

2012

Municipal Sustainability Annual Report



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2012 ClimateWise Partner Poster



- Exceeded \$400,000 in sustainability project savings.
- Developed a Sustainability Management Plan that identifies goals, objectives, strategies, and actions to move the organization toward increased efficiency and resiliency.
- Preliminary estimates indicate the projects with significant environmental and cost-saving returns will include the Hoffman Mill on-going operations, the consolidated metal recycling contract (\$142,077), the Southridge Golf (\$1,013), and Traffic Operations (\$2,000) lighting upgrades, and Department Bike Project (\$4,740).
- Reduced 33 metric tons of carbon emissions with the Water Treatment Plant's Solar Purchase Agreement.
- Five photovoltaic systems with a total of 205 kW contributes to the City's carbon emission reduction each year.
- Started the Drake Waste Water Reclamation Plant's Geothermal Project, also contributing to the City's low carbon power generation portfolio.
- Conducted seven Challenges with City employees, residents, and select ClimateWise partners, including Sustainability 101 Actions; FortZED; Give A Watt: Pedal it Forward; Bike-to-Work Day(s); Bike-to-Work Wednesday; Worksite Challenge; Local Food Challenge; and Healthy Home Challenge.
- Cumulative projected savings among the 421 City staff participants translated into 51 MT CO₂e of reductions and \$111,057 in annual savings.
- Led targeted water and recycling audits to improve infrastructure efficiency.
- Posted new, icon-based recycling guidelines throughout City facilities.
- Dual "waste stations" have been placed in several public areas.
- Participated in ClimateWise Social Superstars, a pilot program that addresses the social responsibility of participating ClimateWise partners. The program is designed to assist organizations in making a positive social impact. City-led projects include: Holiday "Adopt a Family;" United Way Campaign; Toys for Tots; Make a Difference Day; Community Garden Enhancements; and CSA Support.
- Approved updated Purchasing Policy and developed several sustainability guidance documents.

2012 Awards and Accolades

AWARDS

Platinum Level Bicycle Friendly Community Award (2012)
League of American Bicyclists

ISO 14001 Certification (2011-2012)

Drake Water Reclamation Facility and Water Treatment Plant (2012)
TUV Rheinland of North America

International City/County Management Association, Center of Performance Measurement's Certificate of Excellence (2012)

ClimateWise Platinum Level Partner Award (2010-2012)

DEPARTMENT ACCOLADES

Highest % of green office products:

Natural Resources — 100%
Municipal Courts — 86%
CPRE Administration — 79%
Purchasing — 74%
Senior Center — 73%

Highest % of green industrial supplies:

Laporte Water Treatment Plant — 15%
Facilities — 12%
Drake Water Reclamation Treatment — 7%
Utilities — 1%

Recycling:

Industrial Waste:

Water Pollution Lab — 74%
Vehicle Storage — 61%
Equipment — 58%

Public Facilities Areas:

Southridge Golf Club — 50%
Club Tico/Outdoor Pool — 31%
Museum — 30%

Fire Departments:

Station 14 — 56%
Station 6 — 55%
Station 2 — 14%

Offices:

Utility Customer Service — 61%
Library Annex — 46%
281 N. College — 38%

Progress Summary

Measures that Matter

Changes in key City indicators between the 2005 baseline and 2012 demonstrate positive reductions. These indicators show progress based on a per capita or square foot measurement. The following indicators relate to key emission sources:

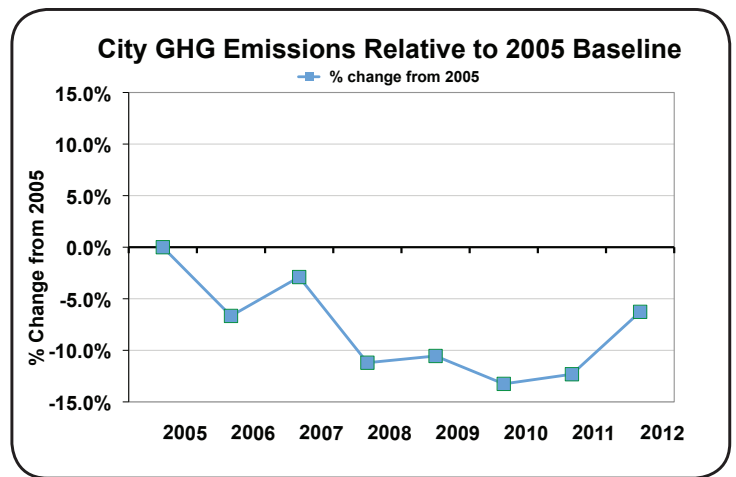
Indicators: 2005-2012

- Total CO₂e emissions: 6.3% decrease
- Scope 1 (direct carbon emissions)¹:
Fleets: 37% decrease
Natural Gas: 27% increase
- Scope 2 (energy indirect emissions)²: 11.4% decrease
- Scope 3 CO₂e emissions (gases from waste and recyclables to the landfill and air travel)³: 5% decrease
- Per sq. ft. CO₂e emissions: 17% decrease
- Per employee: 29% decrease
- Per vehicle emissions: 55% decrease
- Percent of electricity generated by clean, renewable energy on-site: .04% increase
- Change in tons of waste sent to the landfill: 17% decrease
- Waste diversion: increased from 80% in 2005 to 81% in 2012 (including office and industrial materials)
- Carbon emissions from electricity: 11.4% decrease
- Conventional fuel use: 6% decrease
- Electricity used for traffic signals: 38% decrease
- Electricity use for water and wastewater production: 11% decrease

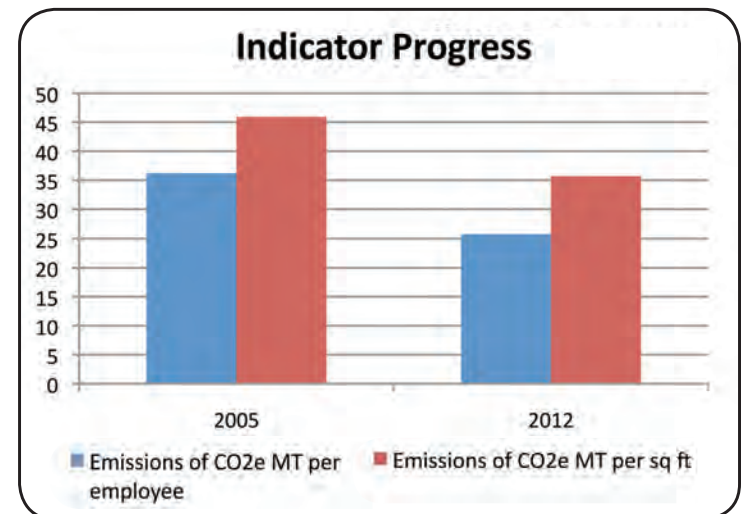
¹ Scope 1: Direct carbon emissions (i.e., natural gas, fuels)

² Scope 2: Indirect energy emissions (i.e., electricity)

³ Scope 3: Other indirect emissions (i.e., travel, landfill waste)



Graph 1: Emissions



Graph 2: Indicators

Senior Center xeriscape

Sustainability Goals

In 2012, the Sustainability Team drafted amendments to the Electricity and Natural Gas, Solid Waste Reduction, and Sustainable Purchasing Goals. Recommendations were made to add a local food goal.

Goal #1: Carbon

Reduce greenhouse gas (carbon) emissions from municipal operations at least 2% per year starting in 2010, in order to achieve a reduction of 20% below 2005 levels by December 31, 2020; and ultimately to achieve carbon neutrality for the municipal organization.

Goal #2: Electricity and Natural Gas

Reduce municipal energy consumption by 20% of the 2005 baseline by 2020, reduce demand peak use by 15% by 2020, and achieve a 20% kBtu/sq. ft. reduction in all City facilities from 2005 baseline levels. If funding is available, purchase 20% of energy from renewable sources by 2020 with 10% provided by onsite distributive energy.

Goal #3: Fuel

Reduce traditional fuel use by the City's vehicle fleet by 20% by 2020 and reach a 1.5 average vehicle ridership (AVR) by 2020 for City employees.

Goal #4: Solid Waste Reduction

Reduce solid waste from: public access facilities by 5% each year; municipal workplace and office by 10% by weight each year; and each industrial byproduct at least 10% each year.

Goal #5: Education and Outreach

Information about the municipal sustainability program will be available to all levels of the community — students in grades K-20 and university, the general public — as well as internal customers.

Goal #6: Funding

Foster a culture of sustainability in the organization and advance municipal goals through various funding mechanisms (i.e., Innovation Fund, grants). Identify and implement innovative improvements to the City's physical plant and operational procedures that are not otherwise funded.

Goal #7: Parks/Natural Areas

Maintain a 30% forest canopy density in suitable areas of City Parks and 70% of native vegetative cover in Natural Areas.

Goal #8: Water

Reduce municipal operations water irrigation use and increase efficiency per acre. Reduce building water use by 20% by 2020.



Goal #9: Sustainable Purchasing

Implement sustainable purchasing practices throughout the City organization, and establish means to verify departments' compliance with revised purchasing policy. Establish quantifiable goals of 2% increase in office and industrial sustainable purchases annually starting in 2013.

Goal #10: Employee Safety and Health

Incorporate a program fostering a culture of health and safety. Increase the number of employees that participate in the Wellness Program from 45% to 75% by 2020. Lower accident frequency and severity.



Game Changing Projects

2012 Projects Annual Benefits Ranking:

Project	Social Benefits	Estimated Environmental Benefits per Year	Annual Financial Savings
Asphalt, Concrete, Toilet Recycling	Toilet rebates, recycling, City services cost less	4,239 MT CO ₂ e	\$266,356
Metal Recycling	Resource conservation	559 MT CO ₂ e reductions	\$142,077
2012 Employee, Citizen, and ClimateWise Challenges	Promotes employee and community engagement	51 MT CO ₂ e reductions	\$111,057
EPIC Recommissioning	Resource conservation	39 MT CO ₂ e reductions	\$44,289
Wastewater Methane Capture	Heat recovery, lower emissions	not calculated	\$28,943
Drake Water Reclamation	Better lighting	49,401 kWh	\$28,212
Surplus, Auction Sale — Repurposed	Resource conservation	Not calculated	\$8,962
EPIC, High Dive Lighting Replacement	Safety, better lighting	53330 kWh, 37 MTCO ₂ e	\$3,200
Police Evidence, Auction Sale — Repurposed	Resource conservation	Not calculated	\$2,928
Lincoln Center, Canyon West Lighting Retrofit	Safety, better lighting	41600 kWh, 29 MTCO ₂ e	\$2,500
Innovation Fund — Bike Repair Kits, Bike Repair, Gear, and Racks	Health	353 Gallons, 3 MTCO ₂ e	\$2,059
Innovation — Traffic Operations, Lighting Upgrades	Comfort, safety, better lighting	20000 kWh, 14 MTCO ₂ e	\$2,000
Lighting Upgrade, Compact Fluorescents & LEDs	Better lighting	16,000 kWh, 11 MTCO ₂ e	\$1,034
Innovation — Southridge Golf, Lighting Upgrades	Comfort, safety, better lighting	10130 kWh, 7 MTCO ₂ e	\$1,013
212-218 W. Mountain, Interior Lighting Retrofit	Safety, better lighting	13300 kWh, 9 MTCO ₂ e	\$800
110-112 Howes, Interior Lighting Retrofit	Safety, better lighting	12500 kWh, 9 MTCO ₂ e	\$750
Innovation Fund — Tire Pressure Monitors	Safety	185 Gallons, 2 MTCO ₂ e	\$649
Innovation Fund — NIX, Outdoor Lighting	Comfort, safety, better lighting	7239 kWh, 5 MTCO ₂ e	\$583
City Hall/Cable 14, 150 kVA Transformer Replacement (Powersmiths)	Resource conservation	8330 kWh, 6 MTCO ₂ e	\$550
North Side Aztlan, De-Stratification Fans	Comfort, safety, better lighting	4100 kWh, 3 MTCO ₂ e	\$500
321 Maple, Interior Lighting Retrofit	Safety, better lighting	7500 kWh, 5 MTCO ₂ e	\$450
Lighting Upgrade,, High-Intensity Discharge	Better lighting	6,000 kWh, 4 MTCO ₂ e	\$407
214 Howes, Interior Lighting Retrofit	Safety, better lighting	5400 kWh, 4 MTCO ₂ e	\$325
Lincoln Center, Dressing Room Lighting Retrofit	Safety, better lighting	5000 kWh, 4 MTCO ₂ e	\$300
Senior Center, Multipurpose Room Lamp Retrofit	Comfort, safety, better lighting	5000 kWh, 4 MTCO ₂ e	\$300
835 Wood, Exterior Lighting Retrofit	Safety, better lighting	3330 kWh, 2 MTCO ₂ e	\$200
Mountain Cafe, Interior Lighting Retrofit	Safety, better lighting	3330 kWh, 2 MTCO ₂ e	\$200
Roselawn Cemetery, Interior Lighting Retrofit	Comfort, safety, better lighting	2500 kWh, 2 MTCO ₂ e	\$150
Renewable Energy Purchase, Green Energy Program	Resource conservation	159878 kWh, 113 MTCO ₂ e	Not calculated
Roll Off Recycling	Resource conservation	68 tons, 205 MTCO ₂ e	Not calculated
Food Waste, Earth Vessels	Resource conservation	12 tons, 2.39448 MTCO ₂ e	Not calculated
Bike-to-Work Wednesday Challenge	Resource conservation	911 miles traveled, 0.4 MTCO ₂ e	Not calculated
Passfort	Resource conservation	56207 miles traveled, 26 MTCO ₂ e	Not calculated

Total Estimated Savings:
5,256 MTCO₂e and \$623,033

Goal #1: Carbon

Reduce greenhouse gas (carbon) emissions from municipal operations at least 2% per year starting in 2010, in order to achieve a reduction of 20% below 2005 levels by December 31, 2020; and ultimately to achieve carbon neutrality for the municipal organization.



LED holiday lights

Benchmarks

2005 Municipal carbon emissions:
68,667 MT CO₂e

2012 Municipal carbon emissions:
64,363 MT CO₂e

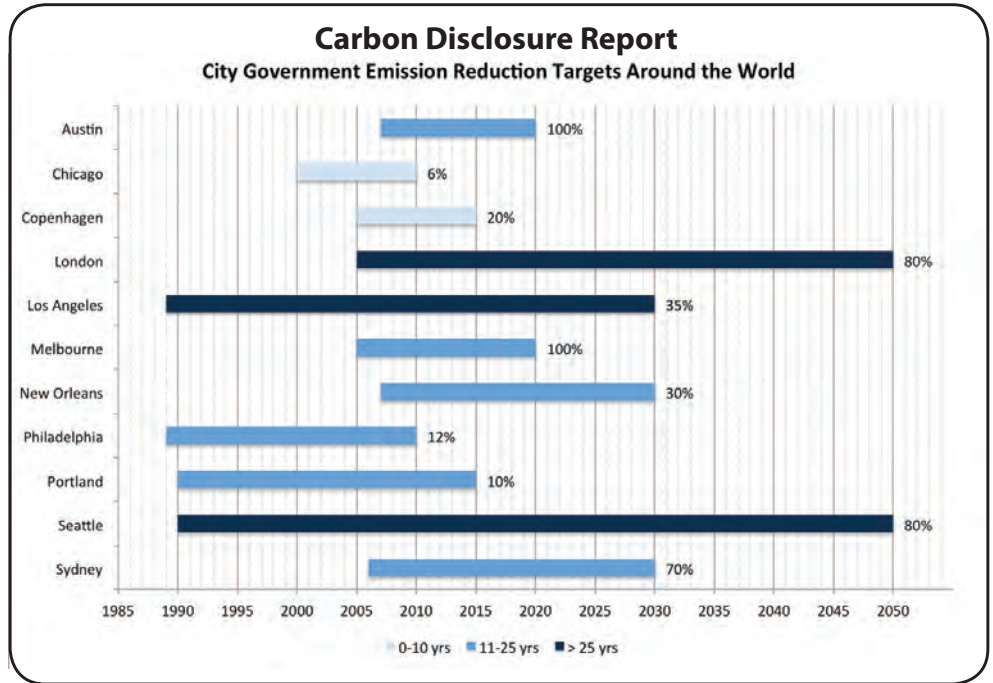
Accomplishments

- Municipal emissions were reduced by 6% below baseline levels. A comparison of other cities' emission targets and progress are shown in Graph 3.
- Updated the "Green It, Mean It" website and utilized it as an inspirational and educational resource. The site includes periodic progress reports, management reports (i.e., carbon reports, diversion and purchasing reports by departments), successes, tips, and resources.
- Developed municipal carbon performance measures for Community Dashboard.
- The City of Fort Collins has moved to calculating all of its carbon emissions inventories using the Greenhouse Gas Emissions Management System (GEMS) database system. This change has allowed greater efficiency in conducting the annual carbon inventory and the implementation of more quality assurance and control measures. The Quality Management Plan (QMP) provides detailed descriptions of methods, emission factors, and data sources. fcgov.com/climate_protection
- Updated the 2004 Sustainability Action Plan to the Sustainability Management Plan.
- Worked with High Performance Government Team to concentrate on increasing sustainability awareness and creating a culture of sustainability through department assessments in targeted areas of water and purchasing. Part of the project involved providing sustainability training opportunities for

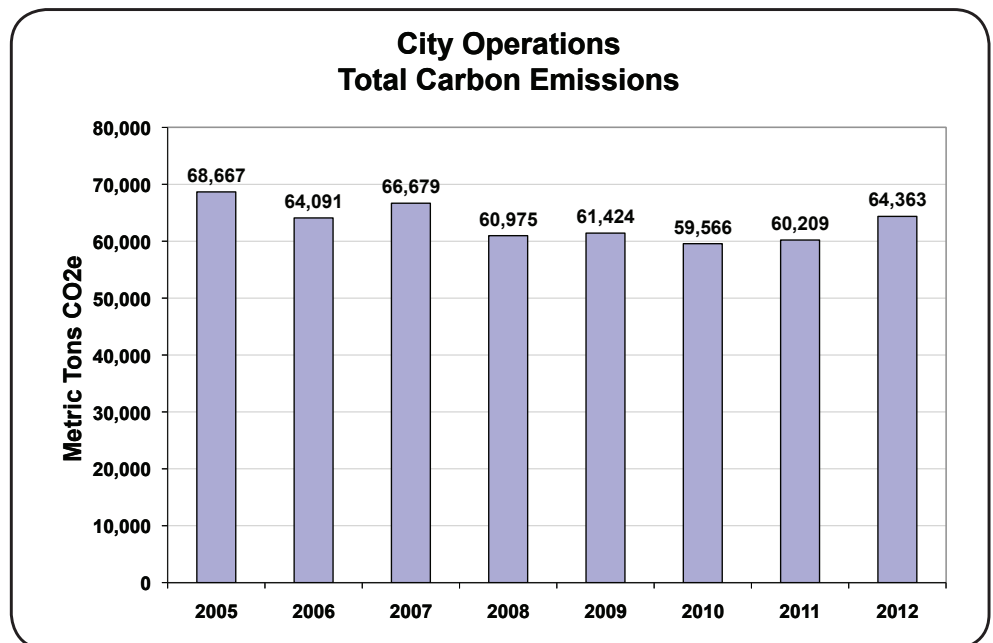
new and existing employees, providing monthly challenges with TBL analysis and coordinating efforts with One Planet and Well Days Program. (see Appendix H for sample challenges)

Short-term Plans

- Identify and implement at least three priority projects for each sustainability goal annually.
- Completed Innovation Fund projects.



Graph 3



Graph 4

Goal #2: Electricity and Natural Gas

Reduce City energy consumption by 20% of the 2005 baseline by 2020, reduce demand peak use by 15% by 2020, and achieve a 20% KBtu/sq. ft. reduction in all City facilities from 2005 baseline levels. If funding is available, purchase 20% of energy from renewable sources by 2020 with 10% provided by onsite distributive energy.



LED fixture

Benchmarks

2005 Electricity: 44,582,789 kWh
 Natural Gas: 107,133 dTh

2012 Electricity: 43,172,562 kWh
 Natural Gas: 137,041 dTh

Electricity: 36,947 → 32,743 MT CO₂e
 Natural Gas: 5,695 → 7,284 MT CO₂e
 Total: 42,642 → 40,027 MT CO₂e

Although the raw consumption of natural gas has increased, natural gas is cleaner than energy produced from electricity, so overall emissions have been reduced.

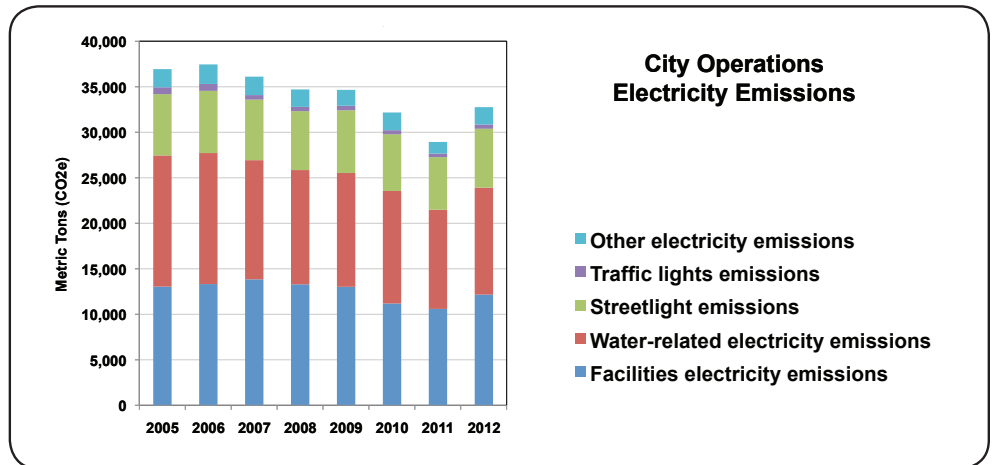
Accomplishments

- Drake Water Reclamation Facility replaced 214 fixtures that will reduce energy by 49,901 kWh and save \$28,212.
- Through a partnership with ENERGY STAR, staff measures and tracks energy performance of 70 City facilities. Results can be viewed on CityNet/sustainability/resources/energy reports.
- In 2012, building air barrier leakage and envelope testing was performed at the Utilities Service Center in support of planned comprehensive retrofits.
- Staff track and address overall reductions in municipal energy consumption, specifically through the following

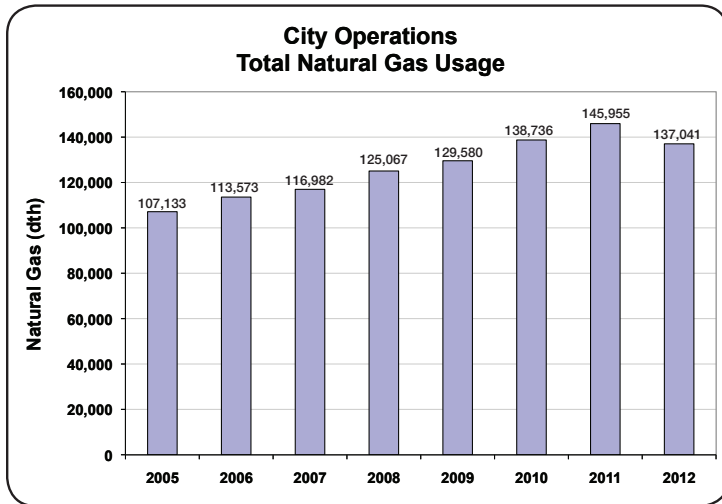
sectors: buildings; water production and delivery; wastewater treatment; street lights/traffic lights; and parks.

- Employee education campaigns featured internal challenges that encouraged smart individual actions to promote organization-wide change in energy use.
- There have been numerous mechanical systems improvements implemented by Operation Services and Utilities staff. These involve a multitude of departments that share the common goal of reducing the City's energy use to the greatest extent practicable. Comprehensive retro-commissioning and building envelope repairs were completed on City Hall, 215 N. Mason, and Collindale Golf Course.

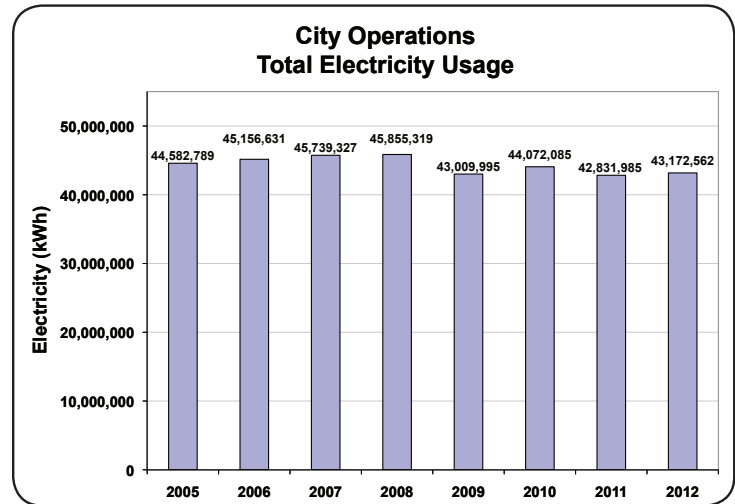
- Replaced all City Hall parking lot High Pressure Sodium street lights with more energy efficient LED street lighting technology. In an attempt to test different LED technologies, products that provided the best light pattern for each of the three parking lots were chosen and installed. A triple bottom line analysis was done for each of the luminaires chosen including factors such as extended life of the luminaire and it's components, reduced maintenance activities, reduced energy consumption, capital cost, return on investment period, and color temperature of emitted light to enhance color visibility to the human eye.



Graph 5



Graph 6



Graph 7

Goal #3: Fuel Reduction

Reduce the traditional fuel use of the City's vehicle fleet by 20% by 2020 and reach a 1.5 average vehicle ridership (AVR) by 2020 for City employees.



Electric vehicle charging stations

Benchmarks

2005 Conventional: 741,432 gallons
Biogenic: 14,194 gallons
Total Fuel Use: 777,410 gallons

2012 Conventional: 782,765 gallons
Biogenic: 32,026 gallons
Total Fuel Use: 819,408 gallons

MT CO₂e: 5,694 → 4,564

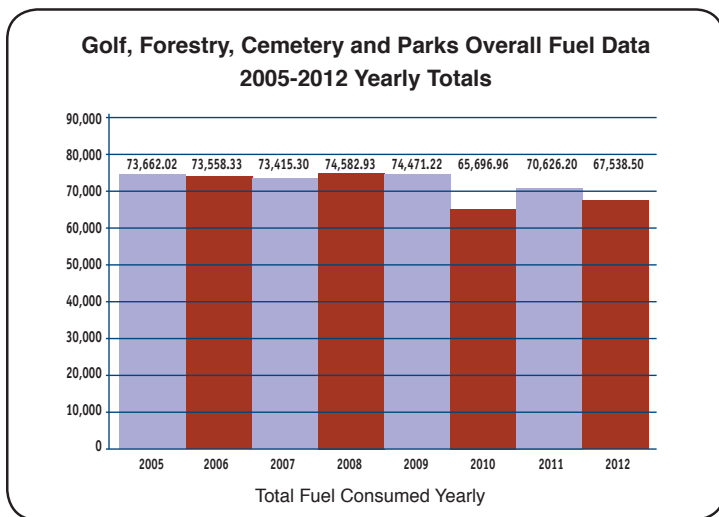
Accomplishments

- Although fuel use has risen, emissions have fallen due to the use of biogenic fuels.
- Purchased Pedicab which has been used to promote alternative transportation and sustainability events.
- Purchased two energy harvesting bikes and developed public educational displays at Aztlan and Senior Center.
- Developed and incorporated the following information: sustainable driving tips, anti-idling, seasonal driving tips, and vehicle use policies and procedures across the organization through training seminars.
- Designated high-efficiency and carpool employee parking spaces at LEED buildings (i.e., Police, Discovery Museum, Aztlan, etc.).

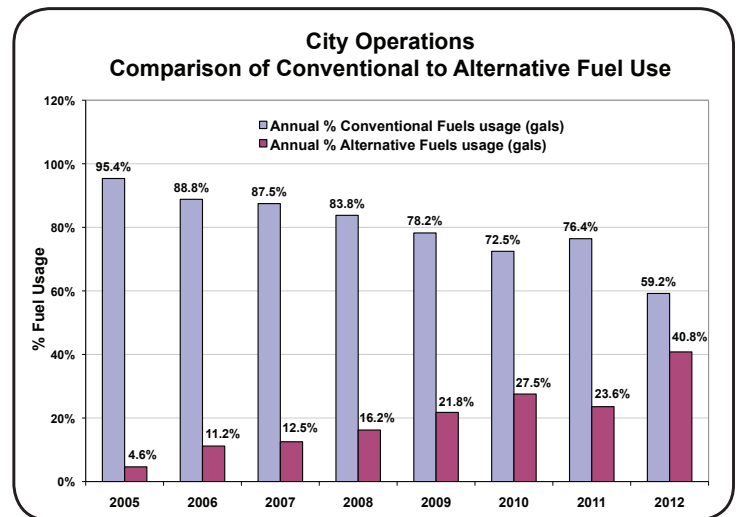
- Transfort promotion and installation of bike racks at all City facilities that requested racks.
- The City's "Anti-idling" Policy has been adopted and communicated through New Employee Orientations. This targets reduction of fuel costs and lower vehicle emissions.
- Bike repair kits and training repair instructions were distributed to 117 N. Mason, 215 N. Mason, 700 Wood Street, Lincoln Center, 281 N. College, and Transfort.
- Implemented the following priorities for the City vehicle purchases: alternative-fueled vehicles; downsize from original request; and added hybrids.
- "ClimateWise Commuter Choices," a program to increase average vehicle ridership of commuters to ClimateWise businesses, including City government, was proposed but not funded in the BFO process. Funding is still being sought from outside sources.
- The City hosted a Bike-to-Work summer event and a Bike-to-Work Wednesday competition. Participants of Bike-to-Work Day collectively saved \$453 and avoided 837 lbs. of CO₂e emissions. The cumulative results of Bike-to-Work Wednesday were 400 tons of CO₂e and \$106,666 in savings.
- Parks Department (Forestry, Golf, Cemeteries, and Parks) have reduced fuel consumption to their 2005 level. This success can be attributed to employee engagement and working with Fleet services on the conversion of small utility vehicles and golf carts to electric. (see Graph 8)



Electric charging station, 700 Wood Street



Graph 8



Graph 9

- Installed three electric charging stations at City Hall.
- Participated in the Clean Cities Program.
- The City purchased the following alternative transportation vehicles:
 - 2012 Volt,
 - Electric Leaf for Drake Water Treatment Plant,
 - 27 Yamaha electric golf carts,
 - four electric utility carts (Workman MDE, two Toro, Cushman),
 - two Wanon electric display boards,
 - two Ford Fusion hybrids,
 - six CNG buses, and
 - one CNG Freightliner dump truck.
- The City purchased four bicycle repair stations. They were installed at 215 N.

Mason, the Northside Aztlan Community Center, Transfort, and the Transit Center.

- Progress continues on the MAX Bus Rapid Transit system, which will provide fuel-efficient mass transportation along the Mason Corridor.

- The City will be a national test community in conjunction with the Electrical Vehicle Coalition.

Social Superstars:

- Participated in the Clean Cities Program.



2012 Bike-to-Work Day, Oak Street Plaza

Make a Difference Day event at On the Vine — Richmond Farms



Goal #4: Solid Waste Reduction

Reduce waste from: publicly accessible facilities (5% per year); municipal workplaces and offices (10% per year); and, industrial operations (10% per year) based on data reported for previous year.



Recycling as an art

Benchmarks

- 2005 Office Waste: 826 tons
Industrial Waste: 29,180 tons
Public Wastes: N/A
Office Recycling: 126 tons
Industrial Recycling: 122,404 tons
- 2012 Office Waste: 683 tons
Industrial Waste: 26,764
Public Waste: 257 tons
Office Recycling: 246 tons
Industrial Recycling: 114,461 tons

Accomplishments

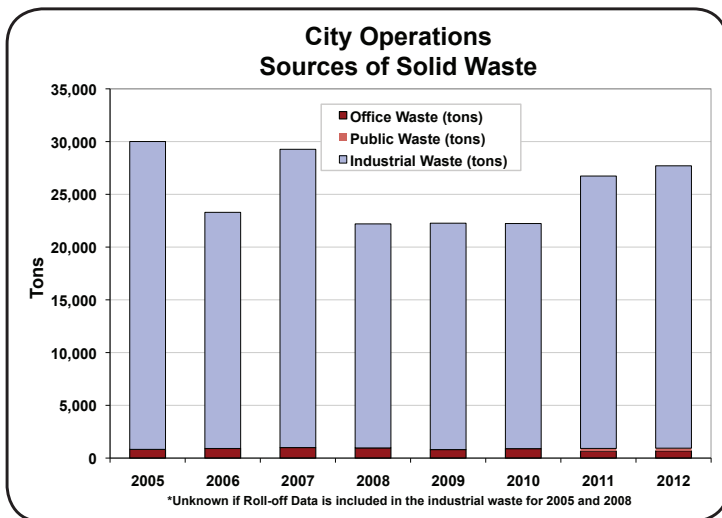
- During 2012, industrial sources of waste for City operations were identified as waste from roll-off containers and waste that was self-hauled to the landfill by City employees. This data was collected retroactively for 2005 through 2011, and is now included in all carbon inventories (Note: it cannot be determined if roll-off containers were accounted for during 2005).
- Posted information to website about Bargain Box recycling interdepartmental program.
- Updated CityNet Sustainability web page to include most recent recycling information as well as zero waste event guides and green office resources, such as junk mail suppression service (i.e., Catalog Choice).

- Streets Department increased their recycling in areas where crew trucks are parked.
- Utilities and Larimer County met and discussed how to turn "waste" dirt into a useful product for Larimer County.
- Parks shop looked at their trash and also the need for better "infrastructure" (i.e., additional smaller recycling bins).
- Excess cemetery dirt is going to Roselawn for an improvement project.
- Purchasing Department uses an online auctioning process, PropertyRoom.com and PublicService.com for police evidence. Materials of higher value (i.e., vehicles, ping pong tables) are taken to Centennial Auction.
- The Environmental Services Department released and distributed its new, icon-based Recycling Guidelines poster.
- Posted solid waste generation and diversion rates by department on internal sustainability website.

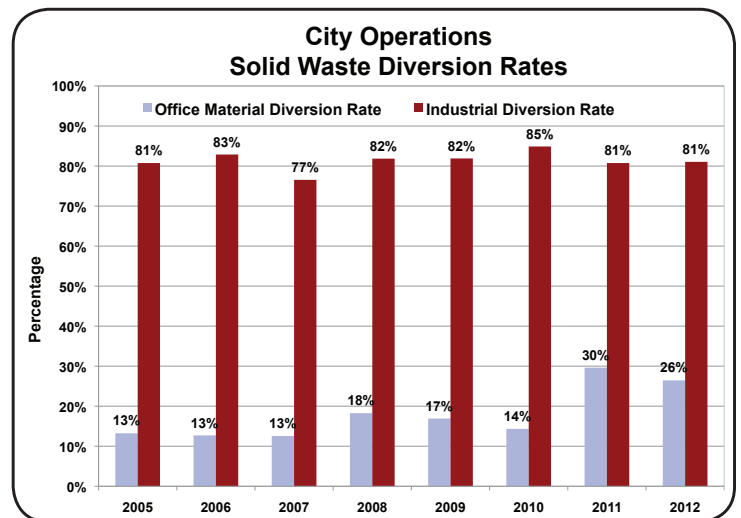


Recycling icon guidelines

- Staff conducted recycling audits at 321 Maple, City Clerk's Office, 215 N. Mason, Channel 14, and City's Attorney Office.



Graph 10



Graph 11

Goal #5: Education and Outreach

The municipal organization will provide sustainable educational opportunities to all levels of the community — students in grades K-20 and university, the general public, businesses, and staff through programs, workshops, presentations, training, and web resources.



Benchmarks

2005: Approximately 30 training seminars

2012: Approximately 55 training seminars

Accomplishments

- Conducted seven engagement challenges in 2012. Cumulative savings were \$111,057 and a 51 MT CO₂e reduction.
- The City hosted numerous energy efficiency training classes to explain how to reduce energy consumption at home and identify incentives available for improvements to air conditioners, insulation and windows. Nearly 100 City employees participated, of those, over 50 employees have made energy efficiency improvements to their homes.
- City maintains both an internal and external Sustainability website. The internal site includes, but is not limited to: Sustainable Purchasing Guidelines, recycling guidelines, challenges, current articles, numerous PowerPoint presentations, and scholarship information.
- Annually, Fort Collins Utilities participates in national Public Power Week with the American Public Power Association to educate staff about conservation and safety.
- ESD staff hosted 10 training sessions and 22 movies for staff and ClimateWise partners. Some trainings and educational outreach were combined. For example, Give a Watt: Pedal It Forward, an educational event that used energy harvesting bikes to power LCD units to display energy tips at CSU. The event kicked off a month-long Transportation outreach. Attendance was 83 participants. The aim was to get all employees fully engaged in the City's sustainability efforts, both at work and in their homes.
- The Residential Environmental Program Series and Biz Ed continue to operate, now for more than 25 years. In addition, other City departments also offer educational workshops and lectures to the public on topics related to the environment.
- Hosted Net Zero Cities Symposium. Approximately 325 participants attended the event.
- The Sustainability Coordinator worked with Webber Junior High and CSU on a holiday giving project. Students traded incandescent bulbs from their homes for CFL or LED lights. They decorated the old bulbs as Christmas ornaments, then wrapped them in small bags with a CFL automatic LED nightlight, or non-toxic natural air freshener for the "Adopt A Family Project." Over one hundred bags were distributed.
- The City hosts bi-annual Bike-to-Work days, encouraging City staff and residents

to reduce their CO₂ emissions for the day through biking to work.

- The 2012 One Planet program was a success, with program ambassadors achieving all their goals, and participation from 48 percent of the workforce—a 27 percent increase from 2011. Utilities' communication strategies include brochure, posters, emails, meetings, staff presentations, website, Ambassador Program, and Barriers document. Response from survey: "I really like the shift to a grassroots support for the program. By letting anyone organize one of the efforts, it really helped people to think about it as 'our program' rather than 'the Utilities' program.'

Highlights include: 32% were new participants; 94% completion rate; 42 ambassadors; 68 opportunities to tour various Utilities' departments and organizations across town; improved database, energy conservation was the top individual goal, with 46 participants who aimed to switch light bulbs and turn off electronics; the Customer Service Division attended a tour as a team; 181 gift cards were awarded; and conducted seven engagement challenges in 2012. Cumulative savings were \$111,057 and a 51 MT CO₂e reduction.

Challenge Benefits:

2012	Participants	Yearly CO ₂ e** (pounds)	Yearly Savings
Sustainability	35	84	\$16,800
FortZED City Employees	31	48	\$69,384
Pedal It Forward	51	60	\$8,640
Food	29	103.353	\$16,233
Bike-to-Work Day*	197		
Bike-to-Work Wednesday	55	400	\$106,666
Healthy Homes	23	0	0
Total	421	102,845	\$111,057
Tons		51.4225	

*Daily total **Assumes behavior is continued throughout the year.

Table 1



700 Wood Street garden

Goal #6: Funding

Foster a culture of sustainability in the organization and advance municipal sustainability goal through various funding mechanisms.(i.e., Innovation Fund, grants). Identify and implement innovative improvements to the City's physical plant and operational procedures that are not otherwise funded.

Benchmarks

2005 Innovation Fund: N/A

Sustainability Scholarship: N/A
(began 2006)

2012 Innovation Fund: \$100,000
\$100,000/year awarded to fund innovative improvements to the City's physical plant and operational procedures.

Scholarship Fund: \$10,000

Waste Innovation Improvement Fund: \$60,000 was available through funds, paid in lieu of landfill tipping fees, by departments who self-hauled waste to the landfill.

Accomplishments

- The Sustainability Scholarship program was instituted in 2006, when City budgets were declining. Employees may apply for up to \$800. Since 2008,

scholarships have been awarded to 78 recipients for sustainability trainings, conferences, certifications, etc. Each recipient shares material with the Sustainability Team or department. Non-departmental funding, such as the City's Sustainability Scholarships supports employee learning in sustainability and is another tool to increase employee knowledge, empowerment, and motivation.

- In 2012, 28 proposals were received and 13 projects funded through the City's Internal Innovation Fund: Southridge Golf efficiencies (LeaAnn Haisch, Bill Whirty); Traffic Ops and outdoor lighting (Sandy Aragon, Bryan Garrett); consolidate left-over office supplies (Sue Kenney, Rosemarie Russo); City departments bikes and gear (Chris Anderson, Rosemarie Russo); tire pressure monitors (Katy Bigner, Shane Armfield); PV on NIX (Karen Mancini, Ethan Cozzens);



inventory City trees (Denae Cameron, Zac Hall); paint 215 stairwells (Angie Rhodes, Bruce Byrne); flat screen TV in 215 lobby (Patty Netherton, Orin Ryssman); NIX outdoor lighting (Angie DeiLaura, Tracy Ochsner, Ethan Cozzens); battery chain saws, including dual battery packs (Zach Hall); and Collindale II electric cart storage (Bill Whirty). The 2012 energy-related projects are estimated to save \$9,700 per year in utility and maintenance costs, deliver an estimated average 17% return on investment, and payback will average 7 years.

- Waste Innovation Fund awarded included bin purchases and dirt screening.
- A Watershed Tour was given to City employees.
- Staff conducted four department water audits.

Goal #7: Parks/Natural Areas

Maintain a 30% forest canopy density in suitable areas of City Parks and 70% of native vegetative cover in Natural Areas.

Benchmarks

Forest Canopy/Native Vegetation

2005 Unavailable

2012 30%: Forest Canopy in suitable areas of City parks

70%: Native Vegetation in Natural Areas

Accomplishments

- In 2011, the City adopted a policy to have 30% of the city covered by tree canopy in parks in suitable areas. To

measure the current coverage, the City conducted an audit using state-of-the-art software STRATUM (measure of street trees) and UFORE (measure of tree coverage). Both studies also calculated the environmental and economic benefits of those trees. As of 2012, the City's tree canopy coverage stood at 30%.

- With financial resources from the Innovation Fund, Natural Areas purchased a GPS system to complete an accurate inventory of City trees, including health and damage assessments.



Poudre River restoration

- Developed a maintenance cycle and establish new trees in vacant planting locations. Use new tree inventory to determine the location and size of future street tree plantings.
- Park Planning and Maintenance are working together on park designs to maximize "no mow areas," while providing a park that meets the needs of the community.
- The Parks Department continues to monitor water consumption at City facilities.

Goal #8: Water

Reduce municipal operations water irrigation use and increase efficiency per acre. Reduce building water use (normalized to account for weather conditions), 20% by 2020.



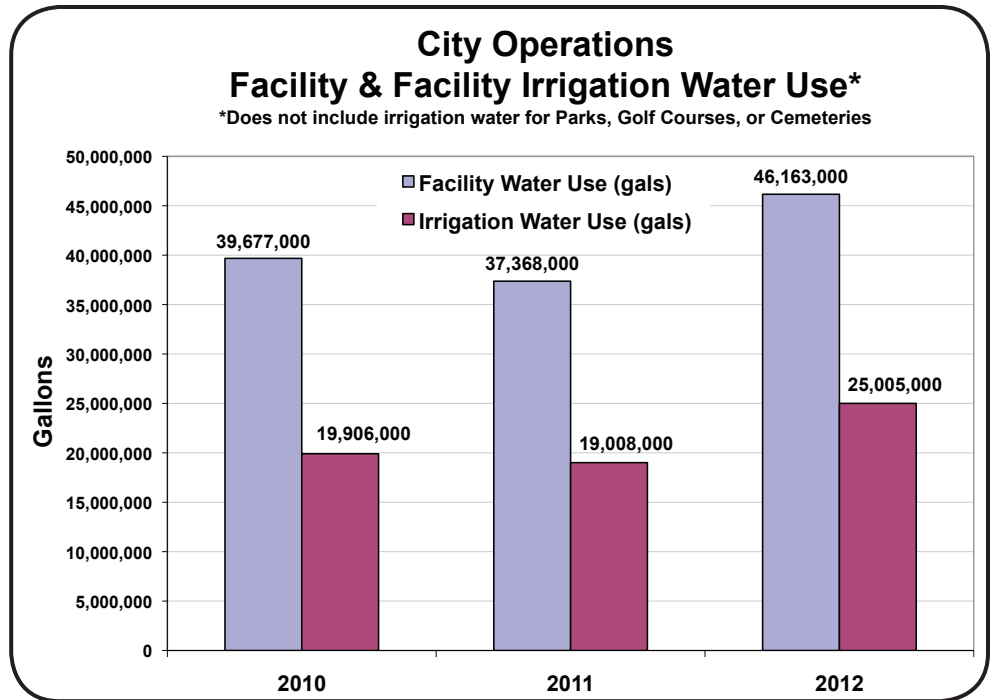
Benchmarks

2005 Indoor Water: 93,356,584 gallons
Outdoor Water: Unavailable

2012 Indoor Water: 46,484,424 gallons
Outdoor Water: Unavailable

Accomplishments

- The Parks Department has been proactive in reducing water use through various strategies. Every park has an evaporative transpiration (ET) controller ranging from 11 stations to over 100 stations controlled with satellites. Parks switched several parks from domestic to raw water, yielding a \$26,908 savings annually since 2010. Raw water is used at 19 parks, which reduces the energy costs of pumping and transport. Raw water accounts for 78% of all park acreage. Through the use of ET controllers, the City has saved \$9,074 since 2009. Additional savings have been made by adjusting schedules based on ET needs. In 2010, a 3.5% savings was achieved at City Park and Rolland Moore Park.
- Conducted Year of Water activities: Watershed Bike Tours and Earth Day displays.
- Utilities linked with community working group to update the Water Supply and Demand Management Policy. They held meetings that were much more in depth than more traditional general outreach.
- Conducted water audits at 215 N Mason, 281 N. College, Senior Center, and Operation Services.
- Basil Hamdan managed a LID (Low Impact Development) stormwater project at 700 Wood Street.
- A Watershed Tour was given to City employees.
- The medians on West Mountain Avenue were renovated with new irrigation heads that include up-to-date technology.
- Basil Hamdan managed a LID (Low Impact Development) storm water project at 700 Wood Street.



Graph 12



Pipe upgrades and maintenance

Goal #9: Sustainable Purchasing

Implement sustainable purchasing practices throughout the City organization and establish means to verify departments' compliance with revised purchasing policy. Establish quantifiable goals of 2% increase in office and industrial purchases annually starting in 2013.

Benchmarks

2005 No Data Available

2012 Industrial: 6% of purchases met sustainable criteria

Office: 32% of purchases met sustainable criteria*

**Based on limited data from two vendors.*

Accomplishments

- In 2012, the Green Purchasing Institute (GRI) completed a review of City's purchasing practices that identified successes and opportunities for improvements. Current City strengths included: new construction requirements (LEED Gold); green cleaning services; computer purchases (EPEAT Gold); road construction (recycled aggregate);

traffic signal lighting products (LED); demolition services and low-fuel vehicle purchasing.

- Adopted the Sustainable Procurement Policy.
- Established tools and increased the tracking of sustainable office and industrial products. (see Appendices E and F)
- The Purchasing Team held a two-day charrette and developed the following vision: "The City of Fort Collins is the recognized leader in the sustainable purchasing arena. Sustainable purchasing takes into account the triple bottom line of environment, social and economic aspects. Sustainable purchasing also recognizes the product life cycle of

acquisition, utilization and disposal. Safety is a recognized element in environmental and social segments of the criteria."

- Purchasing has established the following sustainable vehicle replacement criteria: light duty vehicles—over 90,000 miles (i.e. cars/pickups/vans); mowers—4,000 hours; utility trucks—5,000 hours; small dump trucks—120,000 miles (gas); 150,000 miles or 500 hours (diesel); tandem dump trucks—150,000 miles; backhoes/loaders—8,000 hours; trailers—10 years + condition; sweepers—8,000 hours; other equipment—case-by-case basis. An economic and physical analysis is performed on all vehicles as well.

Goal #10: Employee Safety and Health

Incorporate a City-wide program fostering a culture of health and safety. Increase the number of employees that participate in the Well Day Program from 45% to 75% by 2020. Lower accident frequency and severity.

Affordable Housing garden compost project



Benchmarks

Safety and Wellness

2005 Unavailable

2012 Safety: Developing data for recordable accident frequency, total injury costs, days worked, modified and days lost

Recordable Accident Frequency (RAF) rate is a measure of injury frequency = 6.2

Days Away, Restricted, or Transferred (DART) rate is a measure of injury severity = 3.2

The Safety Team continues to track injury frequency and severity. The Team offers training to reduce the number of injuries and infuse a culture of safety throughout the organization. The City was above the general industry and public entities for both RAF 3.5, 5.7 and DART 1.8, 2.5 benchmarks. These measures rank accidents per 200,000 hours worked.

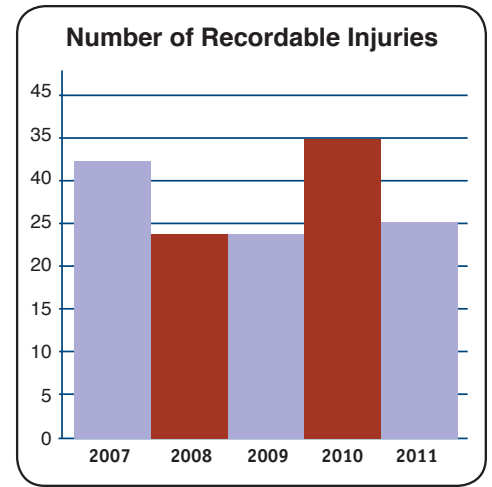
Wellness: 433 City employees earned their third Well Day, a 15% increase in Well Day participants from 2011 to 2012.

Accomplishments

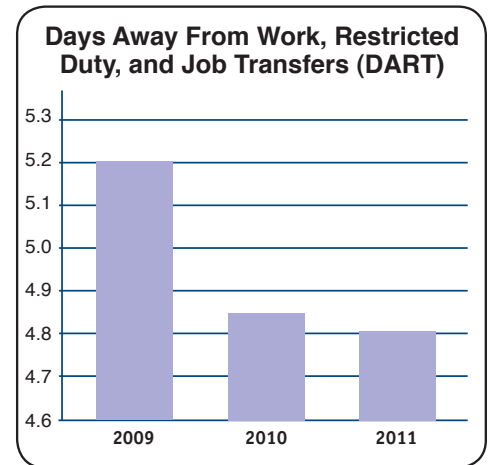
Well Day Program includes:

- Access to three fitness centers for employee use.
- A variety of classes on topics related to nutrition, stress reduction and management, tobacco cessation and exercise.

- An opportunity to earn up to three vacation days annually for qualified employees who complete, within a trimester, a wellness plan with multiple components related to physical activity, learning, behavior change and awareness.
- Designed and constructed a "Nibble Garden" along the Spring Creek Bike Trail. The garden allows residents to stop and nibble on berries while on the trail. The garden is adjacent to Shire CSA, so it also helps to promote one of several CSAs in town.
- As part of the Make a Difference Day, 17 volunteers picked up organic compost (i.e. llama droppings). A llama's digestive system processes seeds, so unlike horse manure the compost material doesn't produce weeds. Organic compost was delivered and spread at affordable housing units including 300 First Street, Village on Plum, Village on Stanford, 811 Myrtle Street, and the gardens at the Senior Center. Volunteers assisted a local CSA "On the Vine" with fall harvesting, weeding, and removing of irrigation drip lines that needed to be replaced because of ash in the ditches. Promoting CSA's ensures that land remains in agricultural production, residents have access to healthy food, less transportation miles are associated with our food, and community members gain a connection to each other and our land.



Graph 13



Graph 14

Indoor air quality gym remodel



Department Projects and Champions

Carbon:

- Operation Services continues to set automated controls for load management. This reduces peak demand charges by reducing electricity use.

Energy:

- Expansion of solar thermal system at EPIC — yields a 14 MT CO₂e reduction.
- Water Reclamation Facility is improving biogas utilization, a process to use recovery gas as a heat source. Digester gas treatment represents an opportunity to offset all of Drake Reclamation facilities current natural gas use.
- Installation of a 36 kW photovoltaic collection system at the Museum and Discovery Science Center — yields a 32 MT CO₂e reduction.
- Drake Water Reclamation is participating in the Colorado Industrial Energy Challenge. Between 2011 and 2012, total energy consumption was reduced by 9.3%. (see Chart 15)

Fuel:

- Increase of CNG Transfort buses by seven buses in 2012 — yields a 719 MT CO₂e reduction annually.
- Police Department electric motorcycle pilot — minimize air pollution and reduce maintenance costs.

Education:

- Developed educational sustainability material for staff and community members — Water Bike Tour, Sustainability Project Bike Tour, Community Garden Resource, Sustainability Certification Guide, Comprehensive CSA listing, Environmentally Preferable Purchasing (EPP) Guidance, and Dirty Dozen Guide (2012) to increase knowledge about purchases, policies and best management practices.
- Sustainability Services hosted 22 Mindful Movie events and 11 corporate training seminars for staff and ClimateWise partners — raising local businesses and internal operations awareness.

Water:

- Steve Wilson, Streets Department, worked with CSU to study and improve pond biodiversity at Fossil Creek Community Park by installing aerators to increase dissolved oxygen levels. He also installed solar bees at Golden Meadows Park to reduce algae on the ponds. Solar bees are an alternative energy powered aeration system. The effectiveness depends on size of the pond.

Waste Diversion:

- Recent studies from Minnesota and Wisconsin and case studies from China show that mixing the class C fly ash (i.e., waste) with recycled road pavements provides a tenfold increase in strength over base materials with a similar character. The City of Fort Collins took advantage of this finding to reuse the pavements of Trilby Road between College Avenue and Portner Road. The additional strength added by combining the fly ash and recycled pavement section increased the projected stiffness of the section.
- Hoffman Mill Operation — yields a 4,239 MT CO₂e reduction and annual savings of \$265,370 from recycling concrete, asphalt, and porcelain.



Spring Creek Bike Trail Nibble Garden, Earth Day event

Social Superstars:

- Participated in the Sustainable Living Fair, LoCo Food Fair and Tour de Fat parade to distribute literature about Healthy Homes and CSAs. Staff made and distributed dozens of healthy home products such as air fresheners, disinfectants and sneaker sweetener. The City provided lights and gifts to the Bounty and Brews Dinner.

Drake Water Reclamations Energy Challenge

Energy Source	2011 Total Consumption (MMbtu)	2012 Total Consumption (MMbtu)	2012 % Change from Base Year
Natural Gas Consumption	12,863	10,615	-17.5%
Electricity Consumption	114,828	101,472	-11.6%
Total Energy Consumption (all sources)	127,096	112,002	-12.2%
Normalization Metric (MG-based)	4,337	3,504	-12.2%
Sample Intensity (MMbtuMG)	29	32	8.7%
Total Savings Based on Model (MMbtu)		-11827	9.3%

Table 2

Acknowledgements

Acknowledgements to employees who participated in educational trainings, One Planet Program, national LEED and Sustainability Certification Program or sustainability challenges:

Kathy Collier — Local Food
Dave Dale — Local Food
Lindsay Ex — Local Food
Michelle Finchum — Local Food
Brenda Flynn — Local Food
Matt Gibbs — Local Food
Deb Harris — Local Food
Brian Hergott — LEED Training
Robert D. Irish — *Revenge of the Electric Car*
Sarah E. Kane — EPP
Tom Knostman — LEED Training
Michael Knox — Training
Tamara Sue Lindenstien — Training

Courtney Livingston — Training
Albert C. Lochra — *Sea Change*
Robin MacDonald — EPP
Janet McTague — Local Food
Susan Mercier — Local Food
Lori Ann Middleton — EPP
Kenneth D. Morrison — Sustainability Progress
Robert Moseby — *Revenge of the Electric Car*
Louise Mosnik — Sustainability Progress
Ryan Mounce — Sustainability Progress
Lucas Morgan Mouttet — *Blue Gold*
Gail Elaine Neben — *Revenge of the Electric Car*

Patty Netherton — Local Food
Molly Ann North — Sustainability Progress
Tracy Oschner — *Revenge of the Electric Car*
Jim Pierce — Food Challenge
John Phelan — Local Food
Jeff Reichert — Local Food
Rosemarie Russo — Local Food
Glen Schlueter — Local Food
Dale Schnathorst — Local Food
Lucinda Smith — Training
John Stephens — Training
Brian Woodruff — LEED Training

One Planet Program:

Nathan Ader	Harriet Davis	Jacob Hirning	Elizabeth Molenaar	Susan Smolnik
Hannah Ahrendt	Kim Devoe	Clifford Hoelscher	Kenneth Morrison	Frances Soltis
Angel Anderson	Opal Dick	Carol Housley	Jason Moss	James Spaulding
Erik Anderson	Victoria D'ippolito	Lori Hubbard	Lucas Mouttet	Gregg Stoneciper
Kevin Armstrong	Kelsey Doan	Clinton Hultgren	Lincoln Mueller, Jr.	James Storebo
Jennifer Authier	Jason Dressen	Joseph Iglehart	Daniel Nelson	Susan Strong
Kraig Bader	Cindy Dungan	Robert Irish	Eric Olson	Douglas Swartz
Jay Barber	Donald Dustin	Maia Jackson	Jill Oropeza	Ellen Switzer
Pablo Bauleo	Jason Eich	Nancy James	Jean Pakech	Patricia Teraoka
Allison Becker	Rene Evenson	Brian Janonis	Adrienne Palmer	Luke Unruh
Michelle Becker	Matthew Fater	Douglas Jardine	Jolee Parmenter	Michael Valloric
Katherine Bigner	Dennis Feltz	Ricky Jesser	David Parton	Brian Varrella
D. Black	Tom Filkowski	Nicholas Jiron	Mary Pekara	Thomas Vosburg
Jorin Botte	J. Michelle Finchum	Benjamin Johnson	John Phelan	Lisa Voytko
Shane Boyle	Shannon Gallegos	Ross Johnson	Robin Pierce	Mona Walder
Adam Bromley	James Garcia	Adam Jokerst	Tyler Promes	Travis Walker
Terri Brown	Lisa Gardner	Melissa Katsimpalis	Christina Prueett	Jennifer Ward
Brad Burke	Matthew Gibbs	Mark Kempton	Susan Reed	Michele Warren
Beverly Byrne	Kelley Gonzales	Kymerlie Koster	Angela Rhodes	Wesley Watkinson
Steven Caganach	Jared Graybeal	Phillip Ladd	Henry Richardson, Jr.	Norman Weaver
Renee Callas	Joyce Grenz	David Lamrque	Marsha Robinson	Carol Webb
Marcee Camenson	Charles Gross	Tamara Lindenstien	Thomas Rock	Kevin Westhuis
Brian Campbell	Basil Hamdan	Billy Linn	Diana Royval	Linda White
Ila Carpenter	Jason Haner	Albert Lochra	Ronald Russell	Chad Willschau
Deetta Carr	Rolin Harbison	Tyson Luttenbacher	Kenneth Sampley	Robert Winick
Lori Clements	Debra Harris	Annetta Maestas	Jesse Schlam	Donald Witman
Alfonso Colin	Jennifer Harvey	Max Maloof	Glen Schlueter	Jay Wolfe
Kathy Collier	Blaine Hastings	Kendall Mathea	Dale Schnathorst	John Wong
Justin Compton	Jon Haukaas	Brandon McGarvie	Gary Schroeder	Daniel Wright
Lois Cordova, Jr.	James Heald	Janet McTague	Lisa Schroers	Virginia Wynne
William Cordova	Sharon Held	Gail Meben	James Schwartz	Gerald Yakel
Janic Couch	Ann Helmut	Edward Meikel	Wendy Serour	Jesse Yakel
Terry Cox	Joseph Henderson, Jr.	Caleb Metzler	Crystal Shafii	Mattew Zoccali
Gordon Cromwell	Errin Henggeler	Robert Micek	Christine Shoemaker	
Judy Dahlgren	Michael Hergenreder	Norman Mill	Randall Sievers	
Jacqueline Darner	Doug Himmelberg	Dawnelle Misenhimer	Lance Smith	
Laurie D'audney	Stephanie Himmelberg	Erinn Mitchell	Tiana Smith	

One Planet Ambassadors:

Hannah Ahrendt	Judy Dahlgren	Cliff Hoelscher	Jean Pakech	Susan Strong
Jennifer Authier	Matt Fater	Melissa Katsimpalis	Jolee Parmenter	Doug Swartz
Jay Barber	Michelle Finchum	Kymerlie Koster	Robin Pierce	Brian Varrella
Katy Bigner	Chuck Gross	Janet McTague	Sue Reed	Tom Vosburg
Shane Boyle	Kelley Gonzales	Caleb Metzler	Ken Sampley	Norm Weaver
Jean Carpenter	Basil Hamdan	Ken Morrison	Glen Schlueter	Jay Wolfe
Deetta Carr	Jon Haukaas	Lucas Mouttet	Wendy Serour	
Lori Clements	Errin Henggeler	Eric Olson	Tiana Smith	
Laurie D'Audney	Stephanie Himmelberg	Jill Oropeza	Crystal Shafii	



#1 Carbon Emissions

- 2013 Complete update to 2004 Internal Sustainability Plan.
- 2013 Identify carbon reduction projects per return on investment.
- 2013+ Identify and implement at least one top priority project for each sustainability goal annually.
- 2014 Evaluate LEED and other programs such as Green Globes, Architecture 2030 and Building Research Establishment Environmental Assessment Method (BREEAM) for best management practices.
- 2014 Publish Annual Report, management dashboards, successes, tips, and resources.
- 2014 Continue to refine data for sustainability tracking.



#2 Electricity and Natural Gas

- 2014 Three buildings will be tested annually to measure efficiency — dependent on Innovation Fund approval.
- 2013 Complete retrofit outdoor lighting at Traffic & Streets, Collindale, and Southridge Golf Course.
- 2013 Provide instructions so that all employees use the EPA and ENERGY STAR power settings on computers.
- 2013 Adjust additional building hours for coincident afternoon peak energy use.
- 2014 Encourage purchase of 98.5% condensing type heaters for all new buildings.
- 2014 Adopt Architecture 2030 standards for new buildings.
- 2014+ Complete HVAC Controls Retrofit Project and monitor savings at two buildings.



#3 Fuel

- 2013 Seek to implement the following priorities for the City vehicle purchases: 1) alternative-fueled vehicle; 2) downsize vehicles from original request; and 3) hybrid. Track TBL impacts of vehicles purchased.
- 2013 Coordinate with ClimateWise and EcoDrive Program to increase average vehicle ridership among City workers. Projects include hosting a seminar about transportation options and a Transportation Challenge and conducting EcoDrive seminars.
- 2014 Increase percentage of alternative vehicles and equipment in fleet.



#4 Solid Waste Reduction

- 2013 Plan and design implementation projects to reduce municipal waste volumes self-hauled by City departments to Larimer County Landfill.
- 2013 Maintain periodic meetings with the City's solid waste and recycling contractor to identify recycling opportunities.
- 2013 Continue relocating construction excavation material for use as fill. Present waste reduction/recycling information to new employees, work groups about "Recycle This" campaign.
- 2014 Offer greater opportunities to recycle in public access areas. Increase enforcement of illegal dumping in City property dumpsters (i.e., install locked bins).
- 2014 Create transparency and readily accessible tools enabling employees to take personal actions. Invest in infrastructure, when feasible, to process waste materials into new products.



#5 Education and Outreach

- 2013 Work with vendors at Golf courses and Lincoln Center to reduce waste.
- 2013 Implement employee challenges as part of ClimateWise Program to maintain Platinum level.
- 2013 Host Corporate Trainings and Mindful Movies in conjunction with CSU for business community and City employees (5 sessions).
- 2013 Development of One Planet Incentive Program in conjunction with Sustainability and Well Days Program.
- 2013 The City will promote leadership by participating in community initiatives such as Fort ZED, Business Outreach, and Master Naturalist.
- 2013 The Customer Outreach Team will continue to meet monthly to coordinate outreach to local businesses.
- 2014 Information about sustainable practices and wise use of natural resources will be available to all levels of the community — students in grades K-20, university staff and students, the general public, and employees as well as City staff.
- 2014 Outreach will be provided through the Residential Environmental Program series, and targeted presentations to audiences such as City staff, Poudre School District, CSU, Homeowner Associations (HOAs), and religious organizations.
- 2014 Periodical evaluations of external and internal outreach campaigns will be conducted by the Education Team.



#6 Funding

- 2013 In addition to reporting on annual carbon inventory, cost savings that directly result from energy and waste conservation will be tracked.
- 2014 Develop BFO offer(s) to fund organizational sustainability projects.
- 2014 The City's Sustainability Innovation Team will identify and rank team projects and departmental projects.



#7 Parks/Natural Areas

- 2014 Achieve a 30% forest canopy density in suitable areas of City Parks by 2020 and a 70% native vegetation cover in Natural Areas.
- 2013 The City will maintain Parks as designated and be built with an emphasis on periodically replacing landscaping to more drought tolerant species.
- 2013 Maintain a 30% forest canopy on City-owned property through monitoring and replanting.
- 2013 Plant natives and eradicate non-natives at Natural Areas to maintain 70% native cover.
- 2014 Replace 5% of existing plants at Parks with xeric/native species.
- 2014 Park Planning and Park Maintenance will work together on park designs to maximize “no mow areas,” while providing a park that meets the needs of the community.
- 2014 Parks will replace select water pumps to a more efficient model to decrease the energy use for irrigation as part of the life-cycle program.
- 2014 Forestry staff will begin a more comprehensive forest canopy inventory.



#8 Water

- 2013 Reduce municipal operations' water irrigation use and increase efficiency per acre.
- 2013 Publish report on water audits at 215 N. Mason, 281 N. College, Senior Center, and Operation Services.
- 2013 Host Bike Water Tours.
- 2014 Invest in more energy efficient pumps and use low-application MP rotators on slopes.
- 2014 Install irrigation sub-metering and weather based controllers.



#9 Sustainable Purchasing

- 2013 Develop baseline of sustainable purchasing.
- 2013 Increase communication among staff.
- 2014 Explore appropriate products for centralization.
- 2013 Increase green office practices such as: use of recycled or remanufactured toner cartridges; reduction of printed material; use of 30% PCW recycled content paper; and use of other green office products.
- 2013 Create a tracking tool to report on sustainable purchasing activities versus baseline purchases.
- 2013 Create training programs for departments.
- 2013 Update the sustainable purchasing website in conjunction with the new web portal.
- 2013 Continue to work through the 25 product categories identified in the green purchasing study.
- 2013 Assist other departments and groups with strategies recommended in audit such as scanner purchases.
- 2014 Using the Sustainable Purchasing Policy, identify and continue to work on alternative items.
- 2014 Require purchase of best available fuel efficient vehicles/net emissions reduction.
- 2014 Develop and periodically update tools.
- 2014 Evaluation criteria for selecting a product or vendor will incorporate sustainability factors, including the bidding company's own sustainability qualifications.



#10 Employee Safety and Health

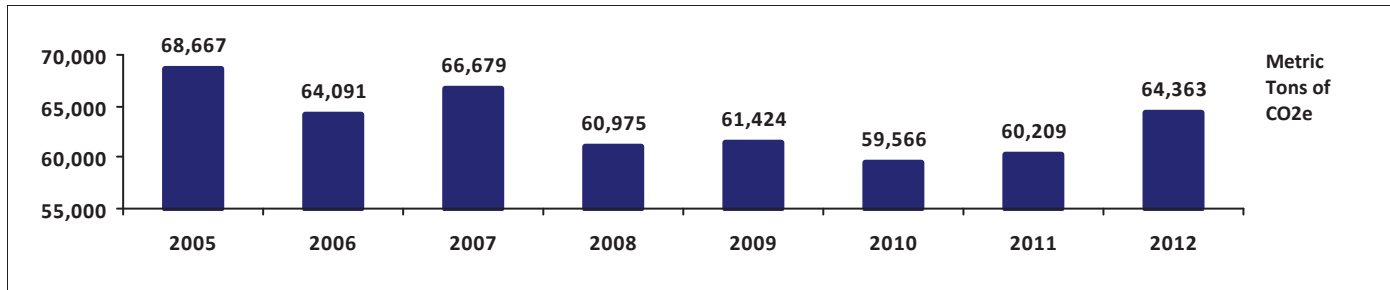
- 2013 Increase the yearly percentage of employees participating in the annual health assessment by 5% annually.
- 2013 Decrease the percentage of employees having five or more risk factors as measured by the health assessment survey. Create an intervention strategy that helps employees' lower risk factors.
- 2013 Increase the number of eligible employees that participate in the Well Days Incentive Program to 75% by 2020.
- 2013 Continue to host and resource a comprehensive Wellness Program for all employees.
- 2013 The City will participate in the Social Superstar Program that draws attention to businesses that create a positive social impact.

Appendix B — Carbon Emission Progress

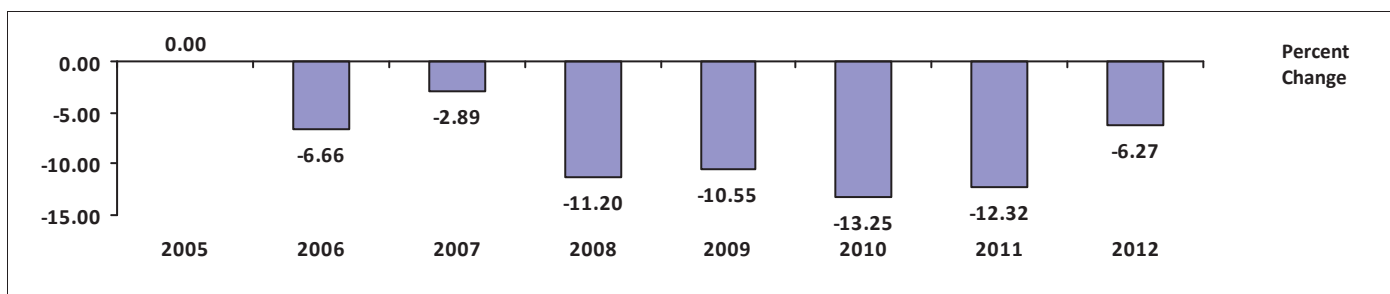
Total Municipal GHG Emissions By Year

Year	Total GHG Emissions (mt CO ₂ e)	Yearly % Change	% Change Since Baseline 2005
2005	68,667		0.0%
2006	64,091	-6.7%	-6.7%
2007	66,679	4.0%	-2.9%
2008	60,975	-8.6%	-11.2%
2009	61,424	0.7%	-10.5%
2010	59,566	-3.0%	-13.3%
2011	60,209	1.1%	-12.3%
2012	64,363	6.9%	-6.3%

Metric Tons of CO₂e Emissions by Year



Percent Change in GHG Emissions from 2005 Baseline



2005 Municipal

GHG Report

Scope 1- Direct GHG Emissions

* conventional fuel only

GHG Source	Quantity Used		Cost	MT of CO2e
Fleet- Gasoline Consumption	417,517	gallons	\$0	3,665.80
Fleet- LPG Consumption	16,672	gallons	\$0	96.53
Fleet- CNG Consumption	5,121	gallons	\$0	0.28
Fleet- Diesel Consumption	267,140	gallons	\$0	2,727.50
	Biogenic	Conventional		
Fleet- E50	0	0 gallons	\$0	0.00 *
Fleet- E85	0	0 gallons	\$0	0.00 *
Fleet- B10	0	0 gallons	\$0	0.00 *
Fleet- B15	0	0 gallons	\$0	0.00 *
Fleet- B20	14,194	56,775 gallons	\$0	579.67 *
<i>Transportation Subtotal</i>		<i>763,225 gallons</i>	<i>\$0</i>	<i>7,069.78</i>
Facilities Natural Gas Consumption	86,190	dTh	\$696,798	4,581.53
Water-related Natural Gas Consumption	20,942	dTh	\$0	1,113.21
<i>Natural Gas Subtotal</i>		<i>107,133 dTh</i>	<i>\$696,798</i>	<i>5,694.74</i>
Scope 1 Subtotal			\$696,798	12,764.52

Scope 2- Energy Indirect GHG Emissions

GHG Source	Quantity Used		Cost	MT of CO2e
Facilities Electrical Consumption	15,760,580	kWh	\$416,164	13,061.14
Water-related Electrical Consumption	17,381,121	kWh	\$0	14,404.12
Streetlight Electrical Consumption	8,123,199	kWh	\$0	6,731.87
Traffic Signal Electrical Consumption	907,818	kWh	\$0	752.33
"Other" Electrical Consumption	2,410,071	kWh	\$0	1,997.28
Scope 2 Subtotal	44,582,789	kWh	\$416,164	36,946.74

Scope 3- Other Indirect GHG Emissions

GHG Source	Quantity Used		Cost	MT of CO2e
Travel in Personal Vehicle (Reimbursed)	133,553	miles	\$50,817	66.25
Air Travel (Reimbursed)	311,146	miles	\$0	852.08
Office Waste from Municipal Facilities	82	tons	-	383.18
Industrial Waste from Municipal Facilities	29,180.00	tons	-	17,653.90
Public Waste	0.00	tons	-	0.00
Scope 3 Subtotal			\$50,817	18,955.41

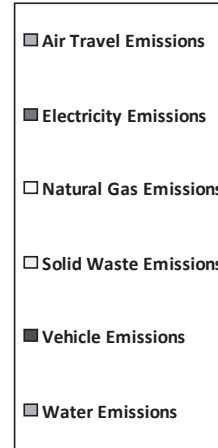
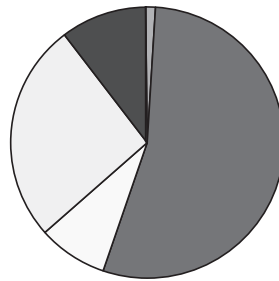
Total Metric Tons of CO2e: 68,666.67

2005 Municipal

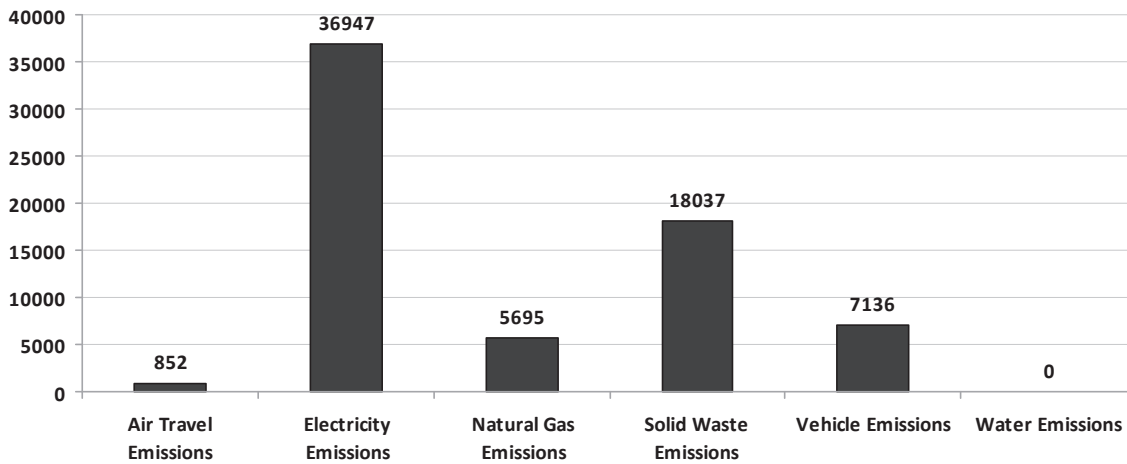
GHG Report

Municipal CO₂e Emissions by Source

Emission Source:	Metric Tons CO ₂ e:	%
Electricity Emissions	36,946.74	53.8%
Solid Waste Emissions	18,037.08	26.3%
Vehicle Emissions	7,136.03	10.4%
Natural Gas Emissions	5,694.74	8.3%
Air Travel Emissions	852.08	1.2%
Total	68,666.67	100.0%



Metric Tons of CO₂e by Emission Source

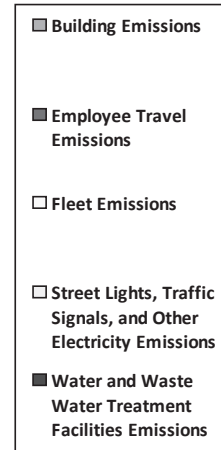
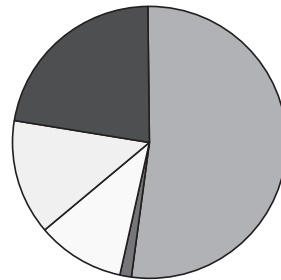


2005 Municipal

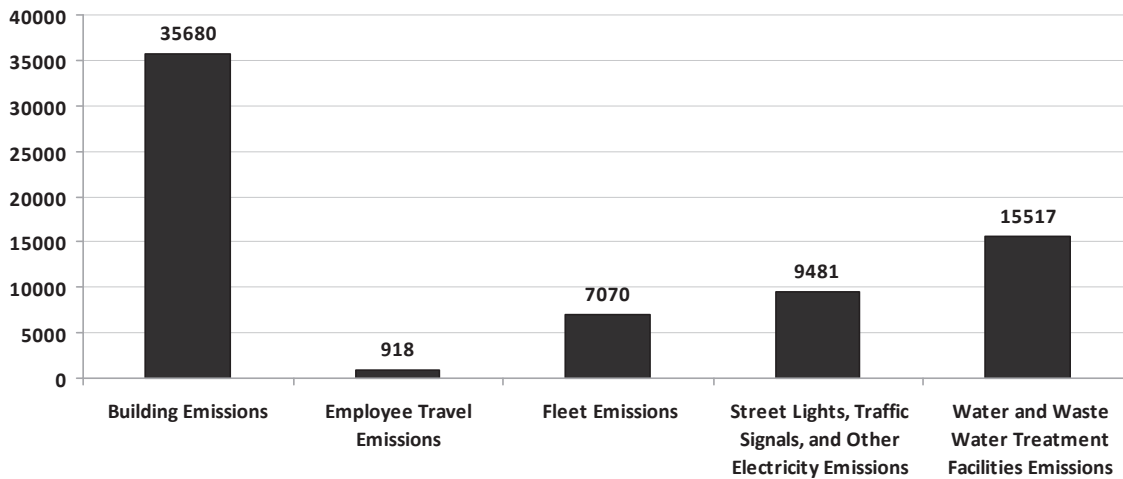
GHG Report

Municipal CO2e Emissions by Sector

Municipal Sector:	Metric Tons CO2e:	%
Buildings Emissions	35,679.75	52.0%
Water and Waste Water Treatment Facility Emissions	15,517.33	22.6%
Street Lights, Traffic, Signals, and Other Electricity Emissions	9,481.48	13.8%
Fleet Emissions	7,069.78	10.3%
Employee Travel Emissions	918.33	1.3%
Total	68,666.67	100.0%



Metric Tons of CO2e by Municipal Sector



2005 Municipal

GHG Report

Detailed Recycling Breakdown

Recycling

Material	Quantity	Cost	MT of CO2e
Cardboard	48,880.28 lbs	-	-63.41
Aluminum	59.48 lbs	-	-0.45
Plastic	5,310.32 lbs	-	-3.93
Newsprint	45,951.03 lbs	-	-79.85
Mixed Office Paper	122,651.72 lbs	-	-186.93
Magazines	6,012.15 lbs	-	-6.76
Commingled	23,087.03 lbs	-	-34.77
Residue	0.00 lbs **	-	-
Office Recycling Total	251,952.00 lbs		-376.09

** included in Landfilled waste - Scope 3

Scrap Metal

Material	Quantity	Cost	MT of CO2e
Aluminum	0.00 lbs	\$0.00	0.00
Copper	0.00 lbs	\$0.00	0.00
Brass	0.00 lbs	\$0.00	0.00
Steel	0.00 lbs	\$0.00	0.00
Mixed Metal	0.00 lbs	\$0.00	0.00
	0.00 lbs	\$0.00	0.00

Crushing Facility

Material	Quantity	Cost	MT of CO2e
1.25 inch crushed concrete	18,303.59 tons	\$0.00	-
1.25 inch dirt and rock road base	0.00 tons	\$0.00	-
1.25 inch recycled asphalt	103,544.23 tons	\$0.00	-
	121,847.82 tons	\$0.00	

Other

Material	Quantity	Cost	MT of CO2e
Wood mulching	232.00 tons	\$2.00	-
Electronics	111.00 tons	\$12.00	-

2005 Municipal

GHG Report

Biogenic emissions from biofuels

	<i>Conventional</i>	Biogenic	Cost	MT of CO2e
Fleet- E50	0	0 gallons	\$0	0.00
Fleet- E85	0	0 gallons	\$0	0.00
Fleet - B10	0	0 gallons	\$0	0.00
Fleet - B15	0	0 gallons	\$0	0.00
Fleet - B20	56,775	14,194 gallons	\$0	134.13
Fleet- B100		0 gallons	\$0	0.00
Fleet - Biofuel Total		14,193.80 gallons	\$0.00	134.13

Indicator Breakdown

Indicators	Annual Metric Tons CO2e Generated Per Indicator		
Number of City of Fort Collins Employees	1,898	Per Employee	36.17844
Square Footage of Municipal Buildings	1,495,847	Per 1,000 Square Ft.	45.90488
Number of Fleet Vehicles	917	Per Fleet Vehicle*	7.70968
City of Fort Collins Annual Budget	\$465,122,000	Per \$100 of Budget	0.01476

*Only takes into account GHG Emissions from Fleet fuel use.

Additional Data

Total Building Water Use	93,356,584 gallons
Per Employee Water Use	49,187 gallons
Summer High Temperature (Fahrenheit)	103 degrees
Winter Low Temperature (Fahrenheit)	-10 degrees

2012 Municipal

GHG Report

Scope 1- Direct GHG Emissions

* conventional fuel only

GHG Source	Quantity Used		Cost	MT of CO2e
Fleet- Gasoline Consumption	449,253	gallons	\$0	3,944.44
Fleet- LPG Consumption	7,597	gallons	\$0	43.99
Fleet- CNG Consumption	160,128	gallons	\$0	8.65
Fleet- Diesel Consumption	4,050	gallons	\$0	41.35
	Biogenic	Conventional		
Fleet- E50	15,590	15,590 gallons	\$0	136.88 *
Fleet- E85	0	0 gallons	\$0	0.00 *
Fleet- B10	0	0 gallons	\$0	0.00 *
Fleet- B15	0	0 gallons	\$0	0.00 *
Fleet- B20	56,639	226,556 gallons	\$0	2,313.14 *
<i>Transportation Subtotal</i>		<i>863,173 gallons</i>	<i>\$0</i>	<i>6,488.44</i>
Facilities Natural Gas Consumption	118,439	dTh	\$509,428	6,295.72
Water-related Natural Gas Consumption	18,602	dTh	\$89,796	988.82
<i>Natural Gas Subtotal</i>		<i>137,041 dTh</i>	<i>\$599,223</i>	<i>7,284.55</i>
Scope 1 Subtotal			\$599,223	13,772.99

Scope 2- Energy Indirect GHG Emissions

GHG Source	Quantity Used		Cost	MT of CO2e
Facilities Electrical Consumption	16,060,284	kWh	\$713,321	12,180.34
Water-related Electrical Consumption	15,494,715	kWh	\$0	11,751.41
Streetlight Electrical Consumption	8,526,396	kWh	\$0	6,466.54
Traffic Signal Electrical Consumption	575,314	kWh	\$36,121	436.33
"Other" Electrical Consumption	2,515,853	kWh	\$1,358,253	1,908.06
Scope 2 Subtotal	43,172,562	kWh	\$2,107,695	32,742.68

Scope 3- Other Indirect GHG Emissions

GHG Source	Quantity Used		Cost	MT of CO2e
Travel in Personal Vehicle (Reimbursed)	155,978	miles	\$86,564	77.37
Air Travel (Reimbursed)	234,137	miles	\$81,578	641.19
Office Waste from Municipal Facilities	682.86	tons	-	667.57
Industrial Waste from Municipal Facilities	26,763.80	tons	-	16,192.10
Public Waste	256.85	tons	-	269.22
Scope 3 Subtotal			\$168,143	17,847.46

Total Metric Tons of CO2e:

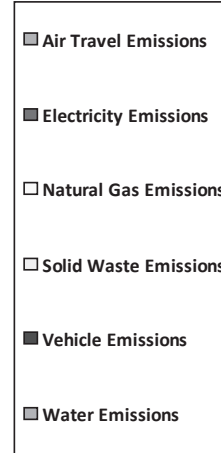
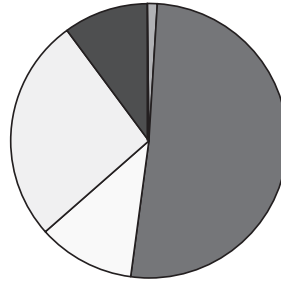
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2012 Municipal

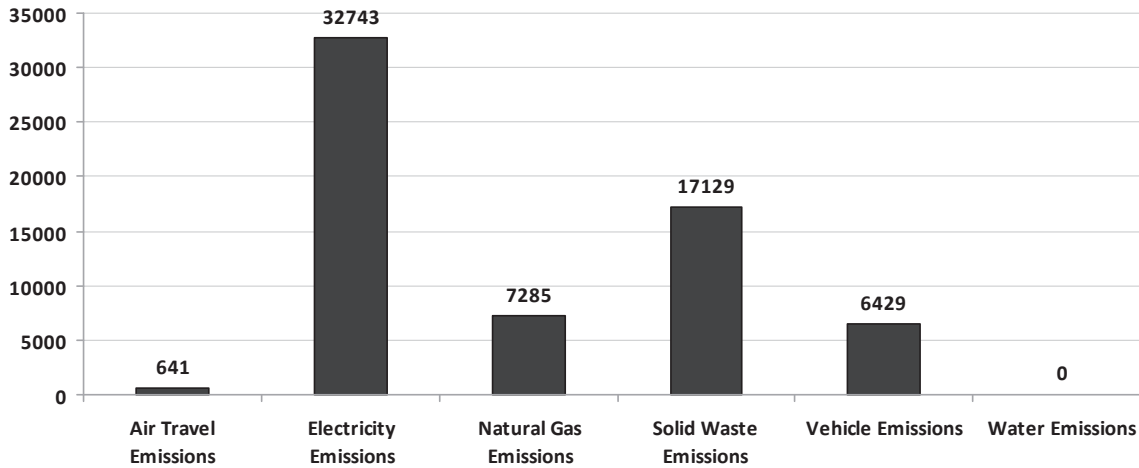
GHG Report

Municipal CO2e Emissions by Source

Emission Source:	Metric Tons CO2e:	%
Electricity Emissions	32,742.68	51.0%
Solid Waste Emissions	17,128.89	26.7%
Vehicle Emissions	6,428.93	10.0%
Natural Gas Emissions	7,284.55	11.3%
Air Travel Emissions	641.19	1.0%
Total	64,226.24	100.0%



Metric Tons of CO2e by Emission Source

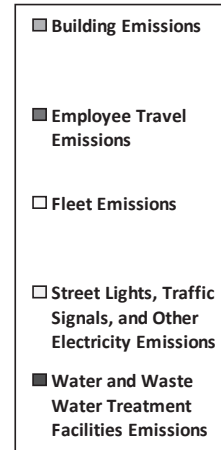
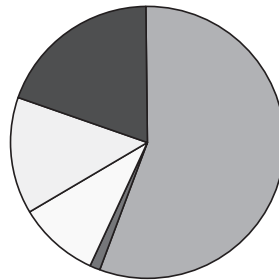


2012 Municipal

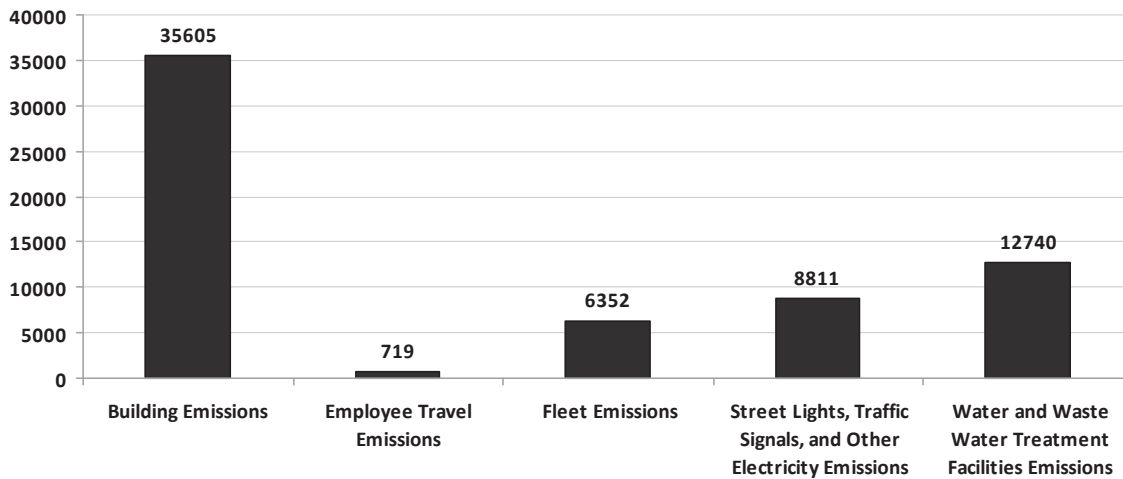
GHG Report

Municipal CO₂e Emissions by Sector

Municipal Sector:	Metric Tons CO ₂ e:	%
Buildings Emissions	35,604.96	55.4%
Water and Waste Water Treatment Facility Emissions	12,740.23	19.8%
Street Lights, Traffic, Signals, and Other Electricity Emissions	8,810.92	13.7%
Fleet Emissions	6,351.56	9.9%
Employee Travel Emissions	718.56	1.1%
Total	64,226.24	100.0%



Metric Tons of CO₂e by Municipal Sector



2012 Municipal

GHG Report

Detailed Recycling Breakdown

Recycling

Material	Quantity	Cost	MT of CO2e
Cardboard	214,110.01 lbs	-	-277.75
Aluminum	1,473.23 lbs	-	-11.12
Plastic	17,187.73 lbs	-	-12.71
Newsprint	58,438.28 lbs	-	-101.54
Mixed Office Paper	133,082.14 lbs	-	-202.83
Magazines	0.00 lbs	-	0.00
Commingled	66,786.61 lbs	-	-100.58
Residue	0.00 lbs **	-	-
Office Recycling Total	491,078.00 lbs		-706.52

** included in Landfilled waste - Scope 3

Scrap Metal

Material	Quantity	Cost	MT of CO2e
Aluminum	223,188.00 lbs	\$74,942.93	-1,518.79
Copper	9,036.00 lbs	\$14,609.20	-61.49
Brass	1,431.00 lbs	\$2,361.15	-9.74
Steel	264,221.00 lbs	\$22,960.45	-1,798.02
Mixed Metal	5,851.00 lbs	\$14,183.24	-39.82
	503,727.00 lbs	\$129,056.97	-3,427.86

Crushing Facility

Material	Quantity	Cost	MT of CO2e
1.25 inch crushed concrete	18,224.99 tons	\$0.00	-
1.25 inch dirt and rock road base	7,237.00 tons	\$0.00	-
1.25 inch recycled asphalt	87,603.22 tons	\$0.00	-
	113,065.21 tons	\$0.00	

Other

Material	Quantity	Cost	MT of CO2e
Wood mulching	1,032.00 tons	\$0.00	-
Electronics	0.00 tons	\$0.00	-
Yard trimmings	112.00 tons	\$0.00	-
	1,144.00 tons	\$0.00	MT of CO2e
Industrial Recycling Total	114,461.07 tons	\$129,056.97	-3,427.86

2012 Municipal

GHG Report

Biogenic emissions from biofuels

	<i>Conventional</i>	Biogenic	Cost	MT of CO2e
Fleet- E50	15,590	15,590 gallons	\$0	89.64
Fleet- E85	0	0 gallons	\$0	0.00
Fleet - B10	0	0 gallons	\$0	0.00
Fleet - B15	0	0 gallons	\$0	0.00
Fleet - B20	226,556	56,639 gallons	\$0	535.24
Fleet- B100		0 gallons	\$0	0.00
Fleet - Biofuel Total		72,228.50 gallons	\$0.00	624.88

Indicator Breakdown

Indicators	Annual Metric Tons CO2e Generated Per Indicator		
Number of City of Fort Collins Employees	2,423	Per Employee	26.56340
Square Footage of Municipal Buildings	1,748,474	Per 1,000 Square Ft.	36.81102
Number of Fleet Vehicles	1,313	Per Fleet Vehicle*	4.94169
City of Fort Collins Annual Budget	\$454,422,997	Per \$100 of Budget	0.01416

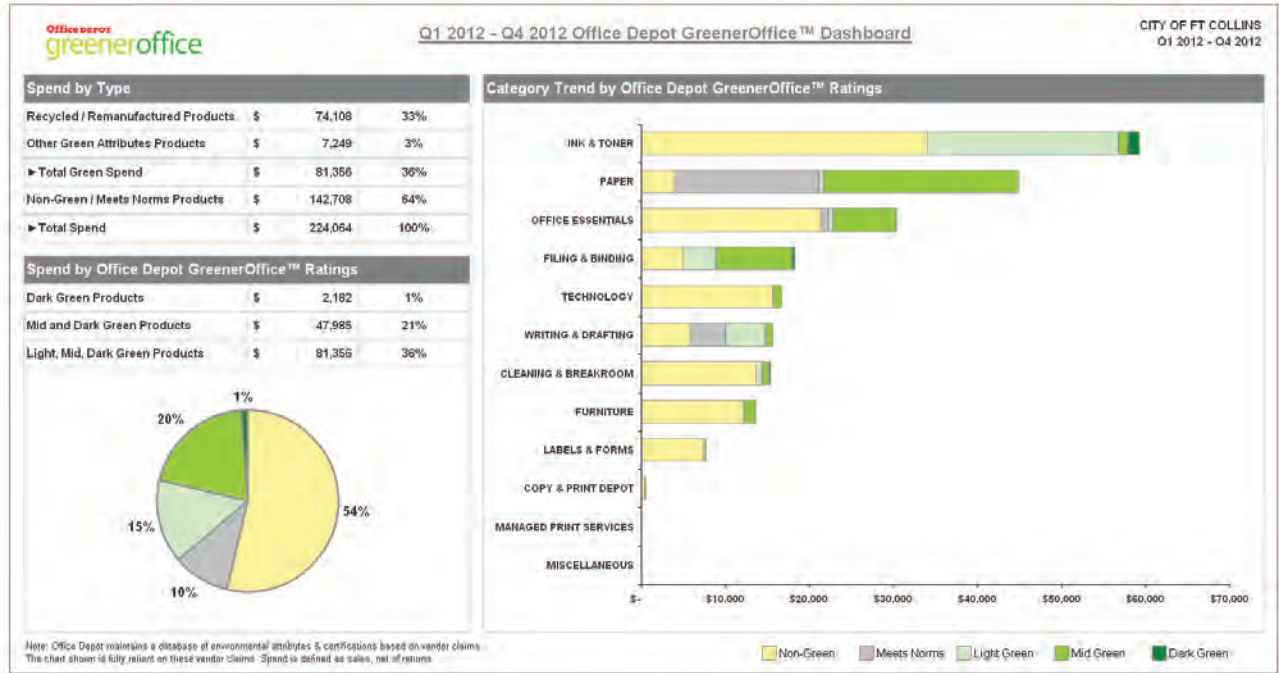
*Only takes into account GHG Emissions from Fleet fuel use.

Additional Data

Total Building Water Use	46,484,424 gallons
Per Employee Water Use	19,185 gallons
Summer High Temperature (Fahrenheit)	102 degrees
Winter Low Temperature (Fahrenheit)	-5 degrees

Appendix E — Purchasing Dashboard

- From Q1 2012 - Q4 2012, CITY OF FT COLLINS purchased \$224,064 in office supplies
- 33% of spend was on recycled / remanufactured products and 3% of spend was on products with other green attributes
 - 21% of spend was considered mid green or dark green according to Office Depot GreenerOffice™ Ratings
 - 36% of spend was considered light, mid, or dark green according to Office Depot GreenerOffice™ Ratings



87006198 and 87008243

How does paper use translate to wood and tree use? (source www.papercalculator.org)

12 cases (1 per month) virgin 8.5x11...requires approximately 1 ton of wood...which requires approximately 8 trees



12 cases 30% recycled 8.5x11...requires approximately 5/8 ton of wood...which requires approximately 5 trees












12 cases 100% recycled 8.5x11...requires 0 tons of new wood...which requires 0 trees



Source: www.papercalculator.org. Wood use measures the amount of wood required to produce a given amount of paper. The number of typical trees assumes a mix of hardwoods and softwoods 6-8" in diameter and 40' tall. Calculated collaboratively by Conservaparc and Environmental Defense based on data from Tom Soder, Pulp & Paper Technology Program, University of Maine, as reported in Recycled Papers: The Essential Guide, by Claudia G. Thompson, The MIT Press, 1992. 1 ton of wood is the equivalent of about 8 trees.

Appendix F — Sustainability Certifications

LOGO	WHO	WHERE	WHAT IT MEANS
	Biodegradable Products Institute www.bpiworld.org	Plastic products	Certifies that plastic products with “biodegradable” claims will safely break down in a typical commercial composting facility.
	B Corporation ¹ A nonprofit dedicated to using the power of business to solve social and environmental problems. www.bcorporation.net	Businesses and products from many economic sectors	The company has earned a passing score (80 out of 200) after being rated on a range of factors related to its environmental and social practices.
	Certified Humane	Animal products	Meets the Humane Farm Animal Care program standards: animals are fed a nutritious diet without antibiotics or hormones and are raised with shelter, resting areas, sufficient space, and the ability to engage in natural behaviors
	Chlorine-free Products Association www.chlorinefreeproducts.org	Mostly paper products	Certifies that the product is chlorine-free.
	EcoLogo Canada's environmental product certification program www.ecologo.org/en	Consumer products	Has issued standards for over 300 product categories many of which are sold in the United States.
	Energy Star ² A program launched by the EPA in the 1990s to reduce energy consumption www.energystar.gov	Appliances, electronics, and lighting fixtures	Indicates that a third-party agency has tested the product for energy efficiency.
EPPnet	Environmentally Preferable Purchasing Network (EPPNet) www.nerc.org/eppnet/index.html	Environmentally preferable purchasing policies and practices	A free electronic list-serv that provides subscribers with quick access to EPP policies, specifications, vendors, pricing and performance information.
	e-Stewards e-stewards.org/certificationoverview	Mostly paper products	Certifies that recyclers of electronic equipment adhere to the highest standard of environmental responsibility and worker protection.
	Forest Stewardship Council ³ A nonprofit that advocates for the responsible care of forests. www.fsc.org	Paper and wood products	Affirms that businesses are sourcing paper and wood from suppliers that use sustainable forestry practices such as erosion control and that preserve habitats and watersheds.
	Fair Trade USA www.transfairusa.org	Coffee, tea, chocolate, and rice	Certifies that imported food products were manufactured and sold under fair and safe working conditions.

¹Larger companies pay up to \$25,000 per year to be certified; small businesses pay \$500.

²An audit showed that fake products, including a gasoline powered alarm clock, could earn the label. The system has since been reformed.

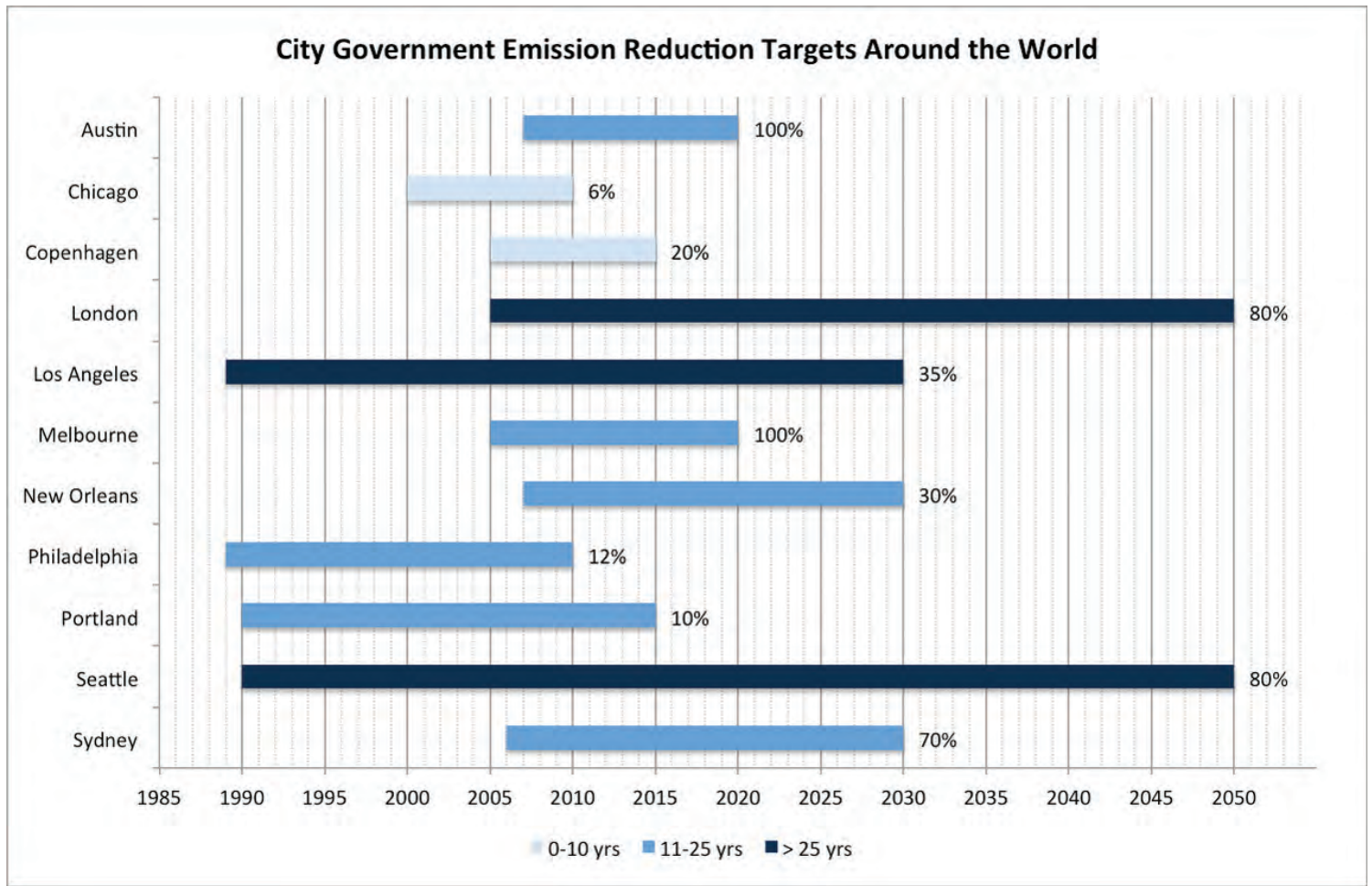
³Certification costs money. Also, some of the council's leaders have financial ties to operations certified by the group.

10/27/12

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Appendix G — City Goal Comparisons



Appendix H — Challenges




Community Capacity Building Challenge

March 13 - April 10, 2013

TAKE A PLEDGE

Check the actions you took on the reverse side.
For prize drawing, enter your info below.

Name: _____

Circle # of weeks participated: 1 2 3 4

Email: _____

Return this form by April 12, 2013 to:
 Rosemarie Russo,
 Sustainability Coordinator
 215 N. Mason
 Fort Collins, CO 80522

Or email your activities to:
rrusso@fcgov.com

Pledge cards available at:
transitionfortcollins.org or
fcgov.com/sustainability

Prizes include:
 Compost bin, watering cans, seeds,
 and more...



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Community Capacity Building Challenge

THINK LOCAL
ACT LOCAL

ACTION TAKEN

- 1** Have a working share at a CSA, directly at a farm, a farmers market, or the Food Coop 4x/month.
- 2** If you consume milk, switch to a local dairy farmer.
- 3** Buy "Colorado Proud" produce or dine at a "Colorado Proud" restaurant.
- 4** Plant veggies that require less water.
- 5** Participate in wind, solar, and water efficiency programs. (fcgov.com/utilities)
- 6** Support Be Local businesses.
- 7** Dine at local restaurants that buy local produce.
- 8** Participate or help develop a social networking event at your office, school, or church (i.e., Wellness or Day Care).
- 9** Volunteer at a non-profit organization.
- 10** Attend DiverCity Cafe, Tuesday evenings, 6-8 pm, March-May, 2013, at Everyday Joes.
- 11** Other _____



REDUCE YOUR USE

Take 10 Challenge

Feb. 1-29, 2012

TAKE A PLEDGE

Check the actions you took on the reverse side.
For prize drawing, enter your info below.

Name: _____

Circle # of weeks participated: 1 2 3 4

Email: _____

Prizes include:
Gift Certificates from the Food Coop and
The Rio Grande, bike supplies, green cones
and more...

Return this form
by **February 29** to:
Rosemarie Russo
215 N. Mason
Fort Collins, CO 80522

or email the number of
activities implemented to
russo@fcgov.com



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REDUCE YOUR USE Take 10 Challenge

ACTION TAKEN	Pounds of CO _{2e} Avoided	\$ Saved Per Year	Social Impact
<input type="checkbox"/> Turn thermostat down 3 degrees	810	\$95	promotes community engagement
<input type="checkbox"/> Avoid driving 20 miles/week	850	\$166	lower VOCs (ozone) better health
<input type="checkbox"/> Ditch your dryer 50% reduction	760	\$40	better air quality and health
<input type="checkbox"/> Install 4 CFL's	650	\$28	lower energy costs
<input type="checkbox"/> Wash clothes in cold water	230	\$12	energy savings
<input type="checkbox"/> Sign up for CSA community supported agricultural share	6,000	5% of produce bill	enhanced soil & local food production
<input type="checkbox"/> Apply for Power Saver or Energy Star Mortgage	14,000	N/A	resource conservation
<input type="checkbox"/> Sign up for green-energy program	12,600	\$120 cost	energy independence
<input type="checkbox"/> Install solar thermal or water-less water system	8,000	\$56	resource conservation
<input type="checkbox"/> Apply for solar PV grant by Feb. 29	4,200	\$140	energy independence



REDUCE YOUR USE

FortZED Residential Challenge

March 7-April 11, 2012

TAKE A PLEDGE

Check the actions you took on the reverse side.
For prize drawing, enter your info below.

Name: _____

Circle # of weeks participated: 1 2 3 4

Email: _____

Prizes include:
Gift Certificates from Green Logic and
The Rio Grande, power strips, Cost Monitor
and more...

Return this form
by **April 13** to:
Rosemarie Russo
215 N. Mason
Fort Collins, CO 80522

You can also email
your activities to:
russo@fcgov.com




FORTZED COMMUNITY ENERGY Challenge TAKE IT TO ZERO

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FortZED Residential Challenge *For full pledge sheet, see fcgov.com/sustainability*

REDUCE YOUR USE

ACTION TAKEN	CO _{2e} Avoided	\$ Saved Per Year	Social Impact
<input type="checkbox"/> 1 Install weather-stripping on exterior doors and windows	5 tons	\$672	better air quality
<input type="checkbox"/> 2 Install & activate a programmable thermostat	1 ton	\$180	resource conservation
<input type="checkbox"/> 3 Buy Energy Star refrigerator, clothes washer, or dishwasher	2,370 lbs	\$150	lower energy costs
<input type="checkbox"/> 4 Plan & modify landscaping to shade home in summer	13 tons	\$1,680	enhanced biodiversity
<input type="checkbox"/> 5 Check out an energy meter from the library to measure energy use of appliances & electronics	362 lbs	\$40	education
<input type="checkbox"/> 6 Air dry clothes on a line	2,032 lbs	\$128	energy independence
<input type="checkbox"/> 7 Increase/improve your home's insulation	13 tons	\$1,680	lower VOCs better health
<input type="checkbox"/> 8 Install high-efficiency windows	4 tons	\$470	energy savings
<input type="checkbox"/> 9 Seal & insulate all air ducts	4 tons	\$470	better air quality
<input type="checkbox"/> 10 Install Energy Star or high efficiency furnace	8 tons	\$1,008	energy independence



REDUCE YOUR USE

Food Challenge

June 1-31, 2012

TAKE A PLEDGE

Check the actions you took on the reverse side.
For prize drawing, enter your info below.

Name: _____



Circle # of weeks participated: 1 2 3 4

Email: _____

Prizes include:
Compost bin, watering cans, seeds,
and more...

Return this form
by **July 2** to:
Rosemarie Russo
City of Fort Collins
215 N. Mason
Fort Collins, CO 80522

You can also email
your activities to:
russo@fcgov.com





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Food Challenge **REDUCE YOUR USE**

ACTION TAKEN	\$ Saved Per Year	Lbs of CO _{2e} Avoided	Social Impact
<input type="checkbox"/> 1 Buy produce from a local farm through a CSA, directly at farm or farmers market, or the Food Coop 4x/month.	90¢ to local farm, 79¢ industrial farm*	N/A	Preserve agricultural land and farming as a livelihood
<input type="checkbox"/> 2 Sign up for local milk service.			Promote local jobs
<input type="checkbox"/> 3 Plant a garden.	\$67	495	Exercise, connect to land
<input type="checkbox"/> 4 Bike to the grocery store 4x/month. Bonus points if it is a locally owned store with locally made products	\$67	495	Cleaner air, healthier citizens
<input type="checkbox"/> 5 Compost or install a green cone.	\$34	570	Healthier living
<input type="checkbox"/> 6 Bring your own container for restaurant leftovers and support restaurants that use local food (www.ncgreenmenu.com).			Less trash
<input type="checkbox"/> 7 Eat seasonal vegetables 4x/month.	\$427	2,492	Lower water use, lose weight—1 lb/month
<input type="checkbox"/> 8 Identify 3 beneficial insects or pollinators in your yard. See fcgov.com/sustainability for a list of beneficial insects	\$30	N/A	Education
<input type="checkbox"/> 9 Buy in bulk quantities with reusable containers 4x/month.		N/A	Lower cost to retailer and customers
<input type="checkbox"/> 10 Buy "Colorado Proud" produce.	\$1,500/family stays in state economy		Less chemical exposure

*A much higher percentage of money goes to the farmer for local produce. Multinational farms spend the majority of profits on marketing, leaving little for the farmer.



REDUCE YOUR USE



Transportation Challenge

TAKE A PLEDGE

Check the actions you took on the reverse side.

For prize drawing, enter your info below.


Name: _____

Circle # of weeks participated: 1 2 3 4

Email: _____

Prizes include:
Gift Certificates from the Food Coop and
The Rio Griend, Bike Bags and Green Cones

Return this form to:
Rosemarie Russo
215 N. Mason
Fort Collins, CO 80522
rrusso@fcgov.com



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REDUCE YOUR USE Transportation Challenge

ACTION TAKEN	Pounds of CO ₂ Avoided	\$ Saved Per Year	Social Impact
<input type="checkbox"/> 1. Avoid driving 20 miles per week	990	\$133	lower VOCs (ozone) better health
<input type="checkbox"/> 2. Avoid idling 10 minutes/week	100	\$18	promotes community engagement
<input type="checkbox"/> 3. Have your tire pressure checked on your car and bike 2X/month	570	\$78	better air quality better health
<input type="checkbox"/> 4. Telework @ least 2X during the challenge	990	\$133	lower energy costs
<input type="checkbox"/> 5. Encourage your kids to walk to school at least 2X during the challenge	495	\$67	energy independence
<input type="checkbox"/> 6. Avoid aggressive driving Fuel reduction: 33% savings on highway, 5% savings in town	495	\$67	energy savings
<input type="checkbox"/> 7. Go to SmartTrips.org and set up a commute profile for yourself or your company			
<input type="checkbox"/> 8. Visit the Bike Library or Bike Co-op and try a new bike path FCBikeLibrary.org, FCBikeCoop.org and BikeFortCollins.org			
<input type="checkbox"/> 9. Sign up to Adopt-a-Bikeway with the Bicycle Hazard Reporting Center www.fcgov.com/bicycling/adopt.php			
<input type="checkbox"/> 10. Sign Up for the Bicycle "Traffic Skills 101" — Nov. 19, 8am-4pm www.fcgov.com/bicycling/trafficsafety.php			



REDUCE YOUR USE



Give a Watt Challenge

March 4 - April 30, 2013

TAKE A PLEDGE

Check the actions you took on the reverse side.

For prize drawing, enter your info below.

Name: _____

Circle # of weeks participated: 1 2 3 4
5 6 7 8

Email: _____

Enter to win cool prizes, including LED lights, solar lights, gift certificates, and more!

Return this form by **May 5, 2013** to:
Rosemarie Russo,
Sustainability Coordinator
215 N. Mason
Fort Collins, CO 80522
or email your activities to:
rrusso@fcgov.com

Pledge cards available at:
transitionfortcollins.org or
citynet.fcgov.com/sustainability/challenge.php



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Give a Watt Challenge REDUCE YOUR USE

ACTION TAKEN

- 1 Be work station smart: plug all work station lines into a power strip; switch it off when you're not using it.
- 2 Enable power management features on your computer.
- 3 Request a department energy audit through Utilities.
- 4 Speak up — if you see an energy conservation opportunity within the municipality, bring it to the Sustainability Coordinator's attention.
- 5 Check out a Kill-A-Watt meter from Utilities to measure energy use of appliances and electronics.
- 6 Replace any incandescent lights with CFLs or LEDs.
- 7 View building energy use forms on the "Green It, Mean It" site at: citynet.fcgov.com/emissions/reports.php
- 8 Set your refrigerator to no less than 38° F, and your freezer to no less than 5° F.
- 9 Turn off lights when not in use.
- 10 Other _____



REDUCE YOUR USE



Carbon Footprint Challenge

October 1-31, 2012

TAKE A PLEDGE

Check the actions you took on the reverse side.

For prize drawing, enter your info below.

Name: _____

Circle # of weeks participated: 1 2 3 4

Email: _____

Enter to win cool prizes, including compost bins, bike bags, bike lights, tire gauges, gift certificates, and more!

Return this form by **Nov. 5, 2012** to:
Rosemarie Russo
215 N. Mason
Fort Collins, CO 80522
or email your activities to:
rrusso@fcgov.com

Pledge cards are available at:
transitionfortcollins.org or
fcgov.com/sustainability



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Carbon Footprint Challenge REDUCE YOUR USE

ACTION TAKEN	Lbs of CO ₂ e Avoided	\$ Saved Per Year
<input type="checkbox"/> 1 Avoid driving 20 miles per week.	990	\$133
<input type="checkbox"/> 2 Call hauler to request the smallest trash container and larger recycling service bin. (100% capacity)	12,000	\$96
<input type="checkbox"/> 3 Avoid idling 5 minutes per day.	226	\$34
<input type="checkbox"/> 4 Check tire pressure 2 times per month.	570	\$34
<input type="checkbox"/> 5 Substitute one meat meal with a locally grown meal.	2,492/6,000	\$427/\$480
<input type="checkbox"/> 6 Install a green cone or compost bin. (after average \$60 cost/bin)	570	\$34
<input type="checkbox"/> 7 Don't buy bottled water.	60	\$50
<input type="checkbox"/> 8 Stop junk mail at fcgov.com/junkmail .	100	\$1,362
ANNUAL SAVINGS		23,312 (12 tons) \$1,362



REDUCE YOUR USE



Healthy Home Challenge

August 6-September 5, 2012

TAKE A PLEDGE

Check the actions you took on the reverse side.
For prize drawing, enter your info below.

Name: _____

Circle # of weeks participated: 1 2 3 4

Email: _____

Prizes include:
 air purifying CFL light bulbs, green cones,
 non-toxic cleaning and garden products,
 and more...

Return this form
by Sept. 7 to:
 Rosemarie Russo
 215 N. Mason
 Fort Collins, CO 80522

You can also email
 your activities to:
 rrusso@fcgov.com



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Healthy Home Challenge

For more info:
 fcgov.com/healthyhomes 970-416-2832

ACTION TAKEN	REDUCE YOUR USE
<input type="checkbox"/> 1 Remove your shoes at the front door.	
<input type="checkbox"/> 2 Attend Healthy Home Seminar, August 6, 2 pm , Harmony Library, Community Room.	
<input type="checkbox"/> 3 Check your house for harmful cleaning products and air fresheners and replace them with non-toxic alternatives.	
<input type="checkbox"/> 4 Test radon, lead, carbon monoxide, and formaldehyde levels in your home.	
<input type="checkbox"/> 5 Seal cracks with caulk to prevent mold and structural damage.	
<input type="checkbox"/> 6 Make one of the recipes from the Healthy Household brochure.	
<input type="checkbox"/> 7 When painting or installing new carpets, use low or no-VOC (Volatile Organic Compound) products; conventional products can trigger asthma.	
<input type="checkbox"/> 8 Open windows to ventilate your home regularly.	
<input type="checkbox"/> 9 Install weather stripping at the bottom of basement and garage doors.	
<input type="checkbox"/> 10 Place a high quality doormat at every entrance.	
<input type="checkbox"/> 11 Verify exhaust fans and ventilation systems are working properly.	
<input type="checkbox"/> 12 Participate in energy and water efficiency programs.	



Water Challenge

May 15-29, 2013

TAKE A PLEDGE

Check the actions you took on the reverse side.
For prize drawing, enter your info below.

Teacher's Name: _____

Teacher's Email: _____

Teacher's Mailing Address: _____

Student's First Name & Last Initial: _____






Enter to win cool prizes!



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Water Challenge Action Taken

- 1** Use a phosphate-free detergent (i.e., all liquid detergents are phosphate free). Reduce the amount of detergent and increase its effectiveness by adding 1/2 cup of baking soda or borax.
- 2** Replace Kentucky Bluegrass with Buffalo grass. This prairie native does best in full sun and clay soils; its soft texture invites bare feet, but it's sturdy. It grows slowly so requires less mowing.
Another Option: plant drought tolerant flowers
- 3** Check for toilet water leaks by putting red food coloring in the tank. If the dye appears in the bowl, there is a silent leak; you may need to change the flapper or the float. A silent leak can use up to 150 gallons a day.
- 4** Replace your toilet with a WaterSense version. Pre-1994 toilets use 3.5 to 7 gallons per flush (gpf), while newer WaterSense models use 1.28 gallons per flush or less and MaP Premium models use 1.06 gpf. There is a \$50 and \$75 rebate available at fcgov.com/utilities. This could save 3,000 gallons per year. If you recycle the toilet at Resource, you can get another \$15.
- 5** Transform your water in-efficient toilet with a dual flush converter system. It takes about fifteen minutes to replace the handle. Toilets account for 25% of indoor water use.
- 6** Instead of using the hose or faucet to water houseplants, catch rainwater in a small pail outside your windowsill or under gutters.
- 7** Use a broom instead of a waterhose to clean the driveway and sidewalks = 9 gallons per minute.
- 8** When taking a bath, close the drain before turning on the water and fill the tub only half way = 22.5 gallons vs. 45 gallons (full tub).
- 9** Turn off the faucet while brushing teeth = 4 gallons per minute.
- 10** Wait until there is a full basket of laundry before running the washing machine = 43 gallons per load.



Return this form **by May 30, 2013.**

Mail this form to:
 Rosemarie Russo, 215 N. Mason,
 Fort Collins, CO 80522
 or
 Email your activities to:
 rrusso@fcgov.com

Pledge cards are available at:
transitionfortcollins.org or
fcgov.com/sustainability




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Appendix I — Civic Engagement

Community Gardens & Resources

City Pilot Gardens
Rodgers, Eldora, Buckingham, and English Ranch.
416-2486, fgog.com

Colorado State University Extension
The Mission of Extension is "to provide information and education, and encourage the application of research-based knowledge." Provides expert advice, bilingual publications, and a variety of seminars.
Campus Delivery 4040, 491-6281, ext.colostate.edu

CSU Student Garden
630 W. Lake St. The 1/2 acre vegetable garden is nestled in the SW corner of campus, managed and operated 100% by student volunteers. They grow and sell a wide variety of organic produce. It provides education, research, and hands-on experience for students interested in farming and associated activities. Look for their weekly produce stand starting mid-May! facebook.com/CSUStudentSustainableGarden

Donath Lake Greenhouses
Hours 9 to 5 daily starting May 1. Container Vegetable Workshops.
gdinfo@lamac.colostate.edu

Farmers Markets
Harmony and Lemay, Sun. 11-3 pm. 495-4889, fortcollinsfm.com
Larimer County, 200 W. Oak St., Sat. 8-12 pm. 498-6000, localharvest.org
Drake, 802 W. Drake, Sat., 218-5521, drakeoodfarmersmarket.com

Front Range Community College
4615 S. Shields. Established a vegetable and flower garden. The Sustainable Team constructed a straw bale shed adjacent to the garden for tools. 226-2500, dwalman@frontrange.edu

Gardens on Spring Creek Community Gardens
2145 Centre Ave. Raise your own organic vegetables, herbs, and annual flowers in a 10' x 15' plot in a security-fenced area for \$50/season (\$50 deposit). 416-2486, fgog.com/gardens/our-gardens/community-gardens

Hops and Berries
Organic Hop Rhizomes. 133 Remington. 430-6489, 493-2484

Nibble Garden
Located just east of Stover next to Shire CSA. Swing by and have a nibble.

The Growing Project
A 501 (c) 3 nonprofit whose vision is to connect community members to each other, their food, and their land through urban agriculture and community gardening. The Urban Foods Outreach program is installing small community gardens all over Fort Collins. Visit their website to find one close to you and to learn about other TGP programs.
thegrowingproject.org

Mulberry Community Gardens
2310 W. Mulberry St. This community project provides a place to garden, the necessary tools, guidance and all-around fun for the beginning to advanced gardener. mulberrycommunitygardens.org

NoCo — Northern Colorado Green Menu
A non-profit connecting consumers to sustainable prepared food offerings at northern Colorado eateries. nccgreenmenu.com

Sixdog Farms
12155 NR 15 Wellington. Working to bring local fresh produce to the Cheyenne community by opening a community garden plot on Lincolnway. They are passionate about making local fresh food accessible to their neighbors. They are seeking folks who are interested in participating in and helping to organize this project. 970-286-0080 sixdogfarms.com

Sunspot Urban Farm, NSA
1008 Sunset Ave. Growing vegetables for neighbors and friends. Their goal is to demonstrate a sustainable alternative to the traditional bluegrass lawn. 556-5942, sunspot.urbanfarm@gmail.com

Sproutin' Up
HomeGrown provides free produce to the Farmers' Markets directly in neighborhoods in need. puro.com/homegrown

The Urban Farm Company of Colorado
Installs high-yield raised vegetable beds, and provides people with resources to make gardening easier. urbanfarmcolorado.com

Wild Iris Living
Offering garden tours, consulting/design services, shrub and fruit tree pruning for sustainable, highly productive edible gardens and water conserving landscapes. 493-5683, WildIrisLiving.com

For more info or to add a resource, contact Dr. Rosemarie Russo: russoc@fgog.com or 416-2327

Sign up for a CSA and Earn Well Day Points!

Community Supported Agriculture (CSA) is a partnership between growers and consumers. Consumers "invest" in a farm for the growing season, and in return, they receive a weekly share of the harvest. It's a great way to get fresh, local food from someone you know and trust. Some CSA's offer eggs, fruit, veggies, herbs, flowers, meat, milk, and other daily products. Here is a list of your local CSA's in reverse alphabetical order.

SIXDOG FARMS
386-0080
Located north of Fort Collins near Wellington. Offering fruit, eggs, microgreens, cheese, and mushrooming! A small group of individuals passionately working to revive and continue a thriving community around sustainably grown local food. sixdogfarms.com

Meadow Maid Foods
307-534-2289
Located in County West. They bring grass fed beef and all natural vegetables to the Fort Collins Winter and Drake Road Markets. Your CSA selections will be ready for you at these markets. meadowmaidfoods.com

Shire CSA
222-2077
Located on the Spring Creek Bike Trail. Members receive a variety of organic produce at weekly pick-up points which take place in the garden. Season May to October. Members choose what goes into their share. shirecsa.com

Local Motion CSA
689-2355
A Division of Letter Family Farms, growing over 100 varieties of vegetables using sustainable farming practices. Their specialty is sweet corn. Other favorites include heirloom tomatoes, edamame, heirloom dry beans, rainbow beets, and more! letterfamilyfarms.com

Spring Kite Farm
These high-quality vegetables are grown using organic and biodynamic practices. Available at farmers markets, select restaurants and cafes, and through their farm CSA program. springkitefarm.com

Lindemeyer Farm
A 7-acre vegetable farm, growing fresh produce for the Fort Collins community within the Fort Collins city limits. They offer three share sizes and two pick-up locations.

Raspberry Hill Farm
980-4558
Year-round microgreens shares — one tray per week of sustainably grown, pesticide-free microgreens that you harvest as needed. Flowers available for special occasions. raspberrymillfarm.com

Jodan Farms
391-2925
Offering true free range and all natural chickens and eggs that have never been fed antibiotics or growth hormones, so you can trust the meat that you eat! jodanfarms.com

Raindrop Retreat Permaculture Project
493-0799
Growing veggies that do well in our area: asparagus in May; cherries and gooseberries in July; strawberries in June and Sept.; apples and pears in Aug. Additional products include soap, skin care, sauerkraut, fruit juices, etc. raindropretreat.com

Happy Heart Farm
482-3448
Offering vegetable, fruit, egg, milk, berry, mushroom, chicken, and beef shares to 155 members. They feeding the families program provides 20 vegetable shares to low income families in Fort Collins. happyheartfarm.com

On the Vine at Richmond Farms
443-4011
Located on Horseshoe west of Shields and Richmond Drive. Minimum of 20 weeks of incredible produce, herbs, and flowers. Volunteer working memberships are available. onthevinefarm.com

Green Dog Farm CSA
Located on West View Dr., Fort Collins. They provide a basket of organically grown produce for 12 people at a cost of only \$300 for 20 weeks. They work with other local farms to offer pasture-raised grass fed beef, whole milk, pork, chicken, and eggs. greendogfarm.com

Old Dem Farm
481-1409
A CSA list of Lapsort, raw milk, eggs, organic, veggies, and meat. Animals are grass-fed and fed non-soy, non-corn feed. Most of the feed is certified organic. Working veggie shares are available. They attend the Drake Road and Cheyenne Farmers' markets. olddemfarm.tumblr.com

Garden Sweet
310-3805
Unmatched in convenience and flexibility. Pick out organic vegetables, berries, flowers, and herbs at four farmers market stands, Pick-Your-Own Patch, and Garden Sweet Farm Stand located on Willis Lane, six days/week May-Oct. since 2003. gardensweet.com

Native Hill Farm
217-8969
Offers a farmers market CSA for families. Members can pick up their produce at their weekly farmers markets. Get exactly what you want when you want it. nativehillfarm.com

Fossil Creek Farms, LLC
980-4096
A certified-organic farm, growing a wide variety of crops. With their CSA, you receive a weekly box full of currently yielding fresh, local organic produce throughout the Northern Colorado growing season. fossilcreekfarms.com

Monroe Organic Farms
264-7941
They've been growing organic produce since they established the World County homestead in 1960! They use themselves as caretakers of this land and know that the land is a cherished family member. monroeorganic.com

Fliani Farm CSA
567-2078
A small neighborhood farm on west View providing fresh veggies to its members.

Miller Farms
785-6133
The farm is the primary pick-up location; you may also pickup your produce from any of the 40+ farmers' markets they attend along the Front Range. millerfarms.net

Flan Farm CSA
Crested Farm Fort Collins 278-0499
Growing biodynamically on their diversified family farm in NE Fort Collins. Offering a wide variety of "add-on" shares and products from other local producers as well as free range pork and eggs. Home delivery, site- and farm pick-up available. New this year is their farm-based education program. crestfarm.com

New CSA? Contact us at 417-2327 or russoc@fgog.com.

ALL FREE! ALL FREE! ALL FREE!




Mindful Movies & More

Climate Refugees
August 28, 2012 • 8:30-9:56 pm
CSU Gardens, 630 Lake Avenue
Climate scientists predict that hundreds of millions of people will be uprooted as a result of rising sea levels and extreme weather events, droughts, and desertification. Where will they go? *Climate Refugees* explores the devastating political impacts of environmental refugees due to climate change, whether it's human-caused or not. 86 min.

Waking the Green Tiger
September 13, 2012 • 8:30-9:48 pm
CSU Gardens, 630 Lake Avenue
In a country where citizens have only recently been allowed to speak their mind about environmental issues, a powerful network of activists has come together to reshape the county. *Waking the Green Tiger* tells the dramatic story of China's first major grass roots environmental movement, which opposed a massive dam at Tiger Leaping Gorge on the Upper Yangtze River which would have transformed the landscape and displaced 100,000 people. 78 min.

Climate Refugees
September 19, 2012 • noon-1:26 pm
215 N. Mason — 3D
Climate scientists predict that hundreds of millions of people will be uprooted as a result of rising sea levels and extreme weather events, droughts, and desertification. Where will they go? *Climate Refugees* explores the devastating political impacts of environmental refugees due to climate change, whether it's human-caused or not. 86 min.

Watershed
October 4, 2012 • 6:30-9:24 pm
CSU Gardens, 630 Lake Ave.
(BS 131 bad weather)
The Lake Michigan shoreline has a water quality and an algae crisis. But who is responsible for repairing the ecosystem? Is it the county board or state government's lack of involvement in contamination problems? Or is it lack of citizen engagement in understanding water quality and the simple actions that everyone can take to preserve Lake Michigan? Find out. 56 min.



Corporate Seminars

Eligible as "required meeting" for Climate Wise Partners and Wellness Points for City of Fort Collins employees.




FEBRUARY 27, 2012
Corporate Social Responsibility
This seminar will cover corporate social responsibility (CSR), which encompasses not only what companies do with their profits, but also how they make them. It goes beyond philanthropy and compliance and addresses how companies manage their economic, social, and environmental impacts, as well as their relationships in all key spheres of influence: the workplace, the marketplace, the supply chain, the community, employees, and the public policy realm.
Location/Time: 215 N Mason — Community Room / 12 — 1pm

MARCH 26, 2012
Sustainability Best Practices
This seminar will look at game changing projects and policies implemented by leading Fortune 500 companies and different municipalities throughout the world.
Location/Time: 215 N Mason — Room 1B / 12 — 1pm

APRIL 18, 2012
Give a Watt. Pedal it Forward.
Learn about alternative transportation alternatives including presentations by Molly North the Fort Collins Bike Coordinator, Bob Flynn of Green Ride Colorado, and Rosemarie Russo from the City. Molly will cover how to finance bike programs for your business. Green Ride CEO will discuss the environmental benefits of using their shuttle services to DIA, and Dr. Rosemarie Russo will cover City alternative fuel use and charging station resources.
Location/Time: CSU Lory Student Center/10-1 pm

APRIL 25, 2012
Climate Wise — Knowledge Pot
This seminar will cover the various elements of the Climate Wise Program, a nationally recognized voluntary sustainability business program. Climate Wise partners have cumulatively saved nearly \$39 million dollars and reduced carbon emissions by 136,000 in 2010. The City municipality is a Climate Wise partners and has earned a Platinum-level. Please join us to see how your department can help participate in available training and challenges. For City employees only.
Location/Time: 215 N Mason — City of Fort Collins' Community Room / 12 — 1pm

APRIL 25, 2012
Give a Watt. Pedal it Forward.
Learn about alternative transportation alternatives and the new energy harvesting bikes.
Location/Time: CSU Lory Student Center/ 12- 1 pm

City employees can register through Talents and Rewards. Refreshments will be provided but please bring your own mug. CW partners can RSVP through Deb Harris dharris@fgog.com or Wendy Serour — wserour@fgog.com






For more informations, contact
Rosemarie Russo at
rrusso@fcgov.com
or City.net.fcgov.com/sustainability