Motor Fleet Management Uses Best Practices, but Needs Telematics to Strengthen Accountability

Final Report to the Joint Legislative Program Evaluation Oversight Committee

Report Number 2012-02

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PROGRAM EVALUATION DIVISION
NORTH CAROLINA GENERAL ASSEMBLY

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Motor Fleet Management Uses Best Practices, but Needs Telematics to Strengthen Accountability

Summary

The General Assembly directed the Program Evaluation Division to study all passenger and non-passenger vehicles owned and operated by state government agencies and institutions. This second in a series of three reports evaluates the management of passenger vehicles by the Department of Administration's Division of Motor Fleet Management.

The Division of Motor Fleet Management received a "B+" for compliance with most fleet management best practices, but fleet management and accountability can be improved. The Division's reliance on state agencies for management and oversight makes it difficult to hold agencies accountable. The Division does not have sufficient information to determine the right number of passenger vehicles for state government needs. State law directs the division to determine vehicle utilization for assigned vehicles based only on mileage, but frequency of use and vehicle purpose are also necessary for a complete assessment of vehicle utilization. Curtailment of vehicle replacement in recent years has led to an older, more costly, and less reliable fleet. Recent changes to the rate structure may also limit funding for vehicle replacement.

Telematics offers a cost-effective solution to improve accountability and provide complete vehicle utilization information. By integrating wireless communications, vehicle monitoring systems, and location devices, telematics provides complete vehicle utilization data, identifies and confirms misuse, reduces reliance on state agencies, and promotes more efficient vehicle utilization. Cost estimates suggest implementation of basic telematics services could be cost effective due to estimated reductions in vehicle utilization.

Through technology and management improvements, the Division of Motor Fleet Management can continue to meet state government needs for passenger transportation services. To address the identified issues, several recommendations suggest action by the General Assembly. First, to strengthen accountability for state-owned passenger vehicles, the Division of Motor Fleet Management should be directed to phase in implementation of telematics. Second, the Division of Motor Fleet Management should be directed to improve management practices identified in this report. Third, the General Assembly should modify the statutory mileage threshold for state-owned passenger vehicles in N.C. Gen. Stat. § 143-341(8).i.7a by directing the Department of Administration to adopt rules establishing a passenger vehicle threshold criterion that includes mileage, frequency of use, and vehicle purpose.

Purpose and Scope

The 2011–12 work plan of the Joint Legislative Program Evaluation Oversight Committee directed the Program Evaluation Division to study the efficiency and effectiveness of the state's motor fleet operations in the Department of Administration's Division of Motor Fleet Management. The General Assembly broadened the scope of the project to include all passenger and non-passenger vehicles owned and operated by all State government departments, institutions, and entities, and to include motor fleet fees and associated cash balances, mechanic operations, the use and purpose of assigned vehicles, and state fueling stations.[1] The legislation also directed a follow-up study on the formation of an Aviation Management Authority.[2]

For the purpose of this evaluation, state-owned motor vehicles were defined as licensed highway-use vehicles purchased or leased by state agencies and institutions for any purpose. Trailers, non-highway-use vehicles, and motorized equipment were excluded. Four research questions guided the inquiry.

1. How many state-owned vehicles does North Carolina have, and what are their purposes?
2. How does North Carolina ensure state-owned vehicles are managed according to fleet management best practices?
3. Does North Carolina have the appropriate number and mix of state-owned vehicles to meet state government needs?
4. What alternatives exist for state government oversight, operation, and ownership of vehicles?

This report is the second in a series of three reports on the status of state-owned motor vehicles in North Carolina, and focuses on the management of passenger vehicles by the Department of Administration's Motor Fleet Management Division. The first report, *Inadequate Data and Fleet Information Management Weaken Accountability for North Carolina's Vehicles,* provided an overview of the number, use, and cost of motor vehicles across all agencies and institutions. The third report describes the management of other vehicles owned by state agencies and institutions.

The following data were collected for this report:

- North Carolina statutes and administrative rules;
- fleet management practices of the Division of Motor Fleet Management from a survey of fleet managers;
- literature review of fleet management best practices;
- interviews with Department of Administration and Division of Motor Fleet Management staff;
- analysis of fleet management information from the Division of Motor Fleet Management's information system for Fiscal Year 2008–09, Fiscal Year 2009–10, and Fiscal Year 2010–11;
- analysis of expenditures, revenues, and cash balances for the Division of Motor Fleet Management;

[1] 2011 NC Sess. Laws, 2011-145, Section 6.13. (d)-(e)

[2] Program Evaluation Division. (2010, April). *Selling 25 Underutilized Aircraft May Yield Up to $8.1 Million and Save $1.5 Million Annually*. Raleigh, NC: General Assembly.

- focus groups with vehicle coordinators from state agencies and institutions;
- surveys of state employees who use state-owned passenger vehicles;
- cost information from a rental car agency operating in North Carolina;
- cost information from a telematics service provider;
- audits and evaluations of state-owned motor vehicles in other states; and
- interviews with and documents from fleet management administrators in other states.

Background

North Carolina established the Division of Motor Fleet Management to ensure the proper management of state-owned passenger vehicles. In 1981, the General Assembly directed the Department of Administration to centrally manage state-owned vehicles. The Department of Administration established the Division of Motor Fleet Management (MFM) to manage, acquire, maintain, repair, and store state-owned passenger vehicles, and charged MFM with enforcing state policy on vehicle use, assignment, and commuting. This mandate to centralize passenger transportation required state agencies and institutions to transfer ownership, custody, or control of all passenger vehicles to MFM except vehicles used primarily for law enforcement, fire, and emergency purposes.[3] Passenger vehicles are defined by administrative rule as any automobile sedan, station wagon, pick-up truck, four-wheel-drive utility vehicle, or passenger-type minivan. Vehicles performing functions other than passenger transport are excluded from centralized oversight by MFM.

The Department of Administration's regulations for motor fleet management establish the mission for MFM.

> Motor Fleet Management provides safe and efficient management, maintenance, repair, and storage of state-owned passenger motor vehicles. Motor Fleet Management provides savings to taxpayers of North Carolina by supplying a centralized source of passenger transportation for all state agencies and to all state employees in the performance of their official duties in the most cost-effective way.[4]

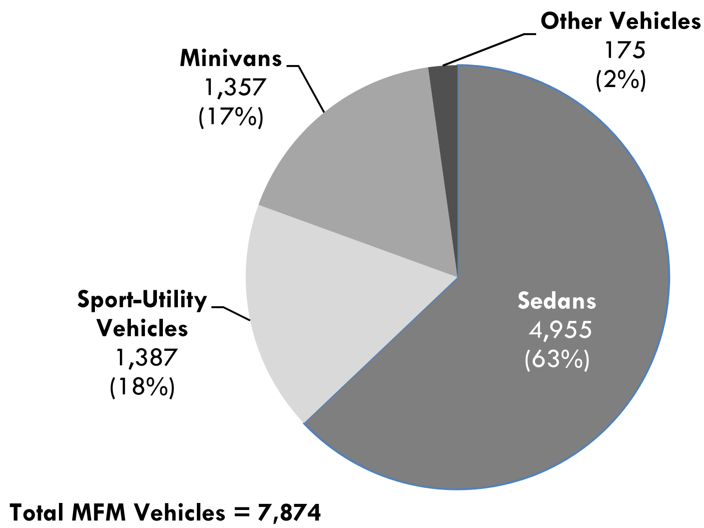
To meet this mission, MFM oversees the use of state-owned passenger vehicles through rules and policies governing vehicle assignment and termination, rates and billing, fleet operations and services, maintenance and care of vehicles, and vehicle usage.

At the end of Fiscal Year 2010–11, MFM had 7,874 vehicles in its fleet. Exhibit 1 shows the number of vehicles by body type. Sedans, minivans, and sport-utility vehicles represent most of the vehicles in MFM's fleet.

[3] State law specifically exempts passenger vehicles from this requirement if they are under the ownership, custody, or control of the Highway Patrol, the State Bureau of Investigation, or Butner Public Safety, which are used primarily for law enforcement, fire, or emergency purposes.
[4] North Carolina Department of Administration (2010). *Motor Fleet Management Regulations*, p. 1.

Exhibit 1

63% of MFM's Fleet in Fiscal Year 2010–11 Were Sedans

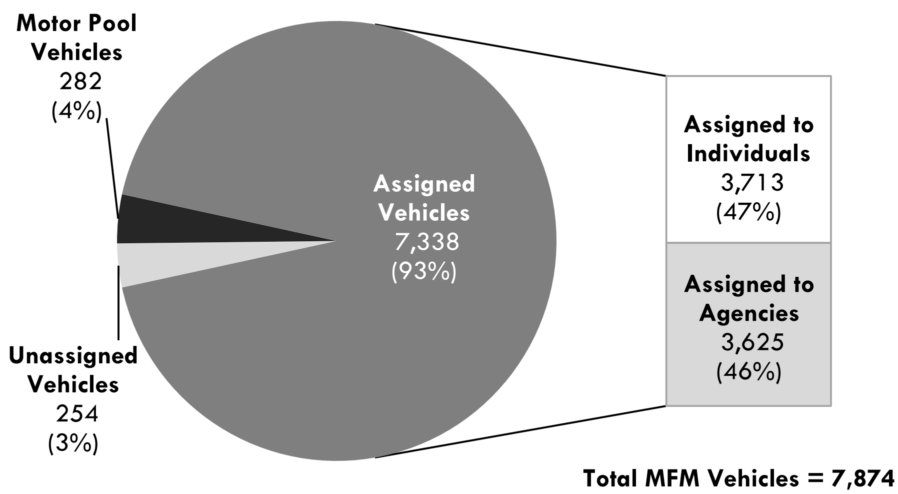


Note: Other Vehicles includes passenger vans, pickup trucks, a wrecker, and a bus.

Source: Program Evaluation Division based on MFM data.

Exhibit 2

93% of MFM Passenger Vehicles Were Assigned to Individuals or Agencies



Note: Unassigned Vehicles were pending assignment, needing major repairs, waiting for disposal, or were being used for recycled parts.

Source: Program Evaluation Division based on MFM data.

MFM vehicles can be assigned to individuals or agencies or used in the state motor pool. Exhibit 2 shows that 93% of MFM's vehicles were assigned to individuals and agencies.

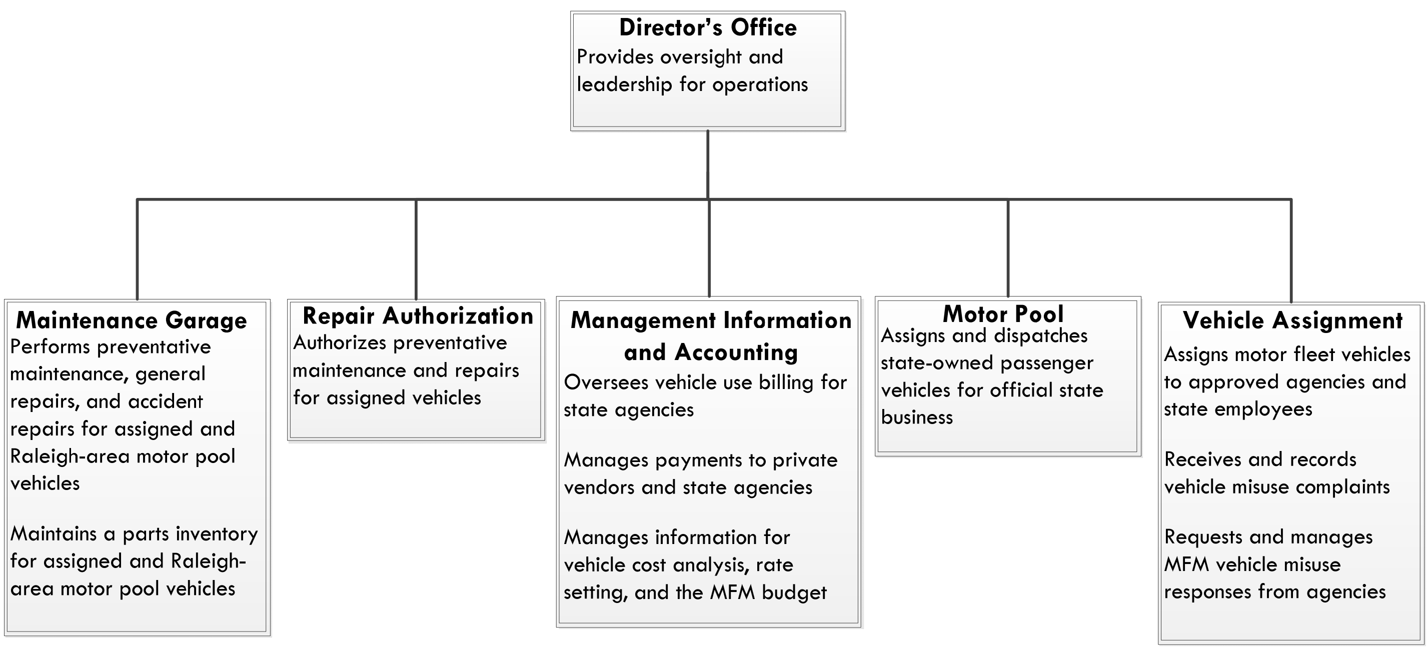
- **Assigned vehicles.** State employees may be assigned a state-owned passenger vehicle for official state business when the vehicle is expected to be driven a minimum of 3,150 miles per quarter. State agencies or institutions may be assigned a state-owned passenger vehicle when the vehicle is expected to be driven an average of 1,050 miles per month to conduct official state business or for a minimum number of low-mileage trips per month as determined by the agency and approved by MFM. Agency-assigned vehicles cannot be consistently driven by one employee and must be regularly available to all agency personnel.

- **Motor pool vehicles.** MFM offers state-owned passenger vehicles for short-term assignment to state employees. These vehicles are centrally controlled and housed at their facility in Raleigh.

During Fiscal Year 2010–11, MFM assigned 7,338 vehicles to 45 state agencies and institutions, 19 community colleges, 4 state boards and commissions, and 2 state authorities. The Department of Correction had the greatest number with 2,379 vehicles and 8 state entities were assigned only one vehicle.[5] The appendix shows the number of vehicles assigned to each state agency by assignment type.

The MFM facility in Wake County houses administrative offices, maintenance garage, parts department, motor pool, and storage for vehicles awaiting maintenance or assignment. Exhibit 3 describes MFM's organization and the activities performed by each unit.

Exhibit 3: Division of Motor Fleet Management Organizational Structure

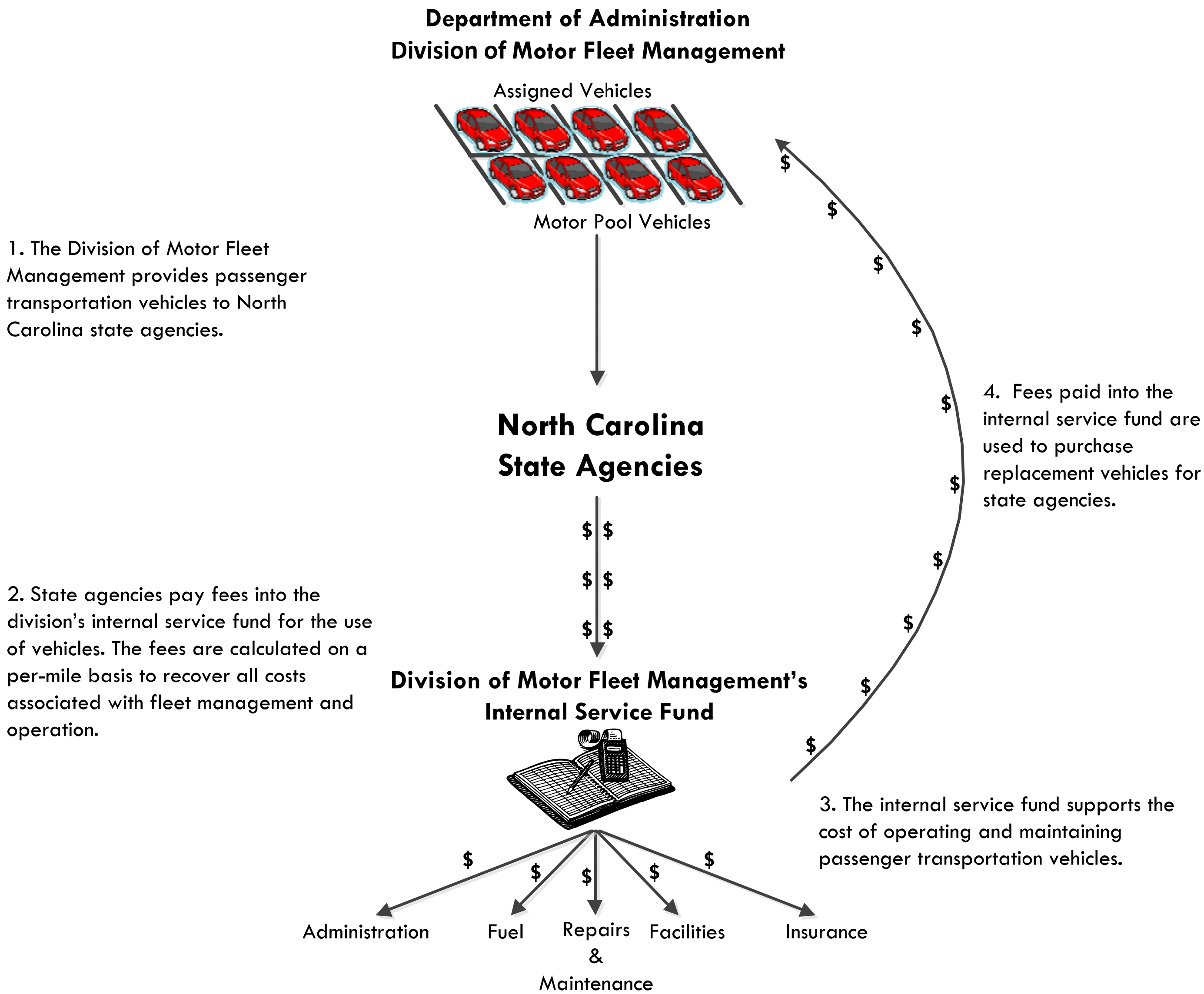


Source: Program Evaluation Division based on Division of Motor Fleet Management's organizational chart and information on each unit.

[5] The eight state entities assigned one vehicle are Bladen, Johnston, Richmond, Surry and Wilson Community Colleges; North Carolina Global TransPark Authority; North Carolina State Board of Elections; and Office of the State Controller.

MFM is funded through an internal service fund and does not receive direct state appropriations.[6] Exhibit 4 describes how the internal service fund supports the full cost of MFM operations.

Exhibit 4: An Internal Service Fund Supports Full Cost of MFM Operations



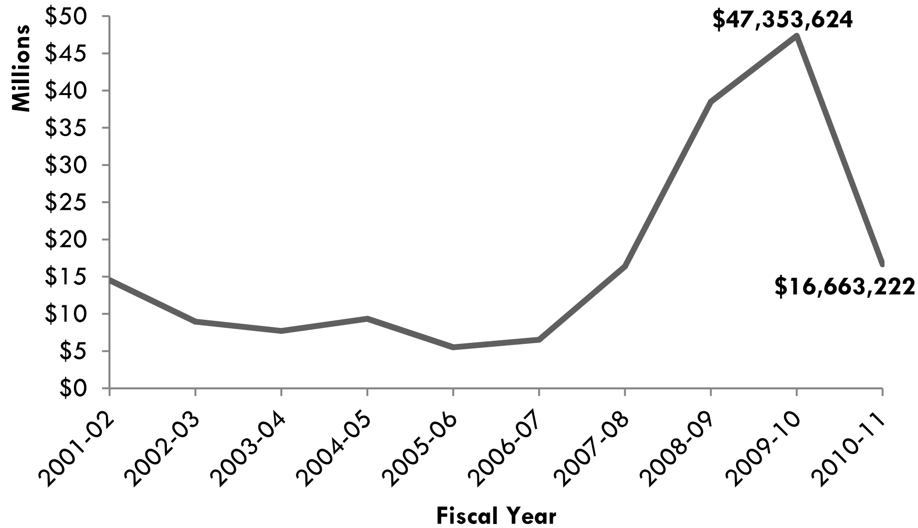
Source: Program Evaluation Division based on Division of Motor Fleet Management information and the budget manual from the Office of State Budget and Management.

Exhibit 5 shows that the MFM internal service fund has maintained a positive year-end cash balance during the last ten fiscal years. From Fiscal Year 2001–02 through Fiscal Year 2007–08, year-end cash balances ranged from $5 million to $16 million, but year-end cash balances grew in Fiscal Year 2008–09 and Fiscal Year 2009–10.

[6] Internal service funds account for any activity providing goods and services to other state governmental agencies and institutions on a cost-reimbursement basis. Internal service funds do not revert unexpended funds at the end of each fiscal year.

Exhibit 5

MFM Internal Service Fund Year-End Cash Balances for Fiscal Year 2001–02 through Fiscal Year 2010–11



Source: Program Evaluation Division based on year-end budget reports for the MFM internal service fund.

According to the Department of Administration, several factors contributed to the increase in the year-end cash balance between Fiscal Year 2007–08 and Fiscal Year 2009–10:

- **Vehicle acquisition.** MFM bought fewer vehicles in Fiscal Year 2007–08 and Fiscal Year 2008–09, and bought no vehicles in Fiscal Year 2009–10, which reduced expenditures.
- **MFM rates.** MFM increased the mileage reimbursement rate by eight cents per mile in July 2008 to respond to increased motor fuel and other operating costs. The mileage reimbursement rate decreased by three cents per mile in May 2010.
- **Travel restrictions.** State employee travel was restricted from April 2009 through June 2010. MFM operating expenditures for motor fuel and maintenance decreased during this time because vehicle use was limited. Even though state employees traveled less, state agencies with assigned vehicles continued to pay MFM fees for the 1,050-mile monthly minimum.

After the cash balance for the MFM internal service fund reached $47.4 million at the end of Fiscal Year 2009–10, the Governor and the General Assembly directed the Department of Administration to transfer $64 million from the MFM internal service fund to the General Fund during Fiscal Year 2009–10 and Fiscal Year 2010–11. These transfers to the General Fund helped balance the state budget and required MFM to pay $16.9 million in rebates to state agencies and institutions that had used federal funds and departmental receipts for MFM services. Exhibit 6 provides a summary of the budget transfers and rebates by fiscal year.

Exhibit 6

MFM Internal Service Fund Transfers Totaled $80.9 Million in Fiscal Years 2009–10 and 2010–11

Budget Transfers and Rebates	Fiscal Year 2009–10	Fiscal Year 2010–11	Total Transfers
Governor	$ 20,000,000	$ —	$ 20,000,000
General Assembly	—	44,000,000	44,000,000
Rebates to State Agencies	7,397,325	9,528,018	16,925,343
Total Transfers	**$ 27,397,325**	**$ 53,528,018**	**$ 80,925,343**

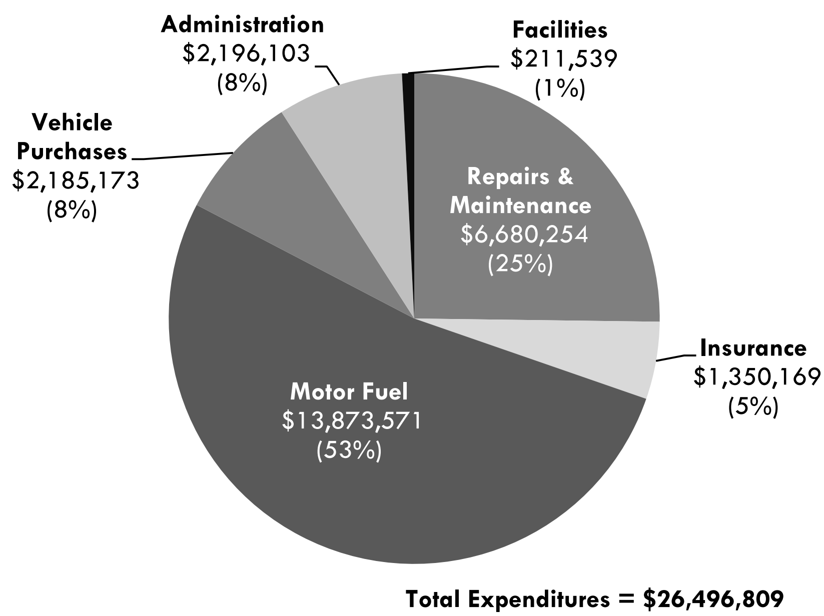
Source: Program Evaluation Division based on year-end budget reports for the MFM internal service fund and budget legislation and reports for Fiscal Year 2010–11.

After the transfers and rebates, the year-end cash balance for the MFM internal service fund decreased to $16.7 million for Fiscal Year 2010–11.

MFM operating expenditures cover administration, facilities, insurance, maintenance and repairs, and motor fuel. Exhibit 7 shows MFM spent $26.5 million during Fiscal Year 2010–11 for operations, including 48 administrative and maintenance positions.[7] Motor fuel, at 53% of expenditures, was the largest cost category (see Exhibit 7).

Exhibit 7

53% of MFM Expenditures in Fiscal Year 2010–11 Paid for Motor Fuel



Source: Program Evaluation Division based on Fiscal Year 2010–11 year-end budget report for the MFM internal service fund.

Centralized management of state-owned passenger vehicles is beneficial to North Carolina state government. Evaluations of motor vehicles and fleet operations in other states have found decentralized management of passenger vehicles increased inefficiencies and costs. Evaluators in these states recommended centralized management of

[7] As of January 2012, MFM had 48 positions with 34 permanent employees, 10 temporary employees, and 4 vacancies.

vehicles to improve efficiencies. Though North Carolina centralized the management of state-owned passenger vehicles 30 years ago, advances in fleet technology and business practices in recent years may offer opportunities for MFM to improve its management.

Findings

Finding 1. With the exception of tracking complete vehicle utilization information for assigned vehicles, the Division of Motor Fleet Management is operating in accordance with fleet management best practices.

The United States General Services Administration has been providing fleet management services to federal agencies since 1954 and provides guidelines on motor fleet management best practices. The Program Evaluation Division reviewed these federal guidelines and other sources to identify four categories of fleet management best practices.[8]

- **Policies and Procedures.** Written documentation of policies and procedures protects the users of passenger transportation vehicles. Written policies and procedures provide controls to ensure vehicles are used appropriately and users of state vehicles are held accountable.
- **Management of Vehicle Utilization Data.** Vehicle utilization is an indicator of the business need for a vehicle and is tracked through vehicle mileage and frequency of use.[9] Collecting data on vehicle mileage and frequency of use can be done by tracking miles driven per trip or monthly miles in combination with the number of trips. The most efficient means of tracking utilization data is through an electronic fleet management information system.
- **Financial Management.** Implementation of a cost recovery system is a financial management best practice. A cost recovery system allows a fleet manager to identify, monitor, evaluate, and adjust fleet ownership, operating, and management costs. With this system, users budget and pay for vehicles and their related services and resources based on an assessment of the direct (depreciation, fuel, maintenance, and insurance) and indirect (administration, maintenance personnel, and operating overhead) costs associated with managing and maintaining the passenger transportation fleet.
- **Vehicle replacement and acquisition.** Developing a fleet replacement plan based on appropriate guidelines is another important best practice. Plans should be updated annually with projected replacement dates and a cost for each vehicle. Organizations using fleet management best practices purchase standardized vehicle types in volume to reduce acquisition costs.

The Division of Motor Fleet Management (MFM) is in compliance with state law and with most fleet management best practices. The Program Evaluation Division survey of North Carolina state government fleet

[8] The Program Evaluation Division reviewed multiple sources including federal guidelines that were adopted from the United States General Services Administration, which provides fleet management services to federal agencies.
[9] Program Evaluation Division. (2011, December). *Inadequate Data and Fleet Information Management Weaken Accountability for North Carolina's Vehicles*. Raleigh, NC General Assembly

managers asked how MFM operated across the four best-practice categories. MFM's scores were based on implementation criteria across the four best-practice categories for their entire fleet of assigned and motor pool vehicles. MFM administers passenger vehicle services in accordance with most fleet management industry best practices; however, the division would benefit from tracking complete vehicle utilization data for assigned vehicles. Exhibit 8 summarizes how MFM performed across the four fleet management best practice categories.

Exhibit 8: MFM Received a B+ for Complying with Most Fleet Management Best Practices

Fleet Management Best Practice Category	Evaluation Criteria	Division of Motor Fleet Management's Response: Yes	No	Percentage of Criteria Met	Grade
Written Policies and Procedures	**The division has written policies for**	**Yes**	**No**	**6 of 6 or 100%**	**A+**
	• **who** can use vehicles;	✓			
	• **how** vehicles can be used;	✓			
	• **when** vehicles can be used;	✓			
	• vehicle **acquisition;**	✓			
	• vehicle **disposal**; and	✓			
	• vehicle **maintenance**.	✓			
Management of Vehicle Utilization Data	**The division**	**Yes**	**No**	**1 of 2 or 50%**	**F**
	• manages an electronic fleet management information system.	✓			
	The division collects vehicle mileage and frequency of use on a per vehicle basis for their entire fleet through				
	• tracking per trip mile; **or**		✓a		
	• tracking monthly miles and daily trip counts.		✓b		
Financial Management	**The division**	**Yes**	**No**	**8 of 8 or 100%**	**A+**
	• has a cost recovery system in place	✓			
	The division tracks direct and indirect costs for				
	• maintenance and repair (including parts and labor);	✓			
	• fuel;	✓			
	• depreciation for owned vehicles;	✓			
	• insurance;	✓			
	• services and benefits, official travel and transportation, of all fleet management personnel (including fleet manager, mechanical and administrative personnel);	✓			
	• purchasing operating equipment for fleet management activities (e.g., office supplies); and	✓			
	• servicing and repairing operating equipment.	✓			
Vehicle Replacement and Acquisition	**The division**	**Yes**	**No**	**4 of 4 or 100%**	**A+**
	• has a vehicle replacement plan;	✓			
	• updates the replacement plan annually;	✓			
	• purchases vehicles in volume; and	✓			
	• purchases standardized types of vehicles.	✓			
		Overall Division Grade		**88%**	**B+**

(a) The Division of Motor Fleet Management does not track per-trip miles for the entire fleet. Per-trip miles are tracked only for motor pool vehicles, and monthly mileage is tracked for assigned vehicles.

(b) State agencies are required to maintain paper trip logs for assigned vehicles, but the Division of Motor Fleet Management does not collect per-trip information from the logs.

Source: Program Evaluation Division based on the fleet management best practice survey and interviews.

Finding 2. The Division of Motor Fleet Management's delegation of fleet management and oversight to state agencies hampers its ability to hold agencies accountable, but advances in technology offer opportunities to improve accountability.

State law authorizes the Division of Motor Fleet Management (MFM) to delegate enforcement of MFM rules regulating the use of state-owned passenger vehicles to state agencies. MFM has delegated much of the day-to-day oversight and management of its vehicles to state agencies because it does not have the staff resources to directly oversee the thousands of vehicles deployed throughout North Carolina. State agencies are expected to coordinate vehicle usage, investigate misuse claims, and obtain preventive maintenance.

Beginning in July 2010, MFM required each agency and institution to designate a vehicle coordinator to serve as a liaison to MFM. Prior to the designation of vehicle coordinators, MFM dealt directly with over 3,700 drivers or individuals assigned a passenger vehicle. MFM created the coordinator role to have one contact for each agency, to reduce the number of people with whom the division was interacting, and to increase agencies' management responsibility for vehicles.

Vehicle coordinators are responsible for

- submitting requests for assigned vehicles;
- reviewing monthly mileage reports and daily travel logs;
- ensuring monthly mileage reports are submitted in a timely manner;
- reporting changes in vehicle assignments within the agency;
- initiating review of underutilized vehicles and reallocating vehicles within the agency;
- recommending vehicles for exemption from the minimum mileage requirement; and
- ensuring the return of vehicles in a timely manner when requested by MFM.

The magnitude of the vehicle coordinator's responsibility varies depending on how many MFM vehicles are assigned to a state agency or institution. MFM staff stated that once a vehicle is assigned to an individual or agency, they are aware of the miles driven, but not the driver of the vehicle or the exact purpose unless the agency reports changes in assignment and purpose. MFM relies on the vehicle coordinator to ensure monthly mileage is submitted, but MFM does not conduct independent audits of paper logs for each vehicle to ensure vehicle mileage is correct or the vehicle is being used for its intended purpose.

Establishing vehicle coordinators has created efficiencies for MFM, but the division needs to provide more guidance to vehicle coordinators on their role and responsibilities. Vehicle coordinators received initial training, but MFM has not repeated the training or conducted any additional training. The MFM website has "Frequently Asked Questions" with responses for vehicle coordinators, and MFM regulations are available online, but no training information is available online. Data from focus groups with coordinators indicated each coordinator saw their role differently and the oversight of vehicles varied. For example, some coordinators stated that their main responsibility was to ensure mileage logs were entered on time whereas others stated that they also review utilization reports, coordinate maintenance, and talked with MFM staff daily. During focus group discussions, the Program Evaluation Division observed that vehicle coordinators were eager to talk about their responsibilities and share ideas. Because MFM has not offered follow-up training, vehicle coordinators have not had an opportunity to meet with each other or MFM staff to discuss ideas or concerns about their responsibilities.

MFM does not routinely conduct customer satisfaction surveys. Surveys provide a way for MFM to interact with its customers, learn about concerns, and point out process improvements. The Department of Administration surveyed MFM customers as a part of the agency strategic planning process in 2009, but MFM does not regularly survey state employees using their vehicles and does not have information to measure outcomes over time. Because MFM does not regularly conduct customer satisfaction surveys, the Program Evaluation Division surveyed individuals who have a vehicle assigned to them as well as individuals who used a motor pool vehicle between July 1 and September 30, 2011.

Over 1,500 state employees with assigned vehicles and 246 state employees who used motor pool vehicles responded to the survey.[10] The Program Evaluation Division found that the majority (over 60% in every category) of state employees with assigned vehicles were satisfied with their vehicles. However, some state employees expressed dissatisfaction with the reliability (16%), condition (18%), and type of vehicle they had been assigned (19%). This lack of satisfaction is echoed throughout the open-ended comments. Similarly, the majority (over 70% in every category) of motor pool users reported satisfaction with MFM services and vehicles, but some users were dissatisfied with the cleanliness (14%), reliability (13%), and driving condition (13%) of vehicles.

MFM does not independently investigate reports of vehicle misuse. MFM is responsible for verifying whether vehicle misuse has occurred and taking appropriate action. MFM relies on state agencies to handle reports received on its misuse hotline and website.[11] Each state agency is required to designate a misuse coordinator to receive misuse complaints. MFM has developed materials for misuse coordinators explaining MFM policy regarding use and misuse of state-owned passenger vehicles.

During the past two years, MFM received an estimated 2,043 misuse reports.[12] When MFM receives a complaint or misuse report for an MFM vehicle providing enough information to identify a specific vehicle, MFM determines the vehicle assignment and sends the misuse coordinator a report describing the complaint. The agency is responsible for investigating each compliant, and the misuse coordinator has 10 days to respond. MFM

[10] Over 3,700 state employees have assigned vehicles. Although the Program Evaluation Division does not know exactly how many state employees with assigned vehicles had access to the survey, the estimated response rate was 42%. Also, 531 state employees who had used a motor pool vehicle between July 1, 2011–September 30, 2011 received a survey with a response rate of 46%.
[11] The hotline and website were established for citizens to report improper use of state vehicles.
[12] Most of the misuse reports were related to MFM vehicles, but about 8% of the total reports were for vehicles belonging to other state agencies or other entities authorized to have permanent state license plates.

officials said that agencies have their own rules and policies regarding misuse of state vehicles and the level of investigation and disciplinary action vary. For example, the Division of Emergency Management has a no-tolerance misuse policy and has stated in response to complaints that drivers have had vehicle privileges suspended. MFM does not compile information describing agency responses to misuse complaints.

MFM assures agencies respond to misuse allegations, but does not independently verify that agencies fully investigate the complaint and take appropriate action.[13] State law authorizes the Department of Administration to revoke assignment of a state-owned passenger vehicle if misuse is verified, but state agencies can appeal the decision.[14] MFM officials indicated that the division terminates the assignment of vehicles either on a temporary or permanent basis in cases of driving while impaired, driving without a valid driver's license, or other major allegation such as repeated physical damage. MFM has revoked vehicle assignment three times for major infractions in past two years.[15]

MFM does not routinely inspect assigned vehicles to ensure vehicles are operated according MFM policies. Regulations establish MFM's expectations of how state-owned vehicles should be used and itemize prohibited activities such as smoking,[16] but MFM does not inspect vehicles to ensure compliance with these regulations. Vehicles are only inspected if they are brought into the maintenance facility in Raleigh, which is only a small percentage of vehicles. For example, MFM staff noted that the bumper sticker providing the vehicle misuse hotline telephone number has been removed from some vehicles. MFM regulations require the bumper sticker because it allows the public to monitor driving behavior and vehicle misuse. Missing bumper stickers are replaced by MFM, but there are no repercussions for individuals and agencies that have removed the bumper sticker or have not followed the rules regarding vehicle maintenance.

The Program Evaluation Division inspected a small sample of assigned vehicles and found vehicles needing oil changes and annual safety inspections. MFM no longer pays for vehicle washes, so it was not surprising that the majority of vehicles inspected were dirty because the cost of washing vehicles is the responsibility of the agency or individual assigned the vehicle. There was evidence of smoking in 3 of the 23 inspected vehicles.

MFM relies on state agencies to ensure assigned vehicles receive preventive maintenance and annual inspections. Ensuring preventive maintenance (e.g., oil changes, tire replacement) is completed is the responsibility of the agency or individual assigned the vehicle. When preventive maintenance does not occur, the life of the vehicle may be shortened or repairs may be more frequent and costly. MFM's policies require preventive maintenance at scheduled intervals established by MFM,

[13] If a driver has six points on his or her license, the division sends a letter to the agency stating that the agency is responsible for anything that happens to the vehicle assigned to that person.
[14] N.C. Gen. Stat. § 143-341(8).i.7a
[15] Two revocations involved driving while impaired incidents and the third revocation involved excessive damage from several accidents.
[16] N.C. Gen. Stat. § 130A-493.

and annual safety inspections must be up to date. Vehicle coordinators receive notices from MFM that assigned vehicles need maintenance, and MFM can monitor whether maintenance has been performed because it approves payment. To ensure vehicles are properly maintained, MFM has introduced stricter enforcement of its preventive maintenance requirements that will terminate vehicle assignments when preventive maintenance has not been completed after two reminders.

Technological advances in fleet management tools that enhance vehicle tracking and user accountability would assist MFM in holding state agencies more accountable. One specific technology is telematics, which offers fleet managers a cost-effective solution that can help boost productivity, address driver safety, misuse and abuse, and ensure fleet operations run as efficiently as possible. Telematics integrates wireless communications, vehicle monitoring systems, and location devices that provide the following services for fleet managers:

- **Complete vehicle visibility.** Tracks when and where a vehicle is driven, the number of miles driven, and the amount of time a vehicle sits idle.
- **Alerts for unsafe driving behavior.** Monitors when a driver exceeds established speed limits, uses excessive hard braking, or takes corners at unsafe speeds.
- **Remote vehicle diagnostics.** Monitors the driving condition of vehicles through remote vehicle diagnostics by continuously monitoring a vehicle's operating condition and by providing automated preventive maintenance reminders.

A basic telematics service package includes complete vehicle visibility. A comprehensive telematics service package adds safety alerts and remote vehicle diagnostics.

Telematics offer MFM a technological solution for the information deficiencies identified in this report. Exhibit 9 shows how telematics could enhance MFM's management and oversight of state-owned passenger vehicles by providing independent information to MFM that does not require reliance on state agencies.

Exhibit 9: Telematics Provides Information that Enhances Fleet Management and Oversight

MFM Information Deficiencies	Telematics Package	Benefits of Telematics
• Relies on agencies to enter mileage information • Does not know when or how often a vehicle is driven • Does not know vehicle location • Does not have enough information to evaluate efficient vehicle utilization • Cannot monitor driving behavior • Cannot investigate vehicle misuse related to driving behavior, vehicle location, and when a vehicle was driven • Cannot monitor vehicle operating condition	**Basic Package** • Complete vehicle visibility	• Provides complete vehicle utilization information including mileage, frequency of use, and vehicle location • Promotes more efficient vehicle utilization • Eliminates mileage data entry by agencies • Identifies and confirms vehicle misuse related to vehicle location and when a vehicle was driven
	Comprehensive Package • Complete vehicle visibility • Safety alerts • Remote diagnostic reporting	• Provides all basic package benefits • Monitors driving behavior • Identifies and confirms misuse complaints related to driving behavior • Provides automatic preventive maintenance reminders • Monitors vehicle operating condition

Source: Program Evaluation Division based on information from a telematics service provider and MFM.

The Program Evaluation Division contacted a telematics service provider and found there is no charge for the telematics device that plugs into a vehicle, but the monthly monitoring rates varied based on the level of services:

- A basic telematics service package costs $25 per month per vehicle or $300 annually, and
- A comprehensive telematics service package costs $40 per month per vehicle or $480 annually.

With these monthly monitoring rates, the Program Evaluation Division developed cost estimates to assess the fiscal impact of full implementation of basic and comprehensive telematics service packages for the entire MFM fleet using the following assumptions:

- a 3% inflation rate per year;
- an additional $100,000 for MFM administrative costs to monitor and analyze telematics information;
- monitoring devices would be installed on 7,700 vehicles over a five-year period; and
- a 7.5% decrease in mileage because telematics would encourage more efficient vehicle usage and reduce vehicle misuse.[17]

This analysis suggests implementation of basic telematics services may not increase MFM expenditures if vehicle utilization decreases by a least 7.5% because the savings from reduced vehicle utilization could offset the cost of the basic telematics services (see Exhibit 10). Implementation of comprehensive telematics services would increase MFM expenditures despite reduced vehicle utilization, but monitoring driving behavior and remote vehicle diagnostics offer other benefits that cannot be easily quantified like vehicle utilization.

[17] Cost savings from reduced vehicle utilization were estimated by multiplying the $0.30 mileage rate by the mileage reduction.

Exhibit 10: Implementing Basic Telematics Services May Offset Increased MFM Expenditures If Vehicle Utilization Decreases by 7.5%

Fiscal Year 2012–13	Projected MFM Expenditures	Estimated Cost of Telematics	Estimated Vehicle Utilization Savings	Estimated Total Cost
No Change	$ 32,439,344	$ —	$ —	$ 32,439,344
With Basic Telematics	32,439,344	2,410,000	(2,467,168)	32,382,177
With Comprehensive Telematics	32,439,344	3,796,000	(2,467,168)	33,768,177

Note: The estimated cost of telematics assumes a 7.5% reduction in vehicle mileage. This estimate assumes no cost for the telematics device and installation costs are not included. Numbers have been rounded.

Source: Program Evaluation Division based on information from a telematics service provider and expenditure information from MFM.

Installation of telematics on MFM vehicles would need to be conducted in phases because MFM's vehicles are dispersed around the state. Installing telematics on new vehicles would make implementation easier, with the rollout of telematics to be phased in over three to five years.

Telematics provide solutions that would allow MFM to collect comprehensive utilization data, identify and confirm vehicle misuse, reduce reliance on state agencies for information, promote more efficient vehicle utilization, and provide agency vehicle coordinators with information to improve agency accountability for assigned passenger vehicles.

Finding 3. The Division of Motor Fleet Management does not collect sufficient information to determine the right number of passenger vehicles for state government needs.

The Program Evaluation Division's first report on the status of state-owned vehicles in North Carolina stated that vehicle utilization is an indicator of the business need for a vehicle and is tracked through vehicle mileage and frequency of use.[18] As stated in this report, the Division of Motor Fleet Management (MFM) lacks the data to assess vehicle utilization for its entire fleet. MFM collects mileage data on assigned and motor pool vehicles, but only tracks the number of trips for motor pool vehicles which is 4% of its fleet.

State law directs MFM to determine utilization for assigned vehicles based only on mileage. N.C. Gen. Stat. § 143-341 specifies that state-owned passenger vehicles must be driven 3,150 miles per quarter or 12,600 miles annually to be assigned to an individual state employee or state agency.[19] State law allows exemptions to the mileage threshold when the vehicle

- is assigned to a state employee whose duties are routinely related to public safety;

[18] Program Evaluation Division. (2011, December). *Inadequate Data and Fleet Information Management Weakens Accountability for North Carolina's Vehicles*. Raleigh, NC: General Assembly.

[19] MFM regulations specify vehicles assigned to a state agency must be driven 1,050 miles per month, which equals 3,150 miles per quarter.

- is assigned to a state employee who is exposed to life-threatening situations; or
- has a unique use that can be justified by the state agency.

MFM has the authority to revoke assigned vehicles not meeting the minimum mileage threshold.

Administrative rules require assigned vehicles to have a travel log to enter daily or trip mileage and require total mileage to be entered into MFM's fleet management information system monthly. However, as seen in Finding 2, MFM does not audit these records to determine if they are accurate. Instead, MFM uses monthly mileage to bill state agencies and institutions for vehicle services and verify that each assigned vehicle meets the mileage threshold.

Without frequency of use information, MFM cannot accurately assess vehicle utilization for assigned vehicles. Vehicles that are used most frequently are the most clearly justifiable. Tracking vehicle mileage and frequency of use with consideration of the vehicle purpose allows for a complete assessment of vehicle utilization. Consider the vehicle usage for the following vehicles.

- Vehicle A is used daily to patrol prison grounds and is driven 300 miles each month.
- Vehicle B is driven 1,200 miles in one trip for four business days each month and is not used for the rest of the month.

Each vehicle must accumulate at least 1,050 miles per month to meet the minimum mileage threshold. Based on mileage, Vehicle A appears to be underutilized because it was driven 300 miles whereas Vehicle B meets the mileage threshold even though in was only used four days during a month. Knowing how often Vehicle A was used would help justify the agency's need for the vehicle and would eliminate the need for an exemption. Monitoring the frequency of use for Vehicle B would help MFM and the agency determine whether it would be more cost-effective for the agency to use a motor pool vehicle or rental car for occasional monthly trips.

Using available mileage information for assigned vehicles, the Program Evaluation Division determined 42% of assigned vehicles (3,049) did not meet the minimum mileage threshold in Fiscal Year 2010–11.[20] The Program Evaluation Division then divided the total number of miles accumulated by vehicles assigned to each state entity by the 12,600-mile threshold to determine the number of vehicles needed to support passenger transport use. Based on this calculation, almost 2,000 vehicles may not be needed by agencies. Taken together, these results indicate state entities may require fewer assigned vehicles, but a final determination cannot be made until MFM collects frequency of use information for assigned vehicles.

More frequent review of exemptions has improved compliance with the mileage threshold, but the exemption process cannot determine whether some assigned vehicles are justified. Beginning in July 2010, MFM required state agencies and institutions to request annual exemptions for vehicles not meeting the statutory requirement instead of perpetual

[20] Mileage data were not available for 44 vehicles.

exemptions. Responsibility for authorizing the retention of a vehicle not meeting the mileage threshold fell to state agency heads and chancellors, who had to approve all exemptions before submission to MFM. According to MFM officials, state entities returned more than 300 vehicles after conducting their review. In addition, the percentage of assigned vehicles meeting the annual mileage threshold increased from 50% in Fiscal Year 2009–10 to 59% in Fiscal Year 2010–11.

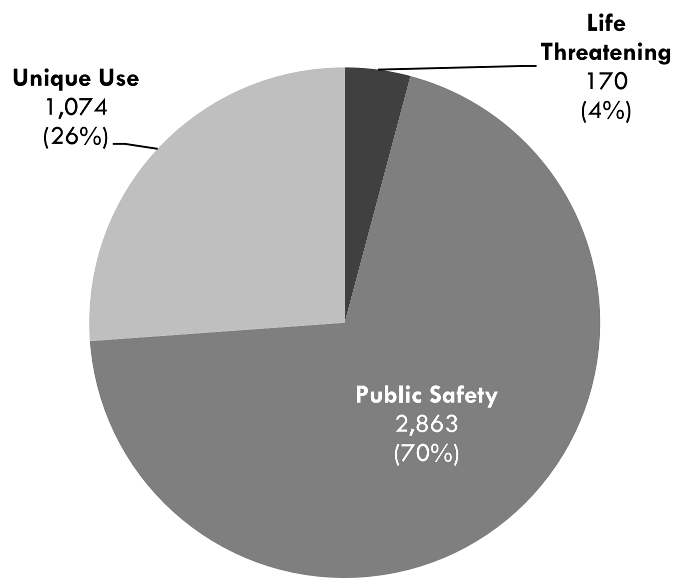
As of December 2011, MFM had approved 4,107 exemptions which are 56% of assigned vehicles. As shown in Exhibit 11, most exemptions fell under the public safety category, but the unique use category contained a quarter of the exemptions. Examples of unique use included

- delivery vehicles for making bank deposits and mail services;
- vehicles to transport patients to appointments; and
- vehicles used during emergencies or disasters.

The Program Evaluation Division's analysis of exempted vehicles showed that assigned vehicles with unique use exemptions were less likely to meet the mileage threshold when compared to assigned vehicles with public safety exemptions.[21] Because MFM does not collect data on frequency of use for assigned vehicles, it cannot determine whether the unique use of these vehicles is justified.

Exhibit 11

MFM Exempted Over 4,100 Assigned Vehicles from the Minimum Mileage Threshold



Source: Program Evaluation Division based on exemption data from the Division of Motor Fleet Management

In summary, MFM collects incomplete vehicle utilization data on assigned state-owned passenger vehicles. State law specifies a mileage threshold for assigned vehicles but does not specify a threshold for frequency of use. Analyses found that 3,049 assigned vehicles were underutilized based on mileage alone, but their need cannot be justified

[21] The analysis showed that 64% of assigned vehicles with unique use exemptions did not meet the mileage threshold and 46% of assigned vehicles with public safety exemptions did not meet the mileage threshold.

without information on how often these vehicles were used. Without a complete vehicle utilization assessment for assigned vehicles, MFM cannot determine the right number of passenger vehicles to meet state government needs.

Finding 4. The majority of the Division of Motor Fleet Management's motor pool vehicles are underutilized.

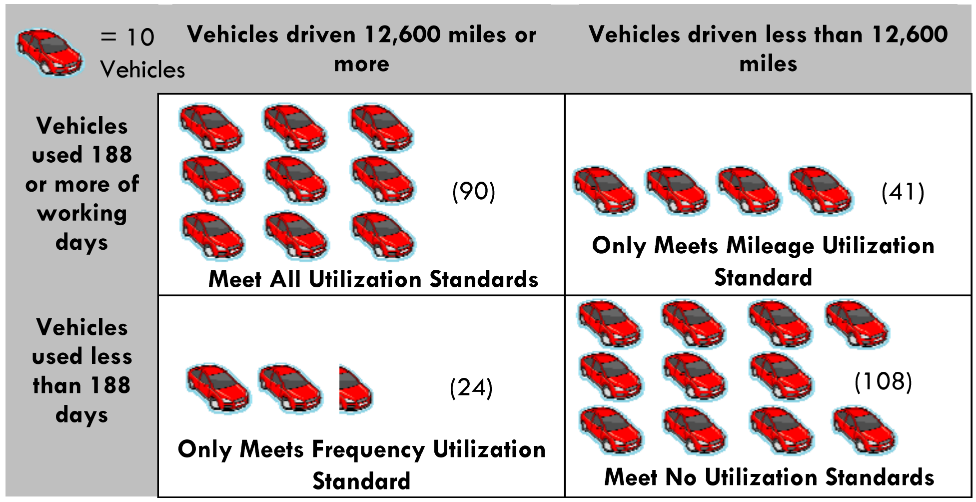
As discussed in Finding 3, state law directs the Division of Motor Fleet Management (MFM) to determine vehicle utilization for assigned vehicles based only on mileage but provides no direction on utilization for motor pool vehicles. MFM collects mileage and frequency of use for each motor pool vehicle and reports that the fleet is utilized 98% per month. This calculation is based on the number of motor pool vehicles available for use each month. For example, if 10 motor pool vehicles were available for use during a month, and 9 motor pool vehicles were utilized for at least one day during that month, MFM's utilization rate methodology would yield a 90% utilization rate. However, MFM's utilization rate is based on the availability of the fleet as a whole, and does not consider frequency of use or mileage on a per-vehicle basis. Without this information, MFM cannot determine whether the State has the right number of motor pool vehicles.

The Program Evaluation Division used mileage and frequency of use data for motor pool vehicles to determine the appropriate size of the motor pool fleet. During Fiscal Year 2010-11, MFM had 282 motor pool vehicles, and on average these vehicles accumulated 12,232 miles and were used for 166 out of 250 business days (69%).[22] The Program Evaluation Division applied the mileage threshold for assigned vehicles of 12,600 miles and assumed motor pool vehicles should be used at least 75% of available business days (188) during the year. The results showed that 61% of these vehicles (173) were underutilized.[23] Exhibit 12 identifies the number of motor pool vehicles meeting the mileage and frequency of use criteria.

[22] Business days exclude state holidays and weekends.
[23] The billing data used for this analysis did not identify which motor pool vehicles are special purpose vehicles reserved for state emergencies, and did not report when motor pool vehicles were unavailable because of repairs.

Exhibit 12

Only 90 Motor Pool Vehicles Met Mileage and Frequency of Use Thresholds in Fiscal Year 2010–11



Note: Nineteen motor pool vehicles did not have utilization data and were excluded from analysis.

Source: Program Evaluation Division based on information from MFM.

Examining patterns of daily usage can help MFM determine the appropriate number of motor pool vehicles. Reducing the motor pool fleet to 90 vehicles may not allow MFM to have enough vehicles on hand for state agencies requiring vehicles for temporary use. Forty-four state agencies and institutions used motor pool vehicles at least once during Fiscal Year 2010–11. If two state employees from each agency needed a vehicle on the same day, only two vehicles would be available for use. To determine the appropriate number of motor pool vehicles, MFM needs to conduct a daily demand analysis. This type of analysis will help MFM identify the days with the highest and lowest vehicle use and examine fluctuations in vehicle utilization patterns. Based on a daily demand analysis, MFM can determine the number of motor pool vehicles needed to meet state government needs on any given day and adjust the fleet size accordingly.

State employees can choose to use their personal vehicle instead of a motor pool vehicle for official state business and receive reimbursement for actual mileage. This choice may affect motor pool utilization because using a personal vehicle may be more convenient for some state employees. A state employee is reimbursed the standard business mileage rate set by the Internal Revenue Service when using their personal vehicles for state business when the round trip does not exceed 100 miles or when a state-owned vehicle is not available.[24] However, if a state employee chooses to use a personal vehicle when a state-owned vehicle is available and the trip mileage exceeds 100 miles, all departments and agencies are required to reimburse the employee at the current MFM per-mile rate.[25]

The Program Evaluation Division also examined outsourcing as an alternative for MFM motor pool operations and found it would not

[24] Effective July 1, 2011, the Internal Revenue Service business standard mileage rate was 55.5 cents per mile.
[25] Effective May 1, 2010, the MFM rate was 30 cents per mile.

reduce the cost of providing motor pool services. State agencies used motor pool vehicles for 6,681 trips and travelled over 3.2 million miles during Fiscal Year 2010–11. Based on this mileage, state agencies paid MFM $1.3 million. MFM's cost for providing these services in Fiscal Year 2010–11was $1.4 million including administrative and maintenance personnel, repairs, parts, insurance, motor fuel, and depreciation. No new motor pool vehicles were purchased in Fiscal Year 2010–11, which limited expenditures and reduced depreciation costs.

Comparing MFM's motor pool cost to the fees paid by state agencies reveals that fees from assigned vehicles are subsidizing motor pool operations. This subsidy occurs because

- motor pool is located at the same facility as overall MFM operations, so there are no additional costs for a separate motor pool facility; and
- MFM reassigns vehicles previously used by state agencies to the motor pool and does not usually acquire new vehicles.

The Program Evaluation Division received comparison cost information from a rental car agency operating in North Carolina based on motor pool trip and mileage data from Fiscal Year 2010–11. The cost estimate from the rental car agency was $2.2 million, which did not include motor fuel costs. Adding motor fuel costs increased the cost of rental car services to $2.7 million or twice the amount state agencies paid MFM for motor pool services in Fiscal Year 2010–11. Outsourcing motor pool services to a rental car agency would require state agencies to pay more for services and is not a cost-effective solution.

Finding 5. The Division of Motor Fleet Management's cost recovery system provides funding for appropriate vehicle replacement, but curtailing vehicle replacement has led to an older, less reliable, and more costly fleet.

The Division of Motor Fleet Management's financial management practices include implementation of a cost recovery system that charges the cost of owning, operating, and maintaining passenger vehicles to agencies. A cost recovery system has several distinct administrative advantages for the Division of Motor Fleet Management (MFM):

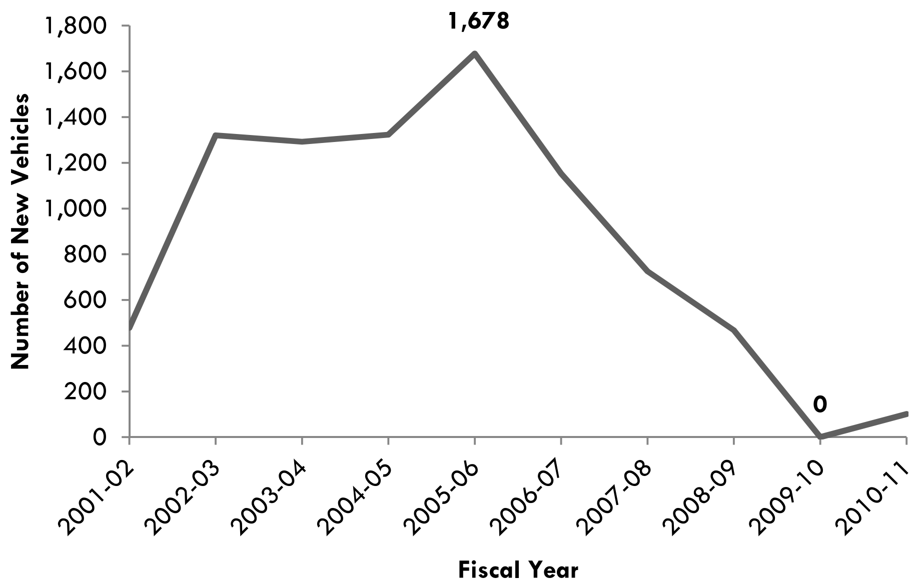
- it helps hold service users and providers accountable for the cost of owning and operating a fleet;
- it provides a funding stream to replace aging vehicles based on vehicle replacement planning; and
- it eliminates dependency on annual state appropriations.

State law authorizes MFM to replace state-owned motor vehicles as needed according to best practices.[26] Exhibit 13 shows the number of new vehicles acquired by MFM each year since Fiscal Year 2001–02. The graph illustrates new vehicle acquisition was a common practice in the past.

[26] N.C. Gen. Stat. § 143-341(8).i.4.

Exhibit 13

New Vehicle Purchases Were Routine Through Fiscal Year 2006–07



Source: Program Evaluation Division based on vehicle purchases reported by MFM.

MFM fleet size has decreased substantially during the past five fiscal years. In Fiscal Year 2005–06, the MFM fleet reached 9,633 vehicles and decreased to 7,874 vehicles at the end of Fiscal Year 2010–11. The reduction in fleet size occurred because MFM has limited or eliminated vehicle replacement in recent years and has continued to dispose of vehicles that were unusable due to age or accidents.[27] MFM stated that some of their rationale for deferring new vehicle acquisition is an effort to "right size" the fleet.

An aging fleet is inefficient, and timely replacement is important for managing vehicle availability, safety, reliability, and efficiency. Defining the optimal time frame for disposal of motor vehicle assets is important enough that the North Carolina Department of Transportation, which owns 27.5% of the state's fleet, conducted an independent study to determine the optimal replacement time frame for motor vehicles and other capital equipment. The study concluded that motor vehicles and other capital equipment have optimal replacement schedules and should be replaced when the marginal cost of ownership and operation is at its lowest point.

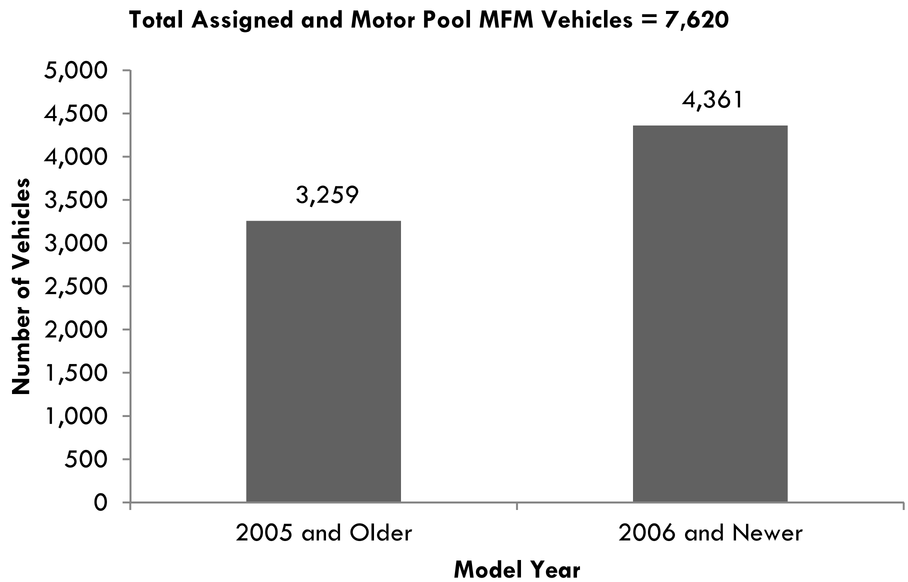
For the typical sedan and other light-duty vehicles in a fleet, Mercury Associates[28] suggests a replacement period of 5 to 7 years, or between 75,000 and 100,000 miles. The Program Evaluation Division compared the age and mileage of vehicles in MFM's fleet to these standards and found that 3,259 vehicles, or 43% of MFM's fleet, are seven years or older (see Exhibit 14).

[27] The General Assembly directed the Departments of Labor, Commerce, Environment and Natural Resources, and Agriculture and Consumer Services to reduce expenditures for and the number of MFM vehicles by 10% or 15% in budget legislation during the 2011 Session.

[28] Mercury Associates is a fleet consulting and services firm that provides technical assistance and advice to public and private organizations including associations providing research, training, and other services to the fleet management profession.

Exhibit 14

43% of MFM's Fleet Has a Model Year of 2005 or Older



Source: Program Evaluation Division based on vehicle information from MFM.

The Program Evaluation Division also found MFM has 2,188 vehicles in its fleet with more than 100,000 miles, which is higher mileage than Mercury Associates recommends. Even though MFM has adopted a replacement threshold of 125,000 miles, 954 vehicles or 12.5% of the MFM fleet exceeded this threshold at the end of Fiscal Year 2010–11.

Suboptimal vehicle replacement practices are inefficient because the cost of maintenance increases and the value of the assets at the time of resale are greatly diminished. Depending on a vehicle's age, delayed replacement affects the cost of annual maintenance. The Program Evaluation Division found that as MFM's fleet continued to age the average annual maintenance costs continued to grow. Over a three-year period the average cost of maintenance per vehicle increased by $177. Applying this per-vehicle growth in maintenance costs to MFM's entire fleet reveals that the decision to curtail new vehicle purchases over the last three years has cost an estimated $1.4 million for maintenance. Other inefficiencies exist with managing an aging fleet. As vehicles age they continue to depreciate and accumulate miles. This mileage accumulation and continued depreciation decreases the value of the vehicle at the time of resale and results in MFM receiving less money when selling older vehicles.

Beyond the inefficiencies associated with aging vehicles, vehicle safety and reliability are a concern. In the Program Evaluation Division survey of users of MFM vehicles, some respondents expressed concerns in written comments with the safety and reliability of the vehicles they use. Of the 1,092 comments provided to the Program Evaluation Division, 12% of the comments cited issues of safety or reliability. Below are examples.

"I don't know how often cars are replaced, but I have had concerns with the vehicle's safety and reliability."

"…vehicles are not replaced in timely manner. In my county we have two vehicles with over 125,000 miles. One of them has over 182,000 miles and is our cage car—due to repairs it has had and high mileage—staff simply don't feel it's reliable to use on long trips when it is needed."

"The vehicle I have has over 130,000 miles. It is just worn out. Before too long, I will be walking. The vehicle has trouble towing a trailer and that is part of my job. We need new vehicles. I am scared every time something happens that it won't be fixed and Motor Fleet does not have any spares."

Finding 6. Recent changes to the Division of Motor Fleet Management's rate structure for assigned vehicles may encourage inefficient vehicle utilization and limit funding for timely vehicle replacement.

The Division of Motor Fleet Management (MFM) is required by state law to charge each state agency receiving transportation services a proportionate share of the total cost of MFM's operation. Charges are based on mileage, and state law sets the minimum rate for most vehicles at $0.20 per mile.[29] Because MFM supplies state agencies many different types of passenger vehicles, it sets mileage rates for 28 vehicle classes ranging from compact sedans to buses.

MFM analyzes cost data regularly to ensure the mileage rate is sufficient to recover the full cost of operating and maintaining state passenger vehicles. Based on the direct and indirect cost data and mileage information from its fleet management information system, MFM adjusts the mileage rates depending on the cost to operate and maintain the vehicles in the fleet. In the past 10 years, the mileage rate for a midsize sedan has ranged from $0.24 to $0.34 per mile. Effective January 1, 2012, MFM implemented a new rate of $0.30 per mile.

Prior to January 2012, MFM charged state agencies a minimum mileage fee based on 1,050 miles per month. For example, a state agency paid $325.50 per month, or $3,900.00 per year, in 2011 for a midsize sedan. The minimum fee covered all vehicle maintenance, insurance and fuel cost and was paid even if the vehicle was not driven during the month. If a vehicle was driven more than 1,050 miles per month, a state agency paid more for the additional miles based on mileage information entered into the MFM's fleet management information system.

In response to concerns raised by state agencies and institutions and the effect of budget reductions, the Department of Administration implemented a new rate structure for state-owned passenger vehicles by

- billing users for actual miles used per month instead of the minimum monthly mileage threshold;
- charging $35 per month per vehicle to pay for insurance and unrecovered actual cost for vehicle losses; and
- reducing the mileage rate by one cent per mile for all vehicles.

Based on MFM's analysis of vehicle utilization from Fiscal Year 2010–11, the new rate structure is estimated to save money for most state agencies

[29] N.C. Gen. Stat. § 143-341(8).i.6 sets the following minimum mileage charges for MFM vehicles: pursuit vehicles and full-size four-wheel drive vehicles – $0.24 per mile, vans and compact four-wheel drive vehicles – $0.22 per mile, and all other vehicles – $0.20 per mile.

during Fiscal Year 2011–12. The annual savings for all state agencies is estimated to be $3.8 million. MFM has stated that vehicle usage, agency reporting, and compliance will be monitored under the new rate structure.

MFM needs to monitor the effects of the new rate structure on vehicle utilization and the cost of maintaining older state-owned passenger vehicles. Best practices for fleet management suggest that fixed monthly charge-back rate structures create economic incentives for fleet users to turn in underutilized vehicles because they pay the same amount even when they drive fewer miles. MFM's monthly minimum mileage fee encouraged state agencies to use their vehicles efficiently because not meeting the minimum mileage threshold resulted in extra expense for underutilized vehicles. The flat $35 monthly fee covering insurance is not enough to create a financial incentive that encourages efficient use of assigned vehicles. Effectively, the new rate structure may reward agencies with vehicles failing to meet the minimum monthly mileage threshold, while increasing vehicle costs for agencies using their vehicles efficiently.

The new rate structure generates enough revenue to cover fleet operating costs, but the reduction in revenue will make it difficult for MFM to return to its practice of replacing vehicles each year. From Fiscal Year 2002–03 through Fiscal Year 2006–07, MFM spent an average of $22.7 million per year to replace 15% of its vehicles. MFM needs to purchase at least 1,100 new vehicles each year in Fiscal Years 2011–12 and 2012–13 in order to meet best practice standards for timely vehicle replacement. The Program Evaluation Division estimated that purchasing 1,100 vehicles would cost $19.5 million in Fiscal Year 2011-12 and $20.1 million in Fiscal Year 2012–13. The new rate structure does not provide enough revenue to sustain routine vehicle replacement after Fiscal Year 2012–13 and still retain a reasonable cash balance equal to two months of operating expenditures.[30] MFM will have to consider increasing the mileage rate or curtailing vehicle purchases to ensure the MFM internal service fund receives enough revenue to maintain operations.

The new rate structure is a temporary solution that MFM needs to monitor closely. In addition to monitoring vehicle usage and agency reporting, MFM must also consider the effects of the new rate structure on vehicle replacement and the cost of maintaining older state-owned passenger vehicles.

In sum, MFM is operating in accordance with most fleet management best practices, but the Program Evaluation Division identified several ways MFM can improve fleet management and accountability. MFM's reliance on state agencies for fleet management and oversight makes it difficult to hold agencies accountable and it does not have sufficient information to determine the correct number of passenger vehicles to meet state government needs. Telematics offers opportunities to improve accountability and provide information needed to analyze vehicle utilization. Curtailment of vehicle replacement in recent years has led to an

[30] The federal Office of Management and Budget suggests a reasonable cash balance for an internal service fund is 60 days of working capital. For MFM, 60 days of working capital is estimated to be $5.5 million based on monthly operating expenditures which does not include vehicle acquisition.

older, more costly, and less reliable fleet, and recent changes to the rate structure may limit funding for vehicle replacement. With improvements in management and the availability of technology, MFM can continue to meet the state government need for passenger transportation services.

Recommendations

Findings from this report indicate that state agencies may require fewer assigned vehicles to provide passenger transportation services, but these findings are based on incomplete information. Because the Division of Motor Fleet Management does not have complete vehicle utilization information, a final determination cannot be made until frequency of use information is collected for assigned vehicles.

The following recommendations represent actions the General Assembly can take to ensure the Division of Motor Fleet Management has complete vehicle utilization information to enhance fleet operations and improve accountability.

Recommendation 1. The General Assembly should direct the Division of Motor Fleet Management to phase in implementation of basic telematics services to strengthen accountability for state-owned passenger vehicles.

The Program Evaluation Division found telematics would offer the Division of Motor Fleet Management (MFM) a solution for their information deficiencies. Telematics would allow MFM to collect comprehensive vehicle utilization data, identify and confirm vehicle misuse, reduce reliance on state agencies for information, promote more efficient vehicle utilization, and provide agency vehicle coordinators with information to improve agency accountability for assigned passenger vehicles.

Cost estimates suggest full implementation of basic telematics services could be cost effective for MFM because reductions in vehicle utilization may offset the cost of telematics services. The Program Evaluation Division recommends that the General Assembly direct MFM to begin phasing in implementation of telematics as it purchases replacement vehicles during Fiscal Year 2012–13. MFM should purchase a basic telematics service package to monitor vehicle utilization information on all new vehicles. To determine whether the information tracked by a comprehensive telematics service package is beneficial and cost effective, MFM should install a comprehensive telematics service package that includes safety alerts and remote diagnostic reporting on a subset of new vehicles.

MFM should report on the status of telematics implementation to the Senate Appropriations Committee on General Government and Information Technology and the House Appropriations Subcommittee on General Government on or before September 15, 2013. The report should include the following information:

- a description of telematics installation and whether it is strengthening accountability for vehicle usage;
- a recommendation on which telematics service package (basic or comprehensive) should be implemented;

- a description of vehicle use policy modifications explaining how telematics information will be used by MFM;
- an analysis of how telematics monitoring can be integrated with MFM's fleet information system;
- the annual cost for full telematics implementation and estimated cost savings from reduced vehicle utilization and other effects of telematics; and
- a timeline for installing telematics on the active MFM fleet.

Recommendation 2. The General Assembly should direct the Division of Motor Fleet Management to improve management practices by tracking vehicle frequency of use in their fleet management information system, performing a daily demand analysis on motor pool vehicle usage, reinstating routine vehicle replacement, enhancing training for vehicle coordinators, and conducting routine customer service surveys of vehicle users.

Specifically, the General Assembly should direct the Division of Motor Fleet Management (MFM) to take the following actions to improve management practices:

- **Modify the MFM fleet management information system to collect vehicle frequency of use data for all state-owned passenger vehicles.** The Program Evaluation Division found MFM does not have sufficient information to determine the right number of passenger vehicles to meet state government needs. Collecting information on how often a vehicle is used will allow MFM to better determine if vehicles are underutilized. In addition, complete vehicle utilization data may allow MFM to modify or eliminate the exemption process for vehicles with unique uses not meeting the mileage threshold.

- **Perform a daily demand analysis on motor pool vehicle usage to determine which vehicles can be eliminated.** The Program Evaluation Division found that motor pool vehicles are underutilized and some could be eliminated. Performing a daily demand analysis will identify how many motor pool vehicles are needed to meet state government needs based on patterns of daily usage. MFM can use the analysis to determine which motor pool vehicles can be eliminated.

- **Replace aging vehicles with mileage exceeding the 125,000-mile replacement threshold or excessive maintenance costs.** The Program Evaluation Division found that MFM's fleet is aging and many vehicles have mileage exceeding the replacement threshold recommended by Mercury Associates and the 125,000-mile threshold set by MFM. Fleet maintenance costs have also increased during the last three years. Replacing aging vehicles with excessive mileage would help to ensure North Carolina has a modern and efficient passenger vehicle fleet.

- **Enhance training and resources for vehicle coordinators by offering ongoing training opportunities, developing a handbook describing their role and responsibilities, and establishing a vehicle coordinators' user group.** MFM provided vehicle coordinators with initial training, but has not repeated the training or offered the training material online for easy access. The Program Evaluation Division found that vehicle coordinators had different views of their role, and some were dissatisfied with the assistance MFM provides them. Enhancing the training and resources by offering ongoing training opportunities and developing a handbook for vehicle coordinators would ensure they understand MFM's expectations and their responsibilities. Establishing a vehicle coordinators' user group would allow coordinators to discuss issues and concerns, learn effective practices from each other, and provide MFM with feedback on how it can assist and support vehicle coordinators.

- **Conduct periodic customer satisfaction surveys of assigned and motor pool vehicle users.** MFM provides a service to state employees and it needs to measure its success by conducting customer satisfaction surveys. MFM should develop a web-based customer survey tool and periodically survey assigned and motor pool vehicle users.

MFM should report on the implementation of improvements to their management practices to the Senate Appropriations Committee on General Government and Information Technology and the House Appropriations Subcommittee on General Government on or before February 15, 2013.

Recommendation 3. The General Assembly should require the Division of Motor Fleet Management to monitor the new rate structure and report on its effects on assigned vehicle utilization and vehicle replacement.

The Program Evaluation Division found that the Division of Motor Fleet Management's new rate structure may have unintended consequences, including encouraging underutilization of assigned vehicles and limiting timely vehicle replacement. The General Assembly should direct the Division of Motor Fleet Management (MFM) to monitor the new rate structure through the end of the 2012 calendar year and report the following information related to implementation to the Senate Appropriations Committee on General Government and Information Technology and the House Appropriations Subcommittee on General Government on or before February 15, 2013:

- expenditure reductions and increases for each state agency and institution resulting from changing the rate structure;
- increases or decreases in the mileage rate;
- effects on assigned vehicle utilization by state agencies and institutions; and
- effects on cash balances for MFM's internal services fund, operating expenditures, and vehicle replacement expenditures.

Recommendation 4. The General Assembly should modify the statutory mileage threshold for state-owned passenger vehicles in N.C. Gen. Stat. § 143-341(8).i.7a to direct the Department of Administration to adopt rules establishing a passenger vehicle usage threshold criterion that includes mileage, frequency of use, and vehicle purpose.

N.C. Gen. Stat. § 143-341(8).i.7a specifies state-owned passenger vehicles must meet a mileage threshold of 3,150 miles per quarter or 12,600 miles annually. A vehicle can be exempted from the mileage threshold if the vehicle is used for public safety, life-threatening situations, or other justifiable unique purpose. As shown in Finding 3, vehicles that are used most frequently are the most clearly justifiable. Tracking vehicle mileage and frequency of use with consideration of the vehicle purpose allows for a complete assessment of vehicle utilization and will allow the Division of Motor Fleet Management to better assess whether an assigned vehicle is necessary. The Program Evaluation Division recommends that the General Assembly eliminate the specific mileage threshold and exemption process in N.C. Gen. Stat. § 143-341(8).i.7a and replace it with direction to the Department of Administration to adopt rules establishing a passenger vehicle usage threshold that includes mileage, frequency of use, and vehicle purpose.

Appendix

Vehicle Assignment by State Agency and Institution

Agency Response

A draft of this report was submitted to the Department of Administration for review and response. Their response is provided following the appendix.

Program Evaluation Division Contact and Acknowledgments

For more information on this report, please contact the lead evaluator, Carol Shaw, at carol.shaw@ncleg.net.

Staff members who made key contributions to this report include Lee Creighton, Sean Hamel, Catherine Moga Bryant, Pamela L. Taylor, and Larry Yates. John W. Turcotte is the director of the Program Evaluation Division.

North Carolina
Department of Administration

Beverly Eaves Perdue, Governor | Moses Carey, Jr., Secretary

March 6, 2012

John Turcotte, Director
Program Evaluation Division
North Carolina General Assembly
300 N. Salisbury Street, Suite 100
Raleigh, North Carolina 27603-5925

Dear Mr. Turcotte:

Thank you for the opportunity to review the Program Evaluation Division's (PED) report on Motor Fleet Management Division (MFM) operations. We found both the review process and the final report to be very thorough and appreciate the time and effort your staff spent developing the report.

We particularly appreciate the acknowledgment of the fact that this division uses best practices in carrying out its important functions. Two years ago, Motor Fleet Management Division embarked on a series of improvement strategies designed to strengthen its management and improve oversight of its operations. Some of the initiatives included the establishment of the vehicle coordinator function in each agency to provide state agencies with greater flexibility to manage their vehicles optimally and to be a single point of contact for MFM if problems arose in use of vehicles, maintenance, or usage. New tools were developed to give agencies more information with which to manage the vehicles assigned to them. Rates were reduced to help agencies' budgets, without damaging MFM operations. The exemption request process was redefined, and resulted in improved allocation of vehicles based on need and program requirements. And perhaps most importantly, MFM recalibrated its rate and eliminated the artificial minimum mileage as the base payment amount.

With its thorough analysis and understanding of MFM operations, PED has provided additional ideas for ways to continue to improve. Our formal response to the report and these ideas is below.

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In two findings, the Department disagrees with PED assumptions:

- Finding 2/Misuse Oversight: As discussed with PED during the analysis, MFM believes that addressing misuse of vehicles by a driver is a shared responsibility between MFM and the agency by whom the driver of the vehicle is employed. MFM is the point of initial contact to report problems, and it can also research specific vehicle history as well as driver records; however, ultimately, the agency for whom the employee works must investigate misuse reports in the context of the employee's work assignment, and then determine what disciplinary action, if any, is appropriate. PED's suggestion regarding the use of telematics has potential to assist agencies with the oversight of their employee's use of state vehicles and will definitely be explored by MFM.

- Finding 4/Utilization of the Motor Pool: As shared with PED, MFM uses a different methodology for calculating utilization, but DOA will continue to monitor use and consider alternative analysis methodologies to ensure the Motor Pool is optimally used.

With respect to the recommendations, DOA believes that MFM operations can continue to be improved by implementing what is being proposed, specifically:

Recommendation 1: As noted to the staff, DOA has already initiated a limited test of telematics, and will be willing to report on what is found by its limited review. Further MFM is willing to consider expanding such a test, and subject to availability of funds, it has already identified a pool that is well-defined that could determine potential savings and other benefits. During this broader test, DOA could also track costs (hardware, software, staff time, etc.) in order to validate potential savings and determine further application of telematics.

Recommendation 2: Related to management practices that PED believes will further improve operations, DOA will explore what is needed to add the data field for number of trips to the data system. Related to the replacement cycle for vehicles, DOA believes that this should be a need-driven process and extends beyond just passenger vehicles. As such, DOA will initiate the discussion with the Office of State Budget and Management to do a broader statewide review of vehicle needs generally, not just passenger vehicles, and to refine the replacement decision-making tool as part of the statewide budget development process. In that way, MFM will have a better understanding and a more consistent method of planning for passenger vehicle replacement and OSBM will have a clearer view of the total vehicle requirement needs statewide for budgeting purposes. Finally, MFM will definitely conduct additional customer surveys and training of vehicle coordinators, something that was in our plans, but is definitely underscored in PED's analysis as a priority need.

Recommendation 3: DOA routinely reviews its rates for impact on operations, and this new rate structure will be regularly and frequently reviewed to ensure the rates are appropriate based on fuel costs, vehicle repair costs, and our replacement schedule. A report to the General Assembly is welcomed to ensure full transparency for all parties.

Recommendation 4: DOA concurs with the recommendation related to eliminating the minimum mileage figure in the statutes, and MFM will develop an alternative need justification methodology.

DOA is appreciative of the work done by the PED to understand the operation and for its collaboration with the department in reviewing data. The staff of the Program Evaluation Division invested many hours in learning about the operation; we appreciate that they acknowledged the good work of MFM staff, and that they have provided ideas that the Department can use to continue to improve our operations.

Sincerely

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