

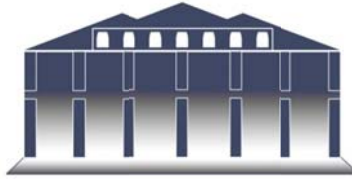
**Inadequate Data and Fleet Information  
Management Weaken Accountability for  
North Carolina's Vehicles**



**Final Report to the Joint Legislative  
Program Evaluation Oversight Committee**

**Report Number 2011-07**

**December 14, 2011**



Program Evaluation Division  
North Carolina General Assembly  
Legislative Office Building, Suite 100  
300 North Salisbury Street  
Raleigh, NC 27603-5925  
919-301-1404  
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**NORTH CAROLINA GENERAL ASSEMBLY**  
Legislative Services Office

George R. Hall, Legislative Services Officer

*Program Evaluation Division*  
300 N. Salisbury Street, Suite 100  
Raleigh, NC 27603-5925  
Tel. 919-301-1404 Fax 919-301-1406

*John W. Turcotte*  
Director

December 14, 2011

Senator Debbie Clary, Co-Chair, Joint Legislative Program Evaluation Oversight Committee  
Senator Fletcher L. Hartzell, Jr., Co-Chair, Joint Legislative Program Evaluation Oversight Committee  
Representative Julia Howard, Chair, Joint Legislative Program Evaluation Oversight Committee

North Carolina General Assembly  
Legislative Building  
16 West Jones Street  
Raleigh, NC 27601

Honorable Co-Chairs:

The Joint Legislative Program Evaluation Oversight Committee 2011-12 Work Plan, approved April 5, 2011, 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. Session Law 2011-145 broadened the scope of the project to include passenger and non-passenger vehicles owned and operated by all State agencies and institutions. This report is the first of three reports on the status of state-owned motor vehicles in North Carolina and provides an overview of the number, use, and cost of vehicles across all State agencies and institutions.

The nature of this evaluation required that we collect data from 37 agencies and institutions owning vehicles and the Department of Transportation's Division of Motor Vehicles. I am pleased to report that all cooperated with us fully and were at all times courteous to our evaluators during the evaluation.

Sincerely,

A handwritten signature in black ink, appearing to read "John W. Turcotte".

John W. Turcotte  
Director



# PROGRAM EVALUATION DIVISION

## NORTH CAROLINA GENERAL ASSEMBLY

December 2011

Report No. 2011-07

# Inadequate Data and Fleet Information Management Weaken Accountability for North Carolina's Vehicles

## 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 first of a series of three reports provides an overview of the number, use, and operating costs of motor vehicles across all agencies and institutions.

**The Program Evaluation Division found an absolute discrepancy of 2,346 vehicles between what agencies and institutions reported owning and vehicle registration records.** North Carolina does not have a central source of information for the number and cost of state-owned motor vehicles. To collect such information statewide, the Program Evaluation Division had to rely on the data provided by state agencies and institutions. It is the Program Evaluation Division's opinion that the 28,669 state-owned vehicles and \$182.7 million in vehicle-related expenditures cited in this report understate the actual number and cost.

**Only 5 of 14 agencies and institutions owning 200 or more vehicles collect the data needed to determine the appropriate size of their fleets.** Vehicle profile and utilization data are necessary to determine the right size of the state fleet. Inconsistencies in vehicle information exist because there is no state law requiring agencies and institutions to collect data on state-owned vehicles and they have not been required to submit standardized use and cost data in order to keep vehicles or to justify acquisition of new or replacement vehicles.

**Other states have identified similar fleet management and oversight problems.** These states identified inadequate fleet management information, decentralized fleet management practices, and difficulty determining the number and location of vehicles as problems affecting statewide fleet management. Georgia, Missouri, and Utah have established centralized offices to address these issues and have invested in fleet management information systems to collect data and report on their state fleets.

**To address the issues identified in North Carolina, two recommendations suggest action by the General Assembly.** First, the General Assembly should direct state agencies and institutions to update vehicle registration records for all state-owned vehicles and direct the State Auditor to provide an independent review of the reconciliation process. Second, to improve fleet management practices statewide, the General Assembly should require the State Controller to recommend an appropriate statewide fleet management system and require state agencies and institutions to collect and report vehicle information through that system.

## 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 include motor fleet fees and associated cash balances, mechanic operations, the use and purpose of assigned vehicles, and state fueling stations.<sup>1</sup> The legislation also directed a follow-up study on the formation of an Aviation Management Authority.<sup>2</sup>

For the purpose of this evaluation, state-owned motor vehicles are 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 first in a series of three reports on the status of state-owned motor vehicles in North Carolina, and provides an overview of the number, use, and cost of motor vehicles across all agencies and institutions. The second report focuses on the management of passenger vehicles by the Department of Administration's Motor Fleet Management Division. The third report describes the management of all other vehicles owned by state agencies and institutions.

The following data were collected for this first report:

- vehicle registration data for permanent license plates from the Department of Transportation's Division of Motor Vehicles;
- number of vehicles, purpose, and operational costs from state agencies and institutions owning motor vehicles and motor fueling sites;
- fleet management practices of state agencies and institutions that own motor vehicles from a survey of fleet managers;
- North Carolina statutes and administrative rules;
- literature review of fleet management best practices;
- audits and evaluations of state-owned motor vehicles in other states; and

<sup>1</sup> 2011 NC Sess. Laws, 2011-145, Section 6.13. (d)-(e)

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

- interviews with and documents from fleet management offices in other states.

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## Background

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### **State agencies and institutions use vehicles to meet their missions.**

Some state functions rely on the use of vehicles to provide efficient and effective services to North Carolinians. For example, the State Highway Patrol relies on their fleet of 2,569 sedans, sport utility vehicles, trucks, vans, buses, and other specialized vehicles to fulfill their law enforcement mission and operations. The Department of Transportation uses its fleet of 7,879 vehicles to support road construction and maintenance throughout the state. Appalachian State University owns 287 vehicles, which support various institutional activities such as athletics, campus safety, food services, and facility maintenance.

**Motor vehicles are risky and expensive state assets to own, operate, and maintain.** State policy acknowledges the dangers associated with accidents involving state-owned vehicles to state employees and members of the general public and requires state agencies and institutions to operate and maintain vehicles to minimize injury, death, and costs. Because the State is financially liable if vehicles are involved in accidents in the course of conducting state business, North Carolina is self-insured up to \$1 million per claimant and \$10 million per occurrence resulting from accident or injury caused by state-owned motor vehicles. From Fiscal Year 1998-99 to Fiscal Year 2009-10, North Carolina incurred \$46.6 million for 23,034 insurance claims, for an average of \$3.9 million per year.

Motor vehicles are expensive state assets to own. The Program Evaluation Division estimates state agencies and institutions spent \$182.7 million from all sources in Fiscal Year 2010-11 to own, operate, and maintain motor vehicles. The cost of state-owned vehicles is comparable to the General Fund appropriation for the entire Division of Social Services in the Department of Health and Human Services for Fiscal Year 2011-12 (\$186.2 million). Proper use and management of these expensive assets is critical to minimize costs.

**North Carolina has enacted laws intended to ensure proper use of state-owned vehicles.** In 1981, the General Assembly established the Division of Motor Fleet Management (MFM) in the Department of Administration to manage, maintain, repair, and store state-owned passenger motor vehicles, and charged MFM with enforcing state policy on vehicle use, assignment, and commuting. Administrative rules define state-owned passenger vehicles as any automobile sedan, station wagon, pickup truck, four-wheel-drive utility vehicle, or passenger-type minivan. Vehicles that perform functions other than passenger transport are excluded from centralized oversight by MFM; therefore, the management and oversight of these vehicles falls to the state agencies and institutions that own them.

Laws have also established expectations for the operation and management of motor vehicles owned by state agencies and institutions.

- **Liability insurance requirement.** Since 1959, departments, agencies, and institutions in North Carolina have been required to carry liability insurance through the State on all state-owned vehicles.<sup>3</sup>
- **License plates for publicly owned vehicles.** State law requires any motor vehicle owned by agencies or institutions to have a license plate that identifies the vehicle as "State Owned."<sup>4</sup> The law provides an exemption for vehicles used to transport suspects, vehicles used to transport individuals receiving mental health, developmental disabilities, or substance abuse services, and law enforcement vehicles used in undercover or surveillance operations.
- **State motor vehicle safety program.** In 1995, the General Assembly directed the Commissioner of Insurance to develop and adopt a State motor vehicle safety program to assure that state-owned motor vehicles are operated and maintained in a safe manner.<sup>5</sup>
- **Petroleum reduction requirement.** In 2005, the General Assembly required all state agencies, universities, and community colleges that have State-owned vehicle fleets to reduce current petroleum products use by 20% by January 1, 2010.<sup>6</sup> Specialty vehicles used for educational or emergency purposes were subject to a 10% reduction in petroleum use.

In sum, motor vehicles are risky and expensive assets for which the State is liable. Ensuring their efficient and effective use is central to managing risks and costs. The first and most basic step towards determining whether vehicles are appropriately managed is the accurate documentation of their number, use, and cost.

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## Findings

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### **Finding 1. North Carolina lacks a central source of information for the number and cost of state-owned motor vehicles.**

Having basic information on state-owned vehicles is the first step to assess and improve the efficiency and effectiveness of the state fleet in meeting various government needs. Because there is no agency responsible for all state-owned vehicles, the Program Evaluation Division had to identify other sources for this information. The Department of Transportation's Division of Motor Vehicles (DMV) maintains a record of all vehicles registered in North Carolina, including those with yellow permanent license plates labeled as "State Owned." Thus, the Program Evaluation Division requested DMV registration records to determine the number of vehicles owned by each state agency and institution.

The review of DMV registration data revealed two major limitations. First, DMV's titling and registration system did not distinguish the yellow permanent license plates for state-owned vehicles from silver permanent

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<sup>3</sup> NC Gen. Stat. § 58-31-50

<sup>4</sup> NC Gen. Stat. § 20-39.1

<sup>5</sup> NC Gen. Stat. § 58-31-52

<sup>6</sup> 2005 NC Sess. Laws, 2005-276. 2011 NC Sess. Laws, 2011-145, Section 19.5(c) extended this provision to September 1, 2016.

license plates for vehicles owned by other authorized entities.<sup>7</sup> State law allows DMV to issue permanent registrations for vehicles owned by non-state entities, including:

- local government entities, such as counties, cities, towns, and local boards of education;
- public safety and emergency management entities, such as civil air patrols, emergency rescue squads, Radio Emergency Assistance of Citizens Teams, rural fire departments, agencies or associations, and local chapters of the American Red Cross; and
- churches that own buses used exclusively to transport individuals to Sunday school, church services, and other church-related activities.

Second, the quality of the data made it difficult to attribute a permanent license plate to the appropriate agency or institution. The Program Evaluation Division encountered multiple versions of an agency's or institution's name in DMV registration data. For example, vehicles owned by the Department of Environment and Natural Resources (DENR) could be listed as:

- the current agency name, full or abbreviated, such as "NC Dept of Environment & Natural Resources" or "NC Department of Environment & Natural Resources;"
- the previous agency name, full or abbreviated, such as "N C DEHNR" or "N C Dept of Nat Res & Comm Devel;"
- the name of a division within the agency, such as "NC Zoological Park" or "Marine Fisheries;"
- any combination of agency and division name, such as "NC DENR Div of Water Quality" or "NC-DENR/NC Aquarium at Pine Knoll Shores;" or
- various misspellings of the agency and/or division name.

Extensive data cleaning allowed the Program Evaluation Division to attribute permanent license plates to 37 state agencies and institutions.

**State agencies and institutions reported differences in their vehicle inventories and the number of permanent license plates registered to them.** In almost every case, agencies and institutions claimed that DMV's registration data did not reflect the number of vehicles they owned, even though the license plates in question were listed as active in the DMV system. Collectively, state agencies and institutions reported owning 28,669 vehicles, whereas DMV records catalogued 29,993 vehicles with permanent license plates registered to the State.

Because the DMV titling and registration system was not designed to maintain an accurate inventory of state-owned vehicles, the Program Evaluation Division used the number of state-owned vehicles based on agency and institution records (28,669). Without verification from an independent source, the number of vehicles reported by state agencies and institutions can only be considered an estimate of the total number of motor vehicles owned by the State.

**Agencies and institutions could not fully account for vehicle discrepancies.** Agencies and institutions differed in whether they reported

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<sup>7</sup> NC Gen. Stat. § 20-84(b)(1)-(16) identifies all motor vehicles authorized to have permanent license plates.



more or fewer vehicles than the number of permanent license plates in DMV registration records. Whereas the net difference in vehicle counts is 1,324, the absolute difference—2,346 vehicles—provides a more accurate picture of the number of permanent license plates not accounted for by state agencies and institutions because it includes both positive and negative differences.<sup>8</sup> The Program Evaluation Division contacted the six agencies and institutions with 150 or more vehicle discrepancies for an explanation of the differences found.

- Two agencies claimed the differences may be due to the number of unmarked vehicles used for law enforcement purposes, which would not have a permanent license plate.
- Another agency official stated vehicles may have been sold after DMV provided vehicle registration data.
- One agency admitted its divisions may not be following proper procedures to turn in permanent license plates when vehicles are disposed of or may not be completing appropriate paperwork when license plates are lost or missing.
- One institution acknowledged it had difficulty determining the exact number of vehicles owned.
- Two agencies could not provide a reason for a discrepancy.

Without a vehicle-by-vehicle reconciliation between agency/institution records and DMV registration data, the State does not know the number of vehicles it owns.

**This evaluation was the first attempt to inventory all state-owned vehicles and reconcile agency and institution vehicle counts to vehicle registration data.** The discrepancies in vehicle counts identified in this report suggest the State cannot account for 2,346 permanent license plates or the state-owned motor vehicles to which these plates were originally registered. Like any other motor vehicle owner in North Carolina, state agencies and institutions are responsible for notifying DMV of name or address changes in writing within 60 days.<sup>9</sup> The Program Evaluation Division's review of DMV registration records indicates this responsibility is not being fulfilled. Further, state law does not require agencies and institutions to have a process to ensure state-owned vehicles are properly titled and registered, easily identifiable in the titling and registration system, and registered with a consistent naming convention. Unlike North Carolina citizens, vehicles owned by state agencies and institutions are not subject to property tax collected by county governments, and as a result, agencies and institutions do not have a financial incentive to correct mistakes if DMV registration records list more vehicles than they claim to own.

**Fifteen state agencies and institutions own 96% of the state-owned motor vehicles.** Each of these state entities reported owning 200 or more

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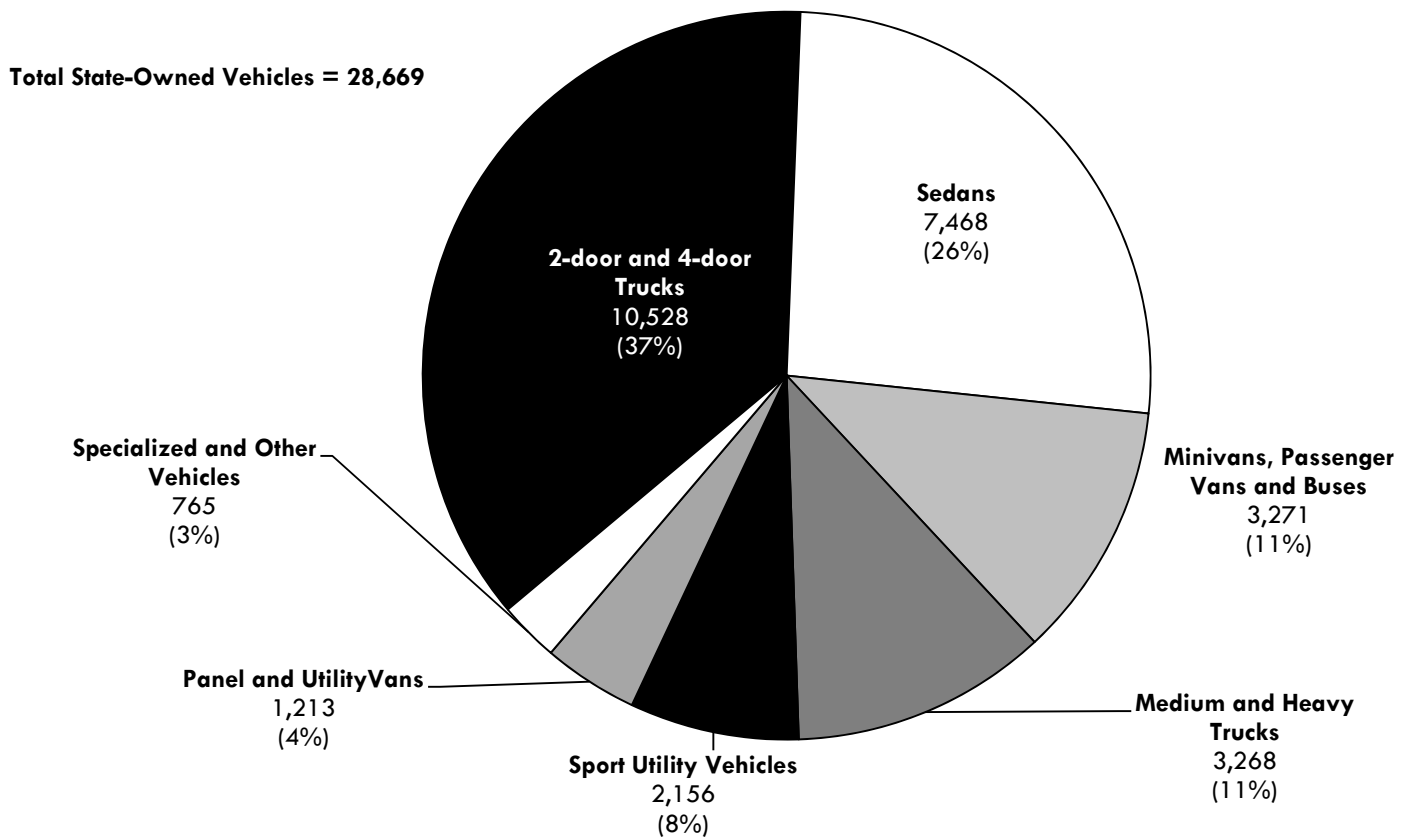
<sup>8</sup> The Office of the State Auditor report, *Performance Audit of the State Property Fire Insurance Fund* (November 2011), identified numerous discrepancies between the inventory of State property maintained by the Department of Administration State Property Office and the property insured by the Department of Insurance Risk Management Division, and recommended a single inventory of state-owned property and procedures to ensure the inventory is maintained accurately.

<sup>9</sup> Department of Transportation Division of Motor Vehicles. (May 2009). *North Carolina Driver's Handbook*.

motor vehicles in Fiscal Year 2010-11.<sup>10</sup> Collectively, these agencies and institutions owned 27,411 vehicles. Two agencies have the largest fleets in the state—the Department of Administration with 7,993 vehicles and the Department of Transportation with 7,879 vehicles. Together, these agencies own 55% of the 28,669 state-owned vehicles. Among education institutions, North Carolina State University owned the most vehicles (974). The 22 agencies and institutions with fewer than 200 vehicles in their fleet owned a total of 1,258 vehicles.

Almost half (48%) of state-owned motor vehicles were pickup, medium, or heavy trucks, and 45% of vehicles were sedans, sport-utility vehicles, minivans, passenger vans, and buses. Exhibit 1 shows the proportion of vehicles by body type (see Appendix A for the estimated number of vehicles for each agency and institution).

Exhibit 1: State-Owned Vehicles by Body Type



Source: Program Evaluation Division based on vehicle inventories provided by state agencies and institutions.

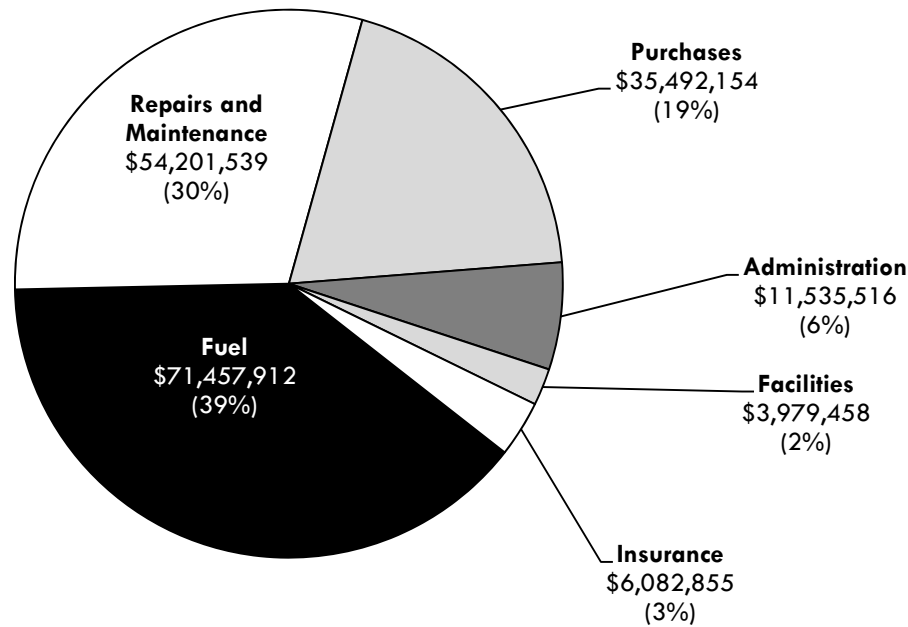
**There is no central source of information on the cost of state-owned motor vehicles.** Each agency is responsible for tracking the cost of their fleet, but there is no standard for accounting for these costs. As a result, the quality and accuracy of the information varies.

<sup>10</sup> The United States Government Services Administration’s Guide to Federal Fleet Management states “fleets of about 200 or more owned units require full-time fleet supervision.” The Program Evaluation Division included the Department of Public Instruction’s 199 vehicles in this category because the total number of vehicles owned by the agency could not be independently verified.

The Program Evaluation Division estimated the total cost of all state-owned vehicles using several methods. First, each agency was asked to review and correct expenditures data provided by the Office of the State Controller for costs associated with supplies for repairs, maintenance, fuel, insurance, and purchases. Next, each agency and institution provided cost information on administration and maintenance personnel, facilities used to store and maintain vehicles, and operation and maintenance of motor fueling sites.<sup>11</sup> Several agencies and institutions (35%) had to estimate these costs because their data did not distinguish between vehicle-related costs and costs for other equipment such as lawn mowers, golf carts, or tractors.

**Based on these data, the Program Evaluation Division estimates state agencies and institutions spent \$182.7 million to own, operate, maintain, and manage state-owned motor vehicles in Fiscal Year 2010-11.** Without a central repository for vehicle cost information, these costs should be considered a conservative estimate of the total costs of state-owned motor vehicles. Vehicle costs ranged from \$1,153 in the Department of Labor to \$70.6 million in the Department of Transportation. Collectively, state agencies and institutions spent an estimated \$71.5 million on fuel and \$54.2 million on maintenance in Fiscal Year 2010-11. Exhibit 2 summarizes statewide vehicle expenditures (see Appendix B for expenditures by agency and institution).

**Exhibit 2: North Carolina Spent Over \$182.7 Million on Vehicles in Fiscal Year 2010-11**



Note: Vehicle expenditures from all sources of funds.

Source: Program Evaluation Division based on cost information provided by state agencies and institutions.

<sup>11</sup> Fifteen state agencies and institutions own motor fueling sites: Appalachian State University, Department of Administration, Department of Agriculture and Consumer Services, Department of Crime Control and Public Safety, Department of Environment and Natural Resources, Department of Health and Human Services, Department of Transportation, East Carolina University, Elizabeth City State University, North Carolina State University, University of North Carolina at Chapel Hill, University of North Carolina at Charlotte, University of North Carolina at Greensboro, Western Carolina University, and Wildlife Resources Commission.

In sum, the State does not have an accurate count of state-owned vehicles and can only estimate the total cost of operating and maintaining these vehicles because there is no statewide source for this information or standard for accounting for costs. Without knowing the number and cost of state-owned motor vehicles, North Carolina cannot determine whether state agencies and institutions are managing these assets appropriately.

**Finding 2. North Carolina does not have the information necessary to determine the appropriate number of vehicles to meet state government needs.**

Fleet size and composition drive fleet-related costs for any organization. Fleet costs increase as size increases because of the fixed costs associated with owning and operating motor vehicles. Despite the financial benefit of actively managing fleet size, industry leaders in fleet management have found that some organizations may let the size of their fleet grow without adequate justification for the increase. This problem—referred to as “fleet creep”—occurs when the size, composition, and expense of the assets grow slowly over time.<sup>12</sup> In Fiscal Year 2010-11, state agencies and institutions spent \$35.5 million to purchase more than 1,200 new vehicles.<sup>13</sup>

**Knowing the number and use of existing vehicles is necessary to determine the appropriate size and mix of a fleet.** In its summary of management recommendations, Mercury Associates includes utilization assessment as a fleet management industry best practice. The first step in conducting this sort of assessment is a detailed fleet profile, which requires a complete vehicle inventory by type, organization, and location—an inventory that North Carolina does not have. A detailed inventory provides a benchmark for the ongoing assessment of vehicle utilization.

Once the fleet profile is completed, the second step of a utilization assessment requires knowing how often vehicles are used. Vehicle utilization is an indicator of the business need for a vehicle and is tracked through vehicle mileage and frequency of use. Vehicles that are used most frequently are most justifiable. Although mileage is a valuable indicator of use, the number of miles traveled does not always offer the best indicator of utilization. For example, vehicles used to patrol prison grounds or maintenance vehicles driven within a small geographical area, such as a campus or government building complex, do not accumulate a lot of miles. In these cases, per-trip use counts are a valuable indicator of utilization. Collecting vehicle mileage and use frequency can be done by tracking either per-trip miles or monthly miles in combination with per-trip use counts.

**Implementing a fleet management information system (FMIS) is the most effective means to evaluate the size and efficiency of a fleet.** An FMIS electronically tracks information on a per-vehicle basis and often includes basic vehicle information such as vehicle identification number,

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<sup>12</sup> Mercury Associates, a recognized industry leader in fleet management, has summarized best practices for managing fleet size and composition.

<sup>13</sup> The number of new vehicles includes vehicle purchases and leases and does not account for the number of vehicles that may have been disposed.

make, model, and year. Because an FMIS should also be capable of tracking vehicle-related costs, miles driven, and frequency of use, a robust system provides efficient collection, analysis, and distribution of fleet utilization data. Having this type of information allows fleet managers to:

- monitor changes in fleet size and composition over time;
- assess fleet utilization; and
- track and analyze direct vehicle costs.

**Agencies and institutions do not have complete information on their state-owned vehicles necessary to determine the appropriate size of their fleets.** Because North Carolina does not have a statewide FMIS for all state-owned vehicles, the Program Evaluation Division assessed the vehicle utilization and fleet management information practices within the state agencies and institutions owning 200 or more state-owned vehicles. The survey identified 68 individuals within the 14 agencies and institutions who were responsible for managing motor vehicle operations at the agency, division, or department/program level.<sup>14</sup> The survey responses revealed that only 5 of 14 state agencies and institutions (36%) electronically tracked the requisite utilization data to determine the appropriate fleet size.<sup>15</sup>

Because agency-wide fleet management relies on uniform data collection for all vehicles, examples of adequate oversight by a fleet manager within an agency may not reflect good agency-wide management. For example, the fleet manager for the State Highway Patrol uses an electronic FMIS to collect vehicle utilization data, but because this practice is not followed by all fleet managers within the agency, the Department of Crime Control and Public Safety cannot be considered as having the appropriate vehicle utilization data for all the vehicles the agency owns.















Exhibit 3 lists the five state agencies and institutions that have implemented an electronic fleet management information system to collect vehicle utilization data for their entire fleet and the nine agencies and institutions that have not. As seen in the exhibit, most state agencies and institutions with one fleet manager have the required utilization data in an electronic format for their entire fleet. No agency or institution with a decentralized fleet management structure had the data to assess if their fleet is used efficiently.

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<sup>14</sup> The University of North Carolina Greensboro was excluded from this analysis because its decentralized vehicle management structure did not allow the Program Evaluation Division to identify all of the individuals responsible for vehicles at the university.

<sup>15</sup> Agencies and institutions with acceptable fleet information management practices collected data on each vehicle in an electronic format. Agencies and institutions with acceptable vehicle utilization data tracked either per-trip mileage or monthly mileage and per-use counts.

### Exhibit 3: Accountability and Accuracy of Vehicle Data Improve with One Fleet Manager

Agencies That Track the Appropriate Data to Perform Vehicle Utilization Assessments	
Agency/Institution	Number of Individuals Responsible for Vehicle Management and Oversight
Appalachian State University	
East Carolina University	
Department of Correction	
Department of Transportation	
North Carolina State University	
Agencies That <u>Do Not</u> Track the Appropriate Data to Perform Vehicle Utilization Assessments	
Agency/Institution	Number of Individuals Responsible for Vehicle Management and Oversight
Department of Health and Human Services	
Department of Environment and Natural Resources	
Department of Agriculture and Consumer Services	
Department of Crime Control and Public Safety	
Wildlife Resources Commission	
Department of Administration	
Department of Justice	
University of North Carolina at Chapel Hill	
Department of Public Instruction	

Note: Each figure represents one individual.

Source: Program Evaluation Division based on survey of fleet management practices.

**Without consistent information on vehicle utilization from all state agencies and institutions, North Carolina cannot determine the appropriate fleet size to meet state government needs.** State law does not require agencies and institutions to collect the appropriate data to assess vehicle utilization. Each agency or institution is left to decide what vehicle information to collect and how to manage it. The lack of statewide guidelines has resulted in inconsistent information management practices, and prevented the Program Evaluation Division from conducting a statewide vehicle utilization assessment for this evaluation. Currently, the General Assembly cannot compare the relative cost and need for vehicles across state government. Developing minimum standards for fleet information management would establish the information infrastructure that would allow the State to:

- determine the appropriate number and mix of vehicles to conduct state business; and
- make systematic budgeting decisions about motor fleet operations.

**Finding 3. Other states have recognized similar problems with fleet management and some have developed models that ensure they have information for decision-making.**

Other states have reviewed vehicle management and oversight to determine whether their fleets were managed efficiently and effectively. The Program Evaluation Division identified 11 states that have evaluated the management of state-owned vehicles since 2001.<sup>16</sup> As shown in Exhibit 4, these reviews identified three central issues.

**Exhibit 4: Fleet Management and Oversight Issues Identified by Other States**

Fleet Management and Oversight Issues	FL	LA	MD	MS	MO	MT	OK	TX	UT	WI	WV
Information for fleet management decision-making is inadequate or not used	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Decentralized fleet management	✓				✓	✓	✓	✓			✓
Difficulty determining the number or location of vehicles				✓	✓	✓	✓				✓

Source: Program Evaluation Division based on a review of performance audits and evaluations conducted by other states.

- Information for fleet management decision-making is inadequate and/or unused.** Evaluations in all 11 states found that state government did not have the necessary information to effectively manage their fleets. The Missouri State Auditor found there was no standard vehicle management database and state vehicle records were inconsistent and inadequate. The Mississippi Joint Committee on Performance Evaluation and Expenditure Review observed the Bureau of Fleet Management did not require agencies to maintain information to make critical decisions about the need for a vehicle or vehicle utilization. The Utah Legislative Auditor General noted about half of state agencies and institutions did not use or monitor vehicle information consistently.
- Decentralized fleet management.** Evaluations in six states found fleet management was decentralized with multiple state agencies managing state-owned vehicles. The Florida Office of Program Policy Analysis and Governmental Accountability observed that their decentralized fleet system hindered coordination, reduced efficiency, and increased costs. The Oklahoma Office of the State Auditor and Inspector found state statutes allowed 22 state agencies to own vehicles resulting in decentralized management of passenger vehicles, and recommended that the Oklahoma legislature centralize management of passenger vehicles to improve performance.
- Difficulty determining the number and location of vehicles.** Evaluators and auditors in five other states noted difficulty

<sup>16</sup> The North Carolina Office of the State Auditor has conducted two related studies within the Department of Transportation on heavy equipment fleet management and a special review of commuting practices in the Ferry Division.

determining the number or location of state-owned vehicles. As in the present North Carolina evaluation, auditors in Missouri and Oklahoma attempted to reconcile vehicle license plate data with vehicle information from the state agencies and institutions and found inconsistencies. The report from the Missouri State Auditor stated that “No one knows how many vehicles the state owns.” The Mississippi evaluation found the Bureau of Fleet Management could not determine the location of a vehicle without going to state agencies.

**Some states have addressed fleet management and oversight problems by investing in fleet management information systems.** As described in Finding 2, fleet management information systems (FMIS) collect and maintain vehicle use and cost data that can be used for fleet management decision-making. Comprehensive statewide data is a powerful tool even if day-to-day vehicle management and operations are delegated to state agencies and institutions. Missouri, Georgia, and Utah each have a system that maintains information on all or most of their motor vehicles. Exhibit 5 summarizes how each state manages and oversees their fleet.

Beyond having an FMIS, the fleet management offices in these states:

- maintain an inventory of all state-owned vehicles;
- manage or establish statewide fleet policies and standards and monitor agency adherence to policies; and
- assist agencies and institutions with fleet management issues.

These offices do not receive direct state appropriations to support their operations.

**Each of these states has developed strategies to better manage their state-owned vehicles.**

- **Missouri.** The fleet manager established a system to ensure the management system has an accurate count of all state vehicles. Each quarter, the license plate and vehicle identification numbers for every state vehicle in the fleet management system is reconciled to the license plate information maintained by the Missouri Department of Revenue. An exception report is generated, and state agencies are required to explain and resolve any errors.
- **Georgia.** Recent FMIS improvements by the Office of Fleet Management have enhanced their ability to assist agencies in finding fleet efficiencies. Before implementing the new FMIS, officials stated they were collecting data but not using it. The office recently hired a data analyst to show state agencies how to make data-based fleet management decisions.
- **Utah.** The Division of Fleet Operations conducts all administrative duties related to the management of state vehicles. The Division also coordinates vehicle purchases, sets administrative rules for fleet management, operates fuel dispensing services and the state travel office, and sets rates to recover vehicle costs.



## Exhibit 5: Other States Have Addressed Fleet Management and Oversight Problems and Invested in Fleet Management Information Systems

	<b>Georgia</b>	<b>Missouri</b>	<b>Utah</b>
	<b>Department of Administrative Services Office of Fleet Management</b>	<b>Office of Administration State Fleet Manager</b>	<b>Department of Administrative Services Division of Fleet Operations</b>
<b>Year Established</b>	1987	2002	1996
<b>Fleet Size (Number of Vehicles)</b>	19,773	10,904	7,301
<b>Responsibilities</b>			
<i>Statewide fleet management</i>	✓	✓	✓
<i>Statewide fleet rules/policies</i>	✓	✓	✓
<i>Statewide standards/best practices</i>	✓	✓	✓
<i>FMIS administration</i>	✓	✓	✓
<i>Vehicle inventory</i>	✓	✓	✓
<i>Fleet contract administration</i>	✓	✓	✓
<i>Reports fleet status to legislature</i>		✓	✓
<i>Additional responsibilities</i>	Analyzes fleet information to identify opportunities for cost savings	Manages quarterly reconciliation process between FMIS and state license plate agency	Manages vehicle registration, licensing, and emissions and safety inspection processes
<b>Fleet Management Information System</b>	Automotive Resource International system (VITAL Insight) customized for Georgia and Automotive Recourse International maintenance and repair program	Custom system developed by Missouri IT staff	AssetWorks system (FleetFocus) customized for Utah and Automotive Recourse International maintenance and repair program

Source: Program Evaluation Division based on interviews with officials and a review of documents from these states.

In sum, North Carolina lacks adequate information to determine the appropriate size and mix of state-owned motor vehicles to meet state government needs. Although state agencies and institutions can provide data on the number, use, and cost of their fleets, the State does not have a central data source to verify the accuracy of this information. State agencies and institutions are not required to collect the necessary data for vehicle utilization assessments. As a result, many do not collect this information at all. The fleet management and oversight issues identified in this report are not unique to North Carolina. Audits and evaluations in other states have addressed similar issues with state-owned motor vehicles by strengthening state policy on fleet management and investing in statewide fleet management information systems. The strategies developed in other states can help improve North Carolina's fleet management practices.

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## Recommendations

**Recommendation 1. The General Assembly should direct state agencies and institutions to update vehicle registration records for all state-owned vehicles, and direct the State Auditor to provide an independent review of the reconciliation process.**

This report identified an absolute discrepancy of 2,346 vehicles between the number of permanent license plates registered to state agencies and institutions by the Department of Transportation's Division of Motor Vehicles (DMV) and the number of state-owned vehicles reported to the Program Evaluation Division by state agencies and institutions. These discrepancies are unacceptable because agencies and institutions, like other motor vehicle owners, are required to notify DMV when vehicle information changes. The responsibility for registering and titling state-owned vehicles rests with the state agencies and institutions that own them, and they must resolve the issues identified in this report. The General Assembly should direct all state agencies and institutions to complete the following tasks by October 1, 2012:

- establish a standard naming convention for how the agency or institution name will be listed on all vehicle registration and titling forms;
- submit the standard naming convention to the State Auditor;
- conduct an internal reconciliation of the discrepancies between permanent license plates registered with DMV and their vehicle records to identify permanent license plates that are inactive or lost;
- update vehicle registration information maintained by DMV by returning or cancelling inactive or lost permanent license plates to ensure these records are accurate; and
- report to the State Auditor that they have submitted their updated vehicle registration information to DMV and provide a copy of their submission.

The Program Evaluation Division has started this process by requesting agencies and institutions reconcile vehicle registration records provided by DMV with the number of vehicles they reported owning.

To ensure integrity in the reconciliation process, the General Assembly should direct the State Auditor to conduct an independent review of the updated vehicle registration information submitted by state agencies and institutions to DMV. The State Auditor should validate the updated vehicle registration records and report any findings to the General Assembly.

**Recommendation 2. The General Assembly should require all state agencies and institutions owning vehicles to collect and report vehicle identification, utilization, and direct cost data to a statewide fleet management information system and should direct the State Controller to identify the appropriate fleet management information system.**

State law does not require state agencies and institutions owning vehicles to maintain vehicle usage and cost information that could be used to determine whether North Carolina has an efficient and effective state

fleet. As shown in Finding 2, only 5 of 14 state agencies and institutions that owned 200 or more vehicles had the requisite information in an electronic format to assess vehicle utilization. To assess whether North Carolina's fleet meets state government needs accurately, the General Assembly should require all state agencies and institutions owning vehicles to collect and maintain vehicle utilization and direct cost data for each vehicle in a fleet management information system (FMIS). A statewide FMIS will ensure that North Carolina has an accurate inventory of vehicles owned by state government and has the information necessary to assess whether the fleet size is appropriate to meet state government needs.

The General Assembly should require the State Controller to determine the most appropriate FMIS for North Carolina because the office is primarily responsible for state government accounting and financial reporting.<sup>17</sup> The State Controller can be an impartial facilitator because the Office of State Controller does not own vehicles or operate an FMIS, and the State Controller is willing to accept this responsibility. The Office of Information Technology Services should be directed to assist and advise the State Controller in the identification of the system.

Because several state agencies and institutions have already purchased or developed fleet management information systems, the State Controller must decide whether North Carolina should modify an existing system for statewide use, develop a new system in-house, or purchase a system from an outside vendor. The responsibilities for the State Controller should include:

- conducting a detailed needs assessment including a complete vehicle inventory using the information in this evaluation as a starting point;
- consulting with state agencies and institutions that own vehicles;
- reviewing the existing fleet management information systems used by North Carolina state agencies and institutions;
- examining fleet management information systems used by other state governments;
- determining the vehicle identification, utilization, and direct cost data that state agencies and institutions will be required to enter in the system;
- determining fees or other methods to pay the initial and ongoing costs for the system; and
- recommending a statewide FMIS, an implementation timeline, a cost estimate, and a funding strategy to the General Assembly by February 1, 2013.

The State Controller has indicated that a modest amount of funding may be needed to fulfill these responsibilities. The General Assembly should consider authorizing the State Controller to access up to \$10,000 from the internal service fund for Motor Fleet Management in the Department of Administration.

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<sup>17</sup> Program Evaluation Division report, *Feasibility of Restructuring Budget and Financial Management of North Carolina State Government* (April 2010), identified the primary responsibilities of the Office of the State Controller.

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## Appendices

Appendix A: Estimated Number of State-Owned Vehicles by Agency and Institution

Appendix B: Estimated Cost of State-Owned Vehicles by Agency and Institution

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## Program Evaluation Division Contact and Acknowledgments

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For more information on this report, please contact the lead evaluator, Carol Shaw, at [carol.shaw@ncleg.net](mailto:carol.shaw@ncleg.net).

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

## Appendix A: Estimated Number of State-Owned Vehicles by Agency and Institution

Agency/Institution	2- and 4-Door Pick-up Trucks	Sedans	Minivans, Passenger Vans, and Buses	Medium and Heavy Trucks	Sport Utility Vehicles	Panel and Utility Vans	Specialized and Other Vehicles	Total Vehicles Owned
<b>State Agencies</b>								
Administrative Office of the Courts	24	55	0	6	9	4	0	98
Department of Administration	108	4,955	1,493	0	1,387	47	3	7,993
Department of Agriculture and Consumer Services	422	0	22	73	11	25	51	604
Department of Commerce	0	0	1	0	0	0	0	1
Department of Correction	468	0	807	173	0	80	171	1,699
Department of Crime Control and Public Safety	47	2,119	9	64	466	52	58	2,815
Department of Cultural Resources	16	0	5	18	3	5	3	50
Department of Environment and Natural Resources	1,379	0	28	333	82	50	129	2,001
Department of Health and Human Services	231	1	213	94	5	117	37	698
Department of Insurance	0	0	3	0	0	0	0	3
Department of Justice	54	227	8	1	141	11	12	454
Department of Juvenile Justice and Delinquency Prevention	45	4	40	0	1	0	0	90
Department of Labor	0	0	0	0	0	0	2	2
Department of Public Instruction	17	79	77	0	8	14	4	199
Department of Revenue	0	0	0	2	0	0	1	3
Department of Transportation	5,539	0	42	2,162	0	8	128	7,879
Employment Security Commission	0	0	0	4	0	3	0	7
North Carolina Community College System Office	0	0	1	0	0	0	0	1
Wildlife Resources Commission	265	0	0	142	1	0	0	408
<b>State Agency Subtotal</b>	<b>8,615</b>	<b>7,440</b>	<b>2,749</b>	<b>3,072</b>	<b>2,114</b>	<b>416</b>	<b>599</b>	<b>25,005</b>

Agency/Institution	2- and 4-Door Pick-up Trucks	Sedans	Minivans, Passenger Vans, and Buses	Medium and Heavy Trucks	Sport Utility Vehicles	Panel and Utility Vans	Specialized and Other Vehicles	Total Vehicles Owned
<b>State Institutions</b>								
Appalachian State University	106	1	48	32	7	82	11	287
East Carolina University	174	0	157	0	3	56	43	433
Elizabeth City State University	14	0	11	1	1	8	0	35
Fayetteville State University	17	0	7	6	0	9	4	43
North Carolina A&T State University	75	3	7	3	4	43	8	143
North Carolina Central University	19	0	11	2	0	8	4	44
North Carolina School for Science and Mathematics	2	0	15	0	0	2	1	20
North Carolina State University	692	1	67	0	14	195	5	974
University of North Carolina Asheville	19	0	12	5	0	0	4	40
University of North Carolina Chapel Hill	372	7	54	67	4	252	8	764
University of North Carolina Charlotte	94	0	15	3	1	8	4	125
University of North Carolina General Administration	31	0	6	1	1	3	2	44
University of North Carolina Greensboro	94	0	13	5	2	32	57	203
University of North Carolina Pembroke	18	1	14	3	0	4	8	48
University of North Carolina School of the Arts	31	6	5	2	3	17	2	66
University of North Carolina Wilmington	50	8	27	53	1	30	4	173
Western Carolina University	67	1	40	11	1	36	1	157
Winston-Salem State University	38	0	13	2	0	12	0	65
<b>State Institution Subtotal</b>	<b>1,913</b>	<b>28</b>	<b>522</b>	<b>196</b>	<b>42</b>	<b>797</b>	<b>166</b>	<b>3,664</b>
<b>Total state-owned vehicles by type</b>	<b>10,528</b>	<b>7,468</b>	<b>3,271</b>	<b>3,268</b>	<b>2,156</b>	<b>1,213</b>	<b>765</b>	<b>28,669</b>
<b>Percentage of state-owned vehicles by type</b>	<b>37%</b>	<b>26%</b>	<b>11%</b>	<b>11%</b>	<b>8%</b>	<b>4%</b>	<b>3%</b>	<b>100%</b>

Notes: Department of Justice and Department of Crime Control and Public Safety numbers include unmarked law enforcement vehicles. Department of Environment and Natural Resources includes Division of Forest Resources vehicles prior to the transfer of the division to the Department of Agriculture and Consumer Services. University of North Carolina General Administration numbers include UNC Center for Public Television vehicles.

Source: Program Evaluation Division based on vehicle inventories submitted by state agencies and institutions.

## Appendix B: Estimated Cost of State-Owned Vehicles by Agency and Institution

Agency/Institutions	Repairs and Maintenance	Fuel	Insurance	Administration	Facilities	Purchases	Total
<b>State Agencies</b>							
Administrative Office of the Courts	\$ 48,774	\$ 175,569	\$ 34,584	\$ 13,484	\$ 0	\$ 116,427	\$ 388,839
Department of Administration	6,778,669	13,991,752	1,374,427	1,315,834	452,484	2,195,138	26,108,304
Department of Agriculture and Consumer Services	655,132	1,216,893	143,896	166,891	59,855	412,217	2,654,885
Department of Commerce	4,514	4,168	1,622	0	0	0	10,304
Department of Correction	2,022,925	5,366,938	361,961	191,344	96,260	5,245,959	13,285,387
Department of Crime Control and Public Safety	7,193,260	10,508,987	690,636	256,176	143,764	7,391,943	26,184,766
Department of Cultural Resources	16,011	34,231	34,386	0	0	37,593	122,221
Department of Environment and Natural Resources	3,382,391	3,368,200	307,346	1,048,113	252,257	3,110,897	11,469,204
Department of Health and Human Services	1,326,908	1,747,068	162,113	350,632	14,754	216,170	3,817,645
Department of Insurance	2,220	1,251	630	7,118	0	0	11,219
Department of Justice	178,040	803,302	84,111	0	0	201,427	1,266,880
Department of Juvenile Justice and Delinquency Prevention	39,876	65,213	38,619	50,968	0	0	194,676
Department of Labor	286	531	336	0	0	0	1,153
Department of Public Instruction	139,966	39,041	17,264	25,006	0	48,662	269,939
Department of Revenue	9,566	4,219	538	1,697	0	0	16,020
Department of Transportation	25,415,130	25,368,110	1,542,568	6,656,409	2,841,345	8,762,301	70,585,863
Employment Security Commission	2,316	2,881	882	3,445	0	0	9,523
North Carolina Community College System	1,165	1,661	310	4,038	120	0	7,295
Wildlife Resources Commission	326,865	940,133	102,811	18,890	0	2,155,911	3,544,610
<b>State Agency Subtotal</b>	<b>\$47,544,014</b>	<b>\$ 63,640,148</b>	<b>\$ 4,899,039</b>	<b>\$ 10,110,043</b>	<b>\$ 3,860,840</b>	<b>\$ 29,894,646</b>	<b>\$ 159,948,731</b>

Agency	Repairs and Maintenance	Fuel	Insurance	Administration	Facilities	Purchases	Total
<b>State Institutions</b>							
Appalachian State University	\$ 947,508	\$ 1,253,193	\$ 59,377	\$ 198,645	\$ 18,500	\$ 299,839	\$ 2,777,062
East Carolina University	1,377,654	952,908	195,836	0	0	552,483	3,078,881
Elizabeth City State University	80,796	66,278	36,657	32,586	15,649	130,442	362,409
Fayetteville State University	43,733	30,960	14,382	29,834	3,300	0	122,209
North Carolina A&T State University	214,903	157,232	30,628	87,845	0	184,639	675,247
North Carolina Central University	53,070	23,109	25,500	75,348	406	107,903	285,336
North Carolina School of Science and Math	25,089	23,286	8,577	722	0	45,003	102,677
North Carolina State University	1,215,514	2,510,904	288,238	151,908	15,500	976,774	5,158,838
University of North Carolina Asheville	128,379	49,564	15,895	0	0	35,000	228,838
University of North Carolina Chapel Hill	529,318	1,099,361	209,536	270,487	24,645	964,936	3,098,284
University of North Carolina Charlotte	324,518	164,322	58,171	139,898	0	876,773	1,563,682
University of North Carolina General Administration	56,300	109,848	44,408	11,620	0	43,287	265,464
University of North Carolina Greensboro	260,063	233,555	81,952	43,490	5,225	282,279	906,563
University of North Carolina Pembroke	94,191	110,556	28,750	39,920	5,950	16,195	295,562
University of North Carolina School of the Arts	61,518	60,712	25,698	234,107	0	197,229	579,265
University of North Carolina Wilmington	801,120	487,642	32,895	58,244	13,624	215,735	1,609,260
Western Carolina University	205,081	351,420	18,047	20,861	0	241,346	836,755
Winston-Salem State University	238,769	132,914	9,268	29,958	15,820	427,644	854,373
<b>State Institution Subtotal</b>	<b>\$ 6,657,525</b>	<b>\$ 7,817,765</b>	<b>\$ 1,183,816</b>	<b>\$ 1,425,473</b>	<b>\$ 118,619</b>	<b>\$ 5,597,508</b>	<b>\$ 22,800,705</b>
<b>Total</b>	<b>\$54,201,539</b>	<b>\$ 71,457,912</b>	<b>\$ 6,082,855</b>	<b>\$ 11,535,516</b>	<b>\$ 3,979,458</b>	<b>\$35,492,154</b>	<b>\$182,749,436</b>

Notes: Department of Environment and Natural Resources includes costs for Division of Forest Resources vehicles prior to the transfer of the division to the Department of Agriculture and Consumer Services. University of North Carolina General Administration includes costs for UNC Center for Public Television vehicles.

Source: Program Evaluation Division based on expenditure data provided by state agencies and institutions.