

**Green Fleet Policy****5.2.0****PURPOSE**

The purpose of this policy is to document the process for purchasing and managing the City's diverse vehicle fleet, which include both vehicles and heavy equipment, in a manner that minimizes greenhouse gas emissions and considers life-cycle economics.

**DEFINITIONS**

Alternate Fuel	Any fuel other than gasoline, diesel, and other substantially petroleum-based fuels that is less polluting than gasoline or diesel fuel. Alternate Fuel shall include, but is not limited to, natural gas, propane, ethanol (E-85), biodiesel (5 percent blend or above) and electricity.
Alternate Fuel Vehicle (AFV)	Any motor vehicle powered in whole or in part by non-petroleum-based fuels.
Operating Departments	City of San José departments that operate motorized vehicles or metered heavy equipment.
Bi-Fuel Vehicle	Any motor vehicle designed to operate on two distinct fuels (including "Flex-fuel" vehicles), one of which is an alternative fuel.
Biodiesel	Fuel refined from agriculturally derived oils that is suitable for use in diesel engines. Often blended with traditional petroleum-based diesel in amounts connoted by the letter "B" and a number (e.g., B20 = 20% biodiesel and 80% petroleum diesel).
CO	Carbon Monoxide – a standard component of conventionally powered vehicle emissions
CO <sub>2</sub>	Carbon Dioxide - a standard component of conventionally powered vehicle emissions and a principal greenhouse gas
Conventionally Powered Vehicles	Vehicles with gasoline or diesel powered internal combustion engines.
CNG	Compressed Natural Gas
Emergency Fleet	Public Safety response vehicles used by San José's Police and Fire Departments.
Fleet	The City of San José's inventory of motorized vehicles and metered equipment.
Fleet Management	The City of San José's General Services Department, Division of Fleet Management
GHG	Greenhouse Gas
Green	Vehicles that emit low or zero emissions; typically powered by fuels other

**Green Fleet Policy****5.2.0**

Vehicles	than gasoline or diesel.
Heavy Duty Vehicle	Any motor vehicle, licensed for use on roadways, having a manufacturer's gross vehicle weight rating greater than 8,500 pounds.
Hybrid Vehicle	A motor vehicle that draws propulsion energy from onboard sources of stored energy that are both an internal combustion / heat engine that runs on combustible fuel, and a rechargeable energy storage system.
Incremental Cost	The difference in the acquisition cost between a conventionally powered vehicle and a comparable alternative fuel vehicle
Light Duty Vehicle	Any vehicle with a gross vehicle weight of less than or equal to 6,000 pounds. Light duty vehicles include passenger cars, light duty trucks, sport utility vehicles (SUV), minivans and pick-up trucks. Light duty vehicles are currently subject to Tier 1 emissions standards under the Clean Air Act Amendments of 1990.
Medium Duty Truck	Any motor vehicle, with a manufacturer's gross vehicle weight rating of 8,500 pounds or more, which is designed primarily for purposes of transportation of property or is a derivative of such a vehicle, or is available with special features enabling off-street or off-highway operation and use.
Low Emission Vehicle (LEV)	Any motor vehicle that meets or exceeds the standards set forth by the US Environmental Protection Agency for Low Emission Vehicles
Metered Equipment	Any powered implement that is metered for hours of use.
NO <sub>x</sub>	Oxides of nitrogen.
PM	Particulate Matter - Solid or liquid particles of soot, dust, smoke, fumes, aerosols or other airborne material; a standard component of conventionally powered vehicle emissions.
Passenger Vehicle	Any motor vehicle designed primarily for transportation of persons and having a design capacity of twelve persons or less.

**POLICY**

The City is committed to being an environmentally and economically sustainable city that is designed, constructed, and operated to use resources efficiently and minimize waste. The City will remain committed to managing and conserving natural resources in an equitable manner for present and future generations of residents receiving city services.

In November 2005, the City became a signatory to the Urban Environmental Accords, which, in addition to prior commitments to greenhouse gas reduction initiatives, have a stated numeric goal of a 25% reduction in greenhouse gas emissions by the year 2030. The transportation sector alone is responsible for about one-third of our nation's total production of carbon dioxide, the greenhouse gas that contributes most significantly to global warming.

**Green Fleet Policy****5.2.0**

Through the implementation of this policy and the Council-adopted Environmentally Preferable Procurement Policy (EP<sup>3</sup>), the City will be a national leader with respect to how we as a city manage our diverse fleet of both vehicles and heavy equipment. In recognizing that fleet assets account for a significant contribution to the City's overall greenhouse gas emissions, and that these emissions can be reduced, along with vehicle fuel and maintenance costs, through the purchase of alternatively-fueled vehicles, the City adopts the following policy.

The City shall make every effort to purchase and use the lowest emission vehicle or equipment item possible, while taking into account the vehicle's life-cycle costs and the ability to support City operations and services.

Through implementation of this policy, the City shall seek to decrease total vehicle emissions by 25 percent by fiscal year 2012-13, using 2002-03 as a baseline year. Current and future emissions targets will be developed and evaluated within the context of the City's overall greenhouse gas reduction strategies.

The objectives of this policy are to:

- A. Optimize the fleet size – eliminate or redeploy unused or under-utilized vehicles while promoting sharing across departmental lines.
- B. Purchase non-emergency fleet vehicles that provide the best available net reduction in vehicle fleet emissions, including, but not limited to, the purchase of alternative fueled and hybrid vehicles.
- C. Consider purchasing lower emission emergency fleet vehicles with comparable performance, safety, and fuel availability during emergencies as compared to conventionally powered emergency fleet vehicles.
- D. When emission reduction targets are not being met, consider purchasing carbon offsets through a recognized carbon trading institution.
- E. Reduce emissions of carbon dioxide (CO<sub>2</sub>), a critical greenhouse gas produced through combustion of fossil fuels – make reduced CO<sub>2</sub> emissions a critical purchase criterion
- F. Reduce emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and particulate matter (PM)—all pollutants produced by combustion of fossil fuels that endanger public health.
- G. Implement concurrent programs using advanced emission controls on all City owned or operated vehicles.

The primary measure of the City's success in accomplishing the above objectives is the annual progress toward meeting the goal of reducing vehicle emissions by 25% by the year 2012-13.

Secondary measures of the City's success in accomplishing the above objectives include a reduction in the amount of emissions of the following greenhouse gases from City-operated vehicles:

**Green Fleet Policy****5.2.0**

- 1) Carbon Dioxide (CO<sub>2</sub>);
- 2) Carbon Monoxide (CO);
- 3) Nitrogen Oxides (NO<sub>x</sub>); and
- 4) Particulate Matter (PM)

as well as annual reductions in:

- 1) The total gallons of gasoline and diesel used in City vehicles;
- 2) Total fuel costs; and
- 3) Total cost of fleet operations per vehicle.

**Establishment of Green Fleet Team**

The Green Fleet Team will include representation from Fleet Management, Environmental Services, Finance, and the City Manager's Budget Office as well as rotating involvement of selected operating departments.

The function of this Team shall be to develop and monitor policies and procedures related to the purchase of City vehicles, metered equipment, and sustainable maintenance products and services to achieve the goals and objectives of the program. The Team will report findings and progress annually to the Transportation and Environment Committee, beginning in the fall of 2008.

**Funding**

The Green Fleet Team will be responsible for making recommendations on acceptable initial incremental costs for improved environmental performance compared with vehicle fuel savings and emissions reductions achieved over the service life of that vehicle. This life-cycle cost analysis, which will include fuel, maintenance, and operation costs over the projected life of the vehicle, along with the factors related to emergency fleet vehicles, will be performed prior to purchasing fleet replacements or additions and will be reflected in the corresponding bid process as appropriate. Funding from outside sources such as Regional, State, and Federal grants shall also be pursued to assist in the offset of the incremental costs of "green" vehicles, if necessary.

**Fleet Inventory**

The City has established and will maintain a complete inventory of the vehicles in its fleet. This inventory will include not only the type and number of fleet vehicles, but also the amount and types of fuel used, the costs associated with their use, and the corresponding emissions. This inventory is critical if goals are to be set and success measured for the fleet.

All City vehicles and metered equipment that operate on gasoline, diesel, electricity, or other energy sources are included in this policy.

**Baseline for Evaluation of Effectiveness**

The baseline year for determining the effectiveness of the Green Fleet program will be fiscal

**Green Fleet Policy****5.2.0**

year 2002-03. This baseline will also be utilized for broader Greenhouse Gas (GHG) reduction initiatives the City is participating in, and to monitor specific emissions parameters that have been captured since then. The City's Fleet Manager shall develop a fiscal year 2002-03 fleet baseline to facilitate the evaluation of annual Green Fleet plans and performance. Baseline information shall include:

- 1) Vehicle class (e.g., sedan, light duty truck, heavy duty truck, etc.)
- 2) Average miles per gallon per vehicle class;
- 3) Type of fuel used;
- 4) Average fuel cost per mile by vehicle class;
- 5) Annual miles driven per vehicle by vehicle class;
- 6) Total fuel consumption by vehicle class;
- 7) Carbon dioxide (CO<sub>2</sub>) emissions based on gallons (or equivalent) of fuel consumed.
- 8) Estimated emissions for each pollutant by vehicle class based on EPA tailpipe standards for carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and particulate matter (PM); and

Environmental Services shall calculate items 7 and 8 above for the Green Fleet Team and shall be utilized to calculate the total amount of greenhouse gases being emitted by City operated vehicles.

Fleet Management and Environmental Services shall be responsible for providing this baseline data in a reliable and verifiable manner to the Green Fleet Team and to the Transportation and Environment committee as requested.

**Green Fleet Strategies To Be Employed By the City**

- Optimize Fleet Size
  - 1) The vehicles considered for removal from the fleet or reassignment shall include the following:
    - a) Light duty vehicles (passenger cars, light duty pick up trucks and vans) that are driven less than 4,800 miles annually.
    - b) Metered equipment that is used less than 240 hours annually.
  - 2) Fleet reduction or reassignment will be performed according to the provisions of City Policy 1.8.1, Use of City and Personal Vehicles. Vehicles identified for removal from the City fleet shall be disposed by Finance in accordance with applicable Municipal Code regulations and EP<sup>3</sup>. The determination of which vehicles are to be reassigned shall be at the discretion of the Fleet Manager, working in cooperation with user departments, and shall be performed according to the guidelines identified in City Policy 1.8.1.
- Decrease Vehicle Emissions

**Green Fleet Policy****5.2.0**

- 1) The City shall make every effort to obtain the “*cleanest*” vehicles possible as measured by available emissions certification standards and those published by the manufacturers.
  - a) Light Duty Vehicles: The City shall purchase or lease only models of passenger vehicles and light duty trucks that are rated as low emission vehicle (LEV) or better by the EPA, where service levels are not negatively impacted.
  - b) Heavy Duty Vehicles and Equipment: The City shall purchase or lease only Heavy Duty Vehicles or Equipment whose engines are CARB certified as low-emission, when available for the given application and where service levels are not negatively impacted.
- 2) Each replacement vehicle will achieve the greatest level of emission reductions possible, while still meeting the operational needs of the City. Alternate-fuel replacement vehicles should be procured only when there is fueling infrastructure in place at City operated or local commercial fueling stations to support the operation of these vehicles.
- 3) Emission reduction targets shall be reviewed annually by the Green Fleet Team and modified based on vehicles available for that model year.
- 4) Vehicle purchase requests shall be reviewed and minimum emission reduction targets will be employed when possible. Fleet Management will work with all City Departments to identify the most fuel-efficient vehicle with maximum emission reduction available that can meet the operational needs of the department, while taking into account the vehicle’s life-cycle costs and fuel availability.
- 5) Request for exemptions to the Green Fleet Policy shall be submitted in writing to the Fleet Manager and exemptions awarded if there is sufficient justification (see Exemptions section of this policy).

- **Reduce Vehicle Size**

Encourage the selection of vehicles of a smaller class size whenever possible to achieve increased miles per gallon and lower emissions. Requests for new vehicle purchases must be supplemented with written justification addressing the need for a class or type. Fleet Management shall work with the applicable operating departments to determine whether a proposed vehicle could be downsized and still fulfill its required function within the department.

- **Increase Use of Alternate Fuel Vehicles and Equipment**

Alternate Fuel Vehicles and Equipment will be considered for procurement and utilization when their use is appropriate to the application and life-cycle cost analysis demonstrates the procurement and utilization of the vehicle to be economically feasible.

As noted under the Funding section of this document, both appropriated City funding and grants from outside agencies may be available to cover the potential incremental costs for

**Green Fleet Policy****5.2.0**

an alternate fuel version of a fleet vehicle or piece of metered equipment. Grant funding may be targeted for the procurement of specific fuel-using vehicles and will be factored into the life-cycle cost analysis.

“*Clean*” fuels (such as compressed natural gas, ethanol, electricity and biodiesel) shall be used when feasible. Feasibility assessment will include considerations of vehicles or equipment able to utilize the “clean” fuel, vehicle costs, fuel availability, and the ability to utilize existing fueling infrastructure. Vehicles using these fuel types will be strongly considered when evaluating vehicle replacement.

Fleet Management shall provide a summary list of alternate fuel vehicles (by fuel type) in the City’s fleet to the Transportation and Environment Committee as part of its annual report.

- Best Practices to Minimize Vehicle Miles Traveled (VMT)
  - 1) For vehicles that operate on fixed routes, such as maintenance routes and meter reading routes, route optimization should be employed. In general, all routes should be planned to optimize the route and trips chained together to reduce required travel time and distance.
  - 2) Encourage meetings at centralized locations to reduce necessary travel.
  - 3) Encourage and enable alternate meeting methods, such as conference calls, to reduce the number of necessary trips.
  - 4) Vehicles shall not be left idling unless a running engine is necessary to protect public safety, to prevent harm to contents of the vehicle, run auxiliary equipment in performance of a job, or to maintain health of occupants while performing duties. Vehicles are not to be left idling for extended periods.
  - 5) Where applicable and/or appropriate, employees should use alternative modes of transportation, such as buses, light rail, carpools, vans, or bicycles.

**Exemptions**

Fleet Management may grant an exemption from the requirements of this Policy to an applicable department requesting an exemption under any one of the following circumstances:

- 1) Where there is no model of motor vehicle or motorized equipment available that will comply with the requirements of this Policy and still meet the specifications for its intended purpose.
- 2) Where the analysis demonstrates to the satisfaction of Fleet Management each of the following:
  - a) That any amortized additional incremental cost of purchasing a lower emission vehicle that complies with the requirements of this Policy cannot be recovered over the operating life of the vehicle or metered equipment through a reduction in fuel, maintenance, and other costs incurred during the operating life of such vehicle or equipment; and

**Green Fleet Policy****5.2.0**

- b) That Fleet Management, or another City department, has unsuccessfully applied for, or attempted to identify grant funding for the purchase or lease of the vehicle or motorized equipment that complies with the requirements of this Policy from outside sources.
- 3) Where the requesting department demonstrates to the satisfaction of Fleet Management that the use of a vehicle or metered equipment that complies with the requirements of this Policy would significantly disrupt operations or reduce service levels.

In the case that Fleet Management grants an exemption, Fleet Management shall purchase or lease the model of motor vehicle or metered equipment that will meet the specifications of the applicable departments and has the highest fuel efficiency and lowest available emissions ratings available for the type of vehicle or metered equipment specified provided the cost is within a reasonable range of the cost of a vehicle meeting the specifications but having higher emissions ratings.

**Vehicle Maintenance**

All vehicles shall be inspected and emissions tested on a biannual basis consistent with State of California guidelines. If the vehicle fails to pass inspection, the necessary emission related repairs will be made to make the vehicle/equipment compliant. Should a vehicle not comply with its certified emission standard, it shall be removed from the fleet.

As directed by the City's EP<sup>3</sup>, ecologically sound products, such as coolants and re-refined oils, shall be used where available, when cost effective, and when they do not void the manufacturer's warranty.

Re-treaded tires shall be purchased for large-wheeled or slow-moving vehicles, when applicable.

**Operation of Bi-Fuel Vehicles**

No bi-fuel vehicle owned by the City may be powered by gasoline, diesel, or other petroleum-based fuel while operating within the City, except where the bi-fuel required is unavailable, or in case of emergencies. In such cases, the maximum recommended use of alternative fuel shall be required. Bi-fuel vehicles owned by the City shall bear a notice stating the requirements of this subsection, posted in one or more locations that are plainly visible to the vehicle operator.

**Reducing Other Environmental Impacts of Vehicles**

In addition to tailpipe emissions, motorized vehicles and equipment may have other negative environmental impacts that can occur in their production, operation, and eventual disposal. Radiator fluids and other substances used in vehicles can have harmful consequences for the environment. Of particular concern are persistent, bio-accumulative, and toxic materials (PBTs), such as mercury, lead and arsenic, which can be released at the end of the life of a



**Green Fleet Policy**

**5.2.0**

vehicle. When opportunities are identified, Fleet Management will continue to reduce the production, operation and end-of-life environmental impacts of the vehicles it purchases.

City vehicles that are identified for retirement shall be evaluated on age, mileage, and emissions in order to determine the most appropriate disposal option in accordance with applicable Municipal Code regulations and EP<sup>3</sup>.

**Annual Reporting**

Fleet Management shall provide an annual report by November of each year, beginning in 2008, to the Transportation and Environment Committee for the prior fiscal year providing information to demonstrate compliance with this Policy.

This report shall include an update with regard to progress against the 25% emissions reduction goal, the percentage of Alternate Fuel Vehicles in the City Fleet, and year-by-year performance for each of these.

Annual Reports shall be reviewed by the Transportation and Environment Committee, the Green Fleet Team, and Fleet Management, and shall be used to determine program effectiveness and to target under-utilized vehicles for removal or reassignment.

Annual Green Fleet purchasing plans shall be developed using any/all of the options listed above, recommendations from the Transportation and Environment Committee, conformity to the City's EP<sup>3</sup> Policy, plus any other alternatives deemed appropriate to achieve the goals of this Policy.

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Peter Jensen, Director of General Services

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Date

Approved:

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Kay Winer, Chief Deputy City Manager

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Date