PERFORMANCE AUDIT

AUDIT OF
STATE FLEET MANAGEMENT

From The Office Of State Auditor
Claire McCaskill

State officials have no assurances the state's vehicle fleet is efficiently used.

Report No. 2001-94
September 25, 2001
www.auditor.state.mo.us

Office of
Missouri State Auditor
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September 2001

www.auditor.state.mo.us

YELLOW SHEET

State officials need more assurances that the state's vehicle fleet is efficiently used

This audit details the status of statewide fleet management policies and found ample room for improvement. Audit results were partly based on the 85 responses we received from state entities to an audit survey and tests on a random sample of 180 vehicles from various state entities. The sampling was necessary because state officials do not keep one central database with statewide vehicle information.

Number of state cars still unclear

No one knows how many vehicles the state owns. The lack of a centralized vehicle management database results in inconsistencies among state entities. State entities reported in the audit survey that they owned 15,389 vehicles. This figure includes 8,877 passenger vehicles, which became the focus of this audit. An attempt to reconcile these numbers with the Department of Revenue state license plate records also showed inconsistencies. (See page 2)

State cars underutilized

About 29% of the 180 passenger cars tested by auditors were driven less than 5,000 miles a year. Fleet managers in other states set the benchmark mileage at no less than 15,000 miles a year for passenger vehicles. Low mileage is an indicator that a fleet has too many vehicles or the cars are inefficiently used. (See page 3)

Few vehicle replacement policies exist

Nearly half of the 85 state entities responding to the survey did not have a vehicle replacement policy, which helps maintain a truly cost-effective fleet. Such a policy sets a replacement threshold in an effort to obtain a substantial return on the state's investment and prevent excessive maintenance. Many state entities with replacement policies were keeping all vehicle types for at least 100,000 miles. Federal guidelines set thresholds from 40,000 to 80,000 miles depending on the vehicle type. (See page 4)

Fleet management left up to each state entity

State entities determine the fleet size and how vehicles are used, assigned, maintained or replaced. Each entity may also adopt its own record keeping system and monitoring process. Most departments further decentralized fleet management by division, such as the Department of Mental Health with 25 different groups maintaining separate vehicle

systems. With no specific guidelines to follow, auditors found several examples of inadequate management including state entities with (See page 7):

- No vehicle management policy.
- No definition of personal use or appropriate incidental use of state cars.
- No justification for how vehicles are assigned.
- No mileage logs kept on vehicles.
- No definition for allowable commuting with state cars.
- No records of maintenance or repairs.
- No records of vehicle operating costs.
- Purchases of vehicles without proper budget authority.

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TABLE OF CONTENTS

Page

STATE AUDITOR'S REPORT 1

RESULTS AND RECOMMENDATIONS 2

Fleet Vehicles Can Be Better Managed 2

Conclusions 10

Recommendations 10

APPENDIXES

I. OBJECTIVE, SCOPE AND METHODOLOGY 12

II. SAMPLE METHODOLOGY AND RESULTS 13

III. LIST OF SAMPLED VEHICLES WITH OVER 100,000 MILES 15

IV. COMPARISON OF NUMBER OF VEHICLES PER STATE ENTITY RECORDS AND THE DEPARTMENT OF REVENUE LICENSE PLATE RECORDS 16

V. SURVEY RESPONDENTS, NUMBER OF VEHICLES, AND SURVEY RESULTS 17

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Honorable Bob Holden, Governor
and
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and
Michael Hartmann, Commissioner
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The State Auditor's Office performed an audit of state vehicles. The audit included all passenger vehicles owned by the 17 state departments, selected elected officials, and 20 colleges and universities throughout the state. The audit focused on adequate controls for usage through policies and procedures, and the utilization of a vehicle management system to track vehicle costs and mileage.

The objectives of this audit were to determine (1) if the state has adequate policies, procedures, controls, and records for the management of vehicles, and (2) if opportunities exist for more efficient and effective use of state vehicles.

For the purposes of this review, we have used the term "state entities" to include all state departments and their subunits, elected officials, and the colleges and universities. Audit tests disclosed that the state did not have adequate statewide policies and procedures and that policies and procedures at the state entity level were inconsistent or nonexistent. Some state entities did not have policies and procedures governing vehicle maintenance, vehicle replacement, proper use, and vehicle assignment. The state does not have a standardized vehicle management system, which would help to ensure the state efficiently operates the fleet of vehicles.

We concluded that fleet vehicles in the state can and should be better managed and the state needs standardized policies and procedures for all state entities to follow in the management of their vehicle fleets.

The audit was conducted in accordance with applicable standards contained in the *Government Auditing Standards* issued by the Comptroller General of the United States and included such tests of the procedures and records as were appropriate under the circumstances.

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State Auditor

June 11, 2001 (fieldwork completion)

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RESULTS AND RECOMMENDATIONS

Fleet Vehicles Can Be Better Managed

The state does not know how many vehicles it owns, vehicles are underutilized and not replaced at an optimal point, and some purchases did not comply with normal budgeting procedures. These conditions exist because the state does not have standard vehicle management policies. Instead, the state operates a large, decentralized vehicle fleet where each state entity manages its own fleet. Vehicle management policies at the state entity level were not consistent and, in some cases, did not exist. As a result, there is no assurance that the state's fleet is effectively and efficiently used.

Audit methodology

We surveyed entities[1] of all 17 state departments, selected elected officials, and 26 colleges and universities to determine if they had vehicle management policies and procedures and to determine the number of vehicles in their fleets. Eighty-five entities responded. We summarized the responses and made audit conclusions regarding the adequacy of fleet management policies on a statewide basis. Because vehicle information is not available in a statewide system, we performed some of our audit work and made conclusions based on a stratified random sample of 180 vehicles from the various state entities and reviewed fleet management records when available. (*See Appendix I, page 12.)* We limited our review to the 8,877 passenger vehicles reported to us by state agencies.

No one knows how many vehicles the state owns

The state does not have a standard vehicle management database and state entity records are inconsistent and inadequate. As a result, it is difficult to determine how many vehicles the state owns. State entities reported in audit surveys that they owned a total of 15,839 vehicles as shown in Table 1.1:

Table 1.1 Number of Vehicles Owned

Vehicle Type	Number
Motor graders, cranes, trailers	2,978
Non-passenger vehicles (cargo vans, heavy-duty trucks, buses)	3,984
Passenger vehicles (automobiles, pick-up trucks, sport utility vehicles, passenger vans)	8,877
Total Fleet	**15,839**

Source: Agency survey responses

The Department of Revenue maintains a record of state license plates issued and we attempted to reconcile the number of vehicles reported to us by state entities to these records. However, the Department of Revenue records consist of 57 computer spreadsheets (one for each state entity). The layout of the spreadsheets is not conducive to any kind of analysis. The spreadsheets were

[1] For the purposes of this audit, we have used the term "state entities" to include all state departments and their subunits, selected elected officials, and the colleges and universities.

not designed to allow any computing or processing capabilities. Instead, each spreadsheet is a list that could not be sorted by model, year, type of vehicle, etc. Reconciling this data with information from individual state entity databases was not possible. Absent reliable state entity databases, we compared the number of vehicles provided to us in response to our surveys of the state entities to the Department of Revenue's spreadsheets on state license plates. This comparison revealed that there were 303 more vehicles reported by state entities than the number licensed. Possible explanations for the differences may include the following:

Vehicle records cannot be reconciled

- Errors in the vehicle records of individual state entities.
- Breakdowns in vehicle licensing procedures by state entities.
- Errors in the Department of Revenue's record.
- The Department of Revenue records did not include Highway Patrol vehicles.
- The number of confidential license plates.

(See Appendix IV, page 16, for the results of this comparison.)

State entities are underutilizing their vehicles

Approximately two-thirds of the 180 vehicles we tested were driven less than 15,000 miles per year. However, annual mileage lower than 15,000 is expected for vehicles used for short trips or special purposes. As a result, we set our audit criteria of underutilization at 5,000 annual miles. We found 52 of the 180 (29%) vehicles were driven less than 5,000 miles during the year. Based on the results of the sample, we estimate the state had a total of 1,763 vehicles that were driven less than 5,000 miles during the year as shown in the table 1.2.

Vehicles were driven less than 5,000 miles in a year

Table 1.2 Number of Vehicles with Less than 5,000 Miles

State Entity (1)	Population (2)	Number Tested (3)	Less than 5,000 miles (4)	Percentage (Col. 4 div Col. 3) (5)	Projected (Col. 2 x Col. 5) (6)
Conservation, Highway Patrol, and Transportation	3,903	60	2	3.3	129
All Other Agencies	3,497	60	12	20.0	699
Colleges/Universities	1,477	60	38	63.3	935
Totals	**8,877**	**180**	**52**		**1,763**

Source: Agency responses to surveys

Although some of these vehicles may be justified because of the need for short trips or other specialized purposes, it appears the state should be able to significantly reduce the size of its vehicle fleet. The state also needs to include in its standard policies and procedures the circumstances where it is appropriate to operate a vehicle less than 15,000 miles in a year.

According to the Council on Efficient Operations and other benchmarks identified in other states, passenger vehicles in public sector fleets should be driven at least 15,000 miles per year. Low mileage is an indicator that a fleet has too many vehicles or is not using them efficiently. Because of the lack of a standard vehicle management system and inadequate records at various

state entities, mileage information is not readily available. As a result, we determined the annual mileage for a stratified random sample of 180 vehicles (from the groups of vehicles listed below) and projected the results to the population of all vehicles. Table 1.3 summarizes annual miles for the vehicles tested.

Table 1.3 Summary of Number of Vehicles by Miles Driven

	Number of vehicles tested			
Annual Miles	Conservation, Highway Patrol, and Transportation	All Other State Agencies	Colleges and Universities	Total
0 to 1,000	0	4	8	12
1,001 to 5,000	2	8	30	40
5,001 to 10,000	8	14	7	29
10,001 to 15,000	16	17	6	39
Over 15,000	34	17	5	56
Not available	0	0	4	4
Totals	**60**	**60**	**60**	**180**

Source: Auditor analysis of agency records

Vehicle replacement policies are important for maintaining efficiency in fleet costs

Nearly half of the 85 (49%) state entities did not have a vehicle replacement policy. Therefore, these state entities could not ensure that they were maintaining a cost-effective fleet. Without a vehicle replacement policy, state entities cannot assess the appropriate break-even point for deciding to maintain and repair the vehicle or to purchase a new one. The state entities that implemented vehicle replacement policies showed a range of replacement thresholds between 49,500 miles and 150,000 miles depending upon the type of vehicle. Understandably, the Highway Patrol had the lowest threshold (49,500 miles) because of the constant use of the vehicles and the type of use. The remaining state entities with such policies have set vehicle replacement at points ranging from 70,000 to 150,000 miles. The majority of those policies indicate state entities are keeping all vehicle types for at least 100,000 miles. However, the federal General Services Administration uses a range of optimal vehicle replacement thresholds of 60,000 miles (for sedans and station wagons), 50,000 miles (for light-duty trucks), 80,000 miles (for heavy-duty trucks), and 40,000 miles (for four-wheel drive vehicles).

Because of the lack of a standard vehicle management system and inadequate records at various state entities, mileage information is not readily available. As a result, we determined the accumulated mileage for a stratified random sample of 180 vehicles (from the groups of vehicles listed below) and projected the results to the population of all vehicles. In our test of 180 vehicles, we found 30 that had over 100,000 miles. These 30 vehicles were owned by 18 different state entities. Although 12 of these 18 entities had vehicle replacement policies, they still operated vehicles with excessive mileage. Based on the results of our sample, we estimate the state owns a total of 1,442 vehicles with over 100,000 miles as shown in table 1.4.

Table 1.4 Vehicles with More than 100,000 Miles

State Entity (1)	*Population (2)*	*Number Tested (3)*	*Over 100,000 (4)*	*Percentage (Col. 4 div Col. 3) (5)*	*Projection (Col. 2 x Col. 5) (6)*
Conservation, Highway Patrol, and Transportation	3,903	60	4	6.7	261
All Other Agencies	3,497	60	16	26.7	934
Colleges/Universities	1,477	60	10	16.7	247
Totals	**8,877**	**180**	**30**		**1,442**

Source: Agency responses to surveys

(See Appendix III, page 15, for list of the 30 vehicles noted in our test that exceeded 100,000 miles.)

Replacing vehicles at the appropriate time is important to obtain a substantial return on the state's investment and prevent excessive maintenance and operating costs.

The replacement of vehicles can be better controlled if agencies are required to comply with the budget process

We noted purchases of vehicles that were not specifically requested as decision items on agency budgets. Instead, the vehicles were purchased from the agency's core budget. Because of this, the Governor's office, the Division of Budget and Planning, and the General Assembly's oversight and approval functions were limited.

The state attempts to control the replacement of vehicles somewhat through the budget process. Budget instructions published by the Division of Budget and Planning state that:

> "Replacement vehicle requests should include information on the mileage of each vehicle as of June 30th. The information is needed to establish consistent application of replacement criteria in the event the funding for vehicles is provided. In addition, the requests for cars should assume cost estimates for a four door mid-size sedan or compact where appropriate, unless specific justification is provided for some other class of car."

Even though budget instructions indicate that vehicle purchases should be itemized in the budget request, the Division of Budget and Planning told us there is no specific prohibition against agencies purchasing vehicles out of their core budget.

We compiled a list of vehicle purchases made from the General Revenue Fund from April 1, 1999, through the lapse period of July 31, 1999, and noted 53 state entities who purchased vehicles totaling $3,584,000. We reviewed the approved budgets for 17 of these 53 entities that purchased $592,700 of the $3,584,000 in vehicles to determine if the state entities budgeted for these vehicle purchases. Ten of the 17 entities we reviewed purchased vehicles totaling $352,237 that were not specifically requested as decision items on state entity

State entities did not follow budget instructions

budgets. Table 1.5 shows the state entities that did not follow the budget instructions for the vehicles purchased.

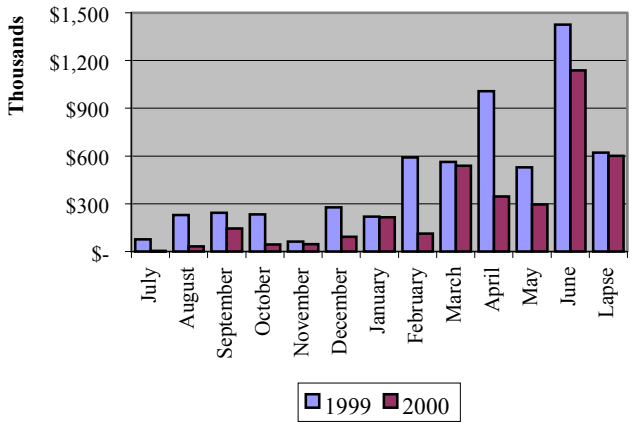
Table 1.5 Non-Budgeted Vehicle Purchases

State Entity	*Amount of* Vehicle Purchases	Month Purchased	*Amount of* Appropriation Lapsed
Secretary of State	$20,761	July 99	$503
Attorney General	$40,744	April-May 99	$0
Judicial Proceedings and Review	$24,404	May 99	$179
OA Division of Facilities Management	$16,343	June 99	$22,361
DED Administrative Services	$13,250	July 99	$105,486
DLIR Board of Mediation	$13,250	June 99	$1,781
DMH Nevada Habilitation Center	$16,964	June 99	$416
DMH Springfield Regional Center	$45,525	June-July 99	$1
Department of Revenue	$160,996	June 99	$30,810

Source: Agency budget documentation and purchase orders

In addition, some vehicles purchased exceeded the class of automobile specified in the budget instructions and the budget did not include the required specific justification. Since agencies are allowed to make their own decisions about when to purchase vehicles and there is a lack of centralized procedures and controls, the state does not know the agency rationale and justification for purchasing the vehicles. Chart 1.1 illustrates agency spending by month for vehicles during fiscal year 1999 and 2000:

Chart 1.1: Amount of Vehicle Purchases by Month



Source: Analysis of agency records

Given the large amounts spent on vehicle purchases each year, the state should have controls and procedures to ensure these purchases are properly authorized in the budget.

Fleet management is accomplished independently at state entities

There are no specific guidelines for the state entities to follow in establishing management programs for their fleets. State entities determine the size of their fleets, how vehicles are used, assigned, maintained, and when to replace or surplus vehicles. State entities may also adopt their own policies, record keeping systems, and fleet monitoring processes. Most departments decentralize vehicle management even more by allowing their divisions, agencies, regional offices, and facilities to manage their own vehicle fleets. For example, within the Department of Mental Health there are at least 25 different organizational groups that maintain their own system and procedures for vehicles.

The authority for setting state rules for state travel and subsistence comes within the scope of the Commissioner of Administration under Section 33.090, Missouri Revised Statutes (RSMo) 2000. The Commissioner issued state travel regulations including Rule 9, which states, "travel may be accomplished by plane, train, bus, private or state-owned automobile, rented automobile or taxi, whichever method serves the requirements of the state most economically and advantageously." Although the state travel regulations include these provisions, the Office of Administration has very little guidance for state entities to follow in making decisions about the most economical and advantageous method of travel.

Fleet vehicle policies and procedures either did not exist or were not adequate

Based on responses to our survey, 27 of the 85 (32%) state entities did not have an overall vehicle management policy, while 58 did have a policy (68%). Ideally, a vehicle management policy should address maintenance schedules, replacement cycles, vehicle usage, and vehicle assignment. The 85 respondents, as shown in table 1.6, had a wide disparity in policies addressing these issues.

Table 1.6 Extent of Vehicle Management Policies

State Entity Vehicle Management Policies		
	Number	
Policy	With	Without
Overall	58	27
Maintenance	20	65
Replacement	43	42
Use	41	44
Assignment	41	44

Source: Agency survey responses

The 27 entities that did not have an overall vehicle management policy are subject to misuse and mismanagement of the fleet. The 27 entities were responsible for 1,281 vehicles. Without guidance, individual users cannot be held accountable for the proper use of the vehicles and fleet managers cannot be held accountable for the condition of the fleet.

Fleet users and managers need guidance

Some of the state entities used insufficient rationale to explain why they did not have a vehicle management policy. For example, some respondents told us that policies were not necessary due

to the small size of their organization and fleet. However, there was no correlation between the size of the state entity and the existence or lack of vehicle management policies.

State entities need vehicle maintenance policies

Audit tests showed that 65 of 85 (76%) respondents to survey questionnaires did not have any vehicle maintenance policies. Vehicle maintenance is a critical element for any vehicle management policy. Without such policies, the fleet's condition is left in the hands of the vehicle operators. As a result, these state entities may not perform routine preventive maintenance at pre-established intervals. Vehicle maintenance should include regularly scheduled preventive maintenance and inspection. The lack of such policies and procedures may also increase the cost of owning and operating vehicles.

Personal and incidental use were not defined

Forty-four of the 85 (51%) state entities did not have a policy concerning the proper use of state vehicles. As a result, individual users did not have proper guidance or a definition of proper use. Without guidance and policies, employees are more apt to misuse vehicles for personal matters. Policies need to clearly outline personal use and define appropriate incidental use. The policy also needs to cover when it would not be appropriate to transport non-state employees.

Record keeping for vehicle use needs improvement

Eight of the 85 (9%) state entities did not maintain vehicle usage logs. These eight entities are listed in the table 1.7:

Table 1.7 State Entities that Did Not Use Vehicle Logs

State Entity	Number of Passenger Vehicles
Harris-Stowe State College	5
Lincoln University	19
Metropolitan Community Colleges	21
Mineral Area Community College	22
Southeast Missouri State University	131
Southwest Missouri State University	98
University of Missouri – Rolla	69
University of Missouri – Kansas City	49
Total	**414**

Source: Agency survey responses

To ensure vehicles are properly used and policies are followed, vehicle usage logs should be maintained and properly reviewed. Vehicle logs should include information on the driver, the date used, beginning and ending odometer readings, and the destination and purpose of the trip.

Most state entities do not have a policy on vehicle assignment procedures

Forty-four of the 85 (51%) state entities did not have a policy to cover vehicle assignment procedures. The state needs proper vehicle assignment policies to promote a more effective and efficient use of vehicle resources. Such policies would ensure that vehicles are assigned only to appropriate individuals or job functions and ensure only eligible employees use pooled vehicles for appropriate purposes.

Policies needed for assigning vehicles

The policy also needs to define commuting and specify the instances when commuting is acceptable. The policy needs to specifically define when a vehicle is justified because the employee is on-call. As an alternative, the state could reimburse the employee for the use of a personal automobile if they were actually called in for an emergency. The best interest of the state should prevail when making decisions to assign vehicles or allow commuting.

State entities need to maintain fleet databases in standard format

The state does not have a statewide fleet management system that provides state entities with current and adequate records. Of the 85 state entities, 17 (20%) indicated they do not have a vehicle management system database. These state entities own 953 (11%) of the state's fleet of passenger vehicles. The Missouri Department of Transportation has a vehicle management system; however, officials reported to us that their system is not accurate nor complete because it does not integrate well with the state's new accounting system. Because of this lack of integration, Department of Transportation has not been able to maintain an accurate and complete database for its fleet of 1,643 passenger vehicles. As a result, a significant percentage of state vehicles are not subject to economy and efficiency benefits inherent in a vehicle management system database.

Inconsistent data collected on fleet vehicles

A vehicle management system database should include basic vehicle identification information to help manage the fleet:

- Vehicle's equipment or license number.
- Fuel and oil usage and costs.
- Periodic and cumulative mileage totals, utilization, and maintenance and repair history (including costs).

A vehicle management system database can increase fleet efficiency by providing data to help agencies control fleet size and condition. Knowledge of various types of utilization statistics (i.e., mileage, number of trips, number of people traveling, etc.) is needed to determine the appropriate fleet size. Analyses of information collected in the database could be used to decide on fleet composition, justify new vehicle purchases, and show if state entities meet vehicle needs cost-effectively.

Some state entities did not have sufficient information in their vehicle management systems

Test results revealed varying levels of vehicle management system information available at the state entities. Even though state entities reported to us that they maintained a vehicle management system, their system was not able to provide certain information as explained below:

Vehicle management systems could improve

- Linn State Technical College and Southwest Missouri State University officials could not provide operating cost information for their vehicles.

- The Department of Mental Health – Bellefontaine Habilitation Center, Central Missouri State University, Linn State Technical College, and Southwest Missouri State University could not tell us how many miles were driven on their vehicles during the year.

- Details of maintenance and repair history were not maintained or were not available for the twelve vehicles tested at the Department of Corrections, and one vehicle each tested at the University of Missouri – Columbia, Linn State Technical College, and Southeast Missouri State University. The Department of Corrections could not provide fuel costs information for ten of the twelve vehicles we tested.

As a result, these and some other state entities are lacking information crucial to efficient and effective management of their vehicle resources.

Conclusions

The audit disclosed that there is a need for a standardized approach by all state entities to the management of their fleets. Many state entities lack good written policies and procedures to effectively and efficiently manage the state's investment in vehicles. All state entities could improve their fleet management systems and databases.

Recommendations

We recommend the Commissioner, Office of Administration, set statewide policy for fleet management and ensure it includes the minimum requirements for a vehicle management program as outlined in the report. The policy should include the following requirements:

- Minimum mileage use requirements.
- Vehicle replacement policies, including replacement thresholds by vehicle type.
- Vehicle purchasing and budgeting procedures.
- Preventive maintenance, including maintenance schedules.
- Allowable and unallowable uses and the records required to account for such use.
- Justification for assigning vehicles to individuals.
- Justification for commuting.

Office of Administration Response

The Office of Administration will convene an interagency work group to develop and recommend policies governing the acquisition, assignment, maintenance and use of state vehicles. Based on the recommendations of the work group, the Commissioner will issue appropriate fleet management policies to executive agency officials.

APPENDIX I

OBJECTIVE, SCOPE AND METHODOLOGY

Objective

The objectives of this audit were to determine (1) if the state has adequate policies, procedures, controls, and records for the management of vehicles, and (2) if opportunities exist for more efficient and effective use of state vehicles.

Scope and Methodology

To accomplish the audit objectives we:

- Reviewed applicable state statutes, code of state regulations, pertinent reports of the Council on Efficient Operations, fleet vehicle related audit reports of other state auditors, and various articles and publications pertaining to fleet vehicle management.

- Obtained information from 85 state entities from 17 state departments, selected elected officials, and 20 colleges and universities regarding the existence of fleet vehicle policies, the number of vehicles owned (by type), and vehicle management systems used.

- Reviewed state entity policies for key fleet management provisions and the number of vehicles affected by these policies.

- Compiled a database of 15,839 state vehicles.

- Obtained Department of Revenue state vehicle license plate records.

- Tested a stratified random sample of 180 vehicles from the three groups (strata) as shown in *Appendix II, page 13*.

- Interviewed fleet managers to clarify policies and procedures.

We sent questionnaires to 17 state agencies, elected officials and colleges and universities to obtain information on state-owned vehicles. Eighty-five entities responded and identified 15,839 vehicles. For audit purposes, we limited audit tests to the 8,877 passenger vehicles in the universe of 15,839 vehicles.

The audit was made in accordance with applicable standards contained in *Government Auditing Standards* issued by the Comptroller General of the United States and included such tests of the procedures and records as were considered appropriate under the circumstances.

APPENDIX II

SAMPLE METHODOLOGY AND RESULTS

Audit Universe

The audit universe consisted of 8,877 passenger vehicles owned by state entities. We stratified the universe into three groups based on the number of passenger vehicles owned.

Table II.1: Number of passenger vehicles

Group Number	Audit Group	Number of vehicles	Percent of total
1	Department of Transportation	1,643	19
	Highway Patrol	1,188	13
	Department of Conservation	1,072	12
	Total – largest three departments	3,903	44
2	Other state agencies	3,497	39
3	Colleges and universities	1,477	17
	Total – all state entities	8,877	100

Source: Prepared by auditors based on survey responses

Sample Design

We selected a stratified random sample of 180 vehicles from the three audit groups noted above. The sample size of 180 was based on a stratified attribute sampling design at the 90 percent confidence level with a 5 percent precision and expected error rate of 6 percent. The sample items were randomly selected from each of the three groups. The samples were used to measure the number of vehicles the state owns that (i) were driven less than 5,000 miles during the year, and (ii) had accumulated mileage over 100,000 miles.

Sample Results

Based on the results of the sample, we estimate the state had a total of 1,763 vehicles that were driven less than 5,000 miles during the year.

APPENDIX II

Table II.2: State Vehicles With Less Than 5,000 Miles

	Conservation, Highway Patrol, and Transportation	All other Agencies	Colleges And Universities	Total
Population	3,903	3,497	1,477	8,877
Sample size	60	60	60	180
Less than 5,000 miles	2	12	38	52
Projected vehicles driven less than 5,000 miles:				
Point estimate error rate	3.3 %	20.0 %	63.3 %	19.9 %
Point estimate quantity	129	699	935	1,763
Upper limit error rate				24.0 %
Upper limit quantity				2,130
Lower limit error rate				15.8 %
Lower limit quantity				1,403

Source: Auditor's analysis

Based on the results of the sample, we estimate the state owns a total of 1,442 vehicles with over 100,000 miles.

Table II.3: State Vehicles With Over 100,000 Miles

	Conservation, Highway Patrol, and Transportation	All other Agencies	Colleges And Universities	Total
Population	3,903	3,497	1,477	8,877
Sample size	60	60	60	180
Over 100,000 miles	4	16	10	30
Projected vehicles over 100,000 miles:				
Point estimate error rate	6.7 %	26.7 %	16.7 %	16.2 %
Point estimate quantity	261	934	247	1,442
Upper limit error rate				11.6 %
Upper limit quantity				1,030
Lower limit error rate				20.8 %
Lower limit quantity				1,846

Source: Auditor's analysis

APPENDIX III

LIST OF SAMPLED VEHICLES WITH OVER 100,000 MILES

In a sample of 180 vehicles, we found 30 vehicles with over 100,000 miles at 18 entities as follows:

State Entity	Mileage	Does the entity have a replacement policy?
Department of Corrections	100,957	No
Department of Corrections	107,560	No
Department of Corrections	141,362	No
Department of Higher Education	113,242	No
Department of Mental Health - Bellefontaine Habilitation Center	132,465	No
University of Missouri - Rolla	129,156	No
Central Missouri State University	104,239	No
Central Missouri State University	124,182	No
Central Missouri State University	135,197	No
Linn State Technical College	152,178	No
Department of Agriculture	131,760	Yes
Department of Natural Resources	100,109	Yes
Department of Natural Resources	105,332	Yes
Department of Natural Resources	109,942	Yes
Department of Public Safety, Adjutant General	126,657	Yes
Department of Mental Health - Central Office	127,992	Yes
Department of Mental Health - St. Louis Regional Center	123,507	Yes
Department of Mental Health - SE Missouri Mental Health Center	179,913	Yes
Department of Health	125,431	Yes
Department of Revenue	128,056	Yes
Department of Social Services	164,059	Yes
Department of Transportation	116,300	Yes
Department of Transportation	124,016	Yes
Department of Transportation	127,182	Yes
Department of Transportation	151,761	Yes
University of Missouri - Columbia	110,241	Yes
University of Missouri - Columbia	121,106	Yes
University of Missouri - Columbia	158,070	Yes
University of Missouri - Columbia	163,243	Yes
Northwest Missouri State University	131,843	Yes

APPENDIX IV

COMPARISON OF NUMBER OF VEHICLES PER STATE ENTITY RECORDS AND THE DEPARTMENT OF REVENUE (DOR) LICENSE PLATE RECORDS

State Entity	Number of Vehicles per: Entity	DOR	Difference
Attorney General	36	27	9
Secretary of State	13	13	0
State Treasurer	3	3	0
Office of State Courts Administrator	26	25	1
Department of Agriculture	271	283	(12)
Department of Conservation	1,229	1,304	(75)
Office of Administration	130	153	(23)
Department of Corrections	704	699	5
Department of Economic Development	167	135	32
Department of Elementary and Secondary Education	174	175	(1)
Department of Health	40	52	(12)
Department of Higher Education	9	9	0
Department of Insurance	6	6	0
Department of Labor and Industrial Relations	34	36	(2)
Department of Mental Health	841	877	(36)
Department of Natural Resources	744	692	52
Department of Public Safety	350	235	115
Missouri Highway Patrol	1,216	0	1,216
Department of Revenue	146	225	(79)
Department of Social Services	426	471	(45)
Department of Transportation	4,063	4,784	(721)
Central Missouri State University	158	176	(18)
Crowder College	74	78	(4)
Harris-Stowe State College	8	8	0
Lincoln University	28	76	(48)
Linn State Technical College	74	75	(1)
Metropolitan Community Colleges	22	32	(10)
Mineral Area College	24	22	2
Missouri Southern State University	31	43	(12)
Missouri Western State University	36	42	(6)
North Central Missouri College	24	0	24
Northwest Missouri State University	132	131	1
Southeast Missouri State University	226	138	88
Southwest Missouri State University	121	173	(52)
State Fair Community College	10	13	(3)
St. Louis Community Colleges	64	0	64
Truman State University	51	60	(9)
University of Missouri - Rolla	104	114	(10)
University of Missouri - Columbia	882	1,008	(126)
University of Missouri - Kansas City	84	97	(13)
University of Missouri - St. Louis	80	68	12
Total Number of Vehicles	**12,861**	**12,558**	**303**

APPENDIX V

SURVEY RESPONDENTS, NUMBER OF VEHICLES, AND SURVEY RESULTS

State Entity	Number of Passenger Vehicles	Has a Vehicle Policy?	Has a Vehicle Maintenance Policy?	Has a Vehicle Replacement Policy?	Has a Vehicle Use Policy?	Has a Vehicle Assignment Policy?	Uses a Vehicle Management System?	Uses Vehicle Logs?
Attorney General	36	NO	NO	Yes	NO	NO	NO	Yes
Secretary of State	11	NO	NO	NO	NO	NO	NO	Yes
State Treasurer	2	Yes	Yes	NO	NO	Yes	Yes	Yes
Office of State Courts Administrator	26	Yes	NO	NO	Yes	Yes	Yes	Yes
Department of Agriculture	240	NO	NO	Yes	NO	NO	Yes	Yes
Department of Conservation	1,072	Yes	Yes	Yes	NO	Yes	Yes	Yes
Office of Administration	124	Yes	NO	Yes	Yes	Yes	Yes	Yes
Department of Corrections (DOC)	644	Yes	Yes	NO	Yes	Yes	NO	Yes
DOC - Fulton Reception and Diagnostic Center	35	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Department of Economic Development (DED) - Administrative Services	20	Yes	NO	Yes	Yes	Yes	Yes	Yes
Safety	38	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DED - Division of Professional Registration	69	NO	NO	Yes	NO	NO	Yes	Yes
DED - Division of Finance	3	NO	NO	Yes	NO	NO	Yes	Yes
DED - Division of Tourism	3	NO	NO	Yes	NO	NO	NO	Yes
DED - Division of Workforce Development	6	Yes	NO	Yes	Yes	Yes	Yes	Yes
DED - Missouri Arts Council	2	Yes	Yes	NO	Yes	NO	NO	Yes
DED - Office of Public Counsel	1	Yes	NO	NO	NO	Yes	Yes	Yes
DED - Public Service Commission	22	Yes	NO	Yes	Yes	Yes	Yes	Yes
Department of Elementary and Secondary Education	62	Yes	NO	Yes	Yes	Yes	Yes	Yes
Department of Health	38	Yes	NO	Yes	Yes	Yes	Yes	Yes
Department of Higher Education	9	Yes	NO	NO	Yes	Yes	Yes	Yes
Department of Insurance	6	NO	NO	Yes	NO	NO	NO	Yes
Department of Labor and Industrial Relations	29	Yes	NO	NO	Yes	NO	NO	Yes

APPENDIX V

SURVEY RESPONDENTS, NUMBER OF VEHICLES, AND SURVEY RESULTS

State Entity	Number of Passenger Vehicles	Has a Vehicle Policy?	Has a Vehicle Maintenance Policy?	Has a Vehicle Replacement Policy?	Has a Vehicle Use Policy?	Has a Vehicle Assignment Policy?	Uses a Vehicle Management System?	Uses Vehicle Logs?
Office	39	Yes	NO	Yes	NO	Yes	Yes	Yes
DMH - Albany Regional Center	17	Yes	NO	Yes	Yes	Yes	Yes	Yes
DMH - Central Missouri Regional Center	24	NO	NO	NO	NO	NO	NO	Yes
DMH - Cottonwood Regional Center	7	Yes	NO	NO	Yes	Yes	Yes	Yes
DMH - Fulton State Hospital	21	Yes	Yes	NO	NO	NO	Yes	Yes
DMH - Hannibal Regional Center	23	Yes	NO	Yes	NO	Yes	Yes	Yes
DMH - Hawthorn Children's Psychiatric Hospital	11	Yes	NO	NO	Yes	NO	NO	Yes
DMH - Higginsville Habilitation Center	59	Yes	NO	Yes	NO	Yes	Yes	Yes
DMH - Joplin Regional Center	14	Yes	Yes	Yes	NO	NO	Yes	Yes
DMH - Kansas City Regional Center	9	Yes	Yes	NO	NO	Yes	Yes	Yes
DMH - Kirksville Regional Center	22	NO	NO	Yes	NO	NO	Yes	Yes
DMH - Marshall Habilitation Center	61	Yes	NO	NO	Yes	Yes	Yes	Yes
DMH - Metropolitan St. Louis Psychiatric Center	8	Yes	NO	NO	NO	NO	Yes	Yes
DMH - Mid Missouri Mental Health Center	8	Yes	Yes	NO	Yes	Yes	Yes	Yes
DMH - Nevada Habilitation Center	25	NO	NO	NO	NO	NO	Yes	Yes
DMH - NW Missouri Psychiatric Rehab Service	33	NO	NO	NO	NO	NO	Yes	Yes
DMH - Poplar Bluff Regional Center	22	NO	NO	NO	NO	NO	Yes	Yes
DMH - Rolla Regional Center	26	NO	NO	Yes	NO	NO	Yes	Yes
DMH - SE Missouri Mental Health Center	17	Yes	NO	Yes	NO	NO	Yes	Yes
DMH - Sikeston Regional Center	24	Yes	NO	NO	Yes	Yes	Yes	Yes
DMH - SE Missouri Residential Services	32	Yes	NO	NO	NO	NO	NO	Yes
DMH - Springfield Regional Center	13	Yes	NO	Yes	NO	NO	NO	Yes
DMH - St. Louis Regional Center	67	Yes	NO	Yes	Yes	NO	Yes	Yes
DMH - SW Missouri Psychiatric Rehab Center	8	Yes	NO	Yes	Yes	Yes	Yes	Yes

APPENDIX V

SURVEY RESPONDENTS, NUMBER OF VEHICLES, AND SURVEY RESULTS

State Entity	Number of Passenger Vehicles	Has a Vehicle Policy?	Has a Vehicle Maintenance Policy?	Has a Vehicle Replacement Policy?	Has a Vehicle Use Policy?	Has a Vehicle Assignment Policy?	Uses a Vehicle Management System?	Uses Vehicle Logs?
DMH - Western Missouri Mental Health Center	28	Yes	Yes	**NO**	Yes	Yes	Yes	Yes
DMH - Bellefontaine Habilitation Center	61	Yes	**NO**	**NO**	Yes	Yes	Yes	Yes
Department of Natural Resources	569	Yes	**NO**	Yes	Yes	Yes	Yes	Yes
DPS - Director's Office	7	**NO**	**NO**	Yes	**NO**	**NO**	Yes	Yes
Department of Public Safety (DPS) - Adjutant General's Office	38	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DPS - Capitol Police	11	**NO**	**NO**	**NO**	**NO**	**NO**	Yes	Yes
DPS - Fire Safety	51	Yes	Yes	**NO**	Yes	**NO**	Yes	Yes
DPS - Highway Safety	6	Yes	**NO**	**NO**	Yes	**NO**	**NO**	Yes
DPS - Liquor Control	15	**NO**	**NO**	**NO**	**NO**	**NO**	Yes	Yes
DPS - State Emergency Management Agency	12	Yes	**NO**	Yes	Yes	Yes	Yes	Yes
DPS - Veteran's Commission	38	**NO**	**NO**	**NO**	**NO**	**NO**	Yes	Yes
DPS - Water Patrol	119	Yes	**NO**	Yes	Yes	**NO**	Yes	Yes
Missouri Highway Patrol	1,188	Yes	Yes	Yes	**NO**	Yes	Yes	Yes
Department of Revenue (DOR)	58	Yes	**NO**	Yes	Yes	Yes	Yes	Yes
DOR - State Tax Commission	3	Yes	**NO**	**NO**	Yes	Yes	Yes	Yes
Missouri Lottery	74	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Department of Social Services	391	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Department of Transportation	1,643	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Central Missouri State University	98	Yes	**NO**	**NO**	**NO**	Yes	Yes	Yes
Crowder College	28	**NO**	**NO**	**NO**	**NO**	**NO**	Yes	Yes
Harris-Stowe State College	5	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Lincoln University	19	Yes	**NO**	**NO**	**NO**	Yes	**NO**	**NO**
Linn State Technical College	42	**NO**	**NO**	**NO**	**NO**	**NO**	Yes	Yes

APPENDIX V

SURVEY RESPONDENTS, NUMBER OF VEHICLES, AND SURVEY RESULTS

State Entity	Number of Passenger Vehicles	Has a Vehicle Policy?	Has a Vehicle Maintenance Policy?	Has a Vehicle Replacement Policy?	Has a Vehicle Use Policy?	Has a Vehicle Assignment Policy?	Uses a Vehicle Management System?	Uses Vehicle Logs?
Metropolitan Community Colleges	21	NO	NO	NO	NO	NO	NO	NO
Mineral Area College	22	NO	NO	NO	NO	NO	Yes	NO
Missouri Southern State University	22	Yes	NO	NO	Yes	NO	Yes	Yes
Missouri Western State University	27	NO	NO	Yes	NO	NO	Yes	Yes
North Central Missouri College	22	NO	NO	NO	NO	NO	NO	Yes
Northwest Missouri State University	58	Yes	NO	Yes	Yes	Yes	Yes	Yes
Southeast Missouri State University	131	NO	NO	NO	NO	NO	Yes	NO
Southwest Missouri State University	98	NO	NO	NO	NO	NO	Yes	NO
State Fair Community College	7	NO	NO	Yes	NO	NO	Yes	Yes
St. Louis Community Colleges	49	Yes	NO	Yes	NO	NO	Yes	Yes
Truman State University	44	Yes	Yes	Yes	Yes	Yes	Yes	Yes
University of Missouri - Rolla	69	Yes	Yes	NO	Yes	Yes	NO	NO
University of Missouri - Columbia	611	Yes	NO	Yes	Yes	NO	Yes	Yes
University of Missouri - Kansas City	49	Yes	Yes	NO	Yes	Yes	Yes	NO
University of Missouri - St. Louis	55	Yes	NO	Yes	Yes	NO	Yes	Yes
Total Number of Passenger Vehicles	8,877							
Total Entities Yes		58	20	43	41	41	68	77
Total Entities No		27	65	42	44	44	17	8
Percentage Yes		68%	23%	51%	48%	48%	80%	91%
Percentage No		32%	77%	49%	52%	52%	20%	9%
Total Vehicles Yes		7,883	7,420	7,029	5,219	6,756	7,924	8,463
Total Vehicles No		994	1,457	1,848	3,658	2,121	953	414

APPENDIX V

SURVEY RESPONDENTS, NUMBER OF VEHICLES, AND SURVEY RESULTS

State Entity	Number of Passenger Vehicles	Has a Vehicle Policy?	Has a Vehicle Maintenance Policy?	Has a Vehicle Replacement Policy?	Has a Vehicle Use Policy?	Has a Vehicle Assignment Policy?	Uses a Vehicle Management System?	Uses Vehicle Logs?
Percentage Yes		89%	84%	79%	59%	76%	89%	95%
Percentage No		11%	16%	21%	41%	24%	11%	5%