A STUDY OF THE INSPECTION, MAINTENANCE, AND REPAIR OF FIRE AND RESCUE SERVICE VEHICLES

OFFICE OF LEGISLATIVE OVERSIGHT
REPORT NUMBER 2004-3

January 27, 2004

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Executive Summary

The critical mission of Montgomery County's Fire and Rescue Service (MCFRS) requires that its vehicles and equipment be ready to perform at any time. The Office of Legislative Oversight recommends that the County Council's future legislative, policy, and funding decisions aim to achieve the following goals:

- A safe and dependable fleet of fire and rescue vehicles and equipment that meets the County's standards of vehicle readiness; and
- A cost-effective system of inspection, maintenance, and repair that keeps all fire and rescue vehicles and equipment in top running order.

Current County law does not explicitly state that effective and efficient fire and rescue service operations include maintaining vehicles in top condition. Neither does it specify who is responsible for maintaining a uniformly safe and dependable fleet of fire and rescue vehicles.

Historically and in practice today, the structure of maintaining fire and rescue vehicles is largely decentralized. 19 Local Fire and Rescue Departments (LFRDs) are responsible for the maintenance of the 319 vehicles that operate from their respective fire/rescue stations; this includes all frontline apparatus and represents 75% of the MCFRS fleet. The Division of Fire and Rescue Services (DFRS) is responsible for the maintenance of the other 25% of the fleet; these vehicles (largely support vehicles) are maintained mostly at one of the County's central fleet maintenance facilities.

The FY 04 approved budget for MCFRS includes $3.2 million in County tax funds for fuel and vehicle maintenance and $367K for vehicle replacement. This amount represents about 3% of MCFRS' total FY 04 budget of $119 million.

OLO found that some aspects of MCFRS' current approach to vehicle maintenance work well. The largely decentralized structure enables the LFRDs to establish entrepreneurial business arrangements for vehicle maintenance and repair. Several LFRDs report being able to negotiate reduced (even no cost) rates with local vendors for some work. A number of LFRDs have adopted formal preventive maintenance schedules and keep detailed maintenance records.

Six in-house shops are conveniently situated to serve the fleet; their locations within the stations afford frequent opportunities for communication among vehicle users and mechanics. The LFRDs that contract out routine maintenance services are mostly satisfied with the quality of these vendor arrangements, which are selected to meet each LFRD's needs.

However, OLO found other aspects of MCFRS' current approach to vehicle maintenance that are not working well and provide an impetus for change. MCFRS routinely encounters problems meeting the normal daily count for certain frontline vehicles because so many are out-of-service in need of repair. MCFRS reports that it often takes substantial effort to deploy apparatus to meet service requirements.

The MCFRS fleet is aging, and older vehicles are more expensive to operate and less reliable. At the same time, MCFRS' call load continues to grow with increased mileage for many vehicles in the fleet. Funding for vehicle replacement has been reduced in recent years. In FY 04, there is a $6.8 million gap between MCFRS' apparatus replacement plan and the amount budgeted for vehicle replacement.

Recent pump tests and pre-trip safety inspection results indicate that MCFRS' current practices do not assure that all fire and rescue vehicles and equipment are in top operating condition and ready to perform at any time. While these results do not evidence an across-the-board failure of existing maintenance arrangements, they do evidence uneven performance.

This uneven performance derives, at least in part, from the absence of: a consistent maintenance strategy for apparatus; a reliable process for daily vehicle inspections and defect reporting; a single approach to recordkeeping; and a system for identifying and correcting problems.

Ten different reports produced since 1976 contain recommendations for improving how fire and rescue vehicles in Montgomery County are maintained and repaired. Few of the recommendations made were implemented. The time has come to address the long-acknowledged but unmet need to strengthen this important function. One of the challenges ahead is how to address the shortcomings of the current structure while holding on to what works well.

To facilitate improvements to MCFRS' vehicle management practices, OLO recommends:

1. The Council should establish, either in law or by resolution, that maintaining MCFRS' fleet of vehicles in top condition is essential to operating an effective and efficient fire and rescue service. To support the goal of a uniformly safe and dependable fleet, the Council should recommend that MCFRS implement systemwide standards and other commonly used fleet management strategies, such as:

   - Safety and performance standards for all vehicles and equipment;
   - Standards and procedures for conducting daily vehicle inspections, reporting defects, and declaring vehicles out-of-service;
   - Driver training and standards, and related management procedures that assure only well-qualified drivers are allowed to drive;
   - An effective preventive maintenance program with ready access to reserve vehicles to enable maintenance without disrupting service delivery;
   - An ongoing and comprehensive testing process that evaluates vehicle and equipment compliance with pre-established standards for maintenance, safety, and performance;
   - A management information system that provides accurate and timely data to support systemwide fleet-related decision making;
   - A vehicle replacement and rehabilitation schedule that replaces vehicles when owning and operating them costs more than owning and operating their replacements; and
   - A system of accountability for making the maintenance structure match the service needs of the organization.

2. The Council should ask the Chief Administrative Officer to submit, by April 1, 2004, a proposal for developing a comprehensive multi-year action plan to improve MCFRS' vehicle management practices. The proposal should identify tasks, milestones, resource needs, and the role of the Fire and Rescue Commission in making improvements. OLO recommends that the list of needed resources include an Apparatus Officer to lead the planning for and implementation of improvement to vehicle management across the MCFRS fleet.

3. The Council should request that the CAO provide the Council's Public Safety Committee with regular status reports of progress made to implement improvements in MCFRS' vehicle management practices.

Office of Legislative Oversight Report 2004-3

A STUDY OF THE INSPECTION, MAINTENANCE, AND REPAIR OF FIRE AND RESCUE SERVICE VEHICLES

CHAPTER I: Authority, Scope, and Methodology

A. Authority

Council Resolution 15-281, FY 2004 Work Program of the Office of Legislative Oversight, adopted July 29, 2003.

B. Scope and Organization of Report

The County Council asked the Office of Legislative Oversight (OLO) to study the current procedures for the inspection, maintenance, and repair of Montgomery County Fire and Rescue Service (MCFRS) vehicles and equipment. The report is organized as follows:

Chapter II, Background, includes four sections: an overview of the structure and funding of fire and rescue services in the County; a review of previous studies and reports that contained recommendations for improving fire and rescue vehicle maintenance; a description of legal and other published standards relevant to the maintenance and performance of fire and rescue vehicles; and a summary of common fleet management practices.

Chapter III, Characteristics of the MCFRS Fleet, presents information on the type, number, ownership, age, and location of MCFRS vehicles. The chapter also discusses MCFRS' vehicle replacement schedule and funding for the purchase of new vehicles.

Chapter IV, The Structure and Cost of Vehicle Inspection, Maintenance, and Repair, reviews the responsibility for vehicle maintenance, and describes the current arrangements for inspection, maintenance, and repair of the MCFRS fleet. The chapter also summarizes feedback from OLO's interviews with MCFRS personnel about the current structure, and reviews budget and cost data.

Chapter V, Data on Vehicle Readiness and Condition of the Fleet, defines what it means to be "vehicle ready," and reviews ten months of data on vehicle availability. It also explains MCFRS' current approach to vehicle and equipment inspections, and reports the limited data that are available on the condition of the MCFRS fleet.

Chapter VI, Focus Group Results, presents the outcome of three focus group sessions convened by OLO in October 2003. In these sessions, career and volunteer personnel discussed current inspection, maintenance, and repair practices, identified standards for evaluating vehicle maintenance performance, and recommended ways to improve the efficiency and effectiveness of how MCFRS performs these functions.

Chapter VII, Comparative Information, provides information on how other local governments in the region structure fire and rescue vehicle maintenance.

Chapter VIII and Chapter IX present OLO's findings and recommendations; and **Chapter X** contains the formal written comments received on the final draft report.

C. Methodology

Karen Orlansky, Director of the Office of Legislative Oversight (OLO), Scott Brown, OLO Legislative Analyst, and Karen Yoskowitz, OLO Research Assistant, conducted this study. Teri Busch, OLO Administrative Specialist, provided invaluable assistance with final production of the report.

OLO gathered information for this project in numerous ways including general research, document reviews, individual and group interviews, and on-site observations. OLO worked with MCFRS personnel to compile process, workload, budget, and other data.

During the course of study, OLO staff consulted with senior DFRS management, Local Fire and Rescue Department Presidents and Chiefs, International Association of Fire Fighters representatives, and front-line personnel. OLO also attended meetings and sought input from the Fire and Rescue Commission and the Fire Board.

In October, 2003, as part of the research design, OLO convened three focus group sessions attended by career and volunteer staff involved in the maintenance and repair of MCFRS vehicles and equipment. In these sessions, the participants were asked to: assess existing inspection, maintenance, and repair practices; discuss standards for evaluating vehicle maintenance performance; and recommend ways to improve the efficiency and effectiveness of how these functions are performed. Chapter VI presents the focus group results.

For comparative information, OLO conducted site visits and interviewed staff representatives from the following local government jurisdictions: Anne Arundel County; Baltimore County; Prince George's County; Fairfax County, the District of Columbia, and the City of Alexandria. Chapter VII summarizes the results of OLO's comparative research.

D. Acknowledgements

OLO received cooperation from everyone involved in this study. OLO appreciates the many individuals who took the time to share their experiences, insights, and suggestions for improvements. Assistant Chief Steve Lohr and Steve Lamphier, DFRS Apparatus Program Manager, deserve recognition for the numerous hours they spent answering our many questions, arranging our field visits, and helping to compile accurate and complete information.

OLO also owes a special thanks to Doug Katz for facilitating the focus groups, and to the 18 focus group participants for their significant time commitment and contributions to our understanding of the complexities of maintaining fire and rescue vehicles in Montgomery County.

CHAPTER II: Background

Part A, The Structure and Funding of Fire and Rescue Services, provides a brief overview of the structure of the County's combined career and volunteer fire and rescue service, and presents summary data on the County's approved FY 04 operating budget for fire and rescue. Part A also reports incident and unit response data.

Part B, History of Recommendations to Improve Vehicle Maintenance, summarizes previous studies and reports that included recommendations to improve how fire and rescue vehicles are maintained and repaired in the County.

Part C, Standards for the Maintenance and Performance of Fire and Rescue Vehicles, provides information on the State regulations and National Fire Protection Association standards relevant to the maintenance and performance of fire and rescue vehicles.

Part D, Common Fleet Management Practices, describes common strategies employed by fleet management departments across the country to maintain safe and dependable vehicle fleets.

Part A. The Structure and Funding of Fire and Rescue Services

A. Overview

By law, Montgomery County has a combined career and volunteer fire and rescue service (County Code Chapter 21).[1] The current structure, in effect since 1998, provides for a public-private partnership between the County and 19 Local Fire and Rescue Departments (LFRDs). Fire and rescue services are provided from 31 fire stations and two rescue stations located throughout the County. (See Table 1, pages 5-6.)

Each LFRD is individually chartered by the State and has a volunteer Board of Directors. The County Government directly allocates some tax funds for day-to-day operations (including funds for fuel and vehicle maintenance) to all of the LFRDs except for the Bethesda-Chevy Chase Rescue Squad.

Two fire and rescue departments (Bethesda and Chevy Chase) use County career fire and rescue personnel exclusively to meet required staffing levels; the other 17 departments use a combination of volunteer and career personnel.[2] Executive Branch staff report that when examined by station, DFRS career staff provide 100% of the minimum staffing at 18 of the 33 fire/rescue stations.

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[1] **Note on pending legislation:** In October 2003, Bill 36-03, Fire and Rescue Services -Amendments, was introduced. The bill proposes changes to County Code Chapter 21, the law that governs the structure of fire and rescue services in the County. As of this writing, Bill 36-03 is pending Council action.

[2] The B-CC Rescue Squad supplements its primarily volunteer staff with a few career paramedics and several other paid personnel, compensated with LFRD funds.

According to a Division of Fire and Rescue Services Bureau of Operations report on FY 03 accomplishments, Montgomery County Fire and Rescue Services responded to approximately 100,000 incidents during FY 03 requiring more than 180,000 unit responses. 825 career personnel provided 93% of the weekday and 72% of the night and weekend staffing objective for field emergency services.

The respective roles of Montgomery County Fire and Rescue Services (MCFRS), the Local Fire and Rescue Departments (LFRDs), the Fire and Rescue Commission (FRC), and the Fire Board under the current governance structure are summarized as follows:

Montgomery County Fire and Rescue Services (MCFRS) is a department of County Government headed by the Fire Administrator. The Fire Administrator is a non-merit, non-uniformed position, appointed by the County Executive and confirmed by the County Council. MCFRS includes two divisions, each headed by a non-merit Division Chief who reports directly to the Fire Administrator.

- **The Division of Fire and Rescue Services (DFRS)** includes all uniformed and civilian County employees in the fire and rescue service. The DFRS provides career staffing for the local fire and rescue departments. DFRS is responsible for fire and rescue communications and training, fire code enforcement and arson investigation, emergency management, certain public education programs, and centralized planning and administrative functions.

- **The Division of Volunteer Fire and Rescue Services (DVFRS)** coordinates activities of volunteers and the local fire and rescue departments. The local departments are included in the DVFRS and the Division promotes their integration into the overall service. The Division's responsibilities include assisting with communication among the County fire and rescue organizations and the local departments, helping to coordinate policy development and review, and administering the length of service award program (LOSAP) for volunteers.

Local Fire and Rescue Departments. As indicated above, there are 19 Local Fire and Rescue Departments that operate out of 33 stations. Table 1, (pages 5-6), lists the 19 LFRDs and locations of the 31 fire stations and two rescue stations.

By law, the LFRDs share responsibility with the Division of Fire and Rescue Services for the delivery of fire, rescue, and emergency medical services to the public. The LFRDs must comply with applicable law and policies and regulations promulgated by the County and Fire and Rescue Commission.

The Fire and Rescue Commission. By law, the Fire and Rescue Commission consists of seven members who are appointed by the County Executive and confirmed by the Council. The law requires that two members each represent the volunteer and career sectors of the fire and rescue service. The three other members must represent the general public. The Fire Administrator serves as the ex-officio non-voting Chair of the Commission and must implement and enforce all Commission policies.

TABLE 1: MONTGOMERY COUNTY FIRE AND RESCUE DEPARTMENTS

Fire and Rescue Departments	Stations
Bethesda Fire Department	**Station 6 -** 6600 Wisconsin Avenue, Bethesda MD, 20815 **Station 20 -** 9041 Old Georgetown Road, Bethesda, MD 20814 **Station 26 -** 6700 Democracy Boulevard, Bethesda, MD 20814
Bethesda-Chevy Chase Rescue Squad	**Rescue Station 1** - 5020 Battery Lane, Bethesda, MD 20814
Burtonsville Volunteer Fire Department	**Station 15 -** 13900 Old Columbia Pike, Burtonsville, MD 20866
Cabin John Park Volunteer Fire Department	**Station 10 -** 8021 River Road, Bethesda, MD 20817 **Station 30 -** 9404 Falls Road, Potomac, MD 20854
Chevy Chase Fire Department	**Station 7 -** 8001 Connecticut Avenue, Chevy Chase, MD 20815
Damascus Volunteer Fire Department	**Station 13 -** 26334 Ridge Road, Damascus, MD 20750
Gaithersburg-Washington Grove Fire Department	**Station 8 -** 801 Russell Avenue, Gaithersburg, MD 20879 **Station 28 -** 7272 Muncaster Mill Road, Derwood, MD 20855
Germantown Volunteer Fire Department	**Station 29 -** 20001 Crystal Rock Drive, Germantown, MD 20874
Glen Echo Volunteer Fire Department	**Station 11 -** 5920 Massachusetts Avenue, Bethesda, MD 20816
Hillandale Volunteer Fire Department	**Station 12 -** 10617 New Hampshire Avenue, Silver Spring, MD 20903 **Station 24 -** 13216 New Hampshire Avenue, Silver Spring, MD 20904
Hyattstown Volunteer Fire Department	**Station 9 -** 25801 Frederick Road, Clarksburg, MD 20871
Kensington Volunteer Fire Department	**Station 5 -** 10620 Connecticut Avenue, Kensington, MD 20895 **Station 18 -** 12251 Georgia Avenue, Wheaton, MD 20902 **Station 21 -** 12500 Veirs Mill Road, Rockville, MD 20853 **Station 25 -** 14401 Connecticut Avenue, Layhill, MD 20906

TABLE 1: MONTGOMERY COUNTY FIRE AND RESCUE DEPARTMENTS CONTINUED.

Fire and Rescue Departments	Stations
Laytonsville District Volunteer Fire Department	**Station 17** - 21400 Laytonsville Road, Laytonsville, MD 20879
Rockville Volunteer Fire Department	**Station 3** - 380 Hungerford Drive, Rockville, MD 20850 **Station 23** - 121 Rollins Avenue, Rockville, MD 20852 **Station 31** - 12100 Darnestown Road, N. Potomac, MD 20878 **Station 33** - 11430 Great Falls Road, Potomac, MD 20854
Sandy Spring Volunteer Fire Department	**Station 4** - 17921 Brooke Road, Sandy Spring, MD 20860 **Station 40** - 16911 Georgia Avenue, Olney, MD 20832
Silver Spring Volunteer Fire Department	**Station 1** - 8131 Georgia Avenue, Silver Spring, MD 20910 **Station 16** - 111 University Boulevard, East, Silver Spring, MD 20901 **Station 19** - 1945 Seminary Road, Silver Spring MD 20910
Takoma Park Volunteer Fire Department	**Station 2** - 7201 Carroll Avenue, Takoma Park MD 20912
Upper Montgomery County Volunteer Fire Department	**Station 14** - Beallsville Road, Beallsville, MD 20839
Wheaton Volunteer Rescue Squad	**Rescue Station 2** - 11435 Grandview Avenue, Wheaton, MD 20902

The Commission has broad authority and is responsible for adopting and enforcing Countywide policies, regulations, standards, procedures, plans, and programs applicable to all fire, rescue, and emergency medical service operations. Under current law, the Commission must, on behalf of the County: ". . . develop effective, efficient, and equitable fire, rescue, and emergency medical services Countywide, and provide the policy, planning, and regulatory framework for all fire, rescue, and medical service operations." (Section 21-2(d))

The Fire Board. By law, the Fire Board consists of the chief and president of each Local Fire and Rescue Department in the County. The Fire Board's legal duties and responsibilities include: submitting to the County Executive a list of candidates for appointment to the Fire and Rescue Commission; actively supporting the maintenance and enhancement of volunteer participation; and advising the Commission on any matters relating to fire, rescue, and emergency medical services.

2. FY 04 Operating Budget

The total approved FY 04 operating budget for the Montgomery County Fire and Rescue Service is $119 million. 85% of this amount is for personnel costs with the other 15% allocated for operating expenses and capital outlay. In sum, the tax-supported operating budget pays for:

- DFRS uniform and civilian personnel;
- The programs provided by DFRS personnel, e.g., training, communications;
- General LFRD operating expenses; and
- Administrative and vehicle maintenance personnel employed by the LFRDs.

MCFRS' approved FY 04 personnel complement lists 1,078 workyears (uniform and civilian) supported by County funds. The LFRDs report more than 1,000 active volunteers, of which approximately 380 qualify for the length of service awards program.[3]

The County tax dollars provided to the 18 LFRDs are audited on an annual basis. The audit is conducted by an independent audit firm, under contract to the County Council.[4]

3. Sources of Funding

The Fire and Rescue Service is funded from three primary sources: the Fire Tax, grant funds, and funds raised by the Local Fire and Rescue Departments.

[3] Established by law, the length of service award program provides retirement benefits to volunteers who accumulated points based on participation in certain activities during their years of service.

[4] The Office of Legislative Oversight serves as the Council's contract manager for the audit of the LFRDs. Arthur Anderson conducted the FY 99 audit; Rager Lehman and Houck conducted the FY 00, FY 01, and FY 02 audit. B-CC Rescue Squad does not receive County tax funds and is not included in the audits.

The Fire Tax. County law (Chapter 21) establishes a fire tax district that consists of the entire County and authorizes the County Council to levy a tax on each $100 of the assessed value of taxable property in the fire tax district at a rate to yield an amount that the Council finds sufficient to fund:

(1) The management, operation, and maintenance of all fire and rescue services;
(2) The purchase (including debt service) construction, maintenance, and operation of real and personal property necessary or incidental to fire and rescue services;
(3) The operation of the Commission and the Fire and Rescue Service;
(4) All tax-supported expenditures of the local fire and rescue departments; and
(5) Awards for the length of service awards program.[5]

The fire tax must be levied and collected in the same manner that other county real property taxes are levied and collected. For FY 04, the Fire Tax provided $115.9 million or almost 97% of the total MCFRS budget.

Grant funds. The fire and rescue service receives some outside grant funds from sources such as Federal Emergency Management Agency and the U.S. Department of Justice.

In addition, the Local Fire and Rescue Departments receive grants from the Senator William H. Amoss Fire, Rescue, and Ambulance Fund (formerly called State 508 funds). The Amoss fund was established to provide grants for fire, rescue, and ambulance services to promote high quality service and the continued financial viability of volunteer fire, rescue, and ambulance companies.

By law, Amoss funds may not supplant County fire and rescue funding and must be used for the acquisition or rehabilitation of apparatus and capital equipment, fire and rescue equipment and supplies, and for the renovation of facilities used to house apparatus. The total FY 04 appropriation of Amoss funds, approved by the Council on September 9, 2003, was $1.3 million. An additional $25,000 appropriation was approved on November 18, 2003. (Appendix F contains copies of the Council resolutions that list the approved FY 04 Amoss Fund grants to LFRDs.)

Funds raised by Local Fire and Rescue Departments. As independent corporations, the LFRDs are able to engage in their own fundraising efforts. Funds raised by LFRDs are used for a range of purposes, including the purchase of new apparatus and renovation of facilities.

[5] County Code Section 21-24, Fire Tax Funds.

4. Fire and Rescue Incident and Unit Response Data

Table 2 (below) summarizes the number of fire and rescue incidents for the past four fiscal years. Between FY 00 and FY 03, the total number of incidents increased more than 20%. During this time, the number of calls for emergency medical services (basic and advanced life support incidents) increased from 69% to 73% of all incidents.

TABLE 2: NUMBER OF FIRE-RESCUE INCIDENTS
FY 00 - FY 03

Type of Incident:	FY 00	FY 01	FY 02	FY 03
Basic life support	38,210	44,753	46,020	47,494
Advanced life support	19,612	23,102	24,800	25,232
Structural fire	11,957*	1,930*	1,715	1,725
Other	13,516*	25,315*	24,239	25,086
Total	83,295	95,100	96,774	99,537

Source: MCFRS/OLO, December 2003

*The relatively large changes between FY 00 and FY 01 shown in the structural fire and other incident categories are due to a change in reporting practices. In FY 01, MCFRS started tracking and reporting structural fire responses separately from all "fire incidents". Since FY 01, the "other incident" category has included responses to non-structure fires and/or miscellaneous alarm calls, e.g., automatic fire alarms.

The annual number of unit responses is higher than the number of incidents because more than one vehicle is often dispatched to a single incident. Table 3 (below) shows the average number of unit responses to incidents for the past four fiscal years. Since FY 00, the annual ratio of unit responses to incidents has fluctuated between 1.81 to 1.0 and 1.97 to 1.0.

TABLE 3: AVERAGE NUMBERS OF INCIDENTS AND UNIT RESPONSES PER DAY
FY 00 – FY 03

Average Number of:	FY 00 Actual	FY 01 Actual	FY 02 Actual	FY 03 Actual
Incidents per day	228	261	265	272
Unit responses per day	451	474	492	500
Ratio of unit responses to incidents	1.97 to 1.0	1.81 to 1.0	1.85 to 1.0	1.84 to 1.0

Source: OLO/MCFRS, December 2003

Exhibit 1 (page 11) depicts unit responses by fire and rescue department for two years, 1997 and 2002.[6] The number of stations operated (1, 2, 3,or 4) by each fire and rescue department is shown in parenthesis following the name of each department. The data show that:

- In 2002, the total number of unit responses was 179,671; this represented a 23% increase from the 145,504 unit responses in 1997.

- The number of unit responses varies substantially among fire and rescue departments. For example, in 2002, there were 1,674 unit responses from the single Hyattstown station and 31,524 unit responses from the four Rockville stations.

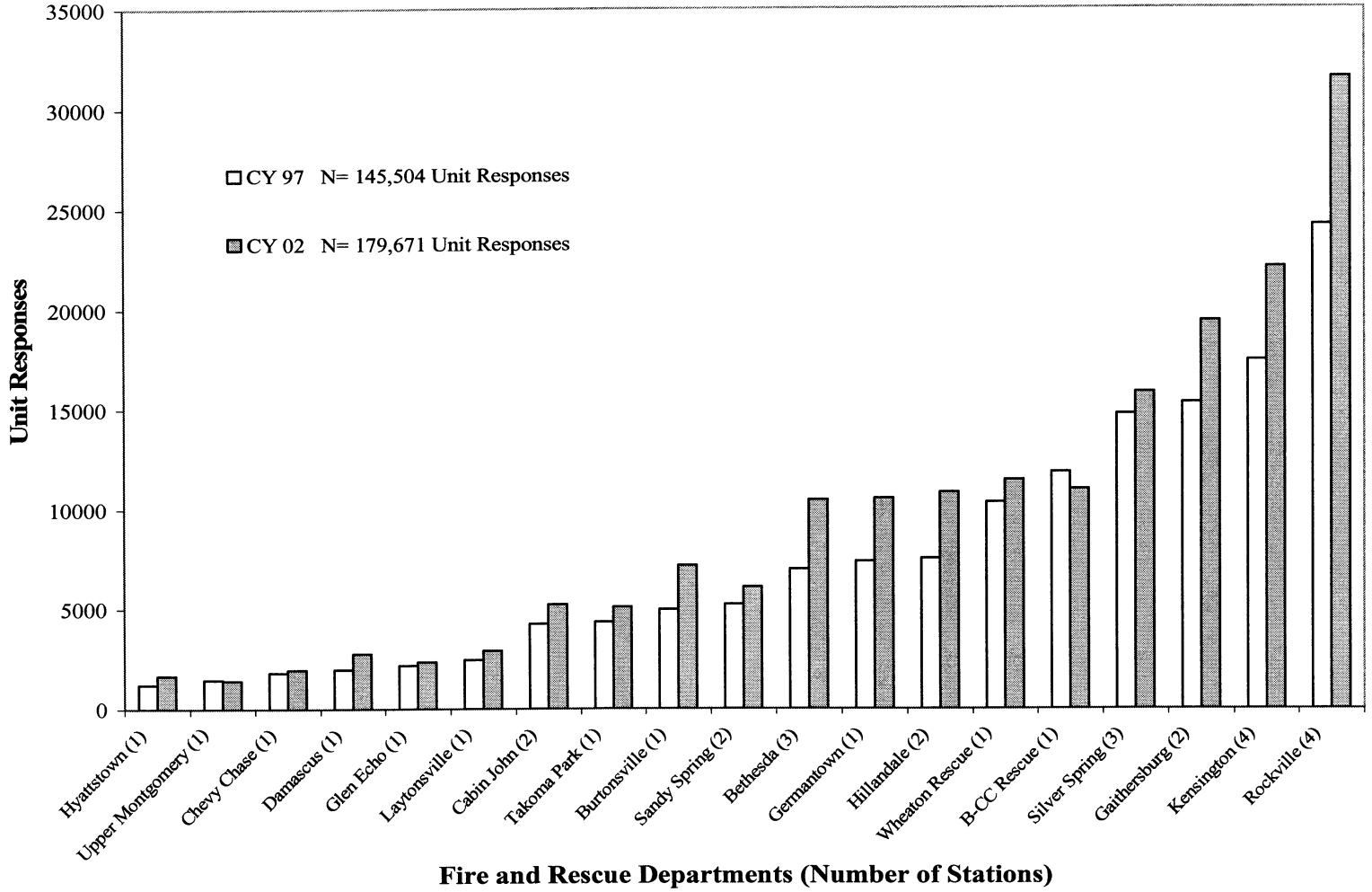
- In both 1997 and 2002, the same four fire and rescue departments (Silver Spring, Gaithersburg, Kensington, and Rockville) accounted for almost half of all unit responses in the County.

- Between 1997 and 2002, all but two of the fire and rescue departments (B-CC Rescue Squad and Upper Montgomery) experienced an increase in unit responses. For eight of the fire and rescue departments, the increase in unit responses exceeded 20%.

From a vehicle maintenance perspective, these data indicate that not all MCFRS vehicles are used at the same rate. How much a vehicle is used depends, in part, upon where it is housed.

[6] Unit response data are presented by fire and rescue department because funding for and decisions about vehicle maintenance are made primarily at the department (vs. station) level.

Exhibit 1: Unit Responses 1997 and 2002 by Fire and Rescue Department



Source: OLO/MCFRS, December 2003

Part B. History of Recommendations to Improve Vehicle Maintenance

Since the mid 1970's, various consultants, task forces, and committees of County Government staff have recommended an assortment of strategies to improve how fire and rescue vehicles are maintained and repaired in Montgomery County. Table 4 (beginning on the next page) summarizes the history of the written recommendations for improvement offered during the past 27 years.

A handful of the recommendations contained in these reports were either partially or fully implemented. In particular:

- There are now six satellite maintenance shops located in fire stations (partial implementation of a 1979 recommendation for eight satellite shops);

- Most of the maintenance on support vehicles used by MCFRS headquarters' staff is performed under the Department of Public Works' contract for light duty maintenance at the Seven Lock Road facility (partial implementation of a 1990 recommendation to make use of the County's existing centralized maintenance facilities); and

- MCFRS has a vehicle stock numbering program (implementation of a 1991 recommendation).

In addition, the Department of Fire and Rescue Services is currently working on developing procedures for daily, weekly, and monthly vehicle checkouts (this will implement a 1991 recommendation).

However, the record shows that most of the recommendations made multiple times over the years have not been implemented. Recommendations made but not acted upon include:

- Develop and implement standards for apparatus maintenance;

- Build a central maintenance facility for fire and rescue vehicles;

- Develop systemwide recordkeeping procedures; and

- Provide a mobile system for performing maintenance and/or repairs.

TABLE 4: HISTORY OF WRITTEN RECOMMENDATIONS ON FIRE AND RESCUE VEHICLE MAINTENANCE: 1976 – 2003

Date	Source	Summary of Recommendations
1976	Consultants: Booz Allen	Build a centralized apparatus maintenance and storage facility to provide all preventive maintenance (PM) services and major and minor repairs. Locate the facility at the closed County incinerator (off Gude Drive); under the management of the Fire Board.
1978	Fire Service Review Task Force (appointed by County Executive)	Provide a central maintenance facility for heavy maintenance and repair (suggested location - Station 21, Kensington). Develop and implement standards for apparatus maintenance. Establish a central authority to ensure compliance by all departments and squads.
1979	Fire Board	Proposes a three-level approach for maintaining fire apparatus: • Level 1: Assign responsibility for minor preventive maintenance work to each station. • Level 2: Assign responsibility for quarterly preventive maintenance work to eight satellite shops. • Level 3: Build a central facility (at the County's service park on Crabbs Branch Parkway) to perform annual preventive maintenance and major repair work.
July 1988	Ad Hoc Committee on Vehicle Maintenance (appointed by the Fire and Rescue Commission)	Proposes changing the approach to maintaining vehicles in three phases: • Phase 1: Establish one satellite maintenance facility in each of the five districts. • Phase 2: Maintain the five satellite shops, construct a central maintenance facility (several possible locations identified), and use the new central facility for performing major repair work; implement a Countywide computerized maintenance information system. • Phase 3: Perform all maintenance and repair work at a central facility. Discontinue the use of the satellite shops. Provide a mobile service for minor repairs and preventive maintenance.

TABLE 4: HISTORY OF WRITTEN RECOMMENDATIONS ON FIRE AND RESCUE VEHICLE MAINTENANCE: 1976 – 2003 CONT.

Date	Source	Summary of Recommendations
January 1990	Fire and Rescue Vehicle Maintenance Working Group (appointed by the Chief Administrative Officer)	Proposes four alternatives to July 1988 Ad Hoc Committee report: 1. Perform maintenance on support vehicles under the County's contract for light vehicle maintenance (Seven Locks Road facility); perform maintenance on ambulances and heavy apparatus at five satellite shops. 2. Perform maintenance on ambulances and support vehicles under the County's contract for light vehicle maintenance (Seven Locks Road facility). Perform maintenance on heavy apparatus at five satellite shops. 3. Same as alternative 2, except perform maintenance on heavy apparatus by adding a third shift of staff to the Department of Equipment Management's maintenance facility located on Crabbs Branch Way. 4. Perform maintenance on all vehicles under a contract administered by the Department of Equipment Management. Specifically, perform maintenance on heavy apparatus by a contractor at the five satellite shops, and perform maintenance on ambulances and support vehicles by a contractor at the County's existing facility located on Seven Locks Road.
April 1990	Interagency Report by FRC Chair and department directors (DFRS, OMB, Personnel, and Transportation)	Proposes a fifth alternative to the January 1990 Fire and Rescue Vehicle Maintenance Working Group Report: 5. Perform maintenance on ambulances under the County's contract for light duty vehicles (Seven Locks Road facility). Offer contract maintenance support to the corporations. Continue to assign the responsibility of maintaining heavy apparatus to the corporations, with movement toward some centralization of that function in the five satellite shops. Develop Countywide maintenance standards and record keeping procedures. The group also offered 11 other recommendations, including: develop Fire and Rescue Commission policies on maintenance standards for tax-supported vehicles and the collation of maintenance information.

TABLE 4: HISTORY OF WRITTEN RECOMMENDATIONS ON FIRE AND RESCUE VEHICLE MAINTENANCE: 1976 – 2003 CONT.

Date	Source	Summary of Recommendations
October 1991	Fire and Rescue Vehicle Maintenance Steering Committee (appointed by the FRC)	Do not pursue the "fifth" alternative outlined above primarily for fiscal reasons. Continue using the five satellite maintenance shops with an improved focus on gathering Countywide information/data for more informed decision-making. To achieve this, develop the following: • A vehicle stock numbering system; • A set of standardized preventive maintenance guidelines; • Procedures for daily, weekly, monthly, and quarterly vehicle checkouts; • A system (software) to capture costs on a unit-by-unit basis and other information; and • A system for repair order usage. The Fire and Rescue Commission endorsed this recommendation in February 1992.
October 1994	Fire, Rescue, and Emergency Medical Services Master Plan	Recommendation G.1-2: • The Fire and Rescue Commission should work with the corporations to resolve roadblocks to implementing Countywide vehicle maintenance standards, and to determine what the goals for a Countywide vehicle maintenance program should be and what resources are needed. • The Commission should develop and implement, in consultation with the corporations, Countywide vehicle maintenance standards, including provisions on how maintenance will be provided, and a schedule for phasing in new vehicle maintenance procedures, if needed.

TABLE 4: HISTORY OF WRITTEN RECOMMENDATIONS ON FIRE AND RESCUE VEHICLE MAINTENANCE: 1976 – 2003 CONT.

Date	Source	Summary of Recommendations
October 1995	Robert F. Kidd, Commissioner, Fire and Rescue Commission (report requested by the FRC)	Concludes that the recommendation for a centralized facility dedicated to vehicle maintenance/repair is the best approach, but is too costly to implement. Recommends maintaining the satellite system as a more practical approach. This report also concludes that "the fire and rescue vehicle fleet has never been better maintained...."
July 2003	MCFRS Planning Symposium (attended by 38 MCFRS personnel)	Identifies apparatus purchase and maintenance as a FY 05 budget priority. Suggestions identified in the area of apparatus purchase and maintenance include: • A dedicated facility (preferably centrally located in the County) to support apparatus maintenance; • The hire of additional mechanics; • Specialized training for mechanics; • A mobile preventive maintenance repair truck; and • The application of a standardized maintenance program.

Part C. Standards for the Maintenance and Performance of Fire and Rescue Vehicles

This section briefly describes State regulations that outline preventive maintenance requirements, and the National Fire Protection Association (NFPA) standards related to fire and rescue vehicles and apparatus. It also explains the two different types of certifications for mechanics/technicians who work on fire and rescue vehicles.

1. Preventive Maintenance Requirements Established by State Law

In 1990, the State of Maryland adopted preventive maintenance requirements (Transportation Article, §23-301–§23-305 and COMAR 11.22) for vehicles defined as trucks, truck tractors, passenger buses, freight trailers, and freight semi-trailers. The Maryland preventive maintenance program meets the federal annual inspection requirement established by the Federal Motor Carrier Safety Administration. The Commercial Vehicle Enforcement Division of the Maryland State Police administers Maryland's program.

Fire engines, aerial ladder trucks, heavy rescue squads, and ambulances qualify as trucks under the State regulations. The regulations require each vehicle to undergo systematic inspection, maintenance, and repair once every 12 months or every 25,000 miles, whichever comes first. The regulations prescribe standards for the following:

- Alignment
- Suspension
- Steering
- Brake systems
- Tires
- Wheels, rims, studs, nuts
- Fuel storage and delivery
- Exhaust system
- Vehicle frame, body, and sheet metal
- Universal joints and u-clamps
- Lighting
- Electrical system
- Emergency equipment
- Seats and seat belts
- Sun visor
- Mirrors
- Glazing
- Windshield wipers and defroster
- Automatic transmission gear selector/neutral safety switch
- Certain power train components
- Speedometer and odometer
- Clutch and brake pedal pad
- Horn
- Hitches and coupling devices
- Tanks and pressure vessel

The regulations require inspection records to be kept at the location where the vehicle is garaged, assigned, or maintained. Also, when applying for initial or renewed registration, the owner must certify that the vehicle is maintained under a preventive maintenance plan as established by the regulation.

2. National Fire Protection Association (NFPA) Standards

The National Fire Protection Association (NFPA) is an international non-profit membership organization dedicated to fire prevention and safety issues. The mission of the NFPA is to "reduce the worldwide burden of fire and other hazards on the quality of life by developing and advocating scientifically based consensus codes and standards, research, training, and education."[5]

Technical committees, staffed by over 5,000 volunteers worldwide, develop, review, and update NFPA's standards. There are currently 200 different published books of standards.

Table 5 (page 20) lists all NFPA standards that relate to fire and rescue vehicles and apparatus. There are four NFPA standards most frequently referenced for vehicle inspection, maintenance, and repair:

- NFPA 1915, *Standard for Fire Apparatus Preventative Maintenance Program* – This standard defines minimum requirements for preventive maintenance programs. The standard includes items to be inspected, frequency of servicing and maintenance, and testing requirements. The standard also recommends the development of written "out-of-service" criteria.

- NFPA 1911, *Standard for Service Tests of Fire Pump Systems on Fire Apparatus* – This standard establishes minimum pump performance criteria and testing requirements. The standard includes procedures for testing the accuracy of gauges and the effectiveness of pump systems under high, medium, and low pressure.

- NFPA 1914, *Standard for Testing Fire Department Aerial Devices* – This standard establishes minimum safety requirements for aerial ladders. The standard requires that ladders be inspected and certified annually. The standard also requires a more comprehensive inspection at least every five years.

- NFPA 1071, *Standard for Emergency Vehicle Technicians Professional Qualifications* – This standard identifies minimum job performance requirements for individuals qualified as emergency vehicle technicians and who are engaged in the inspection, diagnosis, maintenance, repair, and testing of emergency vehicles. The standard provides requirements for two different classifications, Emergency Vehicle Technician I and II.

[5] National Fire Protection Association, 2003, *NFPA Overview.* (www.nfpa.org/catalog/home/AboutNFPA/NFPAOverview/NFPAOverview.asp)

3. Two Types of Mechanic/Technician Certifications

There are two types of certifications relevant to mechanics/technicians who work on fire and rescue vehicles:

- *Automotive Service Excellence (ASE) Certification* – ASE certification is a voluntary program available to all automotive service professionals. Individuals can receive ASE certification in a number of different automotive repair specialties, including heavy trucks. To become certified, an individual must pass the appropriate written examination and have two years relevant work experience. Certification must be renewed every five years.

- *Emergency Vehicle Technician (EVT) Certification Program* – EVT certification is a voluntary program available to mechanics/technicians that work on emergency vehicles. The EVT Certification Program has two separate tracks, one for technicians that service and maintain fire apparatus and another for technicians that service and maintain ambulances. An individual may become solely EVT certified or may become "level-certified", which combines EVT and ASE certification. Each track has three levels (Level I, Level II, and Master Level III). To become certified, an individual must pass the appropriate written examination. Certification must be renewed every five years.

TABLE 5: NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS RELATED TO FIRE AND RESCUE VEHICLE APPARATUS

1. NFPA 1000, Standard for Fire Service Professional Qualifications Accreditation and Certification Systems, 2000 edition.
2. NFPA 1001, Standard for Fire Fighter Professional Qualifications, 2002 edition.
3. NFPA 1002, Standard for Fire Apparatus Driver/Operator Professional Qualifications, 1998 edition.
4. NFPA 1006, Standard for Rescue Technician Professional Qualifications, 2000 edition.
5. NFPA 1021, Standard for Fire Officer Professional Qualifications, 1997 edition.
6. NFPA 1071, Standard for Emergency Vehicle Technician Professional Qualifications, 2000 edition.
7. NFPA 1451, Standard for a Fire Service Vehicle Operations Training Program, 2002 edition.
8. NFPA 1500, Standard on Fire Department Occupational Safety and Health Program, 2002 edition.
9. NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, 2001 edition.
10. NFPA 1720, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments, 2001 edition.
11. NFPA 1901, Standard for Automotive Fire Apparatus, 1999 edition.
12. NFPA 1906, Standard for Wildland Fire Apparatus, 2001 edition.
13. NFPA 1911, Standard for Service Tests of Fire Pump Systems on Fire Apparatus, 2002 edition.
14. NFPA 1912, Standard for Fire Apparatus Refurbishing, 2001 edition.
15. NFPA 1914, Standard for Testing Fire Department Aerial Devices, 2002 edition.
16. NFPA 1915, Standard for Fire Apparatus Preventive Maintenance Program, 2000 edition.
17. NFPA 1931, Standard on Design of and Design Verification Tests for Fire Department Ground Ladders, 1999 edition.
18. NFPA 1932, Standard on Use, Maintenance, and Service Testing of Fire Department Ground Ladders, 1999 edition.
19. NFPA 1936 Standard on Powered Rescue Tool Systems, 1999 edition.
20. NFPA 1961, Standard on Fire Hose, 2002 edition.
21. NFPA 1962, Standard for the Care, Use, and Service Testing of Fire Hose Including Couplings and Nozzles, 1998 edition.
22. NFPA 1963, Standard for Fire Hose Connections, 1998 edition.
23. NFPA 1964, Standard for Spray Nozzles (Shutoff and Tip), 1998 edition.

Part D. Common Fleet Management Practices

Research on the best practices in fleet management indicates that a combination of strategies and resources is needed to effectively and efficiently purchase, maintain, repair, and retire a fleet of vehicles. While recognizing that public safety vehicles have certain unique attributes, the great majority of fleet management practices apply equally to a broad array of vehicle types, including fire and rescue apparatus. This section describes common strategies employed across the country to maintain safe and dependable vehicle fleets.

1. An effective preventive maintenance program.

The literature on fleet management practices consistently cites an effective preventive maintenance program as critical to keeping vehicles in top running order. Maintenance on vehicles includes inspection, lubrication, adjustment, cleaning, testing, and replacing components that have failed or are about to fail. "Preventive maintenance" refers to vehicle maintenance that is performed on a scheduled, periodic basis to correct potential problems either before they occur or before they become major problems.[6]

It is well documented that preventive maintenance helps to keep life-cycle vehicle repair and maintenance costs to a minimum. An effective preventive maintenance program adopts schedules (that are followed) for daily, weekly, and periodic maintenance service checks. These schedules should be based upon the manufacturer's recommendations as well as factors that measure the amount and type of work performed by each vehicle, e.g., geography, weather, engine use, mileage.[7]

2. On a daily basis, vehicle operators inspect their assigned vehicles and report defects. Procedures exist such that vehicles with an out-of-service condition are immediately removed from service.

All employees who drive fleet vehicles – before operating an assigned vehicle – have a responsibility to inspect their vehicle and report defects. Safe and dependable fleet operations have procedures in place for documenting and reporting serious deficiencies that require immediate attention as well as routine items that are not urgent.

To parallel the process of identifying defects, effective fleet operations have an agreed-upon and consistently applied list of out-of-service conditions, along with procedures for immediately removing vehicles from service until major defects are repaired.

The essential role that daily inspections and the reporting of defects by vehicle operators plays in successful fleet operations underscore the importance of effective communication between those who use the fleet's vehicles and those involved with procurement and maintenance.

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[6] International City/County Management Association, *IQ Report, Fleet Management*, July 2002.
[7] Williams Peters, *Apparatus Purchasing Handbook*, Chapter 15, Preventive Maintenance and Warranty, 1994.

3. **A reserve fleet that enables vehicles to be taken out-of-service for preventive maintenance or repairs (both urgent and non-urgent) without disrupting service delivery.**

An effective preventive maintenance program adheres to the schedules established for periodic service. Realistically, in order to stay on a preventive maintenance schedule, a fleet operation needs a sufficiently large and readily accessible reserve fleet so that vehicles can be taken out-of-service for maintenance without disrupting service delivery.

In some fleet operations, one option is to perform service outside of "normal working hours" That option does not typically apply to fleets that include public safety vehicles, which operate on a 24/7 schedule.

4. **A regular testing process that assesses whether vehicles are complying with pre-established performance standards.**

Successful fleet management requires monitoring and evaluating the condition of fleet vehicles. This includes regular testing for compliance with pre-established performance standards. Some vehicle standards are legally established, e.g., the federal Clean Air Act sets vehicle emission standards; federal and state Departments of Transportation establish vehicle safety standards. Additional vehicle operating standards are set forth by professional associations, e.g., the National Fire Protection Association.

To be effective, the results of any such testing program should be used to adjust approaches to vehicle maintenance such that standards are uniformly and consistently met across the fleet.

5. **Driver training and standards, and related management procedures that appropriately reward or discipline drivers to ensure that only well-qualified drivers are allowed to drive.**

Successful fleet operations recognize the important role that skillful drivers play in maintaining a safe and dependable fleet. Strategies for developing and maintaining a cadre of proficient drivers include:

- Implement a rigorous screening, training, and testing program for drivers;
- Recognize and reward drivers who establish good safety records; and
- Investigate accidents in order to determine whether it was preventable, and consistently follow through with discipline/corrective action for drivers who are found at fault.

6. Access to quality, dependable, and reasonably priced vehicle maintenance and repair services.

Desirable characteristics of vehicle maintenance and repair services include:

- Mechanics who meet industry-standard qualifications;
- Timely repairs with minimum out-of-service time;
- Services that are convenient and responsive to users' needs; and
- Services that use the correct diagnostics, proper tools, and provide timely access to the parts needed.

There are multiple ways to structure vehicle maintenance and repair services that have these positive attributes. An organization's challenge is to select an approach that delivers a quality and dependable service for a reasonable cost.

Across the country, some fleet departments provide all services using in-house staff, while others outsource some or all of their maintenance and repair services. Some jurisdictions find that private vendors can perform quality work at a lower cost than in-house staff, while others limit their outsourcing to services that require the use of expensive tools and constant training of service workers.

7. A process for regularly making fleet-related decisions based upon an analysis of accurate and timely information.

Effective fleet management operations require access to accurate, factual, and current information about vehicles in order to make data-driven decisions on the full range of fleet-related issues, including procurement, maintenance, and repair.

A computerized management information system (MIS) is a key component to effective administration of today's complex fleet management services. The MIS should record and track specific data about every vehicle (e.g., vehicle identification number, purchase price, vehicle age) as well as operational data such as mileage, labor hours, cost of parts, preventive maintenance schedule, service performed. In addition to being linked to parts ordering, the data should be used to calculate costs for vehicles by type and age, establish benchmarks, and to help determine which vehicles are cost effective to maintain.[8]

8. A program for replacing vehicles when owning and operating them cost more than owning and operating their replacements.

Effective fleet management requires development of an apparatus replacement plan that is based upon a range of variables such as age, use, and life-cycle maintenance costs. The general rule of thumb is that a vehicle should be replaced when owning and operating that vehicle costs more than owning and operating a replacement vehicle. In practice, an apparatus replacement plan is only effective if it is regularly funded.

[8] International City/County Management Association, *IQ Report, Fleet Management*, July 2002.

CHAPTER III: Characteristics of the MCFRS Fleet

This chapter presents information on the type, number, ownership, age, and location of MCFRS vehicles. The chapter also discusses MCFRS' vehicle replacement schedule and funding for purchasing new vehicles.

Part A. Number, Type, and Ownership of Vehicles in the MCFRS Fleet

As of December 1, 2003, MCFRS' fleet includes 424 vehicles: 174 frontline vehicles, 45 specialty vehicles, and 205 support vehicles.

Table 6 (page 28) and Exhibit 2 (page 29) provide further details data on the numbers and types of vehicles owned by County Government and by individual Local Fire and Rescue Departments.[1] The data show that:

- The County Government owns 72% (305 vehicles) of the fleet. Local Fire and Rescue Departments (LFRDs) own the other 28% (119 vehicles) of the fleet.

- The 174 frontline vehicles represent 41% of the fleet. The County Government owns 74% of all frontline vehicles. Comparatively, the LFRDs own a larger number of heavy rescue squads and an equal number of tankers.

- Ambulances account for 40% of the frontline fleet and engines are another 36%. The 22 aerial ladder trucks represent 13% of the frontline vehicles. Heavy rescue squads and tankers account for the final 10% of the frontline fleet.

- The fleet contains 45 specialty vehicles, 58% owned by the County Government and 42% owned by LFRDs. Specialty vehicles include 16 brush trucks, one hazmat unit, three collapse rescue team vehicles, two air cascade units, two decontamination units, one under water rescue team vehicle, and 20 other various specialty vehicles.

- The fleet contains 205 support vehicles, 74% owned by the County Government and 26% owned by LFRDs. Support vehicles include sedans, SUVs, cargo vans, and other light duty vehicles.

Appendix A lists all vehicles in the fleet by fire and rescue department and indicates vehicle ownership. The Bethesda-Chevy Chase Rescue Squad and the Wheaton Rescue Squad own all of the vehicles that operate from their respective stations. The other 31 stations house a mix of County Government and LFRD-owned vehicles.

[1] Vehicle ownership is defined as the entity listed on a vehicle's title.

Part B. Age of the MCFRS Fleet

The average age of all vehicles in the MCFRS fleet is eight years. The average age of frontline vehicles is eight years; the average age of specialty vehicles is 15 years; the average age of support vehicles is six years. (Tables 7 and 8, page 30)

Almost half (46%) of MCFRS' frontline fleet is less than five years old. However, this statistic is skewed by the relatively large number of ambulances that are replaced more frequently than engines, aerial ladder trucks, and heavy rescue squads.

Table 8 (page 30) shows the frontline fleet split into four age groups: less than five years old, six to ten years old, 11 to15 years old, and more than 15 years old. The 46% of the frontline fleet that is less than five years old includes 44 ambulances, 24 engines, six aerial ladder trucks, three tankers, and two heavy rescue squads. These data also show that:

- 27% of the frontline vehicles are between six and ten years old. This group contains 25 ambulances, 11 engines, five aerial ladder trucks, four heavy rescue squads, and two tankers;

- 16% of the frontline vehicles are between 11 and 15 years old. This group contains 19 engines, five aerial ladder trucks, and three heavy rescue squads; and

- 11% of the frontline vehicles are older than 15 years. This group contains 11 engines, six aerial ladder trucks, and three heavy rescue squads.

Part C. Location of Vehicles

313 of the 424 MCFRS vehicles are located across 33 fire and rescue stations. Exhibit 3 (page 31) depicts the number housed at each fire and rescue department. The Rockville and Kensington fire and rescue departments, with four stations each, house the largest number of vehicles. Appendix A lists all vehicles in the fleet by fire and rescue department.

The other 111 vehicles consist of: 84 support cars, 18 specialty vehicles, five aerial ladder trucks, two engines, one ambulance, and one heavy rescue squad. The five aerial ladder trucks are reserve apparatus, not assigned to a particular station. The other vehicles are used at the Public Safety Training Academy and by DFRS command staff, code enforcement staff, arson investigators, and the Urban Search and Rescue Team.

Part D. MCFRS' Vehicle Replacement Plan

Each fiscal year, MCFRS prepares a vehicle replacement plan that identifies the number of vehicles in the fleet that "should" be replaced. Before FY 97, funding for the replacement of fire and rescue vehicles came from the Capital Improvements Program (CIP). In FY 97, the County Government determined that fire and rescue vehicles were not eligible for CIP funding. Since FY 97 the purchase of fire and rescue vehicles has been funded in the operating budget.

MCFRS staff report that, historically, age has been the primary criteria used to determine when a vehicle "should" be replaced. For example, the MCFRS plan calls for replacing an ambulance after five to eight years; the plan also calls for replacing other frontline vehicles (aerial ladder trucks, engines, heavy rescue squads, tankers) at 15-20 years.[2]

A more complex set of criteria for replacing EMS units was developed and approved by the Fire and Rescue Commission (FRC) in November 2001. In sum, based upon a report prepared by the Apparatus and Facilities Subcommittee of the FRC's Finance, Technology, and Planning Committee, the FRC approved the staff recommendation that beginning in FY 02, the criteria for EMS unit replacement should be:

- Cumulative call load from initial date of service to a fixed date, such as June 30th of each year;
- Total cumulative mileage from initial date of service to a fixed date, such as June 30th of each year; and
- Preventive maintenance records; records of both warranty and repair work, and inspection by an independent team of three knowledgeable personnel.[3] (Source: *EMS Unit Replacement Criteria Report*, page 3.)

MCFRS' current plan calls for the replacement of 21 vehicles in FY 04 at an estimated cost of $7.17 million. The approved FY 04 budget included $367,360 for vehicle replacement, an amount that is $6.8 million short of the amount listed in the replacement schedule. For FY 05, the plan calls for the replacement of 20 more vehicles at an estimated cost of $10.7 million.

Leasing Fire and Rescue Vehicles. As an alternative to purchasing, MCFRS has recently begun leasing some fire and rescue vehicles. Leasing vehicles permits MCFRS to obtain more vehicles sooner for reduced up-front costs. However, the life-cycle cost of leasing a vehicle is substantially higher than a vehicle's purchase price.

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[2] NFPA standard 1901 recommends that frontline vehicles (e.g., aerial ladder trucks, engines, and other heavy apparatus) be replaced at 12 years of age.

[3] The report approved by the FRC stated that implementation of this recommendation assumed that the system of vehicle and maintenance recordkeeping will be enhanced to track cumulative call loads, mileage, engine hours, preventive maintenance, warranty and repair work. Further, it assumed the establishment of a system for objective independent annual evaluation of the condition of each EMS unit.

MCFRS currently leases 11 ambulances at an estimated cost of $220K per year ($20K per ambulance per year). In FY 05, MCFRS plans to lease five more ambulances and four new aerial ladder trucks for a total cost of approximately $800K ($172K per aerial ladder truck and $20K per ambulance per year).

Part E. Senator Amoss Funds

In FY 86, the Maryland General Assembly enacted legislation to establish the Senator William H. Amoss Fire, Rescue, and Ambulance (State 508) Fund to promote high-quality fire, rescue, and ambulance services and the continued financial viability of volunteer fire, rescue, ambulance companies.

Amoss funds are distributed directly to Local Fire and Rescue Departments. (LFRDs) LFRDs must use the grant funds for:

- The acquisition or rehabilitation of apparatus and capital equipment;
- The purchase of fire and rescue equipment and supplies; and/or
- The renovation of facilities used to house apparatus.

The State distributes the grant funds directly to the County in quarterly payments. The State requires that the County expend Amoss funds within two years.[4] The annual amount of money distributed has been approximately $1 million in recent years. The County must allocate the funds to Local Fire and Rescue Departments using a process that includes a review of local department funding requests by the Montgomery County Fire-Rescue Association and the Fire and Rescue Commission.

In FY 04, the County Council appropriated approximately $1.3 million of Senator Amoss grant funds to the 19 LFRDs. The grant money will fund the purchase of apparatus, fire and rescue supplies and equipment and minor station renovations. Appendix F lists the amount of money allocated to each LFRD and the specific items to be purchased with the grant money.

[4] Source: Background section of Council Resolution 15-327 (see Appendix F).

TABLE 6: INVENTORY OF MCFRS VEHICLES (AS OF DECEMBER 1, 2003)

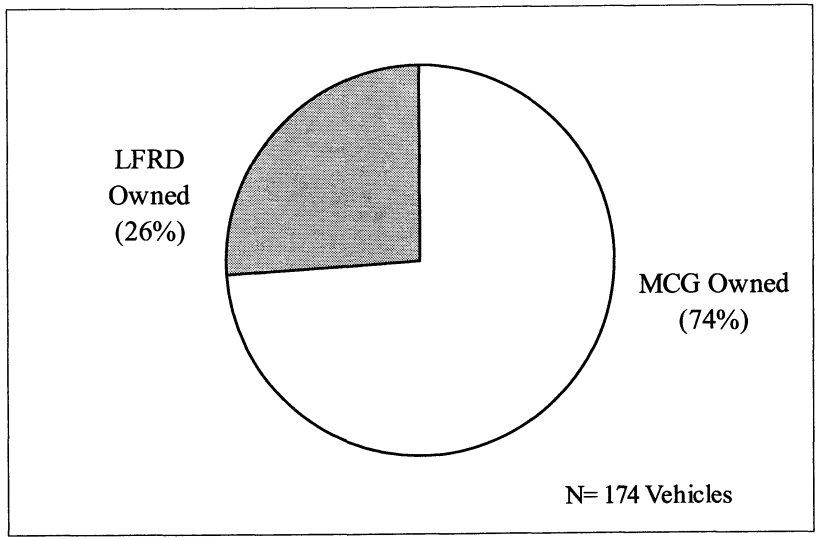
Vehicle	Number of Vehicles	Percent of Total Fleet	Number of Vehicles Owned by MCG	Number of Vehicles Owned by Individual LFRDs
1. Frontline Vehicles				
Ambulances[1]	69	16%	51	18
Engines	63	15%	54	9
Engine tankers	2	0.5%	0	2
Aerials	22	5%	18	4
Heavy rescue squads	12	3%	2	10
Tankers	6	1.5%	3	3
Sub-Total	*174*	*41%*	*128*	*46*
2. Specialty Vehicles[2]	45	11%	26	19
3. Support Vehicles[3]	205	48%	151	54
Total	**424**	**100%**	**305**	**119**
Percent of Total Fleet	**100%**	**100%**	**72%**	**28%**

Source: MCFRS/OLO, January 2004

1. Includes both Advanced Life Support and Basic Life Support ambulances.
2. Includes: brush trucks, the hazmat unit, collapse rescue team vehicles, air cascade units, decontamination units, the under water rescue team vehicle, and other specialty vehicles.
3. Includes: sedans, SUVs, command vehicles etc.

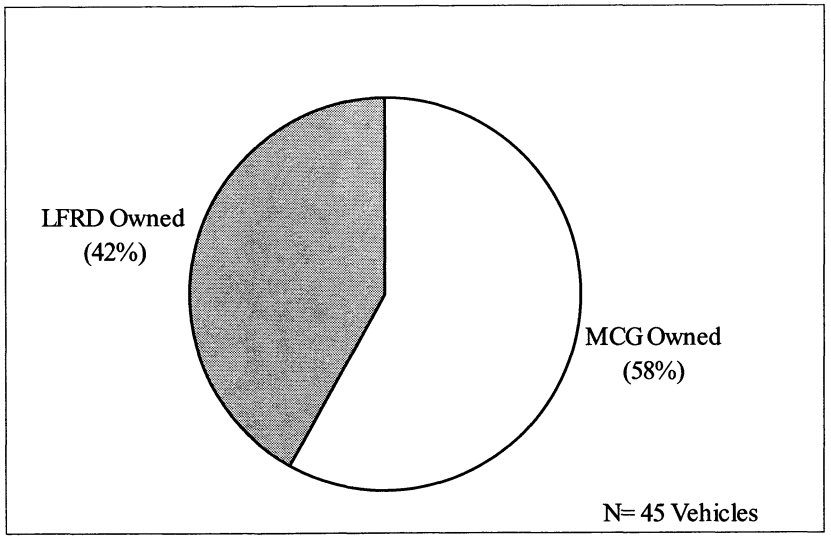
EXHIBIT 2: OWNERSHIP OF MCFRS VEHICLES

A. FRONTLINE VEHICLES



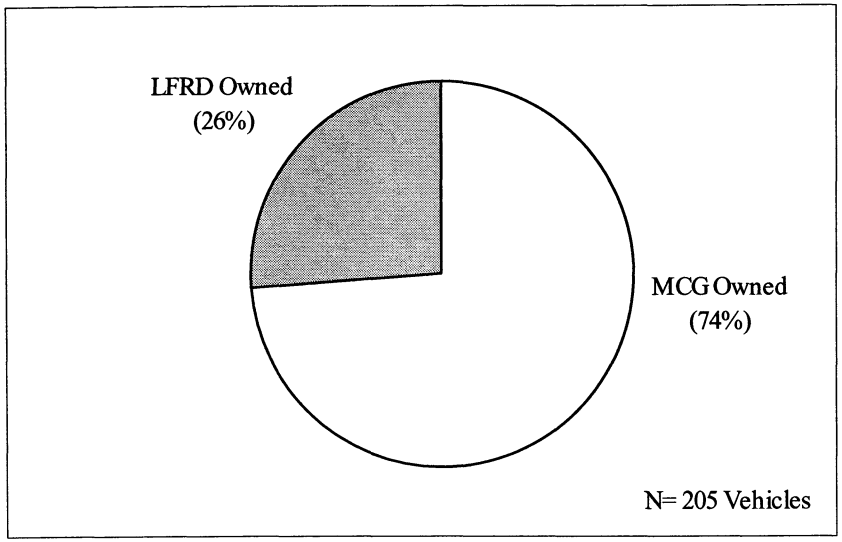
Source: OLO/MCFRS, December 2003

B. SPECIALTY VEHICLES



Source: OLO/MCFRS, December 2003

C. SUPPORT VEHICLES



Source: OLO/MCFRS, January 2004

TABLE 7: AVERAGE AGE OF MCFRS' VEHICLES

Vehicle Type	Average Age Across MCFRS Fleet	Number of Vehicles
Frontline[1]	8 years	174
Specialty[2]	15 years	45
Support[3]	6 years	205
Average Age of Fleet	**8 years**	**424**

Source: MCFRS/OLO, January 2004

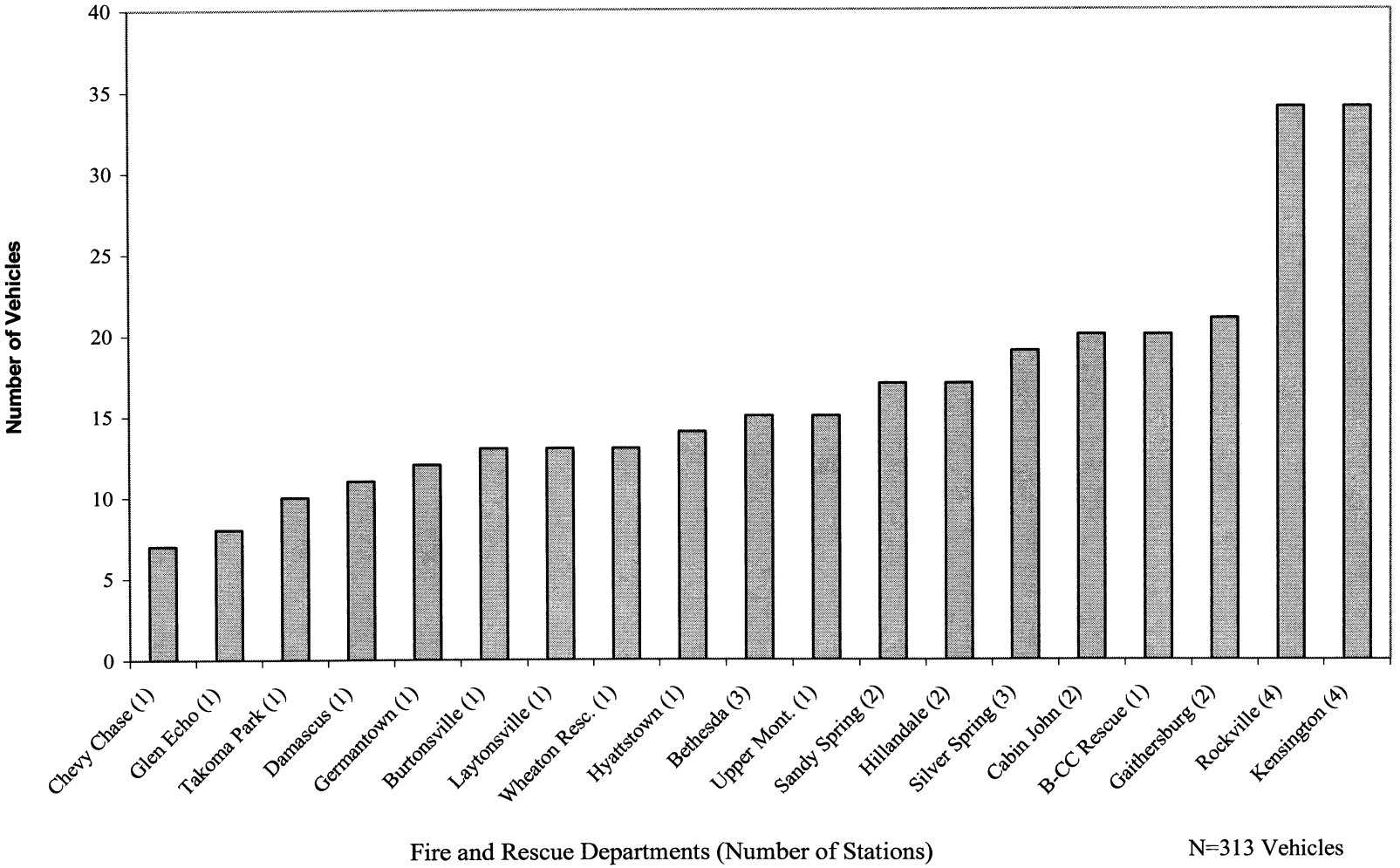
1. Includes ambulances, engines, aerial ladder trucks, heavy rescue squads, and tankers.
2. Includes: brush trucks, the hazmat unit, collapse rescue team vehicles, air cascade units, decontamination units, the under water rescue team vehicle, and other specialty vehicles.
3. Includes: sedans, SUVs, cargo vans, and other light duty vehicles.

TABLE 8: AGE OF FRONTLINE VEHICLES

Age	Number of Frontline Vehicles					Total	Percent of Frontline Fleet
	Ambulances	Engines	Aerials	Heavy Rescue Squads	Tankers		
< 5 years	44	24	6	2	4	80	46%
6 to 10 years	25	11	5	4	2	47	27%
11 to 15 years	0	19	5	3	0	27	16%
>15 years	0	11	6	3	0	20	11%
Total	69	65	22	12	6	174	100%
Average Age	5 years	10 years	12 years	12 years	5 years	8 years	NA

Source: OLO/MCFRS, December 2003

EXHIBIT 3: LOCATION OF MCFRS VEHICLES BY FIRE AND RESCUE DEPARTMENT



Source: OLO/MCFRS, December 2003

CHAPTER IV: The Structure and Cost of Vehicle Inspection, Maintenance, and Repair

Part A, Responsibility for Maintaining a Safe and Dependable Fleet, discusses who is responsible for fire and rescue vehicle maintenance in law and practice.

Part B, Current Arrangements for Inspection, Maintenance and Repair, describes how the Local Fire and Rescue Departments maintain 75% of the MCFRS fleet using a combination of in-house and vendor arrangements. Part B also summarizes the maintenance arrangements for the other 25% of the fleet, which consists of vehicles not assigned to individual stations.

Part C, Feedback from the Field, summarizes the opinions voiced by MCFRS personnel that OLO interviewed about the advantages and problems with the current structure for vehicle maintenance.

Part D, Budget and Cost Data, reviews budget and cost information on MCFRS' vehicle maintenance function.

Part A. Responsibility for Maintaining a Safe and Dependable Fleet

Under current law, (County Code Section 21-2(d)), the Fire and Rescue Commission must "develop effective, efficient, and equitable fire, rescue, and emergency medical services Countywide, and provide the policy, planning, and regulatory framework for all fire, rescue, and medical service operations." The law does not explicitly state that this responsibility includes maintaining safe and dependable fire and rescue vehicles.

Historically, the vehicle maintenance function has been largely decentralized. Individual Local Fire and Rescue Departments are responsible for the inspection, maintenance, and repair of the fire and rescue vehicles and equipment that operate from their respective stations. In practice, this has included maintaining vehicles that are owned by the LFRDs and vehicles that are owned by the County Government and assigned to fire/rescue stations.

Over the years, the LFRDs have independently decided how best to accomplish the vehicle maintenance and repair function. Each year, the LFRDs' budget submissions to the County Government include requests for County tax dollars to fund vehicle maintenance and repair.[1]

[1] The County receives budget requests from 18 LFRDs; B-CC Rescue Squad does not request any County tax dollars. Part D of this chapter provides more detailed information on the distribution of County tax dollars to the LFRDs for vehicle management.

The LFRDs' in-house and vendor arrangements (described in Part B) account for the maintenance and repair of 319 vehicles, or 75% of the MCFRS fleet. The Division of Fire and Rescue Services (DFRS) is responsible for the maintenance of the other 25% of the fleet (105 vehicles), which is not assigned to individual stations. This group includes: support vehicles used by DFRS command staff, code enforcement staff, and arson investigators; vehicles used at the Public Safety Training Academy; and specialty vehicles used by the Urban Search and Rescue Team. Most of these vehicles are maintained at one of the County Government's central vehicle maintenance facilities.

Memorandums of Understanding Signed in 1994

During 1994, individual LFRD representatives, the Chair of the Fire and Rescue Commission, and the Director of the Department of Fire and Rescue Services signed Memorandums of Understanding (MOUs) that address the use and maintenance of vehicles. MOUs were signed by the 17 LFRDs that are assigned County-owned vehicles.[2] Appendix C contains a copy of one of the MOUs.

These MOUs confirm that the responsibility for maintaining County-owned vehicles is delegated to the individual LFRDs. The MOUs establish, among other things, that:

- Each LFRD is expected to maintain the vehicles according to "the original equipment manufacturer's recommendations and applicable Fire and Rescue Commission policies and regulations;"

- Each LFRD will coordinate with the Department of Fire and Rescue Services for an annual inspection of the vehicles for compliance with the preventive maintenance program outlined in the State of Maryland Transportation Article, Section 23-301; and

- The continued assignment of the vehicles to each LFRD is contingent upon the adherence to the conditions outlined in the MOU and "any Fire and Rescue Commission policies and/or regulations pertaining to vehicle assignment, use, and maintenance."

In practice, MCFRS has only partially relied on the MOUs as guidelines for governing vehicle maintenance. DFRS' Apparatus Program Manager reports that individual LFRDs annually complete State forms that certify the fire and rescue vehicles housed at their respective fire and rescue departments comply with State DOT regulations (COMAR, Title 23). The forms list defects identified and indicate when repairs were completed.

However, only a handful of individuals that OLO interviewed knew about the MOUs. The Fire and Rescue Commission did not follow up the MOUs with more specific policies or regulations on vehicle use and maintenance; such as specific preventive

[2] B-CC Rescue Squad and Wheaton Rescue Squad own all of their own vehicles.

maintenance or vehicle performance standards. Further, until May 2003, there was no DFRS staff assigned to focus on vehicle inspection, maintenance, and repair across the MCFRS fleet.

May 2003: DFRS Chief Places Assistant Chief on Special Assignment to Focus on Vehicle Maintenance.

Last May, the newly appointed DFRS Chief identified vehicle maintenance across the MCFRS fleet as a high priority function in need of improvement. The DFRS Chief placed an Assistant Chief on a special assignment, working with DFRS' Apparatus Program Manager, to focus on vehicle inspection, maintenance, and repair. OLO's focus group participants cited the assignment of this Assistant Chief as the single most positive change in the area of vehicle maintenance in many years. (See Chapter VI, page 64)

Examples of the Assistant Chief and Apparatus Program Manager's activities during the past nine months include:

- Coordinating with the in-house shops on general maintenance and repair issues;
- Facilitating the movement of reserve apparatus when vehicles must be taken out of service for maintenance and repair;
- Assigning light duty personnel to assist with the transporting of vehicles to vendors for repair;
- Collecting data on systemwide vehicle availability, warranty repairs, and procurement specifications;
- Conducting research on how other jurisdictions structure the maintenance and repair of fire apparatus;
- Conducting a sample of unannounced inspections of vehicles for compliance with pre-trip safety standards established by State DOT regulations; and
- Conducting pump tests for compliance with standards established by the National Fire Protection Association.

The Assistant Chief and Apparatus Program Manager are working with other DFRS staff to develop systemwide procedures for vehicle checkout and defect reporting as well as an improved driver training program. These improvements are planned for implementation in 2004.

Part B. Current Arrangements for Vehicle Maintenance and Repair

1. The Local Fire and Rescue Departments Use a Combination of In-House and Vendor Arrangements

Table 9 (page 36) summarizes the different arrangements currently used by the Local Fire and Rescue Departments (LFRDs) to perform routine maintenance and repair work. OLO has grouped the different approaches into two main categories: the use of in-house maintenance shops and the use of vendors.

All of the LFRDs contract with private vendors for transmission work, major engine work, body work, and other specialty repairs. This type of repair work requires diagnostics, special equipment, and capacity not currently available in-house. The outsourcing of this type of work parallels the outsourcing practices of the Department of Public Works and Transportation for repair of the County's transit fleet vehicles.

a. Eleven LFRDs Use In-House Maintenance and Repair Shops

There are six in-house maintenance and repair shops. Collectively, the six shops maintain the vehicles and equipment for 11 LFRDs. The shops maintain vehicles owned by the LFRDs as well as vehicles owned by Montgomery County and assigned to the different fire and rescue departments.

Mechanics, who are employees of the LFRD where each of the shops is located, perform the work. Four of the shops service the vehicles for a single LFRD, one shop services the vehicles for two LFRDs; and one shop services the vehicles of five LFRDs.

Appendix B contains tables that summarize other characteristics of the six in-house shops. One of the observations heard numerous times during OLO's interviews with field personnel is that the physical capacity of the in-house shops is limited and needs improvement. (See Part C, Feedback from the Field, beginning on page 39.)

In all six shops, routine preventive maintenance and most repairs (emergency and non-emergency) are conducted by the shop mechanics. All six shops contract out transmission work, major engine repairs, and major body work. All shops report that they conduct their own annual vehicle inspections for compliance with State DOT preventive maintenance standards, and all hire a contractor to conduct periodic aerial ladder inspections. The ladder inspection intervals vary from one to three years. Since last year, all rely upon DFRS staff to perform pump tests.

As Table 10 (page 37) shows, the types and numbers of vehicles serviced vary among the shops. The Kensington, Rockville, and Silver Spring shops service fire, ambulances, and support vehicles. The Bethesda shop services fire and support vehicles. The B-CC Rescue Squad shop services ambulances, heavy rescue squads, and support vehicles. Earlier this year, the Gaithersburg-Washington Grove shop, which had been servicing all types of fire and rescue vehicles, started sending support vehicles to private vendors.

TABLE 9: SUMMARY OF LFRD'S APPROACHES TO VEHICLE MAINTENANCE AND REPAIR*

In-house maintenance shops: Eleven of the 19 LFRDs use an in-house maintenance and repair shop. Mechanics, who are employees of the LFRD where the shop is located, perform the work.		
Local Fire and Rescue Department	**Number of Stations**	**Location of the Service**
Bethesda Fire Department	3	Station 6, Bethesda
Kensington Volunteer Fire Department	4	Station 21, Kensington
Rockville Volunteer Fire Department	4	Station 3, Rockville
Bethesda Chevy Chase Rescue Squad	1	Rescue 1 station (B-CC)
Silver Spring Volunteer Fire Department[2]	3	Station 16, Silver Spring
Takoma Park Volunteer Fire Department	1	
Gaithersburg-Washington Grove Volunteer Fire Department	2	Station 8, Gaithersburg-Washington Grove[1]
Damascus Volunteer Fire Department	1	
Germantown Volunteer Fire Department	1	
Laytonsville Volunteer Fire Department	1	
Upper Montgomery County Volunteer Fire Department	1	
Vendor contracts: Eight of the 19 LFRDs contract with one or more vendors to service vehicles and equipment.		
Local Fire and Rescue Department	**Number of Stations**	The service is performed either at the station or at the vendor's location. Some minor maintenance/repair work may also be performed at the station by career and/or volunteer personnel.
Cabin John Volunteer Fire Department	2	
Glen Echo Volunteer Fire Department	1	
Sandy Spring Volunteer Fire Department	2	
Hyattstown Volunteer Fire Department[1]	1	
Wheaton Rescue Squad	1	
Chevy Chase Fire Department[2]	1	
Hillandale Volunteer Fire Department[3]	2	
Burtonsville Volunteer Fire Department[4]	1	

Source: OLO/MCFRS, December 2003

1. The in-house shop located at Station 8 occasionally services Hyattstown's vehicles.
2. One of Chevy Chase's career firefighter is a qualified mechanic. Chevy Chase pays this individual overtime to perform maintenance and repair work after-hours. The individual is also B-CC's part-time mechanic.
3. Hillandale hires a single mechanic (via a contract with a vendor) to service the vehicles and equipment.
4. One of Burtonsville's vendors is Montgomery County's DPWT; Burtonsville contracts with DPWT's heavy equipment shop to perform routine vehicle maintenance and repair.

*All LFRDs contract out major body work, major engine work, and transmission work.

Table 10: NUMBERS AND TYPES OF VEHICLES MAINTAINED BY IN-HOUSE SHOPS

Location of In-House Shop	Pumpers and Aerial Ladder Trucks	Heavy Rescue Squads	Ambulances	Support Vehicles	Other	Total
B-CC Rescue Squad (Station 1)	0	2	9	8	1	20
Bethesda (Station 6)	10	0	0	5	0	15
Gaithersburg-Washington Grove (Station 8)	17	2	16	26	11	72
Kensington (Station 21)	12	1	7	13	1	34
Rockville (Station 3)	10	1	8	11	4	34
Silver Spring (Station 16)	9	0	6	12	2	29

Source: MCFRS/OLO, December 2003

The ratio of mechanics to vehicles is 1:20 at the B-CC Rescue Squad shop; 1:8 at the Bethesda shop; 1:15 at the Silver Spring shop; 1:17 at the Kensington and Rockville shops; and 1:24 at the Gaithersburg-Washington Grove shop. The ratio at the Gaithersburg-Washington Grove shop was at least temporarily reduced this fall because support vehicles are being sent to private vendors for routine maintenance.

The Gaithersburg-Washington Grove shop employs three full-time mechanics and the B-CC Rescue Squad employs one mechanic. The other four shops each employs two full-time mechanics. Although specific hours vary, the shops typically operate during regular business hours, Monday through Friday. All report some arrangement for callbacks to handle emergency repairs during non-business hours.

The shops have each developed their own procedures for receiving and tracking reports of vehicle/equipment defects. Most of the shops keep paper (non-automated) vehicle maintenance records, and the information maintained varies across the shops. As a result, consistent workload, vehicle use, out-of-service time, and maintenance/repair cost data were not available.

b. Eight LFRDs Hire One or More Vendors to Perform Maintenance and Repair

There are eight LFRDs that do not use one of the in-house shops.[3] These LFRDs each hire one or more vendors to service the vehicles that are either owned by the LFRD or owned by the County Government and assigned to the different fire and rescue departments. Several LFRDS report they have been able to negotiate with local vendors to perform work on some vehicles at reduced rates or even for free.

At each of these LFRDS, either a volunteer and/or career firefighter typically serves as the primary liaison with the vendors. This job involves tracking reports of vehicle defects, scheduling maintenance and repair work, and generally overseeing the performance of the vendors. Accomplishing these duties is time consuming and is not accounted for in the County's budget for vehicle maintenance. The personnel cost is either donated (when performed by a volunteer) or absorbed as part of a career firefighter's salary.

Depending upon the maintenance or repair work to be performed, it is done either at one of the fire and rescue stations (outside in the parking lot or in an engine bay), or at the vendor's location. Some minor maintenance/repair work may also be performed at individual stations by career and/or volunteer personnel.

A number of the LFRDs have published preventive maintenance schedules (e.g., Sandy Spring, Burtonsville) and some keep detailed and up-to-date maintenance records. The schedule adopted and followed at the Sandy Spring Volunteer Fire Department, for example, was determined by a professional fire apparatus mechanic with 40 years of experience.

There are three unique vendor arrangements:

- One LFRD (Burtonsville) contracts with Montgomery County Department of Public Works and Transportation (DPWT) to perform most vehicle maintenance and repair work. This work is performed at DPWT's heavy equipment shop. Burtonsville contracts with a private vendor for maintenance and repair of its vocational equipment, e.g., pumps, ladders.

- One LFRD (Hillandale) hires an individual mechanic via a contract with a private vendor. This mechanic, who also happens to be a retired career firefighter, performs the maintenance and repair work on vehicles and equipment. Most of the work is performed either outside in the parking area of one of Hillandale's stations, or in an engine bay that has been converted into a makeshift maintenance shop.

[3]Although these eight LFRDs rely primarily on vendors, there are occasions where the in-house shops help provide some maintenance or repair services. For example, the in-house shop located at Station 8 occasionally services vehicles for Hyattstown, and the in-house shop located at Station 6 occasionally services vehicles for Cabin John or Glen Echo.

- One LFRD (Chevy Chase) utilizes a career firefighter who is also a qualified mechanic. The mechanic is also employed part-time by the B-CC Rescue Squad. Chevy Chase pays this individual overtime to perform maintenance and repair work after-hours. For some repairs, the mechanic uses B-CC Rescue Squad's maintenance bay (and at times, the Bethesda Station 6 maintenance bay).

2. DFRS Arranges for the Maintenance of Vehicles Not Assigned to Stations

The Division of Fire and Rescue Services (DFRS) is responsible for the maintenance of the 25% of the MCFRS fleet that is not assigned to individual stations. This group of 105 vehicles includes: 83 support vehicles, 18 specialty vehicles, two engines, one ambulance, and one heavy rescue squad.[4] These vehicles are used primarily at the Public Safety Training Academy and by DFRS command staff, code enforcement staff, arson investigators, and the Urban Search and Rescue Team.

Currently, DFRS pays to maintain and repair most of these vehicles at one of the central vehicle maintenance facilities operated by the County's Department of Public Works and Transportation. Specifically:

- 68 DFRS support vehicles are maintained at the Seven Locks Road maintenance facility for light duty vehicles (a private contractor staffs this facility); and

- 10 specialty vehicles (used primarily by the Urban Search and Rescue Team) are maintained at the Crabbs Branch maintenance facility for heavy equipment.

The other 27 vehicles are maintained either through arrangements with the in-house LFRD shops or by private vendors. According to DFRS staff, some of these vehicles (e.g., trailers) do not need regular preventive maintenance.

Part C. Feedback from the Field

During the course of conducting this study, OLO interviewed individuals who work with fire and rescue vehicles from different vantage points. OLO sought the views of: mechanics who service the vehicles; LFRD presidents and chiefs who supervise the vehicle maintenance function at their respective fire and rescue departments; career and volunteer firefighters who ride the vehicles and use the equipment; and other uniform and civilian DFRS and DVFRS staff whose job involves one or more aspects of vehicle management.

Although the views shared about the positive and negative aspects of the current structure of vehicle maintenance and repair were not identical, a number of common themes emerged from OLO's interviews. The rest of this section summarizes the most frequently voiced opinions.

[4] Appendix A (© 7-9) contains a list of the individual vehicles.

OLO heard a range of views about "what works" and "what does not work" about MCFRS' current approach to vehicle inspection, maintenance, and repair. There appears to be general consensus that the current structure offers the following advantages:

- There are time and cost efficiencies associated with being able to select vendors outside of the County's formal procurement process, which is perceived as cumbersome and limiting. For example, one LFRD reports paying $0.30 to $0.50 less per gallon of diesel fuel compared to the cost at County fuel sites.

- The decentralized locations of the in-house shops provide convenient access to maintenance and repair services, and afford opportunities for frequent communication between vehicle users and mechanics.

In general, the LFRD representatives who hire private vendors voiced satisfaction with the service they receive for routine vehicle and equipment maintenance and repair. The LFRDs see advantages to being able to hire and change vendors with relative ease. When an individual vendor is not performing work up to the LFRD's satisfaction, then the LFRD can shop around and select a different vendor. In addition, several LFRDs cited examples where they negotiated with local vendors for reduced rates (in some cases even free) work on some vehicles.

The LFRDs that rely upon vendors to perform their preventive maintenance (PM) report that, more often than not, they are able to keep to their target PM schedules. As noted below, the problems with staying on schedule are more often due to not being able to obtain a reserve piece of apparatus (that would allow their frontline vehicle to be taken out of service for PM) as opposed to the vendor being unable to perform the service.

Additional positive attributes cited frequently by individuals who have direct responsibility for maintaining and repairing the vehicles include: the small size of the current repair operations, which allow for efficient (non-bureaucratic) business decision-making; and the mechanics employed by the in-house shops, who are described as knowledgeable, hard-working and deeply committed to maintaining fire and rescue vehicles in top operating condition.

Almost everyone interviewed voiced multiple frustrations about certain aspects of MCFRS' current approach to maintenance and repair. OLO heard a general consensus opinion from those interviewed that:

- **The physical capacity of the in-house shops is limited and needs improvement.** The in-house shops were built at a time when fire apparatus was smaller. The shops identify a range of basic capacity challenges, such as door and/or ceiling heights being too low, problems fitting two vehicles in a maintenance bay at the same time, and inadequate storage space.

- **The apparatus replacement plan has not been fully funded, which in turn has caused problems for MCFRS' system of maintenance and repair.** An aging fleet of vehicles, by definition, needs more maintenance and repair services. In addition, the lack of an adequate reserve fleet makes it difficult to take vehicles out-of-service for needed maintenance and repair. When small mechanical problems go unattended, they often end up causing bigger mechanical problems that take substantial time and money to repair.

- **There are problems with access to and the loaning of reserve apparatus.** Many of those interviewed reported that it is a time consuming process gaining access to reserve apparatus, which is needed when a frontline vehicle must be taken out-of-service for maintenance and repair. Transferring equipment from one vehicle to another is time consuming and laborious. There was overall agreement that a portion of the reserve fleet should always be fully equipped and "ready to go."

Problems also arise when reserve apparatus is loaned from one fire and rescue department to another and returned in need of repairs. In such situations, it can be difficult sorting out which LFRD is responsible for performing and paying for which repairs. A related problem of accountability arises when a vehicle is returned without all of its equipment.

In addition, due to limited sheltered parking for reserve apparatus, some reserve engines, ladders, and ambulances are parked outside. During the winter months, the plumbing lines on engines can freeze and crack.

- **There are difficulties encountered with contracting out the major repair work to outside vendors.** All of the LFRDs contract out transmission work, major engine work, and major body work. This work requires specialty equipment, training, and physical capacity not found at any of the in-house shops. There are apparently only a handful of vendors in the region who perform this type of work. None are conveniently located and the turnaround time is often many weeks. Several individuals interviewed reported concerns about the cost and quality of work performed.

- **There is not a systemwide Management Information System for tracking vehicle data.** Over the years, there has been much discussion but little action on the need to implement an automated vehicle recordkeeping system. Several LFRDS have stand-alone computers that they use for various tasks such as tracking parts and receiving e-mails on vehicle defects; several also use an in-house computer to track maintenance and repair costs. In the in-house shops, the recordkeeping (currently still limited to paper records) is done by the mechanics themselves.

- **Vehicle drivers do not consistently perform daily and weekly inspections of the vehicles.** A common observation is that vehicle drivers do not consistently perform daily and weekly inspections of the vehicle. These inspections are critical in terms of identifying small vehicle and equipment repair problems before they become bigger problems.

- **Not all vehicle drivers are familiar with how their vehicles should perform and not all drivers are "good" drivers.** At one time, driving a fire/rescue vehicle was a specialty job and there were fewer drivers. This meant drivers consisted of a smaller group of individuals, who gained greater familiarity with how a vehicle was "supposed" to perform. As a result, when something was wrong (e.g., loose breaks, uneven steering) with a vehicle, it was noticed and reported to the mechanics sooner.

A number of individuals interviewed observed that the "workload of the in-house shops exceeds the time and staff available." The reasons cited were that: the vehicles are being used more; the fleet is aging; and the number of vehicles needing service has increased while the number of mechanics has not. In addition, fire and rescue vehicles have become more complex and time consuming to repair. A number of those interviewed expressed concern that increasing workload without increasing staff has created problems for the in-house shops, such as not being able to perform routine preventive maintenance according to their respective target schedules.

Additional concerns voiced by some vehicle drivers and equipment users were:

- A general lack of confidence that all vehicles in the MCFRS fleet are maintained in top operating condition.

- Frustration with a reported lack of consistent feedback on whether (and if so when) vehicle defects reported by vehicle users are being repaired. The consequence of this can be a reduced incentive to report vehicle defects.

- The current maintenance and repair arrangements do not guarantee easy access to after-hours repair services for all.

- There is not one individual in a position of authority to resolve all problems with vehicle maintenance and repair across the MCFRS fleet.

As a general comment, the LFRD representatives interviewed also voiced frustration with the current budget process. Many of those interviewed expressed the view that the LFRDs are not provided with adequate funding for vehicle maintenance and repair. This places them in a difficult position of having to perform a function without the amount of money they believe is needed. Most LFRDs end up going back to the Fire Administrator mid-year to ask for additional funding, especially if a vehicle ends up needing major repair work.

Part D. Budget and Cost Data

1. FY 04 Funding

The County Government's approved FY 04 operating budget for MCFRS includes approximately $3.2 million for the vehicle management program, and $367K for vehicle replacement.[4] If actual FY 04 spending patterns that of recent years, then MCFRS will distribute some additional mid-year funding, which will increase the total amount distributed to the LFRDs.

The $3.2 million appropriated in FY 04 for the vehicle management program is allocated as follows:

- MCFRS distributes approximately 75% ($2.4 million) to 18 Local Fire and Rescue Departments (LFRDs) in the expense category titled "vehicle management." This category is defined to include the cost of fuel as well as the labor, equipment, and supplies for fire and rescue vehicle maintenance and repair. Appendix E shows the FY 04 distribution of the $2.4 million among the 18 LFRDs.[5]

- MCFRS retains the other 25% ($800K) to pay for the maintenance of vehicles not assigned to stations ($426K), major fire and rescue vehicle overhaul work ($230K), additional fire and rescue vehicle repairs that are identified during the fiscal year ($100K), aerial ladder inspection/certifications ($11K), and other miscellaneous items, e.g., supplies, training ($33K).

As Table 11 (page 44) shows, the $2.4 million distributed to the LFRDs in FY 04 for vehicle management represents approximately one-third of the total $6.9 million distributed directly to the LFRDs for day-to-day operating expenses. The Fire and Rescue Commission reviews and approves the distribution of the $6.9 million to the LFRDs. DFRS budget staff report that the distribution of funds is primarily based on the previous year's allocation.

In addition to the $6.9 million itemized in Table 12 (page 44), the County Government's approved FY 04 operating budget includes $9.5 million to MCFRS for support of other LFRD-related expenses. The $9.5 million (not directly distributed to individual LFRDs) pays for the volunteers' length of service award program, insurance premiums, and risk management expenses.

[4] See Chapter III (page 24) for information on MCFRS' apparatus replacement plan and funding for vehicle replacement.

[5] One LFRD, Bethesda Chevy Chase Rescue Squad, operates without County tax dollars.

TABLE 11: FY 04 COUNTY FUNDS DISTRIBUTED TO LOCAL FIRE AND RESCUE DEPARTMENTS FOR DAY-TO-DAY OPERATING EXPENSES

Expense Category	Amount ($ in 000's)	Percent of Total
Vehicle Management*	$2,376	35%
Administration	$1,759	26%
Facilities Management	$1,390	20%
Fire/EMS supplies	$ 698	10%
Volunteer Support	$ 571	8%
Public Education	$ 39	0.6%
Specialty Teams	$ 34	0.4%
Total	**$6,867**	**100%**

Source: MCFRS/OLO, December 2003

*The expense category of vehicle management includes fuel expenses and costs of labor, equipment, and supplies for vehicle maintenance and repair.

2. The Two-Phase Allocation of Funds for Vehicle Management

Budget documents for FY 99 through FY 03 show that MCFRS distributes funds to the LFRDs for vehicle management in two phases. An initial distribution of funds to 18 LFRDs is followed by mid-year distributions of additional funds to approximately half of the LFRDs. The additional funding typically pays for unanticipated increases in fuel costs and/or relatively expensive vehicle repairs that were not anticipated at the beginning of the fiscal year, e.g., transmission and major engine repairs.

TABLE 12: COUNTY TAX DOLLARS DISTRIBUTED TO LFRDS FOR VEHICLE MANAGEMENT FY 99 – FY 03

Fiscal Year	Total Distribution ($ in 000's)	Percent Change from Previous Year	Initial Distribution ($ in 000's)	Additional Mid-Year Distribution ($ in 000's)	Mid Year Distribution as a Percent of Total Distribution
FY 99	$2,331	-	$2,143	$188	8%
FY 00	$2,700	16%	$2,399	$302	11%
FY 01	$2,494	(8%)	$2,106	$388	16%
FY 02	$3,079	23%	$2,488	$590	19%
FY 03	$2,732	(11%)	$2,367	$365	13%

Source: OLO/MCFRS, January 2004

Table 12 (page 44) lists the aggregate amounts of initial and additional funding directly distributed to the LFRDs for vehicle management from FY 99 through FY 03. The amount distributed in FY 03 was 17% higher than the amount distributed in FY 99. This compares to a 26% increase in the bottom-line MCFRS budget during the same time period.[6]

During this five year period, the additional mid-year funding for vehicle management ranged from $188K to $590K. This amount represented between 8% and 19% of each year's total distribution of funds to the LFRDs for vehicle management. Appendix D and Appendix E provide data on the initial and mid-year funds distributed to each LFRD between FY 99 and FY 03.

3. The LFRD's Actual vs. Budgeted Expenses for Vehicle Management

The County tax dollars distributed to the 18 LFRDs are audited on an annual basis. The audit is conducted by an independent audit firm, under contract to the County Council.[7]

A review of the audited financial statements of the LFRDs shows that over a four year period (FY 99 - FY 02), the cumulative amount spent by the LFRDs on vehicle management came within 1% of the total $10.6 million distributed in this category.

However, on an annual basis, there is a differential between the aggregate amount distributed to the LFRDs for vehicle management and the amount actually spent in that category. Table 13 (page 46) summarizes the aggregate data across all 18 LFRDs; Appendix D contains similar information for each individual LFRD.

In FY 99, FY 00, FY 01, the aggregate amount spent by the LFRDs on vehicle management exceeded the aggregate amount distributed in this category. Individual LFRDs covered the additional vehicle management expenses by transferring County funds from other categories, e.g., administration, facilities management, minor equipment, and public education. The net amounts transferred were: $184K in FY 99, $41K in FY 00, and $254K in FY 01.

In FY 02, the aggregate amount spent by the LFRDs on vehicle management was less than the aggregate amount distributed in this expense category. In FY 02, individual LFRDs transferred the additional amount allocated for vehicle management to other expense categories. The net amount transferred was $359K.

[6] The total approved operating budget for MCFRS was $86.4 million in FY 99 and $108.7 million in FY 03.

[7] The Office of Legislative Oversight serves as the Council's contract manager for the audit of the LFRDs. Arthur Anderson conducted the FY 99 audit; Rager Lehman and Houck conducted the FY 00, FY 01, and FY 02 audit. B-CC Rescue Squad does not receive County tax funds and is not included in the audit.

TABLE 13: COMPARISON OF AMOUNT SPENT BY LFRDS ON VEHICLE MANAGEMENT VS. AMOUNT DISTRIBUTED FY 99 - FY 02* ($ IN 000'S)

Fiscal Year	Total Distribution (A)	Total Amount Spent (B)	Difference: (B) – (A)**	
			Amount	Percent
FY 99	$2,331	$2,515	$184	7%
FY 00	$2,701	$2,742	$ 41	2%
FY 01	$2,494	$2,748	$254	10%
FY 02	$3,078	$2,719	($359)	(12%)
FY 99-02 Cumulative	$10,604	$10,724	$120	1%

Source: Audited financial statements of the LFRDs, FY 99, FY 00, FY 01, and FY 02

* B-CC Rescue Squad is not included because it does not receive County tax funds.
**A positive amount indicates that the LFRDs, in aggregate, spent more on vehicle maintenance than distributed, and vice versa for a negative amount.

4. Annual Maintenance Costs Per Vehicle

MCFRS does not maintain consistent and readily available data on maintenance costs or out-of-service time per vehicle. As a result, OLO is unable to comprehensively analyze actual maintenance costs across the fleet.

For example, the data are not available for OLO to analyze annual costs of preventive maintenance by type of vehicle, analyze maintenance costs or out-of-service time by some measure of vehicle use, e.g., miles driven, engine hours, or conduct a comparative analysis of costs for different maintenance arrangements.

Some individual LFRDs have developed their own automated data bases for tracking vehicle maintenance and repair costs; a sample of actual costs by type of vehicle (FY 03 data) compiled by Cabin John LFRD, Sandy Spring LFRD, and Burtonsville LFRD is provided at the end of this chapter. In addition, DFRS tracks the cost of maintaining support vehicles used by DFRS staff.

To get some sense of whether and to what extent per vehicle maintenance costs vary by LFRD, OLO used the following three sources of information:

Source:	**Data Used:**
FY 02 audited financial statements of the 18 LFRDs that receive County funds	Actual amounts spent by each LFRD in the expense category of vehicle maintenance, defined to include fuel and labor, supplies, and equipment for vehicle/equipment maintenance and repair.
2003 fleet inventory prepared by DFRS staff	Number of vehicles listed for each fire and rescue department.
CY 2002 data on incident and unit responses	Number of unit responses for each fire and rescue department.

Table 14 (page 48) summarizes these data, and the resulting calculation of average maintenance and fuel costs per vehicle and per unit response. The LFRDs are divided in the chart by their overall maintenance approach, that is, whether they use one of the in-house shops or rely upon vendors for routine maintenance and repair. The graphs on pages 50 and 51 depict the resulting calculations by LFRD, in order of lowest to highest per vehicle cost.

This rudimentary analysis raises a number of questions, which support the need for improved data collection and analysis in the area of vehicle maintenance. Examples of questions raised by this admittedly over-simplified analysis are:

- Why do the average per vehicle maintenance costs vary by a factor of more than five? When adjusted for use, the differential to be explained is even higher.

- Why are the costs per vehicle for the in-house shops higher than the costs for vehicles maintained through vendor arrangements?

- What explains the unusually low per vehicle costs calculated for the Wheaton Rescue Squad? For example, is the Wheaton Rescue Squad using non-County funds to supplement County tax funds allocated for vehicle maintenance?

- The order of LFRDs (from low to high cost per vehicle) changes with the calculation of maintenance costs per unit response. Is this explained by the fact that vehicle maintenance costs consist of both fixed costs that do not change with increased use and variable costs that are a function of use?

- What impact do changes in the price of fuel have on annual per vehicle costs?

TABLE 14: DATA ON PER VEHICLE MAINTENANCE AND FUEL COSTS BY LFRD*

Local Fire and Rescue Departments*	FY 02 Actual Cost of Vehicle Maintenance**	Number of Unit Responses in 2002	Number of Vehicles Maintained	Actual Maintenance Cost per Vehicle**	Actual Maintenance Cost per Unit Response**
Vehicles Maintained by In-House Shops					
Bethesda	$257,727	10,441	18	$14,318	$25
Rockville	$494,771	31,524	35	$14,136	$16
Silver Spring Takoma Park	$380,218	20,910	29	$13,111	$18
Kensington	$414,780	22,072	35	$11,851	$19
Damascus Gaithersburg Germantown Upper Montgomery Laytonsville	$627,389	37,024	74	$8,478	$16
Sub-Total	*$2,174,885*	*121,971*	*191*	*$11,387*	*$18*
Vehicles Maintained by Private Vendors					
Chevy Chase	$ 57,492	1,980	7	$8,213	$29
Burtonsville	$105,069	7,148	13	$8,082	$15
Cabin John	$140,025	5,216	20	$7,001	$27
Sandy Spring	$ 92,029	6,089	17	$5,413	$15
Hillandale	$ 70,937	10,825	17	$4,173	$7
Glen Echo	$ 30,535	2,371	8	$3,817	$13
Hyattstown	$ 40,678	1,674	14	$2,906	$24
Wheaton	$ 7,581	11,434	13	$ 583	$1
Sub-Total	*$544,336*	*46,737*	*109*	*$4,994*	*$12*
Total	**$2,719,231**	**168,708**	**300**	**$9,064**	**$16**

Source: FY02 audited financial statements for the 18 LFRDs/MCFRS/OLO, December 2003

*B-CC Rescue Squad is not included because it does not receive County tax funds.
**As listed in audited financial statements under "vehicle maintenance" expense category, defined to include fuel and labor, supplies, and equipment for vehicle and equipment maintenance and repair

In the course of interviewing LFRD representatives for this study, OLO obtained some sample cost data by type of vehicle. The table below summarizes the data provided by Cabin John, Burtonsville, and Sandy Spring fire and rescue departments. The data confirm that average vehicle cost data does not capture the fact that actual maintenance costs vary significantly by type of vehicle.

TABLE 15: SAMPLE OF ACTUAL ANNUAL MAINTENANCE COSTS BY TYPE OF VEHICLE

Type of Vehicle	Cabin John LFRD FY 03 data	Sandy Spring LFRD Data*	Burtonsville LFRD FY 03 data
Heavy rescue squad	$12,912	$16,245	$40,112
Aerial ladder truck	$12,069	$22,810	$20,817
Engine	$ 7,539	$13,620	$ 9,480
Support	$ 1,000	N/A	$ 1,565
Ambulance	$4,000-$9,000**	$5,870	$5,181 & $13,540***

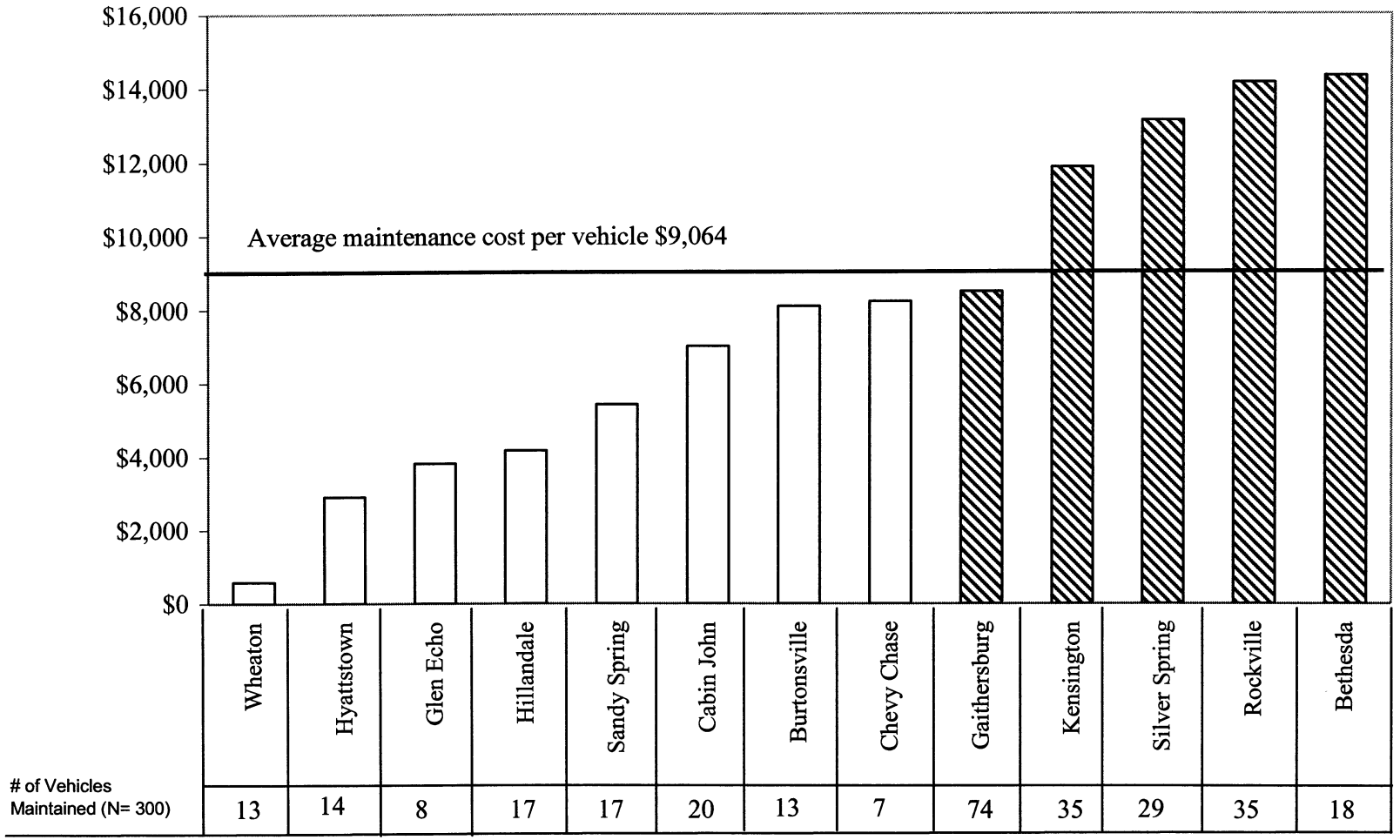
Source: Cabin John, Sandy Spring, and Burtonsville LFRDs.

*Data based on six years of actual costs
** Across three ambulances
*** For two ambulances

Cost data for vehicles maintained by DFRS. As a reviewed earlier in this chapter, the Division of Fire and Rescue Services (DFRS) is responsible for arranging maintenance of the 25% of MCFRS fleet, not assigned to individual stations (see page 39). Annual maintenance cost data for this group of vehicles is readily available only for the 68 support vehicles maintained at the County's Seven Locks Road central fleet maintenance facility.

In FY 03, DFRS' budget included $383K for the cost of maintaining these 68 support vehicles. This equates to an average annual cost of $5,635 per vehicle. DFRS staff advise that this cost includes time and materials for repairs, fuel, payment into a vehicle replacement fund, and an overhead charge (to DPWT).

EXHIBIT 4: FY 02 ACTUAL MAINTENANCE COST PER VEHICLE BY LFRD

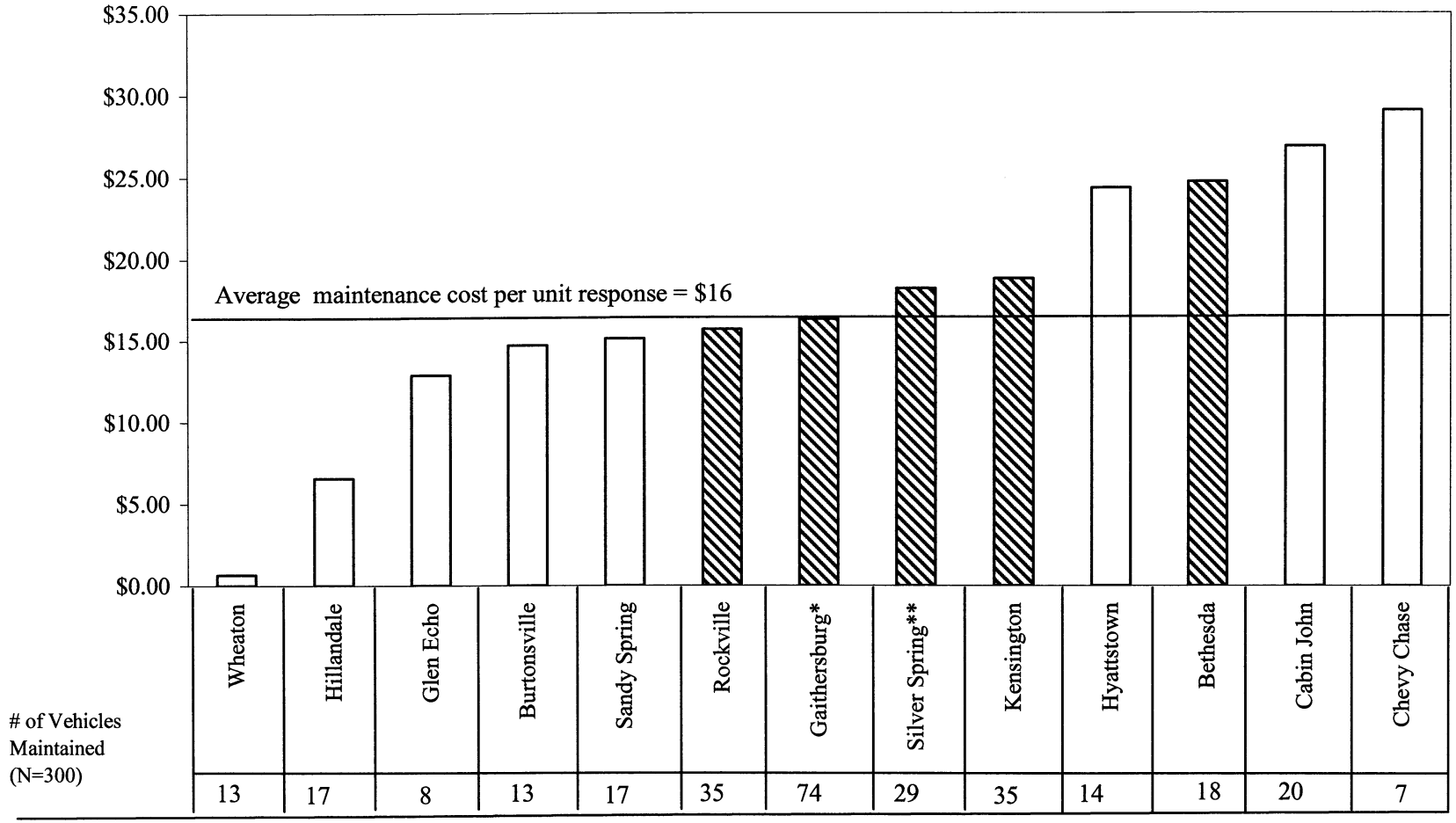


* Gaithersburg LFRD also maintains Damascus, Germantown, Laytonsville, & Upper Montgomery LFRD vehicles

** Silver Spring also maintains Takoma Park LFRD vehicles

Source: OLO, December 2003

EXHIBIT 5: FY 02 ACTUAL MAINTENANCE COST PER UNIT RESPONSE BY LFRD



In-house satellite shops

* Gaithersburg LFRD also maintains Damascus, Germantown, Laytonsville & Upper Montgomery LFRD vehicles

** Silver Spring LFRD also maintains Takoma Park LFRD vehicles

Source: OLO, December 2003

CHAPTER V: Data on Vehicle Readiness and Condition of the Fleet

Part A, Vehicle Readiness, defines what it means to be "vehicle ready," presents FY 02 response times, and reviews ten months of vehicle availability data.

Part B, Vehicle Test Results, explains MCFRS' current approach to vehicle and equipment inspections, and reviews the limited data that are available on the condition of the MCFRS fleet.

Part A. Vehicle Readiness: Defined and Measured

1. What does it mean to be ready?

The Fire, Rescue, and Emergency Medical Services Master Plan defines readiness as MCFRS' ability to respond to incidents within specified time frames.[1] Response time is calculated as the elapsed time between when a unit is dispatched from the 9-1-1 call center and its arrival at the site of the incident.

The time frames vary by the type of incident (fire, basic life support, advanced life support) and the location of the incident by population density (urban, suburban, rural). In sum, the goals are as follows:

Urban: 85% of basic life support and fire incidences within six minutes and 95% of advanced life support incidences within eight minutes.

Suburban: 65% of basic life support and fire incidences within six minutes and 90% of advanced life support requests within eight minutes.

Rural: 25% of basic life support and fire incidences within six minutes and 50% of advanced life support requests within eight minutes.

Table 16 (page 53) summarizes MCFRS' response time performance by type of incident and location in FY 02. The data show that MCFRS exceeded the performance response times for six of the nine categories.

[1] The Fire, Rescue, and EMS Master Plan was adopted in 1994 and amended in 2000. The current plan is scheduled to sunset in December 2004.

TABLE 16: FIRE AND RESCUE RESPONSE TIME PERFORMANCE FY 02

Target Response Times	Percent of Incident Responses Within Target	Did MCFRS Meet Goal?
Urban Districts		
85% of fire incidents within 6 minutes	94%	Yes
85% of BLS incidents within 6-minutes	72%	No
95% of ALS incidents within 8-minutes	96%	Yes*
Suburban Districts		
65% of fire incidences within 6 minutes	83%	Yes
65% of BLS incidences within 6-minutes	52%	No
90% of ALS incidences within 8-minutes	89%	No*
Rural Districts		
25% of fire incidences within 6 minutes	88%	Yes
25% of BLS incidences within 6-minutes	35%	Yes
50% of ALS incidences within 8-minutes	85%	Yes

Source: MCFRS/OLO, December 2003.

*Actual MCFRS performance was within one percent of goal.

2. The Required Number of Vehicles on a Normal Day

In FY 03, the average number of fire and rescue incidents per day was 272. The average number of unit responses was 500. The number of unit responses is higher than the number of incidents because more than one vehicle is often dispatched to a single incident.

MCFRS has identified the number of frontline vehicles needed to meet the response time goals contained in the Master Plan. MCFRS defines this "normal daily requirement" to include 132 frontline vehicles: 44 engines/tankers; 41 ambulances (15 advanced life support units and 26 basic life support units); 15 aerial ladder trucks; 9 heavy rescue squads,[2] and 23 specialized vehicles (e.g., hazardous materials unit, brush trucks).

[2] As of January 2004, the normal daily requirement for heavy rescue squads is under review by the Fire and Rescue Commission.

Table 17 (below) lists the specific frontline vehicles that MCFRS identifies as needing to meet this average daily demand.

TABLE 17: NUMBER OF FRONTLINE VEHICLES REQUIRED ON A "NORMAL DAY"

Type of Vehicle	Number of Vehicles Required on a "Normal" Day
Aerial ladder trucks	15*
Heavy rescue squads	9**
Ambulances	
• Advanced life support units	15
• Basic life support units	26
Sub-Total	41
Engines/Tankers	
• Engines	30
• Tankers	6
• Combined engine/tankers	2
• Rescue engines	3
• All wheel drive brush engines	3
Sub-Total	44
Specialized Vehicles	
• Hazmat units	1
• Brush trucks	14
• Collapse rescue team vehicles	3
• Air cascade units	2
• Decontamination units	2
• Under water rescue team vehicle	1
Sub-Total	23
Total	**132**

Source: MCFRS/OLO, December 2003

*The normal daily requirement of aerial ladder trucks includes Quint-40, which can be dispatched as an aerial ladder truck or as an engine.

**As of January 2004, the normal daily requirement for heavy rescue squads is under review by the Fire and Rescue Commission.

3. The Reserve Fleet

MCFRS supplements the vehicles needed to meet the normal daily workload with a reserve fleet of frontline vehicles. Reserve vehicles are used when other frontline vehicles are reported as "out-of-service." According to DFRS staff, vehicles are most often reported as "out-of-service" because they need maintenance or repair.

Table 18 (below) shows the number and ratio of reserve vehicles compared to the number of vehicles required on a normal day. The reserve fleet primarily consists of engines, ambulances, and brush trucks. There are comparatively few reserve aerial ladder trucks and heavy rescue squads, and there are no reserve vehicles for certain specialized vehicles.

TABLE 18: TOTAL FLEET OF FRONTLINE VEHICLES: NUMBER OF ADDITIONAL VEHICLES IN RESERVE AFTER DAILY REQUIREMENT MET

Type of Vehicle	Total	"Normal" Day Requirement	Number of Reserve Vehicles	Reserve Ratio
Aerial ladder trucks	22	15	7	0.47
Ambulances	69	41	28	0.68
Engines/Tankers				
• Engines	55	30	25	0.83
• Tankers	6	6	0	None
• Combined engine/tankers	2	2	0	None
• Rescue engines	3	3	0	None
• All wheel drive brush engines	3	3	0	None
Heavy rescue squads*	12	9	3	0.33
Specialized Vehicles				
• Hazmat units	1	1	0	None
• Brush trucks	16	14	2	0.14
• Air cascade units	2	2	0	None
• Collapse rescue team vehicles	3	3	0	None
• Decontamination units	2	2	0	None
• Underwater rescue team vehicle	1	1	0	None
Total	**197**	**132**	**65**	

Source: MCFRS/OLO, December 2003

* As of January 2004, the normal daily requirement for heavy rescue squads is under review by the Fire and Rescue Commission.

4. Need for a "Standby Front Line"

The Fire Administrator holds that, in addition to meeting the "normal daily requirement," the County should be prepared to meet a surge in demand for services. Examples of a "bad day" that could cause an unusually high demand for fire and rescue services are multiple structural fires during a 24-hour period or a threat to homeland security.

According to the Fire Administrator, MCFRS would have difficulty responding to a major surge in service demand because existing reserve vehicles are not fully equipped. To enable the service to respond effectively during times of peak demand, the Fire Administrator believes that a number of "standby frontline" or fully-equipped frontline vehicles should be maintained at all times.

Specifically, the Fire Administrator advises that the County should maintain a standby frontline that is 20% over the normal daily requirement. To achieve this, MCFRS would need to fully equip the following vehicles:

- Nine reserve engine/tankers;
- Three reserve aerials;
- Two reserve heavy rescues; and
- Eight reserve ambulance vehicles.

The cost of supplying these reserve vehicles with the appropriate equipment is estimated at $50K to $100K per vehicle.

Consistent with the Fire Administrator's view, two reports approved by the Fire and Rescue Commission in recent years - the *EMS Unit Replacement Criteria Report* (2001) and *Aerial Unit Study* (2002) - recommend making the distinction between active frontline units, standby front line units, and ready reserve units. The definitions offered in the EMS report are as follows:

Active frontline: units that are in controlled status with the Emergency Communication Center, available to respond 24 hours a day/7 days a week.

Standby Front Line: units that are fully equipped with all necessary EMS supplies and portable radios, ready for immediate response, but are unstaffed and in uncontrolled status.

Ready Reserve: units that are mechanically available, but not always fully stocked with necessary EMS supplies or portable ratio, and are in uncontrolled status. (Source: *EMS Unit Replacement Criteria Report*, page 7)

5. Vehicle Readiness Data

The only source of vehicle readiness data over time is from a ten month period (June 30, 2002 through May 4, 2003) during which Division of Fire and Rescue Services (DFRS) staff manually recorded daily apparatus availability.

Table 19 (below) summarizes the data from this 308 day snapshot in time, and Exhibit 6 (page 58) depicts the number of vehicles out-of-service compared to the number of reserve vehicles. In sum, the data show that, during this time, MCFRS:

- Met the daily requirements for engines and ambulances all of the time; and
- Did not meet the daily requirement for aerial ladder trucks and heavy rescue squads all of the time.

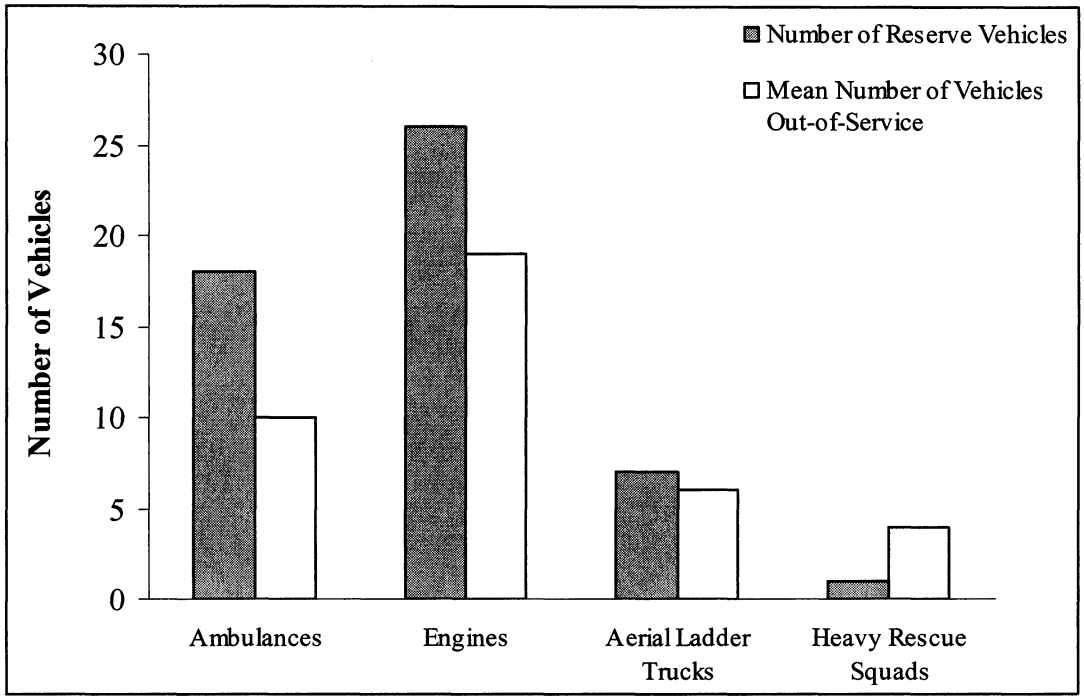
The data indicate that MCFRS met the daily requirement for nine heavy rescue squads on only two of the 308 days of the study period. While MCFRS met the daily requirement for aerial ladder trucks on 243 out of 308 days (78% of the time), further analysis of the data shows that the number out-of-service aerial ladders trucks is frequently on the edge of exceeding reserve capacity. The data show that MCFRS often had fewer than 12 aerial ladder trucks in-service; on some days, there were only eight aerials in-service.

TABLE 19: AVAILABILITY OF FRONTLINE VEHICLES FOR 308 DAY PERIOD (JUNE 30, 2002 TO MAY 4, 2003)

Vehicle	Number of Days that Daily Requirement Met	Percent of Time Daily Requirement Met
Ambulances	308 out of 308 days	100%
Engines	308 out of 308 days	100%
Aerial ladder trucks	243 out of 308 days	78%
Heavy rescue squads	2 out of 308 days	0.7%

Source: DFRS' 10 months of vehicle readiness data.

EXHIBIT 6: NUMBER OF VEHICLES OUT-OF-SERVICE COMPARED TO NUMBER OF RESERVE VEHICLES FOR 308 DAY PERIOD (JUNE 30, 2002 TO MAY 4, 2003)



Source: DFRS' 10 months of vehicle readiness data.

Part B. Vehicle Test Results

As reviewed in Chapter II (page 17), State Department of Transportation (DOT) regulations outline preventive maintenance standards for trucks, and National Fire Protection Association (NFPA) standards outline maintenance and performance standards for fire apparatus. To date, the Fire and Rescue Commission has not adopted regulations that specify maintenance and performance standards that must be met by all vehicles and equipment in the MCFRS fleet.

DFRS' Apparatus Program Manager reports that the individual LFRDs complete State forms that certify the fire and rescue vehicles housed at their respective fire and rescue departments comply with State DOT regulations (COMAR, Title 23). The forms list defects identified and indicate when repairs were completed. DFRS staff maintain a database that records when the COMAR inspections were conducted.

Before 2002, MCFRS had no fleet-wide program for third-party testing of vehicles or equipment. Historically, apparatus testing has been conducted at the discretion of individual LFRDs. Each LFRD decides when and who should conduct, for example, periodic inspections of aerial ladders for compliance with NFPA standards; and annual inspections of fire engines, aerial ladder trucks, heavy rescue squads, and ambulances for compliance with State DOT regulations.

During the past two years, MCFRS launched a third-party testing program, staffed by experienced DFRS personnel. Specifically, DFRS staff conducted tests of the pump systems on all engines for compliance with NFPA 1911 standards, and sample tests of vehicles for compliance with pre-trip safety standards established in State regulations. DFRS staff also started more regular collection of information on aerial ladder truck certifications. The rest of this section reviews the results of these efforts.

1. Pump System Tests

In April 2002, MCFRS initiated a program to conduct annual service tests of the pump systems on the County's fleet of engines for compliance with NFPA standards. The directive issued by the Fire Administrator about the tests explains that the pump tests implement recommendations of the July 2000 Fire Rescue Commission's adopted Water Study.

Note to reader: OLO understands that there is not universal agreement among all parties to use the NFPA standards for pump testing.

The tests performed and results for the 2002 pump tests and 2003 pump tests performed to date are summarized below.

Description of the Pump Tests. DFRS staff conduct the pump tests in accordance with NFPA 1911, *Standard for Service Tests of Fire Pump Systems on Fire Apparatus.* The tests are performed at the Public Service Training Academy.

NFPA 1911 requires that the pumps undergo ten different performance tests. No single test determines whether a pump should pass or fail. According to DFRS staff, five of the ten tests best determine pump performance. These are:

- **Vacuum Test:** checks if the pump leaks air.

- **Tank to Pump Flow:** rates pump performance when relying on water from a vehicle's on-board tank. This test is critical because firefighters use tank water, initially, at the scene of fire, before connecting to another water source.

- **Three Capacity Tests:** assesses the performance of a pump to discharge water under prescribed flows and pressures.

Results of the Pump Tests. Based on the results of the five tests listed above, OLO asked DFRS staff to provide an overall assessment of whether each pumper tested met or did not meet NFPA standards. Table 20 (page 60) summarizes the bottom line assessments of pumpers tested in 2002 and 2003. Table 21 (page 61) sorts the results by maintenance approach, i.e., according to whether pumps are maintained by the in-house shops or private vendors.

In sum, DFRS staff assessed 55% of the 60 pump systems tested during 2002 as meeting the NFPA standards. Further analysis of the results indicate that a higher percent of the pumps maintained by private vendors were assessed as meeting NFPA standards compared to pumps maintained by the in-house maintenances shops (63% vs. 50%).

DFRS repeated the pump tests in 2003 on 51 pumps systems and the results show improvement. Specifically, DFRS staff assessed 67% of the 51 pumps tested as meeting the NFPA standards. The 2003 data show that the percent of pumps maintained by vendors that met NFPA standards increased from 63% to 82%; the percent of pumps maintained by the in-house shops that met NFPA standards increased from 50% to 62%.

Based on the pump test results, DFRS staff recommended the following action plan to improve pump maintenance:

- Provide factory certified pump training to shop personnel,
- Increase station maintenance accountability and management controls,
- Develop training modules for pumps class candidates, existing drivers, and
- Improve data collection on fleet status.

TABLE 20: SUMMARY OF 2002 AND 2003 PUMP TEST RESULTS*

Year	Number Tested	Number (%) of pumps that DFRS staff assessed as:	
		Meeting NFPA standards	Not meeting NFPA standards
2002	60	33 (55%)	27 (45%)
2003	51	34 (67%)	17 (33%)

Source: OLO/MCFRS, December 2003

TABLE 21: RESULTS OF 2002 AND 2003 PUMP TESTS BY MAINTENANCE APPROACH*

Pumps Maintained by:	Number Tested	Number (%) of pumps that DFRS staff assessed as	
		Meeting NFPA standards	Not meeting NFPA standards
Results of 2002 Pump Tests			
In-house shops	41	21 (51%)	20 (49%)
Private vendors	19	12 (63%)	7 (37%)
2002 Total	60	33 (55%)	27 (45%)
Results of 2003 Pump Tests			
In-house shops	40	25 (63%)	15 (36%)
Private vendors	11	9 (82%)	2 (18%)
2003 Total	51	34 (67%)	17 (33%)

Source: OLO/MCFRS, December 2003

*OLO understands that some of the mechanics who work at the in-house shops disagree with the fairness of the pump testing methodology used by DFRS staff.

2. Pre-Trip Safety Inspections

In May and November 2003, DFRS staff randomly selected and inspected a sample of fire and rescue vehicles for compliance with pre-trip safety standards established by State Department of Transportation regulations (COMAR, Title 23). The inspections were unannounced.

The May and November inspections each involved 30 vehicles. In May, DFRS staff inspected 14 engines, eight ambulances, six aerial ladder trucks, one heavy rescue squad, and one specialty vehicle. In November, DFRS inspected 12 engines, nine ambulances, five aerial ladder trucks, three heavy rescue squads, and one specialty vehicle.

DFRS staff inspected items that vehicle drivers are expected to routinely examine before operating a vehicle. The driver's examination is commonly referred to as the pre-trip inspection and includes checking tire tread and pressure, suspension, steering, brakes, lights, windshield wipers, body alignment, and fluid levels.

As summarized in Table 22, in both May and November, DFRS staff assessed 75-80% of the vehicles inspected as meeting the pre-trip safety standards. Vehicles found with major defects were placed out-of-service. In May, seven (23%) of the vehicles inspected were placed out-of-service, and in November, six (20%) of the vehicles inspected were placed out-of-service. Examples of defects found were: broken springs, low tire tread, tires rubbing on frames, air leaks, brake adjustment issues, loose shock absorbers, and a broken windshield.

In both May and November, most of the vehicles placed out-of-service were repaired and back in-service within 24 hours of inspection. Other vehicles were sent to private vendors for specialty repairs, resulting in longer out-of-service times.

TABLE 22: SUMMARY OF PRE-TRIP SAFETY INSPECTION RESULTS*

Date of Inspection	Number Inspected*	Number (%) of vehicles inspected by DFRS staff that resulted in vehicles:	
		Remaining in-service	Placed out-of-service
May 2003	30	23 (77%)	7 (23%)
November 2003	30	24 (80%)	6 (20%)

Source: MCFRS/OLO, December 2003

* In May 2003, the vehicles inspected were: 14 engines, 8 ambulances, 6 aerial ladder trucks, 1 heavy rescue squad, and 1 specialty vehicle. In November 2003, the vehicles inspected were 12 engines, 9 ambulances, 5 aerial ladder trucks, 3 heavy rescue squads, and 1 specialty vehicle.

3. Certification of Aerial Ladders

The LFRDs responsible for maintaining aerial ladder trucks hire contractors to perform on-site tests of aerial ladders for compliance with NFPA 1914, *Standard for Testing Fire Department Aerial Devices*. If an aerial ladder passes, NFPA 1914 requires the testers to issue a certificate of compliance. NFPA standards call for testing aerial ladders:

- Annually;
- After major repairs;
- After subjected to unusual stress or load, and
- When usage exceeds the manufacturers' recommended operational performance.

In addition, a more comprehensive inspection is required at least every five years.

Table 23 (below) summarizes when the 22 aerial ladder trucks in the MCFRS fleet were most recently certified for compliance with NFPA 1914. The DFRS Apparatus Program Manager estimates that 75% of MCFRS' aerial ladders are inspected each year.

TABLE 23: DATES OF MOST RECENT AERIAL LADDER CERTIFICATIONS

Year Most Recently Certified	Number of Aerial Ladders
2003	17
2002	3
2001	1
2000	1
	Total 22*

Source: MCFRS/OLO, December 2003

*The DFRS Apparatus Program Manager reports that four of the five aerial ladders that were most recently certified before 2003 are scheduled for testing/certification in early 2004.

CHAPTER VI: Focus Group Results[1]

In October, 2003, the Office of Legislative Oversight (OLO) convened three focus group sessions attended by career and volunteer staff involved in the maintenance and repair of MCFRS vehicles and equipment. In these sessions, the participants:

- Assessed existing inspection, maintenance, and repair practices;
- Discussed standards for evaluating vehicle maintenance performance; and
- Recommended ways to improve the efficiency and effectiveness of how these functions are performed across the County.

The Structure and Format

The focus group sessions were held one evening a week from 7:00–9:00 pm for three consecutive weeks. They were conducted by a professional moderator.

There were 18 focus group participants, nine career staff, and nine Local Fire and Rescue Department (LFRD) representatives. OLO worked with the Office of the Fire Administrator, the Division of Fire and Rescue Services, and Division of Volunteer Fire and Rescue Services to assemble a hierarchically and geographically diverse group of MCFRS stakeholders. A list of participants is on page 76.

At the start of the exercise, the moderator laid down the following ground rules:

- The focus group's objective is three-fold: (1) to assess current vehicle and apparatus maintenance strategies; (2) to recommend improvements to these strategies; and (3) to identify areas in need of further research by OLO staff.

- While each participant brings knowledge and experience from his or her own position in the Fire and Rescue Service, the focus of the exercise is Countywide. The group's aim is not to assess the performance of individual staff or individual shops or LFRDs, but to identify ways to bring improvements across the County.

- The focus group is neither a team-building nor a decision-making body, and is not obligated to arrive at consensus observations and recommendations. On the other hand, the focus group represents an opportunity for its diverse participants to speak with one voice directly to the Council. The group will decide for itself over the three sessions whether it wishes the exercise to result in disagreement or unity on this challenging matter.

[1] Doug Katz, of Wasserman/Katz, facilitated OLO's focus group sessions, and was the lead author of this chapter.

Each of the three sessions was structured around a specific agenda item:

- In the first meeting, participants were asked to evaluate the County's current vehicle inspection, maintenance, and repair procedures. Each participant was asked to identify specific aspects of the current procedures that work well and those that are problematic.

- In the second meeting, participants were asked to identify formal standards and practices that could be used to: (1) evaluate a community's approach to vehicle maintenance, and (2) assure more reliable data, sounder decision-making, professional competence, and — ultimately — more dependable and safer equipment for the consistent delivery of fire and rescue services.

- The final meeting was devoted to developing the group's recommendations. The question: What are the different options (and the advantages and disadvantages of each) for increasing the efficiency and/or improving the effectiveness of fire and rescue vehicle inspection, maintenance, and repair?

The Recommendations

The focus group reached a general consensus on five substantive recommendations. A majority of participants agreed on two additional strategies for improvement. While one must be cautious when extrapolating beyond a single focus group, the level of agreement within this diverse and representative group suggests that:

- There is common interest in addressing what is seen as a longstanding and increasingly urgent problem.

- There is shared frustration about the Fire and Rescue Service's historical failure to implement agreed-upon remedies and improvements.

- There is common recognition that the increasing size, complexity, and demands placed on the MCFRS budget, escalating demands for fire and rescue services, and advent of new threats to the community's safety all require attention to improving how the County inspects, maintains, and repairs fire and rescue vehicles and equipment.

The chart on the following page lists the group's seven recommendations. Additional explanations along with a summary of participants' comments are at the end of this chapter.

Results of OLO Focus Group Meetings
October 2003

Summary of Recommendations		Explanations & Comments Page #
PART A:	**GENERAL CONSENSUS RECOMMENDATIONS**	
#A1:	Increase funding for apparatus replacement.	70
#A2:	Expand the capacity of the existing satellite maintenance shops.	71
#A3:	Establish Countywide standards for vehicle management, e.g., equipment testing, preventive maintenance, defect reporting, and vehicle checkout procedures.	72
#A4:	Establish Countywide standards for recordkeeping and central collection of fire and rescue fleet data.	73
#A5:	Develop and enforce improved driver standards.	73
PART B:	**RECOMMENDATIONS ENDORSED BY A MAJORITY BUT NOT ALL OF THE PARTICIPANTS**	
#B1:	Create a permanent apparatus chief position that has the responsibility and authority for procurement, inspection, maintenance, and repair of fire and rescue vehicles.	74
#B2:	Establish a central County-owned facility to supplement the maintenance and repair work performed at the satellite shops.	75

Other Session Outcomes

Focus group participants offered observations and insights in the first two sessions that shed additional light on the issue of vehicle inspection and maintenance. The views expressed by one or more participants are summarized below.

SESSION 1: ASSESSMENT OF CURRENT PRACTICES AND PROCEDURES

STRENGTHS:

- Appointment in May 2003 of an Assistant Chief to focus on vehicle maintenance. (Almost all participants acknowledged this as the single most positive step in recent memory.)
- Hard working, knowledgeable, and cooperative mechanics employed by the LFRDs.
- Agreement throughout the Fire and Rescue Service that improvements in vehicle inspection, maintenance, and repair are needed.
- The satellite shop concept, which promotes convenient access to maintenance services, routine mechanic/driver communication, and faster turnaround.
- The recent compliance testing (i.e., for compliance with COMAR Title 23 pre-trip inspection standards and NFPA pump standards), which encourages increased service-wide focus on inspection, maintenance, and repair.
- The LFRDs' ability to purchase maintenance and repair services outside of the County's procurement system results in timely purchasing and favorable prices.

WEAKNESSES:

- Inadequate funding for apparatus procurement and replacement; there is an urgent need to purchase additional front-line apparatus, e.g., aerial ladder trucks, heavy rescue squads.
- The Fire and Rescue Services is a 24/7 function and lacks around-the-clock mechanic services to parallel its hours of operation. Mechanic staffing levels at the satellite shops are insufficient and shop hours are limited generally to normal business hours.
- Chronic vehicle problems are not consistently addressed.
- Repair and documentation inadequacies could pose liability problems for the County.
- The absence of a Countywide, strategic focus on inspection, maintenance, and repair.

The current approach has resulted in: inconsistent repair prioritization across the County; diffused responsibility for mechanic performance; and inconsistent compliance with maintenance requirements.

- The collision frequency for fire and rescue vehicles is "too high." Collisions are caused too often by driver error and individual drivers are not held accountable for at-fault accidents.
- The reserve fleet system is not working effectively; the required station checks are not consistently performed and vehicles are sometimes not returned "home" before being loaned out again.

A basic theme emerged during the group's assessment that extended through the remaining two sessions. In sum, the demands placed on MCFRS have steadily increased while funds for vehicle procurement, maintenance, and repair have not. From the group's standpoint, this trend accounts for many (though not all) of the current vehicle maintenance inadequacies.

SESSION 2: CRITERIA FOR EVALUATION AND ENFORCEMENT

In this session, the group was asked first to list the universe of sources that it would consult if tasked with developing vehicle maintenance standards for a large and complex fire and rescue services system like Montgomery County's. The group identified the following potential sources of guidance:

- Practices of other comparably sized jurisdictions
- Federal Department of Transportation standards
- State MVA vehicle and Commercial Driver's Licensing (CDL) requirements
- National Fire Protection Association (NFPA) standards
- Applicable International Association of Fire Chiefs (IAFC) and International Association of Firefighters (IAFF) standards
- Original Equipment Manufacturers (OEM) standards
- Society of Automotive Engineers standards
- General vehicle maintenance standards
- Automotive Service Excellence (ASE) certifications and tests
- Emergency Vehicle Technician (EVT) standards
- Local emergency vehicle operator's training standards
- Trucking industry practices
- Military and other "severe duty" vocational requirements

The group was then asked to list those laws, regulations, standards, requirements, policies, and guidelines that should apply to MCFRS (whether they are in force currently or not):

- Maryland State Inspection Standards (COMAR, Title 23)
- NFPA Standards for Vehicles and Equipment
- Original Equipment Manufacturers (OEM) standards
- Maryland State licensure requirements
- Local emergency vehicle operator training standards (EVOC)
- Industry Performance Standards.

Finally, the group moved on to list a set of vehicle maintenance performance standards that should be established across the Fire and Rescue Service:

- Vehicle life cycle costs
- Unit maintenance costs per mile
- Vehicle down time
- Out-of-service time due to unscheduled breakdowns versus scheduled maintenance
- Average fleet mileage
- Accidents (collisions per mile)
- Check-out inspection compliance rates
- Shop capacity
- Real time parts inventory
- Number of vehicles per mechanic.

PART A: GENERAL CONSENSUS RECOMMENDATIONS

Recommendations	Participants' Comments
#A1: Increase funding for apparatus replacement.	
a) Revise the apparatus replacement schedule and secure a dedicated, multi-year source of funding.	The current apparatus replacement schedule is out of date and does not reflect the increased use of fire-rescue vehicles. For at least a decade, funding for apparatus replacement has fallen behind what is needed. There are higher costs (e.g., labor, time, parts) and problems (e.g., more vehicles out-of-service) associated with an aging fleet. Apparatus replacement is a priority issue that deserves a dedicated, multi-year source of funding. The County should re-examine the possibility of funding vehicle purchases through the CIP.
b) Tie vehicle replacement decisions primarily to mileage, but also consider other factors (e.g., age, condition).	Vehicle replacement is currently tied to vehicle age. Given the increased use of vehicles, replacement decisions should instead be based on multiple factors, with mileage as the lead variable. In all cases, NFPA 1901 guidelines, which advise a maximum vehicle life of 12-years, should influence County decisions.
c) Buy apparatus already equipped with vocational equipment.	Current practice is to purchase vehicles without the associated equipment. Implementation of this recommendation will decrease downtime necessary to transfer vocational equipment from one vehicle to another.

PART A: GENERAL CONSENSUS RECOMMENDATIONS (CONTINUED)

Recommendations	Participants' Comments
#A2: Expand the capacity of the existing satellite maintenance shops.	
a) Increase the capacity of the existing satellite shops by hiring more mechanics and improving/expanding the facilities (where feasible).	21 of the 33 stations rely upon the satellite shops for vehicle maintenance and repair. As is, the five satellite shops cannot keep up with the volume of work, which results in slippage of PM schedules and longer out-of-service times. The service capacity of the existing five satellite shops is limited by both physical space and the number of mechanics on staff. The service capacity of the satellite shops could be increased in the short term by hiring additional mechanics; over time, the physical layout of at least two of the shops could also be expanded. Another way to increase capacity would be to add one or more additional satellite facilities.
b) Establish system that provides for 24/7 coverage for repairs needed to get apparatus back in service. The group acknowledged that multiple options exist for accomplishing this recommendation.	The fire service is a 24/7 operation and needs ready access to vehicle repair services beyond normal business hours, especially for the core operating hours of 6 AM to midnight, seven days a week. Options for providing 24/7 coverage include: a satellite or central facility that is staffed with a mechanic 24/7; access to staff or contract mechanics on a call-back status; or a mobile service for repairs after hours.

PART A: GENERAL CONSENSUS RECOMMENDATIONS (CONTINUED)

Recommendations	Highlights of Participants' Comments
#A3: Establish Countywide standards for vehicle management, e.g., equipment testing, preventive maintenance, defect reporting, and vehicle checkout procedures.	
a) Establish Countywide standards for vehicle recordkeeping, reporting defects, conducting inspection, and performing preventive maintenance.	There are inconsistencies across the system for recording vehicle maintenance data, reporting defects, conducting inspections, and performing preventive maintenance. Countywide standards are needed to ensure proper care of all vehicles and to enable better decision-making (e.g., funding decision, apparatus replacement decisions) based upon better and consistent data.
b) Establish long-term plan (e.g., 10-year horizon) for apparatus, tools, and equipment performance goals and testing.	MCFRS' recent initiative to inspect/test apparatus, tools, and equipment for compliance with legal standards and NFPA guidelines is widely accepted as a positive step for improving the readiness of the fleet. A long-term plan for performance and testing needs to be established.
c) Establish standard daily, weekly, monthly, and annual vehicle checkout forms and procedures that are used consistently.	Individuals who drive fire and rescue apparatus need to assume greater responsibility for routinely assessing a vehicle's condition and reporting defects. Although daily and weekly checkout procedures already exist, some perceive them as impractical and a burden to use.

PART A: GENERAL CONSENSUS RECOMMENDATIONS (CONTINUED)

Recommendations	Participants' Comments
#A4: Establish Countywide standards for recordkeeping and a central collection of fire and rescue fleet data.	
a) Establish standards for vehicle recordkeeping and a central data collection to make decisions re: vehicle replacement.	Vehicle maintenance recordkeeping and data collection practices are currently decentralized and inconsistent among stations. A standard approach to record keeping and central data collection should aid in the analysis of maintenance costs and decision-making about funding and vehicle replacement.
b) Analyze records to capture data on costs of vehicle maintenance, lifecycle vehicle costs, and vehicle performance.	
#A5: Develop and enforce improved driver standards.	
a) Revisit minimum training standards and requirements for vehicle drivers.	Accidents due to driver error have increased. Standards and requirements for drivers need to be revisited and enforced.
b) Develop and enforce improved driver education and driver accountability.	

PART B: RECOMMENDATIONS ENDORSED BY A MAJORITY BUT NOT ALL OF THE PARTICIPANTS

Recommendation #B1: Create a permanent apparatus chief position that has the responsibility and authority for procurement, inspection, maintenance, and repair of fire and rescue vehicles.

Explanation of Issue

All participants concurred that the assignment of an Assistant DFRS Chief (in May 2003) to focus on improving vehicle inspection and maintenance has added value. Examples of benefits cited include the increased attention to apparatus readiness, vehicle inspection/equipment testing, and the facilitation of solutions to routine problems with the fleet.

Participants generally agreed on the need for centralized coordination and oversight of vehicle maintenance in the fire service, especially if it results in more effective fleet operations, e.g., more resources for vehicle maintenance, a larger and better maintained reserve fleet. There was, however, not a group consensus on the degree of centralized authority to vest in an apparatus chief position. The group also did not explicitly address whether a person hired into a position of central authority over vehicle maintenance would need to be a career firefighter.

A majority of the focus group participants supported the recommendation to create a permanent apparatus chief position that has both the responsibility for and authority over all aspects of vehicle management, including procurement, inspection, maintenance, and repair. This recommendation was supported by 11 of the 18 focus group participants; the 11 supporters consisted of all 9 career participants and 2 of the 9 volunteer participants.

Those who disagreed with this recommendation questioned whether a centralized authority was necessary and whether it would actually improve the current situation. They voiced concerns that a person given central authority over all aspects of vehicle management could too easily misuse or abuse the power vested in the position. In addition, moving towards centralized authority raises questions about the employment status of the mechanics and the use of maintenance shops currently located in LFRD-owned facilities.

PART B: RECOMMENDATIONS ENDORSED BY A MAJORITY BUT NOT ALL OF THE PARTICIPANTS (CONTINUED)

Recommendation #B2: Establish a central County-owned facility to supplement the maintenance and repair work performed at the satellite shops.

Explanation of Issue

Participants reached a general consensus that there are decided advantages of having maintenance shops located throughout the County. Specifically, the satellite shops provide convenient access, timely service, and the opportunity for routine and frequent interactions among the mechanics, drivers, and other station personnel. In addition, arrangements exist for calling back mechanics after regular business hours.

A majority of participants agreed upon the need to supplement the satellite shops with some type of centralized County-owned facility. A number of different approaches to a centralized facility were discussed, but no single vision was endorsed. Suggested functions to be performed at a central facility included: 24/7 coverage for the County as a whole; repairs on the vocational equipment (e.g., ladders, pumps); major repair work on engine and transmissions; and supplemental routine preventive maintenance work. The central facility could also serve as a warehouse for parts.

Questions/concerns raised about a central facility included: the cost associated with constructing and staffing a central facility; who would be "in charge;" the scope of work to be performed; whether all LFRDs would use the central facility; and how opening such a facility would affect the future employment status of the mechanics currently employed by the LFRDs.

FOCUS GROUP PARTICIPANTS: OCTOBER 2003

FACILITATOR: DOUG KATZ, WASSERMAN/KATZ

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Steve Lohr
Assistant Chief, Division of Fire and Rescue Services

Chapter VII: Comparative Information

OLO interviewed staff from the fire and rescue departments of six other local government jurisdictions in the region: three Maryland counties (Baltimore, Prince George's, and Anne Arundel), Fairfax County, the District of Columbia, and the City of Alexandria. Along with DFRS staff, OLO also conducted site visits to vehicle maintenance facilities in all six jurisdictions.

Part A describes the six jurisdictions' population, land area, 9-1-1 call load, and fire and rescue vehicle fleet.

Part B reviews the different approaches used by these jurisdictions to maintain and repair fire and rescue vehicles.

Part C presents vehicle maintenance and fuel costs provided by three jurisdictions.

Part A. Population, 9-1-1 call load, Land Area, and Size of Fleet

For Montgomery County and the six jurisdictions surveyed, Table 24 (page 78) lists the population, land area, 9-1-1 call load, and number of aerial ladder trucks, pumpers, heavy rescue squads, and ambulances. The last column shows the ratio of vehicles to 9-1-1 calls.

The data show that the ratio of vehicles to annual 9-1-1 calls ranges from one vehicle per 504 calls (Anne Arundel) to one vehicle per 2,070 calls (District of Columbia). Montgomery County's ratio of one vehicle per 651 calls is comparatively higher than the ratio in Fairfax, Prince George's, and Anne Arundel, but lower than the ratio in Baltimore County, District of Columbia, and Alexandria.

Table 25 (page 78) shows the number of in-service and reserve vehicles for aerial ladder trucks, pumpers, heavy rescue squads, and ambulances.

Note: A problem with comparing reserve ratios is that jurisdictions maintain reserve vehicles in different degrees of readiness. Some places maintain fully-equipped or "standby frontline" vehicles, while others (like Montgomery County) maintain vehicles that are mechanically ready but not equipped with the full complement of tools and equipment. (See discussion of need for "standby frontline" vehicles on page 56.)

Of the jurisdictions surveyed: Fairfax County is currently in the process of equipping all of its frontline reserve vehicles. In Anne Arundel, four out of 13 reserve ambulances are fully equipped. In the District of Columbia, ten out of 20 reserve pumpers are fully equipped. Prince George's County, Baltimore County, and Alexandria do not maintain any "standby frontline" vehicles.

Table 24: General Characteristics of Jurisdictions Sampled

Jurisdiction	Residential Population	Square miles (land area)	911 calls for Fire & EMS Per Year*	Number of Aerial Ladder Trucks, Pumpers, Rescue Squads, & Ambulances	Ratio of Vehicles to Annual 9-11 Calls
Montgomery	918,000	496	99,537	153	1:651
Fairfax	969,749	395	87,621	156	1:562
Prince George's	801,515	485	~120,000	230	1:522
Baltimore County	754,292	599	115,678	101	1:1,155
District of Columbia	572,059	68		139	1:2,070
Anne Arundel	489,656	416	58,966	117	1:504
Alexandria City	128,283	15	17,615	24	1:734

Source: Population and land area data are from ICMA's *Comparative Performance Measurement, FY 01 Data Report.* * 911 call data are FY 03 statistics except for Anne Arundel which are FY 02.

Table 25: Ratio of In-Service Fire/Rescue Vehicles to Reserves of Jurisdictions Sampled*

County/City	Aerial ladder trucks			Pumpers/engines			Heavy rescue squads			Ambulances			Total		
	No. in-service	No. in Reserve	Reserve ratio	No. in-service	No. in Reserve	Reserve ratio	No. in-service	No. in Reserve	Reserve ratio	No. in-service	No. in Reserve	Reserve ratio	Total in-service	No. in Reserve	Reserve ratio
Montgomery	15	7	0.47	30	24	0.80	9	2	0.22	43	23	0.53	97	56	0.58
Fairfax	12	3	0.42	36	24	0.67	8	2	0.25	42	27	0.64	98	58	0.59
Prince George's	22	3	0.14	90	8	0.09	13	1	0.08	74	19	0.26	199	31	0.15
Baltimore	7	4	0.57	28	16	0.57	0	0	0	30	16	0.53	65	36	0.55
District of Columbia	16	5	0.31	33	20	0.61	3	1	0.33	36	25	0.69	88	50	0.57
Anne Arundel	11	2	0.18	28	25	0.89	9	0	None	29	13	0.45	77	40	0.52
Alexandria City	3	1	0.33	8	3	0.34	1	0	None	5	3	0.6	17	7	0.41

Source: OLO, January 2004 *See text for description of problems with comparing reserve ratios across jurisdictions.

The reserve data that are reported show that five of the six jurisdictions surveyed have aggregate reserve ratios of between 0.41 to 0.59. (Montgomery County's aggregate reserve ratio is 0.58.) Prince George's County reported reserve ratio is notably lower at 0.15; this is because the County maintains a fleet of in-service vehicles that exceeds their normal daily requirement.

When looked at by category of apparatus, Montgomery County's reserve ratios are higher than the ratios found in some of the other jurisdictions and lower than others. For example, Montgomery County's reserve ratio for aerial ladder trucks is almost identical to that for Fairfax, higher than that for Prince George's, District of Columbia, Anne Arundel, and Alexandria, and lower than Baltimore County.

Part B. Approaches to Fleet Maintenance

1. Summary

The six jurisdictions surveyed all perform at least some of their fire and rescue vehicle maintenance and repair work at a central facility. The jurisdictions differ in terms of the type of work performed and who staffs the facility.

Fairfax County and Prince George's County both have central facilities designed only to work on specialized fire and rescue vehicle equipment, e.g., pumps, aerials, gauges, hoses. In Fairfax County, other maintenance and repair work is done either at the County's central facility for all general government fleet vehicles or by private vendors. In Prince George's County, other maintenance and repair work is performed by private vendors.

Anne Arundel County, Baltimore County, District of Columbia, and the City of Alexandria have a central facility for performing all routine and specialized maintenance/repair work on fire/rescue vehicles. In Baltimore County and the City of Alexandria, the work on fire and rescue vehicles is performed at the same facility used for maintaining other general government fleet vehicles (e.g., heavy equipment, transit buses). In Anne Arundel County and the District of Columbia, the work is performed at a facility solely dedicated to fire and rescue vehicle maintenance.

In Alexandria, Fairfax County, District of Columbia, and Prince George's County, the mechanics who work on fire and rescue apparatus are employees of the fire and rescue department. In Anne Arundel and Baltimore Counties, the mechanics are employees of the County's public works department.

With the exception of Baltimore County, all of the jurisdictions surveyed rely on private contractors to perform major repairs, e.g., extensive engine and transmission repairs, and major body work. All interviewees expressed frustration at the time taken by private vendors to complete major mechanical repairs.

The six jurisdictions also employ the following fleet management practices:

- All six have one person charged with the overall responsibility and authority for fire and rescue vehicle maintenance;
- All six maintain a centralized database that tracks per vehicle data on age, annual use, out-of-service time, and maintenance costs; and
- All six have adopted standards that describe the work required for each preventive maintenance service.

2. Approach by Jurisdiction

Fairfax County

Fairfax County's Fire and Rescue Department fleet consists of over 400 vehicles: 15 aerial ladder trucks, 60 pumpers, 10 heavy rescue squads, 69 ambulances, and 264 other vehicles. The vehicles are assigned to 34 stations.

The Fire and Rescue Department employs 12 full-time mechanics who only maintain the specialized equipment on fire and rescue vehicles. The work includes maintaining and repairing: pumps, aerial ladders, gauges, fabrication, sirens, radios, hoses, and cables. The mechanics also prepare new vehicles for service and prepare vehicles for sale.

The Fire and Rescue Department's mechanics work at one large and one medium-sized facility. The medium sized facility consists of two bays located as part of the County's fleet/transit workshop. The larger one is a stand-alone facility located at another fleet/transit facility site. Both facilities have spare parts storage capacity, high ceilings (to accommodate maintenance on large apparatus), and administrative offices. The larger facility also houses some reserve fire and rescue vehicles. The Department is in the process of building a second large facility and moving out of the medium-sized facility.

All other maintenance/repair work on fire and rescue vehicles is performed either by mechanics employed by the County's Fleet Department or by private vendors. Work performed "in-house" is conducted primarily at a different centrally located fleet/transit facility. Private vendors perform all major engine, transmission, and body work.

Fairfax County staff report that fire and rescue vehicles receive preventive maintenance every 5,000 miles. The County replaces pumpers and heavy rescue squads at 12 years of age, aerial ladder trucks at 17 years of age, and ambulances at 10 years of age. A vehicle moves to being a reserve midway through its lifecycle.

The Department charges one senior career firefighter and several mid-level career firefighters with the overall responsibility and authority for vehicle maintenance. These people maintain a database that tracks preventive maintenance, additional maintenance/repairs, mileage, and vehicle costs. Department procedures require drivers to check their vehicles ten times a month and to log defects into a common database.

Prince George's County

Prince George's County's Fire and Rescue Department fleet consists of 550 vehicles: 25 aerial ladder trucks, 98 pumpers, 14 heavy rescue squads, 93 ambulances, and 320 other vehicles. The vehicles are assigned to 46 stations.

The Fire and Rescue Department employs a fleet manager (civilian position), garage supervisor, two mechanics, a spare-parts supervisor, a technician to repair small equipment, and an administrative aide. (The Department is in the process of hiring two additional mechanics.) The fleet manager maintains a database to prioritize maintenance/repair activities, track costs, out-standing reported defects, and reserve apparatus availability.

Similar to Fairfax County, the mechanics work at a large facility and maintain/repair specialized fire rescue equipment such as, pumps, aerial ladders, gauges, fabrication, sirens, radios, hoses, and cables. The facility contains spare-parts storage capacity and administrative offices.

The Fire and Rescue Department hires multiple private vendors to perform all other maintenance and repair work on fire and rescue vehicles. The Department uses three repair trucks, staffed by contractors, to perform work on-site at the stations. Other private vendors perform all major engine, transmission, and body work.

Baltimore County

Baltimore County's Fire and Rescue Department fleet consists of 281 vehicles: 11 aerial ladder trucks, 44 pumpers, 46 ambulances, and 180 other vehicles. (Baltimore County does not use heavy rescue squads.) The vehicles are assigned to 27 career stations.

The Department charges a career firefighter overall responsibility for vehicle maintenance. The Department maintains a database to prioritize maintenance/repair activities, track costs, out-standing reported defects, and reserve apparatus availability.

In Baltimore County, mechanics employed by the County's Public Works Department maintain and repair fire and rescue vehicles. The work is performed primarily at the County's heavy equipment maintenance facility. Staff perform both minor and major vehicle maintenance/repair, including most major engine, transmission, and body work. Staff also repair/maintain small engines, breathing apparatus, aerial ladder cable, starter motors, generators, and hydraulic hoses at the facility. The facility also stores EMS supplies, uniforms, tires, batteries, and spare vehicle parts.

The Public Works Department assigns 14 mechanics to perform fire/rescue vehicle maintenance and repair. The County employs three additional mechanics to conduct station site visits. Two of the three mechanics perform minor vehicle maintenance/repair work at the different fire and rescue stations on a monthly basis. The third mechanic performs state DOT compliance inspections/certification of fire and rescue vehicles.

In Baltimore County, all fire and rescue vehicles receive a service every 200 to 250 hours of engine use. Staff report that some vehicles (e.g., ambulances) receive a service every three weeks. Other vehicles receive a service at least twice a year. Vehicles that accrue maintenance/repair costs up to 50% of the purchase price are considered for replacement.

The District of Columbia

The District of Columbia's Fire and Rescue Department fleet consists of approximately 300 vehicles: 21 aerial ladder trucks, 53 pumpers[1], 61 ambulances, 4 heavy rescue squads, and 160 other vehicles. The vehicles are assigned to 33 stations.

The Fire and Rescue Department employs 21 mechanics, one spare-parts technician, and six supervisors (two uniform and four civilian) to maintain fire and rescue vehicles. The mechanics' and supervisors' schedules are arranged so that staff are available 24/7.

Mechanics primarily perform work at a central facility used only for the maintenance and repair of fire and rescue vehicles. The facility operates 24 hours, seven days a week. The work includes: preventive maintenance; minor repairs; and the maintenance and repair of pumps, aerial ladders, sirens, and gauges. The central facility also does some fabrication and body work. Private vendors perform all major engine and transmission work. Two mechanics perform minor maintenance and repair work on-site at the stations.

The central facility contains spare parts storage capacity, high ceilings (to accommodate maintenance on large apparatus), and administrative offices. The Department maintains a database to prioritize maintenance/repair activities, track costs, defects reported but not yet repaired, and reserve apparatus availability.

District staff report that aerial ladder trucks, pumpers, and heavy rescue squads receive preventive maintenance once every three months. Ambulances receive preventive maintenance once every month. Vehicles also receive an annual federal inspection.

The District's vehicle replacement plan requires the replacement of pumpers and heavy rescue squads at ten years of age, aerial ladder trucks at 15-20 years of age, and ambulances at two to four years of age. A vehicle moves to being a reserve approximately midway through its lifecycle. The Department recently received federal funding to purchase new fire and rescue vehicles. Since obtaining new vehicles, District staff report a significant decline in the number of vehicles placed out-of-service for repairs.

[1] Ten of the pumpers are equipped as "standby frontlines."

Anne Arundel County

Anne Arundel County's Fire and Rescue Department fleet consists of 315 vehicles: 13 aerial ladder trucks, 53 pumpers, 9 heavy rescue squads, 42 ambulances, and 198 other vehicles. The vehicles are assigned to 42 stations.

The Department charges overall responsibility for vehicle maintenance to two career firefighters. The Department maintains a database to prioritize maintenance/repair activities, track costs, out-standing reported defects, and reserve apparatus availability.

In Anne Arundel County, mechanics employed by the County's Services Department maintain and repair all fire and rescue vehicles. The maintenance standards for the vehicles are established by the Fire and Rescue Department. The work is primarily performed at a County facility solely designated for fire and rescue vehicle maintenance. Private vendors perform all major engine, transmission, and body work.

The County employs 12 mechanics (eight day shift and four evening shift), who are responsible for performing maintenance and repairs on fire and rescue vehicles. Some of the mechanics are certified as emergency vehicle technicians. One of the mechanics provides minor/repair work on-site at the fire and rescue stations. Also, staff report that firefighters perform minor maintenance (e.g., changing light bulbs) at the stations.

The preventive maintenance schedule is based on vehicle mileage; with older vehicles receiving a service every 3,000-5,000 miles and younger vehicles receiving services every 10,000 miles. Vehicle replacement is based on a combination of age, mileage, and maintenance costs per mile traveled. In general, the County replaces ambulances every nine years, engines every 15 years, aerial ladder trucks every 15-20 years, and heavy rescue squads every 12-15 years.

City of Alexandria

The City of Alexandria's County's Fire and Rescue Department fleet consists of 130 vehicles: 4 aerial ladder trucks, 11 pumpers, 1 heavy rescue squad, 8 ambulances, and 106 other vehicles. The vehicles are assigned to eight stations.

In Alexandria, the Fire and Rescue Department employs four mechanics to perform most maintenance and repairs on fire and rescue vehicles. One of the mechanics also serves as the Department's fleet manager. The supervisor/fleet manager maintains a data base to prioritize maintenance/repair activities, track costs, out-standing reported defects, and reserve apparatus availability.

The mechanics perform the work at the City's Fleet maintenance shop, at which four bays are designated for fire and rescue vehicles. Private vendors perform all major engine, transmission, and body work. The Fleet maintenance shop contains a spare-parts storage, high ceilings, and administrative offices. Staff report that all fire and rescue vehicles receive three preventive maintenance services a year.

Part C. Fuel and Maintenance Costs

The jurisdictions surveyed all maintain databases that track fuel and maintenance costs by individual vehicle. At OLO's request, three jurisdictions (Anne Arundel County, Prince George's County, and the District of Columbia) provided FY 03 maintenance and fuel cost data for five categories of vehicle types; aerial ladder trucks, pumpers, heavy rescue squads, ambulances, and support vehicles.

The data (summarized in Table 26 below) show that the average annual cost data reported vary by type of vehicle and jurisdiction. Further study of these costs is required to fully explain the variances. Factors likely affecting the cost differences include, age of vehicles, number of costly repairs, and details of the methodology used to calculate annual maintenance costs.

The data show that D.C's maintenance costs are comparatively low. According to D.C staff, this is due to the fact that the District replaced (using federal grant funds) a large percent of its fire and rescue fleet over the past two years. DC staff report that before 2002, the District experienced much higher maintenance costs.

Table 26: Average FY 03 Fuel and Maintenance Costs by Type of Vehicle

Jurisdiction	Type of Vehicle				
	Aerial Ladder Truck	**Pumper/ engine**	**Heavy Rescue Squad**	**Ambulance**	**Support**
Anne Arundel County	$27,000	$13,500	$11,500	N/A	$2,000
Prince George's County	$19,000	$13,000	$20,000	$7,500	$1,700[1]
District of Columbia	$2,029[2]	$7,208	N/A	$6,585	$702

Source: OLO/Individual Jurisdictions, January 2004

1. Prince George's County staff report that $1,700 is the standard amount charged for every support vehicle. The amount covers unlimited maintenance/repair work.
2. This amount is based on four new aerial ladder trucks. District staff report that these vehicles experienced no major mechanical failures in 2003.

CHAPTER VIII: Findings

This chapter contains the Office of Legislative Oversight's findings on how the Montgomery County Fire and Rescue Service (MCFRS) inspects, maintains, and repairs fire and rescue vehicles and equipment.

HIGHLIGHTS OF FINDINGS

General Background

- At least ten different studies and reports produced since 1976 contain recommendations for improving how fire and rescue vehicles in Montgomery County are maintained and repaired. Few of these recommendations have been implemented.

- Under current law (Section 21-2(d)), the Fire and Rescue Commission, on behalf of the County, "must develop effective, efficient, and equitable fire, rescue, and emergency medical services Countywide, and provide the policy, planning, and regulatory framework for all fire, rescue, and medical service operations." The law does not specify that this responsibility includes maintaining fire and rescue vehicles and equipment in top condition.

- The FY 04 approved budget for MCFRS' budget includes $3.2 million in County tax funds for fuel and vehicle maintenance and $367K for vehicle replacement. This amount represents about 3% of MCFRS' total approved budget of $119 million.

Current Structure of Vehicle Maintenance

- The MCFRS fleet consists of 424 vehicles: 174 frontline vehicles, 45 specialty vehicles, and 205 support vehicles. The County Government owns 72% of the fleet and individual Local Fire and Rescue Departments (LFRDs) own the other 28%.

- Historically and in practice today, the structure of inspecting, maintaining, and repair of fire and rescue vehicles in Montgomery County is largely decentralized.

- The 19 LFRDs are responsible for the maintenance of the 319 vehicles that operate from their respective fire/rescue stations. This includes all frontline apparatus and represents 75% of the MCFRS fleet. The LFRDs perform vehicle maintenance using a combination of in-house shops and vendor arrangements.

- The Division of Fire and Rescue Services (DFRS) is responsible for the maintenance of the other 25% of the MCFRS' fleet (105 vehicle), which is not assigned to individual stations. This includes: support vehicles used by DFRS command staff, code enforcement staff, and arson investigators; and vehicles used either at the Public Safety Training Academy or by the Urban Search and Rescue Team. Most of these vehicles are maintained at one of the County Government's central vehicle maintenance facilities.

- In FY 03, the County distributed $2.7 million to 18 of the LFRDs for fuel and vehicle maintenance. (B-CC Rescue Squad operates without County funding.) The amount distributed in FY 03 to the LFRDs for fuel and vehicle maintenance was 17% higher than the amount distributed in FY 99. During this time, MCFRS' bottom line budget increased 26%.

What Works

OLO found that some aspects of MCFRS' current approach to vehicle maintenance and repair work well.

- The largely decentralized structure enables the LFRDs to establish entrepreneurial business arrangements for vehicle maintenance and repair. Several LFRDs report being able to negotiate reduced (even no cost) rates with local vendors for some work. A number of LFRDs have adopted formal preventive maintenance schedules and keep detailed maintenance records.

- The in-house shops are conveniently situated to serve the fleet; their locations within the stations afford frequent opportunities for communication among vehicle users and mechanics.

- The LFRDs that contract out routine maintenance services are mostly satisfied with the quality of these vendor arrangements, which are selected to meet each LFRD's needs.

Areas in Need of Improvement

OLO found that other aspects of MCFRS' current approach to vehicle maintenance are not working well and provide an impetus for change.

- MCFRS routinely encounters problems meeting the normal daily count for certain frontline vehicles because so many are out-of-service in need of repair. It routinely takes substantial staff time and effort to deploy apparatus to meet service requirements. According to MCFRS staff, a major reason is that the County's reserve apparatus is not equipped with the full complement of tools, appliances, and other equipment.

- The MCFRS fleet is aging, and older vehicles with increased mileage are more expensive to operate and less reliable. At the same time, MCFRS' call load and unit responses continue to increase each year. In FY 03, MCFRS responded to almost 100,000 incidents, a 20% increase from FY 00.

- Funding for vehicle replacement has been reduced in recent years. In FY 04, there is a $6.8 million gap between the amount called for in MCFRS latest vehicle replacement schedule for heavy apparatus and EMS (emergency medical service) units and the amount budgeted for vehicle replacement.

- Recent pump tests and pre-trip safety inspection results indicate that MCFRS' current practices do not assure that all fire and rescue vehicles/equipment are in top operating condition and ready to perform at any time. While these results do not evidence an across-the-board failure of existing maintenance arrangements, they do evidence uneven performance.

- This uneven performance derives, at least in part, from the absence of the following commonly-used fleet management practices:

  - Safety and performance standards for all vehicles and equipment;

  - Standards and procedures for conducting daily vehicle inspections, reporting defects, and declaring vehicles out-of-service;

  - Driver training and standards, and related management procedures that assure only well-qualified drivers are allowed to drive;

  - An effective preventive maintenance program with ready access to reserve vehicles so that vehicles can easily be taken out of service for maintenance without disrupting service delivery;

  - An ongoing and comprehensive testing process that evaluates vehicle and equipment compliance with pre-established standards for maintenance, safety, and performance;

  - A management information system that provides accurate and timely data to support systemwide fleet-related decision making;

  - Adherence to a replacement and rehabilitation schedule that replaces vehicles when owning and operating them costs more than owning and operating their replacements; and

  - A system of accountability for making the maintenance structure match the service needs of the organization.

Recent Improvements

- In May 2003, the DFRS Chief placed an Assistant Chief on special assignment, working with DFRS' Apparatus Program Manager, to focus on vehicle inspection, maintenance, and repair across the MCFRS fleet.

- Some notable improvements have already been made, with additional improvements planned for 2004.

Focus Group Recommendations

- OLO's focus group participants (a combination of career and volunteer staff) reached agreement on the need to: increase funding for vehicle replacement, expand the capacity of the in-house shops; establish Countywide standards for vehicle management including equipment testing, preventive maintenance, defect reporting, and vehicle checkout, establish Countywide standards for recordkeeping and central collection of fleet data, and develop and improve driver standards.

- A majority of focus group participants also supported the permanent appointment of an Apparatus Chief and establishment of a centralized maintenance facility to supplement the in-house shops.

Comparative Research

- Research into the fire and rescue vehicle maintenance practices of six other local governments in the region (Anne Arundel County, Baltimore County, Prince George's County, Fairfax County, the District of Columbia, and the City of Alexandria) shows that all have one person charged with the overall responsibility and authority for fire and rescue vehicle maintenance.

- Although the type of work performed varies, all six places use a central facility for at least some fire and rescue vehicle maintenance and repair work. In addition, all six maintain a central vehicle database that tracks per vehicle maintenance activity and costs.

The rest of this chapter provides more details on OLO's findings in seven sections:

- The structure and funding of fire and rescue services in the County.
- Characteristics of the MCFRS fleet.
- Responsibility in County law and practice for vehicle maintenance.
- MCFRS' current structure and costs for the maintenance, and repair of fire and rescue vehicles.
- Assessment of MCFRS vehicle management practices.
- Focus group results.
- Comparative findings on the fire and rescue vehicle maintenance function in six other jurisdictions.

THE STRUCTURE AND FUNDING OF FIRE AND RESCUE SERVICES IN THE COUNTY

Finding #1: By law, Montgomery County has a combined career and volunteer fire and rescue service.

By law, the Montgomery County Fire and Rescue system is a public-private partnership between the County and 19 Local Fire and Rescue Departments (LFRDs). The system is governed by County law and regulations, and by policies set by the Fire and Rescue Commission. MCFRS currently delivers fire, rescue, and emergency medical services from 33 stations located throughout the County's almost 500 square miles.

Under current law, the Fire and Rescue Commission, on behalf of the County, must "develop effective, efficient, and equitable fire, rescue, and emergency medical services Countywide; and provide the policy, planning, and regulatory framework for all fire, rescue, and medical service operations." (County Code Section 21-2 (d))

The Montgomery County Fire and Rescue Service (MCFRS) is a department of County Government. By law, the Fire Administrator is a non-uniformed department head of MCFRS, who must implement the policies of the Commission to effectively administer all fire and rescue services provided in the County.

Each LFRD is individually chartered by the State and has a volunteer Board of Directors. By law, the LFRDs share responsibility with the Division of Fire and Rescue Services for the delivery of fire, rescue, and emergency medical services to the public.

Two fire/rescue departments (Bethesda and Chevy Chase) use County career personnel exclusively to meet required staffing levels; the other 17 departments use a combination of volunteer and career personnel. (B-CC Rescue Squad supplements its primarily volunteer staff with a few career paramedics and several other paid personnel, compensated with LFRD funds.) When examined by station, DFRS report that career staff provide 100% of the minimum staffing at 18 of the 33 fire/rescue stations.

Finding #2: The FY 04 approved budget for the Montgomery County Fire and Rescue Service is $119 million. The amount allocated for fuel, vehicle maintenance, and replacement represents about 3% of the total budget.

In FY 04, 85% of MCFRS' $119 million budget is for personnel costs and 15% is for operating expenses and capital outlay. The FY 04 approved budget includes $3.2 million for fuel and vehicle maintenance, and $367K for vehicle replacement.

MCFRS' approved FY 04 personnel complement lists 1,078 workyears (uniform and civilian) supported by County funds. There are approximately 1,000 LFRD volunteers certified under the Integrated Emergency Command Structure, of which 379 met the requirement for the length of service awards program emergency response category in 2002.

Finding #3: In FY 03, MCFRS responded to approximately 100,000 incidents, an increase of almost 20% since FY 00.

Between FY 00 and FY 03, the number of fire and rescue incidents that MCFRS responded to increased almost 20%, from 83,295 to 99,537. During this time, the number of calls for emergency medical services (basic and advanced life support incidents) increased from 69% to 73% of all incidents.

The number of unit responses also increased notably in recent years (see Finding #4). Greater demands on the fire and rescue service are correlated with population growth. At the same time, the total number of fire/rescue stations in the County (33) has remained the same since 1978.

Finding #4: The annual number of MCFRS' unit responses is higher than the number of incidents because more than one vehicle is often dispatched to a single incident. The level of activity varies across the fire and rescue departments.

In 2002, the number of MCFRS unit responses was 179,671. This represents a 23% increase from the 145,504 unit responses in 1997. The number of unit responses and change in unit responses between 1997 and 2002 vary considerably by fire and rescue department.

These data suggest that not all MCFRS vehicles are used at a uniform rate. How much a vehicle is used depends, in part, upon where it is housed.

Finding #5: In FY 02, MCFRS met target response times in six of nine categories.

The Fire, Rescue, and Emergency Medical Services Master Plan defines readiness as MCFRS' ability to respond to incidents within specified time frames. Response time is calculated as the elapsed time between when a unit is dispatched from the 9-1-1 call center and its arrival at the site of the incident.

The time frames vary by the type of incident (fire, basic life support, advanced life support) and the location of the incident by population density (urban, suburban, rural). FY 02 data show that MCFRS exceeded the performance response times in six out of the nine established categories.

CHARACTERISTICS OF THE MCFRS FLEET

Finding #6: The MCFRS fleet consists of 424 vehicles. The County Government owns 72% of the fleet and individual LFRDs own the other 28%.

As of December 1, 2003, the MCFRS fleet consists of 424 vehicles: 174 frontline vehicles, 45 specialty vehicles, and 205 support vehicles. The County Government owns 128 (74%) of the frontline vehicles, 26 (58%) of the specialty vehicles, and 151 (74%) of the support vehicles. Individual LFRDs own the other 119 vehicles in the fleet, which includes 46 frontline vehicles, 19 specialty vehicles, and 54 support vehicles.

Finding #7: Almost half of MCFRS' frontline inventory is less than five years old. This statistic is skewed by the relatively large number of ambulances that are replaced more frequently than engines, aerial ladder trucks, and heavy rescue squads.

Behind the average age calculation for the frontline inventory is a notable range in average age by type of vehicle. As of December 1, 2003, the average age is five years for ambulances and tankers, 10 years for engines, 12 years for aerial ladder trucks, and 12 years for heavy rescue squads.

The average age of all 424 vehicles in the MCFRS fleet is eight years. The average age of support vehicles is six years, and the average age of specialty vehicles is 15 years.

Finding #8: MCFRS' latest vehicle replacement schedule for heavy apparatus and emergency medical service units identifies 21 vehicles for replacement in FY 04 at an estimated total cost of $7.2 million. The approved FY 04 budget contains only $367,360 for vehicle replacement.

MCFRS staff report that, historically, age has been the primary criteria used to determine when heavy apparatus and emergency medical service units "should" be replaced.[3] For example, MCFRS' plan calls for replacing ambulances after 5-8 years and other frontline apparatus after 15-20 years. The National Fire Protection Association recommends that frontline vehicles (e.g., aerial ladder trucks, engines, and other heavy apparatus) be replaced at 12 years of age.

Funding for vehicle replacement has declined in recent years. The FY 04 approved budget for vehicle replacement is $367K, which is $6.8 million short of the estimated $7.2 million needed to purchase the 21 vehicles identified by the MCFRS apparatus plan for replacement this year. For FY 05, the replacement plan calls for replacing 20 more vehicles at an estimated cost of an additional $10.7 million.

[3] MCFRS' replacement schedule does not contain LFRD support vehicles, which have been funded outside of the apparatus replacement budget.

RESPONSIBILITY IN COUNTY LAW AND PRACTICE FOR VEHICLE MAINTENANCE

Finding #9: County law does not specify that responsibility for fire and rescue service operations includes maintaining the vehicle fleet in top operating condition. Historically and in practice today, the vehicle maintenance function in MCFRS is largely decentralized.

Under current law, (County Code Section 21-2(d)), the Fire and Rescue Commission, on behalf of the County must "develop effective, efficient, and equitable fire, rescue, and emergency medical services Countywide; and provide the policy, planning, and regulatory framework for all fire, rescue, and medical service operations." The law does not specify that this responsibility includes maintaining fire and rescue vehicles in top condition.

Historically, the vehicle maintenance function in MCFRS has been largely decentralized. Today, the 19 Local Fire and Rescue Departments (LFRDs) are responsible for the maintenance of the 319 vehicles that operate from their respective fire/rescue stations. This includes all frontline apparatus and represents 75% of the MCFRS fleet.

Over time, the LFRDs have made independent decisions about how to accomplish vehicle maintenance and repair. The County allocates tax dollars each year to 18 LFRDs for fuel and vehicle maintenance; B-CC Rescue Squad maintains its vehicles without any County tax funds. (See Findings #13-16 for more on the budget and costs of vehicle maintenance.)

The Division of Fire and Rescue Services (DFRS) is responsible for the maintenance of the other 25% of the MCFRS' fleet, which is not assigned to individual stations. This group (105 vehicles) includes support vehicles used by DFRS command staff, code enforcement staff, and arson investigators; and other vehicles used by the Public Safety Training Academy and Urban Search and Rescue Team.

Finding #10: Memorandums of Understanding, signed in 1994, confirm that responsibility for maintaining vehicles assigned to the stations is delegated to the LFRDs. In practice, the MOUs have only partially been used as guidelines for vehicle maintenance.

In 1994, LFRD representatives, the Chair of the Fire and Rescue Commission, and the Director of the Department of Fire and Rescue Services signed Memorandums of Understanding that addressed the use and maintenance of vehicles. MOUs were signed by the 17 LFRDs that are assigned County-owned vehicles.[2] (See Appendix C for a copy of the MOU.)

[2] There were no MOUs signed with B-CC Rescue Squad and Wheaton Rescue Squad because no County-owned vehicle operates from these two rescue stations.

The MOUs confirm that the responsibility for maintaining County-owned vehicles assigned to individual stations was delegated to the LFRDs. The MOUs establish that continued assignment of the vehicles to each LFRD is contingent upon adherence to conditions outlined in the MOU and "any Fire and Rescue Commission policies and/or regulations pertaining to vehicle assignment, use, and maintenance." The MOU does not explicitly address the quality of vehicle maintenance.

In practice, MCFRS has only partially relied on the MOUs as guidelines for the vehicle maintenance function. Only a handful of individuals that OLO interviewed knew about the MOUs. The Fire and Rescue Commission did not follow up the MOUs with more specific policies or regulations on vehicle use and maintenance; such as preventive maintenance or vehicle performance standards. Further, until May 2003, there was no DFRS staff assigned to focus on vehicle inspection, maintenance, and repair across the MCFRS fleet. (See Finding #18.)

CURRENT STRUCTURE AND COSTS FOR THE INSPECTION, MAINTENANCE, AND REPAIR OF FIRE AND RESCUE VEHICLES

Finding #11: The LFRDs perform routine vehicle maintenance and repairs (emergency and non-emergency) using a combination of in-house and vendor arrangements. All of the LFRDs contract out transmission, major engine, major body, and other specialty repair work.

Eleven LFRDs use one of six in-house maintenance and repair shops, staffed by mechanics employed by the LFRD where the shop is located. Four shops service the vehicles and equipment of one LFRD, one shop serves two LFRDs; and one shop serves five LFRDs.

Eight LFRDs contract with one or more vendors to provide routine maintenance and repair. Depending on the work to be done, the service is performed either at a station (outside in the driveway or in an engine bay), or at the vendor's location. Career and/or volunteer personnel serve as liaisons to the vendors; at some stations, these individuals also perform some maintenance and minor repair work.

Finding #12: The six in-house maintenance shops are similar in the type of work performed and hours of operations, but differ in terms of other characteristics including staffing, types and numbers of vehicles serviced, and recordkeeping procedures.

At all six shops, the mechanics perform routine preventive maintenance, most repairs (emergency and non-emergency), and annual inspections for vehicle compliance with State DOT standards. All six shops contract out transmission, major engine, major body, and other specialty work. All six hire vendors to conduct periodic aerial ladder inspections and all rely on DFRS staff to perform pump tests.

The Gaithersburg-Washington Grove shop employs three full-time mechanics, and the B-CC Rescue Squad employs one part-time mechanic; the other four shops each employ two full-time mechanics. Although specific hours vary, the shops typically operate during regular business hours, Monday through Friday. All report some arrangement for callbacks to handle emergency repairs during non-business hours.

The types and numbers of vehicles serviced vary among the shops. The ratio of mechanics to vehicles is 1:20 at the B-CC Rescue Squad shop; 1:8 at the Bethesda shop; 1:15 at the Silver Spring shop; 1:17 at the Kensington and Rockville shops; and 1:24 at the Gaithersburg-Washington Grove shop. The ratio at the Gaithersburg-Washington Grove shop was at least temporarily reduced this year because support vehicles are being sent to private vendors for routine maintenance.

The shops have each developed their own procedures for receiving and tracking reports of vehicle/equipment defects. Most of the shops keep paper (non-automated) vehicle maintenance records, and the information maintained varies across the shops. As a result, consistent workload, vehicle use, out-of-service time, and maintenance/repair cost data were not available.

Finding #13: MCFRS' approved FY 04 budget includes $3.2 million for "vehicle management." While the amount distributed to the LFRDs for fuel and maintenance has increased in recent years, it has not kept pace with the bottom line growth in MCFRS' total budget.

The $3.2 million budgeted for "vehicle management" is allocated as follows:

- 75% ($2.4 million) is distributed to 18 of the 19 Local Fire and Rescue Departments (LFRDs) to pay for fuel as well as the labor, equipment, and supplies for vehicle maintenance and repair.

- 25% ($800K) is used to maintain vehicles not assigned to stations ($426K), major vehicle overhaul work ($230K), additional vehicle repairs that are identified during the fiscal year ($100K), aerial ladder inspection/certifications ($11K), and other miscellaneous items, e.g., supplies, training ($33K).

The record shows that, at least in recent years, an initial distribution of funds to the LFRDs is followed by mid-year distributions of additional funds to approximately half of the LFRDs. Between FY 99 and FY 03, total mid-year funding to the LFRDs was $188K to $590K. The mid-year distributions typically pay for unanticipated increases in fuel costs and/or relatively expensive vehicle repairs not anticipated at the beginning of the fiscal year, e.g., transmission and major engine repairs.

The amount distributed in FY 03 to the LFRDs for fuel and vehicle maintenance was 17% higher than the amount distributed in FY 99. During this time, MCFRS' bottom line budget increased 26%.

Finding #14: Between FY 99 and FY 02, the cumulative amount spent by the LFRDs on vehicle management came within 1% of the $10.6 million distributed in this category.

The County tax dollars distributed to the 18 LFRDs are audited on an annual basis. An independent audit firm, under contract to the County Council, conducts the audit.[3]

The audited financial statements show that between FY 99 and FY 02, the cumulative amount spent by the LFRDs on vehicle management came within 1% of the total $10.6 million distributed in this category. However, on an annual basis, there is a differential between the aggregate amount distributed to the LFRDs for vehicle management and the amount actually spent in that category.

In three of the four years examined, the aggregate amount spent by the LFRDs on vehicle management exceeded the aggregate amount distributed in this category. In one year, the aggregate amount spent by the LFRDs on vehicle management was less than the amount distributed. The annual differential ranged from $41K to $359K.

Finding #15: The Division of Fire and Rescue Services is responsible for the maintenance of 25% of the fleet (105 vehicles). Most of these vehicles are maintained at one of the County Government's central vehicle maintenance facilities.

The Division of Fire and Rescue Services (DFRS) is responsible for arranging maintenance for the 25% of the fleet that is not assigned to individual stations. These 105 vehicles (83 support vehicles, 18 specialty vehicles, two engines, one ambulance, and one heavy rescue squad) are primarily used by DFRS command staff, code enforcement staff, and arson investigators; the Public Safety Training Academy; and the Urban Search and Rescue Team.

Currently, DFRS pays to maintain and repair most of these vehicles at the central vehicle maintenance facilities operated by the County's Department of Public Works and Transportation. Specifically, 68 DFRS support vehicles are maintained at the Seven Locks Road maintenance facility for light duty vehicles (a private contractor staffs this facility); and 10 specialty vehicles are maintained at the Crabbs Branch maintenance facility for heavy equipment.

The other 27 vehicles are maintained either through arrangements with the in-house LFRD shops or by private vendors. According to DFRS staff, some of these vehicles (e.g., trailers) do not need regular preventive maintenance.

[3] The Office of Legislative Oversight serves as the Council's contract manager for the audit of the LFRDs. Arthur Anderson conducted the FY 99 audit; Rager Lehman and Houck conducted the FY 00, FY 01, and FY 02 audit. B-CC Rescue Squad does not receive County tax funds and is not included in the audit.

Finding #16: The data needed to conduct a comprehensive cost analysis of MCFRS' vehicle maintenance function are not readily available. A rudimentary cost analysis suggests that per vehicle maintenance costs range substantially.

MCFRS does not maintain consistent and readily available data on per vehicle maintenance costs or out-of-service time. As a result, OLO is unable to comprehensively analyze actual maintenance costs across the fleet.

Using some aggregate data that are available, OLO did a rudimentary calculation of each LFRDs' per vehicle maintenance cost. This analysis showed that the annual average per vehicle cost ranged from less than $1,000 to more than $14,000, with an average cost of about $9,000 for all types of fire and rescue vehicles, e.g., aerial ladder trucks, pumpers, ambulances, and support vehicles. The calculation showed generally higher per vehicle costs for the LFRDs that use the in-house shops compared to the LFRDs that use private vendors.

Annual maintenance cost data were also available for the 68 DFRS support vehicles maintained at the County's Seven Locks Road central fleet maintenance facility. The average FY 03 costs was $5,635 per support vehicle. This cost includes time and materials for repairs, fuel, payment into a vehicle replacement fund, and an overhead charge (to DPWT).

It is important to note that without additional data, no definitive findings can be drawn from these calculations. In addition, these data do not in any way measure the quality of the maintenance and repair work performed.

Finding #17: OLO's interviews with numerous MCFRS personnel found general agreement that the current maintenance structure offers some location and procurement advantages. Common problem areas cited included: inadequate funding, access to and repair of reserve apparatus, daily vehicle inspections, and defect reporting.

During the course of conducting this study, OLO interviewed individuals who work with fire and rescue vehicles from different vantage points. OLO sought the views of: mechanics who service the vehicles; LFRD presidents and chiefs who supervise the vehicle maintenance function at their respective fire and rescue department; career and volunteer firefighters who ride the vehicles and use the equipment; and other uniform and civilian DFRS and DVFRS staff whose job involves one or more aspects of vehicle management.

OLO heard a range of views about "what works" and "what does not work" under MCFRS' current approach to vehicle inspection, maintenance, and repair. For the most

There appears to be a general consensus that the largely decentralized structure works well in the following ways:

- There are time and cost efficiencies associated with the LFRDs' ability to select vendors outside of the County's formal procurement process, which is perceived as cumbersome and limiting.

- The decentralized locations of the in-house shops in fire/rescue stations provide convenient access to maintenance and repair services, and afford opportunities for frequent communication among vehicle users and mechanics.

Additional positive attributes cited by interviewees who supervise the in-house shops include that: the relatively small size of the in-house shops allow for efficient (non-bureaucratic) business decision-making; and the in-house mechanics are described as knowledgeable and hard-working.

Almost everyone interviewed voiced multiple frustrations about certain aspects of MCFRS' current approach to inspection, maintenance, and repair. OLO heard a general consensus from those interviewed that:

- The vehicle maintenance and repair function is not adequately funded;

- The physical capacity of the in-house shops is limited and needs improvement.

- The County has under funded vehicle replacement, which in turn has resulted in an aging fleet of frontline vehicles, an inadequate reserve fleet, and vehicles that need more maintenance and repair services;

- There are problems with gaining access to reserve apparatus needed when a vehicle must be taken out-of-service for maintenance or repair;

- There are problems with sorting out who should pay for repairs of vehicles that return in need of repair after being loaned from one LFRD to another;

- Daily inspections of vehicles are not consistently performed at all stations, and there is no consistent process for reporting defects; and

- Some vehicle drivers are not familiar with how their vehicles should perform, and some drivers are just "poor" drivers.

OLO also heard general dissatisfaction with the pool of vendors who perform transmission and major engine work. None of the vendors is conveniently located and the turnaround time is often many weeks. A number of individuals voiced concerns about the cost and quality of the work performed.

A number of individuals interviewed observed that the "workload of the in-house shops exceeds the time and staff available." As a result, the shops encounter problems with performing routine preventive maintenance according to their respective target schedules.

Additional concerns voiced by some vehicle drivers and equipment users were:

- A general lack of confidence that all vehicles in the MCFRS fleet are maintained in top operating condition.

- Frustration with a reported lack of consistent feedback on whether (and if so when) vehicle defects reported by vehicle users are being repaired. The unintended consequence of this is admittedly a reduced incentive to report vehicle defects.

- The current maintenance and repair arrangements do not guarantee easy access to after-hours repair services for vehicles that need repairs after regular business hours.

- There is not one individual in a position of authority to resolve all problems with vehicle maintenance and repair across the MCFRS fleet.

Finding #18: In May 2003, the DFRS Chief assigned an Assistant Chief, working with DFRS' Apparatus Program Manager, to focus on vehicle inspection, maintenance, and repair across the MCFRS fleet.

Last May, the DFRS Chief placed an Assistant Chief on a special assignment, working with DFRS' Apparatus Program Manager, to focus on vehicle inspection, maintenance, and repair. OLO's focus group participants cited the assignment of this Assistant Chief as the single most positive change in the area of vehicle maintenance in many years.

Examples of activities during the past nine months are:

- Coordinating with the in-house shops on general maintenance and repair issues;
- Facilitating the movement of reserve apparatus;
- Assigning light duty personnel to help with driving vehicles to vendors for repair;
- Collecting data on systemwide vehicle availability and warranty repairs;
- Conducting research on how other jurisdictions structure vehicle maintenance;
- Conducting a sample of unannounced inspections of vehicles for compliance with pre-trip safety standards established by State DOT regulations; and
- Conducting pump tests for compliance with standards established by National Fire Protection Association.

The Assistant Chief and Apparatus Program Manager are working with other DFRS staff to develop systemwide procedures for vehicle checkout and defect reporting as well as an improved driver training program. These improvements are planned for implementation in 2004.

ASSESSMENT OF MCFRS' FLEET MANAGEMENT PRACTICES

Finding #19: Since the mid-1970's, various consultants, task forces, and staff committees have recommended an assortment of strategies to improve how fire and rescue vehicles are maintained. Few of the recommendations have been implemented.

At least ten different studies and reports produced between 1976 and 2003 contain recommendations for improving fire and rescue vehicle maintenance in the County. Some recommendations contained in these reports were implemented. For example, there are six in-house repair shops located in fire stations, the County's central maintenance facilities are used to maintain DFRS' support vehicles and some specialty vehicles not assigned to individual stations, and MCFRS has a vehicle stock numbering program.

However, what is more notable is the substantial number of recurring recommendations that have not been implemented. Examples of recommendations made multiple times over the years and not implemented:

- Develop and implement standards for apparatus maintenance;
- Build a central maintenance facility for fire and rescue vehicles;
- Develop procedures for daily, monthly, and quarterly vehicle checkouts;
- Develop systemwide recordkeeping procedures; and
- Provide a mobile system for performing maintenance and/or repairs.

Finding #20: Ten months of data on frontline vehicle availability indicate that MCFRS is able to meet the daily requirement for engines and ambulances, but often has difficulty meeting the daily requirement for heavy rescue squads and aerial ladder trucks.

The only source of vehicle readiness data over time is from a ten month period (June 2002-May 2003) during which Division of Fire and Rescue Services staff manually recorded daily apparatus availability. In sum, the data show that MCFRS met the daily requirements for engines and ambulances all of the time; but did not always meet the daily requirement for aerial ladder trucks and heavy rescue squads.

Specifically, the data indicate that MCFRS met the daily requirement for nine heavy rescue squads on only two of the 308 days during the study period. While MCFRS met the daily requirement for aerial ladder trucks on 243 out of 308 days (78% of the time), further analysis of the data shows that the number of out-of-service aerial ladders trucks is frequently on the edge of exceeding reserve capacity. MCFRS often had fewer than 12 aerial ladder trucks in-service; on some days, there were only eight aerial ladder trucks in-service.

Finding #21: The Fire Administrator holds that, in addition to meeting the normal daily requirement, the County should be prepared to meet a surge in demand for services by maintaining a fleet of "standby frontline" vehicles.

According to the Fire Administrator, MCFRS would have difficulty responding to a major surge in-service demand caused by, for example, multiple structural fires during a 24-hour period or a threat to homeland security.

The Fire Administrator advises that MCFRS should maintain a fleet of "standby frontline" vehicles that are fully equipped and ready to "go" should a surge in demand for services occur. The Fire Administrator recommends that the standby fleet should be 20% over the normal daily requirement. To achieve this, MCFRS would need to fully equip nine reserve engine/tankers; three reserve aerials; two reserve heavy rescues; and eight reserve ambulance vehicles. The cost of supplying these reserve vehicles with the appropriate equipment is estimated at $50K to $100K per vehicle.

Finding #22: The limited data that are available indicate that the current structure does not assure all vehicles are in top operating condition.

Because MCFRS does not currently have systemwide performance and maintenance standards, compliance testing, and consistent data collection, OLO is unable to make a definitive finding on the extent to which the MCFRS fleet meets pre-established safety, maintenance, or performance standards.

However, results of recent tests conducted by the Division of Fire and Rescue Services staff indicate that MCFRS' vehicles and equipment do not uniformly meet pump performance standards established by the National Fire Protection Association, or pre-trip safety standards established by State Department of Transportation regulations. Together, the results of these tests evidence a shared problem involving the consistency and quality of the vehicle maintenance arrangements and pre-trip inspections by apparatus drivers.

Summary of Pump Test Results. In 2002, DFRS staff tested the pump systems on all MCFRS engines for compliance with performance standards established by the National Fire Protection Association. *Note: OLO understand that there is not universal agreement among all parties to use the NFPA standards for pump testing.*

DFRS staff assessed 55% of the 60 pump systems tested during 2002 as meeting the NFPA standards. Further analysis of the results indicate that a higher percent of the pumps maintained by private vendors were assessed as meeting NFPA standards compared to pumps maintained by the in-house maintenances shops (63% vs. 50%).

DFRS repeated the pump tests in 2003 of the 51 pumps and the results show improvement. Specifically, DFRS staff assessed 67% of the 51 pumps tested as meeting the NFPA standards. The 2003 data show that the percent of pumps maintained by vendors that met NFPA standards increased from 63% to 82%; the percent of pumps maintained by the in-house shops that met NFPA standards increased from 50% to 62%.

Summary of Pre-Trip Inspection Results. In May and November 2003, DFRS staff randomly selected and inspected a sample of fire and rescue vehicles for compliance with pre-trip safety standards established by State DOT regulations (COMAR, Title 23).

DFRS staff assessed 75-80% of the vehicles inspected as meeting the pre-trip safety standards. In May, seven (23%) of the vehicles inspected were placed out-of-service, and in November, six (20%) of the vehicles inspected were placed out-of-service. Examples of defects found were: broken springs, low tire tread, tires rubbing on frames, air leaks, brake adjustment issues, loose shock absorbers, and a broken windshield. In both May and November, most of the vehicles placed out-of-service were repaired and back in-service within 24 hours of inspection.

Finding #23: MCFRS' largely decentralized approach to vehicle maintenance offers advantages in terms of increasing flexibility and encouraging entrepreneurial arrangements. On the other hand, the decentralized structure lacks many of the practices used in other places to maintain a uniformly safe and dependable fleet.

Advantages of Decentralization. The advantages to a largely decentralized approach to vehicle maintenance parallel the generic advantages of decentralizing any type of function. The management literature frequently cites distributing more administrative control and decision-making to local centers as a strategy for increasing flexibility and increasing opportunities for innovation. Fewer systemwide rules and restrictions can promote decision-making tailored to local needs, and enhance the sense of local responsibility and empowerment for accomplishing the task at hand.

Indeed, MCFRS' largely decentralized approach to vehicle maintenance enables individual LFRDs to establish their own entrepreneurial arrangements. The in-house shops are conveniently situated to serve the fleet. Their locations within the stations afford frequent opportunities for communication among vehicle users and mechanics.

The LFRDs that contract out routine maintenance services report general satisfaction with the quality of their vendor arrangements, which are selected to meet the needs of the different LFRDs. Some LFRDs report being able to negotiate reduced (even no cost) rates with local vendors for some work. Further, when an LFRD is not satisfied with a vendor's work, the LFRD can shop around and select another one.

Disadvantages of Decentralization. Similar to its advantages, the shortcomings of the current MCFRS approach to vehicle maintenance parallel problems associated with decentralizing any operation. Specifically, decentralizing decision-making makes it harder to think systemically, increases the potential for inconsistent practices and uneven service quality, and makes it harder to ensure and monitor compliance with organization-wide policies.

The current decentralized structure is not set up to assure that all fire and rescue vehicles/equipment are maintained in top operating condition. This derives, at least in part, from the overall lack of a coherent and consistent maintenance strategy for apparatus, disparate levels of maintenance record-keeping, and the absence of a mechanism to systematically and objectively identify where problems with maintenance exist, or to intervene to correct those situations.

The decentralized approach to vehicle maintenance has resulted in procedures and practices that do not mirror the fleet management strategies used in other jurisdictions to maintain safe and dependable vehicle fleets. Among other things, the current structure lacks:

- Safety and performance standards for all vehicles and equipment;
- Standards and procedures for conducting daily vehicle inspections, reporting defects, and declaring vehicles out-of-service;
- An effective preventive maintenance program with ready access to reserve vehicles so that vehicles can easily be taken out of service for maintenance without disrupting service delivery;
- An ongoing and comprehensive testing process that evaluates vehicle and equipment compliance with pre-established standards for maintenance, safety, and performance;
- A management information system that provides accurate and timely data to support systemwide fleet-related decision making;
- An updated replacement and rehabilitation schedule that replaces vehicles when owning and operating them costs more than owning and operating their replacements; and
- A system of accountability for making the maintenance structure match the service needs of the organization.

Since May 2003, DFRS staff have been working to address some of the shortcomings of the current structure. Some improvements have already been made, with additional improvements planned for 2004. (See Finding #18.)

RESULTS OF OLO'S FOCUS GROUP

Finding #24: Focus group participants reached general consensus on five recommendations for improving the inspection, maintenance, and repair of fire and rescue vehicles. In addition, two recommendations were endorsed by a majority but not all of the participants.

In October, the Office of Legislative Oversight (OLO) convened three focus group sessions attended by career and volunteer staff involved in the maintenance and repair of MCFRS vehicles and equipment. In these sessions, the participants: assessed existing inspection, maintenance, and repair practices; discussed standards for evaluating vehicle maintenance performance; and recommended ways to improve the efficiency and effectiveness of how these functions are performed across the County.

The focus group reached general consensus on the following recommendations for improving the inspection, maintenance, and repair of fire and rescue vehicles:

- Increase funding for apparatus replacement.
- Expand the capacity of the existing in-house maintenance shops.
- Establish Countywide standards for vehicle management, e.g., equipment testing, preventive maintenance, defect reporting, and vehicle checkout procedures.
- Establish Countywide standards for recordkeeping and central collection of fire and rescue fleet data.
- Develop and enforce improved driver standards.

In addition, the following two recommendations were endorsed by a majority but not all of the participants:

- Create a permanent apparatus chief position that has the responsibility and authority for procurement, inspection, maintenance, and repair of fire and rescue vehicles.
- Establish a central County-owned facility to supplement the maintenance and repair work performed at the in-house shops.

See Chapter VI, page 64 for more details on the focus group proceedings and results.

COMPARATIVE INFORMATION

OLO conducted site visits and consulted with fire and rescue department staff from six other local government jurisdictions in the region: Anne Arundel County, Baltimore County, Prince George's County, Fairfax County, the District of Columbia, and the City of Alexandria.

Finding #25: The six jurisdictions surveyed employ common fleet management strategies to maintain fire and rescue vehicles.

OLO found that the other six jurisdictions employ the following systemwide fleet management practices:

- All six have one person charged with the overall responsibility and authority for fire and rescue vehicle maintenance;
- All six maintain a centralized database that tracks per vehicle data on age, annual use, out-of-service time, and maintenance costs; and
- All six have adopted standards that describe the work required for each preventive maintenance service.

Finding #26: The six jurisdictions surveyed all perform at least some of their fire and rescue vehicle maintenance and repair work at a central facility. The jurisdictions differ in terms of the type of work performed and who staffs the facility.

Fairfax County and Prince George's County have central facilities designed only to work on specialized fire and rescue vehicle equipment, e.g., pumps, aerial ladders, gauges, hoses. For other maintenance and repair work, Prince George's County uses private vendors; Fairfax County uses either the County's central fleet maintenance facility or private vendors.

Anne Arundel County, Baltimore County, District of Columbia, and the City of Alexandria have central facilities for performing all routine and specialized maintenance/repair work on fire/rescue vehicles. Anne Arundel County and the District of Columbia use a facility solely dedicated for fire and rescue vehicle maintenance. Baltimore County and the City of Alexandria perform the work on fire and rescue vehicles at the same facility used for maintaining other local government fleet vehicles.

In Alexandria, Fairfax County, Prince George's County, and the District of Columbia the mechanics who work on fire and rescue apparatus are employees of the Fire and Rescue Department. In Baltimore County, the mechanics are employees of the Public Works Department; in Anne Arundel County the mechanics are employees of the County's Services Department.

With the exception of Baltimore County, the other jurisdictions surveyed (similar to Montgomery County) rely on private contractors to perform major repairs, such as extensive engine and transmission repairs and major body work. All interviewees expressed frustration at the time taken by private vendors to complete major mechanical repairs.

Finding #27: Cost data provided by three other places show that annual maintenance and fuel costs vary by type of vehicle and by jurisdiction.

Maintenance and fuel cost data provided by three jurisdictions (Anne Arundel County, Prince George's County, and the District of Columbia) show that costs vary substantially. Additional research is required to fully explain the differences, but factors likely include: age of the fleet, number of major repairs, and the details of the methodology used to calculate annual fuel and maintenance costs.

The District of Columbia's fuel and maintenance costs stand out as being particularly low. This is most likely due to the fact that, in 2002, the District of Columbia (using federal grant funds) replaced a large percent of its fire and rescue vehicle fleet.

CHAPTER IX: Recommendations

The critical mission of Montgomery County's Fire and Rescue Service (MCFRS) requires that its vehicles and equipment be ready to perform at any time. The Office of Legislative Oversight recommends that the County Council's future legislative, policy, and funding decisions aim to achieve the following goals:

- A safe and dependable fleet of fire and rescue vehicles and equipment that meets the County's standards of vehicle readiness; and

- A cost-effective system of inspection, maintenance, and repair that keeps all fire and rescue vehicles and equipment in top operating condition.

As reviewed in the previous chapters, OLO found that some aspects of MCFRS' current approach to vehicle maintenance and repair work well:

- The decentralized structure enables individual Local Fire and Rescue Departments (LFRDs) to establish their own entrepreneurial business arrangements for maintenance. Several LFRDs report being able to negotiate with local vendors for reduced (even no cost) rates for some work. A number of LFRDs have adopted formal preventive maintenance schedules and keep detailed maintenance records.

- The in-house shops are conveniently situated to serve the fleet; their locations within the stations afford frequent opportunities for communication among vehicle users and mechanics.

- The LFRDs that contract out routine maintenance services are mostly satisfied with the quality of these vendor arrangements, which are selected to meet each LFRD's needs.

However, OLO identified other aspects of MCFRS' current approach to vehicle maintenance that are not working well and provide an impetus for change. MCFRS routinely encounters problems meeting the normal daily count for certain frontline vehicles because so many are out-of-service in need of repair. MCFRS reports that it often takes substantial time and effort to deploy the available apparatus to meet service requirements.

MCFRS fleet is aging, and older vehicles are more expensive to operate and less reliable. At the same time, MCFRS' call load continues to grow with increased mileage for many vehicles in the fleet. Funding for vehicle replacement has been reduced in recent years. In FY 04, there is a $6.8 million gap between MCFRS' apparatus replacement plan and the amount budgeted for vehicle replacement.

Recent pump tests and pre-trip safety inspection results indicate that MCFRS' current practices do not assure that all fire and rescue vehicles and equipment are in top operating condition and ready to perform at any time. While these results do not evidence an across-the-board failure of existing maintenance arrangements, they do evidence uneven performance.

At least in part, this uneven performance is explained by the absence of:

- A consistent maintenance strategy for apparatus;
- A reliable process for daily vehicle inspections and defect reporting;
- A single approach to recordkeeping; and
- A system for identifying where problems exist, with an associated process for making corrections.

Ten different studies and reports produced since the mid-1970's contain recommendations for improving how fire and rescue vehicles in Montgomery County are maintained and repaired. The time has come to address the long acknowledged but unmet need to strengthen this important function. One of the challenges ahead is how to address the shortcomings of the current structure while holding on to what works well.

RECOMMENDATION #1

The Council should establish, by law or resolution, that maintaining MCFRS' vehicles in top condition is essential to operating an effective and efficient fire and rescue service. To support the goal of a uniformly safe and dependable fleet, the Council should recommend that MCFRS implement systemwide standards and other commonly used fleet management strategies.

Maintaining a uniformly safe and dependable fleet of vehicles is essential to the delivery of fire and rescue services, the safety of the career and volunteer firefighters who ride the vehicles, and the safety of the people in other vehicles on the same roads. To accomplish this, the Council should recommend that MCFRS implement systemwide standards and other strategies commonly used to maintain vehicle fleets in top operating condition, such as:

- Safety and performance standards for all vehicles and equipment;
- Standards and procedures for conducting daily vehicle inspections, reporting defects, and declaring vehicles out-of-service;

- Driver training, standards, and related management procedures that assure only well-qualified drivers are allowed to drive;
- An effective preventive maintenance program with ready access to reserve vehicles so that vehicles can easily be taken out of service for maintenance without disrupting service delivery;
- An ongoing and comprehensive testing process that evaluates vehicle and equipment compliance with pre-established standards for maintenance, safety, and performance;
- A management information system that provides accurate and timely data to support systemwide fleet-related decision making;
- A vehicle replacement/rehabilitation schedule that replaces vehicles when owning and operating them costs more than owning and operating their replacements; and
- A system of accountability for making the maintenance structure match the service needs of the organization.

The Council has multiple options for formally establishing that maintaining MCFRS' vehicles in top condition is essential to operating and effective and efficient fire and rescue service. The Council's options include amending the law, adopting a resolution of Council policy, or stating the Council's expectations in the annual appropriations resolution that provides funds to the County Government.

Note on current and proposed change in law

Under current law (Section 21-2(d)), the Fire and Rescue Commission, on behalf of the County, "must develop effective, efficient, and equitable fire, rescue, and emergency medical services Countywide, and provide the policy, planning, and regulatory framework for all fire, rescue, and medical service operations." Bill 36-03, Fire and Rescue Services–Amendments, proposes to shift operational authority over all fire, rescue, and emergency medical service activities to the Chief of the Division of Fire and Rescue Operations, under the direction of the Fire Administrator. Regardless of whether current law is changed, the Council should make clear its expectations that the responsibility for fire and rescue service operations must include maintaining vehicles in top condition.

RECOMMENDATION #2

The Council should ask the Chief Administrative Officer to submit, by April 1, 2004, a proposal for developing a comprehensive multi-year action plan to improve MCFRS' vehicle management practices. The proposal should identify recommended tasks, milestones, resource needs, and the role of the Fire and Rescue Commission.

Improving MCFRS' vehicle management function will take time, commitment, and resources. To facilitate progress on this issue in FY 05, the Council should request the Chief Administrative Officer (CAO) to provide the Council with a proposal for developing a comprehensive multi-year action plan to improve MCFRS' vehicle management practices.

The proposal should include the CAO's recommendations for:

- Tasks to be accomplished;
- Time frames for task completion;
- Needed resources (one-time and ongoing); and
- The role of the Fire and Rescue Commission in making improvements to MCFRS' vehicle management practices.

OLO recommends that the Chief Administrative Officer include the appointment of an Apparatus Officer on the list of needed resources. The Apparatus Officer would be someone charged with leading the planning for and implementation of improved vehicle and equipment management across the MCFRS fleet.

OLO's reasons for recommending appointment of an Apparatus Officer are: (1) the 25 years of history that demonstrate much discussion but little action to improve the fire and rescue vehicle maintenance function in Montgomery County; (2) the fact that it is common practice in other jurisdictions to assign responsibility for fire and rescue vehicle maintenance to one person; and (3) the notable progress made this year by the Assistant Chief who was placed on special assignment, as of May 2003, to focus on MCFRS' vehicles and equipment.

The Apparatus Officer position could be established as either a uniformed or civilian position. However, based on this year's experience with the assignment of an Assistant Chief, OLO recommends that the Apparatus Officer be a senior career firefighter. The major advantage of this is the respect and authority that come with uniform rank in an organization that functions within a formal command and control structure.

The Council should ask the CAO to submit his proposal to the Council by April 1, 2004. This timing will enable the Council to consider any requests for additional FY 05 funding during operating budget worksessions. To be clear, the recommended April 1 target date is for delivery of a time table and list of resources that will enable the successful development of a multi-year action plan. It will be up to the CAO to outline the details of a time schedule for implementing the plan itself.

Recommendation #3

The Council should request that the Chief Administrative Officer provide the Council's Public Safety Committee with regular status reports of progress made to improve MCFRS' vehicle management practices.

In order to keep the issue of a safe and dependable fire and rescue vehicle fleet on the Council's agenda, OLO recommends that the Council request that the Chief Administrative Officer provide the Public Safety Committee with regular (e.g., once every six months) updates of the progress made to implement improvements to the MCFRS vehicle management function.

This will provide an opportunity to continue dialogue on strategies that are working and those encountering obstacles. It will also serve as a forum for continuing discussion of resources needed to achieve the goals of: (1) a safe and dependable fleet of fire and rescue vehicles and equipment that meets the County's standards of vehicle readiness; and (2) a cost-effective system of inspection, maintenance, and repair that keeps all fire and rescue vehicles and equipment in top operating condition.

CHAPTER X: Comments on Final Draft of Report

The Office of Legislative Oversight circulated a final draft of this report in December 2003 to the Chief Administrative Officer and relevant Executive Branch departments, members of the Fire and Rescue Commission, and the Fire Board, including the Presidents of all 19 Local Fire and Rescue Departments.

All written comments received by January 17, 2004 are included in their entirety, beginning on the following page:

- Comments from the Chief Administrative Officer (begin on page 112);
- Comments from the Fire and Rescue Commission (begin on page 117); and
- Comments from the Sandy Spring Volunteer Fire Department (begin on page 120).

OLO greatly appreciates the time taken by staff to review and comment on the draft report and looks forward to further discussions on the issues identified in this study.

Summary of Changes to Draft Report

OLO's final report incorporates technical corrections provided by agency staff. In addition, based upon additional research and feedback received during the comment period, OLO edited the report to:

- Include more information about the maintenance of County-owned vehicles not assigned to individual fire and rescue stations. Appendix A includes an additional 68 DFRS support vehicles; the summary fleet data were revised to include all vehicles.

- Respond to the written comments received by the CAO on: staffing, budget, and unit response data, reserve apparatus, the replacement schedule, the 1994 MOU, and the vehicle maintenance arrangements in other jurisdictions.

- Respond to the written comments received from the Sandy Spring Volunteer Fire Department concerning the LFRDs' maintenance arrangements.

- Incorporate reference to two reports approved by the Fire and Rescue Commission: the *Aerial Unit Study* and the *EMS Unit Replacement Criteria Report.*

- Incorporate additional comparative information about the vehicle maintenance function in other jurisdictions.

OLO's first recommendation was expanded to list the specific strategies for improving MCFRS fleet management practices that OLO recommends the Council endorse. In addition, the final report recommends (Recommendation #2) that the Council request an improvement plan from the Chief Administrative Officer; the draft report had recommended the Council direct this request to the Fire Administrator. This change elevates the Council's request to the more formal level of the Office of the County Executive.

OFFICES OF THE COUNTY EXECUTIVE

Douglas M. Duncan
County Executive

Bruce Romer
Chief Administrative Officer

MEMORANDUM

January 16, 2004

TO: Karen Orlansky, Director
Office of Legislative Oversight

FROM: Bruce Romer
Chief Administrative Officer

SUBJECT: Comments on OLO Report Number 2004-3, Draft Version

Thank you for the opportunity to provide comments on the draft report entitled "A Study of The Inspection, Maintenance, and Repair of Fire and Rescue Service Vehicles." I commend you and your staff for completing a very complex study in a short period of time. In spite of the time constraints, the report is thorough, objective and fact based. We appreciate your efforts in being inclusive to obtain as much information as possible regarding the current state of maintenance, repair and inspection in the fire and rescue service. We also appreciate your acknowledgement of the support that Assistant Chief Steve Lohr and Apparatus Program Manager Steve Lamphier provided to you and your staff in compiling this report.

As you have concluded in your report, there are numerous problems and successes associated with the apparatus maintenance operations of fire and rescue that suggest opportunities for improvements. In that spirit, the CAO and the Fire Administrator provide the following comments regarding the report's findings and recommendations within the report.

You have noted that the current system is under pressure and showing signs of stress. The successes are attributed to the ingenuity, commitment and dedication of a cadre of people - both mechanics and field personnel, career and volunteer, administrative and operating personnel - that have kept their units operating to provide fire and rescue services to our residents. The stresses are attributed to a number of factors and the convergence of a series of

pressures – call volume has increased commensurate with population growth, spatial distribution of resources has remained relatively static, approximately the same number of units doing more work and traveling farther distances, limited time to perform preventative maintenance and limited resources to maintain scheduled replacement. These factors have stressed the current system requiring an analysis of not only businesses processes but also organizational structure.

As stated in the report, the current decentralized apparatus maintenance structure enables flexibility, potentially effective localized decision making, opportunities for innovation, and entrepreneurial business arrangements. However, this same decentralized structure requires commitment of all parties to have a unified and cohesive strategy among all the various parties. The lack of cohesion has mitigated against the implementation of three decades of recommendations from multiple studies on this subject. The lack of consensus on the need to initiate change has resulted in the irregular performance of apparatus maintenance included in the report. More importantly, the decentralized structure does not promote uniform practices, standardized reporting and consistent inspection. While maintenance funding has been allocated each year, the uncertainty of the availability of funds to meet all the anticipated maintenance requirements pushes decisions to short-term repairs rather than long-term component change out or rebuilds to extend the life or duration of the part. MCFRS personnel, because of the press of every day problems or the lack of a shared vision, are thus faced with pressing temporal issues that reinforce inertia against change and negotiated consensus directed at the lowest common denominator rather than highest standards of performance and accountability.

Implementation of recommendation number one involves implementation of maintenance performance standards, uniform inspections and standardized reporting for maintenance analysis and decision making. With these objectives come heightened expectations on the part of mechanic and field personnel that apparatus maintenance needs will be a priority and appropriate resources will sustain. All of us need to be prepared for the significant level of resources that this will require to not only implement but to sustain the level of confidence of all our personnel in this effort. This will be our greatest challenge – to overcome the lack of trust in our ability to sustain on a consistent basis the resources needed to meet the priority we place now on a sound and effective apparatus maintenance, inspection and replacement program.

We concur with the recommendation to develop a comprehensive, multi-year plan for improvements. However, the staff infrastructure and capability are limited. In addition, maintenance information that is standardized and timely data continues to be a limiting factor necessary to confidently identify systemwide problems with apparatus procurement, maintenance, and performance. In the short term, there are immediate actions that can be taken to relieve some of the stress on the system while the planning process recommended within the study proceeds. An investment in additional shop capacity by adding mechanics for swing shifts and having a full complement of equipment and hose for reserve units will immediately improve operational readiness that will lay the foundation for the continual improvements necessary to meet the goal of a uniformly safe and dependable fire-rescue service fleet.

As identified in the report, the MCFRS struggles to meet the daily count for several types of apparatus on a recurring basis. Frequent repairs of aging apparatus are major contributing factors affecting the daily apparatus count. The high number of unscheduled repairs contributes to the excessive out of service times identified in the study. These repairs further hinder adherence to regular preventive maintenance inspections that limit programmed component replacement prior to failure.

With regard to apparatus maintenance and uniform inspection requirements, County tax funds distributed to 18 LFRDs do not assure uniform practice and have historically not compared either quantity or quality of services provided. In theory, the assumption is that all vehicles are maintained to a similar, acceptable standard. In practice, maintenance of fire-rescue vehicles falls short of the needs of the service. Since there are many approaches and many plans for vehicle maintenance, the net effect is disparate results.

Finding #25 of the report is of the most interest to us wherein five other jurisdictions compared to Montgomery County have common fleet management practices. We believe that all of these items are integral to any successful maintenance model. Implementation of these findings, with appropriate resources, will have a positive, near immediate impact on apparatus maintenance. The MCFRS does have an assistant fire/rescue chief in a temporary position to provide oversight over most vehicle activities. This person is generally accepted by all interested parties as being a fair, knowledgeable, objective and competent. MCFRS has recently purchased incident reporting software that includes a fleet management module. This module is not the solution to a centralized maintenance data base, but it represents the introduction of some useful standardized reports that initially will support analysis of apparatus usage and cost data. Thirdly, there have been discussions regarding preventive maintenance services and consensus is forming regarding standards to be applied. There is skepticism, however, of commitment of resources to effectively achieve this objective.

The attachment contains specific comments of staff regarding the report. If you have any questions, please contact my office.

Thank you.

BR:ga

Attachment

Specific comments:

- Page 40. The bottom of page 40 states that there are difficulties encountered with contracting out the major repair work, i.e. engine, transmission, and body work. The MCFRS concurs that engine and transmission repair vendors are troublesome due to a limited vendor pool. References to body work, on the other hand, while generally being a long-term repair, should be deleted from the document. (Repeat on page 94 under finding #16.)

- Page 42. The comment regarding adequate funding for the LFRDs is accurate to the extent that additional funding is needed for routine maintenance and repairs of fire apparatus. Table's 12 and 13 in the draft document demonstrate that need. What is not reflected on these tables, however, is the fact that MCFRS is often not able to fully-fund the mid-year supplemental requests; henceforth some maintenance and repairs are held until the next fiscal year. The point is that such requests are legitimate, whether the maintenance and repairs are handled by the LFRDs or via some other mechanism.

- Page 59. The "note to the reader" should be changed to reflect that there is not universal agreement among all parties to use the NFPA 1911 standard for pump testing.

- Page 61. The findings of the May and November pre-trip safety inspections reflect a shared problem involving the quality of pre-trip inspections by apparatus drivers and preventive maintenance and running repair by the shops. (Repeat on page 97 under finding #21.)

- Page 79. Note that Fairfax County uses a combination of a central facility and vendors to perform non-vocational specific maintenance and repairs. (Repeat on page 80.)

- Page 80. It is unclear, in the last paragraph regarding Fairfax County, whether or not the author is indicating that a senior career firefighter at each station is responsible for said activities. MCFRS believes that the Fairfax County apparatus staff is fairly robust and includes more than a senior career firefighter and 12 mechanics.

- Page 81. In the first paragraph, correct the spelling of "aide".

- Page 82. MCFRS believes that Anne Arundel has evening shift mechanics rather than night shift mechanics. While this comment may seem to be relatively minor, we believe that the word "night" implies a 24 hour shop. With the exception of Washington, DC, we understand that there are no Baltimore-Washington area jurisdictions that have 24/7 maintenance coverage and emergency repair. Most jurisdictions have an arrangement for 24 hour emergency repair or towing.

- Page 82. It is important to note that while fire apparatus repairs are performed at the city's central shop, there are four bays in that shop dedicated to the fire department.

- Page 84. It does take substantial time and effort to deploy reserve apparatus to meet service requirements. A major cause of this is that reserve apparatus lacks the proper complements of tools, appliances, and equipment. Appropriate funding to equip the reserve apparatus fleet would substantially resolve this problem.

- Page 86. Under finding #1, the MCFRS would like to clarify that the DFRS provides 100% of the minimum staffing at 18 of the 33 fire/rescue stations. A combination of career and volunteer personnel staff 14 of the 33 fire/rescue stations and the remaining station (BCCRS) is staffed 100% by that organization.

- Page 87. Under finding #2, the MCFRS believes that the percentage of the FY 04 budget used for apparatus replacement and maintenance should be included as part of this finding.

- Page 87. Under finding #2, please change the wording to indicate that about 1,000 volunteers are certified under the Integrated Emergency Command Structure, of which 379 met the requirement for the LOSAP emergency response category in 2002.

- Page 87. Under finding #3, it is important to note that not only have incidents increased by almost 20% between FY 00 and FY 03, unit responses have also increased. Additionally, an additional fire station has not been built in the county since 1978, yet population has increased tremendously in the same time period.

- Page 88. Under finding #7, note that the latest version of NFPA 1901 recommends a maximum of 12 years front-line service for the types of apparatus covered by the standard.

- Page 88. Under finding #8, clarify that the replacement schedule is for heavy apparatus and EMS units. The schedule does not contain LFRD support vehicles, which have been funded outside of the apparatus replacement budget.

- Page 89. Under finding #10, the MCFRS feels strongly that the MOU, currently in place, does not deal with quality, i.e. performance issues. The MOU, should it remain in place, needs to be revised to deal with standards, data collection, and centralized authority. However, note that financial resources must be provided to meet the expected performance from apparatus maintenance.

- Page 92. Under finding #15, note that the rudimentary costs data is just that as quality of maintenance and repairs is not reflected in the per unit cost.

MONTGOMERY COUNTY FIRE AND RESCUE SERVICE

Douglas M. Duncan
County Executive

Gordon A. Aoyagi
Fire Administrator

MEMORANDUM

January 16, 2004

TO: Karen Orlansky, Director
Office of Legislative Oversight

FROM: Gordon A. Aoyagi, Chairman
Fire and Rescue Commission

SUBJECT: Comments on Draft OLO Report Number 2004-3:
A Study of the Inspection, Maintenance, and Repair of Fire and Rescue Service Vehicles

Thank you for the update that was provided to the Fire and Rescue Commission on January 8, 2004 regarding the above referenced report. The Commission believes that this report is comprehensive and contains valuable information and analysis. The FRC discussed the report and provides the following comments concerning the report's findings and recommendations.

Funding for Apparatus Replacement

As stated in the report, a primary goal for the MCFRS is to provide and maintain "a safe and dependable fleet of fire and rescue vehicles and equipment that meets the County's standards of vehicle readiness".

The Commission concurs with this goal, and believes that appropriate steps should be initiated to ensure that a dedicated funding mechanism be created to fund the replacement of fire and rescue vehicles. In the past, the replacement of vehicles has not competed well with maintaining service requirements when budget pressures have occurred. Any dedicated funding mechanism must not be subject to competition with other components of the Operating Budget, including staffing costs. A dedicated fund to replace vehicles would provide the means to ensure that fire and rescue vehicles be replaced on a scheduled basis, and not make these replacements part of the budget process subject to the pressures of new budget initiatives and competition items.

Vehicle Maintenance and Repair

The Commission concurs with the finding that a unified vehicle maintenance reporting mechanism regarding inspections, defects and repairs will provide needed and critical information in identifying an overall maintenance strategy and a system for identifying problems and taking corrective action. The fleet information suggested, along with staff capability for management oversight, analysis and review, will result in a fleet that is more consistently maintained and managed to appropriate standards.

With regard to funding for vehicle maintenance, in recent years funds from the Operating Budget have been reallocated to address vehicle repair requests submitted by the LFRDs. It is acknowledged that a system-wide coordinated preventive maintenance program will help provide more consistently maintained, reliable apparatus while avoiding unanticipated repairs. It should be acknowledged, however, that while maintenance funds have increased, the increases have not been commensurate with the increases in call load and inflationary pressures of fuel and parts cost increases.

Apparatus Chief Position

In order to provide proper coordination for the responsibility of the procurement, inspection, maintenance, and repair of fire and rescue vehicles, the Commission endorses the establishment of a uniformed apparatus chief position. The current position has enabled one individual to serve as the focal point for planning, administering, facilitating the maintenance and readiness testing and inspection of the MCFRS fleet. The permanent establishment of this position will prove invaluable in the development of system-wide standards, reporting, and the reliability and consistency of apparatus maintenance. One commissioner is opposed to this recommendation.

The provision of fire and rescue service is a core responsibility of the County government. The men and women of the MCFRS must be provided with safe and reliable fire and rescue vehicles that are properly maintained and operationally ready to ensure that the key mission of providing dependable fire and rescue services to our residents is achieved. The OLO study has identified the successes and failures of the current practices involved in vehicle maintenance and repair in the MCFRS. While the report calls for an action plan to be considered by elected officials for implementation, the report does not address what could happen if no changes are made or the additional resources are not provided.

It is unfortunate that the creation of a law or Council resolution indicating that MCFRS vehicle fleet maintenance is essential in providing fire and rescue service is recommended in the report, as fleet management is a key component of any fire and rescue service. The Commission believes that unless corrective action is taken,

including management oversight and additional resources, the goal of providing safe, reliable vehicles will not be achieved, thereby placing MCFRS personnel and the public in danger at a time when the demands on the fire and rescue service are ever increasing.

cc: County Executive Doug Duncan
Bruce Romer, CAO

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Sandy Spring Volunteer Fire Department, Inc.

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TO: Karen Orlansky, Staff Director
Office of Legislative Oversight

FROM: George W. Brown, Jr., Fire/Rescue Chief
Sandy Spring Volunteer Fire Department, Inc.

DATE: January 16, 2004

SUBJECT: Comments – OLO Draft Report 2003-4

Thank you for the opportunity to comment on the referenced draft report. Sandy Spring believes this to be a very fair, balanced report. Generally, Sandy Spring is in agreement with the findings and recommendations of the report. However, Sandy Spring would like to offer some specific comments for inclusion in the final report.

- Sandy Spring is proud of the fact that for eight of the past ten fiscal years, Sandy Spring has remained within its initial allocated operating budget. However, vehicle management, including maintenance, repairs, and fuel, has been traditionally underfunded. In order to stay within its allocated operating budget, Sandy Spring must use monies from other programs to adequately perform vehicle management tasks. Sandy Spring requests additional funding in its operating budget every fiscal year, without significant success in actually receiving additional funds. The County must realize, that no matter who controls fire apparatus maintenance, additional funding is an absolute requirement.

Sandy Spring is disappointed that there is such an emphasis on what does not work for fire apparatus maintenance. Several positive points were presented at Sandy Spring's meeting with Mr. Scott Brown of OLO staff, Vice President Lamphier, Lt. Gunn, and myself.

- All apparatus at Sandy Spring is maintained using a published preventive maintenance schedule. The schedule was determined by a professional fire apparatus mechanic with 40 years of experience.

- Sandy Spring maintains excellent records, albeit those records are not 100% automated. Sandy Spring, however, does keep automated cost records.

- Sandy Spring has been fully cooperative with the County as to pump and aerial testing.

- Sandy Spring has worked out agreements with many of its vendors to ensure a high quality, low cost vehicle maintenance program. In fact, some local vendors perform FREE work on some vehicles.

- Sandy Spring pays $0.30 to $0.50 LESS per gallon of diesel fuel than LFRDs who use the COUNTY fuel sites.

- Most importantly, there is little mention in the report of the amount of time that Lt. Gunn and others spend in properly maintaining apparatus. Lt. Gunn spends 20-40 hours per week with apparatus maintenance. This is a cost savings that can not be readily calculated. However, any other form of vehicle management at Sandy Spring will have a personnel cost associated with it.

Sandy Spring supports the following specific recommendations in the report:

- Sandy Spring supports a single MCFRS position to set maintenance policy, set maintenance priorities, and have general oversight over all fire apparatus maintenance activities.

- Sandy Spring supports the implementation of an automated fleet management system to collect data.

- Sandy Spring supports the implementation of Countywide maintenance standards.

Sandy Spring, however, does not support a potential loss of LFRD control over daily apparatus maintenance for those LFRDs who are performing the job correctly. Sandy Spring asks for the following consideration: allow the LFRDs who are capable of proper apparatus maintenance to continue those practices. If Countywide standards are implemented, Sandy Spring will embrace those standards, provided appropriate funding is provided. Do not lose the positive aspects of apparatus maintenance while attempting to resolve the negative aspects.

Thank you for your consideration of these comments.

cc: Executive Board
Gordon Aoyagi, MCFRS
Tom Carr, MCFRS
Steve Lohr, MCFRS

Office of Legislative Oversight Report 2004-3

A STUDY OF THE INSPECTION, MAINTENANCE, AND REPAIR OF FIRE AND RESCUE SERVICE VEHICLES

LIST OF APPENDICES

MCFRS' Vehicle Inventory

Fire and Rescue Department	Type of Vehicle								
	Aerial ladder trucks	Ambulances	Pumpers	Heavy rescue squads	Brush trucks	Other specialty	Support	Tankers	Total
Bethesda	3		7				5		15
Burtonsville	1	2	2	1	1		6		13
Cabin John	1	3	3	1	2	2	7	1	20
Chevy Chase			2			2	3		7
Damascus		2	3		1		5		11
Gaithersburg-Washington Grove	1	7	4		1	1	7		21
Germantown	1	4	2	1			4		12
Glen Echo		1	2				5		8
Hillandale	1	6	4		1		5		17
Hyattstown		1	2	1	2		7	1	14
Kensington	3	7	9	1	1		13		34
Laytonsville		1	3	1	1	2	4	1	13
Rockville	3	8	7	1	3		11	1	34
Sandy Spring	1	3	3	1	1		7	1	17
Silver Spring	1	5	5			2	6		19
Takoma Park	1	1	2				6		10
Upper Montgomery		2	3		2	1	6	1	15
B-CC Rescue		9		2		1	8		20
Wheaton Rescue		6		1			6		13
Sub total	*17*	*68*	*63*	*11*	*16*	*11*	*121*	*6*	*313*
Other	5	1	2	1		18	84		111
Total	**22**	**69**	**65**	**12**	**16**	**29**	**205**	**6**	**424**

Source: MCFRS, January 2004

TYPE	YEAR	MAKE/MODEL	OWNER	STOCK
Bethesda				
AERIAL	1984	SEAGRAVE AERIAL LADDER	MCG	2842111
AERIAL	2002	PIERCE AERIAL TOWER	MCG	2022374
AERIAL	2003	PIERCE	MCG	2032880
ENG	1990	SEAGRAVE PUMPER	MCG	1902038
ENG	1987	SEAGRAVE PUMPER	MCG	1872130
ENG	1986	SEAGRAVE PUMPER	MCG	1862004
ENG	1988	SEAGRAVE PUMPER	MCG	1882105
ENG	1998	FREIGHTLINER/E-ONE	MCG	1984827
ENG	1999	FREIGHTLINER/E-ONE	MCG	1991756
ENG	2002	PIERCE PUMPER	MCG	1022583
SUP	1998	CHEVROLET BLAZER	MCG	7987849
SUP	1998	CHEVROLET BLAZER	MCG	7985979
SUP	2000	FORD SERVICE TRUCK	MCG	7003623
SUP	2000	FORD PICKUP TRUCK	MCG	7004595
SUP	2003	CHEVROLET TAHOE	COR	7037252
Burtonsville				
AERIAL	1998	PIERCE AERIAL LADDER TRK	COR	2980800
BRUSH	1988	FORD BRUSH TRUCK	COR	6885141
EMS	1997	FREIGHTLIN/WHEELED COACH	MCG	3975671
EMS	2002	FREIGHTLNR/WHEELED COACH	MCG	3027525
ENG	1998	FREIGHTLINER/E-ONE	MCG	1984828
ENG	2000	PIERCE	COR	1000906
SQ	1993	PEMFAB/RANGER	COR	4933027
SUP	1992	JEEP CHEROKEE	COR	7926345
SUP	1996	CHEVROLET P/U TRUCK	MCG	7968823
SUP	1997	FORD EXPLORER	MCG	7974980
SUP	1997	FORD EXPLORER	MCG	7974981
SUP	1999	CHEVROLET PICKUP	COR	7999488
SUP	1999	CHEVROLET CAVALIER	COR	7997822
Cabin John				
AERIAL	1987	SEAGRAVE AERIAL LADDER	MCG	2872076
BRUSH	1996	FORD/KENCO BRUSH	MCG	6968293
BRUSH	2001	FORD/SUMMIT BRUSH TRUCK	MCG	5010761
EMS	1994	FORD/WHEELED COACH AMB.	MCG	3949602
EMS	1997	FREIGHTLNR/WHEELED COA	MCG	3975672
EMS	2000	FREIGHTLNR/WHEELED COACH	MCG	3003013
ENG	1988	SEAGRAVE PUMPER	MCG	1882106
ENG	1997	SPARTAN/QUALITY	COR	1970967
ENG	2000	SPARTAN/QUALITY	COR	1006464
SPEC	1995	GMC VAN	COR	8956500
SPEC	1999	FORD PICKUP TRUCK	COR	8993478
SQ	1992	FORD/SAULSBURY	COR	4929939
SUP	1990	CHEVROLET SERVICE TRUCK	COR	7906109
SUP	1996	FORD BRONCO	MCG	7968704
SUP	1996	FORD CROWN VICTORIA	MCG	7966281
SUP	1996	CHEVROLET PICKUP TRUCK	MCG	7968761
SUP	1998	CHEVROLET SUBURBAN	MCG	7988193
SUP	1999	FORD PICKUP TRUCK	COR	7993478
SUP	2002	FORD F-350 SERVICE BODY	COR	7020448
TANKER		PETERBILT/SUMMITT	COR	
Chevy Chase				
ENG	1990	SEAGRAVE PUMPER	MCG	1902029
ENG	2002	PIERCE PUMPER	MCG	1022582
SPEC	1989	FORD TRUCK (HAZMAT)	MCG	8896156
SPEC	1996	PACE-AMERICAN TRAILER	COR	8966TA3
SUP	1996	DODGE P/U TRUCK	COR	7967235
SUP	1997	CHEVROLET PICKUP TRUCK	MCG	7979259
SUP	1997	OLDSMOBILE BRAVADA	MCG	7971447

TYPE	YEAR	MAKE/MODEL	OWNER	STOCK
Damascus				
BRUSH	1988	FORD BRUSH TRUCK	MCG	6885140
EMS	1999	FREIGHTLN/WHEELED COACH	MCG	3995381
EMS	2001	FRTLNR/WHEELED COACH	MCG	3012293
ENG	1990	SEAGRAVE PUMPER	MCG	1902049
ENG	1990	INTL/KME PUMPER	MCG	1901388
ENG	2002	E-ONE PUMPER	COR	1025647
SUP	1996	CHEVROLET BLAZER	MCG	7967043
SUP	1995	CHEVROLET SUBURBAN	MCG	7959886
SUP	2000	CHEVROLET PICKUP	MCG	7003862
SUP	1999	CHEVROLET MONTE CARLO	COR	
SUP	2000	CHEVROLET IMPALA	COR	7002552
Gaithersburg				
AERIAL	1995	SIMON-DUPLEX/LTI	COR	2950038
BRUSH	2001	FORD/SUMMIT BRUSH TRUCK	MCG	5010760
CAN		NEW CANTEEN	COR	
EMS	1997	FREIGHTLIN/WHEELED COACH	MCG	3975663
EMS	1997	FREIGHTLIN/WHEELED COACH	MCG	3975666
EMS	1998	FRGHTLNR/WHEELED COACH	MCG	3980009
EMS	2001	FRTLNR/WHEELED COACH	MCG	3012291
EMS	2001	FRTLNR/WHEELED COACH	MCG	3012290
EMS	2002	FREIGHTLNR/WHEELED COACH	MCG	3027514
EMS	2003	FREIGHTLNR/WHEELED COACH	MCG	3030351
ENG	1994	SEAGRAVE PUMPER	MCG	1942026
ENG	1986	SEAGRAVE PUMPER	MCG	1862030
ENG	1998	FREIGHTLINER/E-ONE	MCG	1984826
ENG	1999	FREIGHTLINER/E-ONE	MCG	1997997
SPEC	1991	SCOTTY FIRE SAFETY HOUSE	COR	891S021
SUP	1992	JEEP CHEROKEE	MCG	7926344
SUP	1996	CHEVROLET PICKUP TRUCK	MCG	7969080
SUP	1998	CHEVROLET VAN	MCG	7984278
SUP	1999	FORD CROWN VICTORIA	MCG	7999389
SUP	2000	FORD EXPLORER	MCG	7002974
SUP	2001	DODGE PICKUP TRUCK	MCG	7011011
Germantown				
AERIAL	1986	SEAGRAVE AERIAL LADDER	MCG	2862145
EMS	1998	FRGHTLNR/WHEELED COACH	MCG	3980008
EMS	1999	FORD EXPEDITION	COR	7998970
EMS	2002	FREIGHTLNR/WHEELED COACH	MCG	3027523
EMS	2003	FREIGHTLNR/WHEELED COACH	MCG	3030352
ENG	1994	SEAGRAVE PUMPER	MCG	1942028
ENG	1984	SEAGRAVE PUMPER	MCG	1842007
SQ	1992	SEAGRAVE/MARION RESCUE SQ	MCG	4922169
SUP	1996	CHEVROLET P/U TRUCK	MCG	7968804
SUP	1997	CHEVROLET BLAZER	MCG	7973113
SUP	1999	FORD EXPEDITION	MCG	7998969
SUP	2001	FORD CROWN VICTORIA	COR	7016820
Glen Echo				
EMS	1999	FREIGHTLN/WHEELED COACH	MCG	3995380
ENG	1991	E-ONE PUMPER	COR	1913792
ENG	1999	FREIGHTLINER/E-ONE	MCG	1991757
SUP	1992	JEEP CHEROKEE	COR	7926343
SUP	1997	CHEVROLET PICKUP TRUCK	MCG	7979418
SUP	1999	CHEVROLET TAHOE	MCG	7997246
SUP	2000	FORD CROWN VICTORIA	MCG	7001351
SUP	2001	CHEVROLET PICKUP TRUCK	COR	7015109

TYPE	YEAR	MAKE/MODEL	OWNER	STOCK
Hillandale				
AERIAL	1997	SEAGRAVE AERIAL LADDER	MCG	2972065
BRUSH	1000	FORD PICKUP TRUCK	COR	6001756
EMS	1996	FREIGHTLNR/MEDTEC AMB.	COR	3969067
EMS	1997	FREIGHTLIN/WHEELED COACH	MCG	3975665
EMS	2001	FREIGHLNR/WHEELED COACH	MCG	3012294
EMS	2001	FREIGHTLNR/WHEELED COACH	MCG	3012304
EMS	2002	FREIGHTLNR/WHEELED COACH	MCG	3027526
EMS	2003	FREIGHTLNR/WHEELED COACH	MCG	3032943
ENG	1990	SEAGRAVE PUMPER	MCG	1902039
ENG	1987	SEAGRAVE PUMPER	MCG	1872004
ENG	2000	FREIGHTLNR/E-ONE PUMPER	MCG	1008261
ENG	2002	PIERCE PUMPER	MCG	2022218
SUP	1997	CHEVROLET PICKUP TRUCK	MCG	7973776
SUP	1999	JEEP CHEROKEE	MCG	7991425
SUP	1999	CHEVROLET TAHOE	COR	7993628
SUP	1999	CHEVROLET TAHOE	COR	7994483
SUP	1999	CHEVROLET TAHOE	COR	7994057
Hyattstown				
BRUSH	1983	GMC BRUSH TRUCK	COR	6837190
BRUSH	1985	GMC BRUSH TRUCK	COR	6852426
EMS	1997	FREIGHTLIN/WHEELED COACH	MCG	3975661
ENG	1992	KME PUMPER/TANKER	COR	1928562
ENG	2000	INTL/PIERCE	COR	1006204
SQ	1987	GMC/SALISBURY RESCUE SQ	COR	4872354
SUP	1991	CHEVROLET CAPRICE	COR	7915713
SUP	1992	DODGE VAN	MCG	7927214
SUP	1996	CHEVROLET PICKUP TRUCK	MCG	7969602
SUP	1997	CHEVROLET TAHOE	MCG	7976817
SUP	1999	CHEVROLET TAHOE	MCG	7991567
SUP	2000	CHEVROLET LUMINA	COR	7008384
SUP	2002	CHEVROLET TAHOE	COR	7022807
TANKER	2003	KENWORTH/4 GUYS	COR	1038947
Kensington				
AERIAL	1973	SEAGRAVE AERIAL LADDER	COR	2733265
AERIAL	1997	SEAGRAVE AERIAL LADDER	MCG	2972064
AERIAL	2000	E-ONE AERIAL TOWER	MCG	2001617
BRUSH	1988	FORD BRUSH TRUCK	MCG	6885139
CAN	2001	CHEVROLET STEP VAN	COR	8010125
EMS	1994	FORD/WHEELED COACH AMB.	MCG	3942904
EMS	1997	FREIGHTLIN/WHEELED COACH	MCG	3975662
EMS	1997	FREIGHTLIN/WHEELED COACH	MCG	3975667
EMS	1999	FREIGHTLNR/WHEELED COACH	COR	3996373
EMS	1999	FREIGHTLNR/WHEELED COACH	MCG	3995382
EMS	2000	FREIGHTLNR/WHEELED COACH	MCG	3003012
EMS	2003	STERLING/WHEELED COACH	MCG	3030866
ENG	1988	SEAGRAVE PUMPER	MCG	1882110
ENG	1995	SEAGRAVE PUMPER	MCG	1952075
ENG	1991	SEAGRAVE PUMPER	MCG	1912035
ENG	1979	SEAGRAVE PUMPER	COR	1793869
ENG	1995	SEAGRAVE PUMPER	MCG	1952074
ENG	1983	SEAGRAVE PUMPER	MCG	1832005
ENG	1987	SEAGRAVE PUMPER	MCG	1872128
ENG	1999	FREIGHTLINER/E-ONE	MCG	1996489
ENG	2002	PIERCE PUMPER	MCG	2022219
SQ	1998	E-ONE RESCUE SQUAD	COR	4989074
SUP	1987	CHEVROLET SUBURBAN	COR	7876963
SUP	1992	JEEP CHEROKEE	MCG	7926332
SUP	1990	FORD SERVICE TRUCK	MCG	7900292
SUP	1996	CHEVROLET P/U TRUCK	MCG	7968699
SUP	1996	FORD CROWN VICTORIA	MCG	7966280

TYPE	YEAR	MAKE/MODEL	OWNER	STOCK
SUP	1997	FORD VAN	MCG	7974114
SUP	1998	FORD EXPEDITION	MCG	7986611
SUP	1998	GMC YUKON	COR	7989330
SUP	1999	CHEVROLET LUMINA	COR	7996686
SUP	2000	CHEVROLET PICKUP TRUCK	MCG	7000051
SUP	1998	FORD CROWN VICTORIA	COR	7989833
SUP	2000	FORD EXPEDITION	COR	7006505

Laytonsville

BRUSH		FORD	COR	
EMS	1997	FREIGHTLNR/WHEELED COA	MCG	3975674
ENG	1990	SEAGRAVE PUMPER	MCG	1902048
ENG	1990	INTL/KME PUMPER	MCG	1901387
ENG	2000	SPARTAN/4 GUYS	COR	1006691
SPEC	1999	BIG 'T' TRAILER	COR	8991176
SPEC	2002	BRMC TRAILER	COR	8020243
SQ	1994	PETERBLT/AERO RESCUE SQ	COR	4949657
SUP	1992	JEEP CHEROKEE	COR	7926333
SUP	1998	FORD EXPEDITION	MCG	7987078
SUP	1998	GMC PICKUP TRUCK	MCG	7987095
SUP	2000	CHEVROLET BLAZER	MCG	7007210
TANKER	1993	FREGHTLNR/WALKER TANKER	MCG	1937620

Rockville

AERIAL	1989	SEAGRAVE AERIAL LADDER	MCG	2892060
AERIAL	1987	SEAGRAVE AERIAL LADDER	MCG	2872098
AERIAL	2000	E-ONE AERIAL TOWER	MCG	2001618
BRUSH	1982	GMC BRUSH TRUCK	MCG	6824414
BRUSH	2001	FORD/SUMMIT BRUSH TRUCK	MCG	5010763
BRUSH	2001	FORD/SUMMIT BRUSH TRUCK	MCG	5010762
CAN	1979	GMC VAN	COR	8790248
EMS	1997	FREIGHTLIN/WHEELED COACH	MCG	3975670
EMS	1997	FREIGHTLIN/WHEELED COACH	MCG	3975668
EMS	1998	FRGHTLNR/WHEELED COACH	MCG	3980011
EMS	2000	FREIGHTLNR/WHEELED COACH	MCG	3003011
EMS	2000	FREIGHTLNR/WHEELED COACH	MCG	3003014
EMS	2001	FRTLNR/WHEELED COACH	MCG	3012289
EMS	2002	FREIGHTLNR/WHEELED COACH	MCG	3027527
EMS	2003	FREIGHTLNR/WHEELED COACH	MCG	3030350
ENG	1990	SEAGRAVE PUMPER	MCG	1902057
ENG	1990	SEAGRAVE PUMPER	MCG	1902051
ENG	1994	SEAGRAVE PUMPER	MCG	1942027
ENG	1999	FREIGHTLINER/E-ONE	MCG	1991755
ENG	2000	FREIGHTLNR/E-ONE PUMPER	MCG	1008262
ENG	2002	PIERCE PUMPER	MCG	2022217
ENG	2002	PIERCE PUMPER	COR	1022738
SQ	1983	MACK/SAULSBURY RESCUE SQ	COR	4834416
SUP	1995	GMC SUBURBAN	COR	7950075
SUP	1996	FORD VAN	MCG	7961593
SUP	1996	FORD VAN	MCG	7966006
SUP	1995	FORD CROWN VICTORIA	COR	7959394
SUP	1995	FORD CROWN VICTORIA	COR	7959393
SUP	1997	FORD PICKUP TRUCK	MCG	7976829
SUP	1998	FORD EXPEDITION	MCG	7983929
SUP	1997	FORD PICKUP TRUCK	COR	7972610
SUP	1999	GMC SERVICE TRUCK K3500	MCG	7993592
SUP	2001	CHEVROLET TAHOE	COR	7017339
TANKER	2003	FREIGHTLINER/E-ONE	MCG	1032950

TYPE	YEAR	MAKE/MODEL	OWNER	STOCK
Sandy Spring				
AERIAL	1995	PIERCE AERIAL LADDER	COR	2950380
BRUSH	1997	FORD PICKUP TRUCK	COR	6973881
CAN	1973	CHEVROLET VAN	COR	8730352
EMS	1994	FORD/WHEELED COACH AMB.	MCG	3942906
EMS	1997	FREIGHTLNR/WHEELED COA	MCG	3975673
EMS	2001	FREIGHTLNR/WHEELED COACH	MCG	3012295
ENG	1990	SEAGRAVE PUMPER	MCG	1902058
ENG	1984	SEAGRAVE PUMPER	MCG	1842001
ENG	1997	PIERCE	COR	1970445
SQ	1992	INTL/PL RESCUE SQUAD	COR	4924647
SUP	1996	CHEVROLET BLAZER	MCG	7967310
SUP	1996	CHEVROLET P/U TRUCK	MCG	7968951
SUP	1997	CHEVROLET TAHOE	COR	7971830
SUP	1999	FORD EXPEDITION	COR	7994384
SUP	1999	FORD EXPEDITION	MCG	7994383
SUP	2001	CHEVROLET BLAZER	MCG	7014831
TANKER	2003	KENWORTH/PIERCE	COR	1030065
Silver Spring				
AERIAL	2000	E-ONE AERIAL TOWER	MCG	2001054
EMS	1997	FREIGHTLIN/WHEELED COACH	MCG	3975664
EMS	1997	FREIGHTLIN/WHEELED COACH	MCG	3975669
EMS	1999	FREIGHTLN/WHEELED COACH	MCG	3995378
EMS	2002	FREIGHTLNR/WHEELED COACH	MCG	3027524
EMS	2003	FREIGHTLNR/WHEELED COACH	MCG	3030353
ENG	1987	SEAGRAVE PUMPER	MCG	1872126
ENG	1988	SEAGRAVE PUMPER	MCG	1882107
ENG	1994	SEAGRAVE PUMPER	MCG	1942104
ENG	1995	SEAGRAVE PUMPER	MCG	1952073
ENG	1999	FREIGHTLINER/E-ONE	MCG	1996487
SPEC	1995	INT'L/SUMMIT AIR/LIGHT	COR	8955939
SPEC	2000	GENERAL CARGO TRAILER	COR	8003596
SUP	1993	FORD EXPLORER	MCG	7937830
SUP	1996	FORD SERVICE TRUCK	MCG	7961791
SUP	1996	CHEVROLET BLAZER	MCG	7960879
SUP	1998	FORD EXPEDITION	MCG	7983928
SUP	1999	FORD CROWN VICTORIA	MCG	7996152
SUP	2000	FORD EXPEDITION	MCG	7007790
Takoma Park				
AERIAL	1984	SEAGRAVE AERIAL LADDER	MCG	2842101
EMS	2003	FREIGHTLNR/WHEELED COACH	MCG	3030354
ENG	1990	SEAGRAVE PUMPER	MCG	1902036
ENG	2000	FREIGHTLNR/E-ONE PUMPER	MCG	1008263
SUP	1987	FORD P/U TRUCK	COR	7871507
SUP	1996	FORD VAN	MCG	7961594
SUP	1998	FORD EXPLORER	MCG	7985736
SUP	2000	FORD EXPEDITION	MCG	7004517
SUP	2002	FORD CROWN VICTORIA	COR	7022767
SUP	2002	FORD CROWN VICTORIA	COR	7022767
Upper Montgomery				
BRUSH	1996	FORD/KENCO BRUSH	MCG	6968294
BRUSH	1997	FORD RANGER	COR	6973271
CAN	1977	CHEVROLET VAN	COR	8775433
EMS	1998	FREIGHTLNR/WHEELED COACH	MCG	3980010
EMS	2001	FRTLNR/WHEELED COACH	MCG	3012292
ENG	1991	INTL/KME PUMPER	MCG	1911112
ENG	1995	SEAGRAVE PUMPER	MCG	1952076
ENG	1999	SPARTAN/E-ONE	MCG	1990304
SPEC		CONFINED SPACE TRAILER	COR	8XX3500
SUP	1996	CHEVROLET BLAZER	MCG	7967395

TYPE	YEAR	MAKE/MODEL	OWNER	STOCK
SUP	1996	FORD CROWN VICTORIA	MCG	7966279
SUP	1996	GMC PICKUP TRUCK	MCG	7963194
SUP	1992	JEEP CHEROKEE	MCG	7926330
SUP	1999	CHEVROLET TAHOE	MCG	7995773
TANKER	1993	FREIGHTLNR/WALKER TANKER	MCG	1937621

B-CC Rescue

EMS	1993	FREGHTLNR AMBULANCE	COR	3933043
EMS	1993	FREGHTLNR AMBULANCE	COR	3933042
EMS	1996	FREGHTLNR AMBULANCE	COR	3967097
EMS	1996	FREGHTLNR AMBULANCE	COR	3967098
EMS	1999	FREIGHTLINER/HORTON	COR	3995009
EMS	1999	FREIGHTLINER/HORTON	COR	3995007
EMS	1999	FREIGHTLINER/HORTON	COR	3995008
EMS	2002	FREIGHTLNR/MEDTEC	COR	3026028
EMS	2002	FREIGHTLNR/MEDTEC	COR	3026029
SPEC	1993	INTERNATIONAL AIR CASCADE	COR	8939594
SQ	1994	SD/SAULSBURY RS	COR	4948775
SQ	2003	SPARTAN/SAULSBURY	COR	4031536
SUP	1994	FORD CROWN VICTORIA	COR	7946423
SUP	1995	FORD CROWN VICTORIA	COR	7951259
SUP	1995	FORD CROWN VICTORIA	COR	7951530
SUP	1999	CHEVROLET SUBURBAN	COR	7998963
SUP	1999	CHEVROLET VAN	COR	7999440
SUP	1999	CHEVROLET PICKUP TRUCK	COR	7999603
SUP	2002	CHEVROLET TAHOE	COR	7029575
SUP	1999	CHEVROLET PICKUP TRUCK	COR	7999603

Wheaton Rescue

EMS	1995	FORD AMBULANCE	COR	3956193
EMS	1995	FORD AMBULANCE	COR	3956192
EMS	1998	FORD/MEDTEC	COR	3982212
EMS	1998	FORD/MEDTEC	COR	3982209
EMS	2001	FORD/MEDTEC	COR	3012512
EMS	2001	FORD/MEDTEC	COR	3010040
SQ	1997	MACK/E-ONE	COR	4979901
SUP	1982	FORD BRONCO	COR	7829758
SUP	1990	BITE TRAILER	COR	7905031
SUP	1996	FORD EXPLORER	COR	7969667
SUP	1999	FORD PICKUP TRUCK	COR	7999270
SUP	2002	FORD EXPLORER	COR	7023011
SUP	2003	FORD CROWN VICTORIA	COR	7036838

Other

AERIAL	1989	SEAGRAVE AERIAL LADDER	MCG	2892054
AERIAL	1989	SUTPHEN AERIAL TOWER	MCG	2893708
AERIAL	1989	SUTPHEN AERIAL TOWER	MCG	2893716
AERIAL	1989	SEAGRAVE AERIAL LADDER	MCG	2892055
AERIAL	1996	E-ONE AERIAL LADDER	MCG	2965565
EMS	1993	FORD/COLLINS AMBULANCE	MCG	3930341
ENG	1986	SEAGRAVE PUMPER	MCG	1862083
ENG	1995	SEAGRAVE PUMPER	MCG	1952077
SPEC	1994	FORD/WHEELED COACH AMB.	MCG	8942907
SPEC	1988	PENNSTYLE TRAILER	COR	8886015
SPEC	1990	FORD/COLLINS AMBULANCE	MCG	8907494
SPEC	1993	FORD/COLLINS AMBULANCE	MCG	8935176
SPEC	1985	FORD (SETT)	MCG	8855939
SPEC	1988	MACK (CAVE-IN SUPPORT)	COR	8881226
SPEC	1980	FORD (CAVE-IN SUPPORT)	MCG	8807030
SPEC	1990	FORD/COLLINS AMBULANCE	MCG	8900817
SPEC	1979	FORD	MCG	8790199
SPEC	1982	GMC BUS	MCG	8824942
SPEC	1980	TMC BUS	MCG	8806148

TYPE	YEAR	MAKE/MODEL	OWNER	STOCK
Other (continued)				
SPEC		CONVINCER	MCG	8 00000
SPEC	1975	HOBBS TRAILER	MCG	8750208
SPEC	1977	TRAILERMOBILE TRAILER	MCG	8773446
SPEC	1981	GMC TRUCK	MCG	8819765
SPEC	1983	FORD C-700 TRUCK	MCG	8838225
SPEC	1980	FRUEHAUF TANK TRAILER	MCG	8801201
SPEC	1995	INTERNATIONAL TRACTOR	MCG	8952768
SQ	1982	KENWORTH/SAULSBURY RS	MCG	4827012
SUP	1992	JEEP CHEROKEE	MCG	7926335
SUP	1990	FORD P/U TRUCK	MCG	7900289
SUP	1992	JEEP CHEROKEE	MCG	7926339
SUP	1988	CHEVROLET SUBURBAN	MCG	7889914
SUP	1992	JEEP CHEROKEE	MCG	7926338
SUP	1988	CHEVROLET SUBURBAN	MCG	7885065
SUP	1992	JEEP CHEROKEE	MCG	7926337
SUP	1992	JEEP CHEROKEE	MCG	7926331
SUP	1992	JEEP CHEROKEE	MCG	7926340
SUP	1992	JEEP CHEROKEE	MCG	7926341
SUP	1996	CHEVROLET VAN	MCG	7963725
SUP	1986	CHEVROLET PICKUP TRUCK	MCG	7861062
SUP	1986	CHEVROLET PICKUP TRUCK	MCG	7865583
SUP	2001	PREMIER TRAILER	MCG	7011066
SUP	2002	MASTERTRACK TRAILER	MCG	7029150
SUP	2003	CARGOMATE TRAILER	MCG	7037383
SUP	2000	FORD CROWN VIC	MCG	001473
SUP	2003	FORD CROWN VIC	MCG	031455
SUP	2000	CHEVROLET VAN	MCG	002067
SUP	1993	FORD SEDAN	MCG	931491
SUP	2003	FORD CROWN VIC	MCG	031453
SUP	2000	FORD CROWN VIC	MCG	001458
SUP	1996	JEEP CHEROKEE	MCG	961871
SUP	1998	CHEVROLET LUMINA	MCG	981462
SUP	2000	CHEVROLET BLAZER	MCG	998128
SUP	2000	FORD CROWN VIC	MCG	001415
SUP	2000	FORD CROWN VIC	MCG	001485
SUP	2000	FORD CROWN VIC	MCG	001499
SUP	1999	CHEVROLET BLAZER	MCG	998124
SUP	1998	CHEVROLET LUMINA	MCG	981460
SUP	1995	CHEVROLET SEDAN	MCG	951457
SUP	1995	CHEVROLET SEDAN	MCG	951417
SUP	1995	CHEVROLET SEDAN	MCG	951487
SUP	1999	FORD CROWN VIC	MCG	991456
SUP	2003	FORD CROWN VIC	MCG	031454
SUP	2000	CHEVROLET VAN	MCG	002051
SUP	2000	FORD CROWN VIC	MCG	001433
SUP	1999	CHEVROLET BLAZER	MCG	998125
SUP	2003	FORD EXPEDITION	MCG	039157
SUP	2003	FORD CROWN VIC	MCG	031451
SUP	2001	FORD EXPEDITION	MCG	019126
SUP	2001	FORD EXPEDITION	MCG	019113
SUP	2001	FORD EXPEDITION	MCG	019112
SUP	2001	FORD EXPEDITION	MCG	019109
SUP	2001	FORD EXPEDITION	MCG	019110
SUP	1998	CHEVROLET BLAZER	MCG	984971
SUP	2000	FORD CROWN VIC	MCG	001483
SUP	1996	JEEP CHEROKEE	MCG	961865
SUP	1996	CHEVROLET BLAZER	MCG	968123
SUP	2000	CHEVROLET BLAZER	MCG	998127
SUP	2003	FORD EXPEDITION	MCG	039156
SUP	2000	FORD CROWN VIC	MCG	001443
SUP	1999	CHEVROLET BLAZER	MCG	998126
SUP	2000	FORD CROWN VIC	MCG	001479

TYPE	YEAR	MAKE/MODEL	OWNER	STOCK
Other (continued)				
SUP	1990	CHEVROLET SEDAN	MCG	901484
SUP	1995	CHEVROLET SEDAN	MCG	951421
SUP	2001	FORD EXPEDITION	MCG	019111
SUP	1998	FORD TAURUS	MCG	981215
SUP	2000	FORD CROWN VIC	MCG	001461
SUP	2001	CHEVROLET VAN	MCG	019102
SUP	1999	FORD CROWN VIC	MCG	991481
SUP	2002	FORD CROWN VIC	MCG	021488
SUP	2004	DODGE INTERPID	MCG	041403
SUP	2003	FORD EXPEDITION	MCG	039153
SUP	2004	DODGE INTERPID	MCG	041404
SUP	1998	FORD EXPEDITION	MCG	984944
SUP	2001	FORD EXPEDITION	MCG	019116
SUP	2002	FORD CROWN VIC	MCG	021478
SUP	2002	CHEVROLET TAHOE	MCG	021801
SUP	2003	FORD CROWN VIC	MCG	031401
SUP	1996	JEEP CHEROKEE	MCG	961875
SUP	2003	FORD VAN	MCG	031921
SUP	1996	JEEP CHEROKEE	MCG	961876
SUP	2000	FORD CROWN VIC	MCG	001413
SUP	2001	CHEVROLET VAN	MCG	971728
SUP	1997	CHEVROLET PICKUP TRUCK	MCG	824942
SUP	1982	GMC BUS	MCG	968122
SUP	1996	CHEVROLET BLAZER	MCG	961868
SUP	1996	JEEP CHEROKEE	MCG	961864
SUP	1996	JEEP CHEROKEE	MCG	039155
SUP	2003	FORD EXPEDITION	MCG	039158
SUP	2003	FORD EXPEDITION	MCG	039154
SUP	2003	FORD EXPEDITION	MCG	039159

APPENDIX B
COMPARISON OF SIX IN-HOUSE VEHICLE MAINTENANCE SHOPS
TABLE B-1: PHYSICAL CHARACTERISTICS

In-House Shop	Bethesda	Gaithersburg-Washington Grove	Kensington	Rockville	Silver Spring	B-CC Rescue Squad
Location	Station 6 6600 Wisc. Ave. Bethesda, 20815	Station 8 801 Russell Ave. Gaithersburg, 20879	Station 21 12500 Viers Mill Rd Rockville 20853	Station 3 380 Hungerford Rd Rockville 20850	Station 16 111 Univ. Blvd. East Silver Spring, 20910	Rescue Station 1 5020 Battery Lane Bethesda, 20814
Year constructed	1969	1976	1962	1963 (not originally built to be maintenance bays)	1968	1975
Door height	12 feet high	14 feet high	14 feet high	14 feet high	9 feet 6 inches high	14 feet high
Number of service bays	One	Two	Two	Two	One	One
Number of vehicles that can be serviced at one time	1-2 (depends on size; 1st unit is locked in until 2nd unit is moveable)	2	2-4 (depends on size)	2	1-2 (depends on size; 1st unit is locked in until 2nd unit is moveable)	2
Does ceiling height allow for servicing all vehicles inside?	Yes	Yes- except for one vehicle with tilt cab; also, aerials and tankers only fit in one bay	Yes – with careful placement	Yes – except for tilt cabs	Yes – except for three vehicles	Yes
Shop air conditioned?	Yes	Yes	Yes	No	Yes	Yes

TABLE B-2: NUMBER AND TYPES OF VEHICLES SERVICED

In-House Shop	Bethesda	Gaithersburg-Washington Grove	Kensington	Rockville	Silver Spring	B-CC Rescue Squad
Corporations serviced at satellite shop; total number of stations served	Bethesda 3 stations	Gaithersburg-Wash. Grove & Germantown & Laytonsville & Damascus & Upper Montgomery 6 stations	Kensington 4 stations	Rockville 4 stations	Silver Spring & Takoma Park 4 stations	B-CC Rescue Squad 1 Station
Type of Vehicle						
Pumpers	7	15	9	7	7	0
Tankers	0	2	0	1	0	0
Aerial ladder trucks	3	2	3	3	2	0
Heavy rescue squads	0	2	1	1	0	2
Ambulances	0	16	7	8	6	9
Brush trucks	0	5	1	3	0	0
Specialty vehicles	0	4	0	0	2	1
Support	5	26*	13	11	12	8
Total vehicles serviced in shop	15	72	34	34	29	20

* Since mid-fall 2003, support vehicles that had been serviced at the Gaithersburg-Washington Grove shop have been sent to private vendors for routine maintenance.

Table B-3: STAFFING AND HOURS OF OPERATION

In-House Shop	Bethesda	Gaithersburg-Washington Grove	Kensington	Rockville	Silver Spring	B-CC Rescue Squad
Number of mechanics	2 full-time	3 full-time	2 full-time	2 full-time	2 full-time (plus a volunteer who works in shop on a regular basis)	1 part-time
Ratio of mechanics to vehicles serviced	1:8	1:24*	1:17	1:17	1:15 (1:10 counting volunteer)	1:20
Regular hours of operation	Monday-Friday 7:30 AM to 4:00 PM	Monday-Friday 7:00 AM to 4:00 PM	M-W-F: 7AM -5:30 PM and Tues/Thurs: 7:00 AM-7:30 PM (each mechanic works four 10-hour days)	Monday-Friday 7:00 AM to 3:30 PM	Monday-Friday 7:00 AM to 3:30 PM	Varies 3-4 times a week (8 hours a day)
Estimated frequency of after hour repairs	Approximately 10X/year	25 callbacks in first 6 months of 2003; 102.5 hours of overtime	Approximately 12X/year	Minimum of 20-25X/year	Approximately 12X/year**	12X/month

* This ratio was at least temporarily reduced with the decision to send support vehicles to private vendors for routine maintenance.
** The ratio of callbacks would be more except that an on-site volunteer performs most after-hour repairs.

TABLE B-4: SERVICE PERFORMED IN-HOUSE AND SERVICES CONTRACTED OUT
COMPARISON OF SIX IN-HOUSE VEHICLE MAINTENANCE SHOPS

In-House Shop	Bethesda	Gaithersburg-Washington Grove	Kensington	Rockville	Silver Spring	B-CC Rescue Squad
Maintenance and Repair						
Routine Preventive Maintenance	In-house – all vehicles	In-house – except for support vehicles (beginning 9/03)	In-house – all vehicles	In-house – all vehicles	In-house – all vehicles	In-house – all vehicles
Repairs (emergency and non-emergency)	Over 70% in-house	Over 80% in-house	Over 70% in-house	Over 75% in-house	Over 90% in-house	Over 80% in-house
Major body work, major engine work, and transmission work	Contracted out	Contracted out	Contracted out	Contracted out	Contracted out	Contracted out
Inspections						
Annual DOT-(COMAR Title 23) inspections	In-house	In-house	In-house	In-house	In-house	In-house
Aerial ladder inspections	Hires contractor every X years	Hires contractor to inspect every 2 years	Hires contractor to inspect every 3 years (annual in house inspection)	Hires contractor to inspect once a year	Hires contractor to inspect once a year	Not applicable
Pump tests (NFPA standards)	MCFRS	MCFRS	MCFRS	MCFRS	MCFRS	Not applicable

TABLE B-5: PREVENTIVE MAINTENANCE: TARGET INTERVALS AND ACTUAL FY 03 PERFORMANCE

In-House Shop	Bethesda	Gaithersburg-Washington Grove	Kensington	Rockville	Silver Spring	B-CC Rescue Squad
Conduct total inspection of each vehicle	1X/year	Occurs every time vehicle comes in for PM. Shop does not have different levels of PM.	1X/year	2X/year	Occurs every time vehicle comes in for PM. Shop does not have different levels of PM.	4X/year
Preventive Maintenance for Fire Apparatus, e.g., pumpers, aerials						
Target interval for routine PM	2X/year	2X/year	3X/year	2X/year	2X/year	3X/year
Actual average interval of routine PM during FY 03	TBD	1X/year	2X/year	2X/year (PM occurs within one month of scheduled time)	2X/year (can slip due to competing repair work)	3X/year (can slip due to competing repair work)
Preventive Maintenance for Ambulances (EMS vehicles)						
Target interval for routine PM	No ambulances assigned to maintenance facility at this time	Every 5,000 miles (in practice, this equals about once every 6 weeks)	4X/year (every 3 months)	4X/year (every 3 months)	Every 5,000 miles (in practice, this equals about 2X/year)	4X/year
Actual average interval of routine PM during FY 03	TBD	4-5X/year	2-3X/year	4X/year (PM occurs within one month of scheduled time)	2X/year	4X/year (can slip due to competing repair work)

TABLE B-6: OTHER INFORMATION

In-House Shop	Bethesda	Gaithersburg-Washington Grove	Kensington	Rockville	Silver Spring	B-CC Rescue Squad
How are defects reported?	Mostly by phone; some in-person or inter-office	Combination of in-person, fax, telephone, or inter-office	Mostly by e-mail; others in person, by telephone, or inter-office	Mostly by e-mail; others in person, by telephone, or inter-office	Mostly by phone; some in-person or inter-office	Mostly by defect report form; others in person or by email
Are shop records paper or automated?	Paper only	Paper only	Primarily paper; some parts info kept on computer	Paper only; use of computer limited to e-mail reporting of defects	Paper only	Primarily paper; some parts info kept on computer
Approximately how many work orders/repairs were processed by shop in FY 03?	Data not available	Data not available	Data not available	Data not available	Data not available	Data not available
Approximately how many hours of training did the shop's mechanics attend in FY 03?	TBD	24 hours (pump school) for one of the mechanics	24 hours (pump school) for one of the mechanics	24 hours (pump school) for both of the mechanics	24 hours (pump school) for both of the mechanics	Plans to attend pump school in spring/summer
Does shop maintain any other equipment?	Yes – small power tools, appliances, station generators	Yes – small power tools, appliances, station generators	Yes – small power tools, appliances, station generators	Yes – small power tools, appliances, station generators	Yes – small power tools, appliances, station generators	Chain saws, generators, and power tools

MEMORANDUM OF UNDERSTANDING

In order to promote a clear understanding concerning the use of those fire and rescue vehicles (the Vehicles), owned by and titled to Montgomery County Maryland (the County) and assigned to the [redacted] (the Corporation), the following conditions are hereby established and mutually agreed to by the County and the Corporation.

1. The Vehicles identified by vehicle identification number and description on the attached list are assigned to the Corporation for an indefinite period of time for operation and use by the Corporation. The continued assignment of the Vehicles to the Corporation is contingent upon the adherence to the conditions listed below and any Fire and Rescue Commission policies and/or regulations pertaining to vehicle assignment, use, and maintenance. Should the Corporation fail to comply with any of the conditions, as stated below, or any Fire and Rescue Commission policies and/or regulations pertaining to vehicle assignment, use, and maintenance, either party may terminate this Agreement and demand that the Vehicles be returned to the County immediately. Either party may also terminate this Agreement at any time, upon written notice to the other party when either party determines this to be in its best interest.

2. The Corporation will maintain the Vehicles, during the period of assignment, in good operating condition according to the original equipment manufacturer's (OEM) recommendations and applicable Fire and Rescue Commission policies and/or regulations.

3. The Corporation will maintain and preserve the OEM supplied equipment in good operating condition, during the period of the assignment.

4. No alteration and/or modification to the Vehicle's design can be made without the express written approval of the Chairman of the Fire and Rescue Commission or his/her designee.

5. The Corporation will be responsible for normal maintenance and repair costs during the period of assignment. The parties recognize, however, that the Vehicles will be subject to normal wear and tear caused on an emergency vehicle, which may eventually cause maintenance or repair to be uneconomical in relation to the value of the Vehicle. The Corporation will not be responsible for the cost of any such uneconomical repair.

6. The County will provide and maintain insurance for the Vehicles and equipment, including policies providing protection to the County and the Corporation for loss due to collision, fire, theft and general liability.

7. The Corporation will exercise due care in the operation of the Vehicles by its members during the period of assignment.

8. The County will ensure that all career fire-rescue personnel assigned to operate the Vehicles are trained in the proper operating procedures and licensed according to applicable County, State and Federal requirements.

9. The Corporation will ensure that all volunteer fire-rescue personnel assigned to operate the Vehicles are trained in the proper operating procedures and licensed according to applicable County, State and Federal requirements.

10. The Corporation will cooperate with the Chairman, Fire and Rescue Commission or his designee on the performance of an annual audit to determine that proper vehicle registration and insurance are in place.

11. The Corporation will coordinate the inspection of the Vehicles on an annual basis with the Director, Department of Fire and Rescue Services or his designee in accordance to State of Maryland Preventative Maintenance Program and the Annotated Code of Maryland, Transportation Article, Section 23-301 et.seq.

12. This Agreement binds only the County and the Corporation. No third-party beneficiaries are intended to be recognized by this Agreement.

IN WITNESS WHEREOF, the parties herein have executed the Memorandum of Understanding as of the day and year written below.

ATTEST:

CORPORATION - [redacted]

By: [redacted] DATE: _____

[redacted]

(Written Signature and Title)

I hereby certify that the above named individual is a corporate officer duly authorized to execute this Agreement on behalf of the Corporation.

WITNESS:

By: [redacted] DATE: _____

MONTGOMERY COUNTY, MARYLAND

By: George Giebel DATE: 12/8/94

George Giebel, Chairman
Fire and Rescue Commission

By: Jon C. Grover DATE: 12/6/94

Chief Jon C. Grover, Director
Department of Fire and Rescue Services

Approved as to Form and Legality
OFFICE OF THE COUNTY ATTORNEY

By: Bruce P. Thompson

JUL 8 1994

Distribution of County Funds & Actual LFRD Expenditures for Vehicle Management: FY 99 - FY 02

FY 99 Distribution of County Funds & Actual LFRD Expeditures for Vehicle Management				
LFRD	**Initial Distribution**	**Mid-Year Distribution**	**Total Distribution**	**Actual Expenditure**
Bethesda	$236,361		$236,361	$278,593
Burtonsville	$63,500		$63,500	$67,749
Cabin John	$112,600	$87,165	$199,765	$210,332
Chevy Chase	$19,500	$11,600	$31,100	$16,831
Damascus	$29,600		$29,600	$24,748
Gaithersburg	$281,736	$6,970	$288,706	$330,090
Germantown	$101,175		$101,175	$59,518
Glen Echo	$30,350		$30,350	$35,370
Hillandale	$48,300		$48,300	$93,486
Hyattstown	$33,710		$33,710	$62,276
Kensington	$337,451	$57,170	$394,621	$392,078
Laytonsville	$35,000	$8,065	$43,065	$41,312
Rockville	$319,511	$16,991	$336,502	$359,483
Sandy Spring	$108,500		$108,500	$156,159
Silver Spring	$274,061		$274,061	$265,088
Takoma Park	$66,640		$66,640	$52,590
Upper Mont.	$31,300		$31,300	$62,897
Wheaton Resc.	$13,890		$13,890	$6,647
Total	**$2,143,185**	**$187,961**	**$2,331,146**	**$2,515,247**

Source: MCFRS and annual audited financial statements for the LFRDs.

FY 00 Distribution of County Funds & Actual LFRD Expenditures for Vehicle Management				
LFRD	**Initial Distribution**	**Mid-Year Distribution**	**Total Distribution**	**Actual Expenditure**
Bethesda	$246,535	$9,670	$256,205	$273,393
Burtonsville	$63,500	$13,100	$76,600	$92,370
Cabin John	$112,600		$112,600	$112,788
Chevy Chase	$19,000	$21,469	$40,469	$26,334
Damascus	$29,600		$29,600	$68,627
Gaithersburg	$291,421	$94,700	$386,121	$413,972
Germantown	$60,229	$30,000	$90,229	$138,771
Glen Echo	$31,600		$31,600	$70,635
Hillandale	$57,773		$57,773	$57,773
Hyattstown	$111,767		$111,767	$111,767
Kensington	$423,953	$47,995	$471,948	$423,953
Laytonsville	$96,653	$43,005	$139,658	$96,653
Rockville	$341,158	$41,570	$382,728	$341,158
Sandy Spring	$147,385		$147,385	$147,385
Silver Spring	$262,894		$262,894	$262,894
Takoma Park	$75,236		$75,236	$75,236
Upper Mont.	$21,089		$21,089	$21,089
Wheaton Resc.	$6,940		$6,940	$6,940
Total	**$2,399,333**	**$301,509**	**$2,700,842**	**$2,741,738**

Source: MCFRS and annual audited financial statements for the LFRDs.

FY 01 Distribution of County Funds & Actual LFRD Expenditures for Vehicle Management				
LFRD	**Initial Distribution**	**Mid-Year Distribution**	**Total Distribution**	**Actual Expenditure**
Bethesda	$245,945	$12,370	$258,315	$255,361
Burtonsville	$66,500	$5,230	$71,730	$78,593
Cabin John	$112,600	$5,230	$117,830	$114,380
Chevy Chase	$19,000	$9,000	$28,000	$19,743
Damascus	$29,600		$29,600	$23,161
Gaithersburg	$289,663	$54,170	$343,833	$332,467
Germantown	$60,229	$59,807	$120,036	$130,323
Glen Echo	$31,600		$31,600	$37,077
Hillandale	$48,300	$10,000	$58,300	$71,237
Hyattstown	$33,200		$33,200	$41,855
Kensington	$327,195	$40,400	$367,595	$368,387
Laytonsville	$32,750	$17,900	$50,650	$73,650
Rockville	$334,543		$334,543	$521,650
Sandy Spring	$108,500	$35,750	$144,250	$181,404
Silver Spring	$262,646	$133,297	$395,943	$386,227
Takoma Park	$58,850	$5,000	$63,850	$73,265
Upper Mont.	$31,300		$31,300	$33,249
Wheaton Resc.	$13,890		$13,890	$5,529
Total	**$2,106,311**	**$388,154**	**$2,494,465**	**$2,747,558**

Source: MCFRS and annual audited financial statement for the LFRD.

FY 02 Distribution of County Funds & Actual LFRD Expenditures for Vehicle Management				
LFRD	**Initial Distribution**	**Mid-Year Distribution**	**Total Distribution**	**Actual Expenditure**
Bethesda	$255,436	$27,775	$283,211	$257,727
Burtonsville	$67,000	$32,755	$99,755	$105,069
Cabin John	$122,600	$43,724	$166,324	$140,025
Chevy Chase	$19,000	$43,665	$62,665	$57,492
Damascus	$29,600	$9,900	$39,500	$20,784
Gaithersburg	$301,612	$40,000	$341,612	$316,067
Germantown	$83,275	$10,000	$93,275	$125,138
Glen Echo	$31,600		$31,600	$30,535
Hillandale	$60,300	$6,104	$66,404	$70,937
Hyattstown	$39,000		$39,000	$40,678
Kensington	$338,782	$80,118	$418,900	$414,780
Laytonsville	$123,008	$101,149	$224,157	$123,008
Rockville	$494,771	$104,147	$598,918	$494,771
Sandy Spring	$92,029	$8,360	$100,389	$92,029
Silver Spring	$256,393	$8,526	$264,919	$256,393
Takoma Park	$123,825	$74,090	$197,915	$123,825
Upper Mont.	$42,392	$500	$42,892	$42,392
Wheaton Resc.	$7,581		$7,581	$7,581
Total	**$2,488,203**	**$590,813**	**$3,079,016**	**$2,719,231**

Source: MCFRS and annual audited financial statement for the LFRD.

Distribution of County Funds to Local Fire and Rescue Departments for Vehicle Management: FY 03 - FY 04

FY 03 Distribution of County Funds to LFRDs for Vehicle Management			
LFRD	**Initial Distribution**	**Mid-Year Distribution**	**Total Distribution**
Bethesda	$266,616	$84,100	$350,716
Burtonsville	$78,720	$39,360	$118,080
Cabin John	$112,600	$20,240	$132,840
Chevy Chase	$19,000	$24,841	$43,841
Damascus	$29,600		$29,600
Gaithersburg	$351,898	$15,000	$366,898
Germantown	$65,275	$40,500	$105,775
Glen Echo	$31,600		$31,600
Hillandale	$77,800	$7,500	$85,300
Hyattstown	$41,500		$41,500
Kensington	$342,463	$105,325	$447,788
Laytonsville	$60,600		$60,600
Rockville	$366,182	$15,800	$381,982
Sandy Spring	$118,500		$118,500
Silver Spring	$295,990	$13,120	$309,110
Takoma Park	$63,300		$63,300
Upper Mont.	$31,300		$31,300
Wheaton Resc.	$13,890		$13,890
Total	**$2,366,834**	**$365,786**	**$2,732,620**

Source: MCFRS and annual audited financial statements for the LFRDs.

FY 04 Distribution of County Funds to LFRDs for Vehicle Management			
LFRD	**Initial Distribution**	**Mid-Year Distribution***	**Total Distribution**
Bethesda	$273,844	-	-
Burtonsville	$78,720	-	-
Cabin John	$112,600		-
Chevy Chase	$19,000	-	-
Damascus	$29,600	-	-
Gaithersburg	$362,117	-	-
Germantown	$65,275	-	-
Glen Echo	$31,600	-	-
Hillandale	$77,800	-	-
Hyattstown	$41,500	-	-
Kensington	$345,738	-	-
Laytonsville	$60,600	-	-
Rockville	$372,671	-	-
Sandy Spring	$118,500	-	-
Silver Spring	$278,398	-	-
Takoma Park	$63,300	-	-
Upper Mont.	$31,300	-	-
Wheaton Resc.	$13,890	-	-
Total	**2,376,453**	-	-

Source: MCFRS and annual audited financial statements for the LFRDs.

*MCFRS has not yet distributed FY 04 mid-year allocations to the Fire and Rescue Departments.

Resolution No.: 15-327
Introduced: July 29, 2003
Adopted: September 9, 2003

COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND

By: Council President at the Request of the County Executive

SUBJECT: Supplemental Appropriation #2-S04-OFTD-1
to the FY04 Operating Budget
Montgomery County Government
Montgomery County Fire and Rescue Service
FY03 Senator Amoss Fire, Rescue and Ambulance Fund (State 508) Grant
Local Fire and Rescue Departments, $1,313,398

Background

1. Section 307 of the Montgomery County Charter provides that any supplemental appropriation shall be recommended by the County Executive who shall specify the source of funds to finance it. The Council shall hold a public hearing on each proposed supplemental appropriation after at least one week's notice. A supplemental appropriation that would comply with, avail the County of, or put into effect a grant or a Federal, State or County law or regulation, or one that is approved after January 1 of any fiscal year, requires an affirmative vote of five Council members. A supplemental appropriation for any other purpose that is approved before January 1 of any fiscal year requires an affirmative vote of six Council members. The Council may, in a single action, approve more than one supplemental appropriation. The Executive may disapprove or reduce a supplemental appropriation, and the Council may reapprove the appropriation, as if it were an item in the annual budget.

2. The Montgomery County Fire and Rescue Service has requested the following supplemental appropriation to the FY04 Operating Budget for the Local Fire and Rescue Departments:

Department	*Personnel Costs*	*Operating Expenses*	*Capital Outlay*	*Total*	*Funding Source*
Bethesda FD	$0	$72,000	$0	$72,000	State Grant
Burtonsville VFD	$0	$75,000	$0	$75,000	State Grant
Cabin John Park VFD	$0	$80,000	$0	$80,000	State Grant
Chevy Chase FD	$0	$75,156	$0	$75,156	State Grant
Damascus VFD	$0	$75,000	$0	$75,000	State Grant
Gaithersburg-WG VFD	$0	$73,500	$0	$73,500	State Grant
Germantown VFD	$0	$117,300	$0	$117,300	State Grant
Glen Echo VFD	$0	$10,000	$0	$10,000	State Grant
Hillandale VFD	$0	$60,600	$0	$60,600	State Grant
Hyattstown VFD	$0	$75,000	$0	$75,000	State Grant
Kensington VFD	$0	$82,000	$0	$82,000	State Grant
Laytonsville VFD	$0	$67,700	$0	$67,700	State Grant
Rockville VFD	$0	$95,000	$0	$95,000	State Grant
Sandy Spring VFD	$0	$92,500	$0	$92,500	State Grant
Silver Spring VFD	$0	$60,000	$0	$60,000	State Grant
Takoma Park VFD	$0	$32,642	$0	$32,642	State Grant
Upper Mont. Co. VFD	$0	$50,000	$0	$50,000	State Grant
Bethesda-Chevy Chase RS	$0	$70,000	$0	$70,000	State Grant
Wheaton VRS	$0	$50,000		$50,000	State Grant
Totals	$0	**$1,313,398**	$0	**$1,313,398**	

3. This increase is needed to expend the proceeds of the FY03 State of Maryland Senator William H. Amoss Fire, Rescue, and Ambulance (State 508) Fund grant and accrued interest.

4. The Senator William H. Amoss Fire, Rescue and Ambulance (State 508) Fund was established to provide grants for fire, rescue, and ambulance services to promote high-quality service and the continued financial viability of volunteer fire, rescue and ambulance companies. The grant funds are distributed directly to the County in quarterly payments and must be expended within two years.

5. In accordance with the State law, grant funds may be used for the acquisition or rehabilitation of apparatus and capital equipment, fire and rescue equipment and supplies, and for the renovation of facilities used to house apparatus.

6. In accordance with State procedures governing the expenditures of these funds, the County has consulted with the Fire and Rescue Commission and the Montgomery County Volunteer Fire Rescue Association regarding these needs of the County Fire and Rescue Departments.

7. This supplemental appropriation represents the priorities established by the County Executive and Fire and Rescue Commission, in coordination with the Montgomery County Volunteer Fire-Rescue Association, for the renovation of stations and acquisition of fire and rescue equipment. Accordingly, these funds will be distributed as displayed in the table above. The list of equipment and repairs approved by the Fire and Rescue Commission, which the Fire and Rescue Commission may amend in the future, is displayed in the attachment to this resolution.

8. The County Executive recommends a supplemental appropriation to the FY04 Operating Budget and specifies that the source of funds will be the proceeds from the FY03 Senator William H. Amoss Fire, Rescue and Ambulance (State 508) Fund grant and accrued interest.

9. Notice of public hearing was given, and a public hearing was held.

Action

The County Council for Montgomery County, Maryland, approves the following action:

A supplemental appropriation of $1,313,398 to the FY04 Operating Budget for the Local Fire and Rescue Departments is approved as follows:

Department	***Personnel Costs***	***Operating Expenses***	***Capital Outlay***	***Total***	***Funding Source***
Bethesda FD	$0	$72,000	$0	$72,000	State Grant
Burtonsville VFD	$0	$75,000	$0	$75,000	State Grant
Cabin John Park VFD	$0	$80,000	$0	$80,000	State Grant
Chevy Chase FD	$0	$75,156	$0	$75,156	State Grant
Damascus VFD	$0	$75,000	$0	$75,000	State Grant
Gaithersburg-WG VFD	$0	$73,500	$0	$73,500	State Grant
Germantown VFD	$0	$117,300	$0	$117,300	State Grant
Glen Echo VFD	$0	$10,000	$0	$10,000	State Grant
Hillandale VFD	$0	$60,600	$0	$60,600	State Grant
Hyattstown VFD	$0	$75,000	$0	$75,000	State Grant
Kensington VFD	$0	$82,000	$0	$82,000	State Grant
Laytonsville VFD	$0	$67,700	$0	$67,700	State Grant
Rockville VFD	$0	$95,000	$0	$95,000	State Grant
Sandy Spring VFD	$0	$92,500	$0	$92,500	State Grant
Silver Spring VFD	$0	$60,000	$0	$60,000	State Grant
Takoma Park VFD	$0	$32,642	$0	$32,642	State Grant
Upper Mont. Co. VFD	$0	$50,000	$0	$50,000	State Grant
Bethesda-Chevy Chase RS	$0	$70,000	$0	$70,000	State Grant
Wheaton VRS	$0	$50,000		$50,000	State Grant
Totals	$0	**$1,313,398**	$0	**$1,313,398**	

This is a correct copy of Council action.

Mary A. Edgar, CMC
Clerk of the Council

Department FY03 Request	*FY03 Committee Recommendation*	*Grant Amount*
Bethesda Requested $105,000.00	Watch Office & Console FS20	$27,000.00
	Engine Room Floor – FS20	$22,000.00
	Kitchen Remodel – FS26	$23,000.00
	Total:	***$72,000.00***
Burtonsville Requested $287,630.00	Funding for Replacement Brush Truck	$75,000.00
	Total:	***$75,000.00***
Cabin John Park Requested $300,000.00	Renovation of FS30	$55,000.00
	Water Rescue Equipment	$25,000.00
	Total:	***$80,000.00***

Department & FY03 Request	*FY03 Committee Recommendation*	*Amount*
Chevy Chase Requested $86,196.00	Respiratory PAPR's (6 ea.) with cartridges& batteries	$9,216.00
	Humat Valve w/(2) 4" storz connections	$2,000.00
	Air Particle Instrument	$3,500.00
	Drager Hazmat Response Kit	$1,950.00
	Portable Air Compressor	$1,500.00
	Mercury Vac	$3,500.00
	Mercury Vapor Analyzer	$10,000.00
	4 ea. 60 min SCBA Cylinders	$8,020.00
	6 ea. NFPA 1991 Level A Commander TYKEM	$11,400.00
	1 ea. Large Shed for storage	$2,000.00
	Hallway Tile	$4,400.00
	First Floor Carpet	$5,500.00
	Snow Plow for U7	$4,500.00

Department & FY03 Request	*FY03 Committee Recommendation*	*Grant Amount*
Chevy Chase Continued	Outside Building Lights	$1,700.00
	8 ea. 50' Sections (red) 1 ¾" Conquest Hose	$1,264.00
	4 ea. 50' Sections (blue) 1 ¾" Supreme Hose	$ 318.00
	4 ea. 50' Sections (tan) 1 ¾" Supreme Hose	$ 318.00
	4 ea. 50' Sections (yellow) 2" Supreme Hose	$ 480.00
	6 ea. 50' Sections (red) 2" Supreme Hose	$ 720.00
	4 ea. 50' Sections (black) 2 1/2" Supreme Hose	$ 850.00
	4 ea. 50' Sections (purple) 2 1/2" Supreme Hose	$ 850.00

Department FY03 Request	*FY03 Committee Recommendation*	*Amount*
Chevy Chase Continued		
	1 ea. 20' Soft Suction Hose (cotton) 6" F – 4 ½ F	$ 400.00
	2 Sections 50' ea. HTX 4" Hose	$ 560.00
	1 Sections 25' ea. HTX 4" Hose	$ 210.00
	Total:	***$75,156.00***
Damascus Requested $352,500		
	Replacement for E132	$75,000.00
	Total:	***$75,000.00***
Gaithersburg - Washington Grove Requested $710,000	PBI Gear	$15,000.00
	CPAP Machine	$5,000.00
	AED, 2 ea.	$7,000.00

Department FY03 Request	*FY03 Committee Recommendation*	*Amount*
Gaithersburg Washington Grove Continued	GasTracs, 2 ea. (replacement)	$1,500.00
	Stair Chairs, 4 ea. (replacement)	$2,200.00
	Strokes Basket	$ 800.00
	Door Controls w/motor & springs, 4 ea.	$12,000.00
	Air Compressor FS28	$2,500.00
	Air Conditioners, window, 3 ea.	$4,000.00
	PT Equipment Electronic Bikes (FS 8 & FS 28) e ea.	$7,000.00
	T-8 Replacement or Rehab	$16,500.00
	Total:	***$73,500.00***

Department FY03 Request	*FY03 Committee Recommendation*	*Amount*
Germantown Requested $427,250	Exercise Treadmill (County Bid)	$5,000.00
	LifePak 12 (AED Function Only)	$16,800.00
	Security & Access Control System	$30,000.00
	Protective Clothing	$15,600.00
	4" double jacketed supply hose	$ 7,500.00
	1 3/4 attack line hose	$ 2,400.00
	Pumper from FY02 funds	$ 40,000.00
	Total:	***$117,300.00***
Glen Echo Requested $10,000	Personal Protective Equipment	$ 7,500.00
	Nozzles and Appliances	$ 2,500.00
	Total:	***$10,000.00***

Department FY03 Request	*FY03 Committee Recommendation*	*Amount*
Hillandale Requested $133,600	Running Gear, 16 ea.	$25,600.00
	Plumbing Renovations FS 12	$35,000.00
	Total:	***$60,600.00***
Hyattstown Requested $100,000	Rescue Squad Replacement	$75,000.00
	Total:	***$75,000.00***
Kensington Requested $112,000	Ramp and Modifications, FS5	$38,000.00
	Replace overhead Doors, FS5	$24,000.00
	Maintenance Facility FS21	$20,000.00
	Total:	***$107,000.00***

Department *FY03 Request*	*FY03 Committee Recommendation*	*Amount*
Laytonsville Requested $252,700	Protective Helments, 20 ea.	$3,500.00
	Pro Boots, 20 Pr.	$4,700.00
	PBI Gear, 20 sets	$34,500.00
	1 ½," 1 ¾," 2 ½,",hose & LDH appliances	$25,000.00
	Total:	***$67,700.00***
Rockville Requested $743,000	Standpipe bags and Extender bags	$50,000.00
	Running Gear	$20,000.00
	Canteen 3 (Partial Replacement)	$25,000.00
	Total:	***$95,000.00***
Sandy Spring Requested $265,300	Chemical Biological Equipment, (First Line Apparatus)	$7,500.00
	Hose and Appliances	$25,000.00
	A.E.D.'s	$10,000.00

Department FY03 Request	*FY03 Committee Recommendation*	*Amount*
Sandy Spring Continued	Turnout Gear	$25,000.00
	Canteen 4 Partial Replacement)	$25,000.00
	Total:	***$92,500.00***
Silver Spring requested $160,000	Command Vehicle (replacement)	$35,000.00
	Hose, Firefighting	$10,000.00
	Turnout Gear	$15,000.00
	Total:	***$60,000.00***
Takoma Park Requested $32,642	Turnout Gear	$24,000.00
	Slim Jim Kits 3 ea.	$ 480.00
	Elevator Key Sets 3 da.	$ 510.00
	Smooth Bore Nozzles, 2 ea.	$ 552.00

Department FY03 Request	*FY03 Committee Recommendation*	*Amount*
Takoma Park Continued	Pulse Ox Plus Cases, 3 ea.	$2,100.00
	High Pressure Air Chisels, 2 ea.	$2,400.00
	Assorted Hand Tools	$1,000.00
	Haligan bars, 4 ea	$1,600.00
	Total:	***$32,642.00***
Upper Montgomery County Requested $90,000	Interior Renovations	$35,000.00
	Replacement Windows	$ 9,000.00
	Interior Cabinetry	$ 6,000.00
	Total:	***$50,000.00***
Bethesda-Chevy Chase Requested $105,000	Station Security System	$35,000.00
	Personal Protective Equipment	$35,000.00
	Total:	***$70,000.00***

Department & FY03 Request	*FY03 Committee Recommendation*	*Amount*
Wheaton Rescue Squad Requested $250,000.	Rescue Squad Replacement	$50,000.00
	Total:	***$50,000.00***

FY03 Requested:	***$4,522,818.00***
FY03 Recommendation:	***$1,313,398.00***

Resolution No: 15-391
Introduced: October 14, 2003
Adopted: November 18, 2003

COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND

By: Council President at the Request of the County Executive

SUBJECT: Supplemental Appropriation #10-SO4-OFTD-3 to the FY04 Operating Budget
Montgomery County Government
Montgomery County Fire and Rescue Service
FY03 Senator Amoss Fire, Rescue and Ambulance Fund (State 508) Grant
Local Fire and Rescue Departments, $25,000

Background

1. Section 307 of the Montgomery County Charter provides that any supplemental appropriation shall be recommended by the County Executive who shall specify the source of funds to finance it. The Council shall hold a public hearing on each proposed supplemental appropriation after at least one week's notice. A supplemental appropriation that would comply with, avail the County of, or put into effect a grant or a Federal, State or County law or regulation, or one that is approved after January 1 of any fiscal year, requires an affirmative vote of five Councilmembers. A supplemental appropriation for any other purpose that is approved before January 1 of any fiscal year requires an affirmative vote of six Councilmembers. The Council may, in a single action, approve more than one supplemental appropriation. The Executive may disapprove or reduce a supplemental appropriation, and the Council may re approve the appropriation, as if it were an item in the annual budget.

2. The Montgomery County Fire and Rescue Service has requested the following supplemental appropriation to the FY04 Operating Budget for the Local Fire and Rescue Departments:

Department	Personal Cost	Operating Expenses	Capital Outlay	Total	Funding Source
Kensington VFD	$0	$25,000.00	$0	$25,000.00	State Grant Interest

3. This increase is needed to expend the proceeds of the FY03 State of Maryland Senator William H. Amoss Fire, Rescue, and Ambulance (State 508) Fund accrued interest.

4. The Senator William H. Amoss Fire, Rescue and Ambulance (State 508) Fund was established to provide grants for fire, rescue, and ambulance services to promote high-quality service and

the continued financial viability of volunteer fire, rescue and ambulance companies. The grant funds are distributed directly to the County in quarterly payments and must be expended within two years.

5. In accordance with the State law, grant funds may be used for the acquisition or rehabilitation of apparatus and capital equipment, fire and rescue equipment and supplies, and for the renovation of facilities used to house apparatus.

6. In accordance with State procedures governing the expenditures of these funds, the County has consulted with the Fire and Rescue Commission and the Montgomery County Volunteer Fire Rescue Association regarding the needs of the Local Fire and Rescue Departments.

7. This supplemental appropriation is consistent with the priorities established by the County Executive and Fire and Rescue Commission, in coordination with the Montgomery County Volunteer Fire-Rescue Association, for the renovation of stations and acquisition of fire and rescue equipment. It must be used for turnout gear for the Kensington Volunteer Fire Department.

8. The County Executive recommends a supplemental appropriation to the FY04 Operating Budget for the Local Fire and Rescue Departments in the amount of $25,000 and specifies that the source of funds will be accrued interest from State Grant funds.

9. Notice of public hearing was given, and a public hearing was held.

Action

The County Council for Montgomery County, Maryland, approves the following action:

A supplemental appropriation to the FY04 Operating Budget for the Local Fire and Rescue Departments is approved as follows:

Department	Personal Cost	Operating Expenses	Capital Outlay	Total	Funding Source
Kensington VFD	0	$25,000.00	0	$25,000.00	State Grant Interest

This is a correct copy of Council action.

Mary A. Edgar, CMC
Clerk of the Council