

# **Fund Overview**

The Department of Vehicle Services (DVS) delivers efficient and effective vehicle fleet management services — reliable, economical and environmentally sound transportation and related functions. DVS is focused on being responsive to the needs of its customers and preserving the value of the County's vehicle and equipment investment.

DVS provides centralized maintenance and repair services on vehicles and equipment owned by Fairfax County (including Fire and Rescue apparatus, Police cruisers and utility vehicles, and trash trucks) and Fairfax County Public Schools (FCPS) (including all school buses, food and nutrition trucks, and security vehicles) that are in conformance with all federal, state, and county policies, regulations, and procedures.

DVS maintains the largest municipal fleet in the Commonwealth of Virginia and the 10<sup>th</sup> largest school bus fleet in the nation. Approximately 178 mechanics over two shifts at four maintenance facilities strategically located across the County provide timely, responsive and efficient vehicle repairs and services for a broad range of equipment. At the end of FY 2015, the County and FCPS fleet consisted of 6,098 units, of which 5,902 were maintained by DVS. Of the total DVS-maintained units, 2,413 units belong to FCPS. The remaining 3,489 County units consisted of approximately 1,028 vehicles more than one half ton (i.e. specialized equipment, dump trucks, wreckers), 882 police package vehicles (includes motorcycles), 979 light vehicles (one half ton or less in capacity), and 600 off-road and miscellaneous equipment (i.e. loaders, dozers, trailers, mowers, snow plow blades). Fairfax Connector buses and vehicles owned by Fairfax Water Authority are not included in the County fleet count.

Body shops located in two of the facilities provide prompt completion of minor repairs thus reducing the time a vehicle is out of service. Mechanics configure and up fit new vehicles for the Fairfax County Police Department (FCPD) and Office of the Sheriff so they can perform their mission effectively and efficiently. For every new vehicle that is built, another vehicle is stripped of police and sheriff specific decals and interiors before it is sold at public auctions to other municipalities.

DVS administers an internal Quality Control program to make certain that vehicles purchased and maintained by DVS adhere to a defined set of criteria. Quality Control employees inspect all new County-owned vehicles and FCPS buses upon arrival to a DVS site and verify all safety and mechanical requirements have been met. In addition, this program investigates accidents and randomly spot checks work performed by mechanics to ensure it conforms to all federal, state, local and vehicle requirements.

Parts rooms are located at all four maintenance facilities and are responsible for ordering, receiving, issuing and disposing of stock. In total, DVS stocks approximately 5,200 parts with an annual value of \$2.2 million and has a 100 percentage inventory management spot check rating from the Department of Procurement and Supply Management (DPSM).

DVS manages funds for Helicopter, Boat, and Police Specialty Vehicle Replacement for the FCPD; an Ambulance and a Large Apparatus Replacement Fund for the Fire and Rescue Department (FRD); and a FASTRAN Bus Replacement Fund for the Department of Neighborhood and Community Services with a combined total FY 2016 Adopted budget of \$8.5 million. All three departments make fixed annual payments into their specialty vehicle fund to ensure future funding is available to replace vehicles and equipment. Vehicles must meet both the age and mileage criteria for the vehicle type or complete a conditional survey showing the vehicle is uneconomical to repair before they are replaced. When vehicles are replaced, the old vehicle is sold in accordance with procurement guidelines and revenue is deposited into the corresponding fund. All new vehicles are registered, inspected and provided County decals by DVS staff.

Fuel Operations is responsible for fuel at 53 sites and administration of commercial fuel credit cards. Fuel operations are dynamic and heavily regulated by the Environmental Protection Agency (EPA) and the Virginia Department of Environmental Quality (DEQ). Management of the fuel sites requires providing an adequate supply of fuel by planning, coordinating, procuring and paying for fuel deliveries. DVS is responsible for managing repairs to and replacement of fuel tanks and equipment, managing the automated fuel system, ensuring compliance with Federal and State regulations regarding testing for leaks and any necessary notification remediation of site contamination.

DVS practices environmental stewardship in all areas and ensures compliance with environmental permits for all four maintenance facilities. The department participates in the Virginia Environmental Excellence Program established by DEQ and, when possible, includes increased fuel efficiency and reduced emissions requirements in vehicle specifications. In addition, DVS participates in the Virginia Pollutant Discharge Elimination System Permit Program and maintains one permit for each of the four maintenance facilities.

A centralized vehicle maintenance and management operation is beneficial in achieving economies of scale, which are obtainable because of the large volume of work performed and contracts administered directly by DVS. Centralized services ensure County, state and federal policies and regulations are interpreted consistently and effectively, application of new technologies and parts are identified and implemented, and customers can focus on their lines of business without interruption. DVS exercises corporate stewardship by reflecting sound management of County resources and assets when purchasing fuel, vehicles and equipment for the County.

## **Fund Resources**

Category	FY 2014 Actual	FY 2015 Actual	FY 2016 Adopted
	FUNDING		
Expenditures:			
Compensation	\$13,843,106	\$14,312,686	\$15,821,955
Benefits	5,891,482	6,308,208	6,360,673
Operating Expenses	51,734,273	46,310,401	48,344,636
Capital Equipment	17,692,139	14,654,549	15,011,361
Total Expenditures	\$89,161,000	\$81,585,844	\$85,538,625
Transfers Out:			
Transfer Out to General Fund	\$1,224,931	\$0	\$0
Total Transfers Out	\$1,224,931	\$0	\$0
Revenues:			
Vehicle Replacement Charges	\$5,723,886	\$7,618,637	\$6,180,704
Ambulance Replacement Charges	233,505	248,377	214,000
Fire Apparatus Replacement Charges	4,044,472	4,245,879	3,134,000
FASTRAN Bus Replacement Charges	239,962	574,962	304,962
Helicopter Replacement Charges	1,106,834	661,000	640,000
Boat Replacement Charges	69,019	69,019	69,019
Police Specialty Vehicle Charges	245,760	245,760	251,860
Vehicle Fuel Charges	31,913,911	24,588,720	28,190,693
Other Charges	37,303,325	40,581,299	42,460,887
Total Revenue	\$80,880,674	\$78,833,653	\$81,446,125
	POSITIONS		
Authorize	d Positions/Full-Time Equivalents (F	TEs)	
Positions:			
Regular	258 / 258	258 / 258	260 / 260
Total Positions	258 / 258	258 / 258	260 / 260

# **Lines of Business Summary**

		FY 2016 Ado	pted
LOB#	LOB Title	Disbursements	Positions
297	Vehicle Maintenance and Management	\$42,546,823	258
298	Vehicle / Equipment Replacement Funds	14,776,215	1
299	Fuel Operations	28,215,587	1
Total		\$85,538,625	260

# **Lines of Business**

LOB #297:

## VEHICLE MAINTENANCE AND MANAGEMENT

## **Purpose**

DVS works to ensure that departments and agencies have the fleet means to support their missions while also maintaining fleet levels that are appropriate to actual program and service requirements. DVS provides centralized maintenance and repair services on vehicles and equipment owned by Fairfax County and FCPS that are in conformance with all federal, state, and County policies, regulations, and procedures. In addition, DVS is responsible for acquiring and disposing of vehicles and equipment, performing preventative maintenance, ensuring safety recalls are completed and complying with environmental permits for all four maintenance facilities. When possible, increased fuel efficiency and reduced emissions requirements are included in vehicle specifications to be economically responsible and good environmental stewards.

## **Description**

Under the Vehicle Maintenance and Management LOB, approximately 178 mechanics service and maintain 5,902 vehicles and pieces of equipment (including 1,610 school buses) and approximately 30 material management specialists' purchase and stock approximately 5,200 parts at four facilities. Roadside emergency repair services are provided at competitive rates and administrative staff manages a motor pool of 43 vehicles. This LOB is comprised of five discrete programs: maintenance and operations, parts, quality control, motor pool and environment. The five programs are strategically bundled within the organizational structure to ensure DVS preserves the value of the vehicle and equipment investment while maintaining high standards for quality and safety.

## **Maintenance and Operations**

County employees provide vehicle maintenance and repair services to customer agencies. Professional mechanics are trained to perform scheduled and non-scheduled (emergency repairs) work on most vehicles and equipment, and build specialty vehicles to customer specifications. Services range from State inspections, oil changes, and tire replacements to body work, decals and troubleshooting transmission and engine issues. DVS coordinates recalls and warranty work or significant repairs (i.e. accident damage) with contracted commercial vendors.

The maintenance and operations program is responsible for the configuration and up fit of new vehicles for the FCPD and Office of the Sheriff. The objective is to provide both agencies with safe and reliable vehicles that are configured to perform their mission effectively and efficiently. FCPD and the Sheriff work together to maintain a balance of operational flexibility and logistical manageability. In addition, for every new vehicle that is built another vehicle is stripped of police and sheriff specific decals and interiors before it is sold at public auctions for other municipalities.

All new vehicles are registered, inspected, and provided County decals by DVS staff. At the end of the vehicle or equipment's useful life, all decals are removed and DVS works with the DPSM to sell them.

#### **Parts**

Supply, inventory and inventory control are the backbone of support activities to the main function of vehicle repair and maintenance. The parts section operates as a separate program and is responsible for ordering, receiving, issuing and disposing of stock. This program stocks items ranging from common items such as tires, batteries, fuel, oil, to more unique items such as jockey pumps for fire and rescue apparatus and bumpers and windshields for school buses and fire and rescue apparatus. In addition, parts issues contracts for work to be performed by outside vendors to include recycling and reuse contracts.

## **Quality Control**

The Quality Control program is responsible for ensuring that vehicles purchased and maintained by DVS adhere to a defined set of quality criteria. The program supports DVS' mission of providing customers with vehicles and equipment that are available to users when they are needed; reliable when they are in use; safe to operate; and maintained in an environmentally responsible manner.

## **Environment**

DVS participates in the Virginia Environmental Excellence Program ("VEEP"). VEEP was established by DEQ to encourage environmental performance. The program encourages "facilities and organizations within the Commonwealth that have strong environmental records to go above and beyond their legal requirements." DVS submits an annual report on environmental progress at all four maintenance facilities.

DVS also participates in the Virginia Pollutant Discharge Elimination System Permit Program and maintains one permit for each of the four maintenance facilities. DVS contracts with an environmental specialist to perform quarterly visual monitoring and semi-annual monitoring of maintenance facility Stormwater utility outfalls at all four maintenance facilities. Discharge Monitoring Reports (DMR) are reviewed by the Superintendent at each facility, certified and submitted to the DEQ.

#### **Motor Pool**

The Motor Pool program is comprised of 43 vehicles based at the Government Center that are shared among staff. Motor pool vehicles are available for hourly/daily rental to agencies with programs that require predictable but limited use of a vehicle and whose needs do not justify an agency-owned vehicle. In addition, motor pool vehicles are utilized by County employees for unpredictable use to include attending meetings, training, and other events. Customers pay for use of the Motor Pool with two charges: an hourly fee, with an 8 hour/day maximum, and a mileage charge.

## **DVS Customers for Vehicle Maintenance and Management**

Vehicle Maintenance and Management customers are comprised of General Fund and Non General Fund agencies and FCPS. The following chart represents the vehicles maintained by DVS as of the end of FY 2015:

Category	Number of Vehicles	Percentage of Fleet
County	3,489	<b>59</b> %
Public Safety	1,810	31%
Non-Public Safety	1,027	17%
Other	652	11%
FCPS	2,413	41%
TOTAL	5,902	

DVS does not maintain Connector buses, FASTRAN buses, Fairfax Water Authority vehicles, and FRD equipment (e.g. ladders, pumps, hoses, etc.). DVS maintains the largest municipal fleet in the state of Virginia and the 10<sup>th</sup> largest school bus fleet in the nation (School Bus Fleet magazine "Top 100 School District Fleets of 2014").

## **Locations and Hours of Operation**

DVS has four maintenance facilities and a centrally located administrative office. The Jermantown and West Ox facilities are located in the central part of the County along I-66, and the Newington and Alban facilities are located on the southeast end of the County along the I-95 corridor. All maintenance facilities are open Monday through Friday from 5:30 a.m. to 10:00 p.m. Staff are deemed essential personnel. In addition, County staff performs some maintenance at police stations, fire stations and at customer work sites

The Central Motor Pool desk, located in the Government Center is open from 7:00 a.m. to 4:30 p.m., Monday through Friday; however, with prior arrangements, customers can pick up vehicles 24 hours a day. Vehicles at the Motor Pool satellite location at the DVS Jermantown Maintenance Facility are available 5:30 a.m. to 10:30 p.m., Monday through Friday.

## **Benefits**

Administering the County's vehicle fleet requires consideration of many issues including the environment (emissions and waste by-products associated with vehicle maintenance), vehicle safety (state requirements for school bus inspections, state safety inspection requirements, etc.) and automotive technology (mechanics associated with alternatively fueled engines, safety equipment, computerization, recycled products, etc.).

County agencies contract with DVS to perform all maintenance and repair services for their vehicles and equipment. Therefore, DVS is responsible for administering preventive maintenance schedules, and ensuring that all vehicles have current State and Emission Inspections, meet Federal, State and local safety standards, and have valid license tags (State and County). In addition, DVS audits contractors to verify they are performing in accordance with required federal, state and local regulations. As a result, the County receives a cost-effective, centralized and orderly process for County agencies to maintain their vehicles in safe and good working order. County agencies who provide direct services to the residents of Fairfax County can continue to provide direct services without the worry of vehicle maintenance, which falls outside their stated mission. The community can rest assured that when they call for services from any County agency to include public safety and public works - the vehicles will reach the final destination without a potential breakdown.

## **Outsourced Services**

Currently, approximately 11.7 percent of County vehicle maintenance work is performed by outside contractors when deemed more efficient. It is important to note that this includes recall and warranty work that must be performed off site. Typical jobs that are contracted to commercial vendors (beyond recall and warranty work) include engines repairs, transmission repairs or replacements, light vehicle body work and windshield repairs.

Since Connector and FASTRAN services were formed, contractors have been responsible for maintenance. However, DVS manages the FASTRAN Reserve Fund discussed in LOB #298, Vehicle/Equipment Replacement Funds and provides fuel to Connector and FASTRAN as discussed in LOB #299, Fuel Operations. If maintenance and repair services for Connector and FASTRAN were included, the percentage of vehicle maintenance work performed by contractors would rise to approximately 35 percent.

## **Economies of Scale**

A centralized Vehicle Maintenance and Management program is beneficial in achieving economies of scale, which are obtainable because of the large volume of work performed directly by DVS. If not centrally administered, economies of scale would not be realized for opportunities such as: aligning workload, available resources to meet dynamic and unique requirements, analyzing vehicle repair data, procuring replacement parts in bulk, and more. Additionally, centralized services ensure County, state and federal policies and regulations are interpreted consistently and effectively, application of new technologies and

parts are identified and implemented, and customers can focus on their lines of business without interruption.

### **Mandates**

Programs within LOB #297, Vehicle Maintenance and Management are not mandated; however, because the County chooses to provide vehicle maintenance and management services, it must be performed in accordance with the federal and state guidelines outlined below.

#### **Federal**

Title CFR 49-396.3, Federal Highway Administration, the Departments of Transportation and Homeland Security - Inspection, Repair and Maintenance of Motor Vehicles, requires that vehicles or motor vehicle equipment must be maintained in such a manner as to ensure a condition that protects the public against unreasonable risk of accidents.

All mechanics and supervisors employed by Fairfax County are required to have a current Commercial Drivers License (CDL). Therefore, DVS must comply with the following Federal and County mandates.

The Commercial Motor Vehicle Safety Act of 1986 (CMV) was signed into law on October 27, 1986. The goal of the Act is to improve highway safety by ensuring that drivers of large trucks and buses are qualified to operate those vehicles and to remove unsafe and unqualified drivers from the highways. The Act retained the State's right to issue a driver's license, but established minimum national standards that states must meet when licensing CMV drivers. A person shall not drive a commercial motor vehicle unless he/she is physically qualified to do so and, has on his/her person the original, or a photographic copy, of a medical examiner's certificate that he/she is physically qualified to drive a commercial motor vehicle.

The County's CDL program was established to comply with federal regulations. The Omnibus Transportation Employee Testing Act of 1991 prohibits covered employees from being under the influence of drugs while working and requires drug and alcohol testing for CDL holders and other covered workers. The Department of Transportation (DOT) publishes rules on who must conduct drug and alcohol tests, how to conduct those tests and what procedures to use when testing.

Fairfax County CDL program requirements apply to those who drive a County commercial vehicle, regardless of the duration or frequency of such driving. The program includes those who drive for a training program or test driving (after repair) purposes. The program covers regular drivers, backup drivers and temporary employees who are required to hold the CDL.

#### **Commonwealth of Virginia**

<u>Code of Virginia</u>: 46.2 Motor Vehicles, Chapter 10: Motor Vehicle and Equipment Safety, §46.2-1157, requires all vehicles to submit to an inspection of its mechanisms and equipment within 12 months of the month of the first inspection and at least 12 months thereafter.

<u>Code of Virginia</u>: 46.2 Motor Vehicles, Chapter 10: Motor Vehicle and Equipment Safety, §46.2-1178, provides guidance on the administration and scope of emissions inspection program. The code requires all small vehicles with gasoline engines to have emission inspections biennially by qualified inspectors. Inspectors are located at all four DVS maintenance facilities and are certified by DEQ.

Board of Education transportation regulations: 8VAC20-70-130, Maintenance Inspection, requires all school buses and activity buses used to transport pupils to and from school and/or school activities to be inspected and maintained by competent mechanics at least once every 45 school days, or every 5,000 miles. This interval changed from every 30 operating days/2,500 miles in September 2012. DVS ensures compliance with the regulation.

#### **Other**

LOB #297, Vehicle Maintenance and Management is responsible for ensuring all warranties established by manufacturer remain operational and protect the passengers and public against unreasonable risk of accidents.

## **Trends and Challenges**

#### **Trends**

## **Application of New Technologies**

Many types of diagnostic software are required to diagnose and repair vehicle issues today and the application and training of new technologies is an ongoing trend and challenge for DVS. Technicians use most of this technology in DVS facilities today; however, in the near future, DVS may be required to purchase new technology to include oscilloscopes. An oscilloscope is an electrical testing device used to measure the frequency of an electrical signal over time, and display waveform signals in a graph. An oscilloscope is used by engineers, technicians, medical professionals, and educators for testing, measuring, and inspecting.

## **Environmental Stewardship**

DVS recycles waste antifreeze and tires, and sells waste oil to a contractor for recycling. Certain types of auto parts are recycled or remanufactured for another use. This program embraces the EPA's environmental sustainability guidance of reusing products when possible. The department continues to seek innovative ways to increase revenue and green practices in solid waste management.

#### **Police**

During FY 2014, DVS acquired the additional responsibility of purchasing and stocking all parts for new Police vehicle up-fits. Previously, the FCPD purchased all parts and components required to build police vehicles beyond that built by the original equipment manufacturer. The County has realized greater accountability and cost savings by shifting the procurement and management of these materials to DVS. This programmatic change resulted in a substantial increase in parts expenditures, but has ensured standardized configurations and availability of parts. In FY 2013 actual expenditures for parts were \$7.2 million, or \$2.6 million less when compared to the FY2015 actual of \$9.8 million.

## **Certified Mechanics**

The National Institute for Automotive Service Excellence (ASE) promotes excellence in automotive repair and service. ASE tests and certifies automotive professionals, which provides tangible proof of their technical knowledge. DVS recently implemented an ASE bonus program that incentivizes operational staff to acquire ASE certifications. The overarching goal is for all mechanics to have one ASE certification.

#### **Infrastructure Changes Required to Support Growth**

In June 2013, the renovation and expansion to the Newington maintenance facility was completed. The Newington facility was transformed into a more productive structure to support current and future vehicle maintenance needs for County and FCPS vehicles.

As part of this renovation, significant consideration was given to promoting environmentally sound business practices. The modern LEED-certified (Leadership in Energy and Environmental Design) facility offers enhanced production and capacity for the current and future fleet that includes school buses, public safety vehicles and heavy equipment. The new facility includes several green building design and technology features including sun-tracking skylights, clerestory windows, glazing in overhead doors, light sensors/monitoring, waterless urinals, automatic faucets, dual-flush water closets, bio-retention ponds, filters, energy efficient equipment and waterproofing/air barrier systems.

The Newington facility was designed to ensure no increase in runoff with most of the roof rain water being captured for vehicle washing. In addition, indoor environmental quality is achieved through natural light, low volatile organic compound (VOC) finishes and materials, and a vehicle exhaust extraction system to maintain healthy indoor air. Additionally, building materials with recycled content were purchased regionally within a 500 miles radius of the project site. The new facility also includes a new automotive paint booth, wash bay, recessed lifts, above ground lifts, portable lifts, infrared heating, fans and waste oil boilers.

DVS is currently working with the Office of Capital Facilities to make similar improvements to the three remaining maintenance facilities.

## **Challenges (past and future)**

#### **FCPS Fleet**

Between FY 2011 and FY 2015, the FCPS fleet has grown from 2,260 vehicles to 2,413 vehicles, representing an increase of 7 percent. The change in bell schedules for the 2015-2016 school year added 46 additional buses and DVS added 2/2.0 FTE mechanics to support the additional maintenance requirements. In addition, approximately \$100,000 of parts inventory was added to accommodate the additional buses.

FCPS requested that older buses remain in the fleet as reserve vehicles. The replacement criteria for school buses are 12 years regardless of mileage. As of August 2015, approximately 51.2 percent of the school bus fleet meets or exceeds the replacement criteria. This is significant as maintenance costs increase sharply with age and parts are harder to obtain for older buses.

## **Succession Planning**

The retirement of tenured employees and difficulty finding qualified mechanics to fill vacancies is an ongoing challenge that makes it difficult to maintain an optimal vehicle availability rate while recruiting and training new less knowledgeable staff. This is expected to peak in FY 2016, however.

# Retirement	% of LOB Staff
•	8%
	8%
	12%
V-	5%
	5%
	# Retirement Eligible 20 21 31 14 13

DVS has primarily depended on senior mechanics to train newly hired mechanics. Recently, DVS has jump started training efforts to strengthen the development of less experienced new hires by sending mechanics off site to training sponsored by manufacturers and bringing technical experts to the maintenance facilities. When possible, video streaming is used to make classes available to mechanics at different facilities thus reducing travel time.

## **Resources**

Category	FY 2014 Actual	FY 2015 Actual	FY 2016 Adopted
LOB #297: Vehicle Maintenance and Manage	ment		
Lob #277. Volliolo Maintonarios and Mainago.	FUNDING		
Evnanditurace			
Expenditures: Compensation	\$13,795,230	\$14,263,835	\$15,767,114
Benefits	5,878,548	6,294,608	6,345,008
Operating Expenses	19,032,565	19,655,878	20,199,555
Capital Equipment	134,202	0	235,146
Total Expenditures	\$38,840,545	\$40,214,321	\$42,546,823
Transfers Out:			
Transfer Out to General Fund	\$1,224,931	\$0	\$0
Total Transfers Out	\$1,224,931	\$0	\$0
Total Revenue	\$37,303,325	\$40,581,299	\$42,460,887
	POSITIONS		
Authorized Po	sitions/Full-Time Equivalents (F	TEs)	
	`	•	
Positions:	254 / 254	254 / 254	250 / 250
Regular Total Positions	256 / 256	256 / 256	258 / 258 <b>258 / 258</b>
TOTAL POSITIONS	256 / 256	256 / 256	258 / 258

## **Metrics**

Metric Indicator	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Units maintained by DVS	5,741	5,862	5,902	5,944	5,986
Vehicle equivalents maintained by DVS	22,126	22,345	22,668	22,818	22,958
Maintenance Cost per vehicle Equivalent	\$1,614	\$1,734	\$1,773	\$1,846	\$1,882
Parts inventory value per vehicle	\$341.00	\$449.00	\$500.00	\$511.00	\$523.00
Parts inventory fill rate	91.1%	94.1%	86.5%	90.0%	90.0%
Parts inventory turnover	5.09	3.13	4.56	5.00	5.00
Parts Inventory Accuracy	95.7%	86.8%	93.9%	95.0%	95.0%
Vehicle availability rate	97.7%	96.8%	96.9%	96.0%	96.0%
Percent of customers satisfied	97%	98%	98%	98%	98%

The Vehicle Maintenance and Management metrics reflect the department's challenges in maintaining a growing and aging fleet, increasing costs for parts, and maintaining a fully staffed and experienced workforce. While DVS efficiency ratios are becoming higher over time, they continue to compare favorably when benchmarked against other jurisdictions.

One metric used by DVS to measure the efficiency of services is to compare the maintenance cost per mile for different vehicle classes. Maintenance costs per mile include labor, parts, overhead and, when needed, commercial repairs. Trends reflect that, with the exception of medium vehicles, the cost per mile for all categories has increased slightly over the past three years. However, as seen in the table below, Fairfax County vehicle maintenance costs compare favorably with other large jurisdictions (FY2014 International City/County Managers Association (ICMA) data on maintenance cost per mile and preventive and other fleet maintenance expenditures per vehicle).

**FY2014 ICMA Fleet Expenditures per Mile Driven** 

Jurisdiction	Police Vehicles	Light Vehicles	Medium Vehicles
Miami Dade, FL	\$0.23	\$0.28	\$0.71
Fairfax County, VA	\$0.31	\$0.20	\$0.39
Oklahoma City, OK	\$0.38	\$0.29	\$1.09
Scottsdale, AZ	\$0.38	\$0.26	\$0.70

On a macro level, the maintenance cost per vehicle is also trending upward. The trend is consistent with the cost per mile for vehicle class categories and may be attributed to fewer mechanics, an aging and growing vehicle fleet and increases in parts. However, as seen in the table below, Fairfax County costs continue to compare favorably with other large jurisdictions.

FY2014 ICMA Preventive and Other Fleet Maintenance Expenditures per Vehicle

Jurisdiction	Police Vehicles	Light Vehicles	Medium Vehicles
Miami Dade, FL	\$2,554	\$2,097	\$4,102
Fairfax County, VA	\$3,815	\$1,879	\$3,117
Oklahoma City, OK	\$5,265	\$1,243	\$5,267
Scottsdale, AZ	\$4,188	\$2,240	NA

Expenditures per vehicle are impacted by mechanics available to maintain vehicles.

DVS anticipates the number of vehicle equivalents in the fleet to rise as the number of school buses and other vehicles continue to increase. DVS calculates vehicle equivalent ratios by reviewing the size and composition of the fleet to determine the number of mechanics-to-units required to operate the fleet. Then, maintenance and repair requirements of a vehicle class are analyzed against a base vehicle class. DVS uses a sedan. Therefore, a police cruiser, which has greater maintenance and repair needs than a sedan, has a higher vehicle equivalent. Below is a list of vehicle equivalents for DVS.

Vehicle Type	Vehicle Equivalent	Vehicles Maintained Per Mechanic
Sedan	1.0	100
Police Cruiser	2.2	46
School Bus	4.8	21
Heavy Fire Apparatus	10.7	9
Transfer Tractor	7.6	13
3/4 Ton Van	1.1	90

Currently, every DVS mechanic maintains approximately 100 "vehicle equivalents" per year. As the number of vehicles increases, there is a corresponding increase in staffing requirements or a reduction in vehicle availability rate. As staffing is reduced, "billable hours" or charges are reduced thus impacting the overall DVS budget.

As an internal service fund, DVS charges for all work performed directly on a vehicle (or for an agency) by mechanics. This also enables the County to more accurately reflect true program costs in other agency budgets. While the labor rate has increased over the past few years due to higher operating and personnel costs, the DVS labor rate compares favorably with other local jurisdictions. DVS's labor rate has historically been, and continues to remain, lower than rates charged by neighboring municipalities.

## **Hourly Labor Rates**

Jurisdiction	Hourly Rate
Washington DC Average <sup>1</sup>	\$96.38
Arlington County	\$79.00
Prince William County	\$71.00
Fairfax County	\$65.50
Prince George County	\$65.00

<sup>&</sup>lt;sup>1</sup> Ranges from \$65to \$132, as reflected in the 2014 WMABA labor rate survey of collision repair centers. (Hammer & Dolly, WMABA, January 2015.)

LOB #298:

## **VEHICLE / EQUIPMENT REPLACEMENT FUNDS**

## **Purpose**

The Vehicle Equipment Replacement Program ensures the systematic replacement of vehicles and equipment that have completed their cost effective life cycles based on replacement criteria established by the Board of Supervisors. DVS manages funds for Helicopter, Boat, and Police Specialty Vehicle Replacement for the Police Department; an Ambulance and a Large Apparatus Replacement Fund for the Fire and Rescue Department; and a FASTRAN Bus Replacement Fund for the Department of Neighborhood and Community Services. All three departments make fixed annual payments into their specialty vehicle fund to ensure future funding is available to replace vehicles and equipment. Vehicles must meet both the age and mileage criteria for the vehicle type or complete a condition survey showing the vehicle is uneconomical to repair before they are replaced. When vehicles are replaced, the old vehicle is sold in accordance with procurement guidelines.

## **Description**

Three discrete programs are strategically bundled within LOB #298, Vehicle/Equipment Replacement Funds to ensure funds are administered properly, fleet additions are cost-effective, and disposition of vehicles meet procurement guidelines.

## **Replacement Fund for General Fund Agencies**

The replacement fund is intended primarily for General Fund agencies. As of July 1, 2015, approximately 2,300 vehicles in 33 agencies participate in the fund. Of the 2,300 vehicles, 60 percent are public safety vehicles. Heavy trucks and specialty vehicles that have specific applications and/or unpredictable replacement costs are excluded from the fund.

Vehicles must meet both age and mileage criteria established by the BOS and are replaced with a like type vehicle. During 2008-2009, the BOS approved a two year extension to the age criteria, which generated a one-time savings of \$9 million. The tables below reflect past and current replacement criteria for the vehicle replacement reserve.

Example Replacement Criteria, Vehicle Replacement Reserve

Description	Old Yrs	New Yrs	Miles
Mid Size Sedans	6	8	85,000
Police Package Sedans	4	6	80,000
Mini Pickups/Vans	6	8	90,000
1/2-1 Ton Pickup/Van/4x4	8	10	110,000

#### Example Other Replacement Criteria

Description	Yrs	Miles
Ambulance	10	NA
Heavy Duty Dump Truck	9	135,000
Transfer Tractor	10	300,000
Pumpers/Ladder Trucks/Air & Light	12	NA
Trailer	12	NA
School Buses	12	NA

A Vehicle Specifications Analyst is assigned to this LOB and provides technical oversight to all agencies procuring vehicles. Customers are notified by DVS when vehicles meet replacement criteria. Vehicles are typically purchased using state contracts; however, some specialized vehicles are procured using a bid. Agencies can request a vehicle upgrade if strongly supported and justified by mission requirements and the agency has sufficient funding to pay the difference between the like type vehicle and upgraded vehicle.

Vehicle Replacement Reserve funds are generated through monthly billings to the agency that owns vehicles participating in the fund. The monthly rate is based on purchase price, inflation, projected future cost of replacing the vehicle, and expected service life of the vehicle.

## **Other Replacement Funds**

In addition to the replacement fund for general services agencies, DVS manages six specialty vehicle replacement funds and one maintenance fund shown below:

Fund	Agency	Established
Helicopter Replacement	FCPD	FY 1996
Boat Replacement	FCPD	FY 2002
Police Specialty Vehicle Replacement	FCPD	FY 2002
Helicopter Maintenance	FCPD	FY 2015
Ambulance Replacement	FRD	FY 1997
Large Apparatus Replacement	FRD	FY 1998
FASTRAN Bus Replacement	NCS	FY 1999

FCPD and FRD make regular payments into these funds to ensure that funding is available when the equipment requires replacement. For all seven of these funds, the departments are responsible for determining the annual payments required, and requesting funding in their annual budgets. The payments are reflected as revenue in DVS. DVS coordinates with the three departments to ensure the DVS budget submission also includes an accurate appropriation to purchase any needed replacement vehicles in a given year.

Oversight of the various replacement programs is provided by DVS administrative employees. The DVS administrative offices are located at the Fairfax County Government Center and are open Monday through Friday from 7:00 a.m. to 4:30 p.m.

## **Fleet Utilization Management Committee**

The County Executive established the Fleet Utilization Management Committee (FUMC) in 2004 to ensure a well-coordinated review of the fleet between DVS and the Department of Management and Budget. The FUMC leads the annual low-utilization review of the fleet and recommends appropriate fleet reductions to ensure the County fleet is not over-sized in relation to County needs. In addition, the FUMC reviews agency requests for fleet additions ensuring that the assignment of a vehicle is the most cost-effective means of accomplishing the mission. From 2004 through 2014, 199 vehicles have been identified for reassignment or elimination through this review.

The purpose and responsibilities of the FUMC are outlined in Procedural Memorandum 10-06 Amendment 1. Exempted from the policy are all vehicles owned by the Fairfax County School Board, Fairfax County Volunteer Fire and Rescue vehicles, all off road equipment, and certain specialty vehicles.

## **Disposition of Vehicles**

At the end of the vehicle or equipment's useful life, all decals are removed and DVS works with the DPSM to properly dispose of the vehicle. If the vehicle meets the requirements for sale to the public, DVS lists the vehicle on an online vehicle auction site where the public can bid on and purchase County vehicles. The site is used to sell vehicles commonly used by the public such as sedans, vans and trucks. If the vehicle meets the requirements for sale to other municipalities, DVS coordinates with DPSM to list it on Public Surplus, which is only available to and for public agencies. DVS sells specialty vehicles used by public safety, Department of Public Works and Environmental Services, and others on Public Surplus. Revenue for replacement fund vehicles goes to the revenue fund for the vehicle. For example, if a fire apparatus were sold on Public Surplus, the revenue would be deposited in the Large Apparatus Replacement Fund.

## **Benefits**

LOB #298, Vehicle/Equipment Replacement ensures the systematic replacement of vehicles that have completed their cost effective life cycle and prevents the higher maintenance costs associated with older vehicles. Proper management and oversight of vehicle replacement reduces the overall cost of operating the County fleet. As vehicles age, they experience more breakdowns, are less reliable, require more servicing, and parts are difficult to obtain. By ensuring the replacement of aging vehicles that have reached the end of their optimum operating efficiency, departments can focus on their mission without interruption.

Additionally, this LOB ensures that the County does not experience significant variability in annual expenditures by planning long-range. Large fluctuations from year to year are not ideal when budgeting and/or making business decisions.

Without the Vehicle Replacement Program, individual agencies would have to include funds for vehicle replacements within their annual operating budget to coincide with their need for vehicle replacements. Projecting vehicle replacement with accuracy is dependent upon many factors to include operator care, annual operating miles, maintenance history, accident, economic conditions, and policy and legal requirements. Some agencies would have adequate funding to meet their vehicle replacement needs without interrupting their operational use of those vehicles; other agencies would not have sufficient funds to meet their vehicle replacement needs. Those agencies without sufficient funds would either have to:

- use vehicle(s) that have exceeded its economic useful life;
- rent vehicle(s); or,
- reallocate their workload to other vehicles.

In addition, agencies would lose the expert specification assistance provided by DVS. Without this assistance, vehicle specifications could include more or fewer items than are required which could ultimately be cost-inefficient for the County.

## **Mandates**

Administering a Vehicle Equipment Reserve Fund is not mandated; however, the County has chosen to establish several reserve funds, which must comply with the mandates below.

## **Governmental Accounting Standards Board Standard 34 (GASB 34)**

GASB 34 sets standards for capital asset reporting and requires governmental entities to account for the depreciation of governmental fund fixed assets. By implication, government entities need to show how well they are budgeting, tracking and managing assets, to include motor vehicles. In view of this, DVS employs sound vehicle asset replacement planning and financing practices. A best practice fleet program entails having a vehicle replacement planning and decision making process that determines when each vehicle and piece of equipment should be replaced; and a financing and funding process that ensures that funds are available to purchase a replacement asset when the desired replacement date is reached. As such, DVS has mechanisms in place to fund fleet replacements on an annual basis through its budgetary and financial processes. Through use of a sinking fund model, replacement reserves are used to set aside funds to meet future vehicle replacement requirements which minimizes fluctuations in year to year funding needs and allows for repaying vehicle capital costs over several years. On an annual basis, DVS forecasts vehicles due for replacement in the upcoming budget year and ensures budget for those vehicles is appropriated.

## Fairfax County Department of Finance - ATB 50010: Capital Assets

DVS accounts for capital assets in accordance with GASB 34 standard principles and Fairfax County ATB 50010 in the department's replacement vehicle purchasing, capital asset recording, and vehicle disposal processes. In addition, DVS performs monthly asset reconciliation to include ensuring that vehicles are properly classified and recorded as capital assets and that assets are capitalized and recorded in the General Ledger.

## **Trends and Challenges**

## Trends

In response to the County's desire for cleaner and more energy-efficient vehicles, DVS has included hybridelectric vehicles in its vehicle replacement program, where appropriate. As a result, a conventional gasoline fueled county fleet vehicle at the end of its service life may be replaced with a hybrid vehicle, if acceptable to the using agency and conditions warrant.

The County's current fleet includes 117 hybrid-electric and plug-in hybrid-electric vehicles. The County saves more than 16,000 gallons of gas on average each year from its use of hybrid vehicles. DVS anticipates installing charging stations will be necessary to support the electric vehicles.

Using federal stimulus funding, in the 2011-2012 period DVS added 16 Ford Fusion Hybrids, five Chevrolet Volts and one plug-in hybrid-electric school bus to the county fleet. In December 2014, DVS purchased an all-electric Nissan LEAF. In FY 2016, DVS plans to purchase additional all-electric vehicles and increase the fleet of hybrid-electric to 135.

## **Challenges**

The criteria to replace a vehicle was extended by 2 years during 2008-2009. The vehicle maintenance facilities have seen an increase in the number of repairs and costs for repairs. On numerous occasions the vehicle's repair cost has outpaced the value of the vehicle. This creates a situation where the owners of the vehicles are forced to spend more on repair costs than what the vehicle is worth to keep the vehicle on the road.

## **Resources**

Category	FY 2014 Actual	FY 2015 Actual	FY 2016 Adopted		
LOB #298: Vehicle / Equipment Replacement Funds					
200 #2707 Tormoto / 2quipmotit (topiusomoti	FUNDING				
Expenditures:					
Operating Expenses	\$0	\$2,017,989	\$0		
Capital Equipment	17,557,937	14,305,059	14,776,215		
Total Expenditures	\$17,557,937	\$16,323,048	\$14,776,215		
Total Revenue	\$11,663,438	\$13,663,634	\$10,794,545		
	POSITIONS				
Authorized Po	ositions/Full-Time Equivalents (F	TEs)			
Positions:					
Regular	1/1	1/1	1/1		
Total Positions	1/1	1/1	1/1		

## **Metrics**

Metric Indicator	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Vehicles in the replacement reserve	2,270	2,283	2,313	2,326	2,341
Technical reviews completed	265	337	258	222	210
Vehicles that meet VRR criteria	225	286	230	172	168
Vehicles ordered / replaced	265	337	258	222	210
VRR administrative cost per vehicle	\$31.70	\$38.57	\$42.82	\$43.33	\$44.12
Percent of vehicles that meeting replacement criteria and are replaced	100%	100%	100%	100%	100%
Percent of customers satisfied	95%	95%	95%	95%	95%

The Vehicle Equipment Replacement program is an objective tool used to determine the appropriate time to replace a vehicle. Fairfax County uses age and mileage criteria as indicators of the optimal economic life of a vehicle because maintenance costs increase significantly for older vehicles.

As County departments and agencies add vehicles to their fleet, the vehicles are also added to the replacement reserve. Therefore, the output for vehicles in the reserve is increasing over time and in tandem with the expansion of the fleet. Of additional importance is that 100 percent of vehicles that meet replacement criteria are replaced. This is a positive trend as it works to minimize the maintenance and, potentially, fuel costs.

LOB #299:

## **FUEL OPERATIONS**

## **Purpose**

The Fuel Operations LOB is responsible for fuel operations at 53 sites and administration of commercial fuel credit cards. Fuel operations are dynamic and heavily regulated by the EPA and DEQ. Management of the fuel sites requires providing an adequate supply of fuel by planning, coordinating, procuring and paying for fuel deliveries. DVS is responsible for managing repairs to and replacement of fuel tanks and equipment, managing the automated fuel system, ensuring compliance with Federal and State regulations regarding testing for leaks and any necessary notification remediation of site contamination.

## **Description**

The fuel operations program provides gasoline and ultra-low sulfur diesel fuel at 53 sites across the County, primarily located at police stations, fire stations, Fairfax County Public Schools, public works facilities, Park Authority maintenance centers, and DVS maintenance facilities. Fuel is pumped by all County agencies assigned vehicles and equipment to include FASTRAN, Connector and school buses. Commercial fuel credit cards are also provided to customers for specific needs approved by the Director of DVS.

Administration of the fuel operations program requires a keen understanding of logistics and supply and inventory management. Management of the fuel sites requires: providing an adequate fuel supply, coordinating fuel deliveries, procuring and remitting payment for fuel deliveries, identifying and coordinating fuel site repairs, managing the automated fuel system, ensuring compliance with all federal and state regulations, replacing tanks and equipment at the end of their useful life, auditing fuel usage and records, and billing customers.

Fairfax County purchases fuel through a cooperative contract with the Metropolitan Washington Council of Governments (COG). The Washington Metropolitan Area Transit Authority (WMATA) is the lead agency, and Mansfield Oil is Fairfax County's supplier. Fairfax County receives excellent pricing through the program. The more participation, the larger the collaborative volume, which results in additional buying leverage. The fuel card (Voyager card) program provides flexibility to purchase fuel at gas stations nationwide and is required in special circumstances. As a result, the cardholder pays the state-contracted price, instead of the price at the pump and is exempt from taxes.

County agencies pay for their fuel usage. The following table represents the percentage of revenue generated through the Fuel Program by category of customers in FY 2015:

Category	Percent of DVS Fuel Revenue
FCPS	33%
General Fund/General Fund Supported	45%
Other	22%

A combination of County employees and contractors deliver fuel to the 53 sites. Fuel sites are designed to replicate a typical gas station, but an Automated Fuel Management System (FUELFORCE) takes the place of a credit card or pay station. A County employee simply drives to one of the County-owned fuel sites, types specific vehicle and department information into the FUELFORCE system, and dispenses fuel from the designated pump. FUELFORCE records the date, gallons dispensed, and vehicle number. DVS audits all FUELFORCE records biweekly and agencies issued vehicles are billed monthly for fuel and provided with reports to audit fuel usage.

## **Benefits**

Fairfax County currently purchases fuel through a cooperative contract with COG that is administered by DVS. Bulk purchasing power enables the County to purchase fuel at a cost significantly lower than commercial gas stations (excluding tax), resulting in an annual savings of approximately \$2.7 million. Participation provides the County with lower rates for fuel and helps to ensure the County is prepared in the event of fuel disruptions.

Central oversight of the fuel management program provides consistency and accountability over fuel controls to include compliance with federal and state regulations, vehicle operating costs, and product availability. In addition, it ensures corporate stewardship and that agencies can efficiently perform their missions.

#### **Mandates**

Providing fuel is not a mandated activity; however, because the County chooses to provide fuel, each fuel site must adhere to federal and state regulations. Federal and state agencies issue regulations pertaining to the maintenance and management of fuel, fuel tank leak detection, installation specifications, site closures and cleanup of releases (leaks) from underground fuel tanks.

#### **Federal**

Code of Federal Regulations: The federal regulations concerning underground storage tanks (USTs) are contained in 40 CFR Part 280.200 – 280.230 & 281.3. Included are the requirements for tank notification, interim prohibition, new tank standards, <u>reporting and record keeping for existing tanks</u>, <u>corrective action</u>, <u>financial responsibility</u>, compliance monitoring and enforcement, and <u>approval of State programs</u>.

Title XV, Section B of the Energy Policy Act of 2005 amends Subtitle I of the Solid Waste Disposal Act, the original legislation that created the underground storage tank (UST) program. The UST provisions of the Energy Policy Act focus on preventing releases and direct EPA to help states comply with the new UST requirements. DVS staff with a daily responsibility to operate and maintain UST systems has taken required classes.

Clean Air Act: 42 U.S.C §7401.

Clean Water Act: 33 U.S.C. §1251

Resource Conservation and Recovery Act 42 U.S.C. §6901 et seq.; 40 CFR part 280/281 - Underground Storage Tanks.

#### State

 $DEQ\,Regulations-Chapter\,580-Underground\,Storage\,Tanks:\,\,Technical\,Standards\,and\,corrective\,action\,requirements.$ 

## **Trends and Challenges**

## **Diesel Exhaust Fluid**

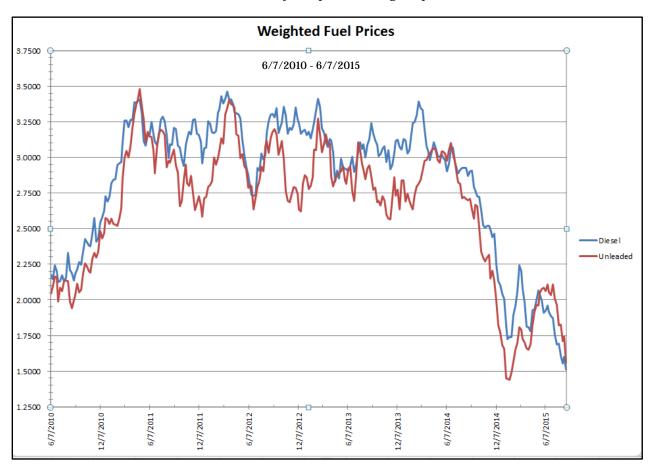
Diesel exhaust fluid (DEF) is used in selected diesel vehicles to lower the concentration of nitrous oxide in the exhaust emissions from diesel engines. Many heavy diesel vehicles have a DEF compartment, which is always separate from the gas tank. All school buses purchased after 2014 have a DEF compartment. Storage and replacement of DEF requires caution.

DEF is safe to handle, but can corrode some metals and must be maintained a certain temperatures. Also, the replacement rate in vehicles is typically a percentage of the diesel consumed by the vehicle. Therefore, DEF should not be dispensed every time diesel is dispensed.

As the County and FCPS purchase more vehicles that require DEF, DVS will need to evaluate how DEF is dispensed and whether the fuel sites should accommodate dispensing equipment.

## **Fuel Prices**

The volatile nature of fuel prices present a variety of challenges to DVS. Staff must estimate the cost of fuel several months in advance of the start of a new fiscal year. As a result, staff must monitor fuel prices on a weekly basis and monitor industry trends in an attempt to refine predictions. This is necessary as large fluctuations in prices can result in DVS being significantly over or under budgeted for fuel costs. The chart below shows the erratic fluctuations of monthly fuel prices during the period June 2010 and June 2015.



### **Fossil Fuel Alternatives**

DVS continues to explore alternatives to fossil fuel. In 2011, the Fairfax County Environmental Quality Advisory Council (EQAC), an appointed citizen advisory board, selected DVS as one of two recipients of EQAC's annual Environmental Excellence Award. The award recognized DVS's strong environmental stewardship as demonstrated by initiatives including the development and continuing expansion of a hybrid-electric vehicle fleet. The County saves more than 16,000 gallons of fuel on average from use of hybrid vehicles.

The current breakdown of alternative fuel vehicles in the fleet are as follows:

Hybrids	11′
Flex Fuel Vehicles	1
<b>Hybrid Electric Plugins</b>	1
Electric	1
Hybrid bus	1
Hybrid cargo	1
Hybrid refuse truck	1

DVS envisions that electricity will be a major alternative fuel in the future. If so, there are infrastructure costs, such as charging stations that need to be considered.

## **Emissions Control/Fuel Consumption**

DVS, FCPS and Fairfax County Department of Transportation (DOT) have established a number of initiatives to improve the energy and environmental performance of the vehicles they manage and maintain. For example, in FY 2015, 132 school buses were purchased with Selective Catalytic Reduction (SCR) technology. SCR meets the EPA2010 requirement of providing engine emissions to near zero (a NOx level of 0.2g/bhp-hr). To reduce fuel consumption and vehicular emissions, DVS and DOT programmed automatic idle shutdown into all county solid waste trucks and Fairfax Connector buses. DVS retrofitted 1,012 school buses and 113 heavy duty trucks with exhaust after-treatments that reduce particulate emissions.

#### Resources

Category	FY 2014 Actual	FY 2015 Actual	FY 2016 Adopted		
LOB #299: Fuel Operations					
·	FUNDING				
Expenditures:					
Compensation	\$47,876	\$48,851	\$54,841		
Benefits	12,934	13,600	15,665		
Operating Expenses	32,701,708	24,636,534	28,145,081		
Capital Equipment	0	349,490	0		
Total Expenditures	\$32,762,518	\$25,048,475	\$28,215,587		
Total Revenue	\$31,913,911	\$24,588,720	\$28,190,693		
POSITIONS					
Authorized Positions/Full-Time Equivalents (FTEs)					
Positions:					
Regular	1/1	1/1	1/1		
Total Positions	1/1	1/1	1/1		

#### **Metrics**

Metric Indicator	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Gallons of unleaded gasoline purchased	2,549,342	2,469,867	2,551,574	2,566,574	2,581,574
Gallons of diesel purchased	7,677,225	7,844,917	7,876,283	7,907,649	7,942,649
Average cost per gallon	\$3.17	\$3.17	\$2.34	\$2.16	\$2.16
Price Savings between in-house and commercial stations for unleaded gasoline	\$0.28	\$0.24	\$0.20	\$0.10	\$0.10
Price Savings between in-house and commercial stations for diesel	\$0.34	\$0.32	\$0.44	\$0.10	\$0.10
Percent of customers satisfied	100%	100%	100%	100%	100%

Gallons of unleaded gasoline purchased have been largely consistent, with limited vehicle growth offset by Fairfax County purchasing vehicles with greater fuel efficiency or that use alternative fuel sources. The County's current fleet includes 117 hybrid-electric and plug-in hybrid-electric vehicles. The County saves more than 16,000 gallons of gas on average each year from its use of hybrid vehicles. In December 2014, DVS purchased an all-electric Nissan LEAF. In FY 2016, DVS plans to purchase additional all-electric vehicles and increase the fleet of hybrid-electric to 135. DVS expects the ratios for unleaded gasoline to level or become better as we pursue alternative fuel sources and purchase cars with great fuel efficiency.

Gallons of diesel purchased are increasing, which reflects the increase in diesel operated vehicles maintained by Fairfax County. Between FY 2011 and FY 2015, FCPS' fleet has grown from 2,260 vehicles to 2,413 vehicles, representing an increase of 7 percent. The change in bell schedules for the 2015-2016 school year added 46 additional buses. These factors have contributed to increases in outputs for gallons of diesel purchased.

Fuel supplied by DVS is consistently lower in price than retail fuel. Fuel prices under the MWCOG contract have been favorable compared to retail prices and are competitive with prices in other available fuel contracts, such as Virginia's State Motor Fuel Program (SMFP). The average price for fuel under the COG contracts has been close to the average price under the SMFP contracts.

The price of fuel will fluctuate over time thus making it difficult to project trends. When drafting this section in September 2015, the prices of diesel and gasoline fuel had dropped for several consecutive weeks according to the U.S. Energy Department. Heavy Duty Trucking noted that the national average price of a gallon of diesel fuel was down \$1.285 and gasoline was down \$1.026 when compared to the same week last year. The drop is reflected in the attached chart from the U.S. Energy Information Administration (EIA).

