



2014

Year in Review



THE CITY OF
COLUMBUS

MICHAEL B. COLEMAN, MAYOR

A MESSAGE from our Mayor



Dear Friends:

My environmental initiative has been embraced by the community as it has developed each year making increasingly significant positive change for Columbus and the world. 2014 was spent developing the Columbus Green Community Plan: Green Memo III that will guide the initiative throughout its next five years. Rather than strategizing initiatives for the city to implement alone, this plan was developed through an intensive public input process and serves as a strategic plan forward for the entire community to accomplish together.

As I embark on my last year in office, I am thankful for all the people who make Columbus great and aspire for its continued improvement. It is because of all of you that I know that even after my term has ended, the priority for environmental initiatives will be upheld.

Thank you to all of the partners who have helped advise, implement and celebrate the efforts of this important initiative. Specifically, I'd like to thank Columbus City Council, the Solid Waste Authority of Central Ohio, the Mayor's Office of Environmental Stewardship and the members of my Green Team.

Sincerely,

A handwritten signature in blue ink, appearing to read "M. B. Coleman".

Michael B. Coleman
Mayor



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I. Education and Engagement

a. **Mayor Coleman's Green Team** is a group of 35 residents, environmental enthusiasts and subject matter experts who donate their time to advise the Mayor and the Office of Environmental Stewardship on sustainability efforts and educate the public about Get Green Columbus. The group is further divided into working groups that focus on areas of interest including: Transportation, Education & Engagement, Energy, Growth & Development, Green Building, Green Business and Greenspace. Staff known as "Green Coordinators" representing each city department further supports the Mayor's Green Team. The group's primary objective in 2014 was to guide the strategic planning of the next five years, involving the community in deciding the highest priority initiatives. Mayor Coleman released the finished planning document, the Columbus Green Community Plan: Green Memo III, at the Columbus Metropolitan Club in early 2015.

b. **Columbus City Council, Environment Committee** was formed and chaired by Councilmember Michelle Mills.

c. **GreenSpot** is the primary program used by the City of Columbus to educate and engage residents, businesses and community groups on topics of sustainability. The voluntary pledge program received renewed support with a focused staff member hired to grow the program. Membership grew from 6,915 to 10,821 over the course of the year. There are 1,028 registered businesses, 9,690 households and 103 community groups.

i. Annually, members are invited to meet Mayor Coleman and celebrate the winners of the **GreenSpotLight Award** which included Abbott Nutrition, The Crest Gastropub, and the Indianola Children's Center.

ii. The **Corporate Sustainability Initiative** provides networking and learning opportunities to businesses going through the process of becoming GreenSpot members. The program resulted six new large companies joining GreenSpot including: Abercrombie & Fitch; Alliance Data; Columbus Zoo and Aquarium; Dr. Pepper Snapple Group; Momentive Specialty Chemicals, Inc.; and the Ohio Department of Insurance.

iii. The **GreenSpot Kids** program expanded to include 39 classes at 24 schools making its total adoption by 104 classes at 68 schools. The program uses GreenSpot, a friendly mascot, to integrate sustainable lifestyle choices into everyday classroom life while supporting existing curriculum. The program has a focus on a first grade audience, although, classrooms of all grade levels can benefit and are welcome to participate. The resources available as part of GreenSpot Kids were designed to be easily mixed and matched by the teacher in a way that best suits the unique needs of their students.

iv. The **GreenSpot Neighborhood** pilot program launched resulting in the Discovery District becoming the first GreenSpot Neighborhood in the city. The program engages residents and businesses in developing a three-year sustainability plan that includes actions to conserve energy, reduce waste, conserve and protect water, green transportation and informing and engaging the public. After the first year, the city determines whether to designate the neighborhood as a GreenSpot Neighborhood based on progress towards commitments.

d. **Litter clean-ups and beautification projects** are primarily led by Keep Columbus Beautiful. The program is a division of the City of Columbus Department of Public Service offering residents resources and opportunities to improve their neighborhoods through litter clean ups and other efforts. A total of 441 clean-up and beautification projects were conducted by 9,002 Keep Columbus Beautiful volunteers who gave 24,745 hours of their time keeping Columbus streets and neighborhoods clean and beautiful. Together, these volunteers collected 339,375 pounds of debris from neighborhood areas. Additionally, the program delivered Seventy-five presentations reaching 3,148 children and adults.

i. Mayor Coleman and Shelley Meyer (OSU Couch Urban Meyer's wife) launched the city's first litter message campaign, "Three Words about Litter.... **"PICK IT UP"** in 2013, designed to empower individuals to take action on litter and employ a socially responsible attitude. In 2014 this program received the National Innovation Award from Keep America Beautiful. A curriculum based activity was developed to accompany the campaign and were distributed to schools. Billboard ads were used to reinforce the message.

ii. Thirteen litter clean-ups were completed as service hours for 20 individuals assigned to fulfill community service hours, collecting over 4.1 tons of debris and 340 tires. The **Environmental Crimes Task Force** also investigated over 1000 calls reporting illegal dumping or littering in Columbus. Learn more about the work of the Environmental Crimes Task Force by visiting www.swaco.org. Report littering or illegal dumping online at www.itsacrime.org.

e. An Environmental Management System (EMS) was started in the Division of Fleet Management to manage compliance with environmental regulations through a series of facility audits. The audits represent the initial phase of a three year process that will include establishing procedures, defining roles and responsibilities, training and communications related to environmental compliance. The EMS system was modeled after the successful effort continuing to take place in the Department of Public Utilities which received certification (ISO 14001) in 2014 after successfully building staff awareness of city and department environmental policies as it relates to individual job functions. Through this training and intensive planning effort, staff are well informed about how their job may impact the environment, what actions can be done to lessen those impacts and how to respond to an environmental emergency.

f. Utility Bill Inserts were sent to over 315,000 households quarterly. Through this publication, residents learned about simple practices that conserve and protect water; volunteer river cleanup and storm drain marking opportunities; and free or discounted tools available to help implement practices such as rain barrels, rain gauges and pet waste bags.

g. Events:

i. Earth Day 2014: Gratitude once again brought together a large scale volunteer effort and a celebration of our planet at Columbus Commons park downtown. The City of Columbus was a proud sponsor of the events coordinated by the non-profit organization, Green Columbus, which attracted over 4,000 volunteers donating a combined 12,500 service hours planting trees, cleaning litter, removing invasive plants and more.

ii. The Department of Public Utilities once again partnered with local environmental professionals to bring more than 500 third grade students to the 2014 **Central Ohio Children's Water Festival**. The festival uses fun-filled, hands on activities to educate students on the importance of conserving and protecting this vital resource. Throughout the year, an additional 850 students in fourth and fifth grades benefited from participating in the "**Momentum**" program that blends performance art and water education through a partnership with BalletMet. A Division of Water staff member worked closely with BalletMet program directors to provide science content and guide a storyline that incorporated water issues and learning objectives into a dance performance.

iii. Neighborhood Pride is an annual series of events. Four neighborhoods are selected each year to receive a weeklong of intensive programs and services from City of Columbus staff. Roads are swept, storm sewers are cleaned, code violations are addressed and the Mayor visits the community to answer questions and have fun with residents at a variety of events including bike rides and a Question & Answer night. In addition, residents received environmental stewardship tools to help conserve energy and water at home.

h. Indian Village Outdoor Education Center, operated by the Recreation and Parks Department, hosted 13,200 participants in 2014. Located along the banks of the Scioto River, the facility offers a natural environment for students to explore and learn. Currently in planning, a newly imagined Center will be designed to be the city's first net-zero energy building. Beyond the walls of the building, campers learn about urban gardening and local food production through hands-on tending of nine community gardens. A new partnership with the Central Ohio Bee Keepers Association allows students the opportunity to learn about pollination and the importance of bees by observing two hives located on-site. A variety of other Columbus Recreation and Parks Department summer camps featured "Going Green" and "Let's All Recycle" themes with over 113 students participating.

i. Grange Insurance Audubon Center continued its education and conservation programs for schools, campers, families, and more. Audubon Center programs took on new meaning with the Sept. 9, 2014, release of an eight-year study by Audubon scientists which combined more than 100 years of data from Audubon citizen scientists with computer modeling to forecast the impact of climate change on birds. The findings were startling; 314 species of birds will be climate threatened or endangered by 2080. With this information, the Grange Insurance Audubon Center stepped up efforts to provide community with adaptation and mitigation solutions and actions. In addition to informational forums on the topic, the Center introduced a new program – Audubon At Home – to help residents and businesses incorporate actions in their daily lives and in their own back yards.

II. Energy

a. **Energy Efficiency** is a top concern and in order to better manage usage, an Energy Manager was hired in 2014 by the Department of Finance and Management.

i. **City facilities** used the following targeted strategies to reduce energy costs as follows:

- **LED lights** were installed at the Fleet Auction Lot, East Central Health Parking, Arlingate Building Renovation, 111 N. Front Street Garage, CTV Studio Renovation, Bellpoint, Griggs and Hoover facilities to name a few. Additionally, The Division of Power is seeking to invest in LED street lighting and is designing pilot programs with vendors for the installation of 12 luminaires. The division is also working with the Department of Public Service to install 15 LED luminaires on Buffalo Parkway.
- The Department of Technology used **power management strategies** to conserve 6000KWH.
- The Department of Finance & Management completed **energy efficiency retrofits** in the following city facilities: **HVAC system** update at the North Market and installation of a new roof is underway to regulate temperature and reduce heating and cooling costs. The Police Shooting Range also received a new HVAC system that has increased heating efficiency alone by 10%. New double pane **windows and caulking** were installed on City Hall to reduce air infiltration, improving efficiency.

ii. In order to track and reduce energy consumption community-wide, the Mayor launched the **Columbus Energy Challenge** with the guidance of a specialized task force. The Challenge is a voluntary benchmarking and disclosure program for commercial and industrial buildings greater than 50,000 square feet. The goal of the program is to have 70% or 680 commercial and industrial buildings over 50,000 square feet participate and a 20% reduction in energy use by 2020. Currently the program has 60 buildings enrolled totally 12,892,527 square feet of space.

iii. Columbia Gas of Ohio's **Demand Side Management Programs** have been widely embraced by Columbus residents. In 2014, there were 81,426 customers that took advantage of these energy efficiency programs. Since program inception in 1987, there have been 141,767 customers served in Columbus. The estimated lifetime energy savings as a result is 2,259,546 MCF from measures installed in 2014 and 13,838,039 MCF for measures installed since program inception.



b. Renewables

i. **Hydroelectric power** in the amount of 7,333MWh was generated at O'Shaughnessy Dam in 2014.

ii. **Quasar Biodigester** generated 2,355 MWh of electricity using biosolids, among other waste products, from the city's waste water treatment plants. The city's Division of Power purchased all of the output for use by its customers.

iii. Solar

- The largest **solar** project of its kind in Ohio was installed on the roof the city's Fleet Maintenance facility in 2013. The 2,650 panels generate electricity equivalent to the amount required to power 85 homes for a year and reduce greenhouse gas emissions by 566 tons. This project was completed through a 20 year power purchase agreement with no upfront cost to the city. The panels produced 684,454 kWh in 2014, or over 35% of the building's electricity for the year, offsetting over 941,356 pounds of carbon and 49,421 tons of coal. In addition, the solar array located on the roof of Milestone 229 at Bicentennial Park generated electricity offsetting utility expenses and the Department of Public Service completed its multi-year, \$2.5 million replacement of nearly 5,000 parking meters with new, solar units.
- There are a total of 86 buildings (residential and commercial) that have been issued an electric permit(s) for the installation of solar, communitywide, since 2008. In 2014, there were 21 permits issued (compared to 32 issued in 2013). Of the 86 locations that have solar, 84 are AEP Ohio customers that have a combined capacity of 2,640 kW as of 12/31/14. The average number of sunny hours in Columbus is 2,183 hours / year. Therefore, the panels generate approximately 5,763,120 kWh of power which avoids an estimated 5,183 metric tons of CO2 emissions - equivalent to taking 1,091 passenger vehicles off the road each year or eliminating the CO2 emissions from the electricity use of 713 average homes for a year.

iv. The city's **AEP Energy Inc.** accounts had 30% of the power purchased using a green power option. An estimated 14,000 kilowatt-hours (kWh) were generated from the **wind farms**. This reduced the city's greenhouse gas emissions by 5%. Additionally, a new **green purchasing program** with AMP Partners began in November 2014 allowing the city's water and waste water treatment facilities to purchase 20% green power. This resulted in 5,000 kWh produced from green power reducing greenhouse gases by an additional 1.8%.



III. Green Buildings and Neighborhoods

a. Green Columbus Fund program continued to encourage sustainable development. In 2014, it awarded 18 reimbursement grants to projects doing brownfield environmental site assessments and in some cases expenses associated with LEED certification. Successful applicants were Two Fifty High Street, Burwell Investments, Advanced Engineering Consultants, Lykens Companies, Casto Communities Construction (272 S. Front and 5450 Riverside), Woods Development Group and Brexton Construction, 1000 Joyce avenue, Meadowbrook Christian Fellowship, Three-C Body Shop, Community Development for All People, MRE Holdings, U&I Properties, 1 Gay Copmany, Trolley Barn, Day Companies, Franklinton Development Association and Burwell Investments. The grant total awarded for the projects was \$1,283,923.

b. Through the **Neighborhood Stabilization (NSP) and HOME Programs**, the Columbus Housing Division funded the following number of units meeting or exceeding green home AWARE standards: 27 units sold; 178 rental units. Due to the AWARE standards, these homes are, on average, 1.5 times more energy efficient than a standard new home built in America.

c. LEED buildings or Leadership in Energy and Environmental Design is a certification program used to limit the impact of buildings on the environment. The number of certified or registered LEED projects in Columbus (public and private) is 411. The City of Columbus achieved or anticipates achieving LEED certification for the following facilities in planning or construction: 111 North Front Building, Fire Stations #2 and #3, McKinley Complex and the Indian Village Outdoor Education Center.

d. Columbus City Council adopted five **area plans** during 2014: the Far North Plan, North Linden Plan Amendment, Northland Plan I, South Side Plan and West Franklinton Plan. Each plan reinforces the importance of transit supportive, mixed-use development and walkable neighborhoods.

f. Columbus City Council adopted **new commercial overlays** for portions of Northwest Columbus and West Third Avenue in the Fifth by Northwest neighborhood. Overlays work in conjunction with existing zoning to improve the character of commercial corridors, facilitate streetscape continuity, and encourage pedestrian-friendly development. Two of the three overlay categories also include parking requirement reductions which encourage redevelopment of older commercial property.

g. Greening America's Capitals is a project of the Partnership for Sustainable Communities between U.S. Environmental Protection Agency (EPA), U.S. Department of Housing and Urban Development (HUD), and U.S. Department of Transportation (DOT) to help state capitals develop an innovative and implementable vision of distinctive, environmentally friendly neighborhoods that incorporate innovative green building and green infrastructure systems. In 2014, the city of Columbus was selected to be a participant in the program. USEPA will fund design services in the Milo-Grogan neighborhood focusing in and around the Timken site. The project will begin in mid 2015.



IV. Reduce, Reuse and Recycle

a. In 2014, the popular **RecyColumbus** program was expanded to an additional 13,777 households located in apartment and condominium communities. Additionally, the program was modified for ease of use and operational efficiency to collect recycling and yard waste on the same day, every other week for a total of 201,326 households. The program captured 33,983 tons of material that previously would have been taken to the county landfill and more than 24,271 tons of yard waste. The RecyColumbus program is further supplemented by SWACO's drop box program consisting of over 200 locations where over 9,523 tons of material were collected. Excluding yard waste, the city's residential recycling programs resulted in a 18.9% diversion rate with a participation rate of 71%. Using a multi-pronged outreach strategy, RecyColumbus combined intensive neighborhood-level grassroots activities with smart media outreach to keep the recycling issue top of mind. Outreach efforts included:

- A notification posted on each cart, community presentations, pop-up banners, direct mail, and phone calls were used to notify residents regarding program changes.
- In partnership with Rumpke 1,296 commercials promoting the program aired on local television stations.
- An improved address search feature on the 311 website was launched in 2013 allowing residents to view and print personalized collection calendars. To date, over 100,000 households have used the service, with over 16,000 signed up to receive phone, email, calendar or Twitter reminders to set their recycling, yard waste and refuse out for collection through the same web feature.

b. Additional waste was diverted through the following efforts:

- The **City Employee Office Recycling Program** collected a total of 506 tons of mixed recyclable material and 96 tons of shredded paper. In follow-up to an audit of the recycling and trash at City Hall and the 77 N. Front Street administrative buildings completed in 2013, labeling and container improvements were made at both buildings to improve diversion of recycled materials.
- 37,000 tons of **asphalt** was recycled from resurfacing projects to repair potholes, berms and shoulders and an additional 600 tons of recycled asphalt was utilized within our park projects. 14,705 gallons of **used oil**, 1251 gallons of **used antifreeze**, 1749 used **batteries**, 155,736 pounds of **scrap metal**, 4387 used **tires**, 7485 pounds of used oil **filters** and 10,691 pounds of **absorbents** were recycled as a result of the city's fleet management operations.
- **Biosolids**, or the product of the waste water treatment process, were beneficially reused versus incineration at the highest rate (87%) recorded to date. Beneficial reuse methods include the city's compost operation which used 7,820 dry tons of biosolids and 1,600 tons of incinerator ash to produce a rich soil amendment that is sold commercially; the Deep Row Hybrid Poplar Project puts biosolids to use to improve strip mine soil; farmers made use of 2,742 dry tons of treated liquid biosolids as a fertilizer; the Quasar biodigester used 4,200 dry tons of city biosolids along with other organic material to generate electricity and operate a compressed natural gas fueling station.
- **Deconstruction** was used as an alternative to demolition on 15 homes, creating more 591.5 conviction friendly prevailing wage hours and recycling 12,000 board feet of wood to be repurposed as furniture by the new local business, Reckon Furniture. The Mind Market at the Columbus College of Art and Design developed a strategy in order to better market and sell salvaged materials from the deconstruction effort.
- **Restaurants and bars** along High Street began recycling glass and other material from their operations free through a joint effort led by the city and supported by the Ohio EPA. These 36 businesses recycled over 180 tons in their first year of the program.
- **Special event recycling** equipment was put to use at Columbus Commons events through a grant provided by OhioEPA. After analyzing their experience with this equipment, remaining grant funds were used to purchase standardized recycling, landfill and compost labels to create consistent messaging for event goers. An event guidebook was also published in order to help advise festival planners on how to make recycling and other sustainable practices standard practice at events.
- Katzinger's Little Deli, North Market Spices, Stauf's Coffee Roasters, Taste of Belgium at the North Market are piloting a **reusable shopping bag** effort with the help of the GreenSpot program. Each merchant will distribute reusable bags to their customers in 2015 and offer incentives when the bags are used at their business. Additionally, in response to interest from the Clintonville Area Commission and others, the city began research and outreach on ways to address the issue of single use bags.

V. Resource Protection and Conservation

a. Natural Areas

i. **Parkland** grew with the addition of 60 acres to the Columbus Recreation and Parks Department inventory and 16 conservation easements were obtained in 2014.

ii. More than 3,910 **Trees** were planted by the city's Division of Forestry and its contractors. Additionally, Public Utilities staff planted native trees to remediate grassy areas of land and restore native woody growth at Griggs Reservoir. Forested buffers of native and natural vegetation provides shoreline stabilization, filters contaminants from surface water runoff and provides valuable habitat. In addition to the trees planted at Griggs, staff also planted trees at O'Shaughnessy Reservoir. Primarily due to Emerald Ash borer, the city was also forced to remove 4,708 trees.

iii. **Columbus Ecological Restoration Program** hosted 25 volunteer community events. The program provides city support to volunteer groups removing invasive plants. 276 volunteers donated 1,104 hours to this program. These dedicated individuals cleared 249 cubic yards of invasive honeysuckle and planted over 314, three gallon plants.

iv. The **Big Darby**, a designated state and national scenic river, continues to receive protection through the Big Darby Accord. The local governments and other participants in the Big Darby Accord Watershed Master Plan of 2006 have been continuing work to carry out its provisions. This work is overseen by the Big Darby Accord Working Group (BDAWG), which represents the participating local governments. Several active bodies are broadly representative of various levels of government, citizens, environmentalists and businesses. These include the Open Space Advisory Committee (OSAC) and the Big Darby Accord Advisory Panel.

In 2013 and 2014 Columbus and Prairie and Brown Townships retained a consulting team headed by Design Concepts Inc. to examine what steps might be appropriate to take with respect to the Big Darby Town Center.

v. The completion of the **Olentangy River restoration** was celebrated with a canoe float and media event to showcase the area from Fifth Avenue north to Lane Avenue. The project continues to mature as plants become established improving aesthetics, recreational functionality and habitat. This transformational project is a key component of the One Ohio State Framework Plan, which envisions the River corridor as an active research and learning corridor and recreational zone which enables better Stormwater management and multi-modal transportation. It was made possible from support by the City of Columbus, Ohio EPA through the WRRSP grant and by The Ohio State University. Restoration of a second dam site, the **Main Street Dam**, located on the Scioto River in the heart of downtown continued to progress. The Main Street Dam removal will add an additional 33 acres of green space to the downtown riverfront, creating the Scioto Greenways which will be complete in Fall 2015. The additional green space will better connect Downtown to the Scioto Audubon Park, Scioto Peninsula and East Franklinton, build upon the Scioto Mile park investments, create linkages to the 11 existing Scioto Greenways Trail and serve as a catalyst for further private investment in Downtown. The project is estimated to cost \$35.5 million and is being funded through private and public partners such as The City of Columbus, Mid-Ohio Regional Planning Commission, Ohio Department of Transportation, Ohio and U.S. EPA, Columbus Downtown Development Corporation, Franklin County Board of Commissioners, Metro Parks, The Columbus Foundation and Battelle.

vi. The Watershed Management section continue to focus on a multi-faced approach to **manage non-migrating Canada geese** at Hoover Reservoir. Staff maintained signage and distributed brochures to other departments to educate visitors on the harmful effects of feeding waterfowl. Landscaping and egg addling were also used to manage goose populations. Successful strategies were shared at a water management conference to help other communities with goose management. Unnaturally large populations of geese were contributing to shoreline erosion, diminished health of waterfowl and excessive goose waste. A sustainable population has improved reservoir shorelines and reduced sources of pollution.

b. Local Foods

i. **Farmers markets** are popular throughout the city. The Columbus Public Health market had over 5,827 visitors buy nutritious foods with public assistance. Additionally, the Mayor's Office of Environmental Stewardship in partnership with Franklin County funded a "**VeggiSnaps**" program that provided customers paying with EBT to receive matching dollars to incentivize purchase of healthy, locally-grown foods at select markets.

ii. 33 **Community gardens** were provided with grant funding from the City of Columbus in partnership with Franklin County, Franklin Park Conservatory, Whole Foods Market and The Columbus Foundation. Grant winners received up to \$4,000 in support as well as product donations such as soil and mulch and free educational classes of their choosing at Franklin Park Conservatory.

c. Water

i. **Rain catchment systems** continued to be installed for free by request on community gardens sites operating on city Land Bank property. 25 cisterns up to 550 gallons in size have been installed on sites through a partnership with the Rebuilding Together Central Ohio Tool Library. In order to refill the cisterns, roof structures were designed in accordance with city code and kits to build these structures were piloted to accompany city issued cisterns in 2014.

ii. The **GreenSpot Rain Barrel program**, a service of the Department of Public Utilities administered with the help of Franklin Soil and Water Conservation District provided low cost rain barrels to GreenSpot members. The program engaged 759 households in 2014. To acquire the rain barrel participants first must learn about the impacts of stormwater and ways to prevent polluted runoff. In addition, customer service representatives in the Columbus Division of Water assist and educate customers about how to detect and fix water leaks and provide water conservation kits to residents.

iii. 8200 square yards of hard, impervious surfaces in the parks were removed and converted to pervious land.

iv. **Blueprint Columbus** is an exploration of an exciting new way of eliminating sanitary sewer overflows while also investing in our neighborhoods and the local economy. This innovative plan will be submitted to the Ohio Environmental Protection Agency in September 2015 for approval. Through Blueprint Columbus' community engagement efforts, residents and professionals alike received information on the cause of and possible solutions to sanitary sewer overflows. Nearly 50,000 Columbus residents were engaged one-on-one or through presentations at civic associations and area commissions, demonstrations at community events and printed materials. To support the effort, a six-week, 72 hour course at Columbus State Community College will train participants to become certified as green landscapers. The Columbus Urban League will identify more than ten students to participate in the program beginning in spring 2015. Curriculum will include an introduction to Blueprint Columbus, plants, ecology, basics of soil, soil preparation, green infrastructure maintenance, garden types and OSHA construction safety awareness.

v. A partnership with Delaware Soil and Water Conservation District supplemented efforts to educate farmers on **best management practices** that reduce nutrient, sediment and chemical concentrations entering the Upper Big Walnut Watershed with the goal to increase use of cover crops and other practices that improve raw water quality draining to Hoover Reservoir.

vi. Planning began by the Department of Public Utilities on highlighting **green infrastructure practices** in 2015 at the Grange Insurance Audubon Center and Metro Parks as an interactive stormwater demonstration. The demonstration site will be open to the public and will include educational activities to engage Columbus City school children and support their curriculum.

Additionally, the first phase of the American Addition neighborhood project was completed in 2014. The project included pervious concrete curb and gutter for 602 linear feet as well as four rain gardens totaling 6,084 square feet.

vii. Columbus Public Health permitted and inspected 342 **on-site sewage** disposal systems to insure they were working correctly. Additionally, 147 orders were issued to eliminate septic systems and connect to the sanitary sewer system. The STEP Program is a partnership of Columbus Public Health's Environmental Health Division and the Department of Public Utilities' Division of Sewers and Drains, and works to protect area water sources.

viii. Citywide, the Department of Public Utilities treated 49.4 billion gallons of water or 42,847 gallons per person in 2014, down from 50.2 billion gallons and 43,798 gallons per person in the year prior.

VI. Transportation

a. **car2go** concluded a successful one-year pilot in the fall and Columbus City Council passed legislation allowing for their continued operation in the City of Columbus. The company has deployed 300 smart cars throughout the urban core of the city and some surrounding jurisdictions including Bexley and Grandview for pre-registered members to use on demand without the need for reservations. car2go users can legally park at city meters and residential permit areas with some exceptions. Users benefit from avoiding the hassles of car ownership including paying for insurance, gas, parking and the car itself.

b. **Walking** infrastructure was increased by 2.3 miles (not including multi-use trails) in 2014 with new sidewalks, for a total of 22.97 miles constructed since 2008. In addition, the Healthy Places Program continued to work with the built environment to provide opportunity for increased walking and physical activity. The program does this through review of re-zoning requests and produces walking and biking maps, which identify safe and enjoyable walking routes in selected neighborhoods. Nine maps were created and 60% of re-zoning requests were submitted with Healthy Places recommendations implemented.

c. City of Columbus Fleet Management Initiatives

i. **GPS** units were installed on 100% of city fleet vehicles. GPS units are proven to increase efficiency of drivers, reduce idling time and reduce miles driven. The equipment will also be used to automatically calculate vehicle emissions and related carbon footprint metrics in 2015.

ii. **Alternative fuel vehicles** and other strategies to reduce the impact of the city's fleet on the environment have been thoroughly outlined in the Green Fleet Action Plan. In 2014, the city purchased 283 light duty vehicles, 65% of which are 'green' and 49 heavy duty vehicles were purchased, of which 92% are 'green'. Overall fuel use grew by 1%, but petroleum fuel usage is down 3.5% compared to 2013. Petroleum use has steadily declined each year since 2010, with an overall reduction of 12.7% since baseline year 2010, far exceeding the city goal of a 5% reduction by 2014. The City currently owns a total of 16 hybrid light duty vehicles, 5 hybrid heavy duty vehicles and 7 on-road all-electric vehicles. Off road vehicles also make up a significant portion of the city's fleet and therefore are being considered for cleaner fuel sources as well. In 2014, 14 propane powered mowers were used and an additional nine were purchased. The mowers consumed 6373 gallons of propane, at an average cost of \$3.31/gallon. Compared to the 2014 average cost of diesel, the use of propane saved approximately \$830 for the year. A full report on 2014 progress for the Green Fleet Action plan is available online.

iii. **Compressed natural gas (CNG)** is a cleaner burning and more cost effective fuel. In addition to the city's Groves Road compressed natural gas (CNG) fueling station, a new facility on Morse Road was opened to the public in June 2014. A third station on Georgesville Road is in design. Together, the two stations pumped 433,196 gges in 2014- 262,262 gges to internal City customers and 170,934 gges to public customers. Compared to the 2014 average price of diesel fuel (\$3.40), the use of CNG saved the City \$404,215 in fueling costs for the year. Columbus is also eligible to receive a tax credit of \$.50/gge for 2014. CNG fuel savings and tax credits combined equals a total of \$620,813 for 2014. As of the end of 2014, Columbus has 94 CNG vehicles in service.

iv. The city's two **electric vehicle public charging stations** were used throughout the year supplying 6,317 kWh.

v. Due to the job duties of police officers, it is necessary they have power to their vehicles for auxiliary equipment which demands extra fuel. In 2014, 90 cruisers were purchased and fitted with "**anti-idling**" devices that stop, or restart, a cruiser automatically and do not affect the on-board power needs of the vehicle that are essential to operate computers and radio communications. A projection anticipates a 34% reduction in idling and savings in the first year of more than \$3500 per cruiser.

d. City employees were encouraged to use **alternative forms of transportation** by offering educational opportunities on transportation options and offering the 2nd gear corporate CoGo membership program to city employees. In 2014, there were 45 city employees who took advantage of the program, buying a CoGo annual membership pass for \$30 vs the normal \$75 fee.

e. Bicycling remained a major focus of work in city departments as evidenced by a variety of exciting improvements to infrastructure and ongoing programming.

i. Recreation and Parks Department Central Ohio Greenway trails are a favorite amenity for Columbus residents and visitors. The Olentangy Trail alone attracted over 1 million users in 2014. This trail network spans beyond the city's borders and into neighboring communities offering over 300 miles of trails combined to enjoy connecting many destinations including the downtown riverfront, The Ohio State University, parks and more. Over 1.25 miles of trail were opened and an additional 3 miles began construction. In addition, 6 miles of shared use path were constructed by the Department of Public Service.

ii. On-Street bikeways were increased by 33.8 miles in 2014, broken down as follows:

- 15.7 miles of sharrow pavement markings
- 4 miles of bike lane pavement markings including the first bike lanes in downtown Columbus on Spring/Long Streets.
- 8 miles of bicycle boulevards

iii. 15 bicycle parking racks were installed throughout the city. These amenities can be requested to be installed in the public right of way by calling the city's 311 call center. Additionally **Pedal Instead**, initially developed by Mayor Coleman's Green Team and the Department of Recreation and Parks, continues to thrive under the leadership of the Yay Bikes! The project provides free, secure valet style bicycle parking at public festivals and events. In 2014 the program parked 7,698 bicycles at 19 events, saving 4,520 gallons of fuel and avoiding 47,513 miles driven by car.

iv. BikeShare, officially named CoGo Bike Share, was launched in July 2013. The system features a network of 300 bikes at 30 downtown stations, enabling users to visit any station to borrow a bike, ride for any amount of time and return the bike at any of the stations. At a July celebration of their one year anniversary, Medical Mutual of Ohio was announced as their title sponsor having donated \$1,250,000 to support the program. 1409 people were registered as members of the program in 2014 and in addition to day-pass users, over 45,000 rides were taken using the system.

v. Organized rides are a way of introducing bicycling to new groups of people and encouraging others to continue riding. Beginning with Bike to Work Day, nearly 400 people joined seven group rides into downtown, each ending at Columbus Commons for breakfast and festivities. CoGo Bike Share hosted the largest of the rides with 100 people earning them the trophy and title of Bike to Work Day Champ. The Columbus Public Health, Institute for Active Living hosted the Mayor's Twilight Ride; over 600 riders participated, raising funds for bikes and safety equipment and training to Columbus area children. Other group rides the city is proud to have take place along its streets include Bike the C-Bus organized by Yay! Bikes and Pelotonia which alone reported over 7,270 participating riders who, together, raised over \$21 million towards cancer research. City staff and transit advocates hosted the League of American Bicyclists in Columbus this summer for a bike tour of the city's existing infrastructure. The League provided helpful guidance in how to move Columbus from Bronze to Silver Level Bike Friendly City.

vi. The City of Columbus hosted a cohort of 16 staff and partners in becoming League of American Bicyclists **Certified Instructors**. Instructors are qualified to lead rides and teach safety and riding techniques to groups and individuals.

vii. A bike security program, **Bug Your Bike**, was launched by the City of Columbus in partnership with The Ohio State University, COTA and Yay Bikes! providing scannable rfid tags to registered riders to be installed on their bikes to increase the likelihood that, if stolen and recovered by a partnering organization, the property will be linked to its owner and returned. 730 individuals registered for the program in its first year.

viii. A Bike Safety Ordinance was passed by Columbus City Council providing a defined safe distance for cars and larger vehicles when passing bicycles.

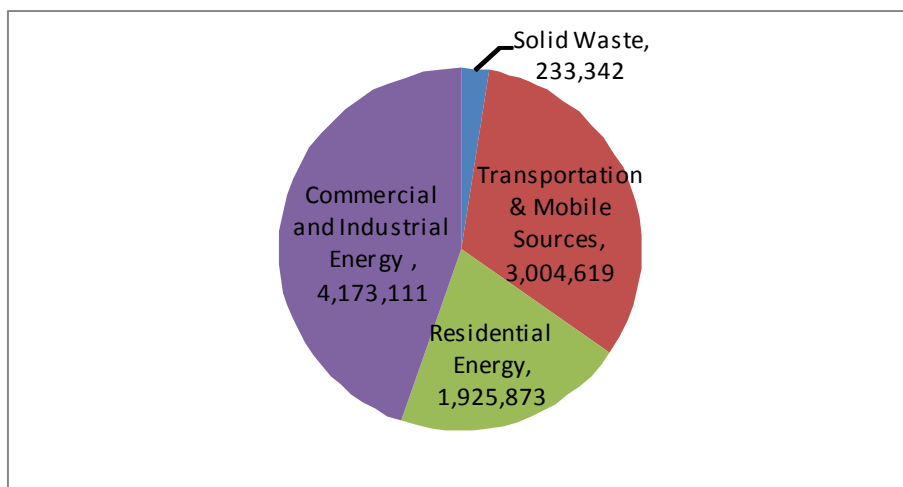
VII. Air Quality and Climate Change

a. Climate Change

- The Mayor's third 5 year **plan for sustainability** was developed in 2014 through a year-long process involving many community members and stakeholders. The plan's primary objective is to reduce and mitigate climate change through city operations and through a strategic community effort. The finalized plan can be viewed online at www.Columbus.gov/GreenPlan.
- Climate Change and its impact on the environment is an emerging **public health** issue. Columbus Public Health partnered with The Ohio State University to develop communication strategies meant to increase the community's understanding about the link between this issue and public health. In 2014, 246 people attended a presentation on climate change through the partnership.
- Reducing **Greenhouse Gas Emissions** continues to be a high priority. The city is committed to reduce greenhouse gas emissions from city operations (energy use in buildings, street lights, transportation and waste) 40% (from baseline year of 2005) by the year 2030. By the end of 2014, greenhouse gas emissions had been reduced by 25% of the 2005 levels. Below is a chart that shows green house gas emission reductions from city operations alone. The city also joined ICLEI and is using the Clear Path tool to inventory emissions and report them to the Carbon Disclosure Project.

Year	Vehicle fleet (mtCO2e)	Buildings & facilities (mtCO2e)	Street lights & traffic signals (mtCO2e)	Water & wastewater treatment (mtCO2e)	Total GHG emissions (mtCO2e)	GHG Reduction (tons from baseline year)	% Reduction
2005	33965	87930	29134	160091	311120	baseline	
2013	30281	76431	26749	124810	258271	52849	17%
2014	29459	77593	29525	98155	234732	76388	25%
2030 (goal)					186672		40%

- Community wide estimates show Greenhouse Gas Emissions total 9,336,945 mtCO2e down 14% from 10,901,086 mtCO2e in 2013. This total includes estimated emissions from the following sectors:



b. Air Quality improved in 2014, there were no days when air quality reached unhealthy levels compared to 2 days in 2013 and 13 days in 2012.

c. The Healthy Homes program improved **indoor air quality** for 50 families. The Healthy Homes Program works to reduce disease and injury by helping families to make their homes healthier and safer environments. Areas of focus include lead poisoning prevention, asthma and allergy control, and high risk indoor environmental concerns. The program provides a green cleaning kit and education to families with children that have asthma to reduce asthma symptoms and toxic chemical use in homes.



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