



# The Path of Sustainability

**City of Fort Collins Action Plan for Sustainability  
2006 Report on Municipal Operations -April 2007**

**It's about the journey.  
Start where you are.  
Use what you have.  
Do what you can.**



# Introduction

In September 2004, the City of Fort Collins Executive Lead Team adopted the *Action Plan for Sustainability* that outlines goals and targets for increasing the sustainability of municipal operations, along with the following policy goal:

**The City of Fort Collins will serve as a community leader in sustainability by conducting daily operations through balanced stewardship of human, financial, and environmental resources for present and future generations.**

Since then, an interdepartmental Sustainability Team has formed and is working to implement many of the targets in the Plan. In 2006, the City of Fort Collins made good progress on the road to sustainability! This report contains highlights of the first year's activities and a peek at plans for 2007.

## 2006 Sustainability Team

Name	Department	Role
Ken Mannon	Operations Services	Team Lead
Greg Byrne	CPES	ELT Liaison
Lucinda Smith	Natural Resources	Coordinator
Jim O'Neill	Purchasing	General Sustainable Purchasing
Opal Dick	Purchasing	General Sustainable Purchasing
Tracy Ochsner	Fleets	Vehicles & Equipment Sustainable Purchasing
Lynn Sanchez	Human Resources	Employee Health
Lance Murray	Risk Management	Employee Safety
Maureen Scullion	Utilities	Employee Safety
Steve Strickland	Operations Services	Green Buildings
Bill Whirty	Parks	Water Use Management
Laurie D'Audney	Utilities	Water Use Management
Brian Woodruff	Natural Resources	Planning & Transportation Issues
Susie Gordon	Natural Resources	Recycling and Waste Reduction
John Armstrong	Natural Resources	Recycling and Waste Reduction
Tom Vosburg	MIS	Sustainability Planning
John Stokes	Natural Resources	Sustainability Planning
Carol Webb	Utilities	Sustainability Planning
Kim Newcomer	CPIO	Employee Outreach
Ginny Sawyer	Neighborhood & Bldg. Svc.	Employee Outreach
Peggy Bowers	Recreation	Employee Outreach

## Background

In 2004, an interdepartmental team worked with a local consultant to develop an internal *Action Plan for Sustainability*. Team members first assessed all existing programs that support sustainability and then conducted an analysis to identify and prioritize areas for future action. The *Action Plan for Sustainability* ([www.fcgov.com/sustainability/pdf/sustainability-plan.pdf](http://www.fcgov.com/sustainability/pdf/sustainability-plan.pdf)) contains nine program areas identified for priority work within municipal operations. Goals and specific targets with measurable actions and timeframes are identified for each of the nine areas.

New Transfort bus runs on clean compressed natural gas



The new SmartCar gets 40-60 mpg.



# Auto Vehicles & Equipment

**Target: Seek to implement the following priorities for City vehicle purchases:**

- 1) hybrids,**
- 2) alternative-fueled vehicles,**
- 3) down-size from original request.**

## Accomplishments

### 1. Added Sustainable Vehicles/Equipment and used Biodiesel Fuel

- In 2006, 1 hybrid electric vehicle was delivered, raising the City fleet total to 10.
- In April 2006, a full-sized compressed natural gas bus went into operation, reducing emissions of carbon monoxide and particulate emission over 85% compared to diesel fuel.
- Dial-A-Ride operates 3 para-transit buses on clean compressed natural gas.
- 2 midsize half-ton pickup requests were downsized from fullsize. A compact car request was downsized from a fullsize staff car.
- Throughout 2006, biodiesel B20 was used to operate all vehicles and equipment in the City fleet with no major problems reported.
- The Smart Car (40-60 MPG, 95% recyclable) was delivered to the City of Fort Collins and was highlighted at numerous summer events.
- In 2005, the Parks Division began piloting the use of electric utility vehicles in task appropriate areas and consistently increased the use of these electric vehicles.

## Awards

Operations Services received an award in October 2006 for excellence and achievement in the Fleet Management industry.

## Challenges

- Asking departments to re-evaluate their vehicle purchase requests to see if a more fuel efficient or alternative fuel vehicle could work, and reaching consensus.
- Relying on the State Bid process to select highly fuel efficient vehicles.

## Future Directions

- Install an E85 (85% ethanol fuel) station on City facilities for use by City employees.
- Receive the long-awaited hydrogen electrolyzer at its planned location at the Transfort facility, enabling pilot testing of hydrogen-operated vehicles (hydrogen/CNG fuel blend).
- Work with experts at Woodward Governor to explore converting the SmartCar to hydrogen fuel.

# Sustainable Purchasing

## Establish a sustainable purchasing guideline.

### Accomplishments

**1. Strengthened Sustainable Policies** - In 2004, a sustainable purchasing guideline was developed and adopted into the City Administrative Policies and Procedures which promotes:

- considering the total cost of a product or service throughout its life cycle and customer usage requirements,
- purchasing 30% recycled content paper and chlorine free paper, and
- using vegetable-based inks in printing.

**2. Got the Word Out** - Sustainability was incorporated into “Purchasing 101” presentations for City employees. Hyperlinks for green purchasing were added to the purchasing webpage to train and assist purchasing customers. See [www.fcgov.com/purchasing/environment.php](http://www.fcgov.com/purchasing/environment.php).

**3. Practiced What We Preached** - Purchasing staff supported purchases involving environmental/sustainable purchases by researching and incorporating appropriate terms & conditions in bids. Examples include:

- The 2006 contract for road salt provides delivery by rail not truck, which saves significant money (\$10/ton at 5000 tons or \$50,000 total), reduces transport emissions, and most importantly assures availability of road salt; a triple win!
- Utilities is piloting transformers that use a vegetable-based insulating fluid instead of the traditional mineral-based insulating fluid.

### Awards

In 2006, Ed Bonnette was honored by the State of Colorado as a “Pollution Prevention Champion” for his efforts to recycle the City of Fort Collins’ obsolete computers.

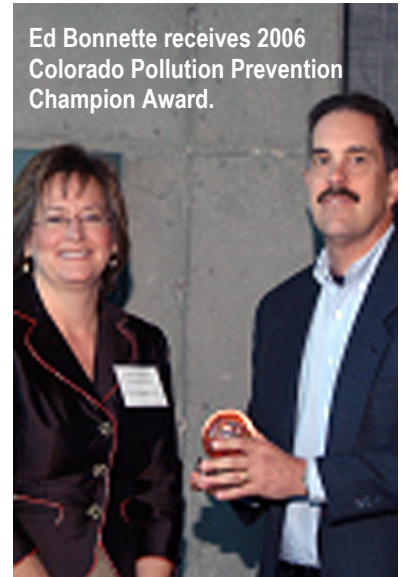
### Challenges

A department’s limited resources result in less time to evaluate sustainable products, and departments are less likely to purchase sustainable items if the cost is higher.

### Future Directions

Fort Collins’ Director of Purchasing is spearheading a national campaign to promote aggregate purchasing at the state level.

Ed Bonnette receives 2006 Colorado Pollution Prevention Champion Award.





# Employee Health

**Increase overall mental and physical health of employees.**

## Accomplishments

**1. Established & Funded A Strong Incentive Program to Motivate Employees and Maintain Good Health** - Over 575 City employees attended the Wellness Round-Up. In 2006, 560 employees participated in the Well Days Incentive Program

- 440 earned the 1<sup>st</sup> Well Day
- 418 earned the 2<sup>nd</sup> Well Day
- 371 earned the 3<sup>rd</sup> Well Day

**2. Exceeded Targeted Participation** –Exceeded the target that 51% of benefited employees would participate in Wellness Program within one year of established Sustainability Program.

- 56% of our benefit-eligible employees participated in the 2006 Well Days program.
- 48% of City employees attended the health fair.
- 25% participated in health screenings offered to City employees.
- 27% participated in our flu shot program.

**3. Asked Employees What They Think** - In December of 2006, we conducted a cultural audit and employee interest survey. Results of the employee satisfaction survey and needs and interest survey are extensive and will help guide Wellness Programs over the next few years.

## Challenges

- Gaining participation in the Wellness Program of City employees less inclined to participate.
- Prevention is often difficult to measure. The Wellness Program will continue to evaluate population data on disease, injury, and health risks, as well as research in the field of health promotion/wellness to help guide our programming efforts.

## Future Directions

- In 2007, Employee Wellness program is again available to all employees.
- Reduce average health claim costs per employee for those participating in the annual incentive programs as compared to the average claim costs of employees not participating over the next 3 years.
- Health claims data will be available in the 2<sup>nd</sup> quarter of 2007 for further analysis on cost-effectiveness of Wellness programs.
- Wellness now uses an online registration process and web-based Health Risk Assessment in an effort to reduce paper use.



# Employee Safety

**Incorporate a Citywide program fostering a culture of safety supported by the administration and practiced throughout the organization.**

## Accomplishments

**1. Developed A Manual** - In 2006, a comprehensive City Safety & Health Program Manual was developed by Risk Management, reviewed, approved and distributed to employees.

**2. Delivered “Loss Run” Reports** – Each quarter in 2006, departments received reports describing and summarizing injuries by type, body part, age, and cost. Updates on employee injuries were provided to the Executive Lead Team by Risk Management.

## Challenges

Recent changes to the City organizational structure made the previous work developing loss run reports for departments obsolete. The database will have to be reprogrammed according to the new City organizational structure.

## Future Directions

- Educational meetings with departments to present procedures for implementation will take place beginning mid 2007. Departments will develop action plans to address areas of high injury (high cost and high occurrence) based on Loss Run reports.
- Continue to build a safety culture by integrating safety practices into every day tasks.



Common safety equipment for City employees.



The CSU Transit Center, a LEED certified joint CSU/City of Fort Collins project, opens in August 2006



City of Fort Collins LEED-certified Vehicle Storage Facility



# Green Building

**Pursue the LEED-NC Silver requirements and report utility usage for all City buildings to promote resource efficiency.**

## Accomplishments

**1. Energy Efficient New Construction** - New construction of City buildings pursued LEED-NC Silver requirements (2004 goal).

- In 2006, the City Vehicle Storage Facility received LEED Certification and became the first vehicle storage facility ever LEED certified.
- The CSU Transit Center, a joint City/CSU LEED construction project, opened in August, 2006. This project is seeking LEED-NC certification (Silver or Gold).
- The new Police Services facility and the new Aztlan Center are under construction with plans to seek LEED-Silver certification at minimum.
- In September 2006, City Council passed a resolution requiring that all newly constructed City-owned buildings >5,000 square feet must meet the LEED-NC Gold standard. Fort Collins joins just 2 other cities who aimed this high.

**2. Energy Efficient Retrofits** - In 2006, the City embarked on a process to develop a performance contract to upgrade numerous City facilities. Johnson Controls, Inc. was selected by competitive bid to conduct an extensive energy audit of larger City buildings. Their preliminary audit of 29 buildings comprising 765,000 sf of conditioned space, led to 275 initial projects proposed. Johnson Controls and City staff are currently working to refine the list and prepare a more comprehensive proposal which will form the basis of the performance contract.

**3. Educated Our Staff** - In 2006, 2 City employees became LEED Accredited Professionals.

**4. Unplugged** - From 1990 to 2004, there has been a 14% reduction in per square footage energy use for major City buildings.

## Awards

Ron Kechter in Operations Services received an award from the Governor's Office for Energy Management and Conservation for his success with high performance green buildings.

## Challenges

- Getting all City facilities utility billing data for into one management program is difficult and time-consuming.
- Defining energy standards for operation of City buildings.

## Future Directions

- Implement chosen energy retrofits identified in the City facility audit by Johnson Controls, including removal of T-12 lights from major buildings.
- Complete Police Services and Aztlan Center.
- Build Discovery Center/Museum under LEED-Gold requirements.
- Survey City buildings and complete Energy Star benchmarks for select buildings.

# Healthy Ecosystems – Water Use Management

## Improve Water Efficiency at City-Owned Landscapes

### Accomplishments

**1. How Efficient Were We With Water Use?** - Parks collected and analyzed irrigation consumption data throughout the Parks system, including:

- Daily ET (evapotranspiration) readings during the growing season
- Rainfall averages throughout the City
- Water use reading from meters and raw water sites.

This allowed us to measure use against need. In 2006, the Park's irrigated turf needed 23.84 inches of water to sustain a safe, healthy, and available play area. This data provided the following:

- 10 parks had over 100% ET use
- 34 parks had under 100% ET use
- Of these 34 parks, 29 were under 90% ET use
- Overall average of gallons per acre used for park sites was 576,320 gallons. This is 85% of ET or need for the plant.

### 2. Water Auditing

- In 2006, two employees earned certification as landscape water auditors.
- Several water audits were performed in areas that were >100% ET.
- Reasons for ET rates > 100% included:
  - Acreage incorrectly assigned (changing the percentage),
  - Adjustments to specific equipment needed (heads and controllers)
  - Antiquated irrigation systems
  - Identified need to set a higher focus on routine maintenance.

**3. Set-up a Water Usage Baseline** - Selected three sites to investigate new irrigation technology related to irrigation efficiency. Water use data collected from these sites will be used as a baseline for future comparisons. Parks will continue to monitor these sites in 2007. The three sites chosen for improvements were:

- Canterbury/Drake median – installed soil moisture sensor,
- Taft/Drake median – installed ET controller
- Oak Street Plaza Park – Installed Netafim, a subsurface irrigation system for both plants and turf.

**4. Revised City Policies Affecting Water Efficiency** - An interdepartmental committee including Utilities, Engineering, Advance Planning, Forestry and Parks reviewed and recommended revisions to the following City policies and regulations affecting water efficiency.

- Streetscape Standards: For public R-O-W and medians, commercial and residential areas.
- Street Cross-Section: This includes the width of parkways and medians, and corner islands. Currently a detached walk is required.
- Wasting Water & Water Restrictions: Language in the Municipal Code needs to be updated.



Wildlife and irrigation at Warren Park







- Water Conservation Standards for Irrigation & Landscaping: Utilities will head a group to look at these regulations.
- Soil Amendment & Restrictive Covenants: These policies don't need revisions.

### **Challenges**

- Most of the water use policies and regulations involve various departments and need City Council approval for making changes.
- Obtaining funding to renovate or replace antiquated City irrigation systems if the water audit revealed the need.
- Median and Streetscapes are challenging to irrigate and control.

### **Future Directions**

- Continue auditing irrigation sites.
- Report on effectiveness of the 3 pilot irrigation efficiency sites.
- Convert domestic taps to raw water sources for irrigation at selected Parks sites.
- Convene a task force to work on the Water Conservation Standards for Irrigation & Landscaping.
- Make a plan to move forward with City water use policy recommendations.



# Recycling & Waste Reduction

**Target: Reduce City departments' overall paper purchases by 10% and strive for using paper with a minimum 30-50% recycled content.**

## Accomplishments

**1. Piloted "Paper Trail"** - In 2006, the paper reduction project, dubbed "Paper Trail", was piloted within 3 departments (Operations Services, Purchasing/ Accounting and Natural Resources). Baseline data was collected:

- 113 employees, 412,500 sheets of paper purchased
- 3,650 sheets/employee
- Total paper cost = \$2,602 (\$0.006/sheet or \$23.03/employee)
- Developed significant web presence for the project on CityNet (<http://citynet.fcgov.com/recycling/papertrail.php>)
- Prepared e-mail updates and started distribution late in 2006
- Developed PowerPoint presentation for departments upon request
- Purchased 800 seats of PDF995, low-cost PDF writing software with funding from the Sustainability Program

**2. Tested Paperlessness** - One staff member "beta-tested" paperless printing using PDF writing software, generating 896 PDF files. This represents a savings of 3,000+ printed pages (assuming ~3 pages per file), or 6 reams of paper or \$18 worth of supplies. Assuming staff used paper at similar rate of the pilot departments, paperless printing resulted in a 82% reduction in paper usage.

**3. Purchased Park Recycling Containers** - Sustainability program funding was used to purchase twelve "Clear Cannibals" bins to be made available to community groups, enabling them to meet the new Parks requirement to provide recycling at large park gatherings.

**4. Turned in Our Scrap Metal For Money** - In 2006, City departments recycled 234,164 pounds of scrap metal worth \$40,196.

## Awards

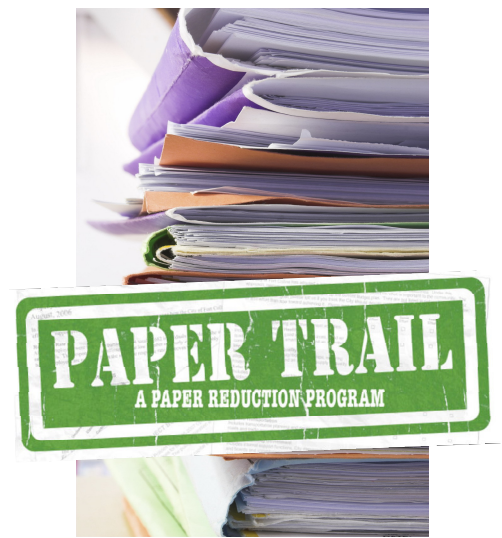
Ed Bonnette received a Pollution Prevention Champion Award for encouraging the City to recycle e-waste responsibly.

## Challenges

- Limited time and resources available for getting the word out to employees about the "Paper Trails" program.
- Difficulty of breaking old paper-dependency habits.
- Decentralized purchasing system means inconsistency in buying recycle-content paper and applying source reduction measures.

## Future Directions

- Expand "Paper Trails" paper reduction project to more City employees.
- Consolidate a vendor for scrap metal recycling to improve reporting and price.





# Sustainability Management Tools

**Make sure the Action Plan does not sit on the shelf.  
Institute ongoing maintenance of the Plan.**

## Accomplishments

**1. Sustainability Team Kicks Off in 2006** - The Sustainability Team met four times in 2006.

**2. We Got the Word Out** - Raised employee awareness of sustainability.

- Sustainability was featured at Employee Wellness Roundup. Two BE LOCAL coupon books were raffled off to winners who visited the table.
- A 15-minute presentation on sustainability has been included in the New Employee Orientation.
- A sustainability website was unveiled both on Citynet and fcgov.com ([www.fcgov.com/sustainability](http://www.fcgov.com/sustainability)) featuring: sustainable purchasing, healthy people, green building, healthy ecosystems, sustainable energy, pollution and waste reduction, and economic vitality.

**3. Discussed Environmental Management** - A subcommittee met in April to discuss the relationship between sustainability and an Environmental Management System for the City. Utilities staff plan to assemble an Environmental Management Team to facilitate implementation of an Environmental Management System (EMS) for city operations. Staff is considering development of a pilot EMS in a single City department before rolling out to the entire City.

## Challenges

- The challenge for the Outreach Committee is trying to communicate the complex messages of sustainability (including what does sustainability mean, what is the City doing to address sustainability, and what can employees do to help) in a simple, easy to understand, interesting manner with the ultimate intent to inspire behavior change. Limited resources and staff time contribute to the difficulty of accomplishing our goals.
- Members of the Sustainability Planning Subcommittee continue to explore the relationship between sustainability and Environmental Management Systems.

## Future Directions

- Conduct employee survey on sustainability
- Hold City employee Earth Day Fair on Sustainable Choices
- Sustainability Outreach to employees featuring 3-5 existing programs
- Incorporate sustainability into *City Services Improvement* program
- Establish an environmental management policy for the City
- Reconvene the City's Environmental Management Team
- Pilot an Environmental Management System



# Our Sustainability Goals

## General Purchasing

- Establish a sustainable purchasing guideline

## Vehicles and Equipment

- Purchase highest fuel efficient and/or lowest emission vehicles for the requested transportation application

## Employee Health

- Increase overall mental and physical health of employees

## Employee Safety

- Value mental and physical health within the City organization
- Incorporate a City-wide program fostering a culture of safety that is supported by the administration and practiced throughout the organization

## Green Building

- Pursue the LEED-NC Silver requirements (2004 Goal)
- Report utility usage for all City buildings to promote resource efficiency

## Water Use Management

- Improve water efficiency at City-owned landscapes

## Employee Commuting

(Goals not finalized in 2006)

## Office Recycling and Waste Reduction

- Institute pollution and waste reduction practices

## Management Tools & Planning

- Make sure the Action Plan for Sustainability does not sit on a shelf. Institute the ongoing maintenance of the plan.

