





Credit: Peter Tobia

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Credit: Mitchell Jeff

Dear Friends,



THIS MARKS THE FOURTH ANNUAL GREENWORKS PROGRESS REPORT, and we're excited to share how far we've come since the plan's release in 2009. Working towards the goals outlined in Greenworks continues to be an effective approach to advancing sustainability across City departments and throughout Philadelphia.



We're proud to report that work on 95 percent of our 166 initiatives is underway or complete. We're exceeding our waste diversion and vehicle miles traveled reduction goals, and we've created nearly the number of gardens, farmers markets, and farms we're striving for by 2015. For the first time we have enough data to report Greenworks trends. Municipal government has lowered energy use by seven percent since 2008, and we've started construction on projects that will yield significant additional reductions. The percentage of alternative energy used in Philadelphia has increased from 2.5 to 14 percent, putting us on track to achieve the Target 4 goal.

The number of partners supporting our work continues to grow, and we appreciate their commitment. The organizations dedicated to advancing Greenworks goals are an impressive and varied group who see through the differences in their missions and bottom lines to understand that sustainability work benefits us all.



As we approach the final two years of Greenworks implementation, City government and our partners recognize that in order to fulfill our collective charge, we need to focus on sustaining sustainability. Within the City of Philadelphia, we're working to deeply root sustainable thinking into our core functions, service delivery, and operations. We ask our partners outside of government to continue to let us know why you value this work. Public support and advocacy is what led to the creation of Greenworks, and it's what will determine how sustainability is prioritized in the future.



We're confident that in 2015, we'll have established an impressive track record that can grow into the next administration and beyond. With Greenworks as a foundation, the continued leadership of community groups, elected officials, and stakeholders will cement Philadelphia's position as a leader in urban sustainability, enhancing the city's competitiveness and quality of life.



Sincerely,

A handwritten signature in black ink.

Michael A. Nutter
MAYOR

A handwritten signature in black ink.

Katherine Gajewski
DIRECTOR OF SUSTAINABILITY

SUMMARY OF TARGETS

BASELINE	BASELINE YEAR	CURRENT	2015 GOAL
TARGET 1 Lower City Government Energy Consumption by 30 Percent			
3.77 Trillion BTUs	2008	3.50 Trillion BTUs	2.64 Trillion BTUs
TARGET 2 Reduce Citywide Building Energy Consumption by 10 Percent			
122.06 Trillion BTUs	2006	129.36 Trillion BTUs	109.85 Trillion BTUs
TARGET 3 Retrofit 15 Percent of Housing Stock with Insulation, Air Sealing, and Cool Roofs			
3,500 Homes Retrofitted	2008	9,131 Homes Retrofitted	84,400 Homes Retrofitted
TARGET 4 Purchase and Generate 20 Percent of Electricity Used in Philadelphia from Alternative Energy Sources			
2.3% Alternative Energy	2008	14.0% Alternative Energy	20% Alternative Energy
TARGET 5 Reduce Greenhouse Gas Emissions by 20 Percent			
MUNICIPAL			
587,899 t CO ₂ e	1990	481,726 t CO ₂ e	470,319 t CO ₂ e
COMMUNITY			
21.21 Million t CO ₂ e	1990	21.33 Million t CO ₂ e	16.97 Million t CO ₂ e
TARGET 6 Improve Air Quality toward Attainment of Federal Standards			
20 Unhealthy AQI Days	2008	21 Unhealthy AQI Days	10 Unhealthy AQI Days
TARGET 7 Divert 70 Percent of Solid Waste from Landfill			
53% Diversion Rate	2008	77% Diversion Rate	70% Diversion Rate
TARGET 8 Manage Stormwater to Meet Federal Standards			
0 New Greened Acres	2011	102.4 New Greened Acres	450 New Greened Acres
TARGET 9 Provide Walkable Access to Park and Recreation Resources for All Philadelphians			
10,300 Acres of Open Space	2008	10,433 Acres of Open Space	10,800 Acres of Open Space
TARGET 10 Provide Walkable Access to Affordable, Healthy Food for All Philadelphians			
230 Markets, Gardens, and Farms	2008	314 Markets, Gardens, and Farms	316 Markets, Gardens, and Farms
TARGET 11 Increase Tree Coverage Toward 30 Percent in All Neighborhoods by 2025			
0 New Trees	2008	89,287 New Trees	300,000 New Trees
TARGET 12 Reduce Vehicle Miles Traveled by 10 Percent			
5.96 Billion Vehicle Miles Traveled	2005	5.34 Billion Vehicle Miles Traveled	5.36 Billion Vehicle Miles Traveled
TARGET 13 Increase the State of Good Repair in Resilient Infrastructure			
73% in State of Good Repair	2008	77% in State of Good Repair	80% in State of Good Repair
TARGET 14 Increase the Size of the Regional Clean Economy			
GREEN GOODS AND SERVICES			
27% of Workplaces	2012	2012 Most Recent Data Available	Report Best Available Metric
GREEN TECHNOLOGIES AND PRACTICES			
53% of Workplaces	2012	2012 Most Recent Data Available	Report Best Available Metric



WITH THE 2013 REPORT, we are sharing progress since we last reported in June of 2012. Greenworks is made up of five goal areas, fifteen measurable targets, and 166 initiatives. The table below is a snapshot of progress to date, and reflects the number of initiatives that are complete, underway, or under consideration for the future.

INITIATIVE PROGRESS BY TARGET

TARGET 1 Lower City Government Energy Consumption by 30 Percent



TARGET 2 Reduce Citywide Building Energy Consumption by 10 Percent



TARGET 3 Retrofit 15 Percent of Housing Stock with Insulation, Air Sealing, and Cool Roofs



TARGET 4 Purchase and Generate 20 Percent of Electricity Used in Philadelphia from Alternative Energy Sources



TARGET 5 Reduce Greenhouse Gas Emissions by 20 Percent



TARGET 6 Improve Air Quality toward Attainment of Federal Standards



TARGET 7 Divert 70 Percent of Solid Waste from Landfill



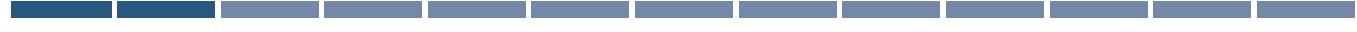
TARGET 8 Manage Stormwater to Meet Federal Standards



TARGET 9 Provide Walkable Access to Park and Recreation Resources for All Philadelphians



TARGET 10 Provide Walkable Access to Affordable, Healthy Food for All Philadelphians



TARGET 11 Increase Tree Coverage Toward 30 Percent in All Neighborhoods by 2025



TARGET 12 Reduce Vehicle Miles Traveled by 10 Percent



TARGET 13 Increase the State of Good Repair in Resilient Infrastructure



TARGET 14 Increase the Size of the Regional Clean Economy



TARGET 15 Philadelphians Unite to Build a Sustainable Future



43 Complete Initiatives



114 Initiatives in Progress



9 Future Initiatives





ENERGY

GOAL: PHILADELPHIA REDUCES ITS VULNERABILITY TO RISING ENERGY PRICES

TARGET 1:

Lower City Government Energy Consumption by 30 Percent

METRICS

- Greenworks Baseline (FY08)

3.77 Trillion BTUs

- Current (FY12)

3.50 Trillion BTUs

- 2015 Target

2.64 Trillion BTUs

The City of Philadelphia manages more than 600 buildings, ranging in size from small neighborhood recreation centers to City Hall and the Philadelphia Museum of Art. In addition, the City owns a fleet of over 4,000 vehicles and operates a network of streetlights throughout Philadelphia. Since 2008, the City has reduced General Fund energy use by 13 percent, and overall energy use by seven percent, with several energy conservation and fuel efficiency projects underway that will yield additional savings in the near future.

To reach the aggressive *Greenworks* energy reduction target, the City developed sophisticated energy management systems that enable tracking and reporting at the facility level. In 2012, the Mayor's Office of Sustainability (MOS) benchmarked all of the City's large facilities using the U.S. EPA's ENERGY STAR Portfolio Manager, a free online tool that provides energy use scores from 1 to 100 for buildings by type. These benchmarking results will inform strategic investments in facilities with high energy use and allow the City to track the results of energy efficiency projects over time.

MOS recently selected a third round of projects for its Energy Efficiency Fund (EEF), which supports departmental energy conservation projects on a competitive basis. Since 2011, EEF projects have saved 2,638 MWh, the equivalent annual energy use of 250 homes. In October 2012, the City started construction on its first guaranteed energy savings project. The project focuses on energy and water efficiency investments in City Hall, the Criminal Justice Center, Municipal Services Building, and One Parkway Building, four of the City's largest energy users. These energy conservation measures include lighting upgrades, weatherization, building controls, and system upgrades.

BY THE NUMBERS

Install New Lighting

REPLACED 85,000 LED TRAFFIC SIGNALS

- 4,924 GHG Reduced (MT CO₂e)
- 9,274 MWh Reduced
- 31,641 MMBTU Reduced (Electricity Only)

LIGHTING UPGRADES AT SIX RECREATION CENTERS

- 263 GHG Reduced (MT CO₂e)
- 347 MWh Reduced
- 1,184 MMBTU Reduced (Electricity Only)

Develop Energy Load/Demand Management Practices

- 98 GHG Reduced (MT CO₂e)
- 130 MWh Reduced
- 442 MMBTU Reduced (Electricity Only)

City Car Management Plan

REDUCED CITY FLEET BY 542 CARS SINCE 2003

- 10,780 GHG Reduced (MT CO₂e)
- 136,393 MMBTU Reduced (Not Including Electricity)

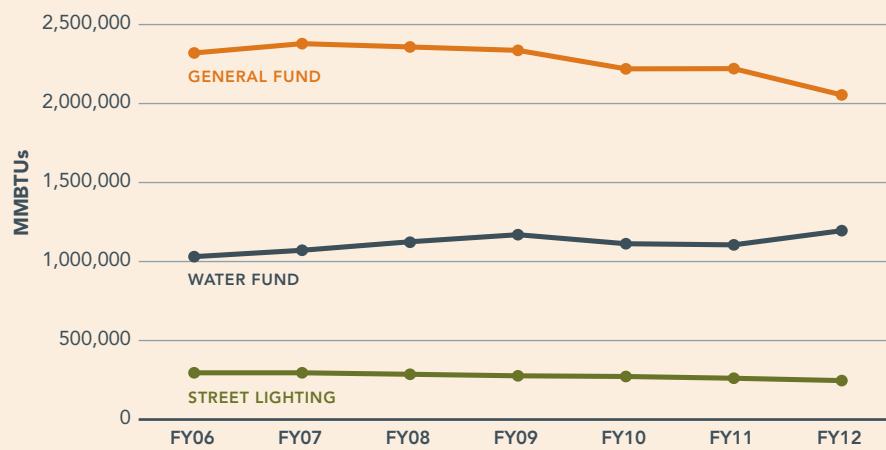
Energy Efficiency Capital Improvements

- 1,440 GHG Reduced (MT CO₂e)
- 2,638 MWh Reduced
- 9,001 MMBTU Reduced (Electricity Only)
- 6,715 MMBTU Reduced (Not Including Electricity)



Workers install a new boiler as part of the City's guaranteed energy savings project.

Municipal Energy Use



TARGET 2:

Reduce Citywide Building Energy Consumption by 10 Percent

Philadelphia is experiencing a period of modest but consistent growth after several decades of population decline. According to the *2013 State of the City* report published by the Pew Charitable Trusts, the population has increased for each of the past six years, and building construction and renovation have also picked up after several slow years. Despite advances in high performance design, construction, and renovation, overall building energy usage has increased during this time.

Compared to the *Greenworks* baseline year of 2006, buildings in Philadelphia used four percent more energy in 2012. Part of this increase may result from population and building square footage growth, but after adjusting for these factors the amount of energy used per capita and per square foot has also increased.

Overall residential energy use has remained relatively stable during this time, despite an increase in the number of households in the city. While commercial electricity use has also remained fairly stable, commercial natural gas use has increased more than 25 percent.



Carpenter Square, at 17th and Carpenter in South Philadelphia, will be the city's second project certified in the LEED for Neighborhood Development system.

To reverse the trend of rising building energy use, *Greenworks* supports the adoption of new, more energy efficient building codes in Pennsylvania. Since new construction only accounts for a fraction of all buildings in Philadelphia, MOS partnered with Councilwoman Blondell Reynolds Brown in 2012 to pass energy benchmarking and disclosure legislation for large commercial buildings.

The law made Philadelphia the sixth city in the country to require annual reporting and public disclosure of energy performance scores for commercial buildings. Benchmarking will help buildings totaling more than 350 million square feet develop energy conservation strategies and make better management decisions. The City of Philadelphia has benchmarked more than 300 City facilities and will make the results public in 2013.

METRICS

- Adjusted *Greenworks* Baseline (2006)

122.06 Trillion BTUs

- Current (2012)

129.36 Trillion BTUs

- Adjusted 2015 Target

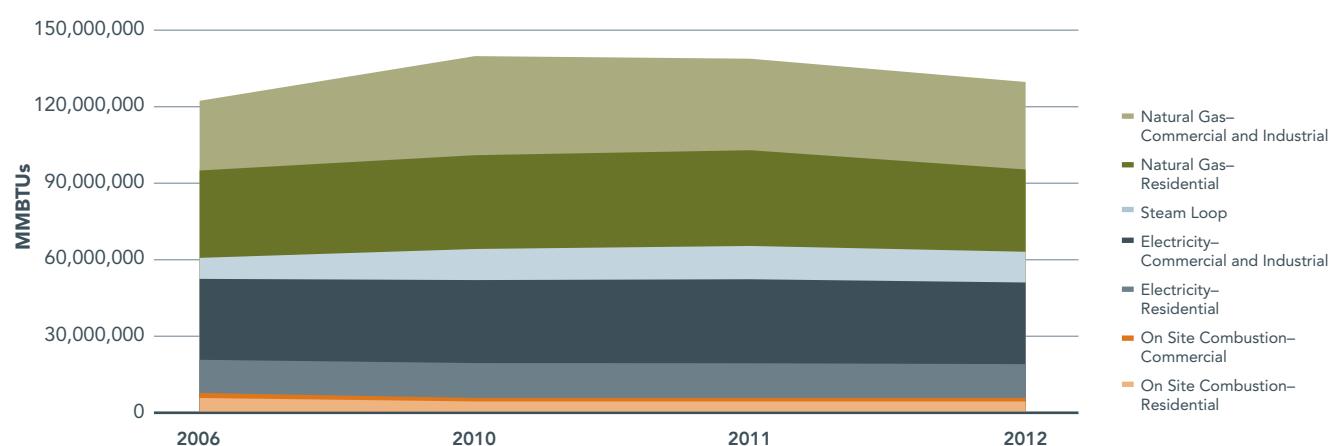
109.85 Trillion BTUs

2006 baseline energy consumption adjusted to reflect updated usage data.



The Mayor's Office of Sustainability launched its commercial energy benchmarking website in spring 2013 at www.phila.gov/benchmarking.

Citywide Building Energy Use



TARGET 3:

Retrofit 15 Percent of Housing Stock with Insulation, Air Sealing, and Cool Roofs

METRICS

- Greenworks Baseline (2008)

3,500 Homes Retrofitted

- Current (2013)

9,131 Homes Retrofitted

- Adjusted 2015 Target

84,400 Homes Retrofitted

The residential energy efficiency landscape has been a changing one. Act 129, passed in October 2008, required Pennsylvania's major electric distribution companies to reduce energy consumption by at least one percent by 2011 and three percent by 2013 and to reduce peak demand by 4.5 percent. To meet the mandated targets, utilities developed action plans that have resulted in major, multi-sector energy efficiency and conservation programs. In 2012, the Pennsylvania Utility Commission (PUC) voted to extend Act 129 for a second phase through 2016. These utility investments, along with American Recovery and Reinvestment Act supported federal funding, have grown the residential retrofit market in recent years.

Since the launch of PECO Smart Ideas in 2009, more than 400,000 customers have participated, resulting in annual savings of more than 1.135 MWh and \$163 million. Included in PECO's second phase offerings is "Smart House Call," a new residential energy assessment, audit, and direct install program.

PGW is expanding EnergySense in summer 2013 to include a new, whole-home program which will provide contractor referrals, discounted \$150 energy assessments, cash rebates of up to \$3,500, and connection to low-interest loans through Keystone HELP. EnergySense is currently approved to run through 2015.

Supported by a \$25 million, three-year Better Buildings grant from the U.S. Department of Energy, EnergyWorks offers comprehensive energy efficiency solutions for home and commercial building owners. As of May 2013, EnergyWorks completed over 1,500 home retrofits in the five-county region, 252 of which were in Philadelphia. As EnergyWorks funds expire in September 2013, PECO and PGW's programs will offer continued energy efficiency support.



Since 2008, more than 9,000 Philadelphia homes have been weatherized.

BY THE NUMBERS

ECA Residential Retrofits

(2,478 HOUSES)

- 5,367 GHG Reduced (MT CO₂e)
- 6,398 MWh Reduced
- 21,829 MMBTU Reduced (Electricity Only)
- 37,156 MMBTU Reduced (Not Including Electricity)

EnergyWorks Residential Retrofits

(252 HOUSES)

- 546 GHG Reduced (MT CO₂e)
- 651 MWh Reduced
- 2,220 MMBTU Reduced (Electricity Only)
- 3,779 MMBTU Reduced (Not Including Electricity)

PGW EnergySense

(3,800 HOUSES)

- 8,230 GHG Reduced (MT CO₂e)
- 9,811 MWh Reduced
- 33,474 MMBTU Reduced (Electricity Only)
- 56,978 MMBTU Reduced (Not Including Electricity)

PHA

(300 HOUSES)

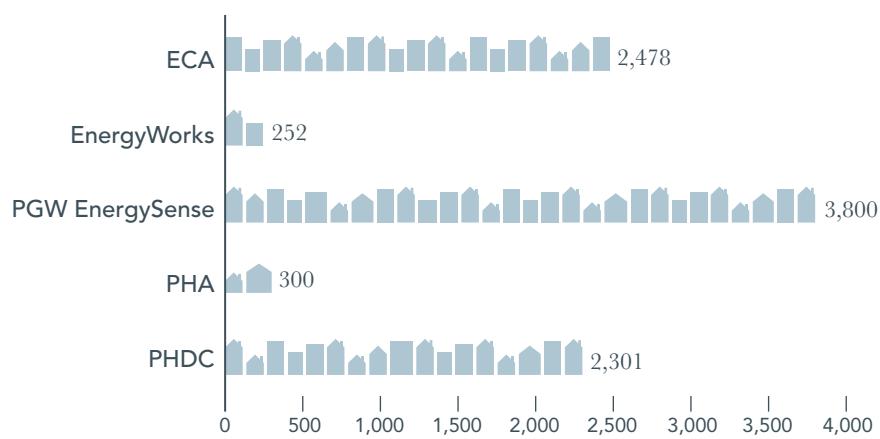
- 650 GHG Reduced (MT CO₂e)
- 775 MWh Reduced
- 2,643 MMBTU Reduced (Electricity Only)
- 4,498 MMBTU Reduced (Not Including Electricity)

PHDC Residential Retrofits

(2,301 HOUSES)

- 4,983 GHG Reduced (MT CO₂e)
- 5,941 MWh Reduced
- 20,269 MMBTU Reduced (Electricity Only)
- 34,502 MMBTU Reduced (Not Including Electricity)

Philadelphia Homes Retrofitted Through Government and Utility Programs



TARGET 4:

Purchase and Generate 20 Percent of Electricity Used in Philadelphia from Alternative Energy Sources



Credit: Max Kaiserman

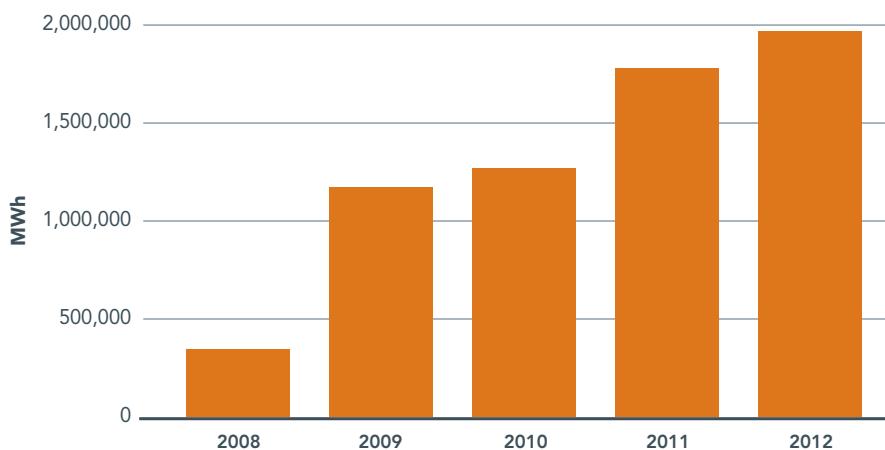
Completed in 1895, the Bourse is the oldest building in Philadelphia with solar power, generating 500 kWh of electricity each year.

Environmental Protection Agency. The City of Philadelphia continues to purchase 20 percent of its electricity from alternative sources and promote renewable energy generation in Philadelphia.

The Philadelphia Water Department, already home to a 250 kilowatt solar array, will add a 5.6 megawatt biogas cogeneration plant to its Northeast Water Treatment facility in 2013. The plant will capture methane biogas generated from the existing sewage treatment process. The captured biogas will be used to generate 43,000 MWh a year, enough to power 3,700 homes, and meet 85 percent of the plant's heat and electrical power demand.

The Philadelphia Eagles are one of many local organizations making a strong commitment to renewable energy. The Eagles outfitted Lincoln Financial Field with more than 11,000 solar panels and 14 vertical axis wind turbines to become the green power showcase of professional sports. The combined systems are projected to provide 30 percent of the power used in the stadium, and the Eagles will purchase alternative energy credits to meet remaining demand.

Alternative Energy Used in Philadelphia



METRICS

- **Greenworks Baseline (2008)**

2.5% Alternative Energy

- **Current (2012)**

14.0% Alternative Energy

- **2015 Target**

20% Alternative Energy



Vertical axis wind turbines at Lincoln Financial Field.

BY THE NUMBERS

250 KW Solar Array Installed at SE Pollution Control Plant

- 164 GHG Reduced (MT CO₂e)
- 309 Renewable MWh Generated

Citywide On-Site Generation

- 2,707 GHG Reduced (MT CO₂e)
- 5,098 Renewable MWh Generated

Renewable Energy Credits

(City of Philadelphia) – **127,000 MWH**

- 67,429 GHG Reduced (MT CO₂e)
- 127,000 Renewable MWh Generated

Renewable Energy Credits

(Rest of City) – **496,317 MWH**

- 249,179 GHG Reduced (MT CO₂e)
- 469,3170 Renewable MWh Generated

TARGET 1: Lower City Government Energy Consumption by 30 Percent

INITIATIVE		PROGRESS 2013
COMPLETED	Adopt Integrated Utility Bill Management System	The City is using the utility bill management database to monitor, track, and report on energy usage. The City continues to add functionality to the database, including expanded energy benchmarking capabilities.
COMPLETED	Apply for All Available Utility Rebates	Phase II of the PECO Act 129 Smart Ideas program went into effect June 2013. The City has received over \$3.6 Million in rebates in Phase I and will continue to pursue all available rebates.
COMPLETED	City Car Management Plan	Successful vehicle reduction and car-sharing programs implemented. In 2013, the Office of Fleet Management will collaborate with the Mayor's Office of Sustainability (MOS) on an alternative fuels policy.
COMPLETED	Develop Energy Load/Demand Management Practices	In summer 2012, the City's participation in PJM's Demand Response program resulted in an 8 MW load reduction. The City will continue to enhance this program in 2013.
COMPLETED	Establish Energy Efficiency Fund	The City's Energy Efficiency Fund was established in 2010. Since that time, the program has invested approximately \$1.5 million dollars in a variety of projects at City facilities with annual savings of more than \$400,000.
COMPLETED	Establish Facilities Task Force	The Facilities Task Force was established in 2011 and will present final recommendations on the City's owned and leased facilities in summer 2013.
COMPLETED	Five-year Strategic Energy Plan (Water Department)	PWD Utility Wide Strategic Energy Plan is in place. Project-specific plans are updated annually.
COMPLETED	Implement Preventative Maintenance Plan	The Department of Public Property expanded its Preventative Maintenance Program by implementing a web-based work order system and hiring additional staff. The City anticipates this program will improve facility conditions, extend equipment life, reduce overall maintenance costs, and conserve energy.
COMPLETED	LEED Legislation for City Buildings	The City has completed the construction on three LEED Silver projects: the new Youth Study Center, Engine 38, and the Police SWAT building.
COMPLETED	Re-establish Municipal Energy Office	Under the Nutter administration, a high-functioning energy office has been incorporated into the Mayor's Office of Transportation and Utilities. In addition to energy conservation, the energy office focuses on supply side strategies that reduce energy costs and environmental impact.
IN PROGRESS	Upgrade Energy Efficiency of Vending Machines	Vending machines at Triplex buildings, City Hall, recreation centers, and other City facilities have been either retrofitted or replaced to increase energy efficiency. The City's current RFP requires new vending machines to be ENERGY STAR labeled.
IN PROGRESS	Benchmark Large City Facilities	MOS completed benchmarking for all City buildings larger than 10,000 square feet using ENERGY STAR Portfolio Manager and will publish the results in 2013.
IN PROGRESS	Create Green Information Technology Plan	MOS and the Office of Innovation and Technology are developing Greenworks at Work, a plan for a more sustainable approach to information technology.
IN PROGRESS	Encourage Conservation Among Employees	MOS and the Energy Office will expand outreach and education to City staff as they continue to implement energy efficiency projects.
IN PROGRESS	Energy-Efficient Capital Investments	Construction on the City's first guaranteed energy savings project at the Triplex buildings and City Hall started in October 2012 and will continue into 2014. Nearly all Energy Efficiency Fund projects granted to date are complete or underway.
IN PROGRESS	Green Building Training for City Employees	In 2012, six city staff from various departments received training and passed the LEED Green Associate exam. Six additional staff are scheduled to take the exam this year, and five City staff are currently enrolled in Building Operator Certification training.
IN PROGRESS	Identify Less-Expensive and Alternative Energy Sources	The City is purchasing electricity and natural gas with a strategic wholesale approach and will seek to expand this to include vehicle fuel purchasing in 2013. 20% of electricity purchased by the City is generated from renewable resources.
IN PROGRESS	Implement Capital Budget Energy Guidelines	MOS continues to offer energy efficiency technical support to capital projects upon request. Beginning in 2013, Capital budget requests require departments to calculate project return on investment.
IN PROGRESS	Include Energy Conservation in Future Building Maintenance Contracts	Through guaranteed energy savings projects, maintenance contracts at Triplex buildings will be updated to include energy-efficient practices.
IN PROGRESS	Install New Outdoor Lighting	New outdoor LED lighting installed at six recreation centers and the four City Hall portals. MOS is exploring lighting upgrades at Streets Department storage yards and other suitable locations.
IN PROGRESS	Investigate Conversion of City Buildings from Steam Loop to Natural Gas	The City and the Philadelphia Museum of Art are concluding an investment grade audit (IGA) for a combined heat and power plant. The IGA results will inform a competitive proposal process to implement the project.
IN PROGRESS	Pilot Department Energy Conservation Incentives	Beginning in 2013, the Energy Office will expand its monthly energy reporting to departments by piloting an incentive-based energy conservation program.
IN PROGRESS	Use Future Energy Costs to Help Inform Building Acquisition/Expansion Decisions	The Facilities Task Force is drafting its final recommendations to the administration to improve the City's approach to asset and facilities management, space and real estate utilization and lease management, capital planning and programming, and utilities payment policies.
FUTURE	Pilot AMI with City Buildings	City buildings to pilot advanced meters as part of PECO's smart grid deployment.
FUTURE	Pilot an Integrated Design Project	Future Initiative.
FUTURE	Use City Buildings to Test Emerging Energy Efficiency Technologies Where Feasible	Future Initiative.

INITIATIVE PROGRESS

TARGET 2: Reduce Citywide Building Energy Consumption by 10 Percent

	INITIATIVE	PROGRESS 2013
COMPLETED	Create a Revolving Loan Fund for Commercial and Industrial Energy Efficiency Retrofits	To date, the EnergyWorks commercial loan program has approved or closed more than \$19 million of energy loans to support large-scale energy retrofit projects in 1,684,000 square feet of space. Independently verified energy analysis projects that these projects will save 68,000 MMBTUs per year.
IN PROGRESS	Develop Cool Roof Code	Bill No. 090023 signed into law May 2010 requiring all new construction and major renovation projects with low-sloped roofs to install EnergyStar-certified cool roofs. L&I now distributes ENERGY STAR Cool Roof information to contractors during the permit process.
IN PROGRESS	Establish Power Purchase Pools for Small Businesses	Philly Buying Power (PBP), a City-endorsed program, aggregates small- and medium-size businesses into large electricity-buying pools that can attract lower rates than businesses can find on their own. PBP purchased over 46 million kilowatt hours for more than 400 properties in 2012, and the businesses received 100% green energy for less than the default market price.
IN PROGRESS	Pursue Competitive Energy Efficiency and Conservation Block Grant through U.S. Department of Energy	The City of Philadelphia received a formula EECBG grant for more than \$14 million and completed work on 12 supported energy efficiency programs in 2013. The City, in coordination with the Metropolitan Caucus and program partners, also received a competitive \$25 million Better Buildings grant to support the development of the EnergyWorks program, which will run through September 2013.
IN PROGRESS	Explore Energy Benchmarking and Reporting for Large Commercial Buildings	Philadelphia became the sixth city in the country to pass a mandatory energy benchmarking and disclosure law in 2012. Beginning in 2013, commercial buildings over 50,000 square feet must annually benchmark and report energy scores, which will become public beginning in 2014.
FUTURE	Consider Adoption of Green Building Code	The City integrated additional green building practices into its new zoning code and its regulations for solar installations. City efforts continue to promote timely statewide adoption of 2012 International Code Council codes necessary to maintain progress toward Greenworks goals for reduced energy consumption, energy cost savings, and improved air quality.
FUTURE	Create an Energy Authority	The Philadelphia Energy Authority (PEA) was established in 2011 and continues to meet regularly to discuss current and future projects. The City and PEA are in discussions regarding several long-term energy projects.
FUTURE	Develop a Citywide Energy-Efficiency Marketing Campaign	The EnergyWorks marketing campaign continues to focus on educating consumers about the benefits of energy efficiency and how they can take action to make improvements. By tracking the performance of various marketing tactics, EnergyWorks is gathering valuable information about how consumers receive energy efficiency information and make decisions.
FUTURE	Grant Floor-Area Ratio Bonuses	Zoning code adopted in August 2012 offers density bonuses on a sliding scale for development projects that meet LEED Platinum or Gold certification standards.
FUTURE	Install Advanced Metering Infrastructure	Through the Smart Future Greater Philadelphia project, funded by the U.S. Department of Energy and PECO, PECO will install 600,000 smart meters and a meter data management system in the Philadelphia region.
FUTURE	Develop Energy-Efficiency Building Guidelines	To provide internal capacity, the City continues to provide green building training for building inspectors and City planning staff. The Mayor's Office of Sustainability has also worked with the Philadelphia Redevelopment Authority and the Office of Housing and Community Development to promote energy efficiency and sustainable design.
FUTURE	Recapitalize EnergyWorks loan program with private funds	The federal funding supporting the EnergyWorks program expires in 2013, though loan funds will revolve over time to support future lending. PIDC and The Reinvestment Fund seek to understand trends in market demand and, accordingly, what capital sources may be available and well-suited to continuing energy efficiency lending in the Philadelphia region.

TARGET 3: Retrofit 15 Percent of Housing Stock with Insulation, Air Sealing, and Cool Roofs

	INITIATIVE	PROGRESS 2013
COMPLETED	Explore Financing Options to Further Help Residents Access Capital for Retrofits	EnergyWorks, through its residential lending partners AFC First and Keystone HELP, makes low interest loans available to homeowners in the five-county region for residential energy efficiency retrofit projects.
IN PROGRESS	Build Energy Efficiency Guidelines/ Requirements into Public and Low-Income Housing	MOS is collaborating with the Office of Housing and Community Development, the Philadelphia Redevelopment Authority, and the Philadelphia Housing Authority to adopt a single green building standard for affordable housing projects in the city.
IN PROGRESS	Expand Current Low-Income Housing Weatherization Efforts	Funding from the state and federal governments to support low-income home weatherization has been dramatically cut in recent years. Weatherization programs have not expanded under this constrained funding context.
IN PROGRESS	Expand Scope of PGW's Weatherization Program and Increase Size	In 2011, PGW launched EnergySense, a portfolio of six energy efficiency programs available to residential, commercial, and industrial customers. As of March 2013, EnergySense has weatherized 3,800 homes and provided 690 rebates for new, high efficiency furnaces and boilers and another 400 rebates to encourage customers to buy programmable thermostats.
IN PROGRESS	Promote Green and Healthy Homes	Since being selected as one of the fifteen sites in the country participating in the Green and Healthy Homes Initiative (GHHI), the Philadelphia Department of Public Health has combined energy efficiency with lead abatement and indoor air-quality improvements to enhance the well-being of children living in economically challenged neighborhoods. To date, with GHHI funding and a partnership with PGW, 74 homes have been weatherized and remediated.

TARGET 4: Purchase and Generate 20 Percent of Electricity Used in Philadelphia from Alternative Energy Sources

INITIATIVE	PROGRESS 2013
COMPLETED	Join EPA Green Power Communities Program In 2012, Philadelphia became the largest city to be a Green Power Community. Green Power Communities are towns and cities that meet or exceed EPA's program requirements for purchasing green power. The City continues to work on increasing green power generation and purchasing.
	Purchase Alternative Energy Credits for at Least 20 Percent of Municipal Electricity Use The City will continue to purchase renewable energy certificates (RECs) covering 20% of its energy usage. By participating in the Green Power Community program and purchasing RECs, the City is leading by example.
	Recycle Deicing Fluid Philadelphia International Airport sends deicing fluid directly to anaerobic digesters at the Philadelphia Water Department's Southeast Water Pollution Control plant. Program reduces aviation operating expenses, generates revenue for PWD, and produces useful biogenic methane.
	Report Solar Financing Options Solar financing information is included in the <i>Solar Photovoltaic Guidebook</i> and the <i>Guidebook for Solar Water Heating Projects</i> .
	Write a Guide for Solar Development <i>Solar Photovoltaic Guidebook</i> updated in March 2011. <i>Guidebook for Solar Water Heating Projects in Philadelphia</i> released December 2011.
	Create Biogas Cogeneration Facility at Northeast Wastewater Treatment Plant Construction of cogeneration facility at Northeast treatment plant is underway. Upon completion, the project will provide 85% of the facility's electricity needs from biogas, a renewable source.
	Explore Vertical Axis Wind Turbines Zoning code adopted in August 2012 allows small wind energy systems as an accessory use in all districts and allows wind energy equipment to encroach limited distances above building height limits. The Philadelphia Eagles installed 14 micro wind turbines in fall of 2012.
	Install Geothermal System at Sewer Maintenance Facility The West Philadelphia Maintenance Facility design is complete and includes a geothermal heat exchange system. Construction contingent on funding.
	Reduce Regulatory Barriers to Solar Installation Zoning code adopted in August 2012 eases the permit process for large-scale solar installations. Two laws sponsored by Councilman Kenney exclude the costs of solar panels and inverters in calculating electrical permit and building permit fees.
	Support Passage of State Legislation to Revitalize SAEC Market Both PA House Bill 1580 Senate Bill 1350 remain stalled. The PA Solar Alternative Energy Credit market suffers from oversupply and continues to decline.
IN PROGRESS	Develop Solar Land Use Plan Future initiative.
	Educate Energy Purchasers on Benefits of Local Alternative Energy Credits Supporting local renewable energy has several ancillary benefits, such as creating local jobs, reducing air pollution in the region, and decreasing electricity costs through reduced capacity charges in the PECO zone. Local renewable energy can also put vacant land back to work and serve to educate Philadelphians about renewable energy. The more local our residents' and businesses' renewable energy purchases are, the more the benefits accrue directly to the community.
	Explore Ways to Capture Water at Fairmount Park and Flat Rock Dams New design of Flat Rock Dam is underway and includes space to accommodate a potential hydroelectric project.
	Promote Renewable Power Purchase Agreements for Public Buildings The renewable energy market in Pennsylvania currently does not support renewable power purchase agreements. The City remains prepared to develop projects when the market improves.



Solar panels cover the south facade of Lincoln Financial Field.



ENVIRONMENT

GOAL: PHILADELPHIA REDUCES ITS ENVIRONMENTAL FOOTPRINT

TARGET 5:

Reduce Greenhouse Gas Emissions by 20 Percent

The Mayor's Office of Sustainability (MOS) tracks greenhouse gas (GHG) emissions for the entire city and for the municipal government. In the *Greenworks Update and 2012 Progress Report*, MOS added 2006 to the existing baseline year of 1990. GHG inventories require an enormous amount of specific, consistent data, and the more recent baseline year of 2006 is a far more accurate benchmark than 1990. Against the new baseline, both inventories show reductions reflecting the impact of GHG mitigation initiatives in *Greenworks*, including energy efficiency, alternative fuel use, and tree planting.

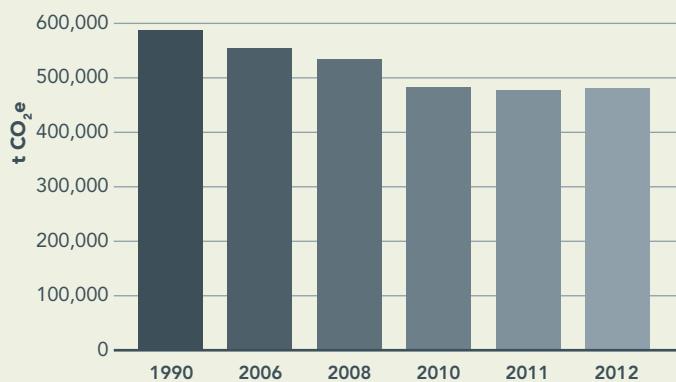


Buildings account for more than 60 percent of citywide GHG emissions in Philadelphia.

The 2012 municipal GHG inventory shows a 13 percent decrease in emissions since 2006. Energy conservation in City buildings and the use of clean-burning biofuel in the City fleet are two main drivers of this change. The largest emissions decrease in both the municipal and citywide inventories comes from power plants decreasing the use of coal for electricity generation. The recently updated 2010 citywide inventory shows an eight percent emissions decrease since 2006. Because citywide energy use increased 14 percent during this period, the drop in GHG emissions can be attributed almost exclusively to power plant fuel switching.

In May 2013, the National Oceanic and Atmospheric Administration reported that global carbon dioxide levels reached an average daily concentration above 400 parts per million, the highest rate measured for millions of years. In addition to local GHG mitigation efforts, MOS participated in the Carbon Disclosure Project (CDP) Cities Project for the third consecutive year. CDP invites cities around the world to share GHG inventories, along with mitigation and adaptation strategies, with the goal of providing an index of programs that address global climate change.

Municipal Greenhouse Gas Emissions



METRICS

Municipal

- 1990 Baseline

587,899 t CO₂e

- 2006 Baseline

554,842 t CO₂e

- Current (2012)

481,726 t CO₂e

- 2015 Target

470,319 t CO₂e

Citywide

- Adjusted Greenworks Baseline (1990)

21.21 Million t CO₂e

- 2006 Baseline

23.22 Million t CO₂e

- Current (2010)

22.33 Million t CO₂e

- Adjusted 2015 Target

16.97 Million t CO₂e

TARGET 6:

Improve Air Quality Toward Attainment of Federal Standards

METRICS

• Greenworks Baseline (2008)

20 Unhealthy AQI Days

Current (2012)

21 Unhealthy AQI Days

• 2015 Target

10 Unhealthy AQI Days

Philadelphia is served by a network of ten air monitoring stations located throughout the city. The network is operated by the Philadelphia Department of Public Health's Air Management Services (AMS) unit. AMS closely tracks levels of criteria pollutants such as carbon monoxide, sulfur dioxide, particulate matter, and lead to provide regular air quality information and alerts to the public.

Five of the air monitoring stations in Philadelphia also measure air toxics. Many of these measurements are made in real time, which is essential for AMS to provide timely public information and to identify pollution sources. Through the network, AMS monitors high levels of contaminants and population exposure and tracks long-term trends.

Greenworks acknowledges that factors such as weather and air pollution beyond Philadelphia's borders strongly influence local air quality, but encouraging residents to drive less and promoting cleaner burning vehicles makes an important difference by lowering local emissions.

In 2012, Bike Score ranked Philadelphia the fourth most bikeable city in the country. This score is based on the number of residents who commute by bike, number and quality of bike lanes, and availability of bike parking. The City continues to encourage biking by adding new lanes, sharrows, and parking stations.

With transit ridership at its highest point in over two decades, SEPTA is working hard to reduce emissions while meeting increased demand. In 2013, SEPTA purchased 160 new hybrid diesel buses, which will be phased in over the next two years. In 2015, over 50 percent of SEPTA's bus fleet, more than 630 buses, will be fuel-efficient, low-emissions hybrids.

BY THE NUMBERS

Purchase Biodiesel for Use in City Fleet

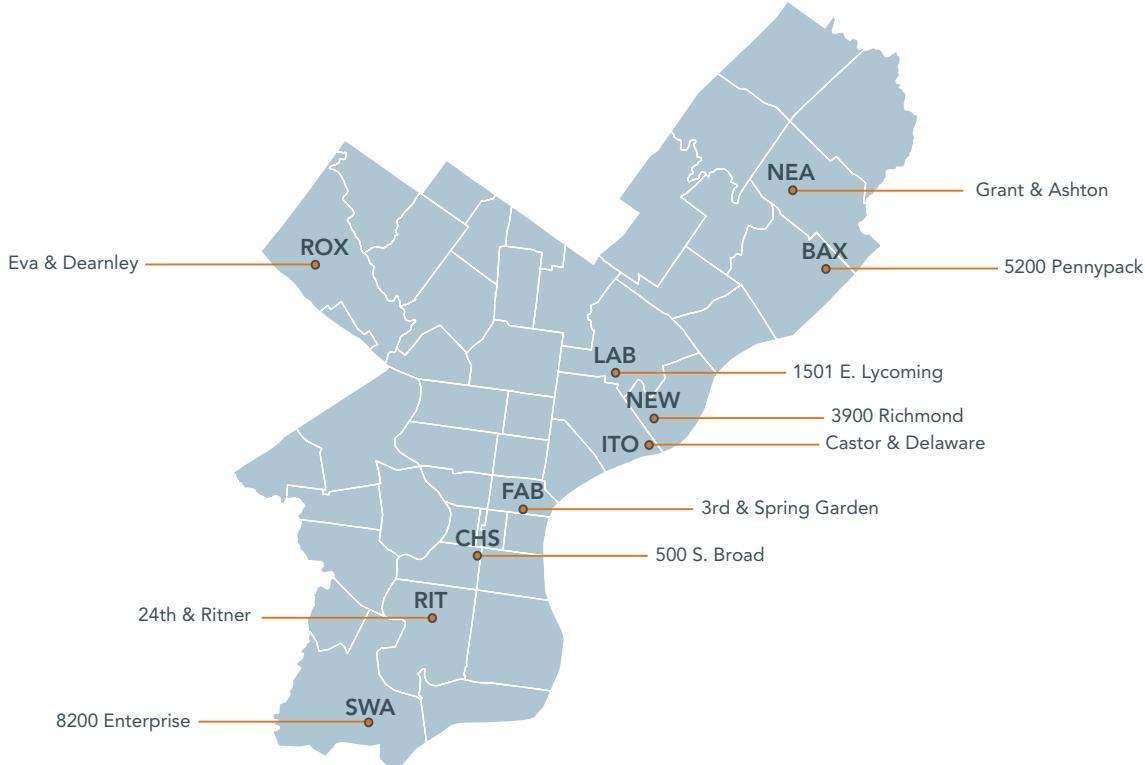
- 1,062 GHG Reduced (MT CO₂e)

Purchase Hybrid Buses

(SEPTA Purchased 472)

- 12,798 GHG Reduced (MT CO₂e)
- 173,046 MMBTU Reduced (Not Including Electricity)

Philadelphia Air Monitoring Network



TARGET 7:

Divert 70 Percent of Solid Waste From Landfill

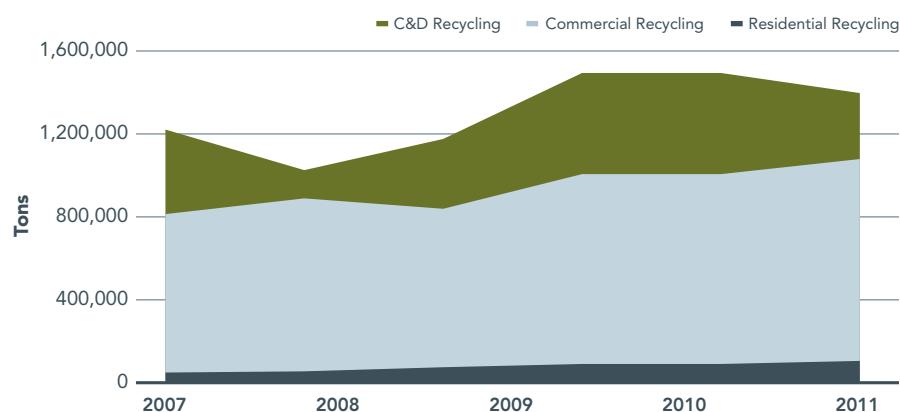
In 2011, the most recent year for which data is available, approximately 49 percent of Philadelphia's solid waste was recycled, and another 28 percent was used to produce energy. The 77 percent total rate of solid waste diversion from landfill exceeds the *Greenworks* goal of 70 percent diversion. In May 2012, City Council proposed legislation to allow the Philadelphia Streets Department to enter into a solid-waste contract that will divert nearly 100 percent of residential municipal solid waste from landfills beginning in 2014.

The 2012 Philadelphia Marathon, with the help of 500 bins generously donated to the City of Philadelphia by SCA Americas and more than 200 Waste Watchers volunteers, successfully diverted more than 87 percent of the waste generated during the race from the landfill. Waste Watchers educated more than 28,000 runners and myriad spectators who supported the effort by sorting their waste into recycling, compost, and trash.

In April 2012, the Philadelphia Streets Department and Philadelphia Parks & Recreation (PPR) launched a pilot program collecting recycling in outdoor spaces throughout PPR properties in Northwest Philadelphia. During the first year of the program, participants diverted 18.4 tons of recycling from the landfill. The Streets Department and PPR aim to expand the program to service more than 100 additional facilities.

The Philadelphia Prisons System added food waste composting to their successful recycling program. With a \$15,000 grant from the U.S. EPA, the Prisons built a pilot composting system that processes 600 pounds of food waste a day, provides jobs skills to inmate laborers, and saves the Prisons considerable money.

Philadelphia Recycling



METRICS

• Greenworks Baseline (2008)

53%

Waste Diverted from Landfill

• Current (2011)

77%

Waste Diverted from Landfill

• 2015 Target

70%

Waste Diverted from Landfill

BY THE NUMBERS

City Collected Curbside Recycling

(105,248 TONS)

- 63,149 Waste Diverted from Landfills (tons)

Privately Collected Recycling

(973,635 TONS)

- 584,181 Waste Diverted from Landfills (tons)

Electronic Waste Recycling

(204 TONS)

- 470 GHG Reduced (MT CO₂e)
- 204 Waste Diverted from Landfills (tons)

C&D Recycling

(318,104 TONS)

- 302,199 Waste Diverted from Landfills (tons)

Waste Watchers volunteers managing bins donated by SCA Americas at the 2012 Philadelphia Marathon.

TARGET 5: Reduce Greenhouse Gas Emissions by 20 Percent

INITIATIVE	PROGRESS 2013
Conduct Greenhouse Gas Inventory for Philadelphia International Airport	Initial inventory completed in 2009. An updated greenhouse gas inventory is planned prior to start of the Airport's Capacity Enhancement Program.
Annually Report GHG Emissions and Climate Adaptation/Mitigation Strategies through Carbon Disclosure Project	In 2013, the Mayor's Office of Sustainability (MOS) participated in the Carbon Disclosure Project for the third consecutive year.
Conduct Community Greenhouse Gas Inventory Every Two Years	In 2012, MOS worked with the Philadelphia City Planning Commission, Air Management Services, and the Delaware Valley Regional Planning Commission (DVRPC) to update the citywide greenhouse gas inventory. Both the citywide inventory and a regional inventory conducted by DVRPC will be published in 2013.
Advocate for Federal Climate Legislation	In a speech delivered at the 2013 U.S. Conference of Mayor's winter leadership meeting, Mayor Nutter placed climate as a priority for the Conference. Mayor Nutter is hopeful that mayors and cities can be at the center of conversations about what steps the federal government can and should take to support climate efforts. Philadelphia will continue to engage as an active partner in any and all federal next steps on this critical issue.
Maintain Greenhouse Gas Emissions Inventory for Municipal Government	MOS has completed municipal GHG inventories for the past three years.

TARGET 6: Improve Air Quality toward Attainment of Federal Standards

INITIATIVE	PROGRESS 2013
Develop Green Ports Plan	In 2010 the Delaware River Port Authority completed the Green Ports Initiative report, which establishes energy efficiency, environmental management, procurement, waste, and water recommendations and metrics for the agency.
Purchase Hybrid Diesel Buses	In 2013, SEPTA purchased 160 new hybrid-electric buses. By 2015, approximately one half (632) of SEPTA's 1300-bus fleet will be operating on hybrid-electric technology.
Airport Green Plan	Philadelphia International Airport (PHL) launched its Green Plan in 2010. In 2011, PHL completed an Organic Waste Pilot Program and is currently working to implement a material recovery facility on site.
Congestion Reduction	The Mayor's Office of Transportation and Utilities continues to optimize traffic flow on key corridors by re-timing traffic signals.
Consider the creation of demand pricing schemes for Parking	The Philadelphia Parking Authority set different prices for parking on major commercial corridors depending on the day of the week and time of day. The selected prices and time limits aim to maintain approximately 80 percent parking occupancy, which reduces circling by vehicles searching for parking and in turn reduces congestion and emissions from automobiles.
Develop a Compressed Natural Gas Facility	Clean Energy Fuels Corp. installed a CNG station near PHL on property owned by Wallypark. PHL is seeking FAA funding to acquire CNG buses for its parking shuttle fleet.
Facilitate Use of Electric Vehicles	The Streets Department issued regulations allowing Philadelphia residents who own or lease an electric vehicle to apply for a reserved electric vehicle parking space on the street in front of their residence.
Increase Parking Options for Bicycles and Motor Scooters	The City installed 463 new bike racks in 2012. The Philadelphia Parking Authority established new parking zones to accommodate motorcycles and scooters in the area between Arch and Locust, and Broad and the Schuylkill River.
Increase the City Fleet's Gas Mileage	70% of Police fleet replaced with better MPG vehicles between 2009 and 2010. Vehicle replacements slowed due to budget constraints.
Increase the Number of Hybrid or Compressed Natural Gas Taxis	Major medallion owners continue to add alternative fuel vehicles to their fleets.
Increase the Use of Biodiesel Fuel in the City Fleet	All diesel vehicles in the City fleet currently run on biodiesel.
Retrofit Diesel Vehicles	Office of Fleet Management has replaced filters on all diesel fleet vehicles. As a result of Executive Order 1-07, all diesel non-road vehicles used in public works projects of over \$1,000,000 must install diesel retrofits to reduce particulate matter emissions by at least 20 percent.

INITIATIVE PROGRESS

TARGET 7: **Divert 70 Percent of Solid Waste from Landfill**

INITIATIVE	PROGRESS 2013
COMPLETED	
Develop an Incentive-based Recycling Plan.	As of spring 2013, Recycling Rewards has approximately 195,000 households enrolled. The program received the 2012 U.S. Conference of Mayors Innovative Partnership Award.
Expand Plastics Recycling	City expanded to plastics #1-7 in August 2010. In 2011, the City began accepting food and beverage cartons curbside and #6 styrofoam plastic at the Northeast Sanitation Convenience Center.
Anti Littering Campaign	Streets Department launched UnLitter Us campaign in 2010. Sixth annual Philly Spring Clean Up in April 2013 removed more than 1 million pounds of trash and 23,341 pounds of recycling.
Construction and Demolition (C&D) Waste Management Program	Approximately 85% of generated C&D debris recycled in 2011. Private sector investment and expansions continue.
Continue Event Recycling	SCA-sponsored bins debuted at 2012 Philadelphia Marathon and, along with Waste Watchers volunteers, helped divert 85% of waste. SCA bins continue to be utilized.
Continue/Expand Public Space Recycling	Streets Department and Philadelphia Parks & Recreation launched a pilot program that expands recycling to outdoor spaces throughout PPR properties in Northwest Philadelphia. During the first year of the program, PPR diverted 18.4 tons of recycling from the landfill.
Enhance Electronic Recycling	2012 electronics recycling exceeded 500,000 pounds, a 40% increase from 2011. City operates three permanent drop-off stations, runs eight remote events, and holds 2nd Sunday events at Ezekiel Baptist Church.
Expand Recycling at Transit Stations	SEPTA has entered into a contract with Waste Management to provide recycling hauling services at passenger stations, depots, and backshops through 2017. Recycling is now in place at all City Transit rail stations, depots, backshops, and select Regional Rail Stations. SEPTA is in the planning process to bring recycling to all Regional Rail stations by 2014.
Include Sustainability Criteria in Solid Waste Contracts	Spring 2012 solid waste contract will divert nearly 100% of residential municipal solid waste from landfills beginning in 2014.
Increase Oversight of Recycling in Commercial Buildings	More than 11,000 businesses have registered recycling plans with the City as of 2013. Recycling of key commercially generated materials such as cardboard, paper, and food and beverage containers increased from 85,700 tons in 2010 to 154,000 tons in 2011.
Increase Recycling at City Facilities	Rebranded recycling program promotional materials for City office workers have been developed and will be fully distributed in 2013.
Institute Sustainable Procurement Policy	The Procurement Department and MOS are partnering to examine contracts up for renewal or bid and to identify opportunities to add more sustainable requirements.
Place more public records, plans, and documents online	In 2012, 58% of the submissions received by the Records Department were recorded electronically, and 87% of employees filed financial disclosure statements electronically.
Promote Composting	Waste Watchers program promotes composting at large events. Private sector and institutional participation in composting programs—including food waste—continues to expand.
Study Energy-from-Waste Alternatives	Philadelphia Water Department exploring feasibility of food waste digesters at wastewater treatment plants.
IN PROGRESS	



Credit: Peter Tobia

A bike commuter uses one of the newly installed bike corrals in Center City.



EQUITY

GOAL: PHILADELPHIA DELIVERS MORE EQUITABLE ACCESS TO HEALTHY NEIGHBORHOODS

TARGET 8:

Manage Stormwater to Meet Federal Standards

METRICS

- Greenworks Baseline (2011)

0 New Greened Acres

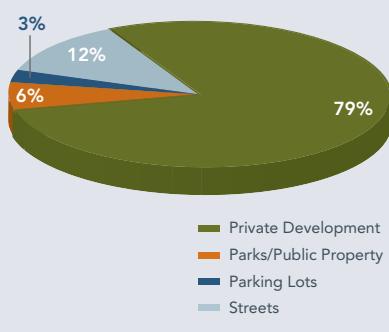
- Current (2012)

102.4 New Greened Acres

- 2015 Target

450 New Greened Acres

Greened Acres



Credit: Pennsylvania Environmental Council

A family in Cobbs Creek with their newly installed rain barrel.

The Philadelphia Water Department (PWD) has innovative and trend-setting agreements with the Pennsylvania Department of Environmental Protection and the U.S. Environmental Protection Agency (EPA) to manage stormwater with green infrastructure that intercepts rainwater where it falls. The Green City, Clean Waters Implementation and Adaptive Management Plan, the first deliverable of the City's agreement with the State of Pennsylvania, was formally accepted on November 15, 2012, and Philadelphia boasts 102.4 completed greened acres, a more than sevenfold increase in one year.

PWD and the Philadelphia Industrial Development Corporation (PIDC) launched the Stormwater Management Incentives Program (SMIP) in January 2012. SMIP offers stormwater bill credits to owners of impervious commercial properties who build and maintain green stormwater management projects. For the first round of SMIP funding, PWD selected eight projects from 45 applications. The \$3.2 million in grants awarded will result in 65.5 greened acres.

With a \$30 million, 20-year low-interest federally funded loan from PENVEST, PWD will create over 90 greened acres and restore streams at three sites. To date PWD has completed three of the project's five green stormwater infrastructure phases. The final two phases of work are under construction, and PWD anticipates completing them by the end of the year.

PWD partnered with the U.S. EPA and the Community Design Collaborative to launch Infill Philadelphia: Soak It Up!, a design initiative that explores how green stormwater infrastructure can revitalize urban neighborhoods. As part of the program, a design competition generated 28 submissions from world-class interdisciplinary teams addressing three real-life Philadelphia sites—industrial, commercial, and neighborhood—with innovative and cost-effective designs.



17 olympic sized swimming pools worth
of water managed by those rain barrels yearly

TARGET 9:

Provide Walkable Access to Park and Recreation Resources for All Philadelphians



Julian Abele Park in South Philadelphia.

PPR, boasts new pavers, sidewalks, stormwater tree trenches, plantings, and benches. Paine's Park, along the Schuylkill River near the Philadelphia Museum of Art, is a 2.5 acre skatepark offering 75,000 square feet of skate space, pedestrian trails, and an acre of open space.

The Philadelphia City Planning Commission and PPR, in collaboration with the Mayor's Office of Transportation & Utilities released the *Philadelphia Trail Master Plan* in spring 2013. The plan establishes the goals of the Philadelphia trail network as connectivity, safety, encouragement, and open space. The plan also inventories existing trail facilities; ranks proposed projects based on their alignment with these goals, demand for services provided, and City priority; and clarifies the process of trail development and construction in Philadelphia.

PPR is also engaging in strategic planning. In partnership with PennPraxis, PPR completed *More Park, Less Way: An Action Plan to Increase Urban Vibrancy on the Benjamin Franklin Parkway*, which includes a menu of options that can be implemented in the next three years to increase the amenities the Parkway offers residents. PPR is also leading a process to re-imagine Bartram's Mile, which is one mile of currently vacant river frontage along the Schuylkill between Grays Ferry Avenue and 58th Street.

Since Greenworks launched, Philadelphia Parks & Recreation (PPR) and other landowners have added more than 133 acres of new park space.

Parks completed in 2013 represent the wide variety of open space in Philadelphia. Julian Abele Park, located at 22nd and Carpenter Streets, is a neighborhood park that, with funding from the Pennsylvania Department of Conservation and Natural Resources, the Philadelphia Water Department, the Pennsylvania Horticultural Society, and

METRICS

- **Greenworks Baseline (2008)**

10,300

Acres of Open Space

- **Current (2012)**

10,433

Acres of Open Space

- **2015 Target**

10,800

Acres of Open Space

Philadelphia Trail Progress Since 2011



TARGET 10:

Provide Walkable Access to Affordable, Healthy Food for All Philadelphians

METRICS

- Greenworks Baseline (2008)

230

Markets, Gardens, and Farms

- Current (2013)

314

Markets, Gardens, and Farms

- 2015 Target

316

Markets, Gardens, and Farms

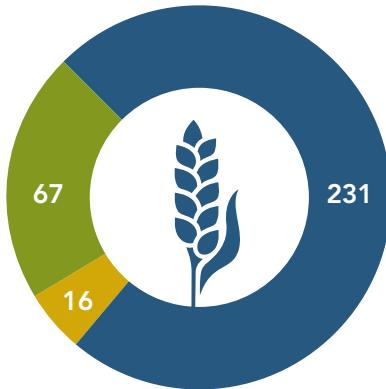
To increase access to local food, *Greenworks* set a goal of adding 86 new gardens, farms, and farmers markets by 2015. Since 2009, the city boasts 37 new farmers markets and 47 new farms or gardens, which together represent over 97 percent progress toward meeting the initial goal. Ten of the new farmers markets were opened between 2010 and 2012 by the Philadelphia Department of Public Health (PDPH) and The Food Trust in underserved communities as part of the Get Healthy Philly initiative, and the program expanded hours at five of the markets for the 2013 season.

During 2012 and 2013, MOS partnered with PDPH to convene all City agencies that regulate farmers markets, inventory the current requirements for farmers markets held on public property, and identify opportunities to streamline the regulations and make operating farmers markets in Philadelphia easier. MOS and PDPH created a how-to guide for 2013 market operators and plan to further simplify farmers market regulations before the 2014 season.

In spring 2013, Philadelphia Parks & Recreation (PPR) launched FarmPhilly, a program supporting food-producing gardens at 13 recreation centers. The gardens will provide programming for day camp students and nutrition education for community members.

In 2013, PDPH's Office of Food Protection completed several initiatives to simplify and communicate the process of starting a food business in Philadelphia. PDPH published *A Guide to Permits and Licenses: Opening a Stationary Food Business in the City of Philadelphia*, created a streamlined plan review application form for stationary food business, began accepting on-line payments, and initiated joint counter hours with Licenses & Inspections in the Municipal Services Building concourse.

Markets, Gardens, and Farms in Philadelphia



MARKETS
GARDENS
F FARMS



Teens 4 Good youth, who learn farming and entrepreneurial skills, staff one of the organization's farmstands.

TARGET 11:

Increase Tree Coverage toward 30 Percent in All Neighborhoods by 2025

Over the past four years, Philadelphia Parks & Recreation (PPR) has formed a number of tree-planting partnerships, on both public and private land, that have resulted in planting more than 89,000 new trees, or approximately 30 percent of the *Greenworks* goal to plant 300,000 trees by 2015.

Since PPR launched TreePhilly, a greening initiative that directly engages Philadelphians in improving their communities by planting and maintaining trees, the program has given away nearly 6,600 trees for Philadelphia residents to plant in their front, back, and side yards. In 2013, TreePhilly began the Street Tree Block Program which helps neighbors navigate the street tree planting process and coordinate with PPR arborists and contractors to get new trees planted on their blocks.

PPR's Seasonal Tree Maintenance Associate Program is now called TreeKeepers. In 2012, TreeKeepers visited 35 PPR facilities, pruned and mulched 2,220 trees, maintained 20,054 linear feet of trail, and managed 116,184 square feet of stormwater bioswale area. In 2013, TreeKeepers will employ 12 full-time crew members who receive horticultural and arboricultural training. TreeKeepers will take a stormwater management course from the Pennsylvania Horticultural Society through a training program funded by the U.S. Environmental Protection Agency.

TreePhilly partners with community organizations to survey street tree pits. The Tookany/Tacony Frankford (TTF) Watershed Partnership was an active partner on this project, holding eight tree surveying events over summer and fall 2012, working with almost 200 volunteers to survey 7,000 properties. TTF surveyed the entire neighborhood of West Oak Lane. PPR used the tree survey data gathered by TTF to select locations for street tree plantings.

METRICS

- Greenworks Baseline (2008)

0 New Trees

- Current (2012)

89,287 New Trees

- 2015 Target

300,000 New Trees

Cumulative Trees Planted Since 2011



Tree Coordinator Erica Smith with yard trees growing at the City's nursery in Fairmount Park.

TARGET 8: Manage Stormwater to Meet Federal Standards

INITIATIVE	PROGRESS 2013
COMPLETED Develop Sustainable Stormwater Management Plan	The Green City, Clean Waters Implementation and Adaptive Management Plan, the first deliverable of the City's Consent Order and Agreement with the State of Pennsylvania was formally accepted by the Pennsylvania Department of Environmental Protection (PADEP) on November 15, 2012.
IN PROGRESS Create new tidal/non-tidal wetlands along Delaware and Schuylkill Rivers	Philadelphia Water Department (PWD) is monitoring the Wises Mill and Cathedral Run wetlands completed in 2012. Including Saylor's Grove, PWD now manages three stormwater treatment wetlands. Through its comprehensive monitoring program, PWD ensures the wetlands manage stormwater optimally and gathers data to inform the planning of future large-scale stormwater management projects.
Control Pollution and Trash on the Rivers	PWD continues its aggressive strategy of removing debris and floatables from the Delaware River and tidal Schuylkill River. In the past year PWD removed 27.1 tons of trash from this area and an additional 2 tons from the non-tidal portion of the Schuylkill River between Fairmount Dam and Flatrock Dam.
Create Green Streets	PWD completed design of five phases of work funded by a \$30 million PENNVEST loan, and all projects are either built or under construction at this time. PWD has begun design of additional projects, focusing on sites that can be installed at the same time as other water and sewer improvement projects. In the past year, PWD and the Streets Department collaborated on the construction of three large rain gardens as part of the Passyunk Avenue realignment project and completed designs for the TIGER 3 and Stenton and Washington Avenues projects.
Expand the Rain Barrel Programs	Since last year, approximately 1,054 rain barrels have been distributed by PWD, bringing the current total to 3,254 rain barrels distributed through the free rain barrel program.
Green Surface Parking Lots	As of spring 2013, PWD has approved 163 porous pavement projects, totaling 72.3 acres.
Implement New Stormwater Fees & Credits	PWD commercial customers are in the final phase-in year and will see 100% parcel-based stormwater fees starting July 2013. Many customers are taking advantage of PWD's program that grants stormwater bill credits for green elements installed on their property.
Improve Stormwater Management at City Airport Facilities	Construction is underway on the PHL Perimeter Gate 8 project which incorporates two vegetated swales and porous pavement. Construction will soon begin on the Rental Car Facilities Expansion project which will incorporate three bioretention basins, porous pavement, and new trees. PWD, Department of Aviation, and PADEP will continue to collaborate on stormwater management solutions for airport facilities.
Increase the Number of Green Roofs	Thirteen additional green roofs have been constructed, bringing the current total to 80 (16.0 acres). An additional 21.7 acres are either under construction or planned at 60 sites around the city.
Maintain Recent Stormwater Regulatory Changes	Since 2006, PWD has approved over 2,000 acres of development under the stormwater regulations, including 206 acres as part of 78 approvals to date in FY13.
Offer Incentives to Property Owners who Build Green Stormwater Infrastructure	Non-residential PWD customers, Business Improvement Districts, Neighborhood Improvement Districts, and Special Services Districts are eligible for the Stormwater Management Incentives Program, which offers both grant and loan incentives. Residents in the CSO are eligible for PWD's Rain Check program, which shares costs of special residential landscape improvements that help manage stormwater runoff and beautify homes.
Restore Waterways	PWD finalized design of the Gorgas Run Stream Restoration project and will seek construction bids in 2013. Along with the Wises Mill, Bells Mill, and St. Martin's restoration projects, the Gorgas Run project completes PWD's Sediment TMDL compliance program in the Wissahickon watershed. PWD is continuing the design process for the Cobbs and Tacony Creek stream corridor restoration projects.

TARGET 9: Provide Walkable Access to Park and Recreation Resources for All Philadelphians

INITIATIVE	PROGRESS 2013
IN PROGRESS Create a Corridor Network Connecting Parks, Neighborhoods, and Trails Citywide	The Philadelphia City Planning Commission and Philadelphia Parks & Recreation (PPR) released the <i>Philadelphia Trail Master Plan</i> in Spring 2013. The plan defines priorities for future trail development in Philadelphia. Since 2011, 17.4 miles of trails have been constructed, are under construction, or have been designed.
Develop Parkland and Open Space Connections Along the City's Creeks and Rivers	PPR, the Schuylkill River Development Corporation, and the John Bartram Association are leading a process to reimagine "Bartram's Mile," a mile of currently vacant river frontage along the western shore of the Schuylkill River between Grays Ferry Avenue and 58th Street. In addition, The Delaware River Waterfront Corporation is working to create a linear park along the Delaware River.
Explore the Use of Innovative Financing for Open Space Development	PPR is partnering with the Philadelphia Water Department (PWD) and the Trust for Public Land (TPL) on a pilot which works with residents to create new green play spaces in underserved neighborhoods. The pilot actively engages residents in the design, development, and stewardship of the new green spaces.
Increase Stability of Fairmount Park Ecosystem	PPR's Urban Forestry and Ecosystem Management Division partnered with Biohabitats to complete the <i>Parkland Forest Management Framework</i> , which includes an updated tree restoration plan and 16 pilot projects.
Prioritize New Green Space Creation Within Low-Served Neighborhoods	The PPR, PWD, and TPL pilot is focused in areas of need identified by Green2015.

TARGET 10: Provide Walkable Access to Affordable, Healthy Food for All Philadelphians

INITIATIVE	PROGRESS 2013
COMPLETED Establish Food Policy Advisory Council	Mayor Nutter appointed the Food Policy Advisory Council (FPAC) in 2011. In 2012, FPAC testified at City Council hearings, advised the administration on vacant land disposition for food production, and helped update emergency food access information available through 311. FPAC also formed a new subcommittee focused on communication.
Include Fresh Food Market Incentives in Zoning Code	Zoning code adopted in August 2012 provides floor area, building height, and parking requirement reduction incentives for fresh food markets to locate in a variety of zoning districts.

INITIATIVE PROGRESS

IN PROGRESS

Encourage Distribution of Healthy Food in Neighborhood Stores	Through a partnership between the Philadelphia Department of Public Health (PDPH) and the Food Trust, more than 630 corner stores have been recruited into the Healthy Corner Store Initiative.
Expand the Number of Neighborhood Farmers Markets	In 2013, PDPH's Get Healthy Philly program is extending the season at its 10 farmers markets in underserved areas and is also expanding the hours of 5 markets. SEPTA also worked with a variety of partners to create new farmers markets at the Olney and Frankford Transportation Centers and the 46th Street El Station.
Foster Commercial Farming	Zoning code adopted in August 2012 allows market or community-supported farms, horticulture nurseries, and greenhouses as principal or accessory uses in a variety of zoning districts.
Foster School-Based Efforts	PDPH hired a School Food Coordinator in 2013. As part of Get Healthy Philly, 171 public schools created School Wellness Councils focused on physical activity and nutrition, and the breakfast cart program provides nutritious breakfast to 20,000 public school students.
Integrate Anti-Hunger Efforts into Food and Urban Agriculture Goals	PDPH created Philly Food Bucks to promote spending food stamp benefits at farmers markets. The program increased SNAP sales at Food Trust farmers markets by 335%.
Leverage Vacant Land	Land-holding agencies created a comprehensive list of City-owned parcels available for sale at www.PhillyLandWorks.org .
Provide Technical Assistance to Community Gardeners and Urban Farmers	During the 2013 growing season, Philadelphia Parks & Recreation is partnering with the Penn State Extension to provide technical assistance to gardens at 13 recreation centers, where youth in summer recreation programs will learn about gardening and nutrition.
Publicize Local Food-Source Efforts	Fair Food Philly and the Pennsylvania Association for Sustainable Agriculture hosted the second Philly Farm & Food Fest, a day of eating and hands-on learning about the region's food system, in April 2013. Fair Food and GRID Magazine published the Philadelphia Local food Guide.
Support Expansion of Food Co-ops	The City is working to support the South Philly Co-op's real estate search. The Philadelphia Industrial Development Corporation provided 19% of the capital for the expansion of Mariposa Food Co-op, which opened its new location in March 2012.
Support Green Kitchen Development	PDPH, Department of Commerce, and PIDC supported the creation of the Enterprise Center CDC's Center for Culinary Enterprises, a shared-use culinary business center.
Update Food Business Guide	The Guide to Opening a Stationary Food Business in the City of Philadelphia was released in spring 2013. PDPH is drafting a similar guide for mobile vendors.

TARGET 11: Increase Tree Coverage Toward 30 Percent in All Neighborhoods by 2025

COMPLETED

IN PROGRESS

INITIATIVE	PROGRESS 2013
Establish Seasonal Tree Maintanence Associate Program	In 2012 Philadelphia Parks & Recreation's (PPR's) seasonal tree crew, TreeKeepers, visited 35 park facilities, pruned and mulched 2,220 trees, maintained 20,054 linear feet of trail, and managed 116,184 square feet of stormwater bioswale area. In 2013, TreeKeepers is expanding to 12 full-time crew members.
Provide Incentives for Preserving Large Caliper Trees	Zoning code adopted in August 2012 provides credits for preserving existing trees in §14-705(1).
Change Street Tree Rules Involving Property-Owner Permission	Philadelphia Parks & Recreation (PPR) established a notification and opt-out process for owners of property abutting planned street tree plantings. PPR is sending opt-out letters to both home and business owners.
Launch Local Carbon Offset Market	Through a partnership between the City, the U.S. Forest Service, and Fairmount Park Conservancy, the Erase Your Trace website launched in spring 2009. The tool allows for the purchase of carbon offsets that benefit local tree planting efforts.
Revise the Zoning Code Regarding Trees for Surface Parking Lots	The zoning code adopted in August 2012 requires any surface parking area located within 20 feet of any public street to include trees.
Create Urban Tree Forest Management Program	PPR's Urban Forestry and Ecosystem Management Division partnered with Biohabitats to complete the <i>Parkland Forest Management Framework</i> , which includes an updated tree restoration plan and 16 pilot projects.
Decrease the Cost of Tree Planting	In its first three rounds of giveaways, the TreePhilly campaign purchased and distributed 6,600 container trees for planting by homeowners in yards and volunteers in public spaces.
Establish City-wide Public Tree Planting Campaign	Since its launch in 2012, TreePhilly campaign has given away more than 6,600 yard trees.
Fully Stock Street Trees Adjacent to All City Facilities	PPR is partnering with other City departments and large landowners including SEPTA, the School District of Philadelphia, the Philadelphia Fire Department, and the Philadelphia Prisons System to plant street trees and interior trees in neighborhoods with low tree canopy.
Green the Schools	Trust for Public Lands is leading a partnership among PPR, Philadelphia Water Department, and the School District of Philadelphia to green schoolyards.
Initiate City-Based Growing	PPR's Greenland nursery has 3,000 trees and woody shrubs in production this year for planting in natural areas and in PWD green stormwater infrastructure facilities.
Prioritize Tree Planting in Low-Canopy, High-Crime Districts	PPR used data from the Urban Tree Canopy assessment to prioritize eight focus areas with low canopy and high potential for public space and yard tree plantings.
Strengthen and Increase Public-Private Maintenance Partnerships	TreeKeepers partners with Mural Arts, the Schuylkill Project, and the Pennsylvania Horticulture Society's Green Machine program.
Target Empty Tree Pits	PPR is attempting to replant in all pits as soon as a tree is removed. Citizen surveys of empty pits are helping PPR target areas for inspection and planting.



ECONOMY

GOAL: PHILADELPHIA CREATES A COMPETITIVE ADVANTAGE FROM SUSTAINABILITY

TARGET 12:

Reduce Vehicle Miles Traveled by 10 Percent

METRICS

- **Greenworks Baseline (2005)**

5.96

Billion Vehicle Miles Traveled

- **Current (2011)**

5.34

Billion Vehicle Miles Traveled

- **2015 Target**

5.36

Billion Vehicle Miles Traveled

Between 2006 and 2011, Philadelphia's annual tally of vehicle miles traveled (VMT) decreased by 10.3 percent, exceeding the *Greenworks* goal. Since the City gained more than 50,000 new residents during the same period, the VMT per capita decreased an even more impressive 13 percent. By supporting and promoting active and public transportation, *Greenworks* initiatives help drive down VMT, which in turn improves air quality, lowers energy use, and reduces greenhouse gas emissions.

Philadelphia's transit network maintained a trend of strong ridership growth, reaching a 23-year high with 334 million passenger trips in 2012. This increase came despite continued funding constraints, and demonstrates the effectiveness of SEPTA's initiatives to improve service quality. SEPTA is working with its vendor to complete the final design of its New Payment Technologies project, and will begin public pilots in late 2013.

To support Philadelphians who commute by bike, the City continued to expand and improve its bicycle infrastructure by adding bike lanes and sharrows and increasing the number of bike parking options. In 2012, the Mayor's Office of Transportation and Utilities (MOTU) installed 463 new U-racks and 9 bike parking corrals, which can accommodate a dozen bikes.

In 2012, MOTU launched *Ride Right, Walk Right, Drive Right*, a public campaign aimed at improving road safety for pedestrians, cyclists, and drivers. Graphic posters in 50 bus shelters and in more than 500 buses remind Philadelphians to share the road responsibly. In 2013, MOTU worked with the Bicycle Coalition of Greater Philadelphia to provide equipment demonstrations and public forums in support of a bike sharing program, which the City plans to launch in 2014.

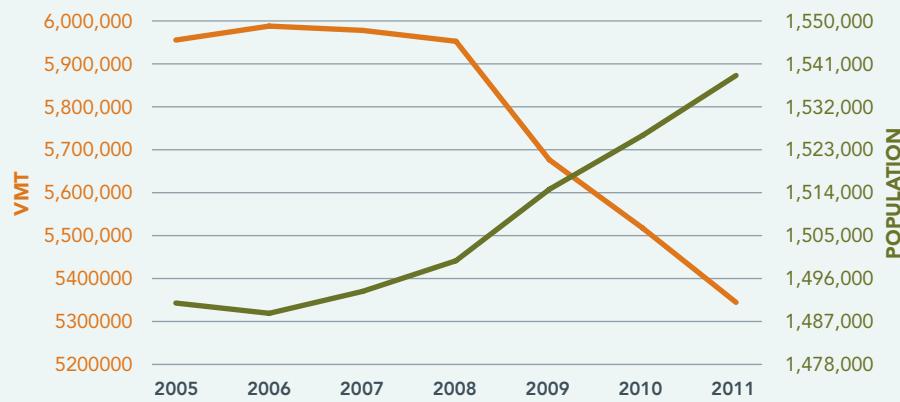


**YEP
YOU TOO.**

IT'S ROAD SAFETY.
NOT ROCKET SCIENCE.

One of the Ride Right, Walk Right,
Drive Right campaign posters.

Philadelphia Population and Vehicle Miles Traveled



TARGET 13:

Increase the State of Good Repair in Resilient Infrastructure

Maintaining the City's infrastructure is an enormous, largely unheralded task. The Streets Department maintains more than 2,500 miles of roads, enough to reach the west coast from Philadelphia. The Philadelphia Water Department (PWD) supplies clean drinking water and manages wastewater through a network of pipes and treatment plants covering all 140 square miles of the city. SEPTA's bus, subway, trolley, and rail services provided 334 million passenger trips in 2012.

In 2012, the Streets Department completed the 40th Street bridge over the AMTRAK corridor in West Philadelphia and the Schuylkill River Park bridge over the CSX tracks in Fitler Square. The complete streets rehabilitation of the Walnut Street bridge, which includes enhanced bicycle lanes, was also completed in 2012. The Schuylkill River Boardwalk Project was successfully bid and construction is underway, on schedule for completion in 2014.

In the past four years, SEPTA has completed 32 stimulus-funded infrastructure projects totaling \$191 million. SEPTA continues to prioritize state of good repair investments through its Capital Program to stabilize its growing backlog of capital need, which totals nearly \$5 billion.

METRICS

• Greenworks Baseline (2008)

73%

of Assets in a State of Good Repair

• Current (2011)

77%

of Assets in a State of Good Repair

• 2015 Target

80%

of Assets in a State of Good Repair

Infrastructure Assets in Philadelphia

**SEPTA**

450 miles of track
280 stations

**PUBLIC PROPERTY**

More than 600 buildings

**PWD**

3,200 miles of water mains

**STREETS & BRIDGES**

320 bridges
2,525 miles of road

climate adaptation



KEEPING INFRASTRUCTURE IN A STATE OF GOOD REPAIR IS A CORE FUNCTION OF MUNICIPAL GOVERNMENT.

 and agencies make repairs and plan to replace existing assets, they now must do so with an eye on the changing climate. Since Greenworks launched in 2009, Philadelphia has experienced major tropical storms and set all-time records for snow, heat, and rainfall.

Climate change will bring more frequent and more severe extreme weather events to Philadelphia, along with a steady increase in high heat days over ninety degrees. The impacts on the built and natural environments, as well as on the economy and public health, will likely be immense.

The City continues to work on mitigation measures to reduce greenhouse gas emissions. Initiatives to increase building energy efficiency and to reduce vehicle miles traveled, for example, lower harmful emissions. But Philadelphia will serve its residents and businesses well—in the short and long term—by proactively establishing programs, policies, and investments that promote growth while also preparing the city for climate variability and change.

The Greenworks Update and 2012 Progress Report committed to developing a climate adaptation plan. The Mayor's Office of Sustainability (MOS) began by conducting initial research: reviewing current information, identifying gaps in knowledge, cataloguing existing efforts, and scanning for best practices from other cities and organizations. In 2012, MOS convened an inter-departmental working group to begin cataloguing predicted climate risks, resulting City vulnerabilities, and potential adaptation solutions. This work will continue over the next year with a goal to release a comprehensive plan to the public in 2014.

In May of 2013, SEPTA released its first climate adaptation and vulnerability assessment. Funded by the Federal Transit Administration, the report looks at the effects of climate change and extreme weather on the Manayunk/Norristown Regional Rail Line, which serves portions of Philadelphia and Montgomery County and parallels the Schuylkill River, and which has experienced more frequent and damaging flooding in recent years.

Extreme Weather in Philadelphia

		The most days over 90 degrees	Hurricane Sandy (October) The warmest year on record
2009 	2010 	2011 	2012 
The snowiest winter (2009-2010)		The warmest July The wettest month (August) Hurricane Irene (August) The wettest year on record	

TARGET 14:

Increase the Size of the Regional Clean Economy

When the Mayor's Office of Sustainability (MOS) released *Greenworks* in 2009, the best available green jobs numbers were calculated from pre-recession economy data using a methodology that cannot be replicated. To advance the local clean economy, MOS needed more current and detailed information about the existing blend and scale of industries in this sector. With support from the Living Cities and Knight Foundations, and in partnership with PhiladelphiaWorks, MOS engaged Reed Group to conduct a clean economy survey of Philadelphia and the surrounding region. The survey aligns with and deepens previous national and state surveys and develops a replicable methodology.

The clean economy survey gathered data on employees and workplaces in Philadelphia, Bucks, Chester, Delaware, and Montgomery counties. It found that 27 percent of workplaces produce green goods or provide green services, defined by the Bureau of Labor Statistics (BLS) as goods and services "that benefit the environment or conserve natural resources. These goods and services are sold to customers, and include research and development, installation, and maintenance services." The survey also found that 53 percent of workplaces use green technologies or practices, defined by BLS as "those that lessen the environmental impact of an establishment's production processes."

The survey indicates that the clean economy sector in the Philadelphia region is relatively strong, and the results show that waste management and construction are the two industries with the most clean economy jobs. MOS is committed to gathering and reporting the best clean economy metrics available to highlight Philadelphia's competitive advantages and inform policymakers about how to best invest in and support the clean economy. MOS will release a more detailed summary of the clean economy survey in 2013.

METRICS

Producing Green Goods and Services

27%

Workplaces

Using Green Technologies and Practices

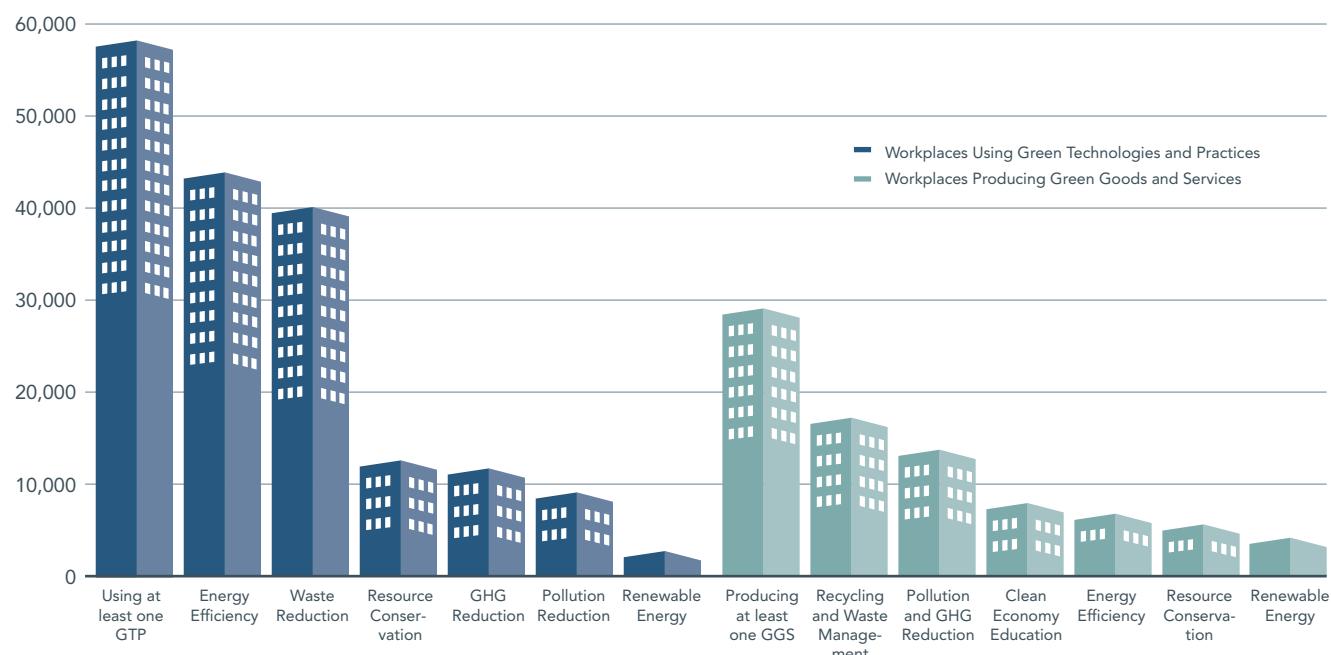
53%

Workplaces



Advanced Sports International, which creates custom bikes, is part of the regional clean economy.

Workplaces Participating in the Clean Economy



TARGET 12: Reduce Vehicle Miles Traveled by 10 Percent

COMPLETED

IN PROGRESS

INITIATIVE	PROGRESS 2013
Build an East-West Bicycle Corridor	Bicycle counts increased over 100% on the Spruce and Pine Street East-West corridor. The corridor connects to other Center City destinations via buffered bike lanes and the South Street Bridge.
Create Bike Parking Stations	Since June 2012, the Mayor's Office of Transportation and Utilities (MOTU) has installed nine bike parking corrals in high-demand areas.
Expand the Number of Bike Racks	Since January 2012, the City has installed 463 new U-shaped bike racks.
Implement Airport Bicycle Access Plan	Center City-to-Airport bicycle access plan completed 2009.
Design and Implement Complete Streets	In 2012, MOTU published the Complete Streets Handbook, and City Council passed a bill to implement a Complete Streets Policy. Three complete streets projects are currently under review for implementation.
Develop a Pedestrian and Bicycle Master Plan	The Philadelphia Pedestrian & Bicycle Plan was adopted by the City Planning Commission in June 2012. The Plan identifies strategies and specific recommendations to increase the number of people walking and bicycling in the city by improving the safety, connectivity, convenience, and attractiveness of pedestrian and bicycle networks.
Develop More Off-Road Bike Trails	Delaware River Waterfront Corporation is planning to add 11 miles of trails along the North Delaware waterfront in the next two years. The nine-mile Cobbs Creek Connector trail, currently in design, will connect West Philadelphia, the Heinz Wildlife Refuge, and the Delaware River.
Develop New Fare Card Technologies	SEPTA continues to work with its vendor to construct zone offices to manage the New Payment Technologies project, while the team completes final design of the system. Customer-facing pilot tests of the system will begin in late 2013.
Ensure Sustained Transit Funding	SEPTA commissioned an independent report by the Economy League of Greater Philadelphia and Econsult Solutions that makes a comprehensive case for investing in public transportation in the southeastern Pennsylvania region.
Explore the Creation of a Bike-Sharing Program	In 2013, Mayor Nutter committed \$3 million in capital funding for the City's bike share program. MOTU has conducted extensive outreach and engagement including equipment demonstrations and public forums, and completed a business plan in 2013. MOTU plans to launch bike sharing in Philadelphia in 2014.
Further Improve Service and Safety	SEPTA's key performance indicator for safety and security improved by 18 percent during the final six months of 2012 compared to the same six month period of 2011. The metric equally weights passenger, vehicular, and station accidents; and employee lost and non-lost time accidents.
Invest in Current Transit Infrastructure	All 32 of SEPTA's ARRA-funded projects, totaling \$191 million, have been completed. SEPTA continues to prioritize state of good repair investments through its Capital Program to stabilize its growing backlog of capital need, which totals nearly \$5 billion.
Make Transit-Oriented Development Investments	With the \$48 million mixed-use TOD project adjacent to the Temple University Regional Rail Station nearing completion, SEPTA is actively supporting other transit-oriented developments, such as engineering support related to the 149-unit apartment complex adjacent to the Ivy Ridge Regional Rail station, which broke ground in October 2012.
Plan for an Expanded System	SEPTA is in the midst of an Alternatives Analysis and Draft Environmental Impact Statement for the extension of the Norristown High Speed Line from 69th Street Station in Delaware County to King of Prussia in Montgomery County.
Reduce Parking Ratios for Buildings with Designated Bike and Car Share Spots	Zoning code adopted in August 2012 establishes new parking maximums to prevent oversupply of parking and requires dedicated vanpool, carpool, and hybrid vehicle parking in large commercial parking lots.
Upgrade Commercial Corridors	The Department of Commerce's ReStore Streetscape Enhancements and Storefront Improvement Programs revitalize commercial corridors.

TARGET 13: Increase the State of Good Repair in Resilient Infrastructure

IN PROGRESS

INITIATIVE	PROGRESS 2013
Acknowledge Climate Change in Infrastructure Planning	In May 2013, SEPTA released its first climate adaptation and vulnerability assessment. Funded by the Federal Transit Administration, the report looks at the effects of climate change and extreme weather on the Manayunk/Norristown Regional Rail Line, which serves portions of the City of Philadelphia and Montgomery County and parallels the Schuylkill River, which has experienced more frequent and damaging flooding in recent years.
Develop Climate Adaptation Plan	In the <i>Greenworks Update and 2012 Progress Report</i> , the City committed to developing a climate plan. In 2013, an inter-departmental working group was formed to begin the planning process. The City intends to release a report in 2014.
Improve Road Maintenance and Upgrade Bridges	The 40th Street Bridge over AMTRAK and the Schuylkill River Park Bridge over the CSX tracks were both completed and opened in 2012. The rehabilitation of the Walnut Street Bridge, which included sidewalk widening and enhanced bicycle lanes, was also completed in 2012. The Schuylkill River Boardwalk Project was successfully bid and construction is on schedule for a 2014 completion. Bridges currently in design include the Willow Grove Ave Bridge over SEPTA and the 41st Street Bridge over AMTRAK.
Invest in Public Property Management Systems	The Department of Public Property's (DPP) work order system came online in 2012/2013 and enables DPP to replace a labor-intensive process with a web-enabled and highly accessible solution, resulting in less paperwork and better service to buildings. An inter-departmental working group is currently assessing needs and opportunities around an integrated asset management system.

INITIATIVE PROGRESS

TARGET 14: Increase the Size of the Regional Clean Economy

	INITIATIVE	PROGRESS
COMPLETED	Conduct a Market Analysis	The Mayor's Office of Sustainability (MOS), working with PhiladelphiaWorks and Reed Group, conducted a regional clean economy and employment survey in 2012.
	Create a Green Economy Stakeholder Task Force	MOS continues to work with the Sustainable Business Network of Greater Philadelphia which convenes the Green Economy Task Force, a coalition launched in 2008.
	Create a Regional Green Jobs Training Center	The Energy Coordinating Agency's John S. and James L. Knight Green Jobs Training Center, opened in 2010, offers courses related to building energy efficiency. This state of the art facility features classroom and laboratory space; air sealing, insulation, and heating labs; and model houses constructed to duplicate the problems of typical homes. Last year, ECA trained more than 900 individuals at the center.
	Conduct Regional Clean Economy Survey Every Two Years	Pending availability of funding, MOS and its partners will continue to survey the state of the regional clean economy.
	Make Strategic Programmatic Investments to Increase Market Demand	EnergyWorks increases demand in the energy efficiency sector by streamlining the process for customers, providing low-interest loans through Keystone HELP, and investing in effective marketing to raise awareness among homeowners.
	Raise Awareness About the Clean Economy	Mayor Nutter, City officials, and partners continue to highlight the economic and workforce development opportunities and the outcomes of initiatives and investments in the Philadelphia region.
	Re-brand Philadelphia for Business Development Efforts	Smart City, Smart Choice, a joint initiative of the City of Philadelphia Department of Commerce and the Philadelphia Industrial Development Corporation (PIDC), launched in 2010. The campaign highlights Philadelphia's assets that support the clean economy sector. In 2013, the Department of Commerce and PIDC launched StartUp PHL, a collaborative effort to strengthen the entrepreneurial environment in Philadelphia.
	Support and Connect Energy Research and Academia	The Energy Efficient Buildings Hub (EEB Hub) is a consortium of academic institutions, federal laboratories, global industry partners, regional economic development agencies, and others located at The Navy Yard in Philadelphia. With funding from the U.S. Department of Energy, the EEB Hub works to improve energy efficiency in buildings and promote regional economic growth and job creation.

Green Technologies and Practices are Processes

Making a building more energy efficient
Reducing amount of waste a business creates

Green Goods and Services are Outputs

Manufacturing CFLs, insulation, or building controls
Hauling and processing recycling



GlaxoSmithKline's LEED certified facility is an example of green technology.



Builders at Paseo Verde, a project that will seek LEED for Neighborhood Development Certification, provide a green service.



ENGAGEMENT

GOAL: PHILADELPHIANS UNITE TO BUILD A SUSTAINABLE FUTURE

TARGET 15:

Philadelphiaans Unite to Build a Sustainable Future

We wouldn't be making nearly as much progress toward our *Greenworks* goals without the help of our amazing partners. We don't have enough space here to give all the thanks that are due, so visit www.phila.gov/green to sign up for our monthly e-newsletter and get stories about our great community partners delivered directly to your inbox once a month.



Building Energy Benchmarking

The Coalition for an Energy Efficient Philadelphia (CEEP) is a broad coalition of businesses, institutions, citizens, and organizations working together to achieve a higher degree of energy efficiency in Philadelphia's buildings to reduce environmental impact and save money.

The Coalition was founded by Next Great City Philadelphia, the Energy Coordinating Agency, and the Delaware Valley Green Building Council, and includes over 80 organizations. In 2012, CEEP worked closely with Councilwoman Blondell Reynolds Brown and the Mayor's Office of Sustainability to support the creation and passage of Philadelphia's Energy Benchmarking and Disclosure law. CEEP's expertise and advocacy were instrumental in making Philadelphia the sixth city in the country to require energy benchmarking and disclosure for large commercial buildings.

The Circuit Coalition

In 2012, the Circuit Coalition, a regional collaborative of non-profits, foundations, and alternative transportation advocates, launched a campaign to complete The Circuit, a network of trails that will make it possible to bike safely from Philadelphia to the East Coast Greenway, a green highway linking major cities from Maine to Florida.

With 250 miles already complete, The Circuit aims to connect 450 additional miles of trails linking the urban, suburban, and rural communities of Greater Philadelphia. The Circuit will provide

a place for healthy transportation and recreation, and connect local communities to green space.

In 2012, The Pennsylvania Environmental Council, in cooperation with the Mayor's Office of Transportation and Utilities and the Bicycle Coalition of Greater Philadelphia, and with support from the William Penn Foundation, released a request for proposals for a Philadelphia bike share business plan. The plan, currently being developed by Toole Design Group, will consider capital and operating funding requirements and operating models for the system.



Philadelphia Focuses on Food

Philadelphia is renowned for its great food scene, from its world class restaurants to its vibrant gardening community. The City of Philadelphia boasts an impressive cast of food partners. In 2012, the Food Policy Advisory Council (FPAC), convened by Mayor Nutter in 2011, helped update information about emergency food resources available at 311, advised land-holding agencies on how to evaluate garden applications, and created a new subcommittee focused on communicating the FPAC's work to a broader audience.



External partners have also been instrumental in advancing the Greenworks goal of increasing food access. The Philadelphia Department of Public Health partnered with The Food Trust for its Get Healthy Philly program to bring farmers markets to underserved neighborhoods, increase healthy food options at corner stores, and offer incentives to SNAP recipients to purchase fresh fruits and vegetables. The City is in its second season of partnering with Delaware Valley Farm Share to offer delivery of locally grown fruits and vegetables to City employees in their workplaces.

Infill Philadelphia: Soak It Up!



revitalization. The Collaborative's Infill Philadelphia program promotes workable, innovative design strategies for revitalizing older urban neighborhoods, a great fit with the Philadelphia Water Department (PWD's) Green City, Clean Waters goal of installing green infrastructure to manage Philadelphia's stormwater.

In partnership with the U.S. Environmental Protection Agency, the Collaborative and PWD launched Infill Philadelphia: Soak It Up!, a national design competition. Twenty-eight teams, from 101 firms, comprised of 315 of the nation's top thinkers in urban design proposed innovative and cost effective stormwater management solutions

The Community Design Collaborative (the Collaborative) provides *pro bono* preliminary design services to non-profit organizations in greater Philadelphia, offers unique volunteer opportunities for design professionals, and raises awareness about the importance of design in community

for three real-life Philadelphia sites, one industrial, one commercial, and one neighborhood. The Soak It Up! competition successfully leveraged the Collaborative's ability to attract professional design attention to public sector problems, and the program resulted in attractive solutions directly applicable to PWD's work.

Philadelphia Tree Partnerships

In partnership with Wells Fargo and the Fairmount Park Conservancy, Philadelphia Parks & Recreation runs TreePhilly, a campaign to directly engage Philadelphia property owners, businesses, and neighborhood residents to improve their communities by planting and maintaining trees. Wells Fargo generously provided \$125,000 to purchase nearly 6,600 trees that TreePhilly has given away to Philadelphia residents who plant them in their front, back, and side yards. The success of TreePhilly would not be possible without community partners including the Pennsylvania Horticultural Society and the Tookany/Tacony-Frankford Watershed Partnership, both of whom provide tree planting and care education at TreePhilly giveaway events.



TARGET 15: Philadelphians Unite to Build a Sustainable Future

COMPLETED	INITIATIVE	PROGRESS 2012
	Publish Annual Report	2013 Greenworks Progress Report released in 2013.
	Develop Social Marketing and Public Education Campaigns	Each month, the Mayor's Office of Sustainability (MOS) sends an electronic newsletter to subscribers. MOS continues to use Twitter, Facebook, YouTube, and www.phila.gov/green as outreach tools.
	Reach Out to Stakeholders	MOS engages and receives input from stakeholders on a variety of topics including food policy, energy benchmarking, facility and asset management, and community engagement.
	Regularly Update Website	MOS continues to add new resources to www.phila.gov/green and launched additional web sites for the Food Policy Advisory Council and Energy Benchmarking in 2013.
	Use Data to Measure Results	2013 Greenworks Progress Report includes data for each target and begins to measure trends over time.

THE CITY OF PHILADELPHIA

MAYOR'S OFFICE OF
SUSTAINABILITY

GREENWORKS
PHILADELPHIA



www.phila.gov/green