columbus Beautiful



Data Source: City of Columbus, Department of Public Utilities

## Upcoming Events:

- **Earth Day-** service projects April 8-15, celebration April 22<sup>nd</sup> ([earthdaycolumbus.org](http://earthdaycolumbus.org))
- **GreenSpotLight Awards-** March 24 9am, CML Main Library ([columbusgreenspot.org](http://columbusgreenspot.org))
- **Columbus Green Purge** May 13 at Ohio History Center ([columbus.gov/greenpurge](http://columbus.gov/greenpurge))
- **Tree Give-A-Way** April 15 registration online ([columbus.gov/branchout](http://columbus.gov/branchout))
- **Milkweed Give-A-Way** April 21 10am Franklin Park Conservatory

## Other Stewardship Items:

- **Smart Columbus** – de-carbon the grid, efficient transportation, electrification ([columbus.gov/smartcolumbus](http://columbus.gov/smartcolumbus) ).
- **Bring me back-** plastic bag recycling and reduction program ([swaco.org](http://swaco.org) )
- **Columbus Blueprint-** goal to eliminate sanitary sewer overflows, includes plan to install over 70 acres of green infrastructure in the r/o/w, parks and vacant lots. ([columbus.gov/blueprint](http://columbus.gov/blueprint))
- **Glass Act-** bar/restaurant glass recycling program, over 940 tons collected.





THE CITY OF  
**COLUMBUS**  
ANDREW J. GINTHER, MAYOR

DEPARTMENT OF  
PUBLIC UTILITIES

Erin Miller, Environmental Steward, Office of Sustainability  
614-645-0815 or [emmiller@columbus.gov](mailto:emmiller@columbus.gov)