REPORT TO COUNCIL
City of Sacramento

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STAFF
October 23, 2007

Honorable Mayor and
Members of the City Council

Title: Fleet Sustainability Policies

Location/Council District: Citywide

Recommendation: Adopt a **Resolution:** 1) rescinding all prior Fleet purchasing and fuel strategy policies (including but not limited to Resolutions 2005-454, 2004-613, 1999-565); and 2) approving a comprehensive Fleet Sustainability Policy.

Contact: Keith Leech, Fleet Manager, 808-5869

Presenter: Keith Leech, Fleet Manager

Department: General Services

Divisions: Fleet Management

Organization No: 3259

Description/Analysis:

Issue: Since 1999, fleet purchasing and fuel strategy policies have been developed in a piecemeal fashion that has resulted in a number of individual policies. This report recommends rescinding all prior Fleet purchasing and fuel strategy policies, and, approving a single comprehensive Fleet Sustainability Policy that incorporates components of previous policies that are still valid today, an annual adjustment to fuel consumption reduction goals, as well as new strategies that have become available as technology has advanced. In addition, this report follows up on the June 14, 2005 report to City Council titled *Update on Fleet Operations – Fleet Standards, Utilization, Annual Progress Report, and Fuel Strategy* by including information on vehicle purchases, fuel consumption, and composition of the City's fleet for the two fiscal years since the June 14, 2005 report.

Fleet Vehicle Purchases

The June 14, 2005 report to City Council on Fleet operations established a list of vehicle types for various City job classifications to be used as the City standard for vehicle purchases. Fleet Management reviews this list annually and updates the list as needed. When purchasing vehicles, Fleet Management considers the

vehicle request against the vehicles standards list, but also considers the operational requirements of the given job classification to ensure that City departments purchase vehicles that meet the demands of the job while promoting sustainable practices. Vehicles purchased in any given year are based on each year's replacement schedule, as well as any additions to the fleet that have been approved within the adopted budget. Attachment 2 provides information on vehicles purchased during FY2005/06 and FY2006/07.

Fuel Consumption

On June 14, 2005 City Council adopted Resolution No. 2005-454 approving a goal to reduce diesel and unleaded fuel consumption by 15% from the FY 2002/03 levels by FY2009/10. In addition, the City Council adopted a long term fuel strategy to reduce fuel consumption and costs, reduce emissions, and reduce the City's dependence on foreign energy sources. The strategy included replacing existing vehicles with more efficient, higher fuel mileage vehicles, setting goals for reducing fuel consumption for all City departments, and changing how vehicles and equipment are used. Following the adoption of the long term fuel strategy, departments were asked to submit their plans to achieve the City Council's goal of reducing fuel consumption.

The common themes from the department plans are:

1. Replace existing vehicles with more fuel efficient and lower emission vehicles
2. Replacing existing vehicles with smaller vehicles
3. Reduce the number of vehicles assigned to departments
4. Reduce the number of vehicles used for overnight retention
5. Stage on-call vehicles at a central location within the City and use a compact car or a pickup to transport on-call staff home and to the on-call vehicle
6. Implement global positioning systems (GPS) and electronic work order systems for efficient routing to reduce total mileage driven.
7. Reduce the amount of time vehicles are idling
8. Car pool and use alternate transportation for meetings when feasible

When adjusted for growth, the City is on target to meet the fuel consumption reduction goal by FY 2009/10 as shown in Attachment 3.

To assist City departments in meeting the fuel consumption reduction goal, Fleet Management is committed to lowering fuel consumption by providing technological tools for departments to more closely monitor fleet usage. Fleet Management has partnered with Animal Care Services to pilot a global positioning system (GPS) on ten Animal Care vehicles. The GPS system tracks idle time, speeding violations, miles per gallon, engine problems, and trip distances. The data obtained from this system shows great promise in monitoring and controlling excessive idle time and reducing fuel consumption. Additionally, Fleet management is currently enhancing the City's fuel system and reporting

tools to provide Fleet customers more timely and accurate data on fuel consumption and associated costs for all city vehicles.

Update on Composition of the City's Fleet
As of the June 14, 2005 Fleet update report, the City's fleet included 1,866 vehicles. Since that time the City's fleet has grown by 131 vehicles for a total of 1,997 vehicles as of June 30, 2007. Additional details on the vehicle purchases made during FY2005/06 and FY2006/07 are provided in Attachment 4.

Policy Considerations: The recommended Fleet Sustainability Policy addresses the goals of clean energy and improved air quality identified in the City Council FY2006/07 Sustainability and Livability Focus Area

Committee/Commission Action: None

Environmental Considerations: Not applicable

Rationale for Recommendation:
This report recommends rescinding all prior fleet purchasing and fuel strategy policies and adopting a single comprehensive Fleet Sustainability Policy to eliminate redundant and obsolete policies. For example, Resolution Nos. 1999-565 and 2004-613 included many of the same strategies for reducing vehicle emissions. However, technological advances in the automotive industry have resulted in improved vehicle emission ratings such that policies *requiring* certain vehicle emission ratings are no longer necessary since that is now what the industry offers at a base level. Adopting a single comprehensive Fleet Sustainability Policy will also provide for easier reference.

Financial Considerations:
During FY2005/06 and FY2006/07, Fleet Management purchased 361 vehicles for approximately $21 million in support of City departments. Fleet Management has taken the lead in seeking grant opportunities to offset the cost of these purchases. Since FY2000/01 Fleet Management has received eleven grants and $3 million in grant funding for the following:

- $670,000 for the installation of one liquefied natural gas (LNG) fuel site at the Meadowview City Service Complex
- $113,500 for the installation of fourteen particulate traps (emission control devices) on large diesel vehicles
- $1.9 million for the purchase of 54 LNG side loaders and rear loaders
- $294,000 for the incremental costs of purchasing LNG fuel verses diesel fuel
- $42,000 for testing Purinox low nitrous oxide fuel

Fleet Management is committed to implementing new vehicle and fuel technologies to improve air quality, reduce fuel consumption, and save financial resources. Through

the implementation of LNG vehicles instead of diesel vehicles, Fleet Management has been successful in saving the City approximately $1.7 million over the past seven fiscal years

Currently, the incremental funding required to purchase hybrids and alternative fueled vehicles is dependent upon receiving grant funding and budget augmentations from other departments.

Emerging Small Business Development (ESBD): This report does not result in the purchase of any goods or services.

Respectfully Submitted by: _____
Keith Leech
Fleet Manager

Approved by: _____
For: Reina J. Schwartz
Director, Department of General Services

Recommendation Approved:

_____
for Ray Kerridge
City Manager

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Attachment 1

Background on Emissions Data

Based on the June 14, 2005, Council report titled "Update on Fleet Operations and Adoption of Fuel Strategies" all vehicles purchased were based on emission standards set by the California Air Resources Board (CARB). The California Low Emission Vehicle (LEV) program defines automotive emission standards which are stricter than the United States' national "Tier" regulations. There have been two major phases. The first phase began in the 1990s and ended when the Low Emission Vehicle II (LEV II) standards began to be phased in for 2004. Several states other than California currently use the same restrictions. The States include Maine, Massachusetts, New York, Oregon, Vermont and Washington and referred to as "CARB states." The LEV standard created major emission categories for unleaded fueled vehicles only, each with several targets available depending on vehicle weight and cargo capacity. The major emission categories are displayed below.

Major emission categories:

- LEV – Low Emission Vehicle
- LEV II – Replaced the LEV Program with even cleaner emissions standards
- ULEV – Ultra Low Emission Vehicle
- SULEV – Super Ultra Low Emission Vehicle
- SULEV II – Even cleaner emissions standards than SULEV
- PZEV – Partial Zero Emission Vehicle
- ZEV – Zero Emission Vehicle

Diesel vehicles have a different standard based on grams of particulate mater (PM) per brake horsepower-hour (g/bhp-hr). Emergency vehicles are exempt from reporting standards. The levels are based on engine year and requirements set by CARB.

- Model Years 1994-1998 – 5.0 g/bhp-hr
- Model Years 1999-2002 – 4 0 g/bhp-hr
- Model Years 2003-2006 – 2.5 g/bhp-hr
- Model Years 2007– 1.3 g/bhp-hr

LNG vehicles also the same g/bhp-hr as diesel but the engines have a lower g/bhp-hr than conventional diesel engines based on model years.

- Model Years >2004 – 2.5 g/bhp-hr
- Model Years 2004-2006 – 1.8 g/bhp-hr

- Model Years 2007-Now – 0.2 g/bhp-hr

City Fleet purchases for FY2005/06 and FY2006/07 were based on major emission categories set by CARB. Every year manufacturers are required to meet these standards and the scale becomes more stringent every year. In FY2006/07, the majority of the vehicles purchased were 19% Partial Zero Emission Vehicles (PZEV), including 2007 Ford Focus and 2007 Pontiac GM Grand Prix vehicles. Similar to PZEV vehicles, 9% of the vehicles purchased were hybrids rated as Super Ultra Low Emission Vehicles (SULEV)/AT-PZEV, rated similar to a PZEV vehicle. Technological advances in the automotive industry have resulted in improved vehicle emission ratings such that policies requiring certain vehicle emission ratings are no longer necessary since that is now what the industry offers at a base level.

Attachment 2

Summary of Vehicles Purchased By Fuel Type

	FY2005/06				FY2006/07			
Fuel Type	**Count**	**% of Count**	**Purchase $**	**% of $**	**Count**	**% of Count**	**Purchase $**	**% of $**
Diesel	23	15%	$ 2,208,020	37%	38	18%	$ 7,487,850	50%
Unleaded	122	79%	$ 2,689,919	45%	131	63%	$ 2,644,481	18%
Hybrids (unleaded)	3	2%	$ 80,839	1%	16	8%	$ 405,743	3%
LNG (Liquefied Natural Gas)	6	4%	$ 960,793	16%	21	10%	$ 4,530,951	30%
E85	0	0%	$ -	0%	1	1%	$ 36,896	0%
Total	**154**	**100%**	**$5,939,571**	**100%**	**207**	**100%**	**$15,105,921**	**100%**

In support of City departments, Fleet Management purchased 361 vehicles during FY2005/06 and FY2006/07. The purchases were comprised of 154 vehicles in FY2006 and 207 vehicles in FY2007.

Attachment 3

Fuel Consumption

Year	FY2003/04	FY2004/05	FY2005/06	FY2006/07
2010 Goal (adjusted)*	1,846,599	1,940,814	1,978,499	2,070,071
Fuel Used	2,160,917	2,090,404	2,157,795	2,162,524
Difference	314,318	149,590	179,296	92,453
Variance from goal	17%	8%	9%	4%

Related Data

Growth of Fleet

Unit Count in 2003	1,790

Year	FY2003/04	FY2004/05	FY2005/06	FY2006/07
2003 Base	1,790	1,790	1,790	1,790
Unit Count	1,747	1,866	1,914	1,997
Difference	-43	76	124	207
Variance from goal	-2%	3%	5%	10%

Miles Driven

Miles Driven in 2003	18,354,441

Year	FY2003/04	FY2004/05	FY2005/06	FY2006/07
2003 Base	**18,354,441**	**18,354,441**	**18,354,441**	**18,354,441**
Miles Driven	22,064,742	22,580,698	20,944,413	20,058,857
Difference	3,710,301	4,226,257	2,589,972	1,704,416
Variance from goal	20%	23%	14%	9%

*2010 Goal (adjusted): The fuel consumption goal is adjusted based on vehicle growth in the fleet. Goal is per City Council Resolution No. 2005-454 to develop a target goal to reduce fuel consumption 15% from the 2003 levels by 2010.

Attachment 4

Composition of Fleet Purchases
By Emissions Rating

		2006		2007			
Fuel Type	Emission Rating	Count	% of Count	Count	% of Count	Total	**Total % of Count**
DIESEL	Emergency	1	1%	12	6%	13	4%
	1.3 bhp-hr	0	0%	4	2%	4	1%
	2.5 bhp-hr	22	15%	12	6%	34	10%
	4 bhp-hr	0	0%	4	2%	4	1%
	5 bhp-hr	0	0%	6	3%	6	2%
DIESEL Total		23	16%	38	20%	61	18%
E85	ULEV II	0	0%	1	1%	1	0%
E85 Total			0%	1	1%	1	0%
HYBRID	SULEV II	3	2%	0	0%	3	1%
	SULEV/AT-PZEV	0	0%	16	8%	16	5%
HYBRID Total		3	2%	16	9%	19	6%
LNG	0.2 Gram	0	0%	21	10%	21	6%
	1.8 Gram	5	3%	0	0%	5	1%
	2.5 Gram	1	1%	0	0%	1	0%
LNG Total		6	4%	21	10%	27	9%
UN-LEADED	LEV	37	25%	15	7%	52	15%
	LEV II	4	3%	66	32%	70	20%
	ULEV	67	46%	0	0%	67	17%
	ULEV II	0	0%	14	7%	14	4%
	SULEV	12	8%	0	0%	12	3%
	SULEV II	2	1%	1	0%	3	1%
	PZEV	0	0%	35	17%	35	10%
UNLEADED Total		122	78%	131	70%	253	69%
Grand Total		**154**	**100%**	**207**	**100%**	**361**	**100%**

RESOLUTION NO. 2007-XXXX

Adopted by the Sacramento City Council

October 23, 2007

RESCINDING ALL PRIOR FLEET PURCHASING AND FUEL STRATEGY POLICIES (INCLUDING BUT NOT LIMITED TO RESOLUTIONS 2005-454, 2004-613, 1999-565); AND APPROVING A COMPREHENSIVE FLEET SUSTAINABILITY POLICY.

BACKGROUND

A. The City of Sacramento recognizes that the region has an air quality problem and that public agencies have a significant role to play in improving air quality by reducing the emissions from their fleet operations.

B. The Mayor and City Council are committed to working with other governmental agencies in the region to address existing air quality problems.

C. In Fiscal Year 2006/07 the City Council adopted a Strategic Plan goal to achieve Sustainability and Livability and reduced fuel consumption and improved air quality are key components of a sustainable and livable community;

D. Several policies addressing fleet purchasing, low-emissions and fuel strategies (Resolutions 2005-454, 2004-613, 1999-565) have been adopted by the City Council over the past eight years.

E. In an effort to address new technologies and ensure that the City's fleet purchasing and fuel consumption policies are current staff is recommending that all prior fleet policies be rescinded and a revised comprehensive fleet sustainability policy be adopted.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

Section 1. Rescind all prior Fleet Purchasing and Fuel Strategy policies (including but not limited to Resolutions 2005-454, 2004-613, 1999-565).

Section 2. Approve the comprehensive Fleet Sustainability Policy (Exhibit A)

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Exhibit A

Fleet Sustainability Policy

The City of Sacramento is committed to improving the Region's Air Quality by:

A. Emission Reduction

a. Aggressively incorporating low-emission vehicles into fleet operations;

b. Aggressively seeking fleet grants to convert, purchase and implement air quality improvements to existing and future fleet assets;

c. Analyzing other emission reduction strategies and reporting back to the City Council as additional information on fuel efficiency opportunities become affordable and available;

d. Continuously working with the Sacramento Metropolitan Air Quality Management District (SMAQMD) on reducing air emissions from the City's fleet;

e. Actively participating with the Clean Cities Coalition to stay abreast of new innovative ideas and be willing to utilize City equipment to demonstrate promising technologies; and

f. Conforming to the City's fleet purchasing and fuel consumption goals except when no financially viable alternative option is available.

B. Low Emission Vehicle Acquisitions

a. Purchase vehicles based on the actual type of use and need of a particular position classification based upon an established vehicle standard with an emphasis on purchasing units offering the greatest fuel economy and lowest emissions in its respective class.

b. Continue to expand the use of vehicles using Liquefied Natural Gas (LNG) or other available clean fuel sources for trucks and heavy equipment.

C. Fuel Consumption

a. Reduce fuel consumption 15% from the 2003 levels by 2010 with an annual adjustment to the 2003 level to reflect the City's growing fleet operations.

b. Continue to reduce miles driven annually by fleet vehicles through decentralization of City operations.

D. Vehicle Operations

a. Promote reduced idling, trip reduction, routing for efficiency and use of public transportation to operating departments within the City.

b. Reduce fleet size by removing under utilized units from the fleet or through reassignment in place of additional units.

c. Add systems to vehicles and equipment to allow continued operation of warning lights with the engine off without compromising the ability to restart.

d. Reduce the number of overnight retention vehicles to only those as needed for valid on-call response.

E. Cost Effectiveness and Performance

a. Actively seek grants and other funding opportunities to use in implementing alternative fuel, fuel infrastructure and new technology into the Fleet.

b. Identify opportunities and the financial resources needed to replace older fleet equipment with certified low emission equipment.

c. Work with the City departments to develop an implementation plan for compliance of all existing diesel powered fleet equipment with the California Environmental Protection Agency Air Resource Board Fleet Rule for Public Agencies and Utilities by calendar year end 2015.

F. Monitoring and Reporting

a. Incorporate the use of future technologies such as electronic monitoring devices such as global positioning systems (GPS) devices and vehicle identification boxes (VIBs);

b. Each fiscal year fleet management shall:

i. Prepare an inventory and report on all light, medium and heavy duty vehicles in the fleet that are active, the emission rating for each vehicle, the miles each vehicle was driven, a listing of all vehicles that are exempt from being a low-emission vehicle, explanation of the reasons for each exemption and identification of all vehicles that were purchased during the reporting period;

ii. Prepare a detailed report showing the emission rating for each active piece of off-road equipment in the fleet, the hours of operation of each piece of equipment; and the progress in obtaining the low-emission fleet status; and

iii. A report of any other actions taken to support or enhance the City's Fleet Sustainability Policies.