

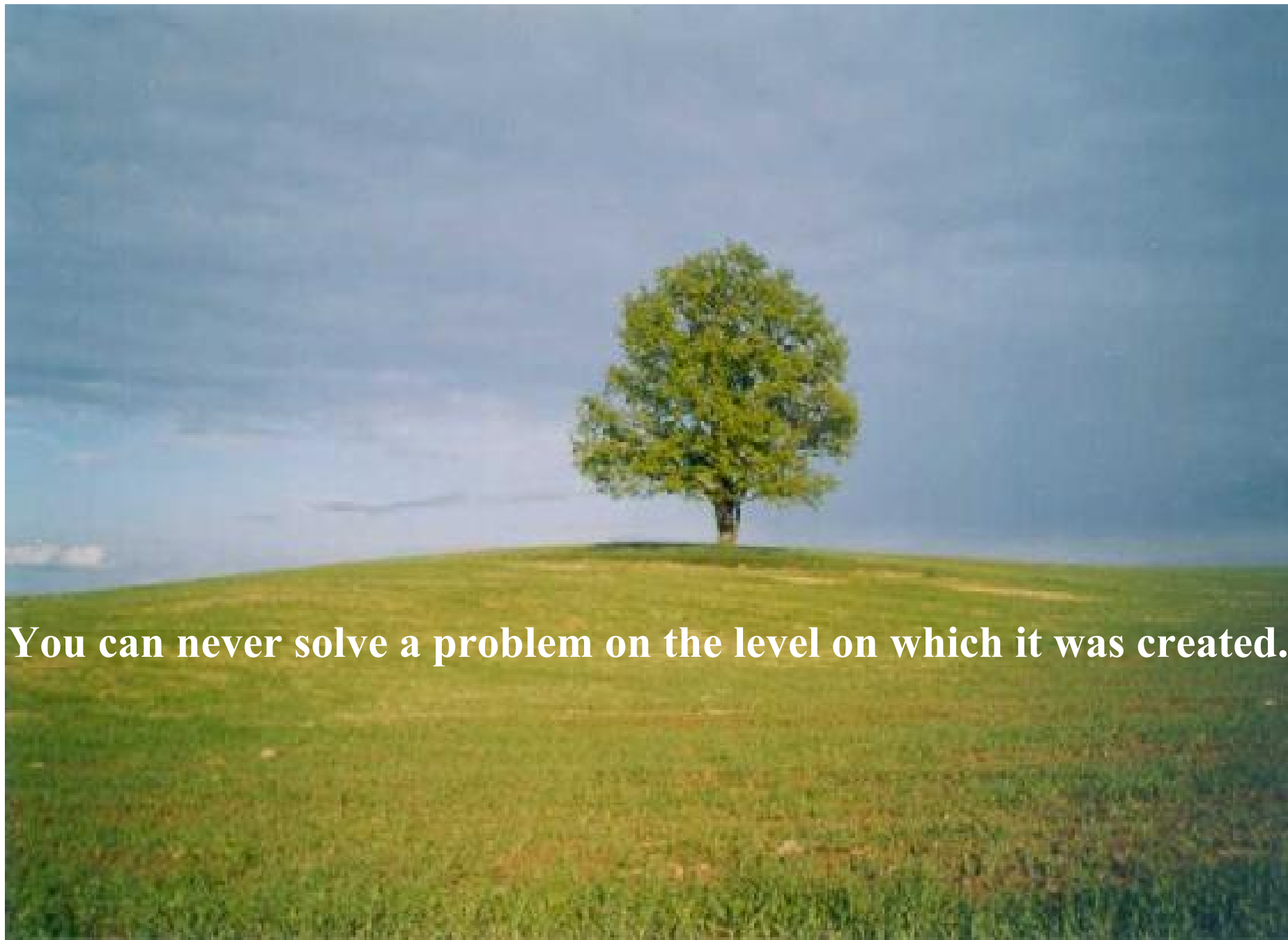


City of Tulsa Energy



# Conservation and Efficiency Plan 2007

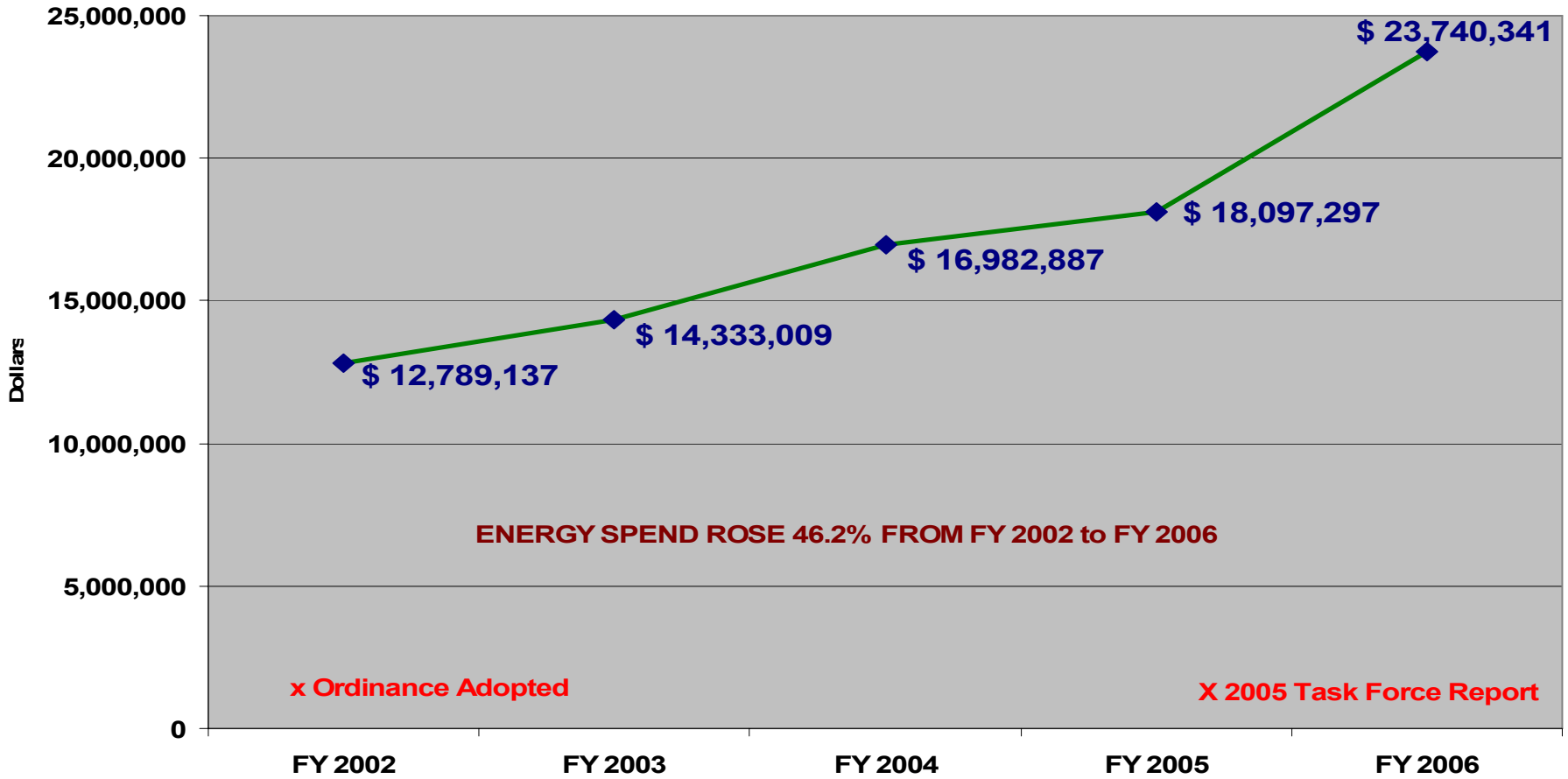




**You can never solve a problem on the level on which it was created.**

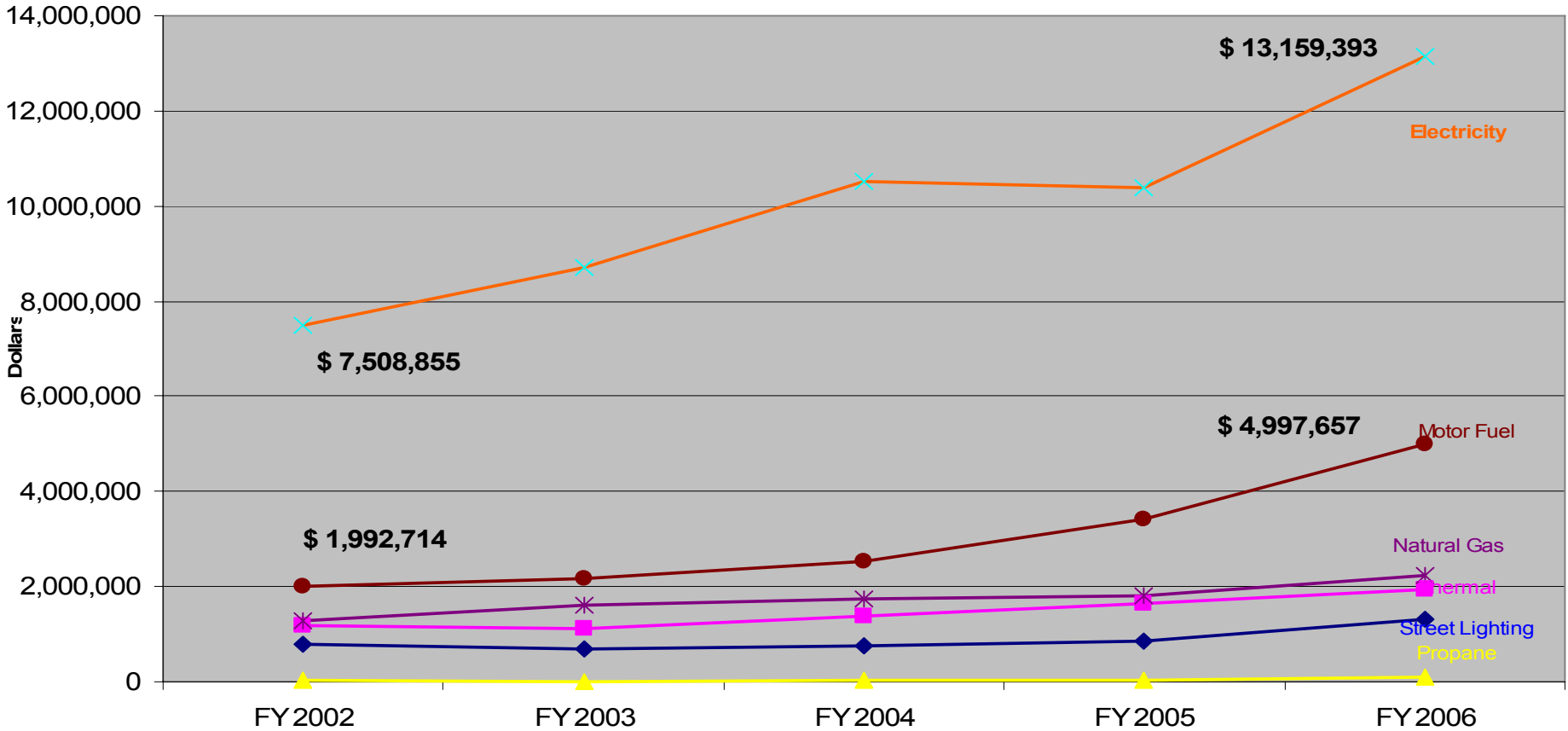
# Total Energy Spend City of Tulsa

Data Source: Internal Auditing, EMD

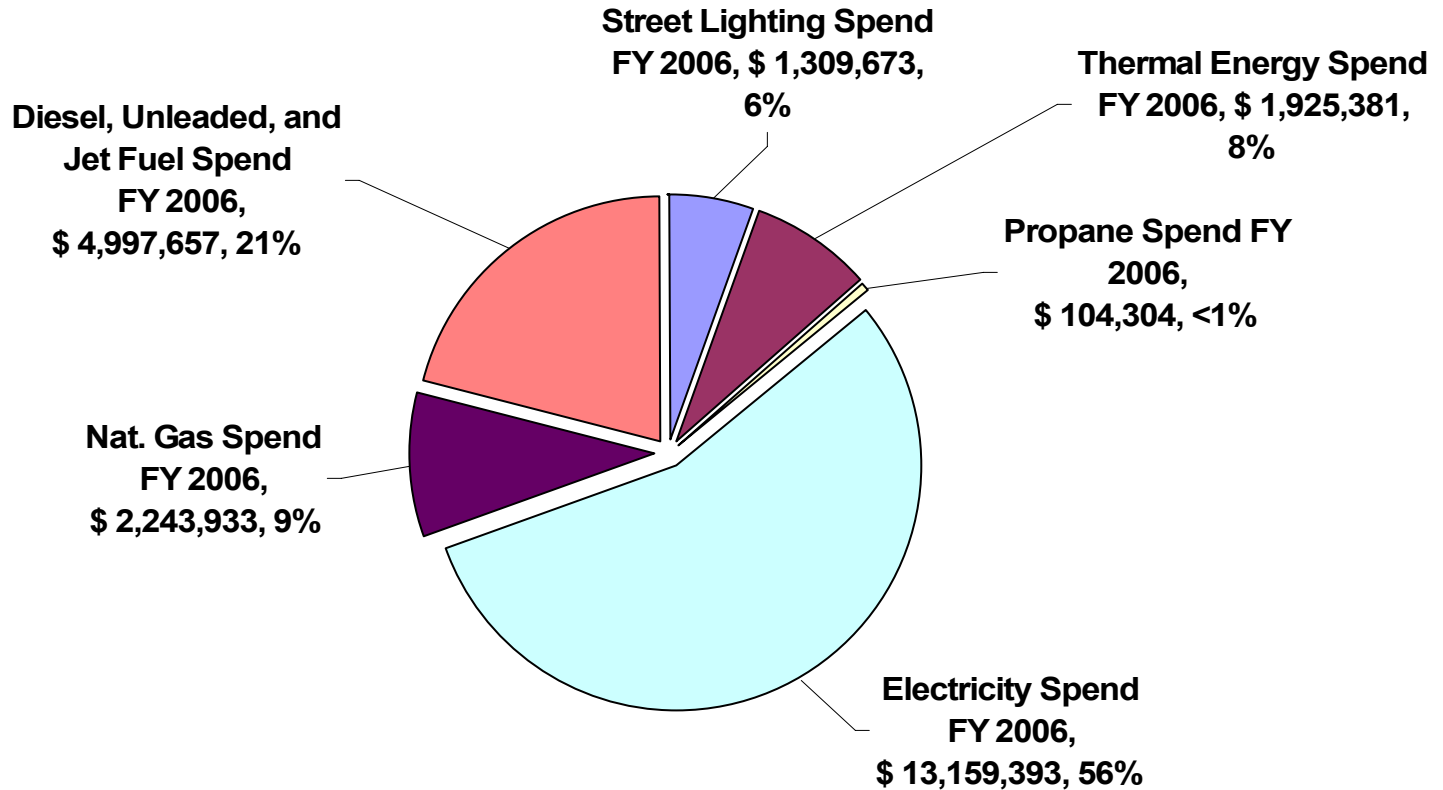


# All Energy Spend Trend City of Tulsa

Data Source: Internal Auditing, EMD



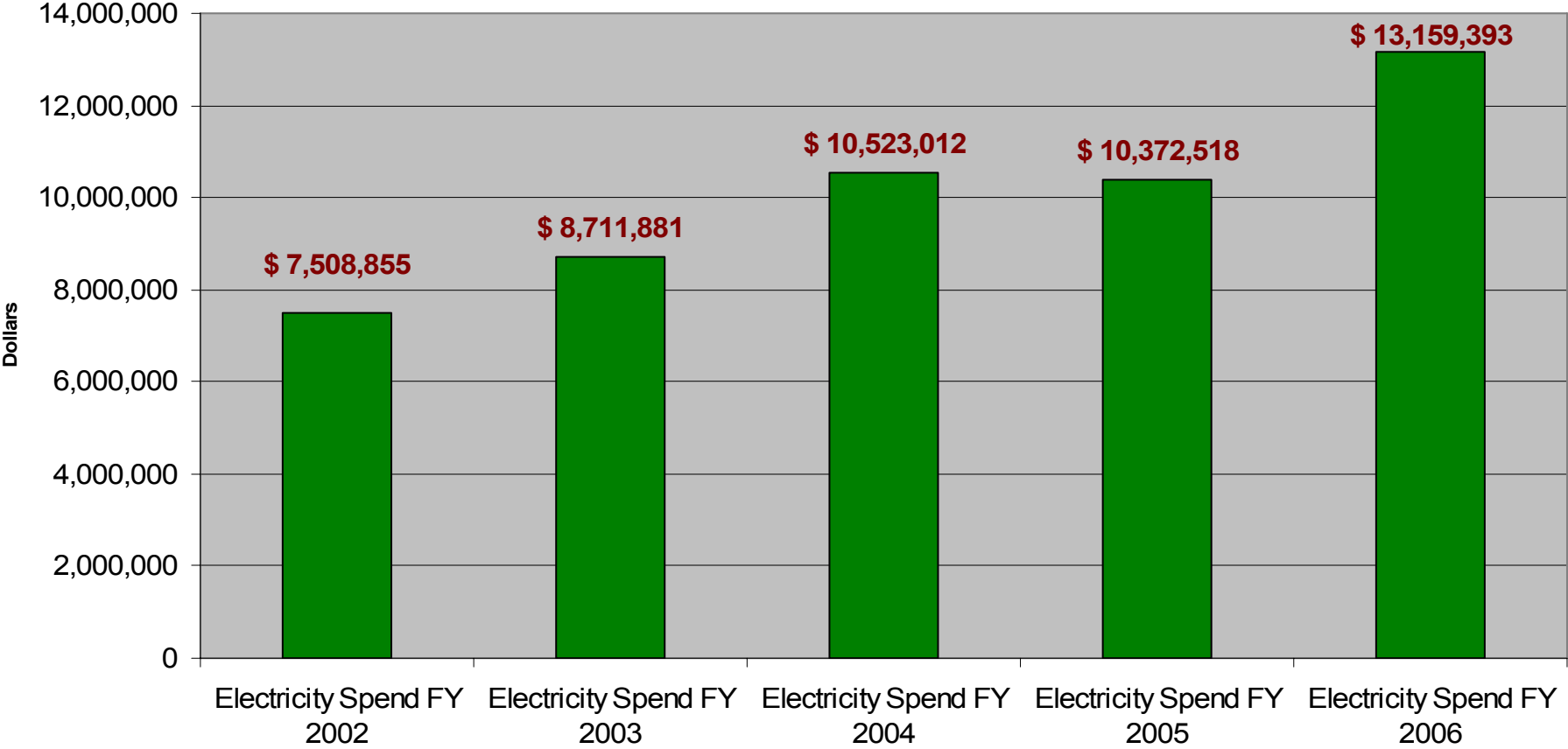
## Energy Spend FY 2006 by Type



Source: Internal Auditing, EMD

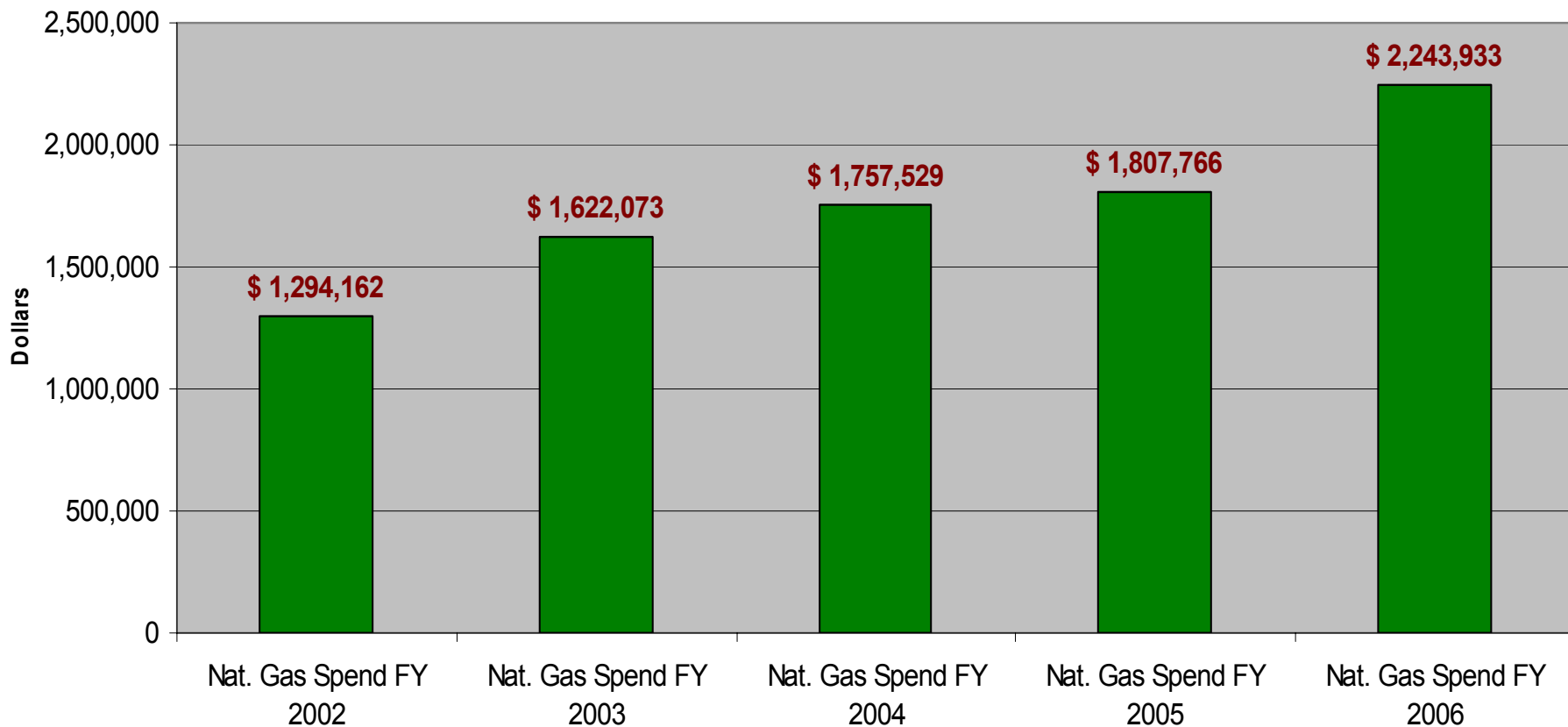
# Electricity Spend City of Tulsa

Data Source: Internal Auditing



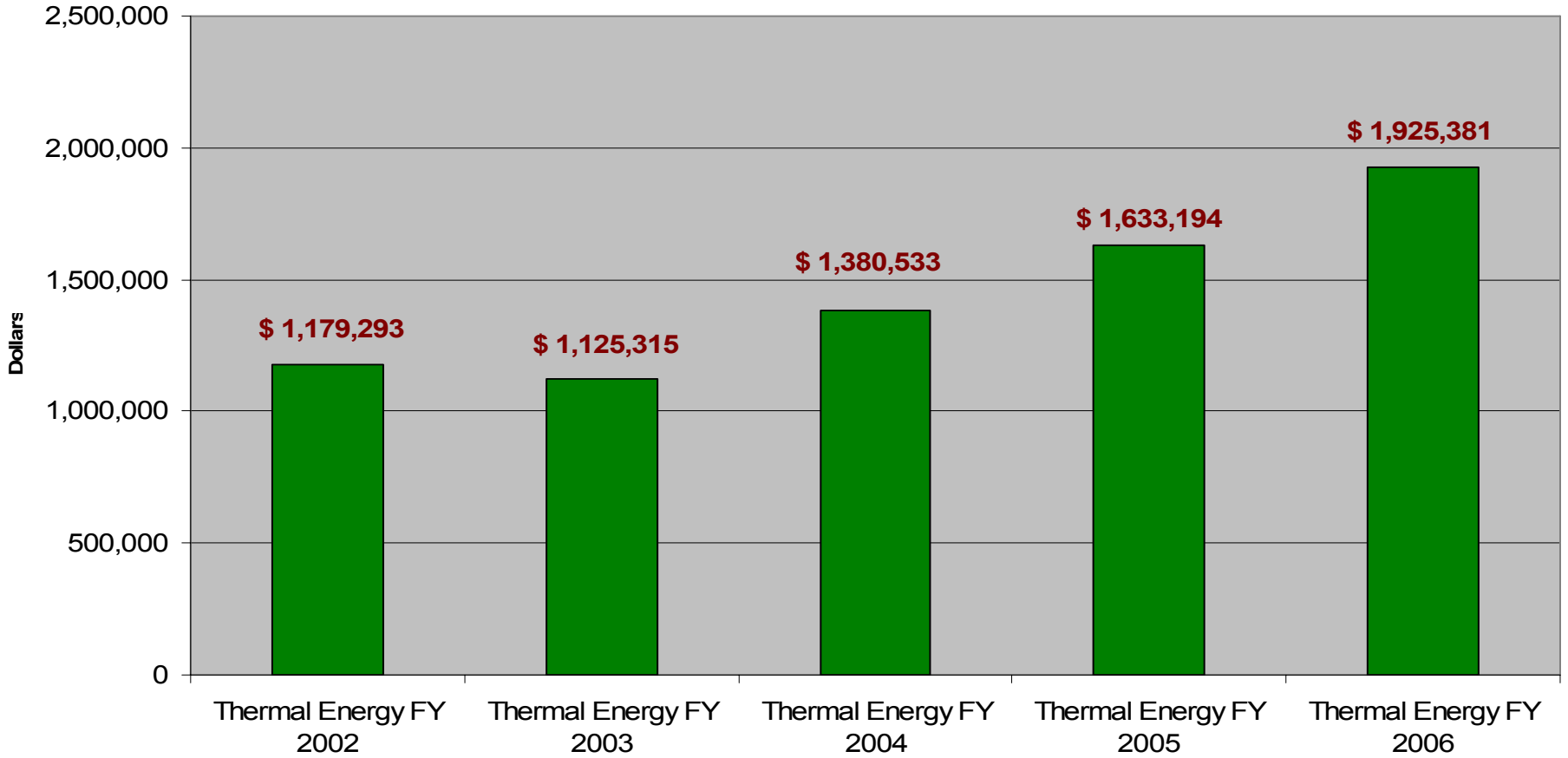
# Natural Gas Spend City of Tulsa

Data Source: Internal Auditing



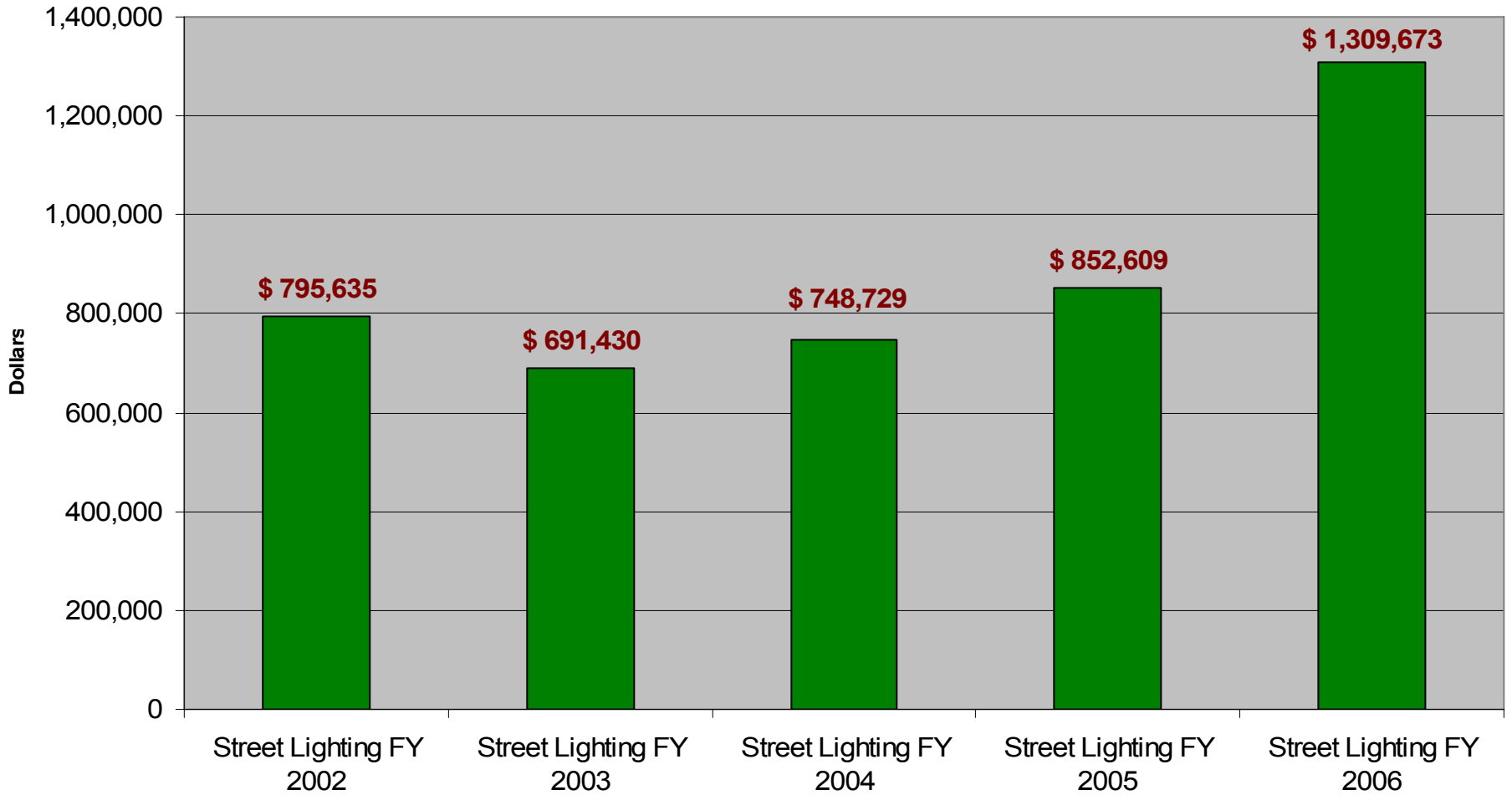
# Thermal Energy Spend City of Tulsa

Data Source: Internal Auditing



# Street Lighting Spend City of Tulsa

Data Source: Internal Auditing

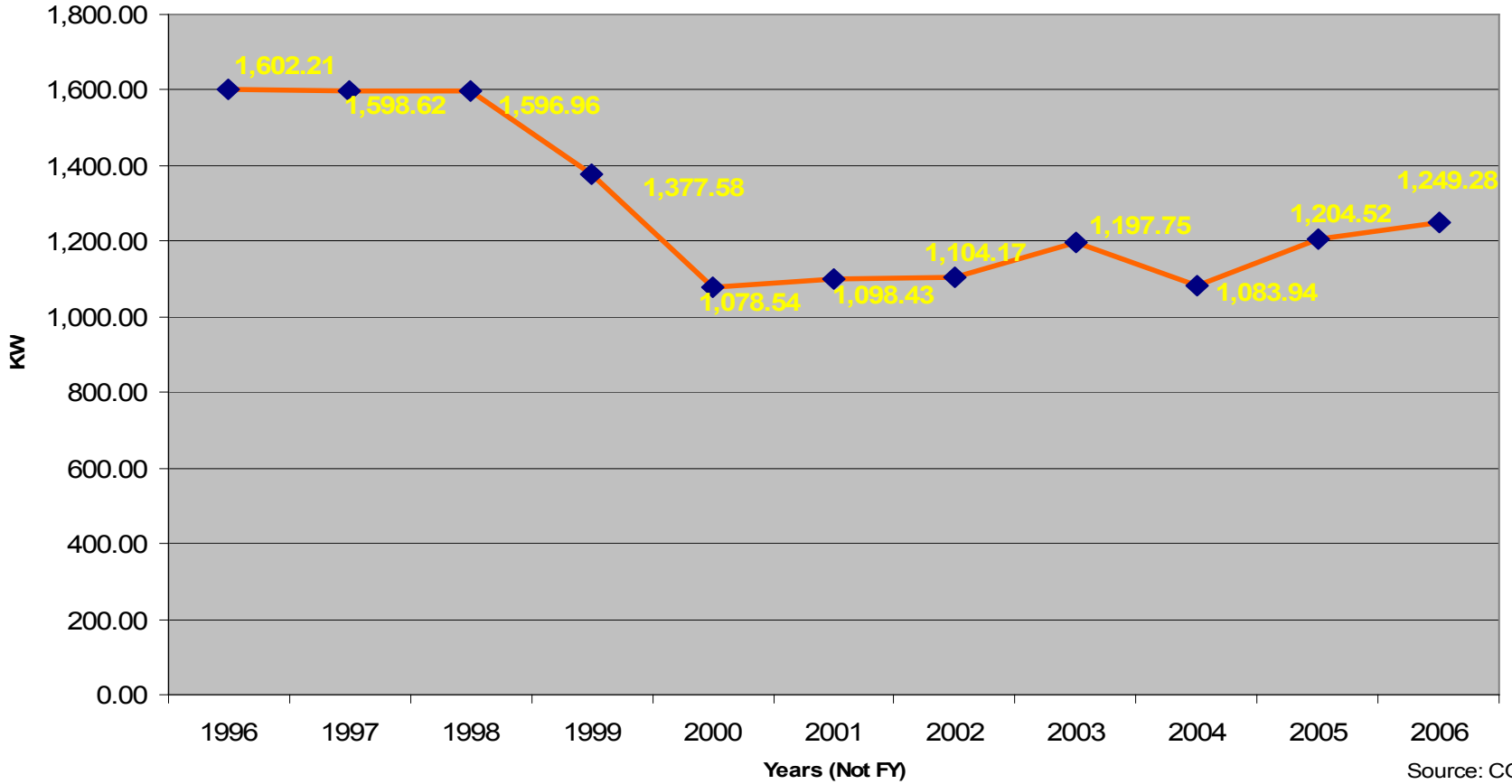


# City Hall Bldg. 395 People

Mayor's Office	11
Administration	10
Budget	10
Treasury	10
Capital	10
Accounting	9
City Clerk	9
Payroll	9
Accounts Payable	9
Accounts Receivable	9
Purchasing	8
Human Resources	8
ISD/TSD	7
Internal Auditing	6
Early Settlement	6
Public Works Administration	5
PW Community Affairs	5
PW Project Impact	5
PW Financial Planning	5
PW Customer Service	4
TMUA	4
Legal	3
City Council	2
Finance	S
Plant Operations	B

# City Hall 10 Year KW Demand Average

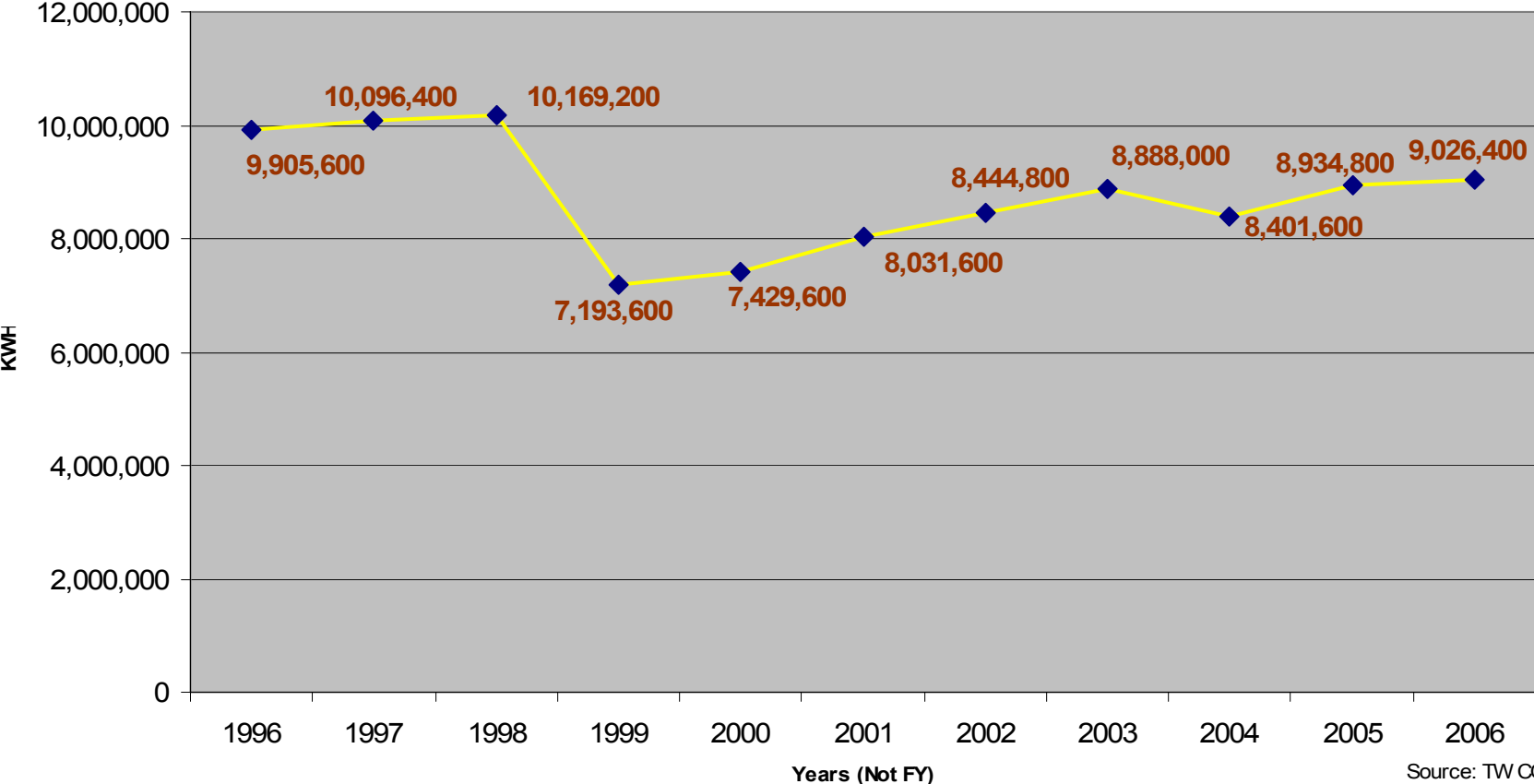
Includes City Hall, Police Courts, and Francis Campbell



Source: COT TW

# City Hall 10 Year KWH Consumption

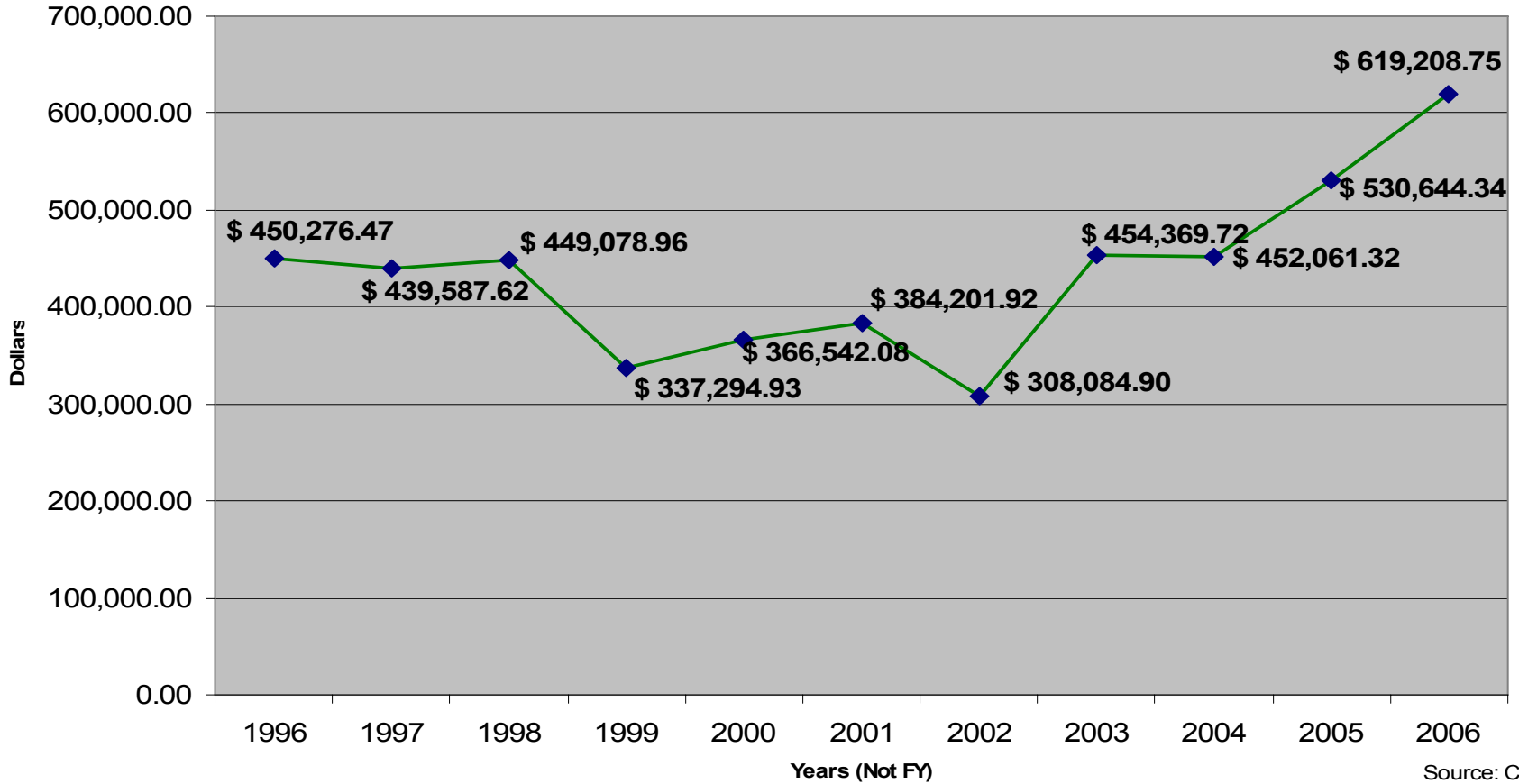
Includes City Hall, Police Courts, and Francis Campbell



Source: TW COT

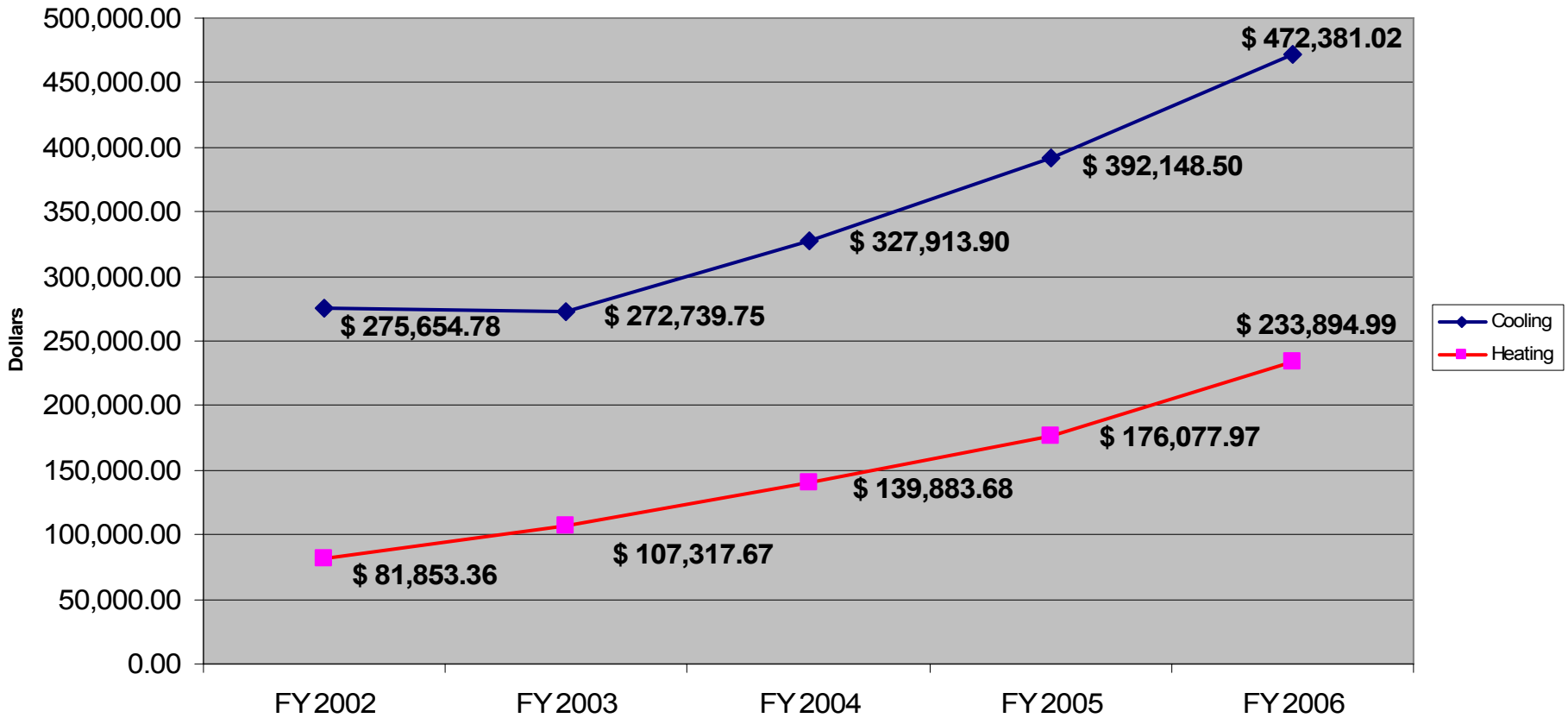
# City Hall 10 Year Spend on Electricity

Includes City Hall, Police Courts, and Francis Campbell



Source: COT TW

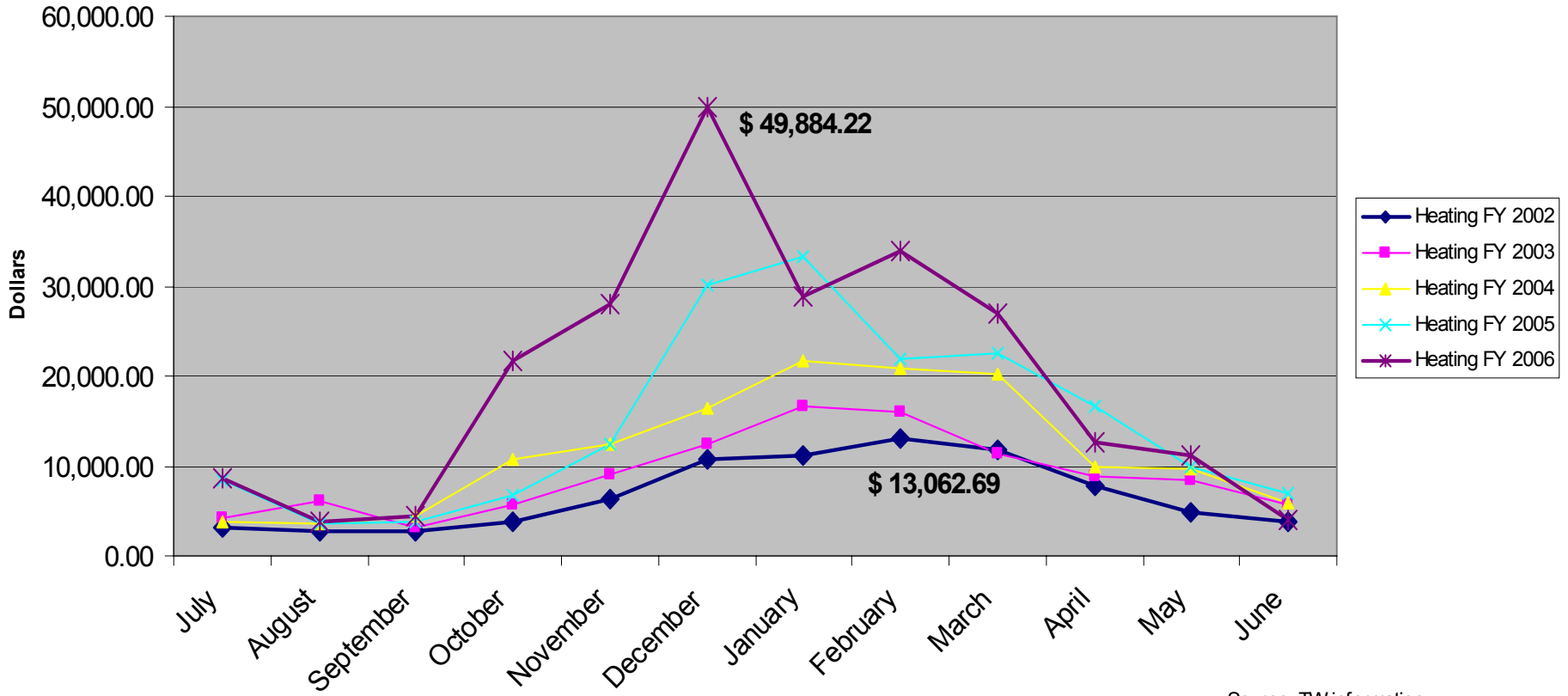
## City Hall Heating and Cooling Spend



(City Hall 54.9%, Police Court 39.1%, Campbell Room 6%)

Source: COT TW information

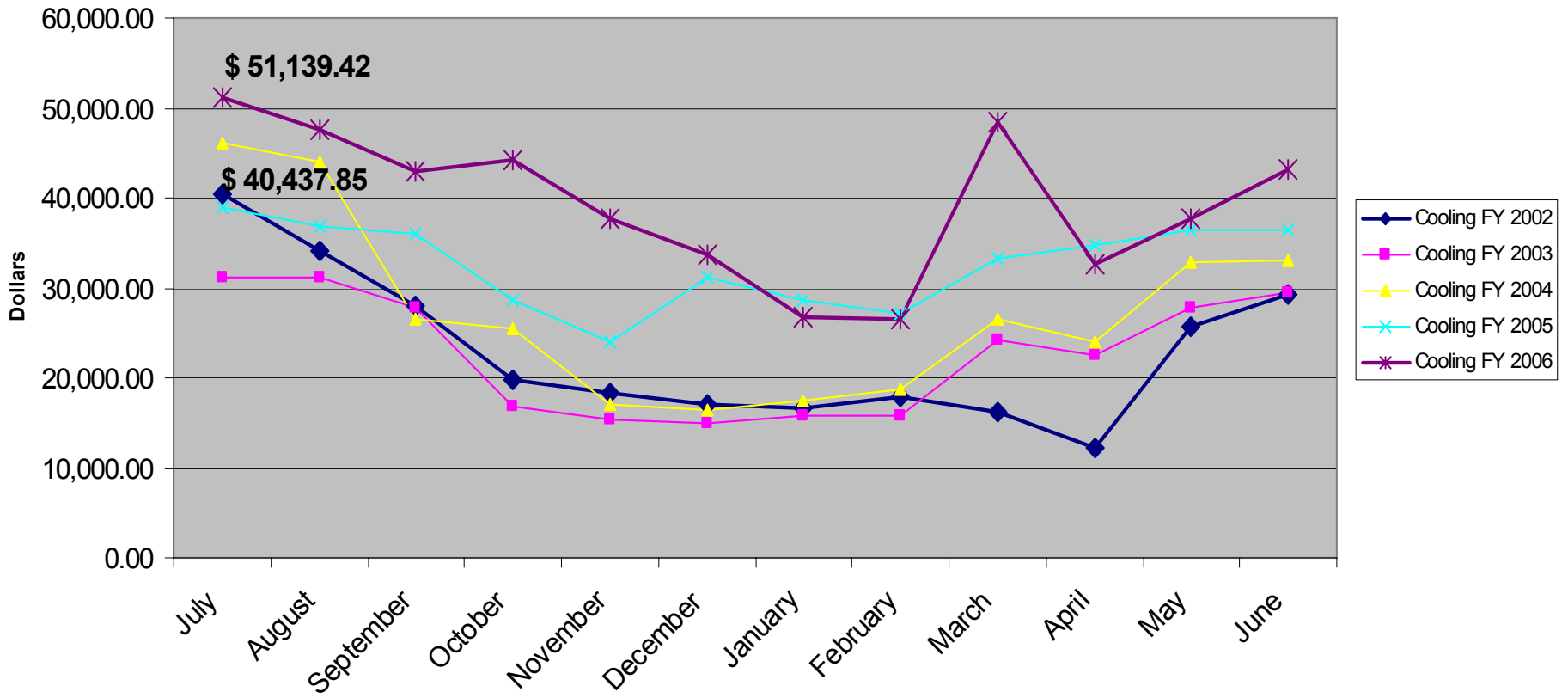
## City Hall Heating Spend Fiscal Years 2002 - 2006



(City Hall 54.9%, Police Court 39.1%, Campbell Room 6%)

Source: TW information

## City Hall Cooling Spend Fiscal Years 2002 - 2006

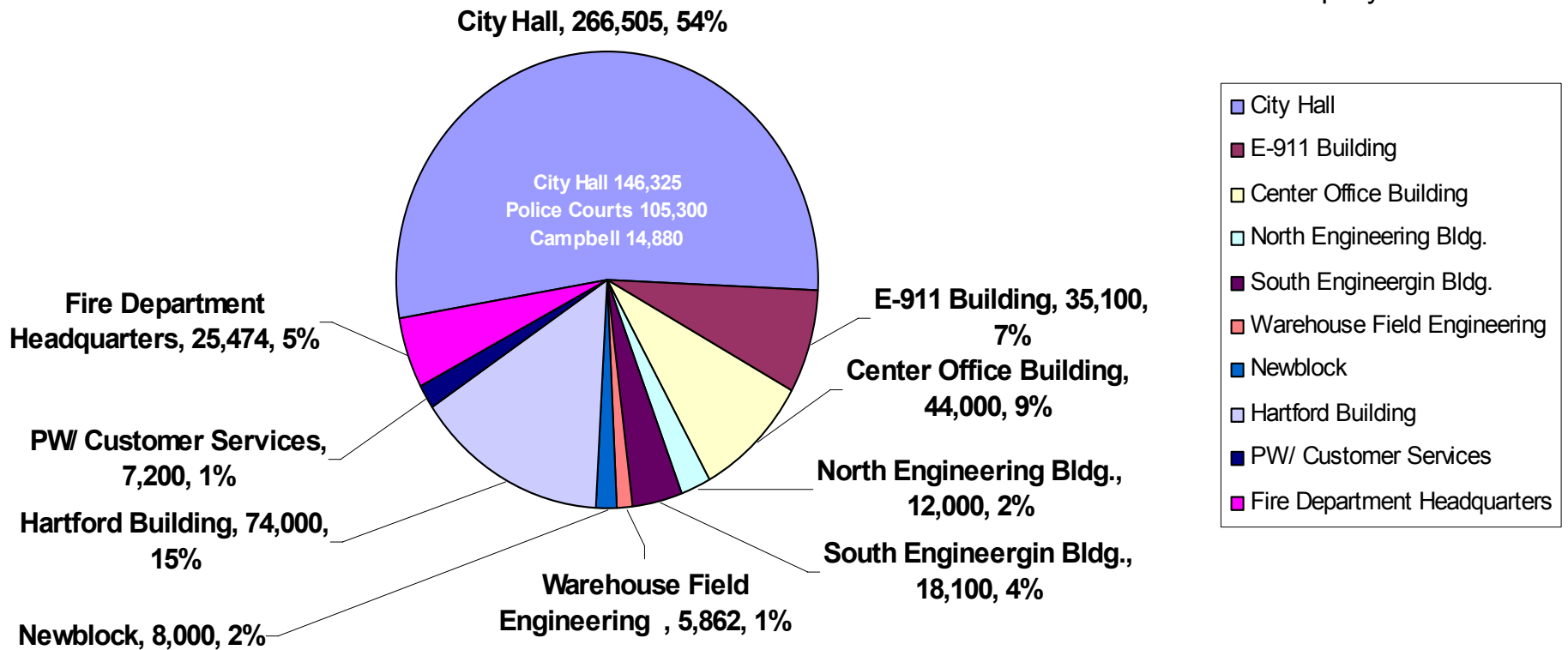


(City Hall 54.9%, Police Court 39.1%, Campbell Room 6%)

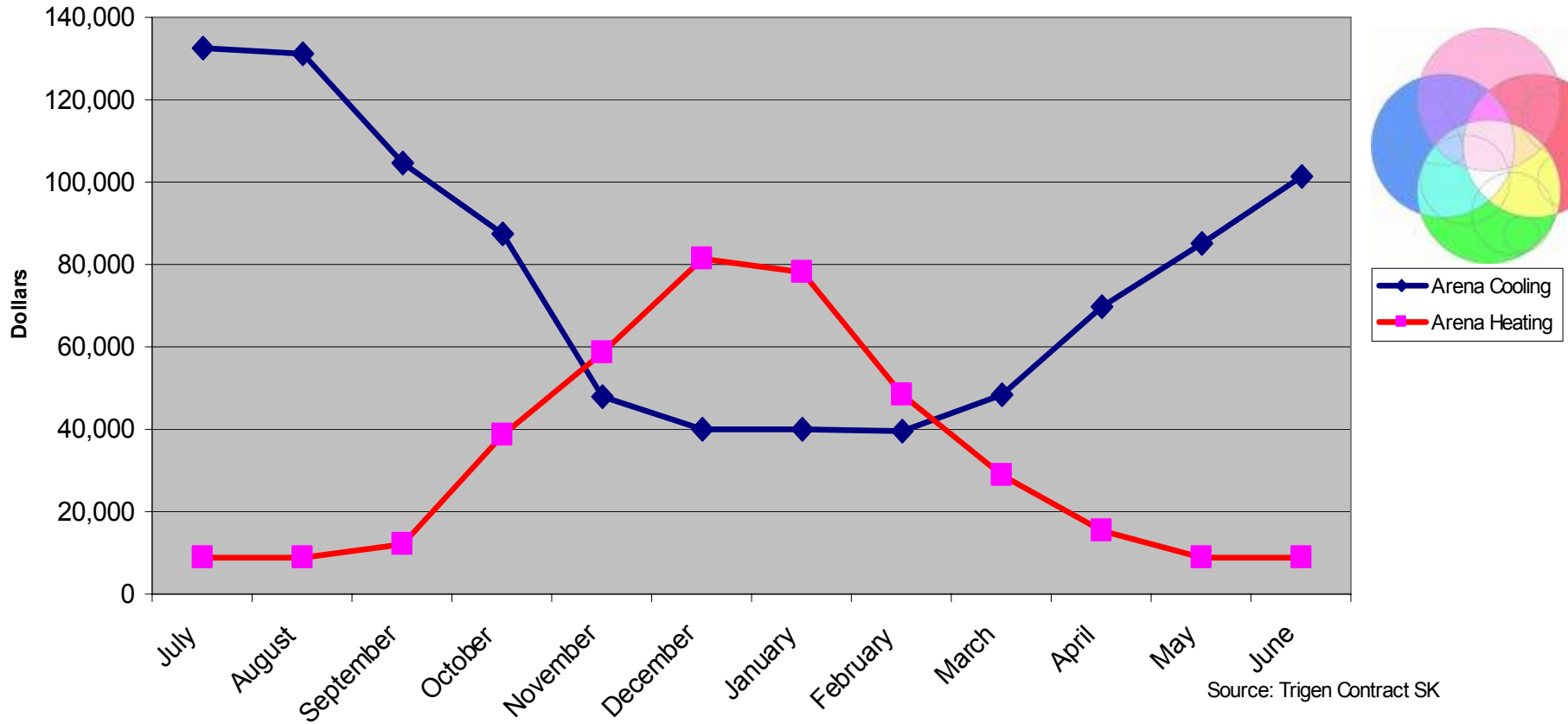
Source: TW information

## Proposed Consolidated Facilities 496,241 sq. ft.

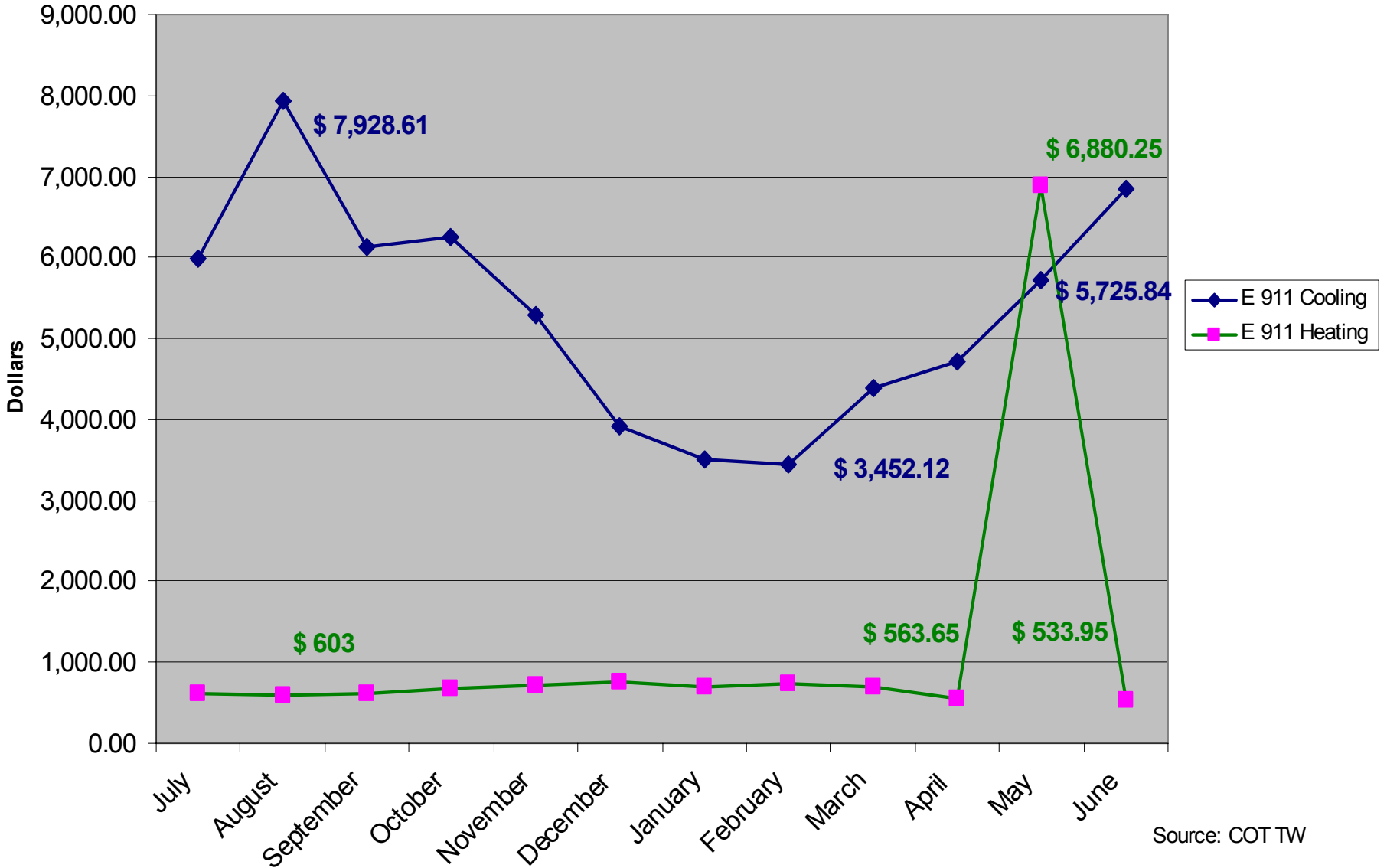
Data Source: The Staubach Company March 2007



## Energy Cost Should Follow Smooth and Predictable Patterns Arena Heating and Cooling Cost



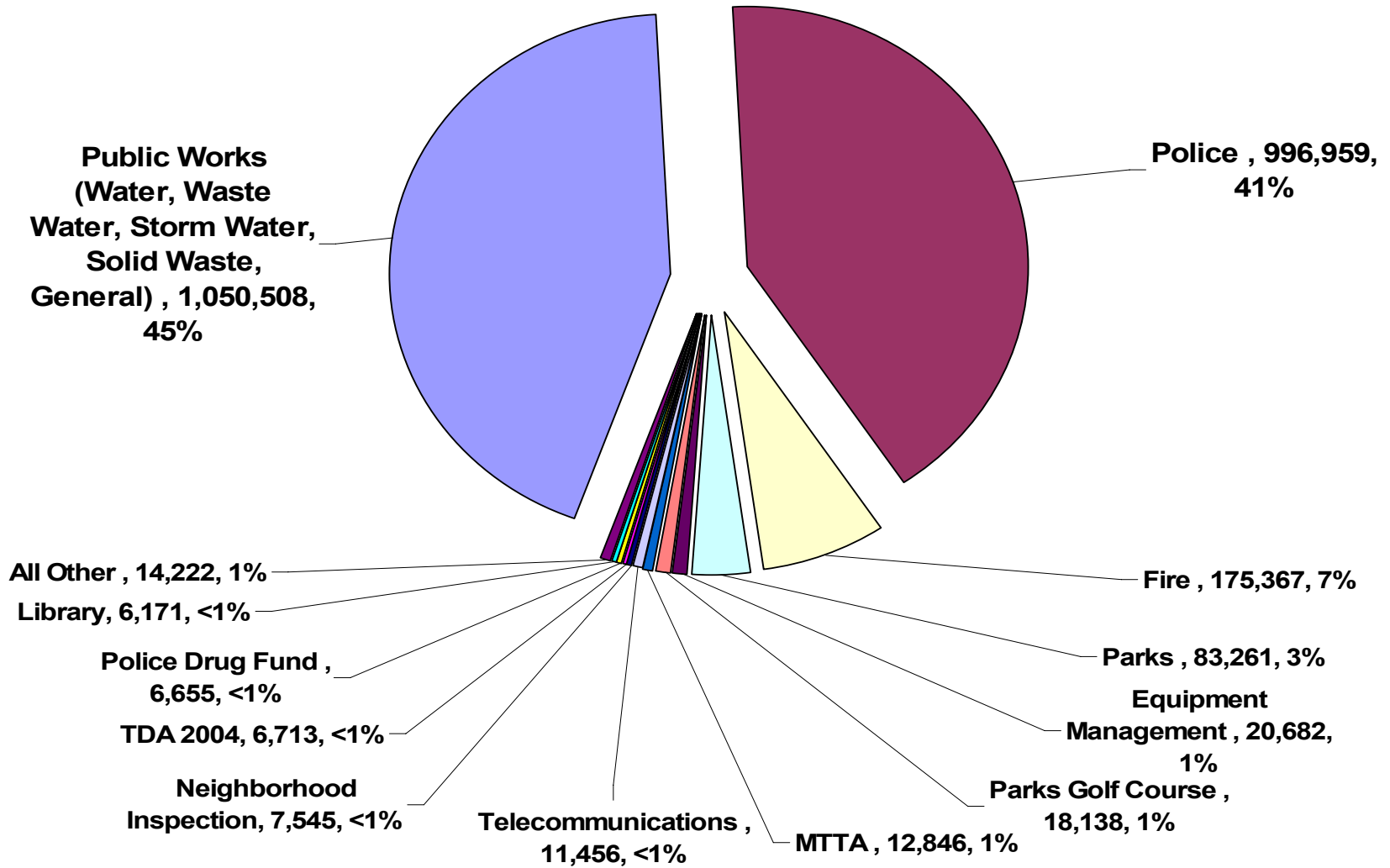
# Maverick Spend E-911 Building Heating and Cooling Amount Paid FY 2006



Source: COT TW

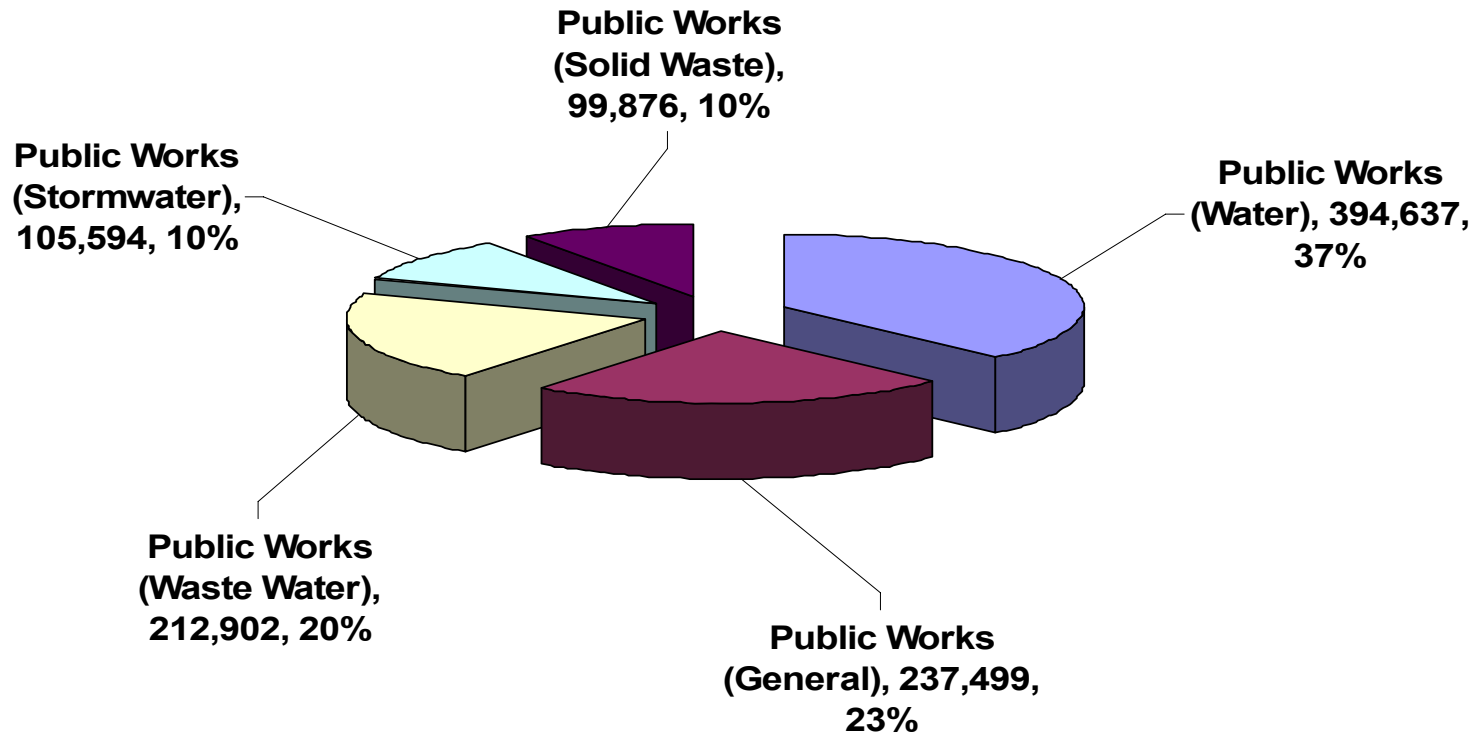
# FY 2006 Motor Fuel Consumption in Gallons

Source: EMD BJ



# FY 2006 Public Works Fuel Consumption in Gallons

Data Source: EMD BJ



## Fuel Consumption, Largest to Least by FY 2006

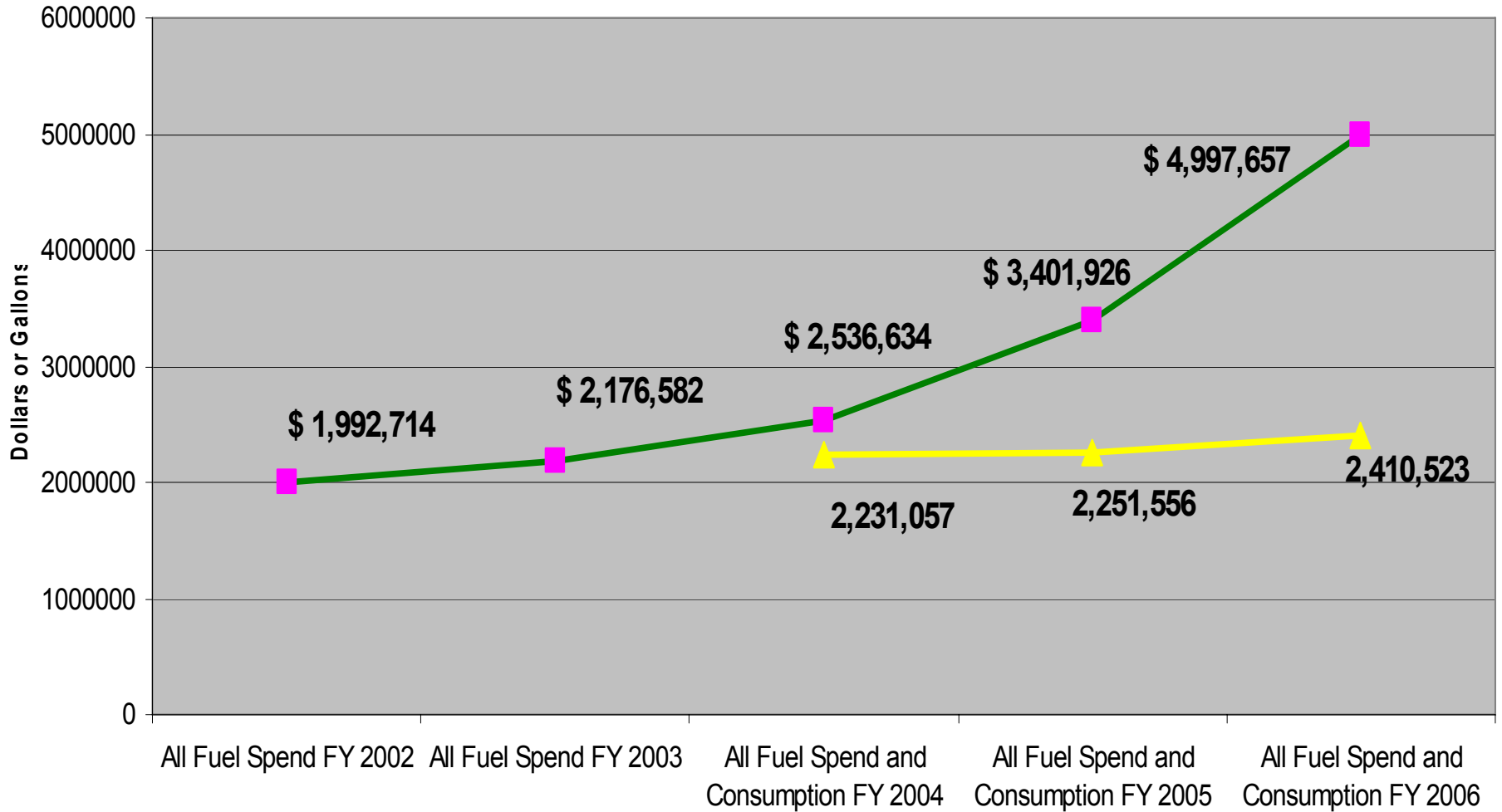
	FY 2004	FY 2005	FY 2006
1 Police	936,891	921,788	996,959
2 Public Works (Water)	357,839	371,494	394,637
3 Public Works General	204,319	206,119	237,499
4 Public Works (Waste Water)	188,120	218,289	212,902
5 Fire	161,814	159,993	175,367
6 Public Works (Storm water)	96,872	95,384	105,594
7 Public Works (Solid Waste)	111,193	103,569	99,876
8 Parks	75,526	78,717	83,261
9 Equipment Management	19,896	18,731	20,682
10 Parks Golf Course	20,443	18,724	18,138
11 Tulsa Transit Authority	7,772	6,435	12,846
12 Telecommunications	10,228	10,158	11,456

## Fuel Consumption, Largest to Least by FY 2006 Continued...

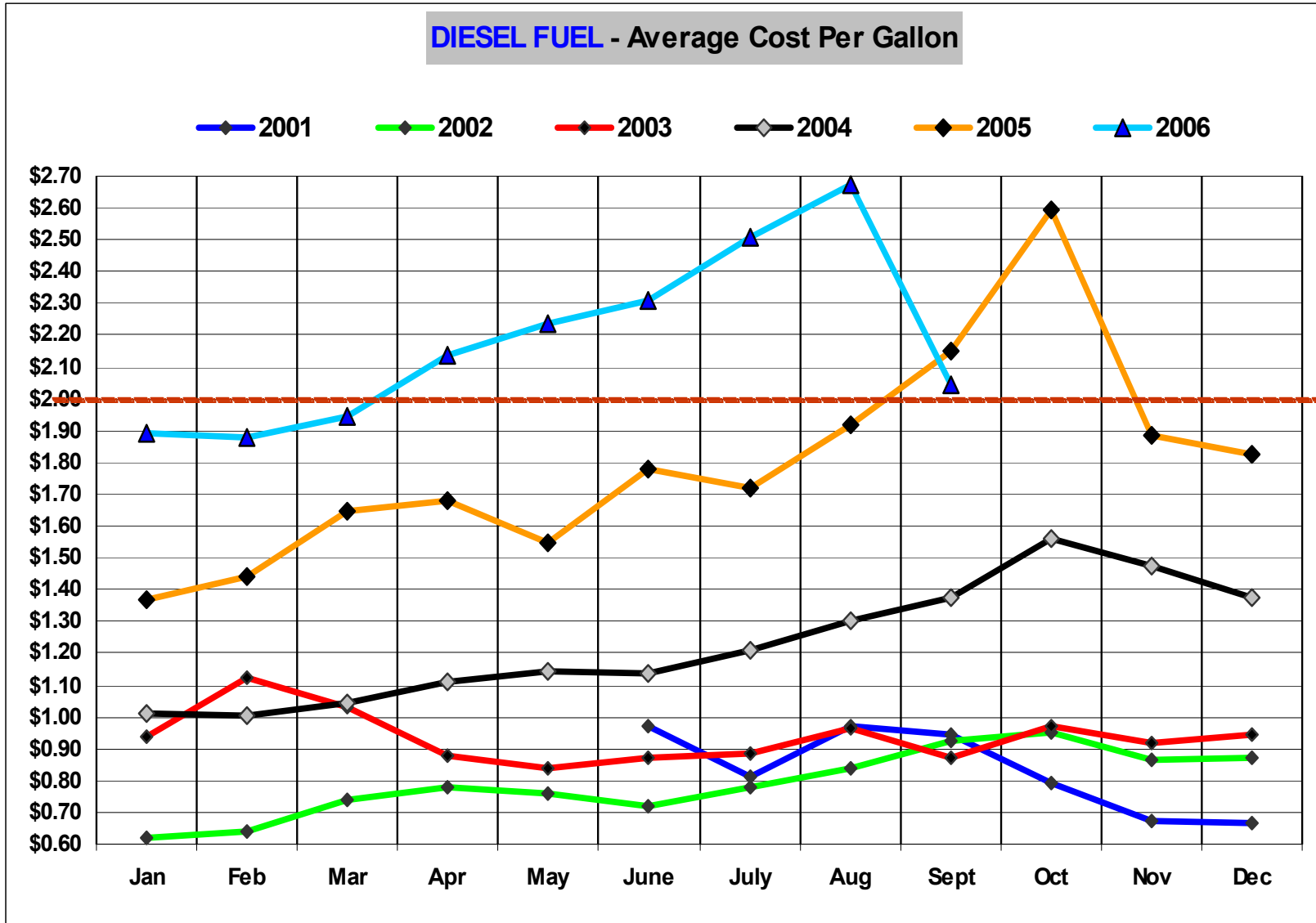
13	Neighborhood Inspection	6,843	6,611	7,545
14	TDA 2004	7,275	6,439	6,713
15	Police Drug Fund	6,074	9,847	6,655
16	Library	6,581	6,209	6,171
17	Metropolitan Environmental Trust	1,615	2,228	3,148
18	Convention Center	3,083	3,252	2,910
19	Human Resources	2,846	2,437	2,467
20	River Parks	1,690	1,751	1,768
21	UDD Employment and Training	1,536	1,404	1,518
22	Human Rights	1,130	893	1,017
23	Gilcrease	821	469	605
24	UDD Planning \$ Economic Dev.	249	213	214
25	Legal	247	182	175
26	Finance Treasury	74	109	157
27	Municipal Courts	0	0	132
28	Finance Purchasing	77	111	111

# City of Tulsa Total Motor Fuel Consumption vs. Spend

Data Source: Internal Auditing, EMD

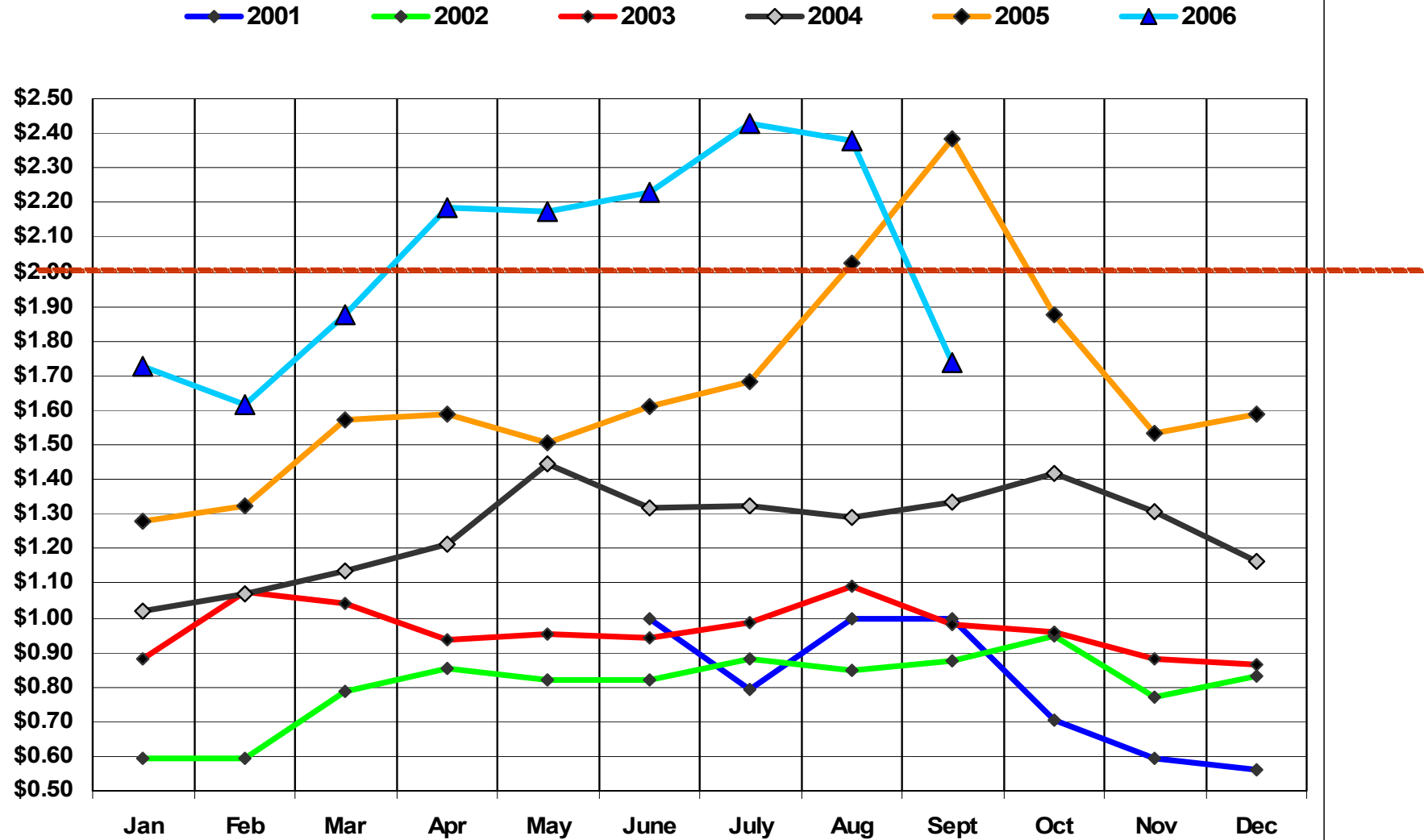


# 2007 Budget, \$2.00/Gallon

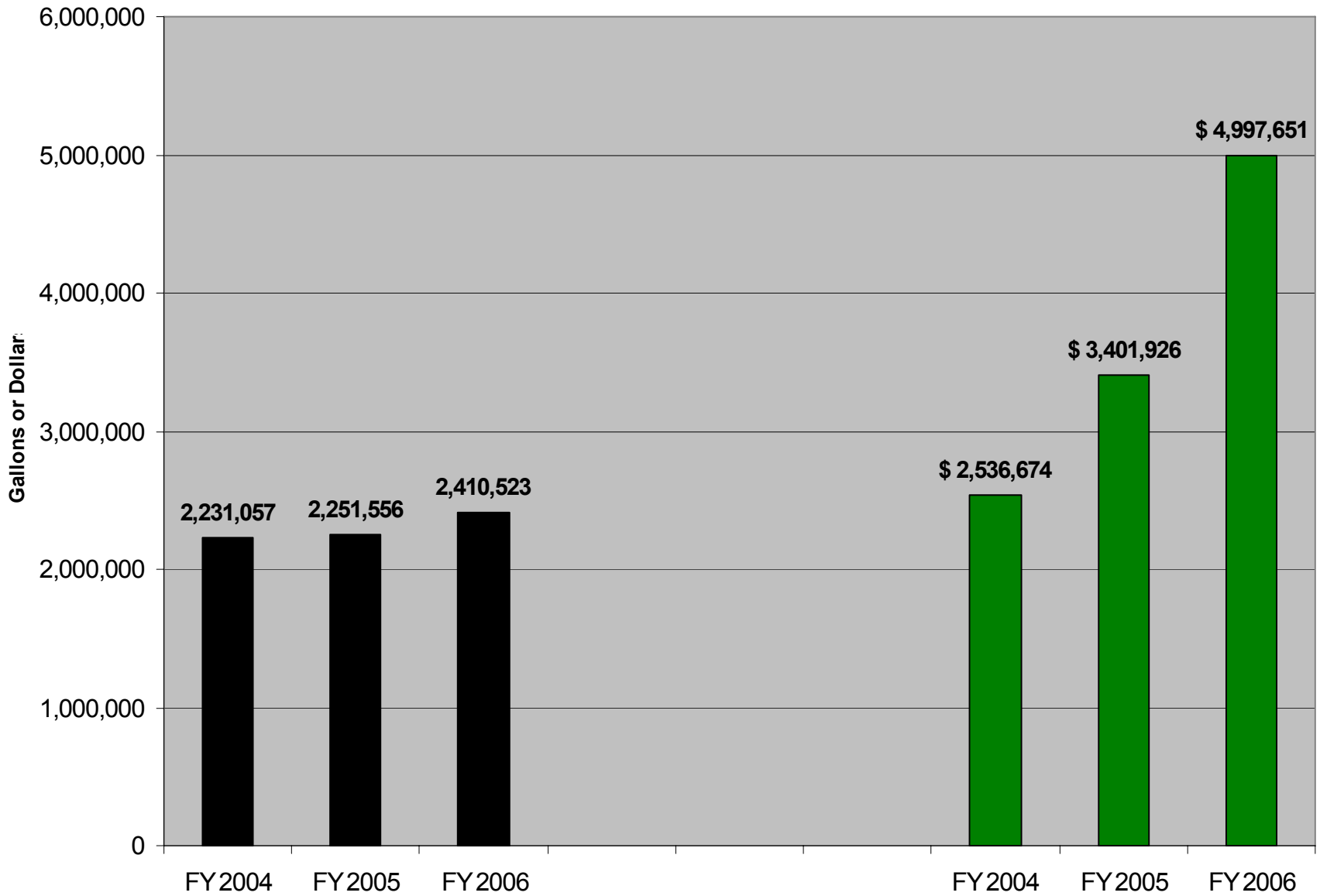


# 2007 Budget, \$2.00/Gallon

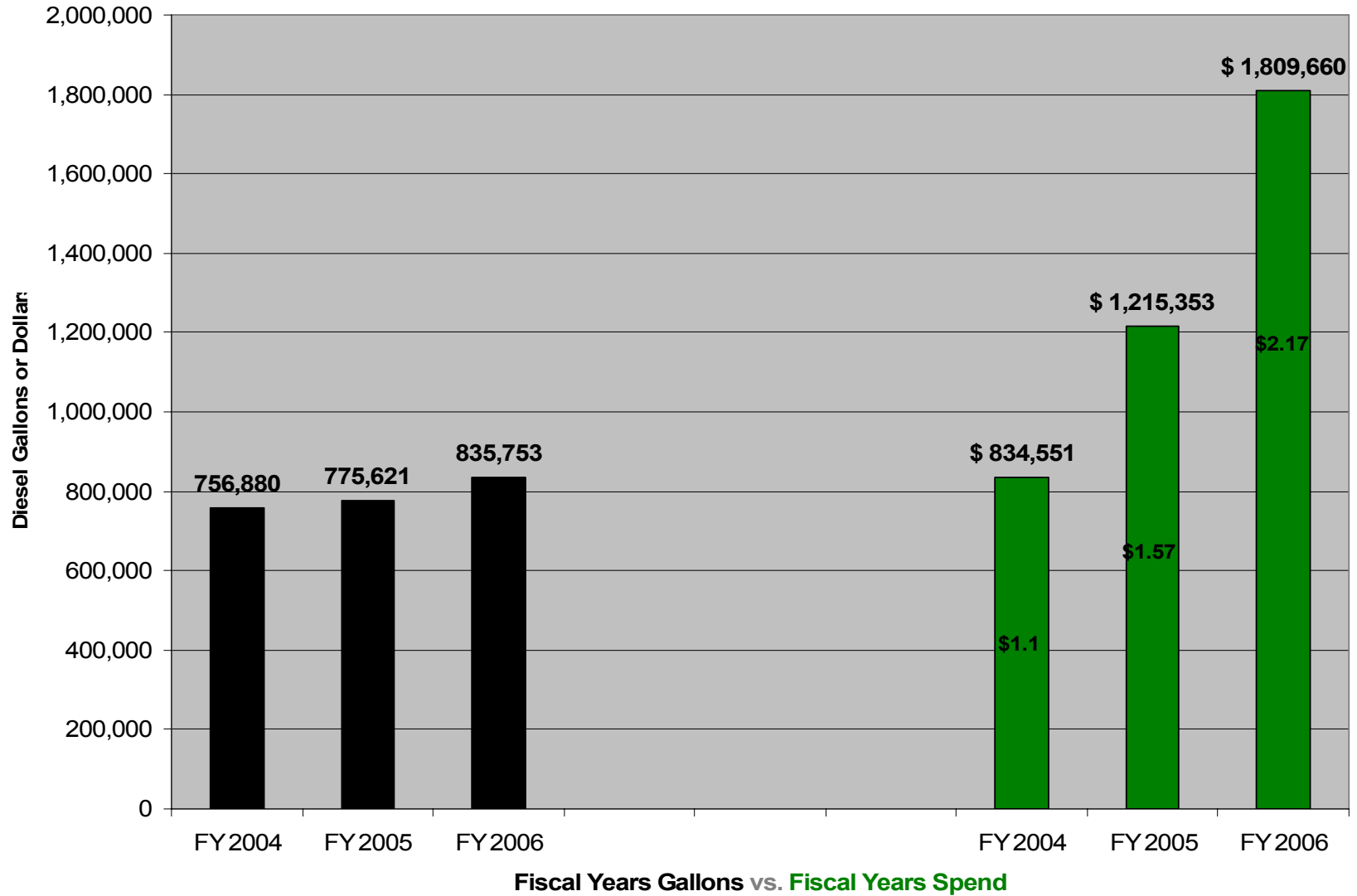
## UNLEADED FUEL - Average Cost Per Gallon



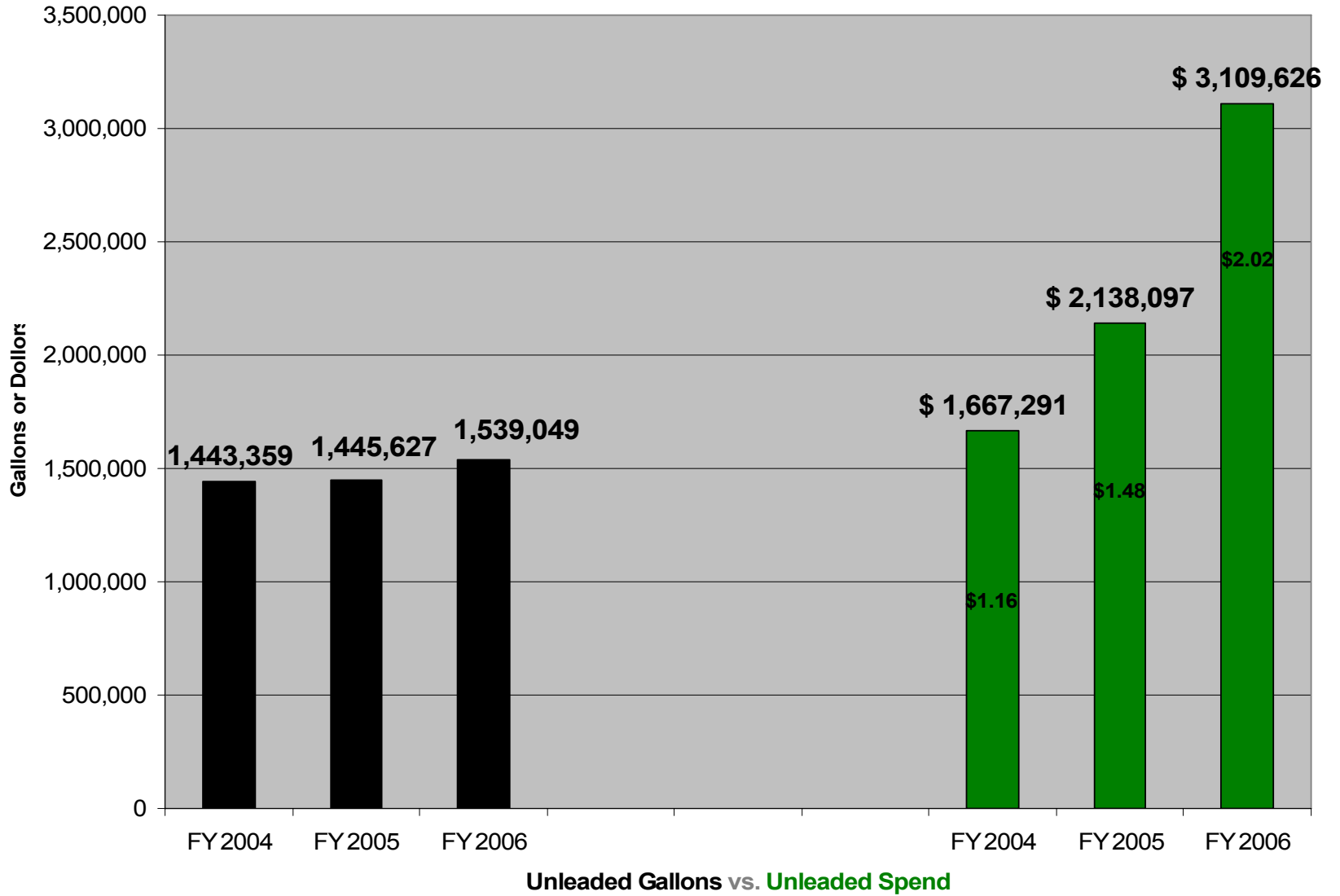
# City of Tulsa Total Fuel Consumption vs. Spend



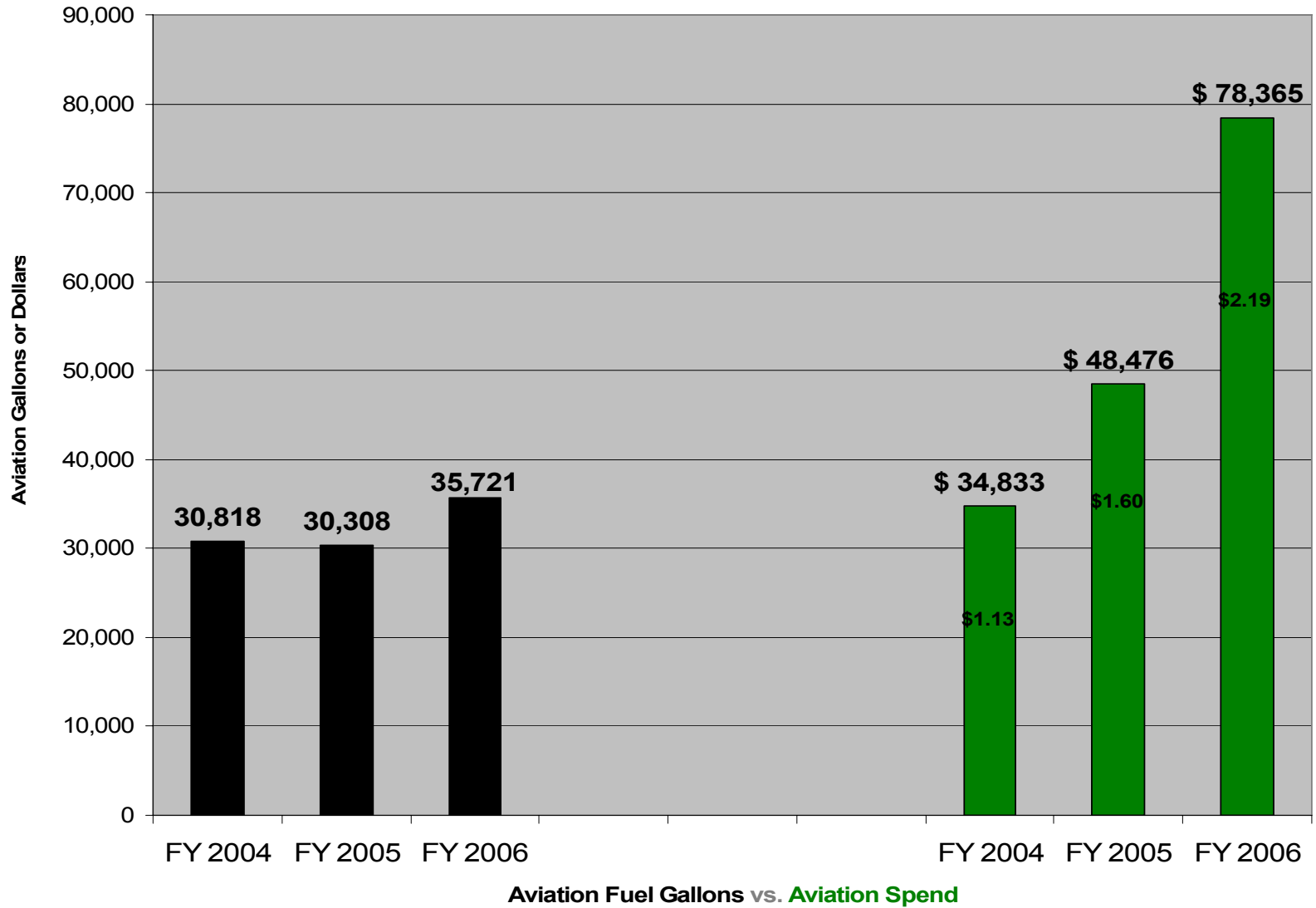
## Diesel Gallons vs. Diesel Spend



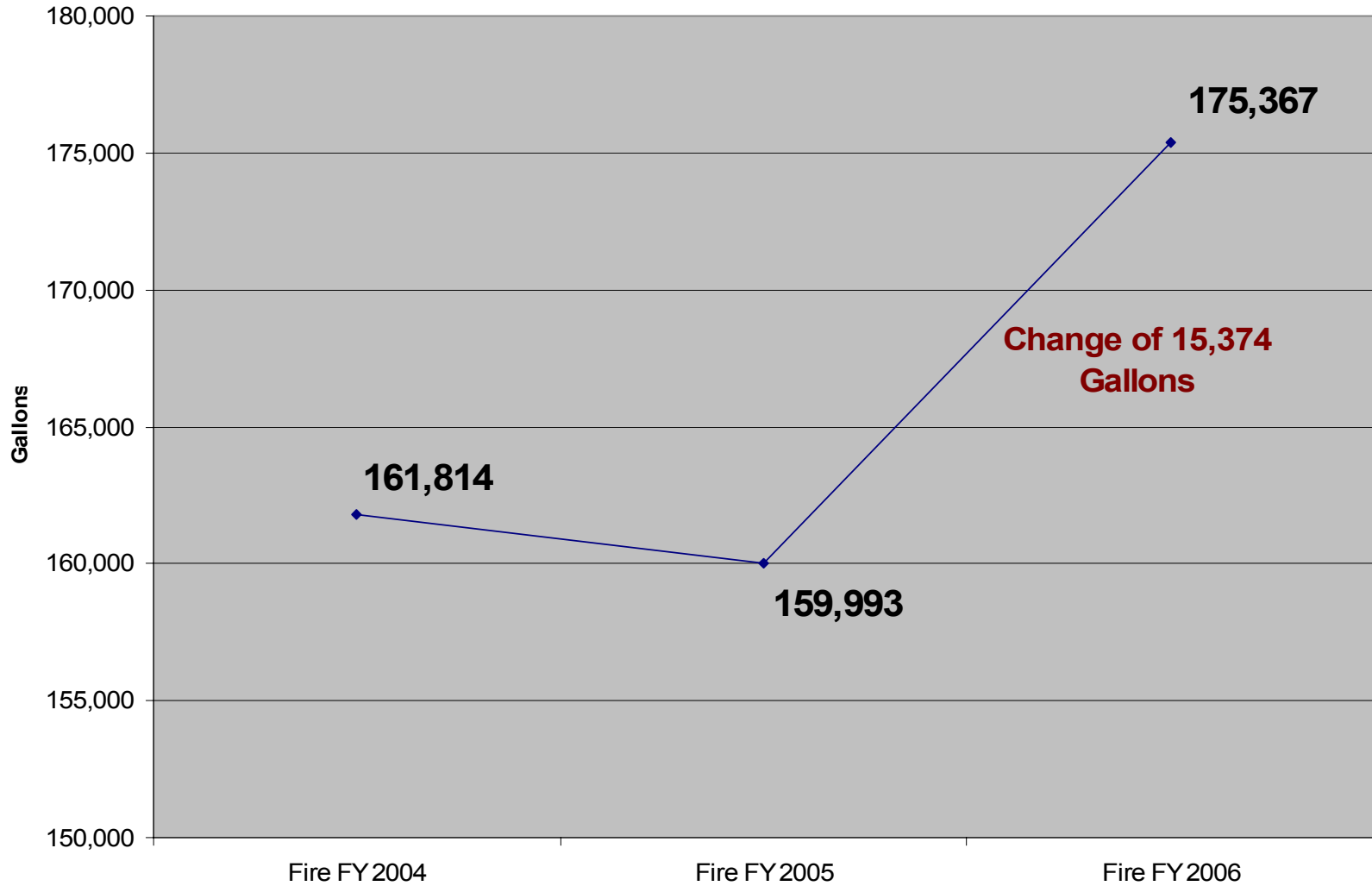
## Unleaded Gallons vs. Unleaded Spend



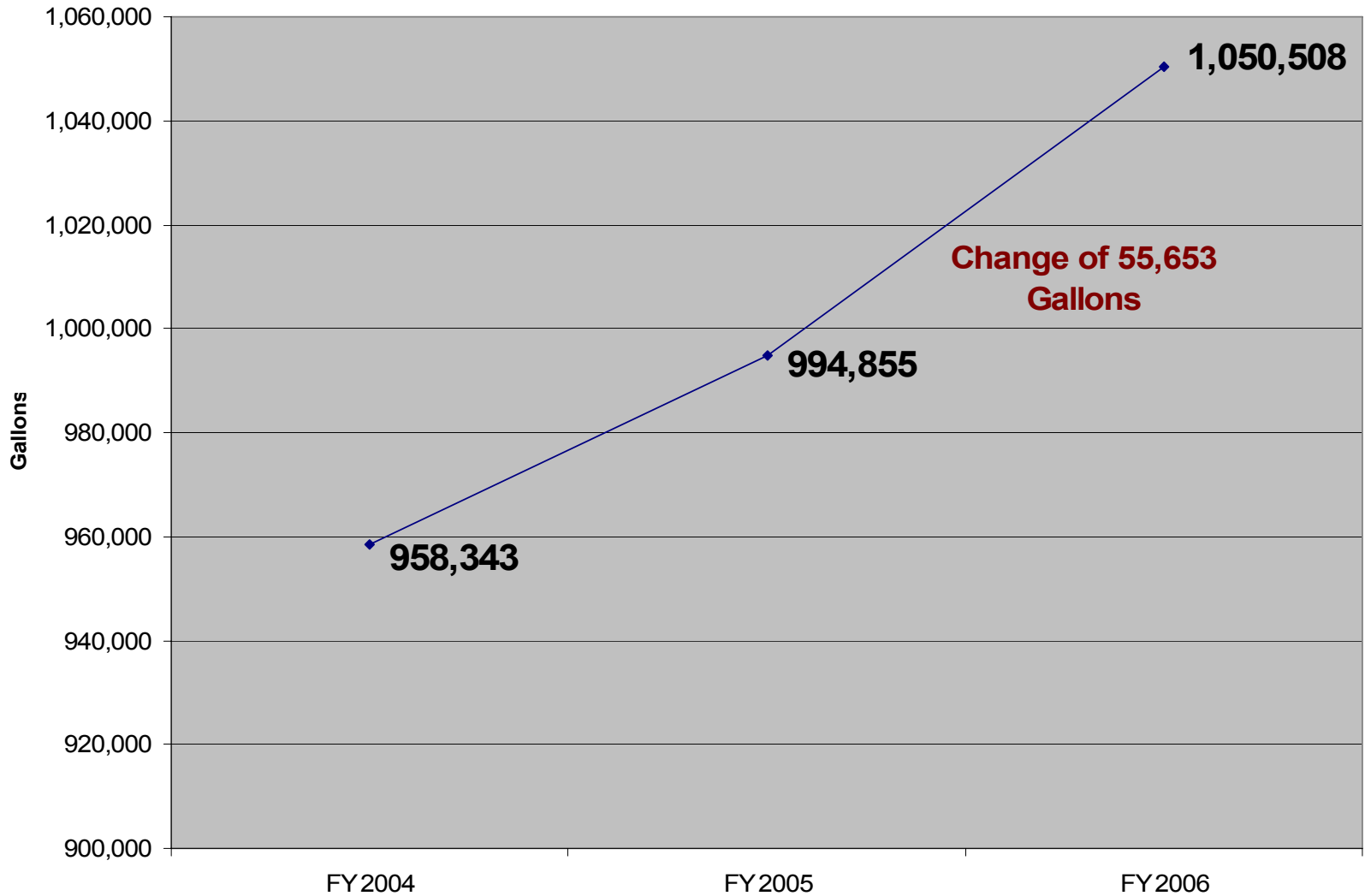
## Aviation Fuel Gallons vs. Aviation Spend



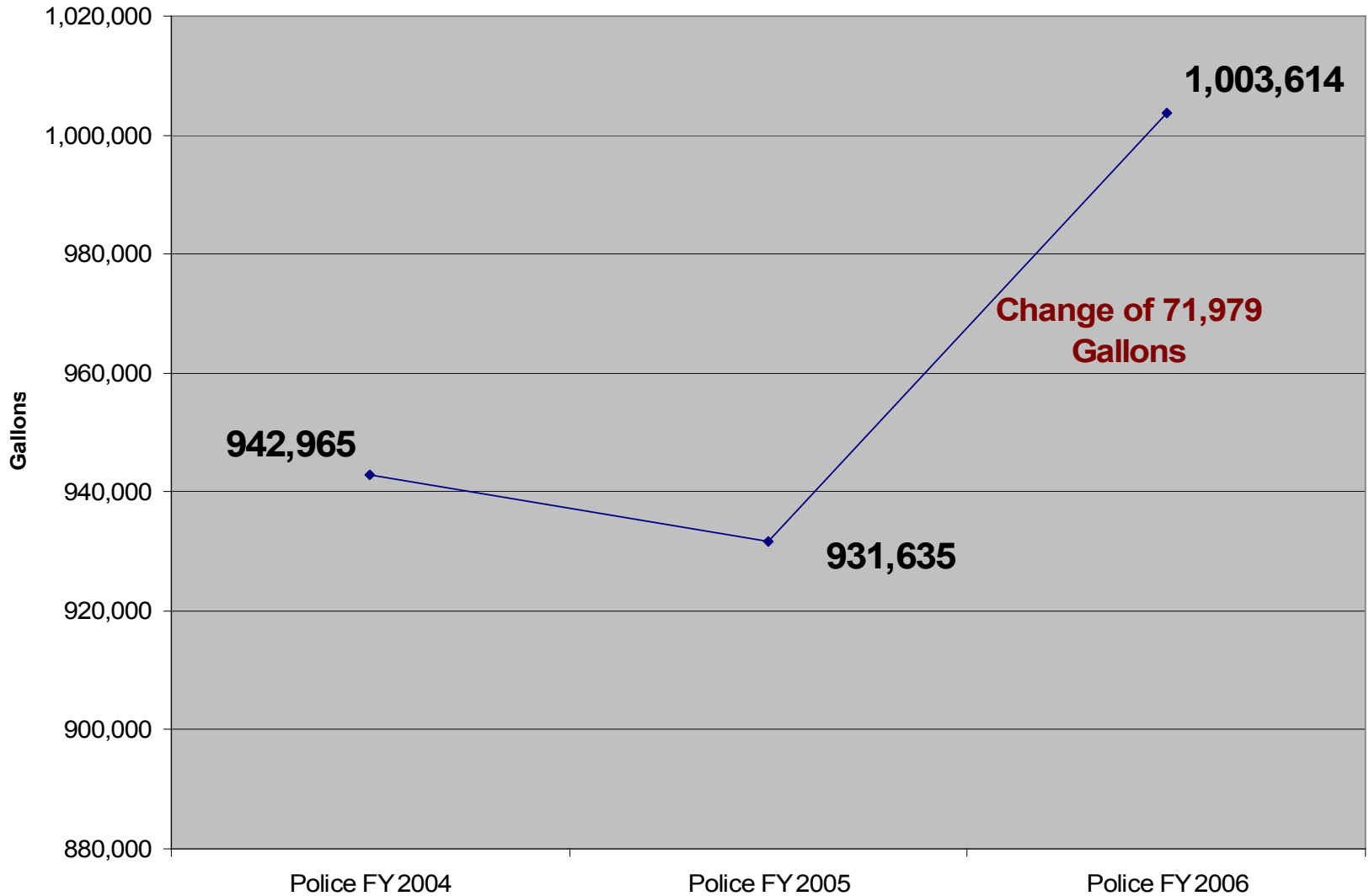
## Total Fire Fuel Consumption in Gallons Third Largest Fuel Increase for COT in Gallons



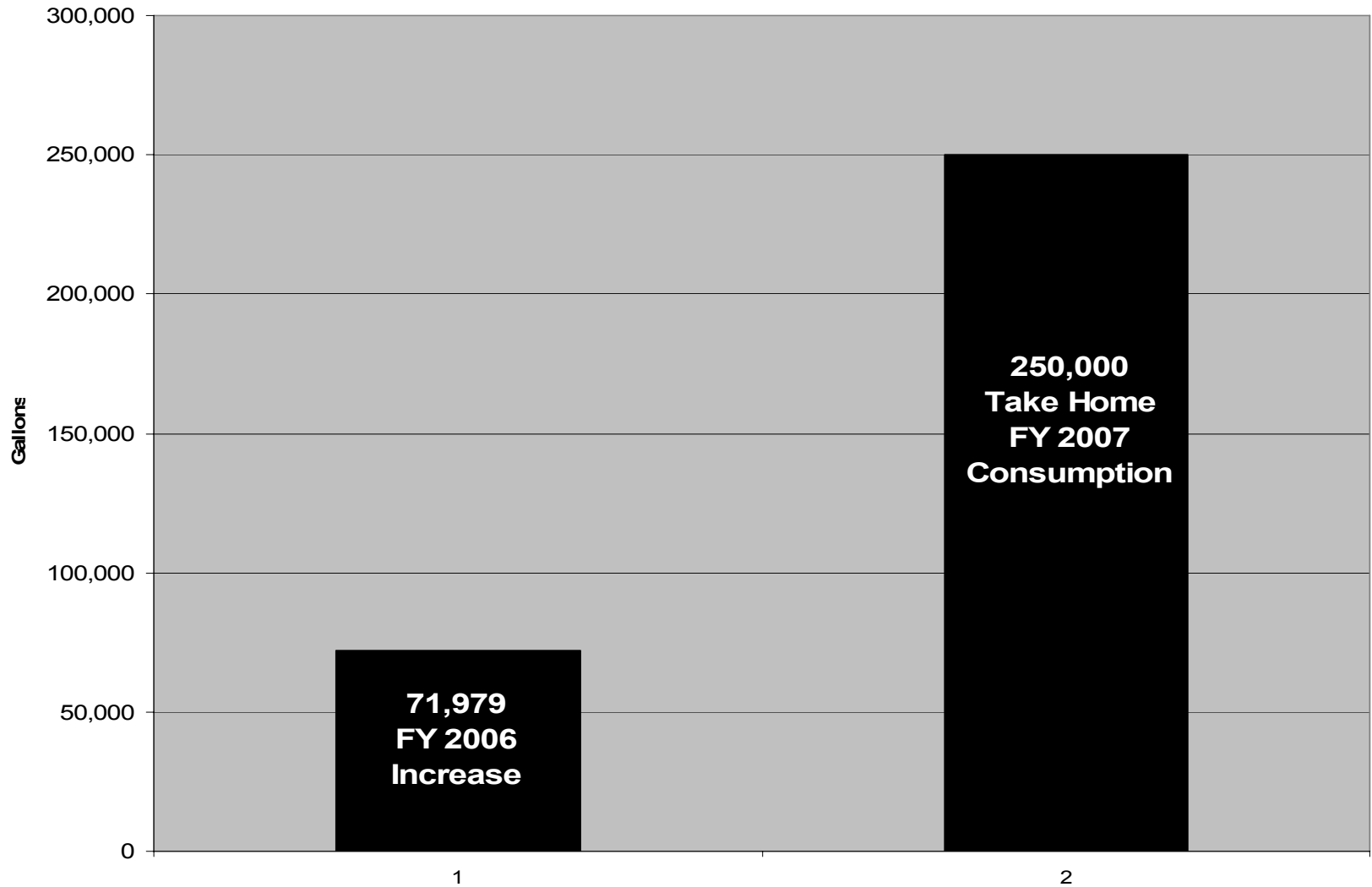
**Public Works, (General, Water, Waste Water, Stormwater, Solid):  
Second Largest Increase for COT in Gallons**



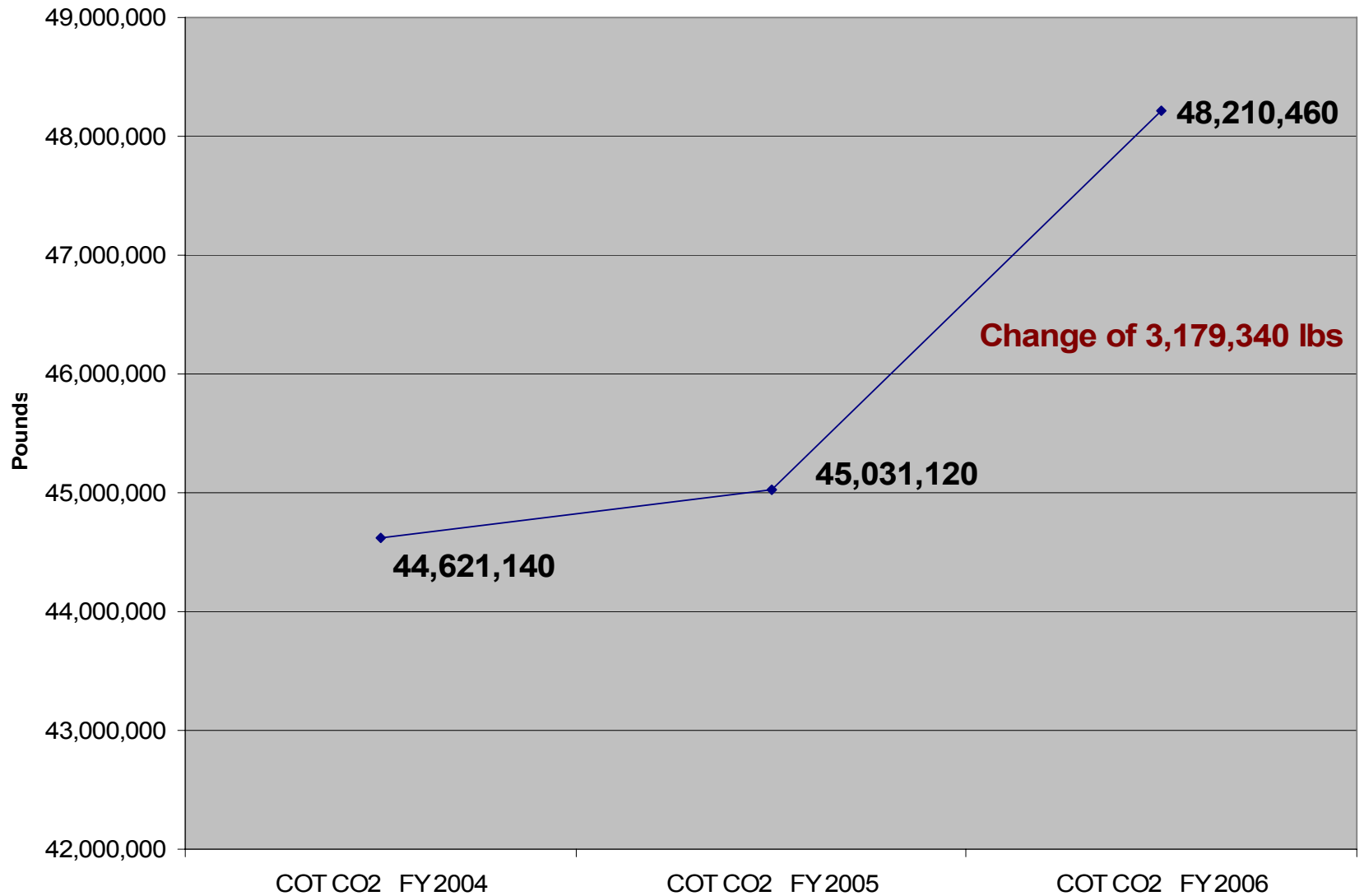
### Total Police Fuel Consumption in Gallons: Largest Fuel Increase for COT in Gallons




**Police FY 2006 Consumption Increase  
vs.  
Take Home Vehicle Consumption in FY 2007 in Gallons**

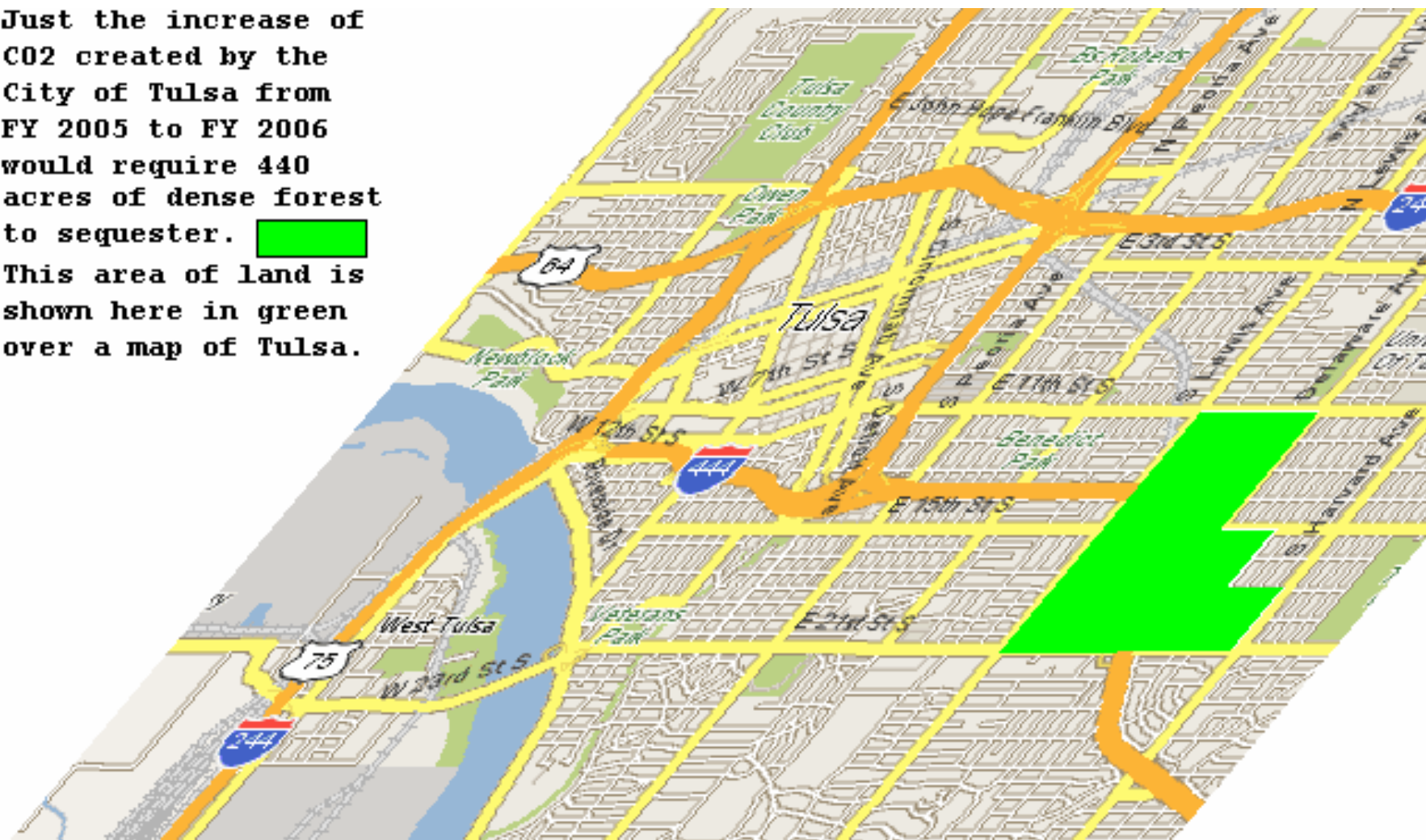


# CO2 Created by City of Tulsa Fuel Consumption in Pounds

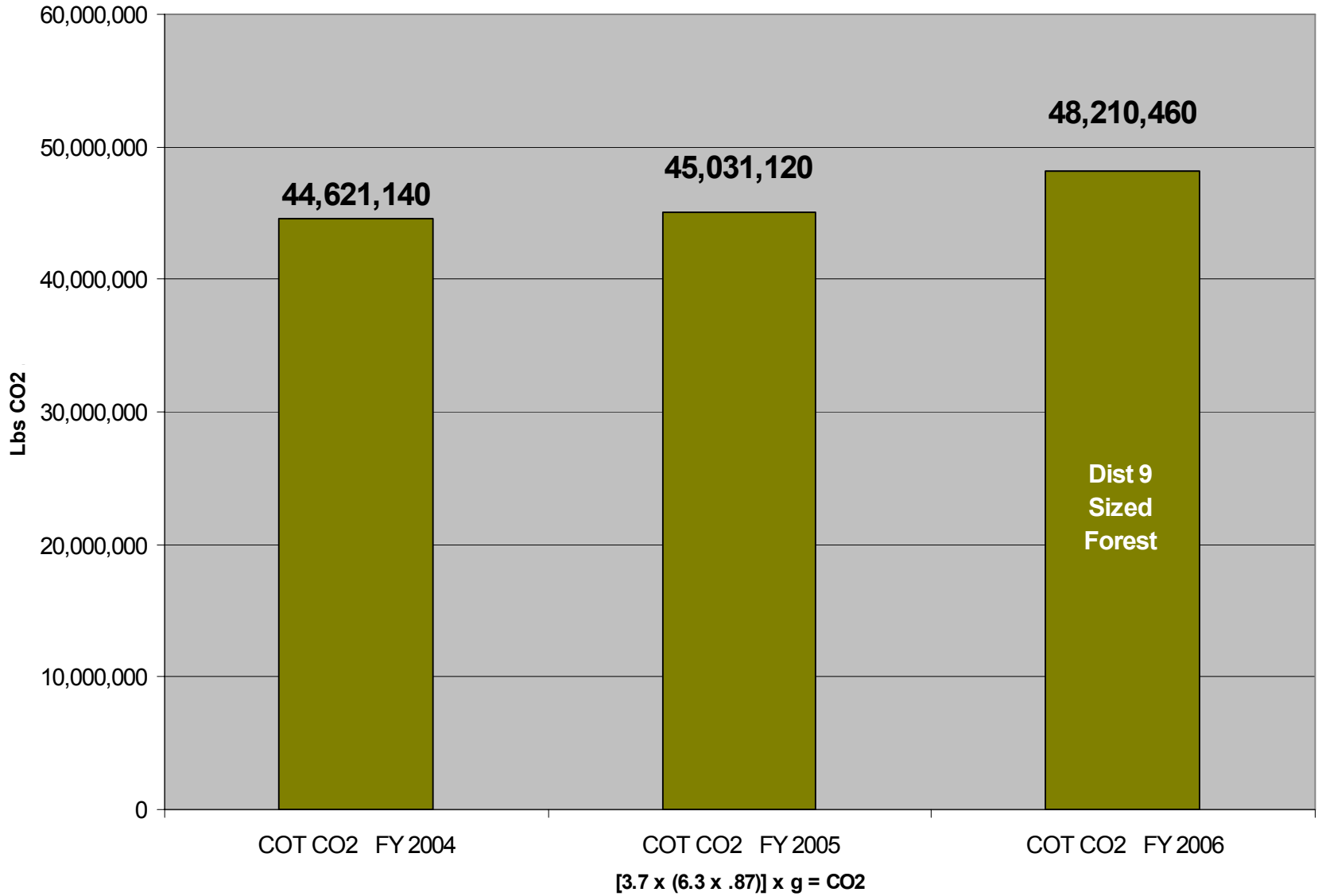


$[3.7 \times (6.3 \times .87)] \times g = \text{CO}_2$

Just the increase of CO2 created by the City of Tulsa from FY 2005 to FY 2006 would require 440 acres of dense forest to sequester.  This area of land is shown here in green over a map of Tulsa.

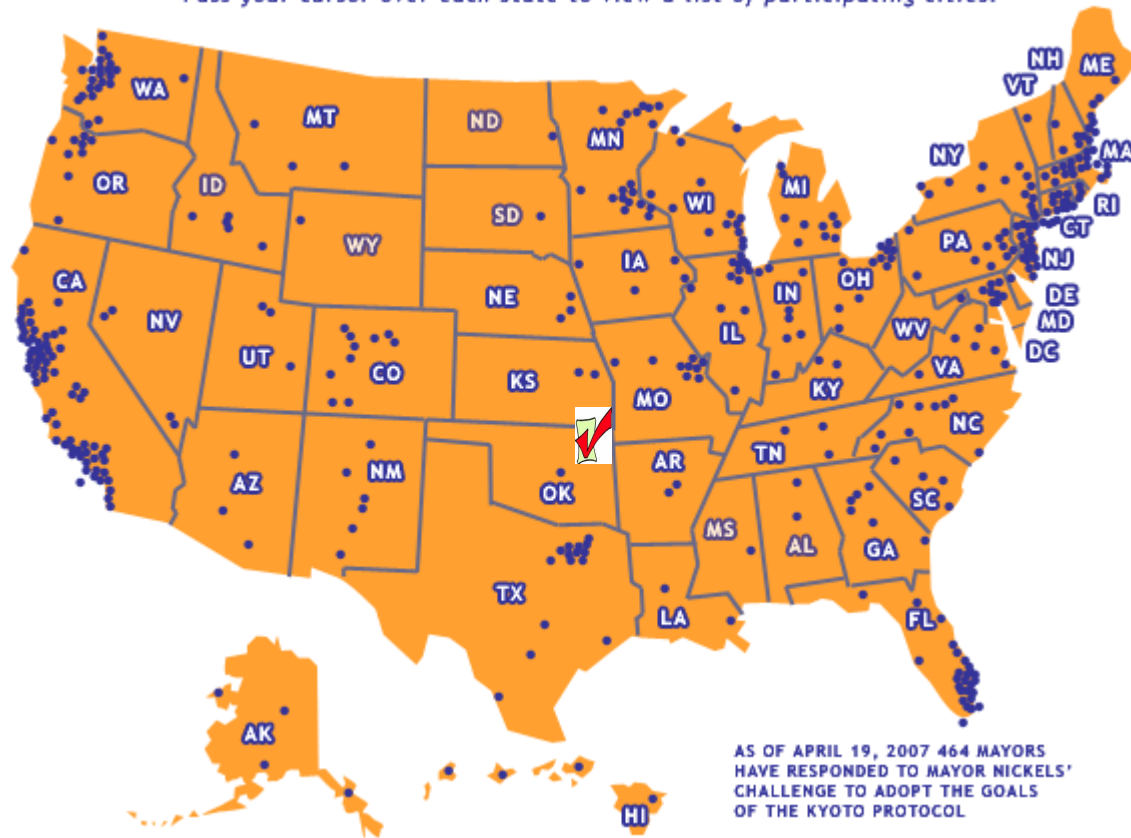


# CO2 Created by City of Tulsa Fuel Consumption in Pounds



## In 2007 Mayor Taylor Will Make Tulsa a Signatory to the U.S. Conference of Mayors Climate Protection Agreement.

*Pass your cursor over each state to view a list of participating cities.*



# Performance Measures: All Motor Fuel Consumption In Gallons, Not Dollars

	Fiscal Year Last Total '06	% Target Consumption Reduction	FY 2008 Total Consumption Target	Target FY 2008 Met? Y/N*
Public Works	1,050,508	10%	945,000	
Police	1,003,614	10%	903,253	
Fire	175,367	10%	158,000	
Parks	83,261	10%	74,935	
Equipment Management	20,682	10%	18,614	
Parks Golf Course	18,138	10%	16,235	
Tulsa Transit Authority	12,846	10%	11,562	
Telecommunications	11,456	10%	10,311	
Neighborhood Inspection	7,545	10%	6,791	
TDA 2004	6,713	10%	6,042	
Library	6,171	10%	5,554	
Metropolitan Environmental Trust	3,148	10%	2,834	
Convention Center	2,910	10%	2,619	
Human Resources	2,467	10%	2,221	
River Parks	1,768	10%	1,592	
UDD Employment and Training	1,518	10%	1,367	
Human Rights	1,017	10%	916	
Gilcrease	605	10%	545	
UDD Planning Economic Dev.	214	10%	193	
Legal	175	10%	158	
Finance Treasury	157	10%	142	
Municipal Courts	132	10%	119	
Finance Purchasing	111	10%	100	

\*All Departments That Have Not Met the Target in FY '08 Shall Raise to a Department That May be Targeted for Budget Reduction

# Performance Measures:

## Heat/Cooling

1)

If City Hall and the Other Proposed Sites Move to One Technology the Estimated Heat and Cooling Energy Savings Will Be Significant.  
(At 72 Degrees)

FY '06 Spend Total City Hall	Target Reduction	2008 One Tech Reduction Spend Target	Goal Met? Y/N (Adjusted Price Per Sq. Ft.)
Heating \$233,894	50%	\$116,947	
Cooling \$472,381	10%	\$425,143	

2)

If City Hall and the other Proposed Sites Do not Move to One Technology Other Steps may be Taken to Reduce Spend on Heat and Air.\*  
**\*This Solution Will First Require an Ordinance Change and is Subject to that Prerequisite.**

**3 Degrees Difference will typically result in 10% cost savings.**

FY '06 Cooling Spend Total City Hall	3 Degrees + or - = 10% Less Spend	2008 City Hall Reduction Spend Target	Goal Met? Y/N (Adjusted Price Per Sq Ft.)
Heating \$233,894	10%	\$210,505	
Cooling \$472,381	10%	\$425,143	

If the Desired Cost Savings are Not met in FY 2008, then Re-Evaluation of Temperature Setting Will Follow.

# Blue Skyways Collaborative (BSC)

Blue Skyways Collaborative is designed to significantly reduce diesel and energy related air emissions in a large part of the Central United States.

The Blue Skyways Collaborative Community designation is open to both public and private entities in the ten-state region of Texas, Louisiana, Oklahoma, Arkansas, Kansas, Nebraska, Missouri, New Mexico, Iowa, and Minnesota.

The Blue Skyways Collaborative can recognize communities, school districts, organizations, and businesses that undertake voluntary initiatives to reduce air emissions.

Achieving recognition as a “Blue Skyways Community” means that your local government and business community is *going the extra mile* to adopt voluntary measures to ensure the area’s public and private sectors are doing their part to implement and utilize innovative technologies and programs to reduce emissions.

Achieving recognition as a “Blue Skyways Partner” means that your entity is *going the extra mile* to adopt voluntary measures to implement and utilize innovative technologies and programs to reduce emissions.

**The Following City of Tulsa Entities Shall Take Steps to Become Blue Skyways Partners:**

- 1) Tulsa International Airport
- 2) The City of Tulsa/ Rogers County Port of Catoosa
- 3) Metropolitan Tulsa Transit Authority
- 4) Parks and Recreation Division
- 5) Public Works Division
- 6) Mayor’s Office (Policy, Research, and Performance)



No Less Than Three of the Six above Shall Attend Each Blue Skyways Bi-Annual Meeting.  
The Mayor’s Office shall always be one of the three or more delegates from the City.

# Other New Blue Skyways Partners Include:

Capitol Area Council of Governments (Austin, Texas, area)

Caterpillar Inc. (Peoria, Illinois)

City of Dallas

City of Houston

Dallas-Fort Worth International Airport

Earth Biofuels Inc. ("BioWillie")

East-West Gateway Coordinating Council of Governments (St. Louis area)

H-E-B Grocery Company (San Antonio, Texas)

Marion School District (Arkansas)

Mid-America Regional Council (Kansas City area)

MidAmerican Energy Company (Urbandale, Iowa)

North Central Texas Council of Governments (Dallas-Fort Worth area)

Peterbilt Motor Company (Denton, Texas)

Port of Houston Authority

Texas Transportation Institute (Texas A&M University)

Wal-Mart Corp. (Bentonville, Arkansas)

West Memphis School District (Arkansas)

# Blue Skyways, Goals and Missions

The overarching goal and mission of the Blue Skyways Collaborative (BSC) is to improve the quality of life in North America's Heartland, including the border areas with Canada and Mexico, by reducing air pollution through voluntary collaboration and innovations in fuel and energy use. Objectives envisioned to help achieve this goal include:

- 1) Develop Federal, tri-national, State, and local partnerships,
- 2) Market the Collaborative's message,
- 3) Promote the sharing of new renewable energy technologies and innovations,
- 4) Leverage resources, and
- 5) Implement projects that utilize both proven and innovative technologies for diesel engines, alternative fuels, and renewable energy.

To execute this mission, six subcommittees were developed to identify priorities and establish and implement goals.

The six subcommittees include:

- (1) On-Road
- (2) Non-Road
- (3) Air/ Water/ Rail
- (4) Fuels
- (5) Energy
- (6) Communications and Outreach.

## Reasons why Tulsa is joining the Blue Skyways Collaborative:

- As of April 2, 2007, the Supreme Court ruled the EPA may regulate CO2 emissions.
- If Tulsa were to ever go into non-attainment, it could mean lost economic development.
- Blue Skyways is a treasure chest of resources, bringing together the experience of communities along the I-35 corridor.
- Grants for alternative energy solutions are made more accessible through networking with State and Federal officials.
- Membership is free. The only cost to Tulsa is a commitment to moving down the right path of energy conservation.
- Increased collaboration will shift City culture to be the best steward of all resources.
- We owe it to our children to ensure that they inherit a community where the City leads by example in energy efficiency.



Mayor Taylor Encourages All Tulsans to  
visit the Blue Skyways Web Site:  
<http://www.blueskyways.org>

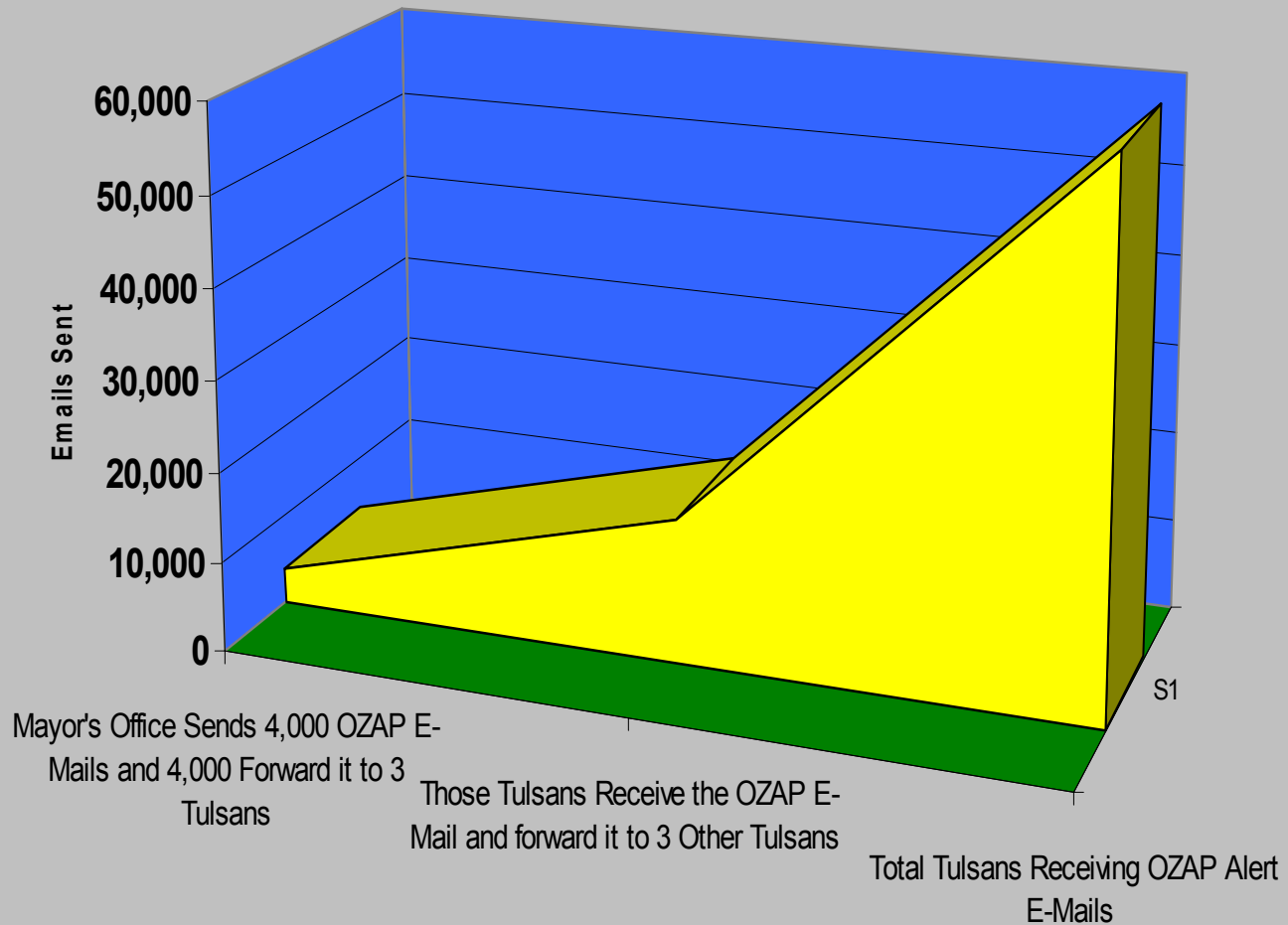
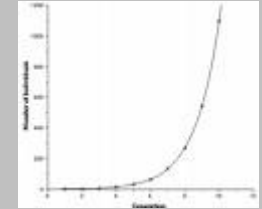
## Mayor's Office Role in Ensuring Collaboration with Blue Skyways:

- Promote the Mayor's "Ozone Alert Plan" (OZAP) throughout the area by communicating Ozone Alerts to all ABC members and City employees, and Tulsa Chamber and to encourage them to forward by e-mail to other citizens in Tulsa in an effort to exponentially increase person to person awareness and action. This is to supplement INCOG's efforts and not in any way to replace what INCOG does.
- Send regular communications to all Divisions, Departments, Authorities, Boards, and Commissions about grants, workshops, and other programs to promote a City-wide culture of energy efficiency, conservation, and innovation.
- Monitor attendance of the Airport, Port, MTTA, Public Works, Parks, and other delegates to Blue Skyways Bi-Annual Meetings.
- Meet regularly with EPA, INCOG, and ODEQ to keep abreast of all opportunities for grants that could positively impact City efficiency or Tulsa air and other environmental quality measures.
- Hold meetings called Tulsa Environmental Action Meetings (TEAM) no less than once a month in the Mayor's Office to emphasize the importance of environmental awareness, responsibility, and action for both City government and the Tulsa region as a whole to reduce energy spend.

# Ozone Alert Plan (OZAP)

## Communications Goal Summer 2007

### To Supplement INCOG Efforts



## Authorities, Boards, and Commissions: Member's Participation in the Plan



In an effort to positively change Tulsa into a culture which values air quality and healthy habits, all people appointed by the Mayor shall be encouraged by written letter to be ambassadors for environmentally sound practices and efforts.

When using City facilities, each Authority, Board, and Commission shall turn off the lights if another group is not using the facility immediately after their meeting.

Because all members of Authorities, Boards, and Commissions are chosen among the most capable and conscientious of Tulsans, they shall be challenged to be leaders in the effort to keep Tulsa breathable and healthy.

The Mayor shall include as part of the application process for ABCs a line which asks the applicant what steps, if any, they have taken to do their part in environmental responsibility. The Mayor may, as part of the appointment and reappointment process evaluate applicants' and appointees' efforts in environmental responsibility.

The Mayor will communicate by e-mail to all the members of ABCs ways in which they are called to help ensure that Tulsa is a leader in environmental responsibility, including forwarding OZAP e-mails. These encouraged practices shall include:

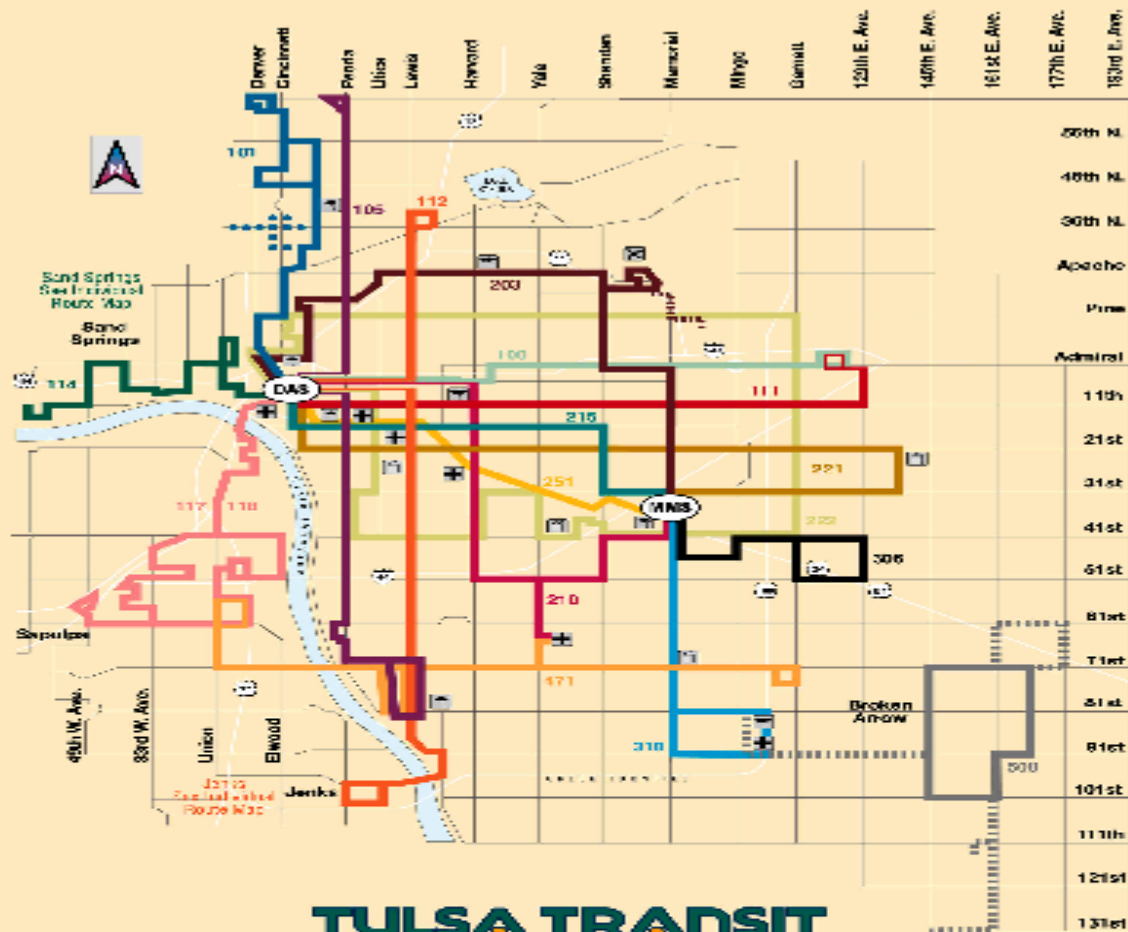
- 1) Observing all Ozone Alert Days by not using, or permitting others to use, lawn care equipment which operates from fossil fuels, including, but not limited to: mowing, trimming, and edging equipment.
- 2) Car Pooling and encouraging others to car pool on Ozone Alert Days.
- 3) During the summer months and on all Ozone Alert Days, for all members of ABC to choose to fill their tanks after 6:00 PM and for all members of ABCs to be environmental ambassadors to encourage others in the Tulsa region to do the same.
- 4) All members of ABCs are strongly encouraged to choose to participate in Tulsa's recycling program in an effort to reduce the amount of recyclable and renewable materials buried.
- 5) Where feasible, to purchase alternatively fueled vehicles or hybrid vehicles as their primary form of transportation in Tulsa; members of ABCs shall encourage other Tulsans to use alternatively fueled vehicles or hybrid vehicles.
- 6) All Authority, Board, and Commission members shall be encouraged to try public transportation for a day.

## City of Tulsa: Employee's Participation in the Plan



Mayor Taylor encourages all employees of the City of Tulsa to ensure the air quality and environmental health of the City. She has chosen to use a hybrid vehicle as her primary form of transportation. In the same spirit, she asks other City employees to engage in environmentally responsible choices by:

- 1) Observing all Ozone Alert Days by not using, or permitting others to use, lawn care equipment which operates from fossil fuels, including, but not limited to: mowing, trimming, and edging equipment.
- 2) Forwarding OZAP e-mails to family and friends in Tulsa.
- 3) Car Pooling and encouraging others to car pool on Ozone Alert Days.
- 4) During the summer months and on all Ozone Alert Days, all City of Tulsa employees to choose to fill their tanks after 6:00 PM and for all City of Tulsa employees to be environmental ambassadors for others in the Tulsa region to do the same.
- 5) For all City of Tulsa employees to choose to participate in Tulsa's recycling program in an effort to reduce the amount of recyclable and renewable materials buried in the Tulsa area.
- 6) Where feasible, to purchase alternatively fueled vehicles or hybrid vehicles as their primary form of personal transportation in Tulsa; City of Tulsa employees shall encourage other Tulsans to use alternatively fueled vehicles or hybrid vehicles.
- 7) All employees shall be encouraged to try public transportation for a day and, if they will, purchase a bus pass and encourage others to take public transportation.



Route & Schedule Information 509.2100  
www.tulsatransit.org

### Route Listing - February 2006

- |                                   |                              |                            |
|-----------------------------------|------------------------------|----------------------------|
| 100 - Admiral                     | 117 - Union SW Blvd.         | 222 - Pine / 41st Street   |
| 101 - Suburban Acres              | 118 - 33rd West Ave.         | 251 - East Track           |
| 105 - Pacaria                     | 303 - Airport                | 310 - Memorial             |
| 111 - 110th Street                | 210 - Howard                 | 471 - 71st Street          |
| 112 - Lewis / Jenks               | 215 - 15th Street            | 306 - Southeast Industrial |
| 114 - Charles Page / Sand Springs | 221 - 21st Street / Eastland | 608 - B.A. Connection      |

Hospital	Airport	University-College	Male	Park & Ride	Denver Ave. Station	Memorial Midtown Station

All Routes are Wheelchair Accessible

Note: This map is not to scale, see individual route maps for detailed routing information.

<http://www.tulsatransit.org>

# All Year Zero – Idling Plan for City of Tulsa Vehicles and Other Equipment



## Public Works

The Public Works Division shall observe a zero idling policy as part of this plan. Under no circumstance shall a City vehicle or piece of equipment run unless it is absolutely necessary for a required task. Idling City vehicles or equipment on Ozone Alert Days shall result in disciplinary action including possible termination.

## Police

In an effort to reduce spend on fuel and decrease CO2 Emission in the City of Tulsa, the Police Division shall implement and observe a zero idling policy as part of this plan. Idling shall be defined as leaving the engine running where it is not critical in protecting health or safety of people in Tulsa. Idling City vehicles or equipment on Ozone Alert Days shall result in disciplinary action including possible termination.

## Fire

In an effort to reduce spend on fuel and decrease CO2 Emission in the City of Tulsa, the Fire Division shall implement and observe a zero idling policy as part of this plan. Idling shall be defined as leaving the engine running where it is not critical in protecting health or safety of people in Tulsa. Idling City vehicles or equipment on Ozone Alert Days shall result in disciplinary action including possible termination.

## Parks and Recreation

The Parks Division shall observe a zero idling policy as part of this plan. Under no circumstances shall a City vehicle or piece of equipment run unless it is absolutely necessary for a required task. Idling City vehicles or equipment on Ozone Alert Days shall result in disciplinary action including possible termination.

## All Other City Vehicles

All other City vehicles shall observe a zero idling policy as part of this plan. Idling City vehicles or equipment on Ozone Alert Days shall result in disciplinary action including possible termination.

# Take Home Vehicles

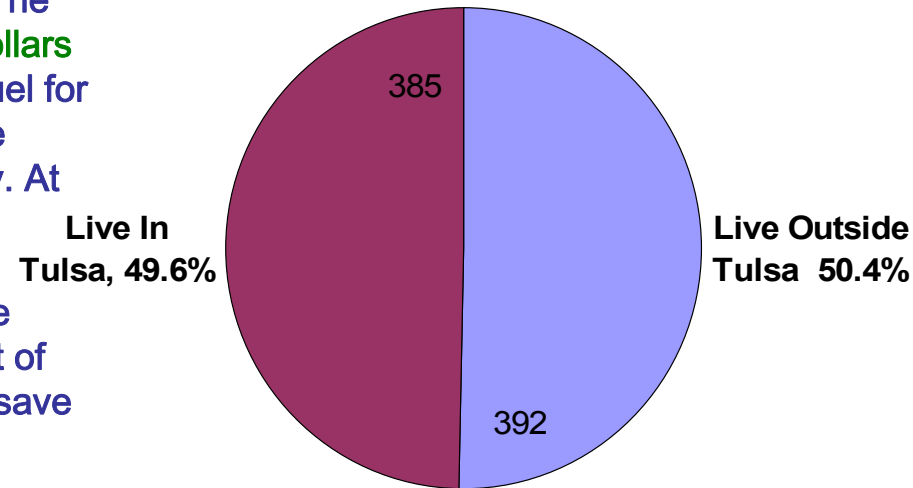
## Police

From fiscal year 2005 to 2006, the Tulsa Police Department had the highest increase in fuel consumption.

Currently there are 777 officers who take home vehicles. Of those officers, 392 or **50.4%** of the officers live outside of the City limits. Each day some 16,872 miles are traveled by officers coming to and from work using City fuel. The City of Tulsa spends 250,000 gallons or **\$500,000 dollars** a year (based on \$2 dollars a gallon at 12 mpg) on fuel for Police take home vehicles. The mileage added to the vehicles requires 26 vehicles to be replaced annually. At 22,000 per vehicle, this equals \$570,000.

The estimated total cost to the City by the Police take home vehicle policy, including wear and replacement of vehicles, is **\$1.1 million dollars annually**. In order to save fuel and spend, the City could potentially consider renegotiating with the Fraternal Order of Police upon contract renewal to exclude take home vehicles.

In addition, Police vehicles and fuel are used by off duty officers for personal off duty work. The use of City fuel for personal off duty work could also be reconsidered during the time of renewal to reduce spend on tax payer funded fuel.



# Energy Efficiency and Conservation Possibility: Moving and Replacing City Hall

One of the most radical shifts in City of Tulsa spend reduction is the proposal to move City Hall from 200 Civic Center to One Technology Center. This move would have a greater impact on utility conservation and efficiency than any other plan for modification of use within City Hall itself.

The proposed relocation of various departments to one central and energy efficient location would have a dramatic impact on consumption and spend for City government.

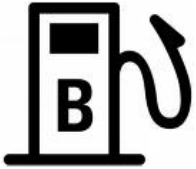
The potential to encourage the building of a LEED (Leadership in Energy and Environmental Design) -certified building on the current City Hall site would have both positive economic and environmental results. This would not only increase the efficiency by consolidating 12 sites into One Technology, but would also increase the overall character and sustainability of Tulsa in replacing the current City Hall site and the other sites with silver, gold, or platinum certificate LEED certified Buildings. Green rooftops shall also be encouraged.

Tulsa would no doubt be viewed as a “best of the best practices” city in a double effort of consolidating outdated facilities into a state of the art building and then stipulating to the buyers of the sites that any replacement building be LEED certified. This would likely have a net positive impact for national and international promotion, sustainability, and recruitment for Tulsa. The U.S. Conference of Mayors publishes a best practices book on environmental practices yearly.

Any new construction should assess the feasibility of green rooftops. This concept has growing support in Tulsa and should be implemented in new construction. The U.S. Green Building Council offers a “Green Building Toolkit” to aid public and private entities in green construction. Green construction is not only more cost efficient, but adds to the overall attractiveness of a community and adds a sense of place.

Currently, the City has entered into an option to purchase the One Technology Center building. The purchase, if it happens, will occur by Fall 2007.





## Moving in the Right Direction with Motor Fuels –Biodiesel

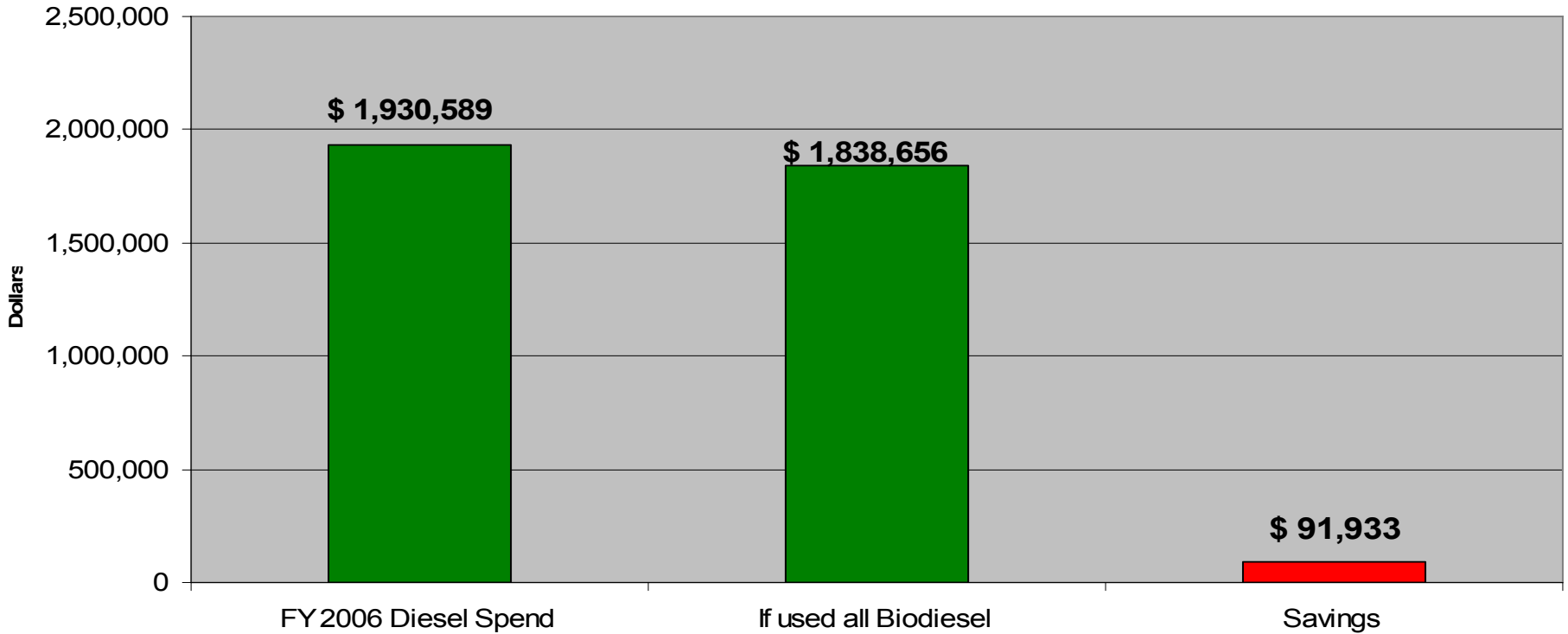
There are currently a number of local alternative energy companies in Tulsa and the Tulsa area who would like to partner with the City of Tulsa to supply cleaner-burning locally produced biodiesel. This fuel, the City has been told, will be less expensive than what we are currently paying for diesel. The immediate appeal of biodiesel is that its use does not usually require retrofits, but only requires a choice to fill responsibly.

In addition to the environmental and financial benefits, these nascent companies will create jobs in an industry which will round out Tulsa's energy profile. In the same spirit that led many pioneering individuals to Tulsa, these alternative fuel ventures are forging a new vision for stronger domestic energy security and responsibility.

The City of Tulsa will likely experience a net benefit from their use. Where at all feasible, partnerships with local clean fuel suppliers should be strengthened. These suppliers include, but in no way are limited to, Tulsa Biofuels, which plans to start production at 6th and Peoria in July 2007. Green Country Biodiesel, just east of Tulsa in Chelsea, is also making plans to launch production within the next year.

As of April 2007, the City is paying \$ 2.31 per gallon for diesel. Tulsa Biofuels has reported to the Mayor's Office that they would be able to sell biodiesel to the City for \$2.20 per gallon starting in Fall 2007.

**Financial Savings From Biodiesel FY 2006 Consumption at Today's Diesel Price \$2.31 vs. Biodiesel at \$2.20**





## Moving in the Right Direction with Motor Fuels –Natural Gas

America imports 62% of its foreign oil. Natural gas is an Oklahoma resource with amazing potential for municipal fleet use. Natural gas is about a dollar cheaper per equivalent gallon.

The Mayor's office has been hosting energy meetings over the last few months. Companies including, but not limited to, Clean Energy, Tulsa Gas Tech, GasTech, and ONEOK offer solutions for natural gas use. Local Tulsa companies, such as Crane Carrier, are currently building refuse trucks that incorporate this clean, inexpensive, natural gas technology.

Natural gas emits 50% less NOX, 80% less particulate matter, and 30% less CO2.

In addition to these positive traits, natural gas when procured from various suppliers is about half the price of gasoline. The City of Tulsa being required by law to weigh the most cost effective option, and the price of gasoline on the rise, natural gas lends itself as a prime choice. If ½ of Tulsa's fleet were CNG, Tulsa would save over one million dollars a year on fuel.

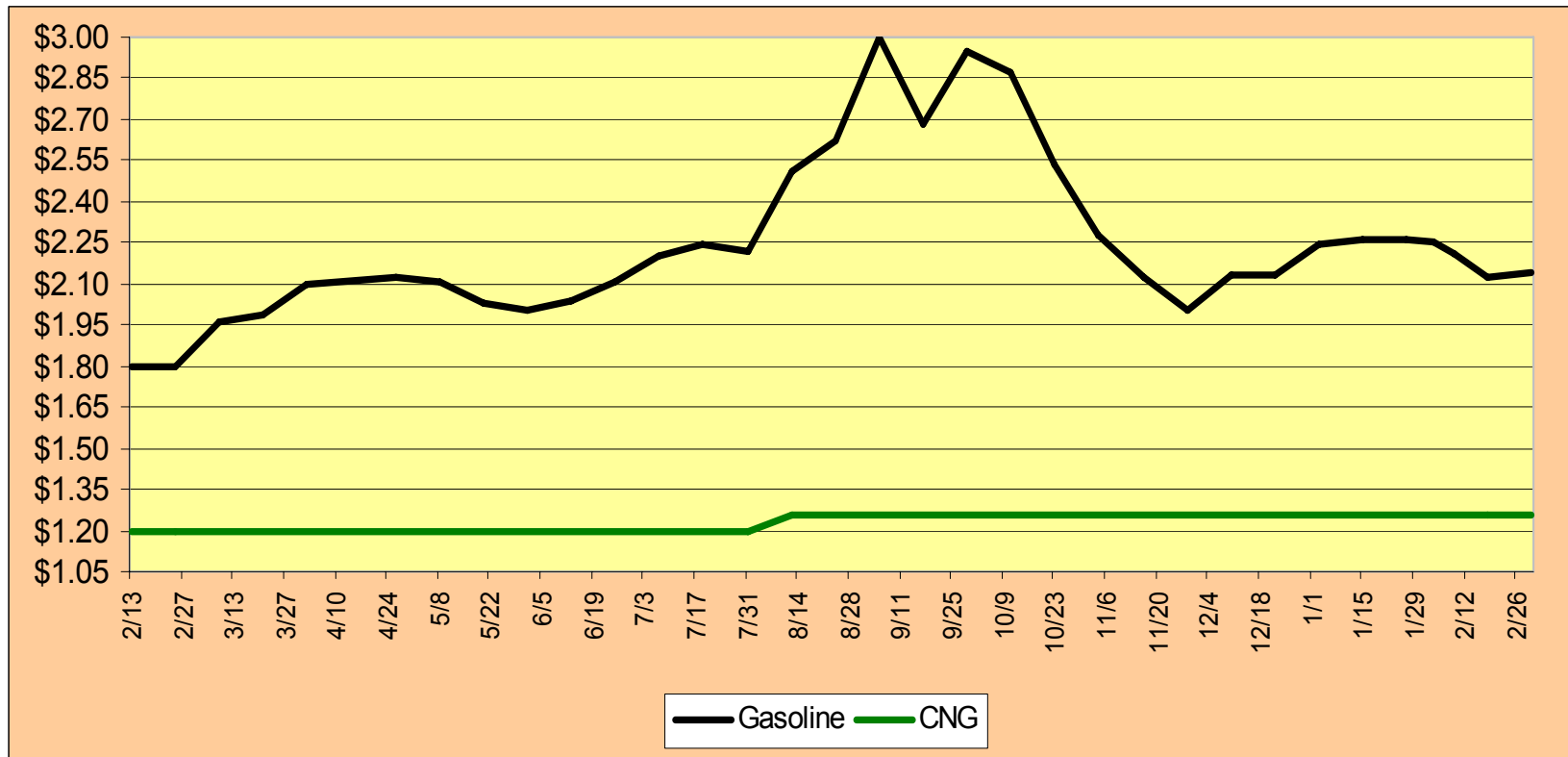
Companies that are able to lock in a price for natural gas supply, such as Clean Energy, usually require a minimum of 250,000 gallons per year of service. To put this in perspective, this amount is equivalent to the gallons of fuel used just for Police take home vehicles in 2007.

Two months ago, the City of Tulsa purchased two CNG dedicated vehicles using Federal CMAQ grant money. The reality of increased deep and broad support for alternative energy is an emerging zeitgeist here to stay.

The next page outlines what the City of Dallas has done with locking in low CNG prices.

## City of Dallas Clean Energy CNG Contract.

Obtained by Mayor's Office after Collaboration with BSC.  
Clean Energy Meeting Held Mayors Office 4-18-2006.



The City of Tulsa Will Continue to Explore CNG  
and  
Other Alternative Fuel Where Viable

## Procurement



Through April 2007, Internal Auditing has been working with Purchasing to standardize procurement codes of items City-wide.

This will lead to more control over spend and greater efficiencies in all purchases, including energy-related spend.

Much of the information in this plan was derived from Internal Auditing and their work to identify top City of Tulsa spend.

The information is growing by the day and will be used to buy commodities in a more intentional, right-sized, and information-driven way.

In 2007, the City will continue to look into solutions with the possibility of locking in energy prices with energy providers to reduce spend in the volatile energy market. This would save the City from oil price spikes that can happen from pure speculation about many variables, such as volatile geopolitics.

## Electricity and Lighting

Electricity is among the most difficult commodities to control. From the large scale level with complicated energy arrangements with electric suppliers, to use, a compilation of thousands of individual consumers with various electrical needs, steps may be taken to turn the curve on electrical consumption by all departments.

**TEAM** meetings, held in the Mayor's Office, will continue to explore working with suppliers for municipal rate reduction. These meetings will also assess the increased feasibility of energy independence through: **Hydroelectric, Solar, Wind, Biomass, Landfill Methane Recovery, and other technologies** which could lead City government to energy independence. This could also be used to leverage existing energy rates. Experts from around the country will continue to be consulted, as they have recently been, on cleaner, more cost-efficient, and renewable solutions. It is not a question of if, but when.

### Public Works

Light emitting diode (LED) street lights, according to the 2007 U.S. Conference of Mayors "Best Practices Guide," cost less than half what incandescent lights do, yet use less electricity and last five times longer.

### City-Wide

In an effort to save electricity, all City computers are to be turned off at night unless it is absolutely necessary not to do so.

All lights are to be turned off when leaving a room.

There will be increased use of motion detection switches as opposed to manual on/off switches.

Turn coffee warmers off when the pot of coffee will no longer be served. Use a coffee mug, not a disposable cup.

Lights are to be turned off in areas where work is not done or where natural light is sufficient.

City of Tulsa employees shall not use plug in fans or heaters.

City employees are to avoid using lamps that are mostly aesthetic in purpose.

Energy saving light bulbs shall be used, where feasible, in replacement of inefficient and hot incandescent bulbs.



## Recycling



All City Sponsored events shall make available and visible to participants, the option to recycle paper, plastic, and cans.

These shall include, but are not limited to, the Performing Arts Center, the Convention Center, Arena, and outdoor events such as Neighborfest.

The City is choosing leading in this, and other efforts, by example.

## Make Life Better, Volunteer to Plant a Tree in Tulsa

<http://www.upwithtrees.org>



## Recap of Very Basic Things All Divisions and Departments Can Do To Improve Energy Efficiency, Conservation, and Responsibility:

- 1) Always turn off the lights on your way out of the room. Also, be sure to turn off your computer before you leave for the day.
- 2) Do not use plug-in lights, heaters, or fans in City buildings.
- 3) Always car pool and fill tanks at night on Ozone Alert Days.
- 4) Bike to Work. The Mayor is calling on all City employees to bike to work on National Bike to Work Day, May 16, 2007. Tulsa is moving towards being named a “Bicycle Friendly City” by the League of American Bicyclists. Biking is healthy and pollution free. The City is working on increasing accessibility, awareness, and safety for those who choose to travel on bike.
- 5) Recycle where possible. Where not, make it possible!  
<http://www.metrecycle.com>

