ITEM_____

# VILLAGE OF DOWNERS GROVE
## REPORT FOR THE VILLAGE COUNCIL WORKSHOP
## SEPTEMBER 8, 2009 AGENDA

| SUBJECT: | TYPE: | SUBMITTED BY: |
|---|---|---|
| Fleet Services Report | Resolution<br>Ordinance<br>Motion<br>✓ Discussion Only | David Fieldman<br>Village Manager |

### SYNOPSIS
Staff has prepared the Fleet Services Report for the Village Council's review and discussion.

### STRATEGIC PLAN ALIGNMENT
The Five Year Plan and Goals for 2008-2013 identified *Exceptional Municipal Organization.* The 2008-2009 Management Agenda identifies *Village Fleet: Evaluation and Direction* as a Top Priority action item.

### FISCAL IMPACT
N/A.

### RECOMMENDATION
Discussion only during the September 8, 2009 Manager's and Director's Report.

### BACKGROUND
A comprehensive analysis of the Village's fleet operations was identified in the Strategic Plan as a Top Priority for 2009. There are currently 194 vehicles and vehicle-related equipment and the value of the fleet is estimated at $10 million. A functional and well-maintained fleet is critical in the provision of safe, efficient and reliable core services. Replacing vehicles according to the vehicle replacement schedule results in reduced maintenance costs and allows staff to continue to provide high quality services to the public. Given the significant cost, staff has been actively researching and pursuing opportunities to minimize the cost of purchasing and maintaining Village vehicles, while ensuring that service levels continue to meet or exceed expectations.

In an effort to accomplish this goal, staff has completed the Fleet Services Report for 2009. The Fleet Services Report details the initiatives undertaken by staff in an effort to reduce the overall costs associated with the Village fleet. To date, staff estimates that efficiencies implemented in the Village fleet have resulted in savings of approximately 20%. Some of the major fleet efficiencies implemented by staff in 2009 include the following items:

- *Staffing Reductions* - The Fleet Maintenance Division has been performing all usual duties with one less mechanic since the first quarter of 2009, due to an employee resignation. Staff has successfully maintained the same level of service due to efficiencies gained from the enhanced use of the Computerized Fleet Analysis system. This has resulted in a savings of $72,000.
- *Enhanced Utilization of the Computerized Fleet Analysis Software (CFA)* - Procedures were implemented to the Computerized Fleet Analysis (CFA) software which will allow staff to more accurately track fuel usage, as well as schedule maintenance and document vehicle repairs. This has resulted in a savings in maintenance supplies and equipment purchases of approximately $50,000.
- *Reduced Fuel Consumption* – Staff has implemented several initiatives in an effort to reduce fuel consumption and lower costs. These efficiencies, coupled with a reduction in the cost of fuel in

2009, have resulted in an approximate savings of $150,000. Some of the fuel savings initiatives include:

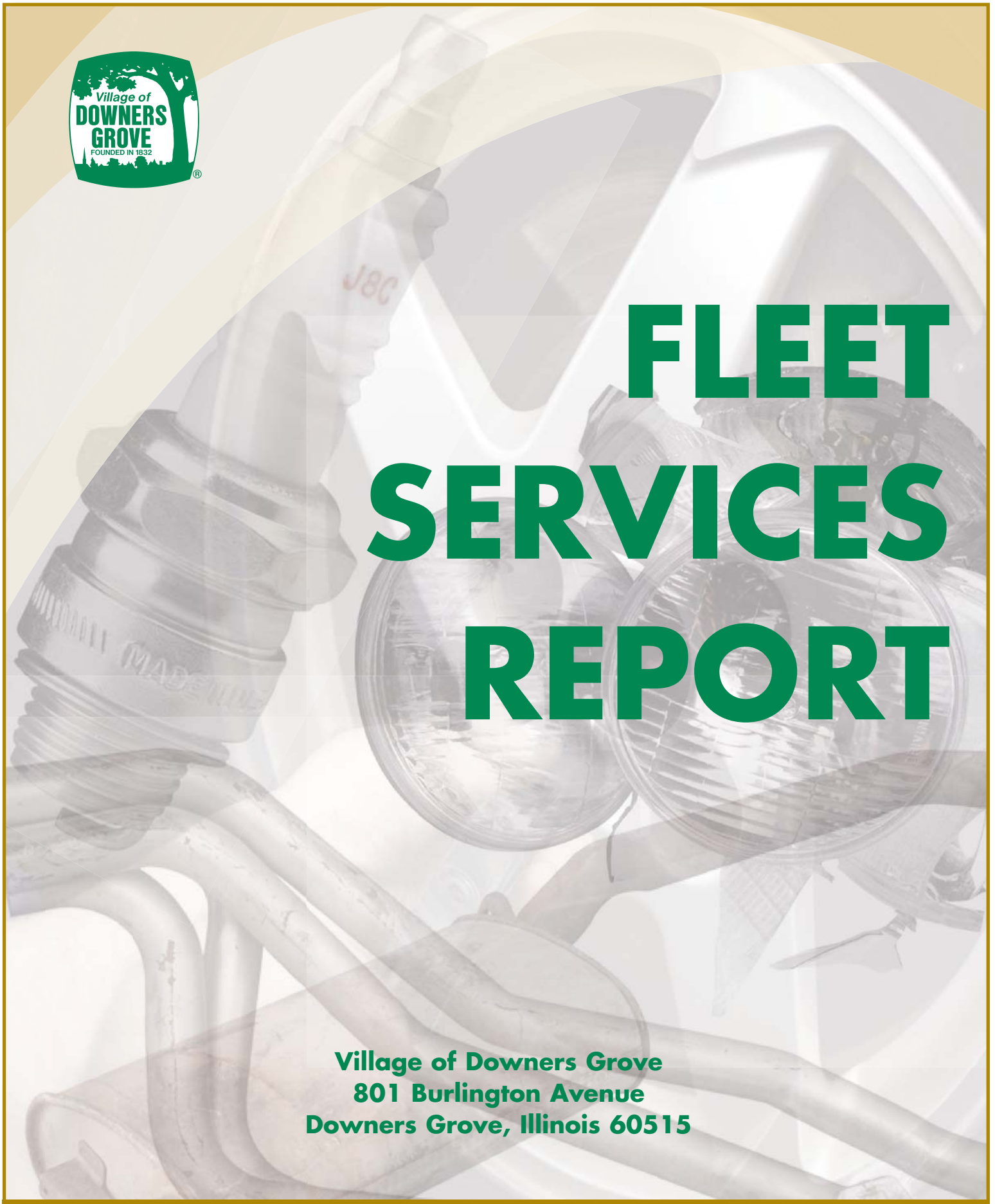
- Anti-Idling Policy
- Fire Department Jump Company
- Switch to Nitrogen Tire Inflation

- *Reduction in Fleet Size* - The FY09 budget calls for a reduction in the Village fleet by eleven vehicles. Additionally, the vehicle inventory analysis has resulted in a reduction further reduction of four vehicles to date. The fifteen vehicle reduction in the Village fleet is estimated to produce a cost savings of approximately $200,000

The Village will continue to identify and implement enhancements to fleet operations on an ongoing basis. These changes will serve to distinguish the Village as a leader in the environmentally and financially sustainable operation of its fleet. This represents one example of the broader effort to change the business model for Village operations.

**ATTACHMENTS**

Fleet Services Report



# FLEET SERVICES REPORT

Village of Downers Grove
801 Burlington Avenue
Downers Grove, Illinois 60515

## AUGUST 2009

**Team Lead:**

**Judy Buttny**
***Finance Director***

**Team Members:**

**Stan Balicki**
***Assistant Director of Public Works, Operations***

**Brandon Dieter**
***Management Analyst***

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***Fleet Services Manager***

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***Budget Officer***

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***Management Intern***

# EXECUTIVE SUMMARY

A comprehensive analysis of the Village's fleet operations was identified in the Strategic Plan as a Top Priority for 2009. There are currently 194 vehicles and vehicle-related equipment, and the value of the fleet is estimated at $10 million. A functional and well-maintained fleet is critical in the provision of safe, efficient and reliable core services. Replacing vehicles according to the vehicle replacement schedule results in reduced maintenance costs and allows staff to continue to provide high quality services to the public. Given the significant cost, staff has been actively researching and pursuing opportunities to minimize the cost of purchasing and maintaining Village vehicles, while ensuring that service levels continue to meet or exceed expectations.

In an effort to accomplish this goal, staff has completed the Fleet Services Report for 2009. The Fleet Services Report details the initiatives undertaken by staff in an effort to reduce the overall costs associated with the Village fleet. To date, staff estimates that efficiencies implemented in the Village fleet have resulted in savings of approximately 20%. Some of the major fleet efficiencies implemented by staff in 2009 include the following items:

- *Staffing Reductions* - The Fleet Maintenance Division has been performing all usual duties with one less mechanic since the first quarter of 2009, due to an employee resignation. Staff has successfully maintained the same level of service due to efficiencies gained from the enhanced use of the Computerized Fleet Analysis system. This has resulted in a savings of $72,000.
- *Enhanced Utilization of the Computerized Fleet Analysis Software (CFA)* - Procedures were implemented to the Computerized Fleet Analysis (CFA) software which will allow staff to more accurately track fuel usage, as well as schedule maintenance and document vehicle repairs. This has resulted in a savings in maintenance supplies and equipment purchases of approximately $50,000.
- *Reduced Fuel Consumption* – Staff has implemented several initiatives in an effort to reduce fuel consumption and lower costs. These efficiencies, coupled with a reduction in the cost of fuel in 2009, have resulted in an approximate savings of $150,000. Some of the fuel savings initiatives include:
    - Anti-Idling Policy
    - Fire Department Jump Company
    - Switch to Nitrogen Tire Inflation
- *Reduction in Fleet Size* - The FY09 budget calls for a reduction in the Village fleet by eleven vehicles. Additionally, the vehicle inventory analysis has resulted in a further reduction of four vehicles to date. The fifteen vehicle reduction in the Village fleet is estimated to produce a cost savings of approximately $200,000

The Village will continue to identify and implement enhancements to fleet operations on an ongoing basis. These changes will serve to distinguish the Village as a leader in the environmentally and financially sustainable operation of its fleet. This represents one example of the broader effort to change the business model for Village operations.

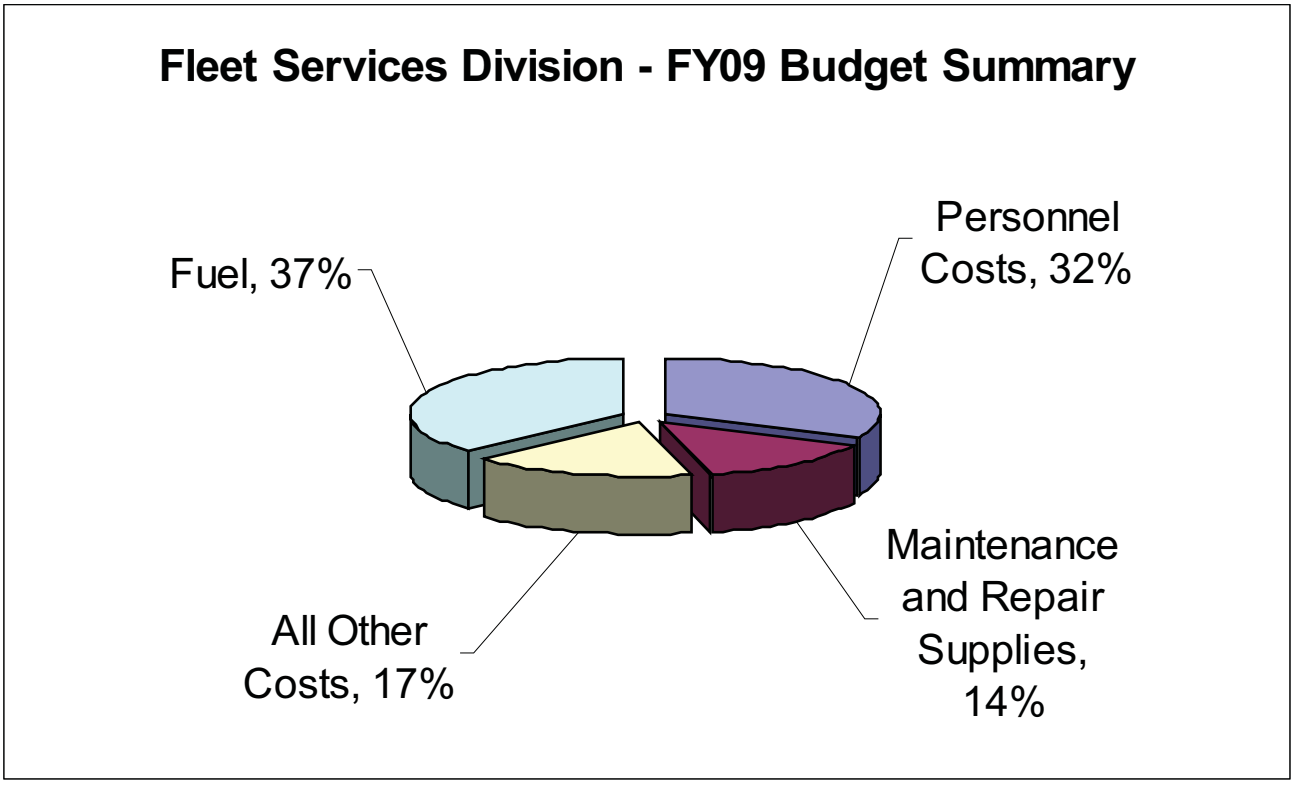
# FLEET SERVICES DIVISION

Fleet Services is a division of Public Works dedicated to keeping all of the Village's vehicles in proper working order for the safety of our employees and the general public.

A fully budgeted staff consists of 6.6 Full Time Equivalent (FTE) employees which include five mechanics, a Parts Technician, Shop Assistant and a Fleet Services Manager who oversees all aspects of the Fleet Services Division.

*** The value of the Village's fleet is approximately $10 million dollars.**

The Fleet Services Division annual budget is allocated as follows:



With few exceptions, most repairs and maintenance are performed by the Village's Fleet Mechanics, who must be technically skilled to work on a wide variety of vehicles ranging from light duty (administrative and patrol cars) to those of a specialized nature such as snow plows, fire engines, ambulances and buses. On occasion, some repairs are outsourced to a third party vendor. Fleet Mechanics' primary responsibilities include:

- Preventive maintenance such as oil changes, tire rotation, safety inspections, fluid level checks, etc.
- Repairs to vehicles and miscellaneous equipment in the fleet.
- Responding to calls in the field for equipment repair.
- Installation of vehicle enhancements.

The Fleet Services Manager coordinates the analysis and upkeep of the vehicle replacement schedule and parts inventory. Data is maintained using Computerized Fleet Analysis (CFA) software, which has been in use by staff since the early 1990s. CFA has the ability to monitor the vehicle maintenance schedule, repair history and track parts inventory. Recent software upgrades will allow for the future tracking of vehicle mileage and fuel consumption.

Historically, the Village has entered into Intergovernmental Agreements (IGAs) with local entities for the use of our fueling station at Public Works. The following entities pay the Village's rate of fuel, plus an additional administrative fee per gallon for the service:

- Village of Lisle
- Village of Westmont
- Downers Grove Sanitary District
- Downers Grove Grade School District 58
- DuPage County
- Forest Preserve District of DuPage County
- SEASPAR (added in January 2009)

# FLEET ANALYSIS

A comprehensive analysis of the Village's fleet was identified in the Strategic Plan as a Top Priority for 2009. At the request of the Village Council, staff conducted a review of the Village's fleet in order to analyze operational efficiencies and areas of potential cost savings.

In June of 2008, staff was in the process of cataloging the Village's vehicle inventory, an undertaking that was completed in February 2009. In summary, there are a total of 198 vehicles/pieces of equipment in the Village Fleet. The following chart shows vehicle allocation by department/area, as well as the type of fuel used.

| PROGRAM | Count | Unleaded | Bio-Diesel | CNG | Propane | Hybrid | E-85 | Solar | NA* |
|---|---|---|---|---|---|---|---|---|---|
| Building Administration | 2 | 1 | 1 | | | | | | |
| | | | | | | | | | |
| PUBLIC WORKS: | | | | | | | | | |
| Engineering | 7 | 2 | | 5 | | | | | |
| Street Construction | 2 | 1 | | 1 | | | | | |
| Supplies and Inventory | 2 | | 1 | 1 | | | | | |
| Public Service Response Team | 2 | | 2 | | | | | | |
| Forestry/Snow Removal | 20 | 3 | 14 | | | 1 | | | 2 |
| Pavement/Snow Removal | 22 | 1 | 14 | | 2 | | 2 | | 3 |
| Drainage | 17 | | 16 | | | | | | 1 |
| Traffic | 11 | | 3 | 1 | | 1 | | 6 | |
| Water | 8 | 2 | 4 | 1 | | | 1 | | |
| POLICE: | | | | | | | | | |
| Administration | 3 | 1 | | | | | 2 | | |
| Traffic Enforcement | 30 | 26 | | | | 3 | | 1 | |
| Investigations | 11 | 8 | | | | | 3 | | |
| Emergency Response | 1 | | 1 | | | | | | |
| Community Support | 1 | 1 | | | | | | | |
| Parking Enforcement | 2 | | | 2 | | | | | |
| FIRE: | | | | | | | | | |
| Administration | 6 | 5 | | | | 1 | | | |
| Suppression | 12 | 1 | 9 | | | | 1 | | |
| Training | 3 | | | | | | 1 | | 2 |
| Prevention | 3 | 2 | | | | | | | 1 |
| Hazardous Material | 2 | | 1 | | | | | | 1 |
| Public Education | 2 | | | | | | 1 | | 1 |
| EMS | 6 | 1 | 5 | | | | | | |
| | | | | | | | | | |
| Cable TV | 1 | | 1 | | | | | | |
| Transportation | 7 | 1 | 6 | | | | | | |
| Community Development | 6 | | | 6 | | | | | |
| Fleet Maintenance | 5 | 2 | 1 | | 1 | | 1 | | |
| TOTAL FLEET | 194 | 58 | 79 | 17 | 3 | 6 | 12 | 7 | 12 |

* The NA column represents non-motorized equipment in the inventory that does not use any fuel, such as trailers.

## Alternative Fuel Vehicles

The Village started its acquisition of alternative fuel vehicles (AFVs) in 2001 when it purchased seven Compressed Natural Gas (CNG) vehicles for the Public Works Department. Compared to conventional fuels, alternative fuels burn cleaner, reducing the emissions of harmful air contaminants such as carbon monoxide, carbon dioxide and hydrocarbons. Most recently, the Village purchased six CNG Honda Civic GX models in 2008 which are currently in use by the Community Development staff.

In addition to CNG, the Village's alternative fuels include biodiesel and E85.

**Biodiesel** is produced from domestic renewable resources such as plant oils, animal fats, used cooking oil and even new sources such as algae. Though biodiesel itself contains no petroleum, the grade of this fuel purchased by the Village is blended with petroleum diesel. Biodiesel blends can be used in most types of compression-ignition (diesel) engines with little or no modifications. Biodiesel is simple to use, biodegradable, nontoxic, and essentially free of sulfur and aromatics.

**E85** is the term used to describe motor fuel blends that consist of 85% ethanol and 15% gasoline. Besides its superior performance characteristics, ethanol burns cleaner than gasoline and it is a completely renewable, domestic, environmentally-friendly fuel that enhances the nation's economy and energy independence. Ethanol also degrades quickly in water and, therefore, poses much less risk to the environment versus an oil or gasoline spill.

Over half of the Village's fleet utilizes alternative fuels. The benefits of using AFVs are not only to the environment but also to the bottom line. AFVs typically save money in the form of lower fuel and maintenance costs and longer vehicle life, thereby extending the vehicle's replacement schedule. In addition, diversifying the types of fuels used by the fleet reduces our reliance on foreign oil and on any single type of fuel.

Downers Grove participates in the voluntary program Illinois Green Fleets through the State of Illinois. Organizations gain recognition for having clean, alternative fuel vehicles in their fleet. The Village has received rebates through the Illinois EPA's Alternative Fuel Vehicle Rebate Program since 2001. As an example, in 2008 the Village received a rebate of $24,000 for the purchase of the six Honda Civics referenced above.

*** Fuel is the single biggest maintenance expense in the Fleet Maintenance Fund.**

## Fuel Purchasing Reductions

Staff has reviewed fuel purchases for January through early June of 2009 and compared this data with purchases made for the same period in 2008, as outlined below:

| | January - June Purchases | | |
|---|---|---|---|
| Fuel Type | 2008 | 2009 | % Difference |
| Unleaded | 50,796 | 48,019 | -5.47% |
| Bio-Diesel | 49,744 | 34,416 | -30.81% |
| E-85 * | 4,033 | 8,502 | 110.81% |
| Total Fuel Purchased in Gallons | 104,573 | 90,937 | -13.04% |

* Please note that only one E-85 purchase was made during the first six months of 2008, versus two that were made during the same time frame in 2009.

Because the Village has storage capability at the Public Works fueling station, fuel can be purchased in advance of immediate need. As such, unleaded fuel is purchased twice a month, bio-diesel once a month and E-85 is purchased twice a year.

Overall, fuel consumption has been reduced through operating efficiencies detailed in the next section, as well as efficiencies realized from the use of AFV's.

# ACTIONS IMPLEMENTED IN 2009

## Fleet Reduction

The FY09 budget calls for a reduction in the Village fleet by 11 vehicles, valued at $111,000. The vehicle inventory analysis has resulted in a reduction of four additional vehicles to date, valued at $90,000 in the areas of Public Works, Community Development and the Police Department.

## Maintenance Software Upgrade

Procedures were implemented to the Computerized Fleet Analysis (CFA) software which will allow staff to more accurately track fuel usage, as well as schedule maintenance and document vehicle repairs. While CFA has been a tool used by the Fleet Maintenance staff, a more comprehensive use of the system began in January 2009 after a software upgrade was installed. Staff received a refresher course about the overall functions of the CFA system, as well as the new features installed that the Village will be monitoring.

## Switch to Nitrogen Tire Inflation

Staff is in the process of converting to the use of nitrogen to inflate the tires of all Village vehicles and equipment. Vehicles will be converted as they are brought to Fleet Services for regular maintenance. The advantages of nitrogen for tire inflation include improvements in a vehicle's handling, fuel efficiency and tire life through better tire pressure retention, improved fuel economy and cooler running tire temperatures.

Compared to inflating tires with oxygen, nitrogen permeates more slowly and maintains proper tire pressure longer. Properly inflated tires increase a vehicle's gas mileage by 3.3%, which translates into fewer toxins being emitted into the environment, as well as fuel savings of approximately $15-18,000 per year.

## Reduction in Staff

The Fleet Maintenance Division has been performing all usual duties with one less mechanic since the first quarter of 2009, due to an employee resignation. This has resulted in a savings of $72,000. Per current Village policy, the position has not been filled. Staff has successfully maintained the same level of service due to efficiencies gained from the enhanced use of the Computerized Fleet Analysis system, as described above.

## Anti-Idling Policy

In the summer of 2008, the Village Manager issued a directive to staff regarding engine idling of Village vehicles. The Manager's overall goal to eliminate unnecessary idling of vehicles results in reduced wear on engines, reduced fuel consumption, and fewer pollutants emitted into the atmosphere. Vehicle operators were directed to be cognizant of the environmental hazards and increased costs linked with excessive idling of vehicles and to turn off their engines whenever practical. In response to this directive, the Police Department drafted a written formal Anti-Idling Policy.

## "Jump Company"

The Fire Department adopted a "Jump Company" operation to be used for certain types of calls. Under this policy, one less vehicle is dispatched, resulting in overall fuel savings.

## FUTURE OPPORTUNITIES

As we continue to look for other operational and cost efficiencies, there are several areas of opportunity for the Village to explore.

**Sources of Savings**

***Fleet Purchasing and Leasing Evaluation***
Staff is currently in discussions as to whether or not it would be in the Village's interest to lease a portion of the fleet. Further evaluation is needed to determine if there would be any true savings realized over the life of the vehicle. With each large or combined fleet purchase, we will continue to evaluate possible options.

***Village Motor Pool***
With enhanced data from the upgrade of the Computerized Fleet Analysis (CFA) software, including better tracking of vehicle mileage, staff will look into creating an interdepartmental motor pool. In theory, a standard mileage threshold would be determined for all Village vehicles. Vehicles coming in under that figure for the year would warrant a review as to whether the vehicle was still needed by that department. The creation of a Village motor pool would meet the occasional needs of those departments that may lose a vehicle.

***Village-wide Anti-Idling Policy***
On the heels of the Police Department policy, staff is in the process of creating a written formal Anti-Idling Policy for all Village vehicles.

***Grants***
Staff has submitted an application for $11,200 in funds related to the National Clean Diesel Program. Potential grant funding would be utilized for installing idling units on the Village's diesel powered vehicles so that it would be unnecessary to idle the engines to keep the cabs warm in cold weather.

Staff is also considering partnering with the City of Chicago in an effort to obtain grant funds from the Department of Energy.

***CNG Usage for Large Vehicles***
Staff will be investigating whether some of the Village's larger vehicles may be replaced by models powered by compressed natural gas (CNG). The first test case will be considered in 2010.

***Fueling Station Upgrades***
Staff will investigate upgrading the fueling station hardware and software components in an effort to more accurately track fuel usage.

***Develop Performance Measures***
The Computerized Fleet Analysis (CFA) software can be used to help us develop a set of performance measures to make decisions about future vehicle purchases and aid in accurate vehicle replacement schedule.

***Explore Options to Reduce Accidents***
Staff will review alternatives to reduce accidents with Village vehicles. Options to consider include the creation of an Accident Review Panel to review all accidents involving Village vehicles, and the installation of two-way video cameras in Village vehicles.

***Generate Service-Level Agreements***
A service-level agreement defines the responsibilities of both fleet services and the individual department as to what work will be performed on the vehicle and the expected length of time it will be out of service.

A policy such as this holds Fleet Services accountable and has the effect of improving operational efficiencies, as well as encouraging better internal customer service.

***Establish Vehicle Standards***
An opportunity exists to impose standards for light-duty vehicles and accessories on all departments. The Village should look at developing a set of standards that outlines the type of vehicle needed, down to make and model, for a department's specific use. Adoption of a vehicle standards policy would limit future new vehicles and replacements to the standardized choices.

***Evaluate Cost Allocation Model***
A review of current practices may yield operational efficiencies not yet realized by more accurately allocating costs to Village departments.

***Monitor Technology***
Staff will keep abreast of new advances in alternative fuels to ensure we remain competitive and receive the best value for our money.

**Possible Revenue Sources**

***Fleet Service and Repair Intergovernmental Agreements***
In May of 2009, staff repaired a vehicle for the Sanitary District. This repair served as the impetus for the Village to explore the possibility of Intergovernmental Agreements (IGAs) for fleet maintenance, service and repair as a possible revenue generator. More research and direction is needed to determine if it would be worth our while to engage in this type of activity.

***Retail Sale of CNG***
Village Staff is proposing that the Village enter into an agreement with a Downers Grove business for the retail sale of CNG.