

City of Asheville

**Carbon Footprint
Annual Report**



{ FY 2009- 2010 }



City of Asheville, NC

Office of the City Manager

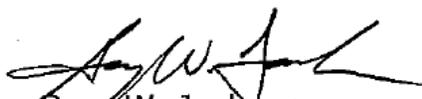
October, 25th, 2010

In 2007 Asheville City Council established their long term commitment to sustainability. They did this through passing a resolution to reduce the municipality's carbon footprint 2% each year until an 80% reduction was achieved by the year 2050. Fortifying their commitment in 2009 and 2010 City Council prioritized Green/Sustainable as one of their five strategic goals stating, "Asheville will be the southeastern leader in clean energy and environmental sustainability." Valuable efforts turning this from a concept to a reality include: the "How Low Can AVL Go" sustainability education program, single stream recycling in public facilities, and solar thermal on fire stations.

To bring focus to strategic efforts, the city created the Sustainability Management Plan (www.ashevillenc.gov/green). The plan established 23 goal areas to address sustainable government operations. Along this path the City Manager created the Office of Sustainability and incorporated it within the City Managers office to steward this strategic effort and set the course ahead. A major role of the office is to bring measurement and accountability to Asheville's sustainability efforts. The Annual Carbon Footprint Report is intended to aid departments during the business planning process. This report provides indicators of performance to assist sustainability goal setting.

After review of the 2009-2010 Annual Carbon Footprint Report, it is my pleasure to share our progress with the community. I am proud of staff for their achievements in carbon footprint reduction. My gratitude extends to individuals and teams across all departments who worked hard to learn, to think creatively and to achieve tremendous success in sustainability. As we look forward I am certain we will make greater progress as the momentum continues to build.

Sincerely,



Gary W. Jackson
Asheville City Manager

Executive Summary

Key Highlights from this Report:

- Tasked with a 6% reduction over 3 years the city delivered an 8.42% reduction
- The most significant reductions can be attributed to energy conservation in public buildings, streamlined efficiency in water distribution, and fuel/routing efficiency in transit
- The most significant opportunities for future reductions are in the fleet and streetlight sectors

FY 09-10 Financial Facts:

- Municipal energy spending totaled \$5,349,610
- Carbon footprint reductions resulted in \$336,216 avoided energy spending which is a 5.91% spending reduction from the previous year
- Grant monies awarded to the city in support of carbon footprint reduction totaled \$8,839,345

External Impacts on Energy Usage:

- In FY 2008-2009 spending in many sectors increased due to an electricity rate increase of 11.5%
- In FY 2008-2009 fuel spending in many departments decreased due to the brief fuel shortage in September 2008

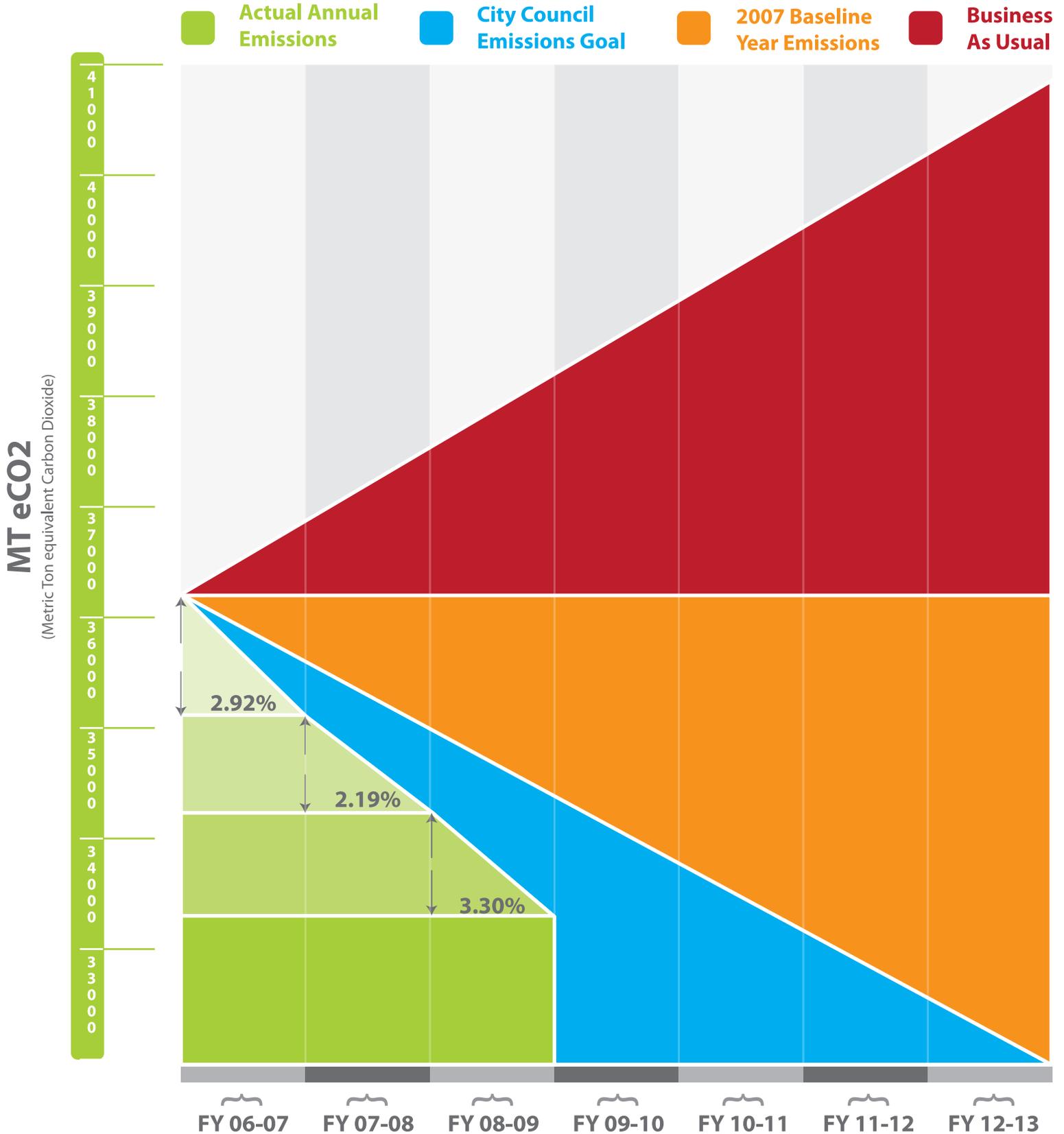
Carbon footprint reduction to date is 2,965 MT eCO₂ which equals

- Annual emissions from 567 four door sedans
- Annual energy use of 252 homes
- Annual carbon sequestration of 76,026 trees

{ **howlowcanavigo?** }
{ raise the bar. lower the carbon. }

Total Municipal Emissions Performance

April 2007 marks the formal beginning of the City of Asheville's efforts in carbon footprint reduction. At that time the City Council passed a resolution to reduce the municipal carbon footprint 2% per year until a total reduction of 80% would be achieved. A carbon footprint is the total set of greenhouse gases (GHG) emissions including carbon dioxide caused by an organization, event, product or person. The city's carbon footprint is a byproduct of the infrastructure, services and programs. The graph below depicts the big picture of the total carbon footprint reductions each year. The city was tasked with a 6% reduction over 3 years and delivered an 8.42% reduction through our commitment to *raise the bar to lower the carbon!*

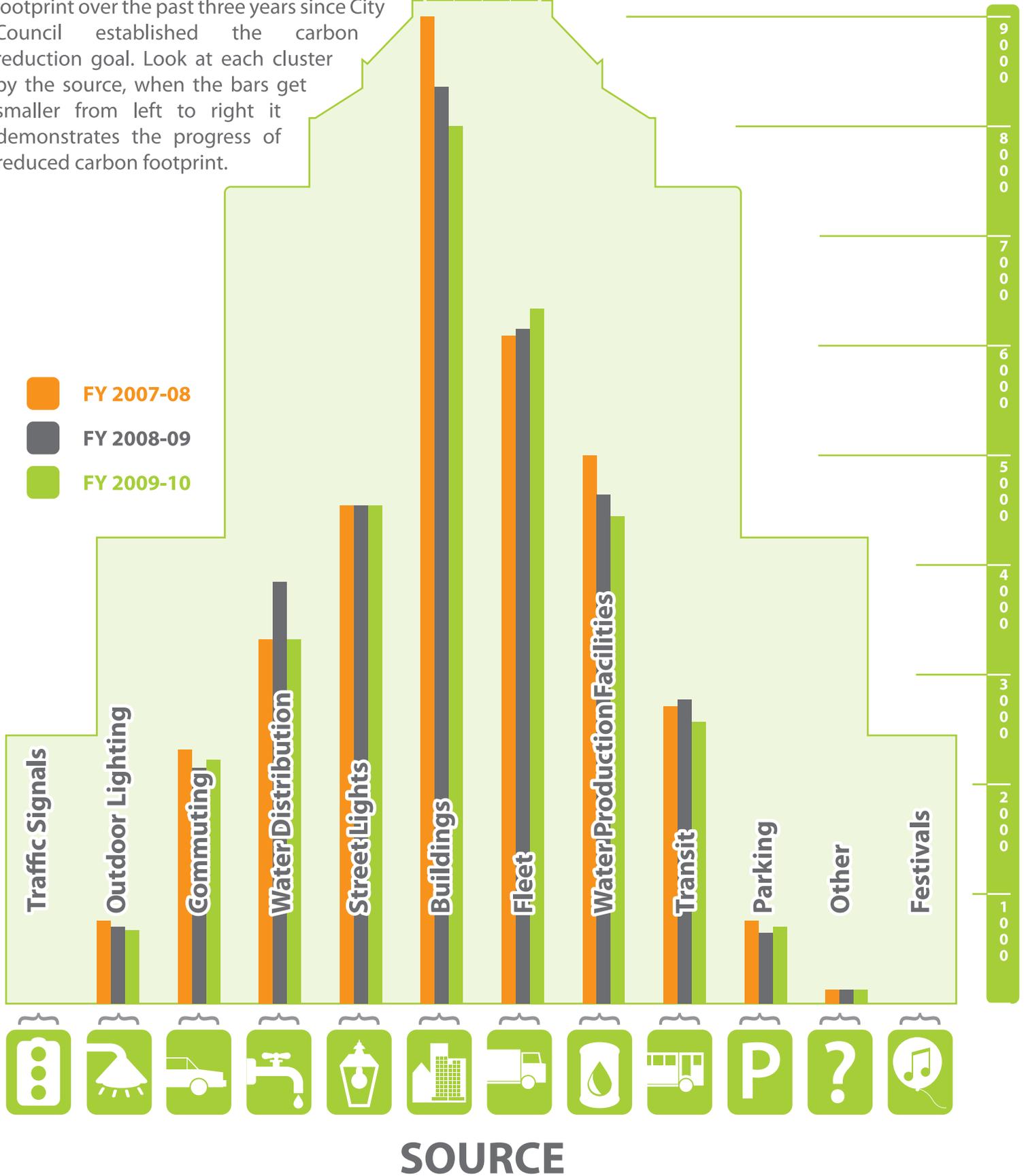


Carbon Footprint BREAKDOWN: Over Three (3) Years

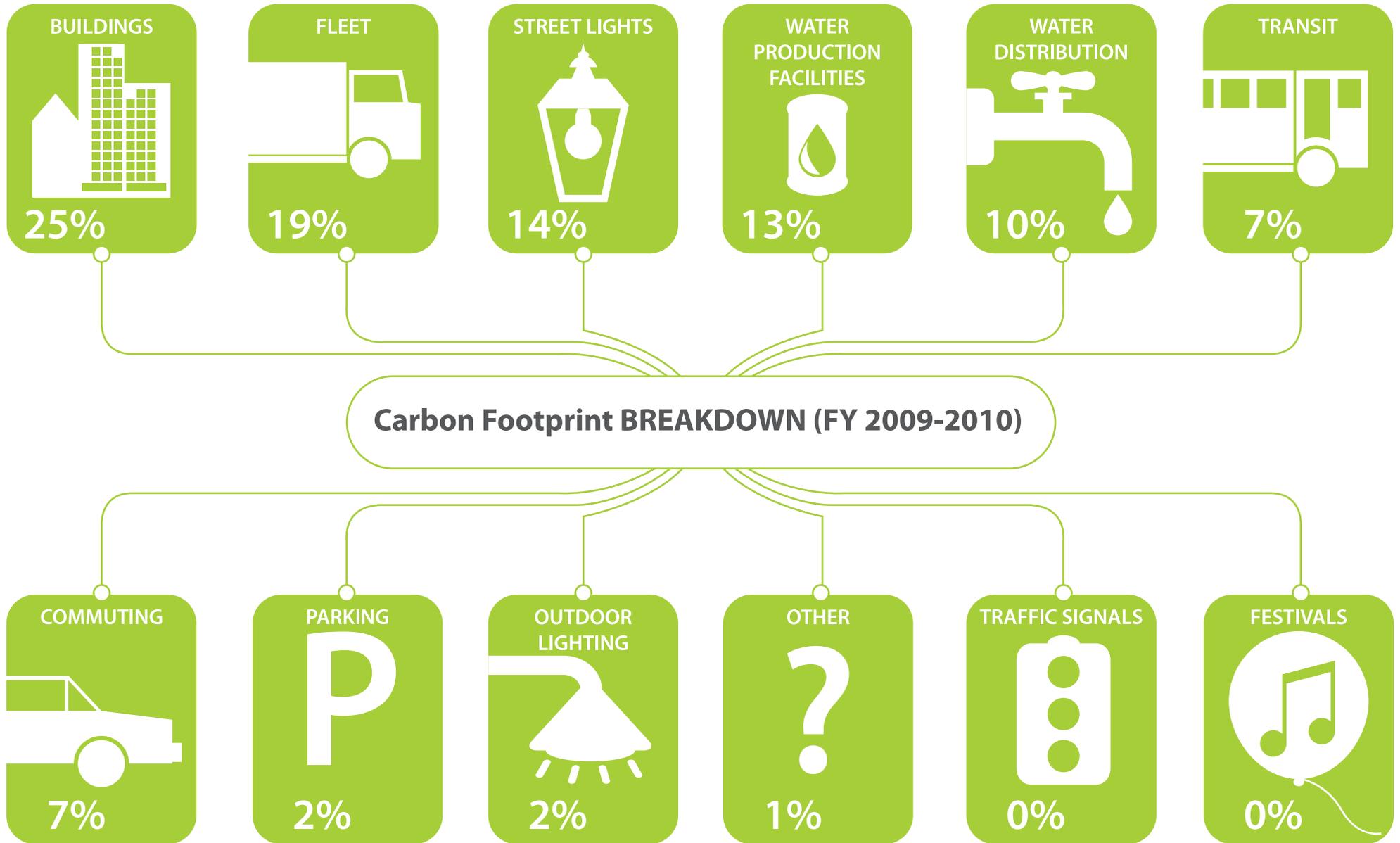
The previous page provided a snapshot in time for the carbon footprint of the city by source. This page explains the carbon footprint over the past three years since City Council established the carbon reduction goal. Look at each cluster by the source, when the bars get smaller from left to right it demonstrates the progress of reduced carbon footprint.

MT eCO₂

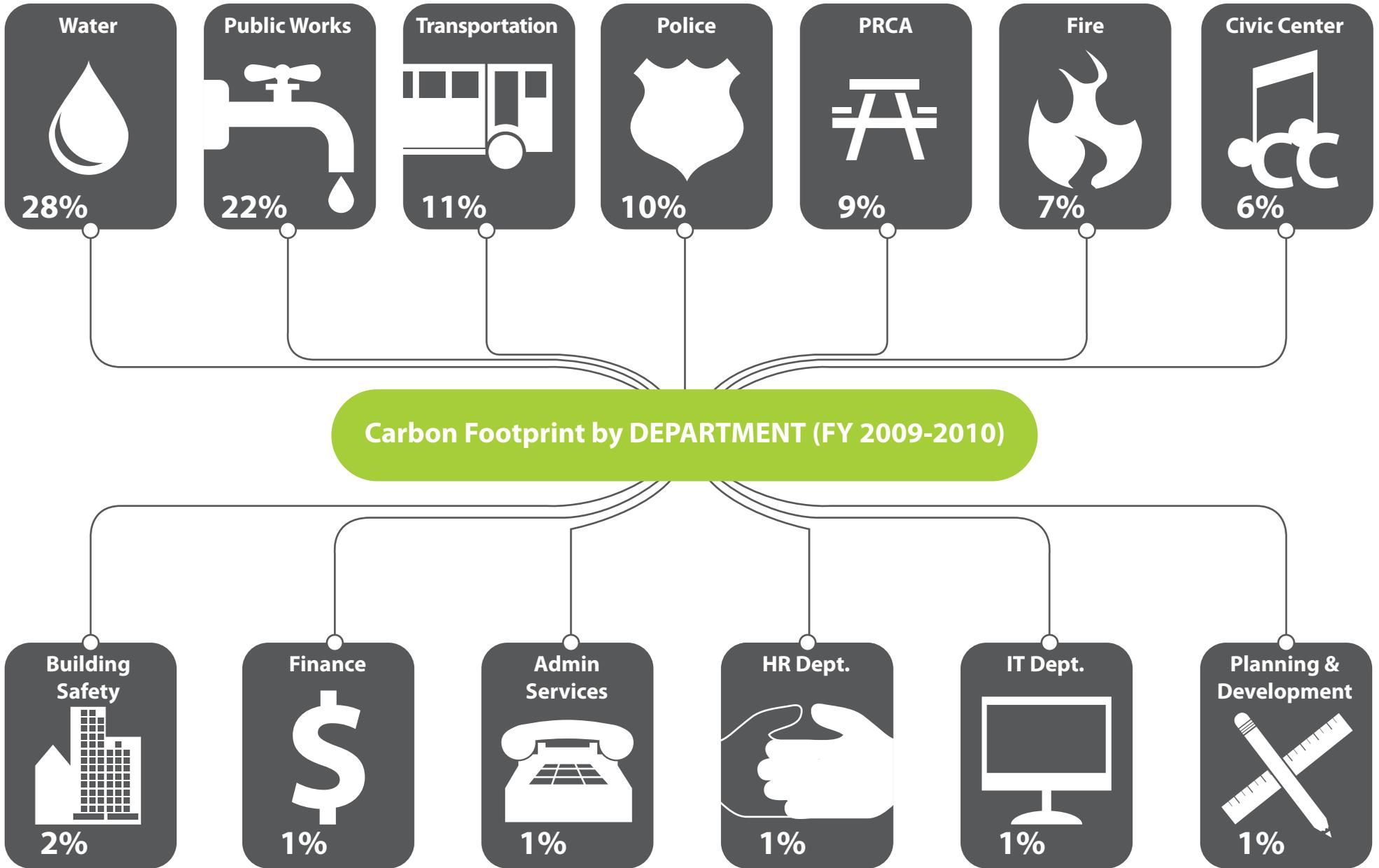
(Metric Ton equivalent Carbon Dioxide)



The City of Asheville measures carbon footprint by tracking the amount of energy we use to perform municipal functions and services. We then take that energy information and calculate how many tons of CO2 emissions that generates in the atmosphere. We track two types of emissions. Scope 1 emissions are generated at the point of energy use: for example the exhaust that comes out of a vehicle tail pipe is a Scope 1 emission. Scope 2 emissions are generated with one degree of separation. For example the electricity we use to turn on a light switch or power an air conditioner generates emissions off site at the power plant facility. For us in Asheville that is the Lake Julian Progress Energy Power Plant. Below are the uses for energy that make up the city's carbon footprint.



The City of Asheville performs a wide variety of services for the community. To best understand these services and their respective carbon footprints the information below is broken down by city department. Each department has unique responsibilities and different portions of the overall carbon footprint for the municipality.



Water Resources

\$987,863

Total Energy Costs

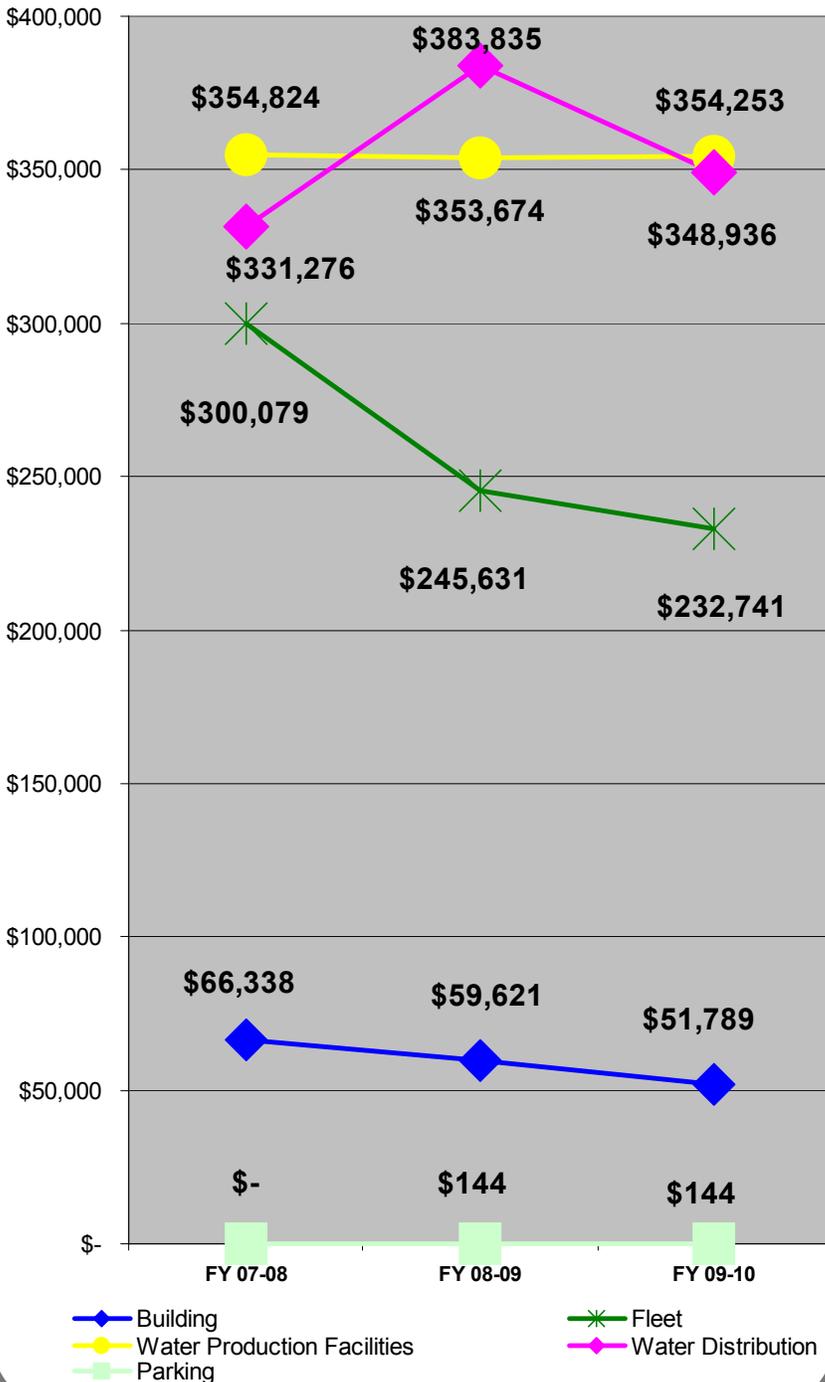
\$55,042

Avoided Spending

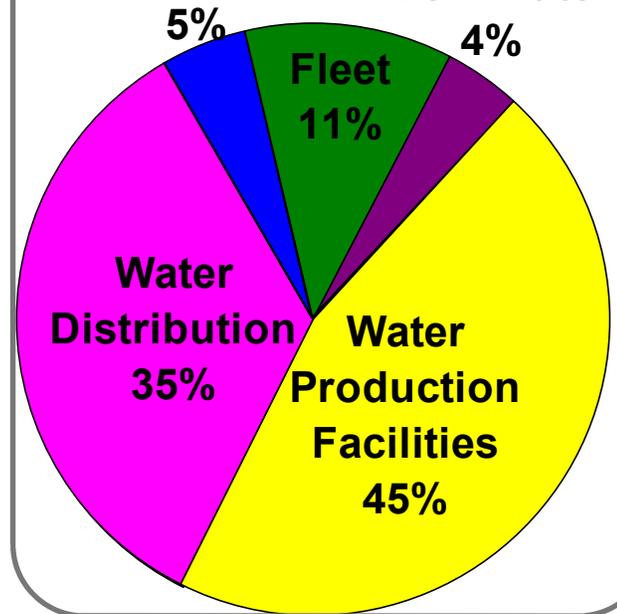
29.1%

% of Municipal Footprint

Energy Spending Trend



Department Carbon Footprint



Department Sustainability Highlights

- Department energy spending went down 5.0% from last year
- Pursued and won a grant to down-size two large pumps at the North Fork Water Plant
- Phasing in automated meter reading devices which will reduce the time and fuel needed to check water meters in the utility area

Public Works

\$2,174,49

Total Energy Costs

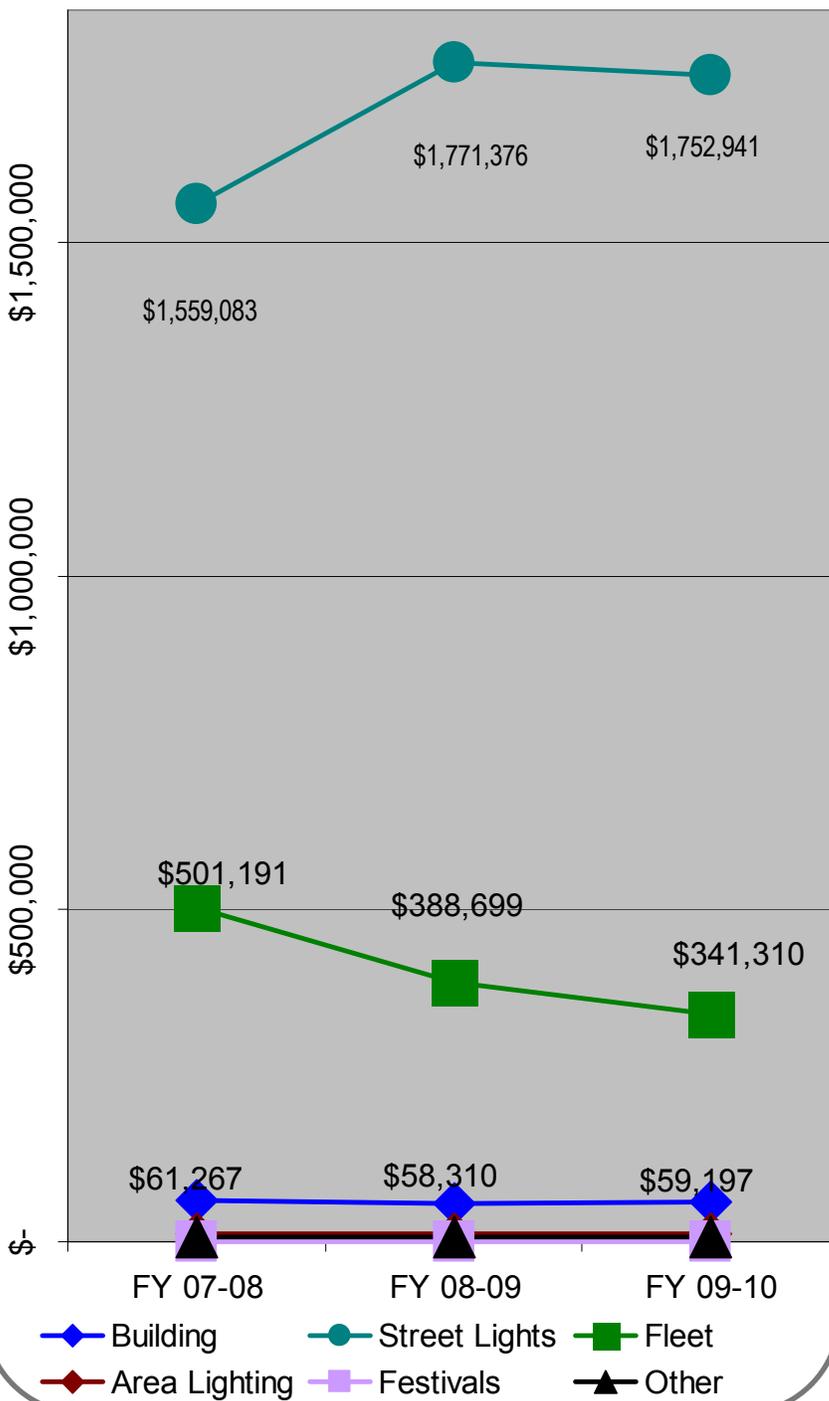
\$60,194

Avoided Spending

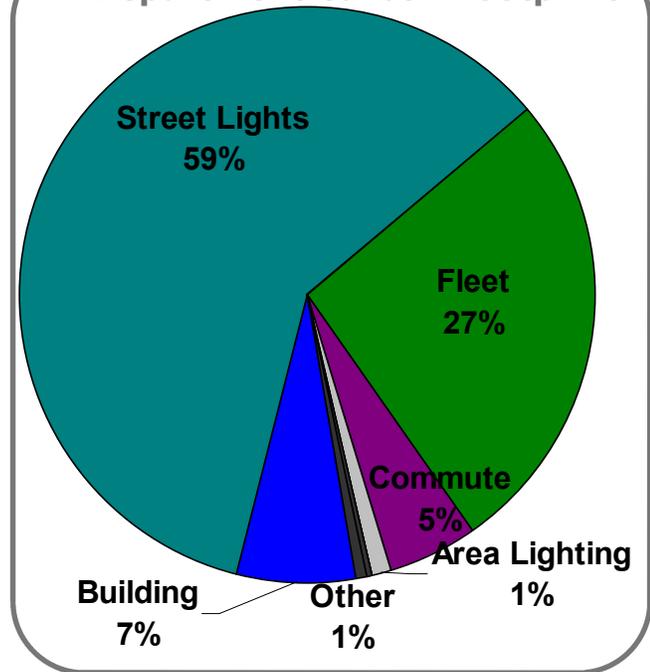
23.2%

% of Municipal Footprint

Energy Spending Trend*



Department Carbon Footprint



Department Sustainability Highlights

- Department energy spending went down 2.7% from last year
- Began single stream recycling in public buildings to make it easier by no longer needing to sort recycling
- Won a grant to subsidize the cost of compost bins which provided bins to 1000 citizens

* all costs not shown due to space confinements

Transportation Dept

\$599,938

Total Energy Costs

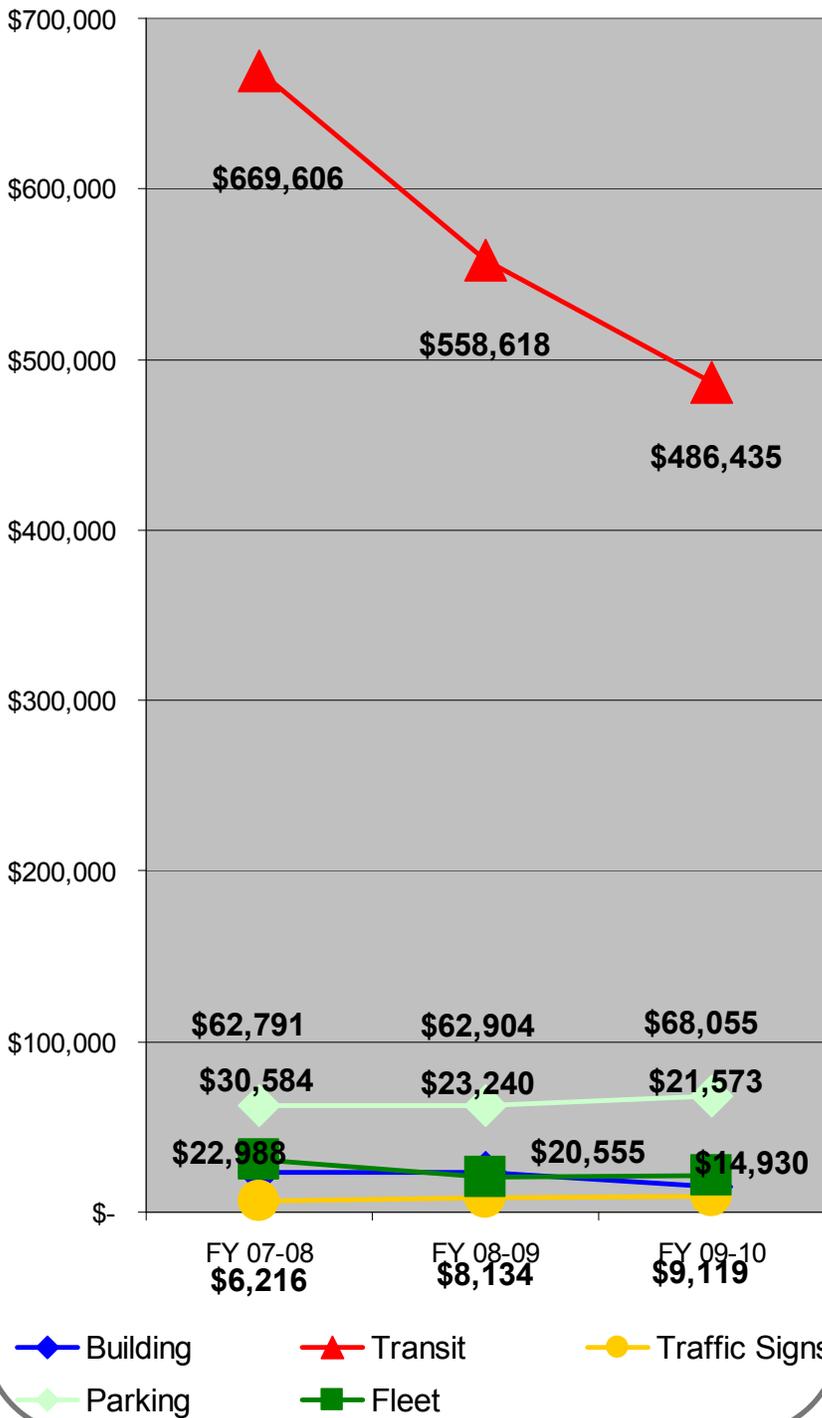
\$72,345

Avoided Spending

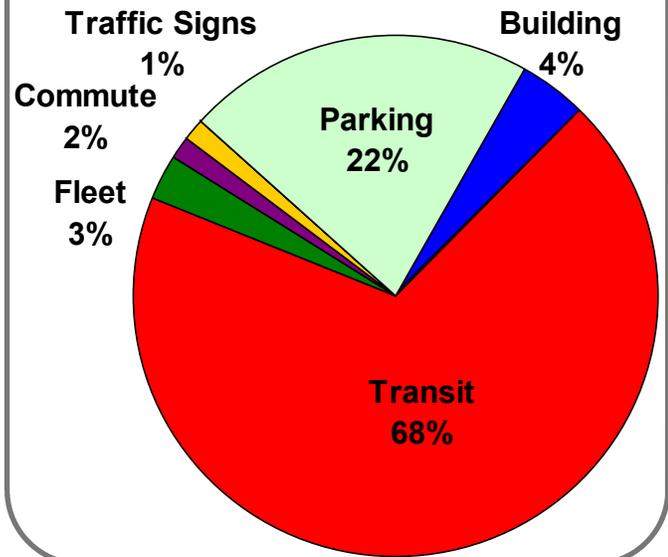
11.2%

% of Municipal Footprint

Energy Spending Trend



Department Carbon Footprint



Department Sustainability Highlights

- Department energy spending went down 10.8% from last year
- Grants awarded last year will phase in the replacement of ALL transit busses. Several of the new buses will be hybrid models
- The first employee vanpool started minimizing 9 commutes to one vanpool

Asheville Police Dept

\$497,538

Total Energy Costs

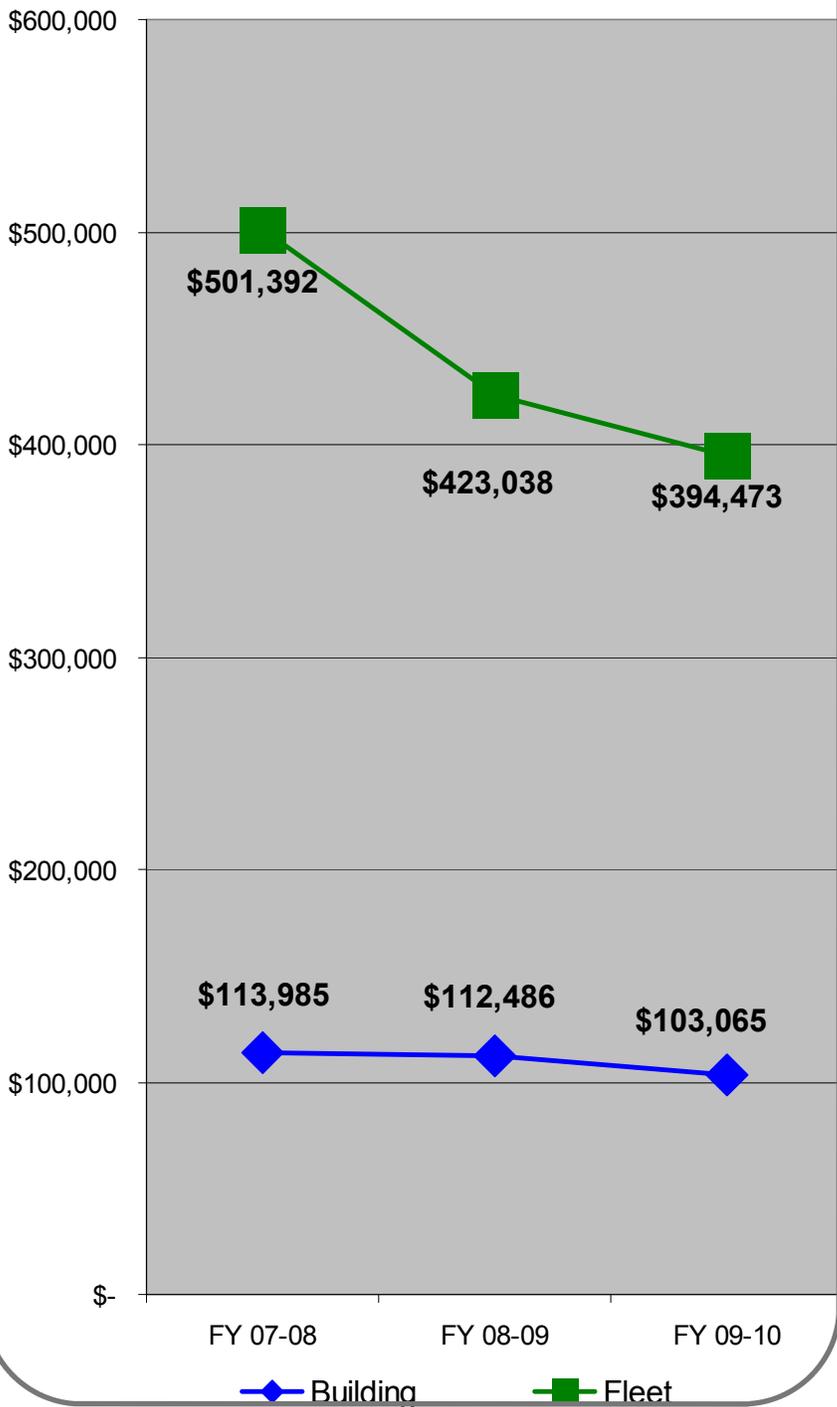
\$34,434

Avoided Spending

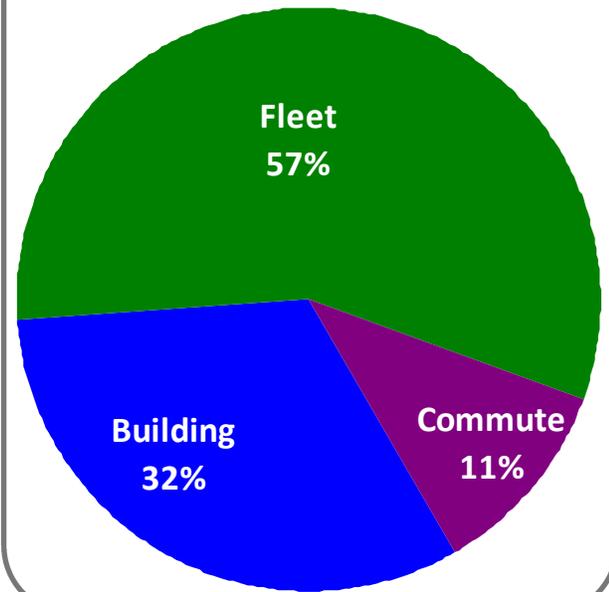
9.6 %

% of Municipal Footprint

Energy Spending Trend



Department Carbon Footprint



Department Sustainability Highlights

- Department energy spending went down 6.5% from last year
- Expanded Bike Patrol Unit to 30 bicycles reducing fleet fuel use

Parks, Recreation and Cultural Arts

\$397,957

Total Energy Costs

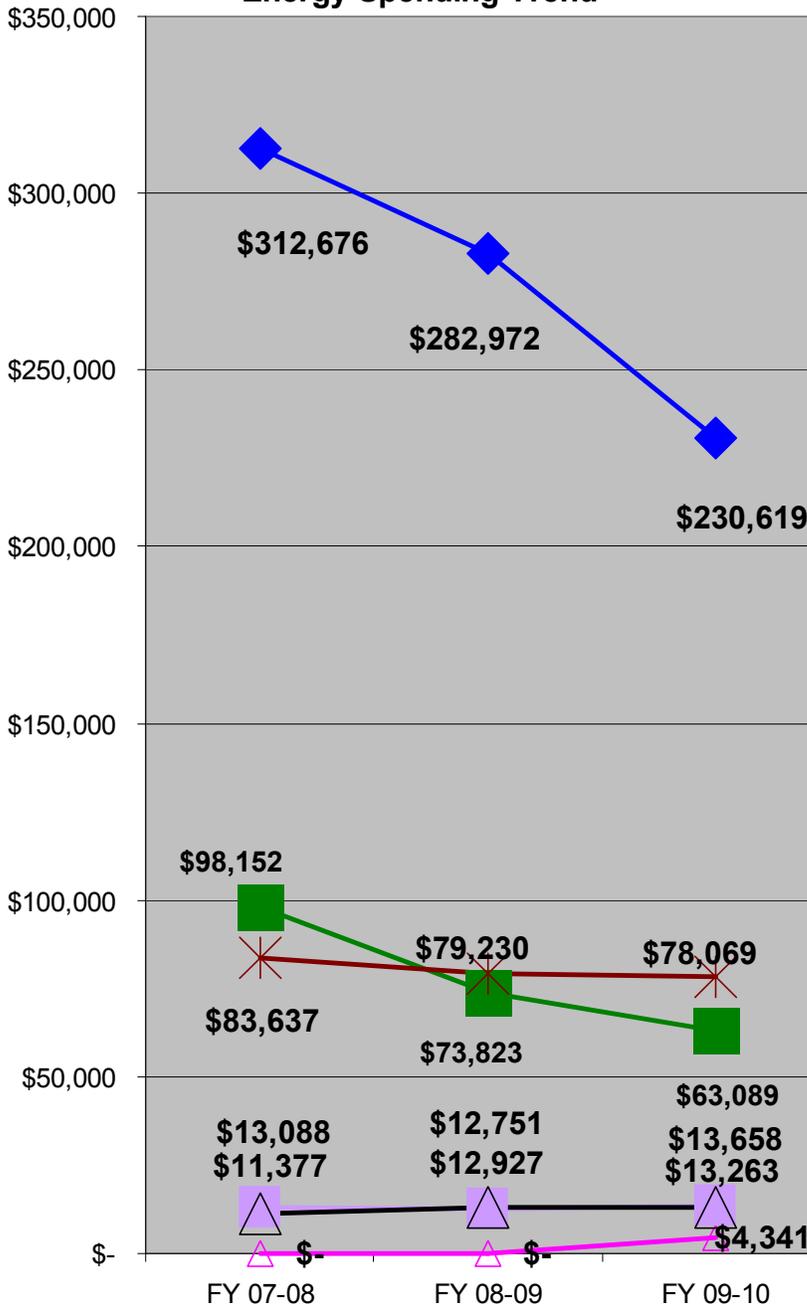
\$60,194

Avoided Spending

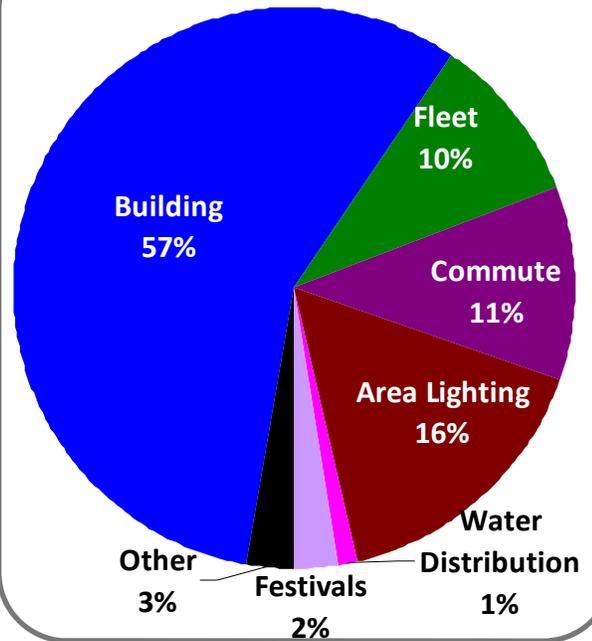
9.0 %

% of Municipal footprint

Energy Spending Trend



Department Carbon Footprint



Department Sustainability Highlights

- Department energy spending went down 13.1% from last year
- Upgraded the city's cleaning and paper supplies contract to all green seal certified products
- Began construction on the city's first LEED Gold building project

Asheville Fire Department

\$268,870

Total Energy Costs

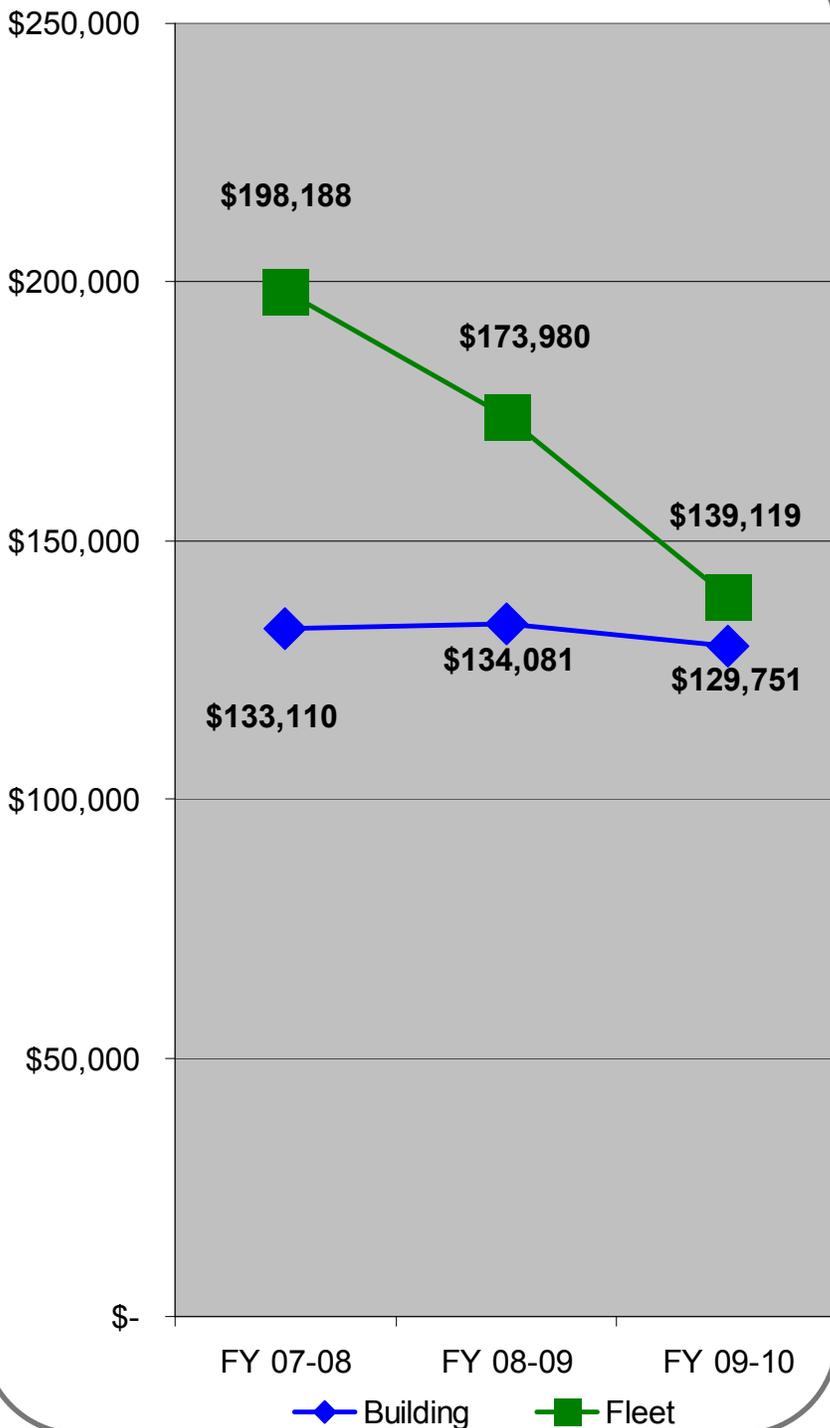
\$35,638

Avoided Spending

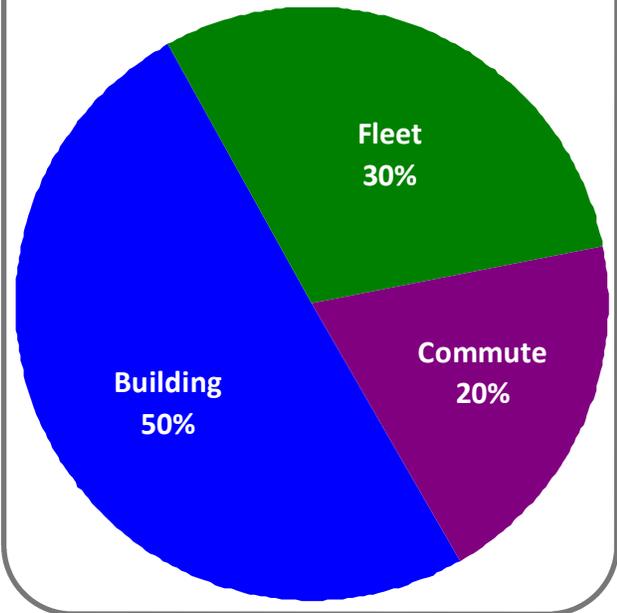
6.7 %

% of Municipal Footprint

Energy Spending Trend



Department Carbon Footprint



Department Sustainability Highlights

- Department energy spending went down 11.7% from last year
- Installed the first solar hot water systems on two fire stations
- Weatherized and improved energy efficiency in two fire stations
- Fleet upgrades contributed to better fuel efficiency

Civic Center/ Econ Devel

\$232,339

Total Energy Costs

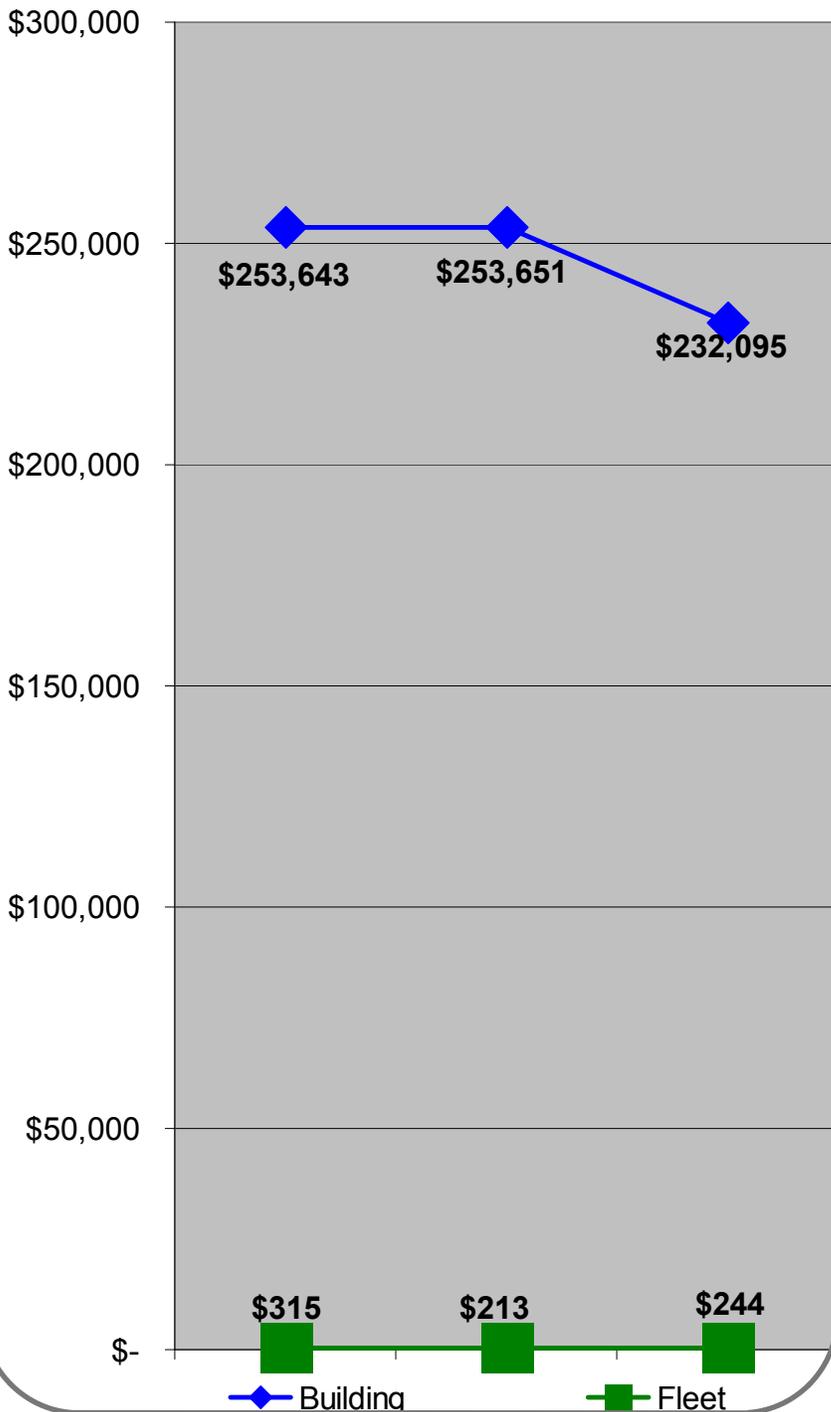
\$21,525

Avoided Spending

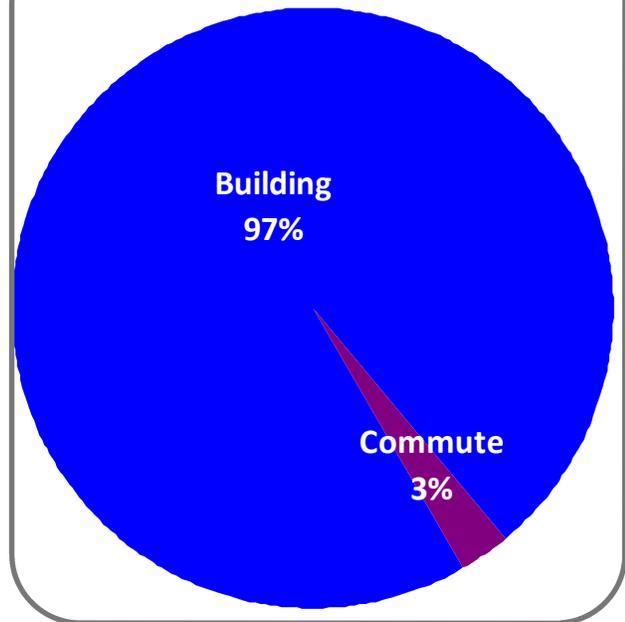
5.7%

% of Municipal Footprint

Energy Spending Trend



Department Carbon Footprint



Department Sustainability Highlights

- Department energy spending went down 8.5% from last year
- In the process of installing a separate HVAC unit in the banquet hall to separate heating and cooling from the Civic Center
- Most of the cost savings were generated by discontinuing the ice skating rink

Building Safety

\$55,857

Total Energy Costs

\$623

Additional Spending

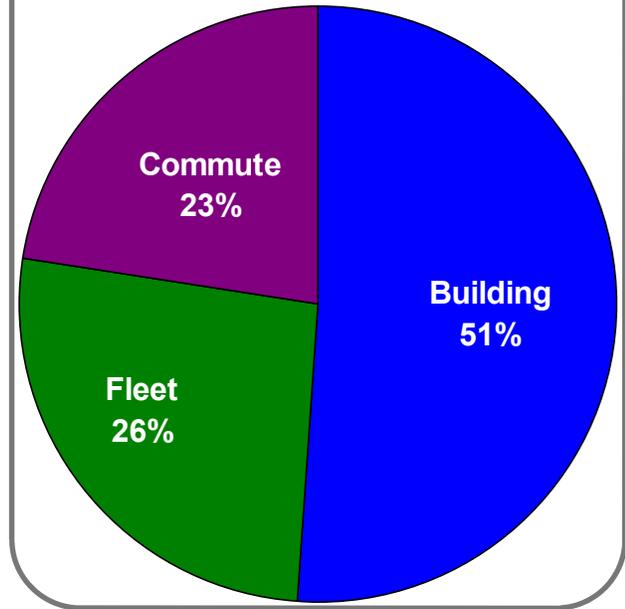
1.6 %

% of Municipal Footprint

Carbon Footprint by Source



Department Carbon Footprint



Department Sustainability Highlights

- Department energy spending slightly increased by 1.1% from last year due to growth in number of staff in department
- Facilities Maintenance division now offers energy efficient choices to departments when replacing equipment
- 20 employees trained to perform energy audits

Finance Department

\$39,779

Total Energy Costs

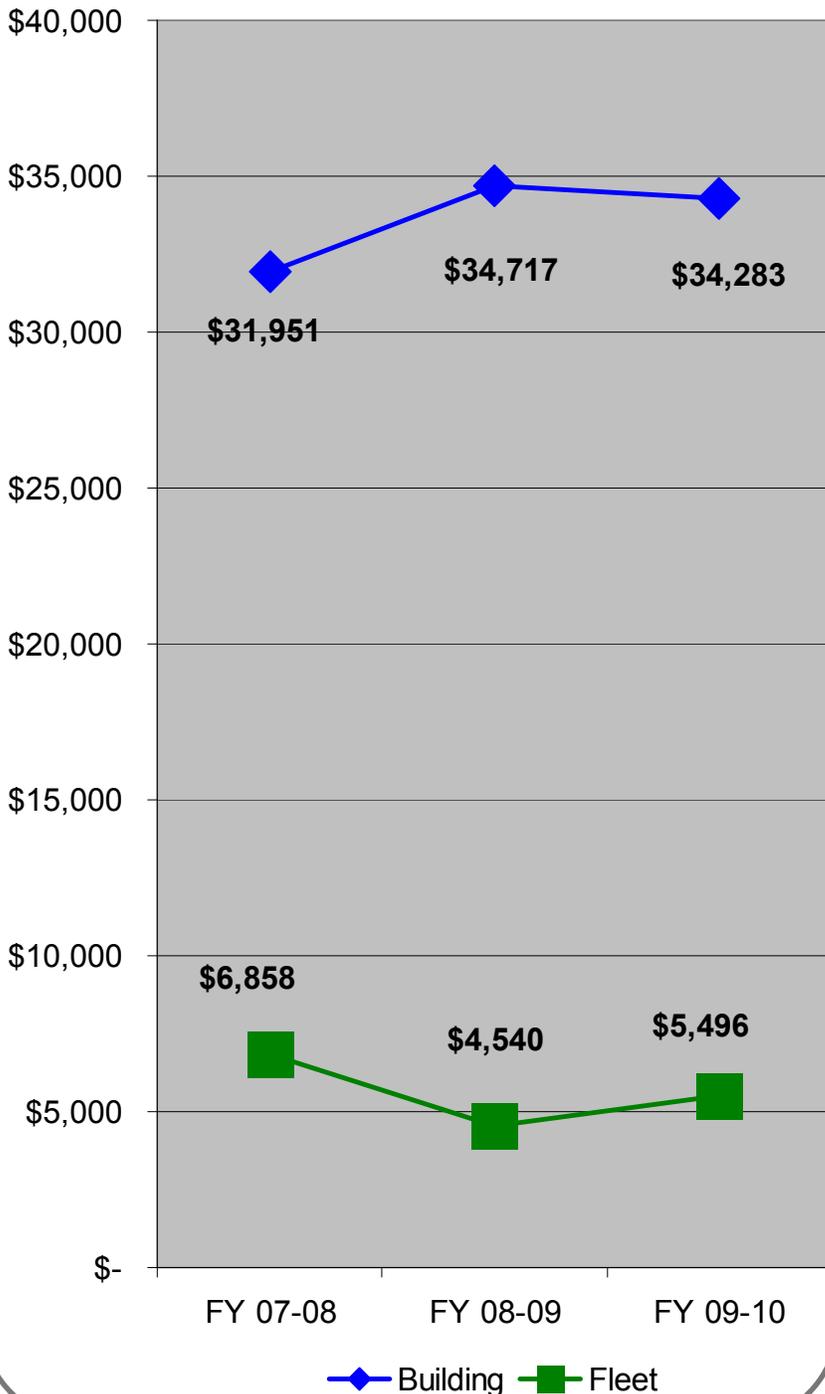
\$522

Additional Spending

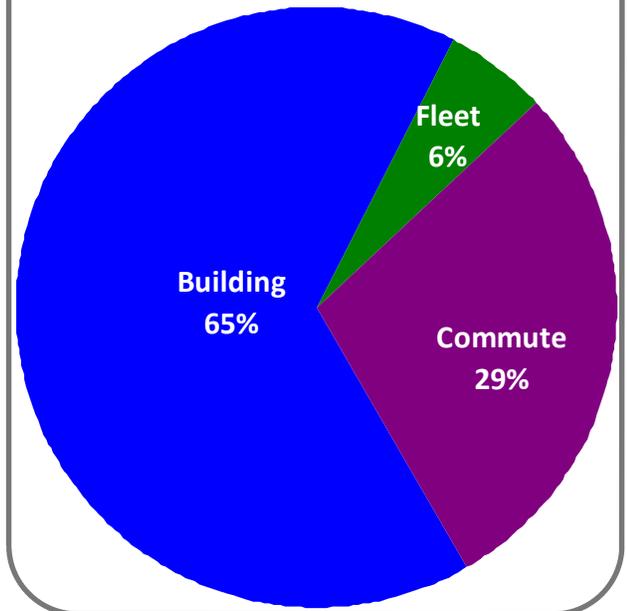
1.4 %

% of Municipal Footprint

Energy Spending Trend



Department Carbon Footprint



Department Sustainability Highlights

- Department energy spending increased slightly by 1.33% from last year

Administrative Services

\$26,650

Total Energy Costs

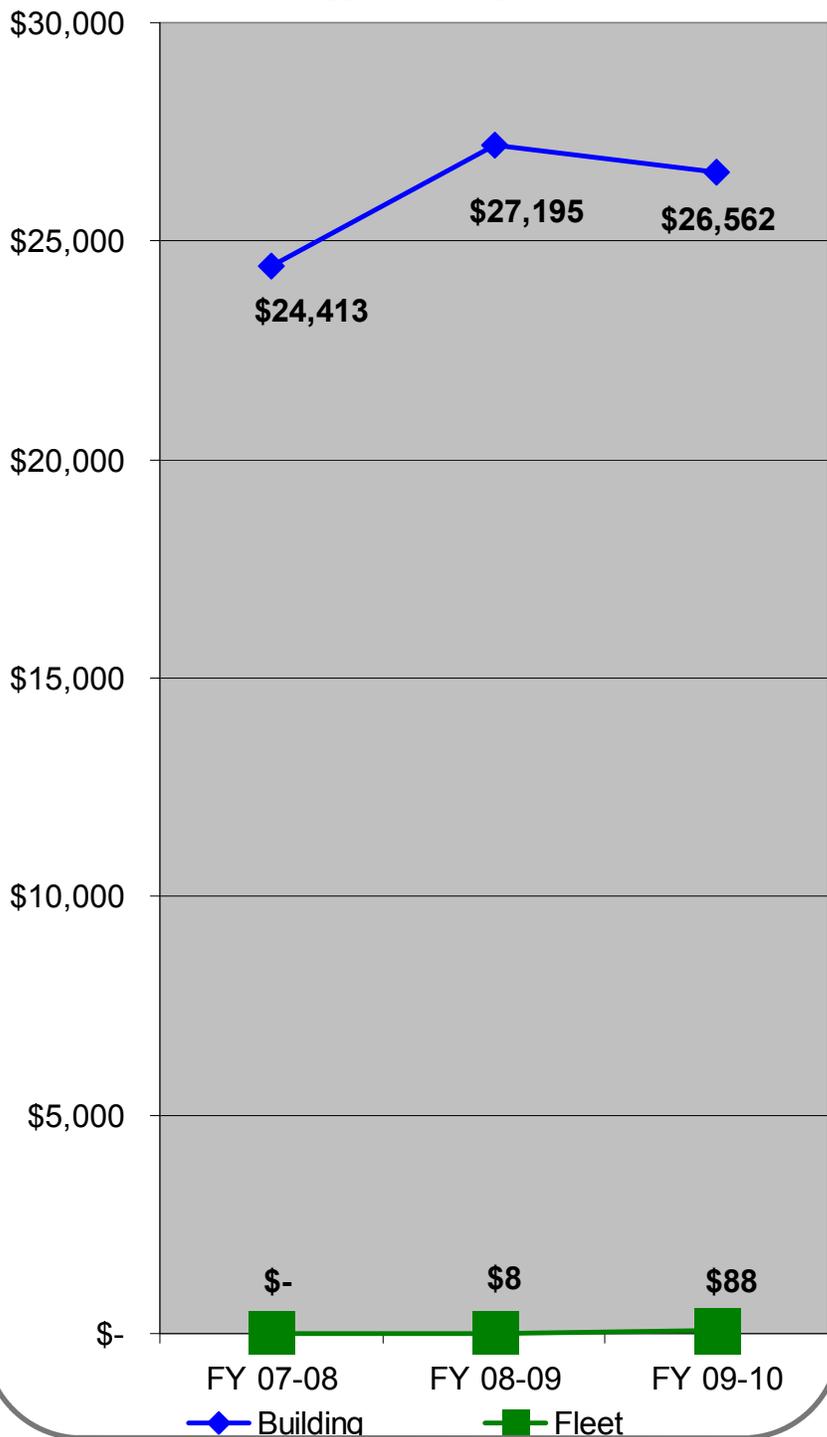
\$553

Avoided Spending

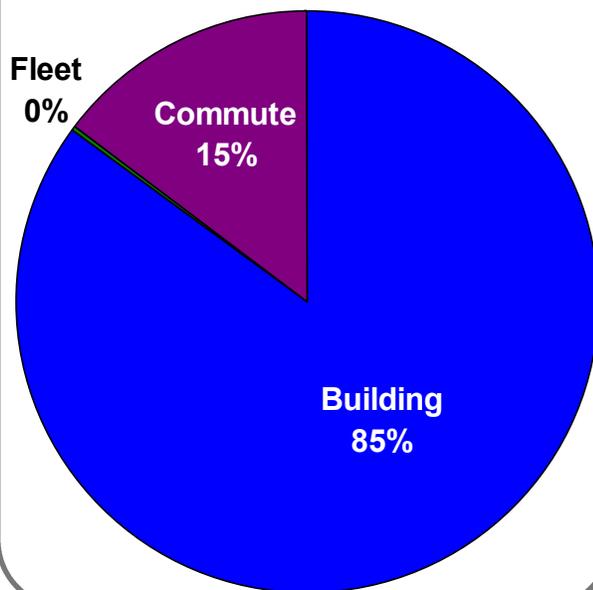
0.8%

% of Municipal Footprint

Energy Spending Trend



Department Carbon Footprint



Department Sustainability Highlights

- Department energy spending went down 2.0% from last year
- Created the City Share Program providing a CNG vehicle and two bikes to city departments to share
- Provides assistance to encourage green purchasing
- Began the How Low Can AVL GO program to educate employees about energy conservation

Human Resources

\$12,709

Total Energy Costs

\$1,098

Avoided Spending

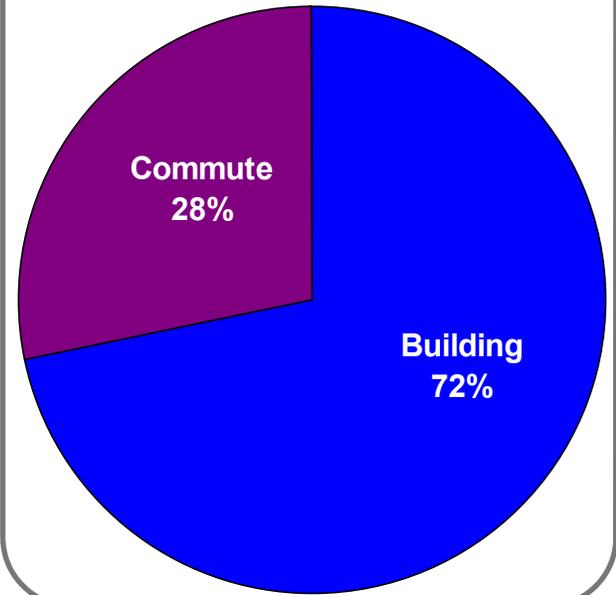
0.5%

% of Municipal Footprint

Carbon Footprint by Source



Department Carbon Footprint



Department Sustainability Highlights

- Department energy spending went down 8.0% from last year

Information Technology

\$18,670

Total Energy Costs

\$3,912

Avoided Spending

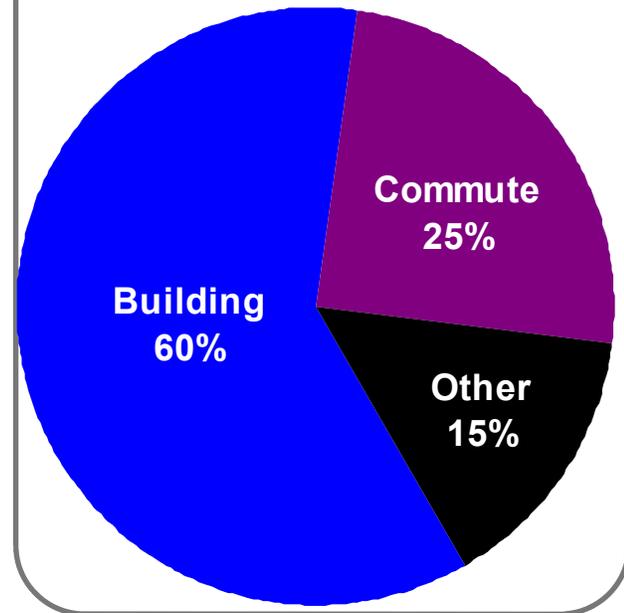
0.7%

% of Municipal Footprint

Energy Spending Trend



Department Carbon Footprint



Department Sustainability Highlights

- Department energy spending went down 5.9% from last year
- Upgraded the city servers to reduce energy use and increase capacity of the servers
- Continued the surplus electronics recycling program

Planning and Development

\$29,149

Total Energy Costs

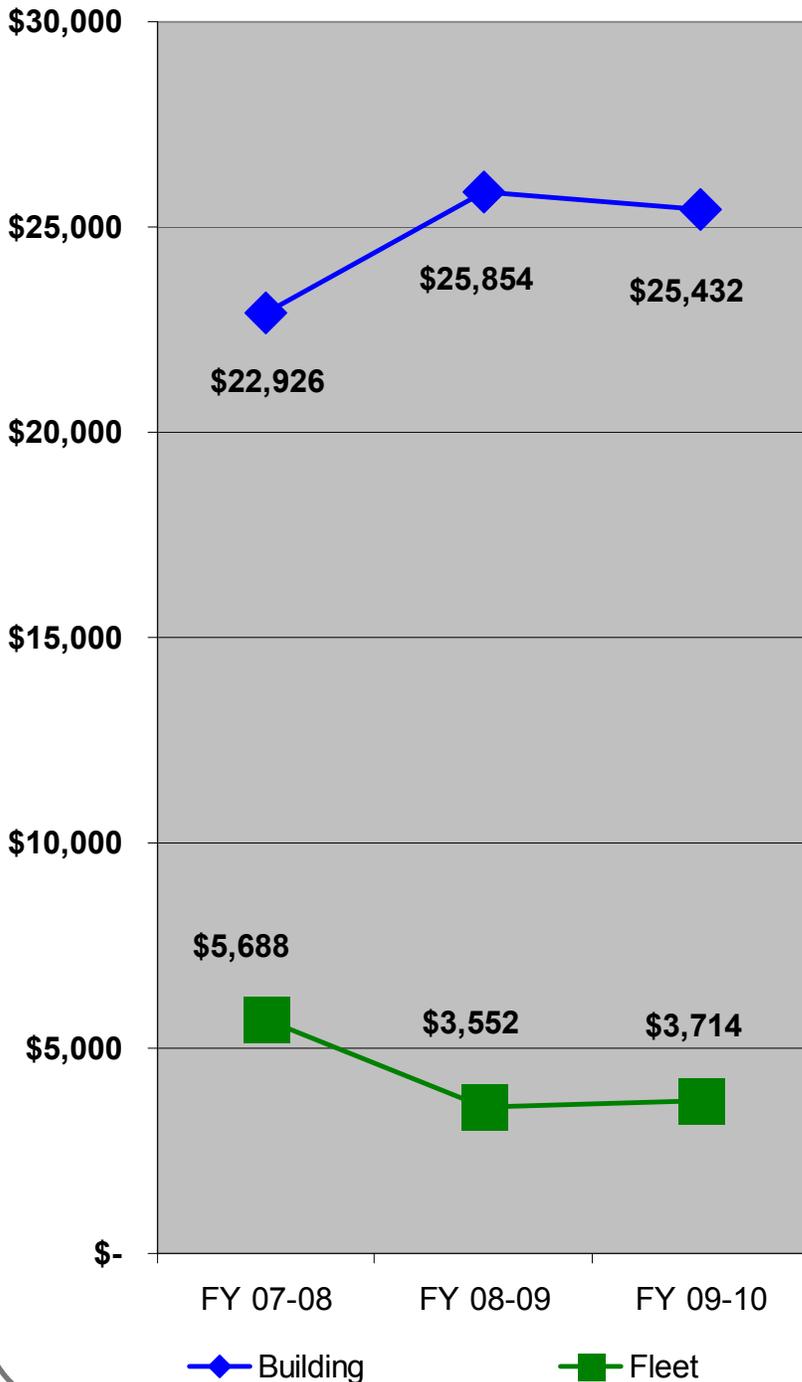
\$259

Avoided Spending

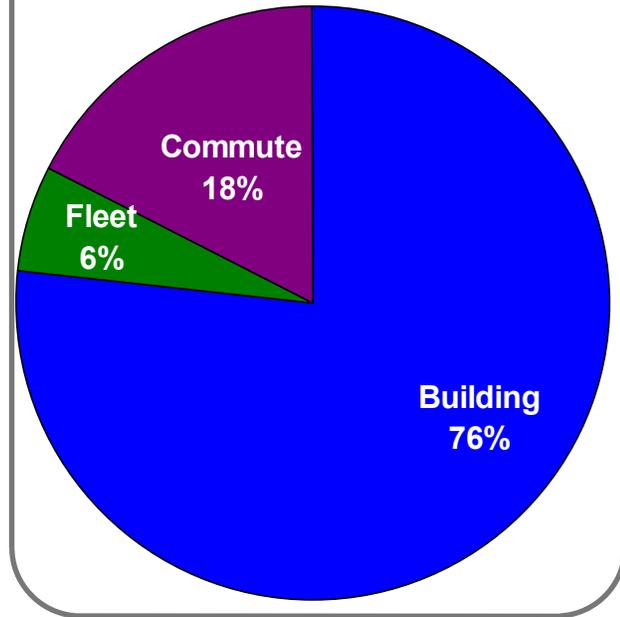
0.9%

% of Municipal Footprint

Energy Spending Trend



Department Carbon Footprint



Department Sustainability Highlights

- Department energy spending went down 0.9% from last year