

November 2012

HIGHWAY SAFETY

Federal and State Efforts Related to Accidents That Involve Non- Commercial Vehicles Carrying Unsecured Loads



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Why GAO Did This Study

Vehicles carrying objects that are not properly secured pose a safety risk on our nation's roadways. Debris that falls from a vehicle can collide with other vehicles or pedestrians, causing serious injuries or fatalities. According to data collected by NHTSA, there were about 440 fatalities caused by roadway debris in 2010. However, the exact number of incidents resulting from vehicles carrying unsecured loads is unknown.

Congress, through the Conference Report for the Consolidated and Further Continuing Appropriations Act, (2012), directed NHTSA to improve its data on unsecured-load incidents and directed GAO to report on state laws and related exemptions, and punitive measures regarding unsecured loads on non-commercial vehicles, such as cars and light trucks used for non-commercial purposes. This report examines NHTSA's data collection efforts as well as states' laws related to unsecured loads. GAO reviewed NHTSA documents and interviewed officials from NHTSA, as well as representatives of highway safety associations and state police agencies. GAO also conducted a survey of all 50 states and the District of Columbia, with a response rate of 100 percent, and researched the laws, punitive measures, and education efforts in each state.

GAO provided a draft of this report to NHTSA for review and comment. NHTSA provided technical comments that were incorporated, as appropriate.

View [GAO-13-24](#). For more information, contact Susan Fleming at (202) 512-2834 or FlemingS@gao.gov.

HIGHWAY SAFETY

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What GAO Found

The National Highway Traffic Safety Administration (NHTSA) collects limited information on crashes involving vehicles carrying unsecured loads but plans to make changes to collect better information. Currently, NHTSA collects some data in the Fatality Analysis Reporting System and the National Automotive Sampling System General Estimates System. However, the systems do not currently have a data category to distinguish between debris resulting from natural sources (such as a tree branch) and debris resulting from human error (such as an unsecured load). As a result, NHTSA cannot currently identify how many crashes involve vehicles carrying unsecured loads. NHTSA intends to make changes to both its systems to better identify crashes involving unsecured loads. These changes will go into effect in 2013. However, NHTSA may still face challenges collecting this data because 1) law enforcement officials face difficulties in determining whether a crash involved an unsecured load and 2) states do not collect uniform data on unsecured loads in their police crash reports. NHTSA officials stated that they would likely recommend changes to the Model Minimum Uniform Crash Criteria (MMUCC)—voluntary guidelines intended to create uniform data in police crash reports; however, the revised guidelines will not be released until 2017 because of MMUCC's 5-year cycle of updates. NHTSA officials acknowledged that even with the changes in its data systems, data improvements will take time to implement and data on unsecured-load crashes will likely continue to be imprecise.

Example of an Unsecured Load on a Non-Commercial Vehicle



Source: GAO.

All 50 states and the District of Columbia have statutes regarding unsecured loads that pertain to non-commercial and commercial vehicles. A majority of states and the District of Columbia reported exempting vehicles from unsecured load statutes for primarily commercial activities such as roadway maintenance or agriculture activities, while 9 states have statutes that apply to all vehicles. All 50 states and the District of Columbia reported having fines or penalties for violating unsecured load statutes ranging from \$10 to \$5,000; fifteen states add the possibility of imprisonment. Ten states also reported having a safety or education program related to unsecured loads.

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Abbreviations

FARS	Fatality Analysis Reporting System
FMCSA	Federal Motor Carrier Safety Administration
MMUCC	Model Minimum Uniform Crash Criteria
NASS GES	National Automotive Sampling System General Estimates System
NHTSA	National Highway Traffic Safety Administration

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United States Government Accountability Office
Washington, DC 20548

November 15, 2012

The Honorable Patty Murray
Chairman
The Honorable Susan Collins
Ranking Member
Subcommittee on Transportation, Housing
and Urban Development and Related Agencies
Committee on Appropriations
United States Senate

The Honorable Tom Latham
Chairman
The Honorable John Olver
Ranking Member
Subcommittee on Transportation, Housing
and Urban Development and Related Agencies
Committee on Appropriations
House of Representatives

Non-commercial vehicles¹ carrying objects that are not properly secured pose a safety risk on our nation's roadways. Debris from a vehicle's unsecured load can collide with other vehicles, or pedestrians alongside roads, causing serious injuries or fatalities. In addition, this type of debris can be a hazard on the road that can result in a crash as drivers swerve to avoid it. Over the last 10 years, several serious crashes involving non-commercial vehicles carrying unsecured loads² have highlighted the safety risks associated with this practice. For example, in February 2004, a driver in Renton, Washington, was critically injured when an

¹For the purposes of our analysis, non-commercial vehicles include passenger vehicles (cars or light trucks) used for non-commercial purposes. Light trucks are trucks of 10,000 pounds gross vehicle-weight rating or less, including pickups, vans, truck-based station wagons, and utility vehicles.

²The definition of an unsecured load varies across states but generally includes cargo in transit that is not properly restrained, tied down, or secured with tarps, nets, or ropes to reasonably prevent a portion from falling off. Cargo can include personal property or objects on the vehicle or attached to a trailer. Open trailers can be obtained from personal or commercial sources, such as U-Haul. For the purposes of this report, "unsecured load" includes cargo that is either not secured or improperly secured.

entertainment center fell from the back of a trailer being pulled by a vehicle in front of her. In November 2011, a woman was killed in Beverly, West Virginia, when unsecured contents fell off a trailer being hauled by a non-commercial vehicle and went through her windshield. More recently, in April 2012, a pedestrian in North Naples, Florida, sustained a fractured skull and spinal injuries when a mattress and metal frame fell off a non-commercial vehicle and struck the victim.

According to National Highway Traffic Safety Administration (NHTSA) data, in 2010, there were about 51,000 crashes—including almost 10,000 injured persons and 440 known fatalities—involving a vehicle striking an object that came off of another vehicle or a non-fixed object lying in the roadway. However, the exact number of crashes involving non-commercial vehicles carrying unsecured loads is unknown, in part because there is no mechanism for distinguishing road obstructions resulting from human error, such as an unsecured load, and those involving natural elements such as a fallen tree. Moreover, while the Federal Motor Carrier Safety Administration (FMCSA) regulates securing cargo on commercial vehicles, similar federal regulations for non-commercial vehicles do not exist.³ States determine what laws, if any, to apply to securing cargo on non-commercial vehicles.

In response to these issues, the Conference Report accompanying the Consolidated and Further Continuing Appropriations Act, 2012, directed NHTSA to collect and classify data resulting from crashes involving road debris in a manner that would distinguish road obstructions resulting from human error from those involving natural elements. Further, the Conference Report also directed GAO to report on the various state laws, associated penalties, exemptions, and enforcement actions regarding unsecured loads.⁴ In response to this congressional direction, this report examines (1) efforts NHTSA has undertaken to monitor crashes involving vehicles⁵ carrying unsecured loads and (2) existing state laws,

³The Federal Motor Carrier Safety Administration's cargo securement rules apply to all cargo-carrying commercial motor vehicles.49 C.F.R. § 393.100 et seq.

⁴H.R. Conf. Rep. No. 112-284, at 300 (2011) accompanying the Consolidated and Further Continuing Appropriations Act of 2012, Pub. L. No.112- 55, 125 Stat. 552.

⁵NHTSA collects data on crashes involving both non-commercial and commercial vehicles.

exemptions, and punitive measures regarding non-commercial vehicles carrying unsecured loads.

To identify efforts NHTSA has undertaken to monitor crashes involving vehicles carrying unsecured loads, we obtained documents from and conducted interviews with NHTSA officials to obtain information on the agency's current policies, procedures, and practices for monitoring crashes involving vehicles carrying unsecured loads. Specifically, we obtained information about what data on unsecured loads NHTSA currently collects; how NHTSA coordinates with state agencies on its data collection efforts; actions NHTSA has taken or plans to take to improve its data collection processes in response to congressional direction; and challenges, if any, that NHTSA faces in improving its data on vehicles carrying unsecured loads. In addition, we conducted a literature search to identify and review relevant studies, reports, and available data on crashes involving vehicles carrying unsecured loads and to gain a better understanding of the magnitude of the problem of vehicles carrying unsecured loads. Finally, we analyzed NHTSA's crash data from the Fatality Analysis Reporting System (FARS) and the National Automotive Sampling System (NASS) General Estimates System (GES) to identify the number of crashes from 2005 through 2010 in which a vehicle struck falling or shifting cargo or an object lying in the roadway. Based on our interviews with NHTSA officials and our review of NHTSA's policies and procedures for maintaining the data and verifying their accuracy, we determined that these data were sufficiently reliable for the purposes of our report.

To identify existing state laws, exemptions, and punitive measures regarding non-commercial vehicles carrying unsecured loads, we conducted a literature review of and legal research on state laws, penalties, and exemptions regarding properly securing loads on non-commercial vehicles. In addition, we conducted a survey of all 50 states and the District of Columbia to supplement, verify, and corroborate data obtained from our legal research and to obtain additional information on penalties, enforcement actions, and education and prevention efforts in each state. We received completed surveys from 51 respondents for a response rate of 100 percent. In addition, we conducted interviews with state police officials in 7 states to collect information on enforcement actions and education and prevention efforts related to properly securing loads carried by non-commercial vehicles. We selected states that (1) were geographically diverse, (2) were of varying sizes, and (3) have varying types of laws related to non-commercial vehicles carrying unsecured loads. We also conducted interviews with associations and

individuals active in highway safety issues to obtain additional information on issues related to unsecured loads and efforts by states to deal with these issues. Interviewees included the American Automobile Association Foundation for Traffic Safety and one of the co-authors of a 2004 study for this foundation examining the safety impacts of vehicle-related road debris; the Governors Highway Safety Association; and the Transportation Cargo Safety Organization.⁶

We conducted this performance audit from March 2012 to November 2012 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient and appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Further details on our scope and methodology can be found in appendix I and the survey is reproduced in appendix II.

Background

Unsecured cargo or other debris falling from a moving vehicle can pose a serious hazard to other motorists and can lead to property damage, injuries, or fatalities (see fig. 1). Examples of unsecured-load debris that often ends up on roadways include objects such as mattresses or box springs, ladders, and furniture items.

⁶American Automobile Association Foundation for Traffic Safety, *The Safety Impact of Vehicle-Related Road Debris*, (Washington, D.C.: June 2004).

Figure 1: Example of Non-Commercial Vehicle Carrying an Unsecured Load



Source: GAO.

NHTSA's mission is to prevent motor vehicle crashes and reduce injuries, fatalities, and economic losses associated with these crashes. To carry out this mission, the agency conducts a range of activities, including setting vehicle safety standards; conducting research on a variety of safety issues; administering grant programs authorized by Congress; providing guidance and other assistance to states to help them address key safety issues, such as drunken driving and distracted driving; and

collecting and analyzing data on crashes. NHTSA analyzes crash data to determine the extent of a problem and to determine what steps it should take to develop countermeasures. Regarding unsecured loads, NHTSA collects some data regarding whether a crash involved an unsecured load.

Determining the number of crashes involving unsecured loads can be a challenge because data are limited. NHTSA does track the number of crashes involving road debris. However, as mentioned previously, these data include all types of road debris, including debris resulting from human error (e.g., unsecured load) and debris that is from natural elements (e.g., a fallen tree branch). Based on available NHTSA data, such crashes comprise a small percentage of total police-reported crashes. For example, in 2010, out of a total of about 5,419,000 crashes, about 1 percent— 51,000 crashes—involved a vehicle striking an object that came off another vehicle or a non-fixed object lying in the roadway. Of these 51,000 crashes, there were almost 10,000 people injured and 440 fatalities—about 1 percent of the total number of fatalities from motor vehicle crashes in that year (32,855).

States determine what laws, if any, to apply to non-commercial vehicles carrying unsecured loads and whether to develop prevention programs geared towards reducing crashes of non-commercial vehicles carrying unsecured loads. State and local law enforcement agencies are responsible for enforcing these laws.

NHTSA's Changes to Its Collection of Data on Unsecured Loads Will Take Time to Implement

While NHTSA currently collects limited information on crashes involving unsecured loads, the agency intends to make changes to its data systems to follow Congress's direction to distinguish road obstructions resulting from human error from those involving natural elements. NHTSA's changes to its data systems will allow the agency to better track crashes involving unsecured loads, but NHTSA will still face challenges with collecting this information because the determination as to whether a crash involved an unsecured load is made by state law enforcement officials and can be difficult to make. Further, there are some limitations with respect to the state data collected in police crash reports, and data improvements will take time to implement.

NHTSA Plans to Collect Better Data on Unsecured Loads in Response to Congressional Direction

NHTSA collects data on crashes and fatalities that may involve both commercial and non-commercial vehicles carrying unsecured loads in two data systems—FARS and NASS GES. (see table 1).⁷ The FARS provides a census of police-reported traffic crashes nationwide in which at least one fatality occurred. The NASS GES provides national estimates of crash statistics based on a sample of police-reported crashes.⁸ For both data systems, police crash reports, which are unique to each state, are a key source of data. NHTSA gathers this information from states and recodes it into a uniform format.

⁷NHTSA also collects data on incidents involving unsecured loads in its investigation based data systems which include the National Automotive Sampling System Crashworthiness Data System, National Motor Vehicle Crash Causation Surveys, Special Crash Investigations, and Crash Injury Research and Engineering Network systems. These systems currently have data elements to identify and collect detailed data on unsecured loads; however incidents involving unsecured loads do not appear in these systems with sufficient frequency to allow NHTSA to make a national estimate based on them.

⁸For a crash to be eligible for the GES sample a police crash report must be completed and it must involve an crash with a motor vehicle resulting in property damage, injury, or death.

Table 1: Description of NHTSA’s Data Collection Systems

Data system	Description	Data source	Data collection method
FARS	The FARS provides data on fatal traffic crashes based on a census of the traffic crashes in which at least one fatality occurred. To be included in a FARS, a crash must involve a motor vehicle traveling on a facility customarily open to the public and must result in the death of an occupant of a vehicle or a non-motorist within 30 days of the crash.	Data are obtained from state and local police crash reports, state vehicle registration files, state driver-licensing files, State Highway Department data, vital statistics, death certificates, coroner/medical examiner reports, and emergency medical service reports.	Data for FARS are collected on a voluntary basis through cooperative agreements between NHTSA and each of the 50 states, the District of Columbia, and Puerto Rico. On average police crash reports are obtained from approximately 9,900 of the 17,000 police jurisdictions in the United States.
NASS GES	NASS GES provides national estimates of crash and injury statistics based on a nationally representative, random sample of all types of police-reported motor vehicle traffic crashes.	Data are obtained from state and local police crash reports.	About 50,000 police crash reports are randomly selected each year from 410 police jurisdictions in 60 sites across the United States.

Source: NHTSA information.

Currently, there are three data categories in these systems that track data on crashes involving road debris. However, as noted previously, these data categories do not currently distinguish between different types of roadway debris (i.e., debris resulting from natural/environmental sources versus debris resulting from human error). As a result, NHTSA cannot currently identify how many crashes involve vehicles carrying unsecured loads.

In response to the congressional direction to improve its data on unsecured-load crashes, NHTSA officials stated that they are currently making changes to the FARS and the NASS GES to collect better information and better track crashes involving unsecured loads. Specifically, NHTSA has developed changes to both systems to (1) revise two existing data categories on road debris and (2) add two new data categories. The revised and new categories will provide more specific information on unsecured-load crashes. (See appendix III for current FARS and NASS GES data category definitions and planned 2013 changes.) For example, NHTSA will now be able to distinguish between the following two types of crash scenarios that involve an object being set in motion by one vehicle and striking another vehicle, a person, or property, causing injury or damage:

- Cargo, such as a mattress, being transported by one motor vehicle becomes dislodged and strikes another vehicle, a person, or property.

-
- An object in the road, such as a tree branch, is struck by a motor vehicle and then strikes another vehicle, a person, or property.

NHTSA will also be able to distinguish between two types of crash scenarios that involve a vehicle striking an object already in the road (without striking another vehicle, a person, or property):

- A motor vehicle strikes a non-fixed object *already at rest* in the roadway, such as a mattress, and the object is *known* to have been cargo from an unsecured load.
- A motor vehicle strikes a non-fixed object *already at rest* in the roadway, such as a tree branch, and the object is known to have *not* come from a motor vehicle, or it is *unknown* if it came from a motor vehicle.

NHTSA officials stated that they intend to analyze this data in the future to determine whether actions are needed to address this problem. They explained that in deciding when to take actions regarding a traffic safety issue, NHTSA first tries to determine the extent of the problem by looking at counts or trends. The agency then may conduct research to better understand the problem and work toward developing countermeasures.⁹

According to NHTSA officials, these changes will be effective in the FARS and NASS GES during the 2013 data collection year, which begins January 2013. To implement these changes, NHTSA plans to develop a 2013 coding manual between mid-August 2012 and December 5, 2012, and develop data-entry specifications by November 2012. NHTSA officials stated that they plan to train FARS analysts at the state level and NASS GES data coders on how to use the new and revised data elements in early December 2012. Public users will first have access to the 2013 data in 2014 after data collection and quality control checks are completed.

⁹NHTSA also intends to use data in its investigative data systems to aid in the development of countermeasures.

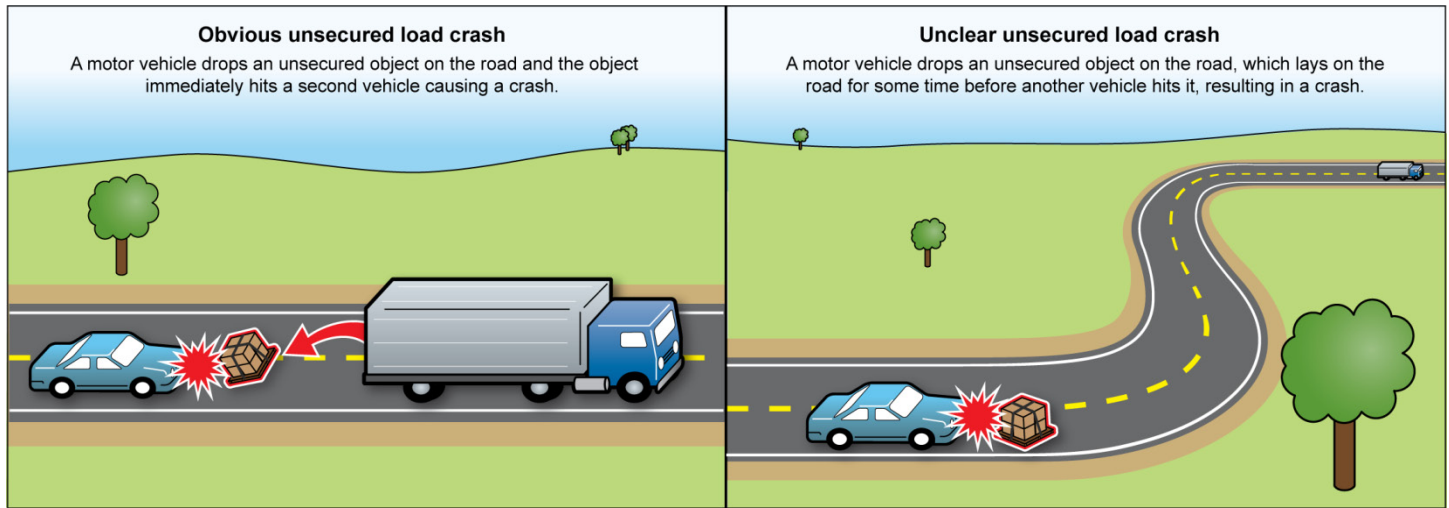
Identifying Unsecured-Load Crashes Can Be Difficult, and Data Improvements Will Take Some Time to Implement

While NHTSA's changes to the FARS and NASS GES data systems will allow the agency to better track crashes involving unsecured loads, it still faces challenges collecting data on these crashes. Two primary factors affect NHTSA's ability to collect this information: (1) law enforcement officials face difficulties in determining whether a crash involved an unsecured load and (2) states do not collect uniform data on unsecured loads in their police crash reports. Even with the changes that NHTSA is making in its data collection processes and procedures, the resulting data will be imprecise because it relies on state reporting of crashes and data improvements will take time to implement as acknowledged by NHTSA. NHTSA officials stated that they will make every effort to capture the data available in the source documents to provide the most accurate assessment of this safety issue.

Law Enforcement Officials Face Difficulties Determining Whether a Crash Is a Result of an Unsecured Load

Even though NHTSA is improving its data systems, determining whether a crash is a result of an unsecured load will remain a challenge. Several law enforcement officials we spoke with indicated that classifying a crash involving an unsecured load is difficult in some cases, because it is unclear whether the object on the road was as a result of an unsecured load or another factor. One law enforcement official explained that if an object falls from a moving vehicle and immediately hits a vehicle or a person, the crash is generally classified as an unsecured-load crash. However, if an object falls from a moving vehicle onto the road and remains on the road for some time before another vehicle subsequently strikes the object, then the crash will generally not be classified as an unsecured-load crash unless there is a witness available to report that the object originally fell off of another vehicle (see fig. 2). The official explained that identifying the first incident as an unsecured-load crash is generally easier because of a higher likelihood of witnesses at the scene who saw the crash occur and saw the unsecured-load fall from the vehicle. In the second scenario, where debris remains on the road for some time, there may be no information to explain how the object on the road ended up there. According to this official, it is up to the reporting officer to determine how to classify or describe the crash in the police report. Under NHTSA's planned data system changes, the agency will be able to specify in their data systems crashes that involve unsecured loads if all pertinent information is available to the reporting officer. However, if the incident is not identified by the reporting officer as an unsecured-load crash in the first place, it may not be flagged as such in NHTSA's data systems. NHTSA officials acknowledged that it can be difficult in some cases to determine if something in the road fell off a vehicle if there is no evidence available.

Figure 2: Obvious Unsecured-Load Crash and a Crash That Is Difficult to Identify as an Unsecured-Load Crash



Source: GAO.

Data Are Inconsistent

States do not uniformly define and report data on unsecured loads in police crash reports. NHTSA uses information from police crash reports to determine whether a crash is an unsecured-load incident or another type of incident. Some state crash reports contain a field where officers can check off a box indicating whether “unsecured loads” were a contributing factor in a crash while others rely on the officer to explain in the narrative section of the report whether the incident involving an unsecured load or other factor. NHTSA uses information from both sections of the report in developing their data. However, in some cases, information about whether a crash involved an unsecured load may not be included in the narrative portion of the police reports. According to NHTSA officials, reports on fatal crashes are more likely to have this information; however, the level of information that is included in the narrative report could vary from officer to officer. If a police crash report does not contain information indicating that a crash involved an unsecured load, then NHTSA cannot classify the crash as such.

On a voluntary basis, most states have begun collecting a similar minimum core of information in their police crash reports. These core elements are outlined in the Model Minimum Uniform Crash Criteria (MMUCC), voluntary guidelines for the implementation of uniform crash

data elements.¹⁰ According to NHTSA officials, most states follow these guidelines to varying degrees. One avenue for ensuring that all states collect consistent information on unsecured loads in their police crash reports would be to include unsecured-load data as a core data element in the next edition of the guidelines. NHTSA does not have independent authority to seek changes in state police reports; however, NHTSA officials stated that they will likely recommend changes to MMUCC guidelines. In order for a new data element to be added, it must be approved by the MMUCC Expert Panel, which includes representatives from NHTSA, FMCSA, the Federal Highway Administration, the National Transportation Safety Board, the Governors Highway Safety Association, Insurance Institute for Highway Safety, Ford Motor Company, Emergency Medical System agencies, and local and state police agencies. Recommended changes to the guidelines can be submitted by any agency represented on the MMUCC expert panel.

Any changes to the guidelines cannot be made for quite some time as MMUCC operates on a 5-year cycle. MMUCC released its revised guidelines in July 2012, and the next update is not expected until 2017. NHTSA officials explained that they would be unable to recommend changes to the guidelines until 2016, when MMUCC begins the process updating the guidelines. If changes are made to the guidelines, these changes would not go into effect until after 2017. NHTSA officials also noted that making changes to police crash reports in response to changes in the guidelines can take from 12 to 18 months. Some police agencies now use electronic police crash reports, and as a result, changes to the police crash reports could require information technology infrastructure investments to update their electronic systems. Moreover, additional training of police officers regarding how to use the new data elements would be required. NHTSA officials stated that in the interim, state FARS analysts and NASS GES data coders will communicate to law enforcement officials that information on unsecured-load crashes should be included in the narrative portion of police crash reports.

¹⁰MMUCC was originally developed in response to requests by states interested in improving and standardizing their state crash data. Lack of uniform reporting made the sharing and comparison of state crash data difficult. Since it was first published in 1998, the MMUCC guidelines have become the standard most used by states in developing and revising their police crash reports.

All 50 States and the District of Columbia Have Laws That Pertain to Non-Commercial Unsecured Loads, but Exemptions, Fines, and Penalties Vary

All fifty states and the District of Columbia have statutes regarding unsecured loads that pertain to non-commercial vehicles. While nine states reported having no exemptions related to their statute, a majority of states and the District of Columbia reported exempting vehicles from unsecured-load statutes most commonly for roadway maintenance or agriculture activities, but these exemptions are primarily related to commercial activities. All fifty states and the District of Columbia reported having fines or penalties for violating unsecured-load statutes ranging from \$10 to \$5,000; fifteen of these states add the possibility of imprisonment. (See appendix IV for summary of all fifty states and the District of Columbia's laws, exemptions, and penalties/fines.) Ten states reported having a safety or education program related to unsecured loads.

All States Have Laws Pertaining to Commercial Unsecured Loads That also Apply to Non-Commercial Vehicles, but Certain Commercial Activities Are Frequently Exempted

All fifty states and the District of Columbia have statutes regarding unsecured loads that pertain to non-commercial vehicles. While the statutes vary widely, many use a common construction similar to: "No vehicle shall be driven or moved on any highway unless such vehicle is so constructed or loaded as to prevent any of its load from dropping, shifting, leaking, or otherwise escaping there from," a statement that is oftentimes followed by exemptions as discussed below. However, a few states such as Mississippi have short statutes that contain a shortened form of this common language.¹¹ Other states such as Oklahoma set forth more specific instructions in the statute directing, for example, the covering of loads to be "securely fastened so as to prevent said covering or load from becoming loose, detached or in any manner a hazard to other users of the highway."¹²

The state statutes on unsecured loads differ more frequently in their description of exemptions. According to our survey, 41 states and the District of Columbia have exemptions from unsecured-load laws in their statutes (see fig. 3). These exemptions most commonly applied to roadwork and agriculture. For example, the most common roadway exemption includes "vehicles applying salt or sand to gain traction" or "vehicles dropping water for cleaning or maintaining the highway." Exemptions for commercial activities range from general wording such as

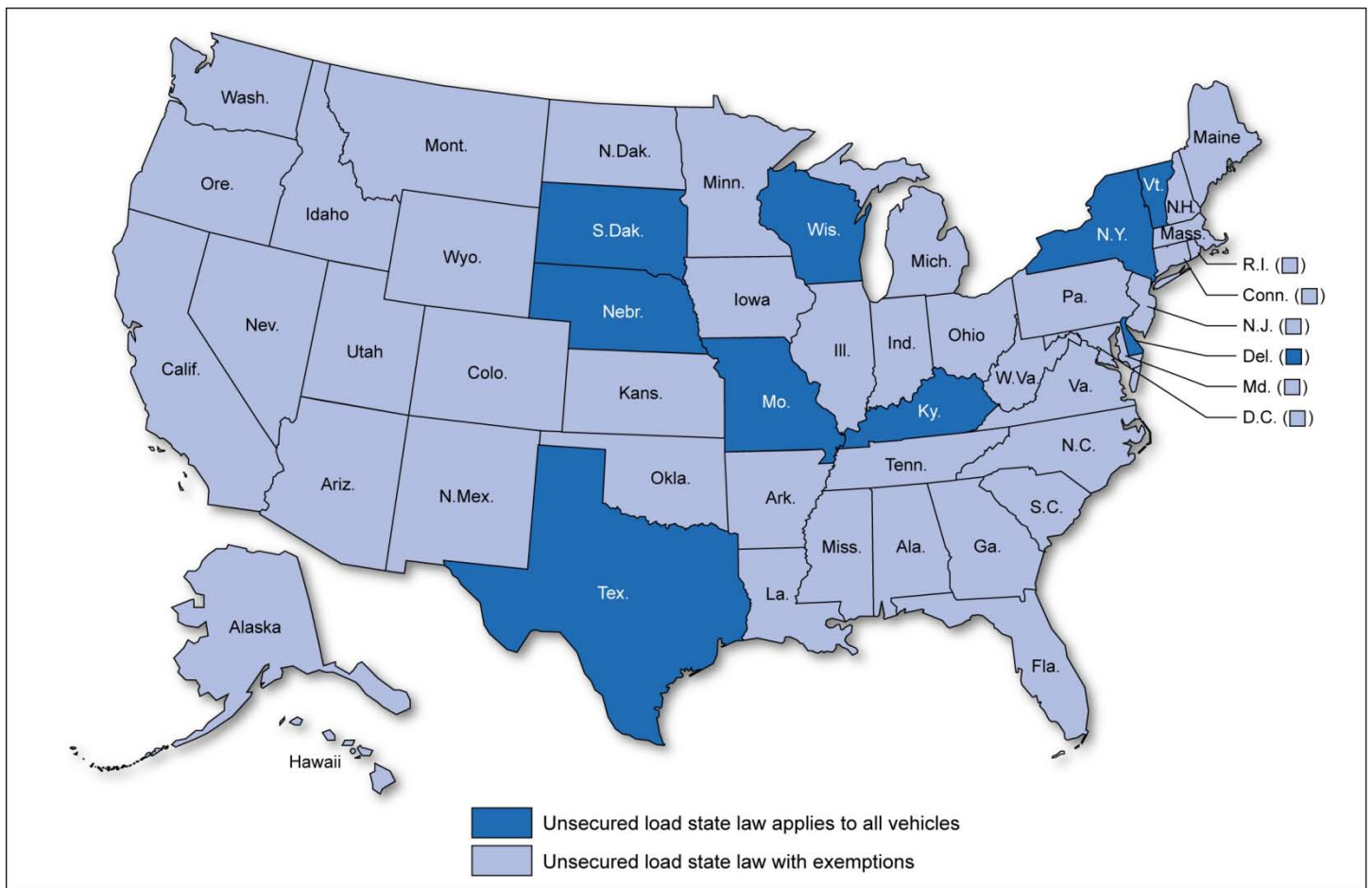
¹¹Miss. Code Ann. §63-5-55.

¹²47 Okl. St. § 14-105.

“applies to all motor vehicles except those carrying agricultural loads,” to industry-specific exemptions such as “applies to all motor vehicles except logging trucks or those carrying wood, lumber, or sawmill wastes.”

Nine states reported having no exemptions to their unsecured-load statute, including Delaware, Kentucky, Missouri, Nebraska, New York, South Dakota, Texas, Vermont, and Wisconsin.

Figure 3: State Statutes That Provide Exemptions for Unsecured-Load Laws, 2012



Sources: GAO analysis of unsecured load state laws and exemptions and Map Resources.

States Have Punitive Measures of Varying Degrees, Including Fines of \$10 to \$5,000 and Possible Imprisonment

All states have some level of fines or penalties for violations of unsecured-load statutes. Most states have specific penalties ranging from as little as \$10 to as much as \$5,000; fifteen states include possible jail time. (See fig. 4.)

- Two states—Nevada and New Hampshire—reported the fine as unknown, because it is imposed at the local court level and could vary widely.
- Twenty states and the District of Columbia reported maximum fines of \$10 to less than \$500 and only two of those states—Tennessee and Colorado—add possible jail time in addition to the fine.¹³ Eight of these states have maximum fines between \$10 and \$100 for the first offense.
- Twenty-eight states reported more severe maximum fines of \$500 to \$5,000 for violating unsecured-load laws and thirteen of those states—Florida, Georgia, Illinois, Louisiana, Michigan, Mississippi, New York, Oklahoma, South Dakota, Virginia, Washington, West Virginia, and Wyoming—include possible jail time in addition to a fine.

The states of Illinois,¹⁴ Virginia,¹⁵ and Washington¹⁶ have the highest maximum fines: \$2,500 for Illinois and Virginia, and \$5,000 for Washington.¹⁷ In addition, the law enforcement officials in all of the seven states we selected for interviews stated that additional criminal charges could be brought in their state against individuals who injured or killed a person as a result of negligently securing their load in addition to the specific penalties stated in unsecured-load statutes.

¹³Jail time ranges from no more than 30 days for example in New York, South Dakota, and Tennessee—to no more than a year in Georgia, Illinois, Virginia, and Washington.

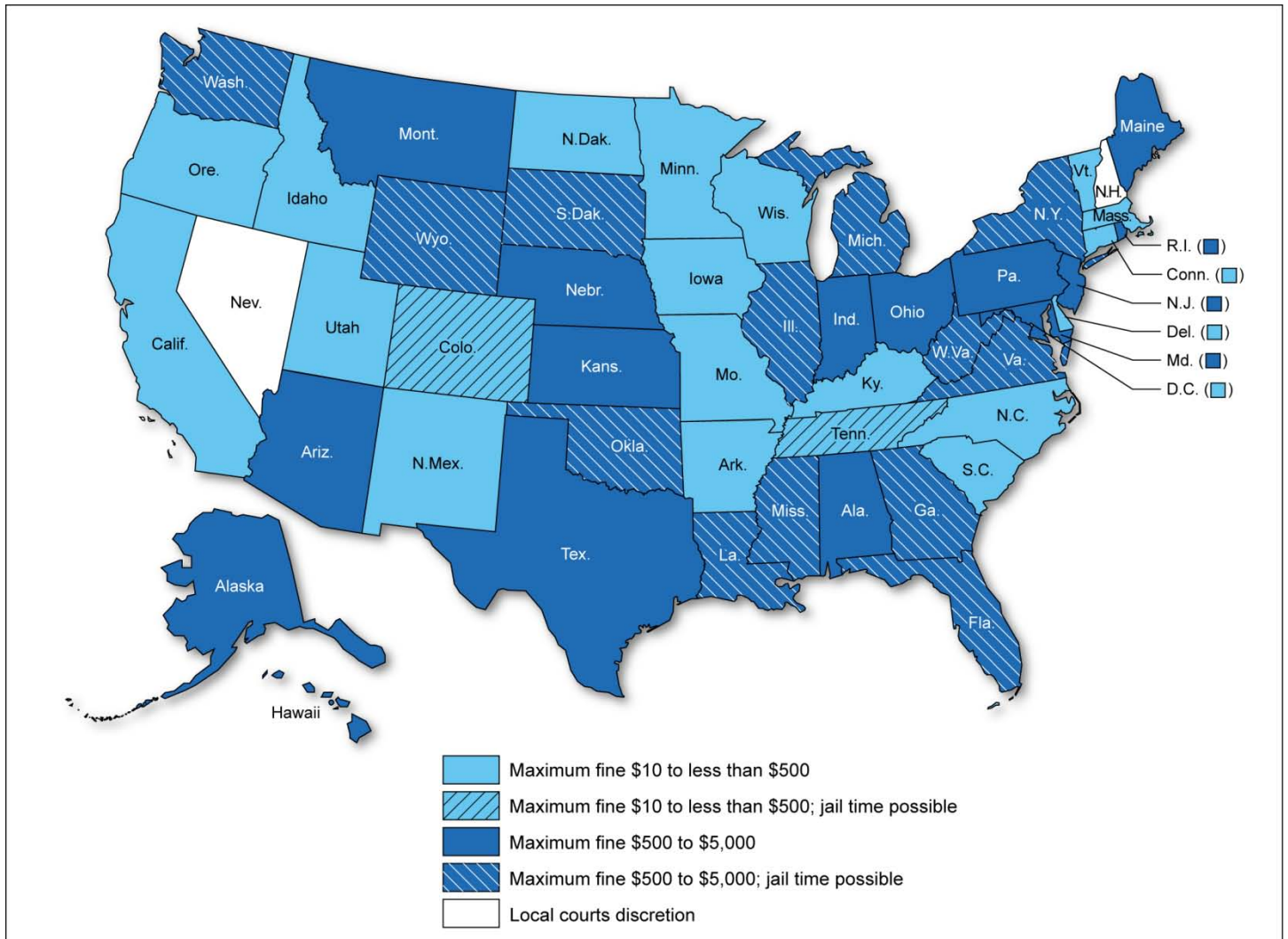
¹⁴Illinois Unified Code of Corrections (730 ILCS 5/5-4.5-55).

¹⁵Va. Code Ann. § 10.1-1424 and § 46.2-1156.

¹⁶Rev. Code Wash. § 46.61.655.

¹⁷Washington became the state with the nation's highest unsecured load fine following the passage of House Bill 1478 known as "Maria's Law," for a young woman who was injured during a 2004 accident caused by road debris. Maria's Law criminalized the failure to properly secure a load. A person who causes an injury or death by failing to secure a load in the state can be charged with a gross misdemeanor and faced with a year in jail and a \$5,000 fine.

Figure 4: State Punitive Measures for Violating Unsecured-Load Laws, 2012



Sources: GAO analysis of unsecured load state laws and penalties and Map Resources.

Enforcement officials in some states told us that it is often difficult to write citations for unsecured-load violations. In five of the seven states, officials we interviewed noted that statutory language can be ambiguous, or require law enforcement officials either to witness the unsecured load falling or have the load actually fall to the ground to be considered a statutory violation. This language makes law enforcement respond reactively rather than proactively. All seven enforcement officials we interviewed told us they were not aware how anyone could distinguish

between citations written for commercial vehicles (i.e., used for business purposes) and non-commercial vehicles (i.e., private vehicles used to move personal belongings or take trash to the local landfill for example) as written in their states. Therefore, counting violations of their states' unsecured load laws specifically for non-commercial vehicles is not currently possible.

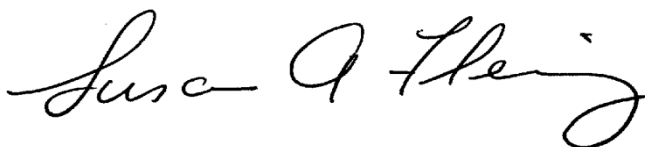
Some States Have Programs for Educating the Public about Unsecured Loads

Ten of the 50 states and the District of Columbia reported they have a safety or education program that pertains to unsecured loads on non-commercial vehicles. Those states include California, Illinois, Maine, North Carolina, North Dakota, South Carolina, South Dakota, Texas, Washington, and Wisconsin. Enforcement officials in all of the seven states we selected for interviews stated that in their experience, education—teaching drivers about the importance of properly securing the load in any vehicle or trailer before driving—is the key component to reducing unsecured-load incidents. See appendix V for examples of safety education materials from North Carolina and Washington.

Agency Comments

We provided a draft of this report to NHTSA for review and comment. NHTSA provided technical comments that were incorporated as appropriate.

We are sending copies of this report to the Administrator of NHTSA, the Secretary of the Department of Transportation, and interested Congressional Committees. In addition, the report will be available at no charge on the GAO website at <http://www.gao.gov>. If you or your staff has any questions about this report, please contact me at (202) 512-2834 or FlemingS@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix VI.



Susan Fleming
Director, Physical Infrastructure

Appendix I: Objectives, Scope, and Methodology

This report examines (1) efforts the National Highway Traffic Safety Administration (NHTSA) has undertaken to monitor crashes involving vehicles carrying unsecured loads and (2) existing state laws, exemptions, and punitive measures regarding non-commercial vehicles carrying unsecured loads. For the purposes of our review, we defined unsecured load to include a load or part of a load in transit that is not properly restrained, tied down, or secured with tarps, nets, or ropes to reasonably prevent a portion from falling off. We defined non-commercial vehicles to include passenger vehicles (cars or light trucks) transported for non-commercial purposes, and the towing of loads in an open trailer behind the passenger vehicle. Light trucks included trucks of 10,000 pounds gross vehicle weight rating or less, including pickups, vans, truck-based station wagons, and utility vehicles. Open trailers included trailers that can be obtained from personal or commercial sources, such as U-Haul, but used for non-commercial purposes. NHTSA collects data on crashes involving non-commercial and commercial crashes. We obtained NHTSA's input in developing these definitions.

To identify efforts NHTSA has undertaken to monitor crashes involving vehicles carrying unsecured loads, we obtained documents from and conducted interviews with NHTSA officials to obtain information on NHTSA's current policies, procedures, and practices for monitoring crashes involving vehicles carrying unsecured loads. Specifically, we obtained information about what data on unsecured loads NHTSA currently collects; how NHTSA coordinates with state agencies on its data collection efforts; actions NHTSA has taken to date or plans to take to improve its data collection processes in response to its mandate; and challenges, if any, that NHTSA faces in improving its data on vehicles carrying unsecured loads. In addition, we conducted a literature search to identify and review relevant studies, reports, and available data on crashes involving vehicles carrying unsecured loads and to gain a better understanding of the magnitude of the problem. Finally, we analyzed NHTSA's crash data from the Fatality Analysis Reporting System (FARS) and the National Automotive Sampling System General Estimates System (NASS GES) to identify the number of crashes in 2010 in which a vehicle struck falling or shifting cargo or an object lying in the roadway. We assessed the reliability of these data sources by, among other things, interviewing NHTSA officials and reviewing NHTSA policies and procedures for maintaining the data and verifying their accuracy. Based on this information, we determined that the data provided to us were sufficiently reliable for our reporting purposes.

To identify existing state laws, exemptions, and punitive measures regarding non-commercial vehicles carrying unsecured loads, we conducted a literature review of and legal research on state(s) laws, penalties, and exemptions regarding properly securing loads on non-commercial vehicles. In addition, we conducted a survey of all 50 states and the District of Columbia to supplement, verify, and corroborate data obtained from our legal research and to obtain additional information on penalties, enforcement actions and education and prevention efforts in each state. (The survey is reproduced in appendix II.) The survey was completed primarily by law enforcement officers in each state's Department of Public Safety. We selected three states in which to conduct pretests: Iowa, New Mexico, and Washington. In each pretest, we provided the state police official with a copy of our draft survey, asked this individual to complete it, and then conducted an interview to discuss the clarity of each question. On the basis of the feedback from the three pretests we conducted, we made changes to the content and format of the survey questions as appropriate. We launched our survey on June 20, 2012. We received completed responses from the 51 survey respondents for a response rate of 100 percent. We reviewed survey responses for inaccuracies or omissions, analyzed the data, and have presented the key findings in this report.

We also conducted interviews with state police officials in seven states to collect information on enforcement actions and education and prevention efforts related to properly securing loads carried by non-commercial vehicles. We selected states that were (1) geographically diverse, (2) of varying sizes, and (3) varied in the types of laws related to non-commercial vehicles carrying unsecured loads. Using these criteria, we interviewed state police officials in California, Colorado, Maryland, New York, Texas, Washington, and Wisconsin. In addition, we also conducted interviews with associations and individuals active in highway safety issues, to obtain additional information on issues related to unsecured loads and efforts by states to deal with these issues. Interviewees included the American Automobile Association Foundation for Traffic Safety and one of the co-authors of a 2004 study for this foundation examining the safety impacts of vehicle-related road debris;¹ the Governor's Highway Safety Association; and the Transportation Cargo

¹American Automobile Association Foundation for Traffic Safety, *The Safety Impact of Vehicle-Related Road Debris* (Washington, D.C.: June 2004).

Safety Organization. We also requested interviews with the International Association of Chiefs of Police, American Association of State Highway and Transportation Officials, and the American Association of Motor Vehicle Administrators; these organizations replied that they did not have information on unsecured-loads issues.

We conducted this performance audit from March 2012 to November 2012 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient and appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Survey Questions

1. Does your state have a state law(s) regarding properly securing loads carried by non-commercial vehicles?

Yes
No → **SKIP TO QUESTION #3**

2. Please provide the state code, date, and electronic copy of the most current code.

State code:	
Date:	
Electronic Copy:	Please email to [email removed]

3. Has your state introduced a state bill in the last year regarding unsecured loads carried by non-commercial vehicles?

Yes
No → **SKIP TO QUESTION #5**

4. Please provide the date and electronic copy of the newly introduced bill.

Date:	
Electronic Copy:	Please email to [email removed]

5. Does your state have associated fines/penalties (including drivers' points) specific to unsecured loads carried by non-commercial vehicles?

Yes
No → **SKIP TO QUESTION #6**

5a. If yes, are they addressed in the state law you are providing?

Yes → **SKIP TO QUESTION #6**
No

5b. If they are not addressed in the state law, are there other laws that apply to unsecured loads (i.e., unsafe driving conditions, littering, etc.) that don't mention unsecured loads specifically?

Yes → **Please email a copy of those laws to [email removed]**
No

6. Does your state have exemptions to these laws concerning unsecured loads carried by non-commercial vehicles?

Appendix II: Survey Questions

Yes
No → **SKIP TO QUESTION #7**

6a. If yes, are the exemptions addressed in the state law you are providing?

Yes
No → **Please email those exemptions to [Email removed]**

7. Please provide us with the name and contact information for someone we could talk to in your state about enforcement actions in regards to violations for unsecured loads carried by non-commercial vehicles.

Contact same as above
Unknown

Name:	
Title:	
Organization:	
Email:	
Phone:	

8. Does your state have a safety or education program either stand-alone or part of a larger program that pertains to your state's law on unsecured loads carried on non-commercial vehicles?

Yes
No → **SKIP TO QUESTION #9**
Unknown → **SKIP TO QUESTION #9**

8a. Please provide us the name and contact information for someone we can talk to in regard to safety or education programs in your state that pertain to your state's law on unsecured loads carried by non-commercial vehicles.

Contact same as above
Unknown

Name:	
Title:	
Organization:	
Email:	
Phone:	

9. Is there anything you'd like to add regarding unsecured loads carried by non-commercial vehicles in your state? (i.e., accidents we should be aware of, concerns that may be unique to your state, etc?).

Appendix III: Current FARS and NASS GES Data Category Definitions and Planned 2013 Changes

Data category ^a	How data category is defined currently	How data category will be defined starting in 2013
Data categories that apply to objects set in motion, striking another vehicle, person, or property		
Motor Vehicle In-Transport Strikes or is Struck by Cargo or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport ^b	<p>Used when cargo on or parts from a motor vehicle are set in motion or an object in the road is struck by a motor vehicle and set in motion. In both cases, the cargo, parts, or object then strike another motor vehicle.</p> <p>Scenario A: A mattress transported by, or a hubcap from, vehicle 1 becomes dislodged and is set in motion. The mattress or hubcap flies into and strikes vehicle 2.</p> <p>Scenario B: Vehicle 1 hits a tree branch or a hubcap from an unknown source in the roadway, and sets it in motion striking vehicle 2.</p>	No Change.*
*Although NHTSA will continue to code both scenarios A and B in the above data category, it will now distinguish between the two scenarios, using the additional data categories described below.		
Cargo/Vehicle Parts Set-In-Motion	Used for all set-in-motion crashes described above.	Revised: Will now be used only for scenario A (crashes where the object set in motion was originally cargo on, or parts from, a moving motor vehicle and this object strikes another vehicle, person or property causing injury or damage).
Other Object Set-In-Motion	Not a current category.	New: Will be used for scenario B (crashes where the object set in motion was not originally cargo on or parts from a moving motor vehicle or it is unknown whether the object was the cargo or a part of an in-transport motor vehicle. In either case, the object strikes another motor vehicle, person or property causing injury or damage).
Data categories that apply to vehicles striking objects already in the road that may or may not have come from another vehicle		
Motor Vehicle in Transport Strikes an Object That Is Not Fixed	<p>Used for crashes wherein a motor vehicle strikes any non-fixed object, such as a mattress or a tree branch, lying in the roadway.</p> <p>Scenario C: Vehicle hits a tree branch already in the roadway.</p> <p>Scenario D: Vehicle hits a mattress already in the roadway.</p>	Revised: Will be used only for scenario C (when a motor vehicle strikes a non-fixed object already at rest in the roadway but <i>known</i> to have not come from a motor vehicle, or <i>unknown</i> if it came from a motor vehicle).

**Appendix III: Current FARS and NASS GES
Data Category Definitions and Planned 2013
Changes**

Data category^a	How data category is defined currently	How data category will be defined starting in 2013
Motor Vehicle in Transport Strikes an Object That Fell From a Motor Vehicle In-Transport	Not a current data category.	New: Will be used for scenario D (when a motor vehicle strikes a non-fixed object already at rest in the road but <i>known</i> to have been the cargo or part of another motor vehicle in-transport).

Source: GAO analysis of NHTSA information.

^aThe data categories in this table are formally known as data attributes and are used to categorize data entries in NHTSA's FARS and NAS GES data systems.

^bThis definition also includes persons (in addition to cargo or other objects) set in motion from or by another motor vehicle, although NHTSA officials explained that incidents involving people in this type of scenario are rare.

Appendix IV: Non-Commercial Unsecured-Load Laws, Exemptions, and Fines or Penalties or Both

State	Unsecured-load law	Unsecured-load law exemptions	Unsecured-load violation fines/penalties (& separate penalty statute if not contained in unsecured-load law)
Alabama	Ala. Code 32-5-76	Motor vehicles carrying agricultural loads.	Not more than \$500.
Alaska	Alaska Stat Sec. 46.06.080	Motor vehicles carrying agricultural, mining, and timber, vehicles applying salt or sand to gain traction, or public vehicles cleaning or maintaining the highway.	Not more than \$1000 and litter pickup.
Arizona	A.R.S. 28-1098	Motor vehicles carrying agricultural loads, cleaning or maintaining the highway or dropping sand for traction, minor pieces of agricultural materials such as leaves and stems from agricultural loads.	\$250–\$1000.
Arkansas	A.C.A. 27-35-110	Motor vehicles depositing sand for traction or water for cleaning or maintaining the highway.	\$100 Arkansas Code Annotated §5-4-201.
California	Cal. Veh. Code 23114	Motor vehicles carrying clear water or live bird feathers.	\$211 (\$146 fine plus \$30 security fee and \$35 conviction assessment) California Rules of Court; Rule 4.102, January 2010 Edition.
Colorado	C.R.S. 42-4-1407	Motor vehicles dropping material for traction or for cleaning or maintaining the roadway. Vehicles operating entirely in a marked construction zone, vehicles involved in maintenance of public roads during snow or ice removal operations, vehicles involved in emergency operations when requested by a law enforcement agency or an emergency response authority.	\$150–\$300 and/or 10-90 days imprisonment. C.R.S. 42-4-1701.
Connecticut	Conn. Gen. Stat. § 14-271	Farming vehicles, motor vehicles dropping sand for traction or water for maintaining roadway.	\$117–\$158.
Delaware	Del. C.Title 21 § 4371	None.	First offense not less than \$10 and no more than \$28.75 and for each subsequent offense, no less than \$28.75 and no more than \$100.
District of Columbia	DCMR Title 18, § 2503	Motor vehicles dropping sand for the purpose of securing traction, or water or other substance sprinkled on the roadway in cleaning or maintaining the roadway.	\$150–\$250.

**Appendix IV: Non-Commercial Unsecured-
Load Laws, Exemptions, and Fines or
Penalties or Both**

State	Unsecured-load law	Unsecured-load law exemptions	Unsecured-load violation fines/penalties (& separate penalty statute if not contained in unsecured-load law)
Florida	Fla. Stat. § 316.520	Farming vehicles traveling locally or vehicles dropping sand for traction or water for cleaning or maintaining the road.	\$200 Fla. Stat. § 318.18, license suspension with second offense. Any person who willfully violates the provisions of this section which offense results in serious bodily injury or death to an individual within the confines of statute is also subject to fines of no more than \$500 and prison for not more than 60 days; § 775.082 and § 775.083.
Georgia	O.C.G.A. § 40-6-254 and § 40-6-248.1	Motor vehicles carrying agricultural, vehicles transporting agriculture or farm products.	Up to \$1000 and/or jail time not to exceed 1 year. O.C.G.A. § 17-10-3.
Hawaii	HRS § 291C-131	Agricultural vehicles, vehicles carrying birds with feathers, and vehicles carrying rocks, sand, or gravel.	\$250 - \$1000 + suspension of license (dependent on number of offenses).
Idaho	Idaho Code § 49-613	Vehicles that are government, quasi-government, their agents or employees or contractors thereof, in performance of maintenance or construction of a highway; vehicles owned by canal companies, irrigation districts, drainage districts or their boards of control, lateral ditch associations, water districts or other irrigation water delivery or management entities, or operated by any employee or agent of such an entity, performing construction, operation or maintenance of facilities; and vehicles transporting agricultural products..	\$67.
Illinois	§ 625 ILCS 5/15-109 and § 625 ILCS 5/15-109.1	Motor vehicles dropping sand for traction or water for cleaning the highway, or agricultural vehicles.	For 109: \$120, Class A Misdemeanor, Illinois Supreme Court Rules, Rule 526. A conviction for this could result in a determinate sentence of imprisonment of less than one year or a fine not to exceed \$2,500 for each offense or the amount specified in the offense, whichever is greater, may be imposed. Illinois Unified Code of Corrections (730 ILCS 5/5-4.5-55). For 109.1: Not to exceed \$250.
Indiana	Indiana Code § 9-20-18-14 and § 9-21-8-48	Motor vehicles transporting poultry or spreading sand/de-icing (removing ice).	Up to \$500 Indiana Code § 34-28-5-4.
Iowa	Iowa Code § 321.460	Motor vehicles carrying hay or stover (stalks and leaves, of corn); or sand for traction or water for maintaining roadway.	\$200 Iowa Code § 805.8A.

**Appendix IV: Non-Commercial Unsecured-
Load Laws, Exemptions, and Fines or
Penalties or Both**

State	Unsecured-load law	Unsecured-load law exemptions	Unsecured-load violation fines/penalties (& separate penalty statute if not contained in unsecured-load law)
Kansas	K.S.A. § 8-1906	Motor vehicles hauling livestock or spreading substances in highway maintenance or construction.	Not to exceed \$500 K.S.A. § 8-1901.
Kentucky	KRS § 189.150	None.	\$20–\$100 KRS § 189.990
Louisiana	La. R.S. § 32:383	Motor vehicles dropping sand to secure traction, or dropping a liquid substance on a highway to clean or maintain.	\$500 and/or 6 months jail time.
Maine	29-A M.R.S. § 2396	Motor vehicles carrying hay, straw, vines, cornstalks, or grain.	\$150–\$500.
Maryland	MD Transportation Code Ann. § 24-106; § 24-106.1	Motor vehicles carrying agricultural products and those dropping materials to provide traction or clean the highway.	\$500.
Massachusetts	ALM GL Ch. 85 § 36	Motor vehicles dropping sand for the purpose of securing traction, or sprinkling of water or other substance on such a way in cleaning or maintaining the same.	\$50–\$200.
Michigan	MCL § 257.720	Highway maintenance vehicles engaged in ice or snow removal. Agricultural and horticultural vehicles.	Not more than \$500 and/or 90 days jail time.
Minnesota	Minn. Stat. § 169.81	Motor vehicles carrying agricultural products such as small grains, shelled corn, soybeans, or other farm produce, or vehicles dropping material for traction or cleaning.	Not more than \$300 Minn. Stat. § 169.89.
Mississippi	Miss. Code Ann. § 63-5-55	Motor vehicles dropping material for traction or for cleaning or maintaining the highway.	Not more than \$500 and not more than 6 months imprisonment or both. Miss. Code Ann. § 63-5-7, 63-9-11.
Missouri	R.S.Mo. § 307.010	None.	Not to exceed \$300 R.S.Mo. § 560.016.
Montana	Mont. Code Anno., § 61-8-370	Commercial motor vehicles in compliance with state and federal laws; agricultural vehicles; vehicles performing road maintenance or in a marked construction zone.	No more than \$500 Mont. Code Anno., § 61-8-711.
Nebraska	R.R.S. Neb. § 60-6, 304	None.	\$100 - \$500 R.R.S. Neb. § 28-106.
Nevada	Nev. Rev. Stat. Ann. § 484D.850	Motor vehicles dropping materials for traction or cleaning the highway.	Fines are addressed and set by individual courts, for example in Reno it's \$403.
New Hampshire	RSA 266:72	Local farmers, transportation of heavy scrap or crushed vehicles, or construction vehicles in a construction zone, vehicles driving at less than 30 mph.	Fines are addressed and set by individual courts.
New Jersey	N.J. Stat. § 39:4-77	Agricultural vehicles.	Not more than \$500 for each violation.

**Appendix IV: Non-Commercial Unsecured-
Load Laws, Exemptions, and Fines or
Penalties or Both**

State	Unsecured-load law	Unsecured-load law exemptions	Unsecured-load violation fines/penalties (& separate penalty statute if not contained in unsecured-load law)
New Mexico	N.M. Stat. Ann. § 66-7-407	Agricultural vehicles or those dropping sand for traction or water for cleaning the roadway.	\$100 N.M. Stat. Ann. § 66-7-401; § 66-8-116.
New York	NY CLS Veh. & Tr. § 377	None.	\$100 - \$750 and/or imprisonment up to 30 days.
North Carolina	N.C. Gen. Stat. § 20-116	Motor vehicles dropping material for traction or cleaning the highway.	\$100 N.C. Gen. Stat. §20-176.
North Dakota	N.D. Cent. Code, § 39-21-44.1	Motor vehicles dropping sand for traction or water for highway maintenance.	\$20.
Ohio	ORC Ann. 4513.31	Agricultural and garbage vehicles or those dropping sand for traction or water for cleaning the roadway.	\$150 - \$1000 ORC Ann. 2929.28; ORC Ann. 4513.99.
Oklahoma	47 Okl. St. § 14-105	Agricultural vehicles or those dropping sand for traction or water for cleaning the roadway.	\$5 - \$500 or imprisonment for up to 6 months, or both. 47 Okl. St. § 17-101.
Oregon	ORS § 818.300; 818.310	No exemptions for vehicles, just for certain roads, private thoroughfares.	\$260 ORS § 818.300(4) and ORS § 153.019. Additionally, owners or drivers are liable for all damage done as a result of the violation if it occurs on certain roadways. ORS § 818.410.
Pennsylvania	75 Pa.C.S. § 4903	Logging and garbage trucks, the shedding or dropping of feathers or other matter from vehicles hauling live or slaughtered birds or animals, and spreading of any substance in highway maintenance or construction operations.	\$300–\$1000.
Rhode Island	R.I. Gen. Laws § 31-25-9; R.I. Gen. Laws § 31-25-10	Logging trucks or those carrying wood, lumber, or sawmill wastes. Motor vehicles dropping sand for traction or water for highway maintenance.	\$85, R.I. Gen. Laws § 31-41.1-4; \$100 to not more than \$500, R.I. Gen. Laws § 31-25-10.
South Carolina	S.C. Code Ann. § 56-5-4100	Motor vehicles dropping sand for traction or water for highway maintenance. Agricultural and timber-related vehicles.	\$100.
South Dakota	S.D. Codified Laws § 32-15-18	None.	\$500 or 30 days in prison or both, S.D. Codified Laws § 22-6-2.
Tennessee	Tenn. Code Ann. § 55-7-109	Vehicles carrying farm produce to the market. Vehicles which transport crushed stone, fill dirt and rock, soil, bulk sand, coal, phosphate muck, asphalt, concrete, other building materials, forest products, unfinished lumber, agricultural lime. Motor vehicles dropping sand for traction or water for highway maintenance.	No more than \$50 or not more than 30 days in prison or both. Tenn. Code Ann. § 40-35-111.

Appendix IV: Non-Commercial Unsecured-Load Laws, Exemptions, and Fines or Penalties or Both

State	Unsecured-load law	Unsecured-load law exemptions	Unsecured-load violation fines/penalties (& separate penalty statute if not contained in unsecured-load law)
Texas	Tex. Transp. Code § 725.021	None.	\$25–\$500 Tex. Transp. Code § 725.003.
Utah	Utah Code Ann. § 72-7-409	Vehicles carrying dirt, sand, gravel, rock fragments, pebbles, crushed base, aggregate, any other similar material, or scrap metal. Certain agricultural loads and vehicles spreading any substance connected with highway maintenance, construction, securing traction or snow removal.	\$100–\$250.
Vermont	23 V.S.A. § 1451 and § 1454	None.	\$99 –\$156 § 1454.
Virginia	Va. Code Ann. § 10.1-1424 and § 46.2-1156	Motor vehicles dropping material for traction or for cleaning or maintaining the highway. § 10.1-1424. Motor vehicles used exclusively for agricultural purposes, or transporting forest products, poultry, or livestock. § 46.2-1156.	Not more than \$2,500 or not more than 12 months in jail for violating § 10.1-1424, and a fine of not more than \$250 for violating § 46.2-1156. Va. Code Ann. § 18.2-11.
Washington	Rev. Code Wash. (ARCW) § 46.61.655	Vehicles carrying gravel, sand, and dirt if 6 inches of freeboard is maintained within the bed. Motor vehicles dropping sand for traction.	Up to \$5000 or up to a year in jail or both. Rev. Code Wash. (ARCW) § 9A.20.021.
West Virginia	W. Va. Code § 17C-17-6	Motor vehicles dropping material for traction or for cleaning or maintaining the highway.	Up to \$500 fine or 6 months imprisonment or both. W. Va. Code § 17C-18-1.
Wisconsin	Wis. Stat. § 348.10	None.	\$10–\$200 Wis. Stat. § 348.11.
Wyoming	Wyo. Stat. § 31-5-228	Motor vehicles spreading substance for maintaining or constructing the highway.	Up to \$500 fine or 6 months imprisonment or both. Wyo. Stat. § 31-5-1201.

Source: GAO analysis of state laws, exemptions, fines and penalties.

Appendix V: “Secure Your Load” Educational Materials for Non-Commercial Vehicles

Figure 5: North Carolina Department of Transportation


Secure it!

Careless drivers could wind up picking up their own litter. It's illegal under North Carolina law to haul an improperly secured load. Penalties for littering include up to a \$2,000 fine, community service work and one point on a motorist's driver license upon conviction.

Section 1. G.S. 14-399
When litter is blown, scattered, spilled, thrown or placed from a vehicle or watercraft, the operator thereof shall be presumed to have committed this offense.



"Don't trash our highways! Debris that is tossed or falls from your vehicle becomes a safety hazard to other drivers. Make sure your loads are secure and that no loose trash can fly out of your open window or your truck bed. Littering is a violation of state law that the Highway Patrol takes seriously."

*M.W. Gilchrist, Colonel
 NC Highway Patrol*



Keep it in Your Bed... Secure Your Load


North Carolina taxpayers spend millions of dollars every year to remove trash that blows from truck beds. Transporting unsecured loads is unsafe and illegal.

Put a Lid on It!

The N.C. Department of Transportation spends millions of dollars each year removing litter from the state's roadsides.

Loads must be properly secured with a cargo net or tarp. Otherwise, debris can blow or be tossed out due to wind drafts from higher travel speeds.



Nationwide, about 25,000 accidents can be attributed to roadway debris annually.

The N.C. State Highway Patrol reports that two out of three tickets they issue for unsecured loads are issued with motorists safety in mind.

Keep North Carolina's highways safe by securing loads to keep furniture, mattresses, appliances, empty containers, bags of garbage, fast food trash, construction materials, tools and other items off our state's roadsides.


Some information provided by the U.S. DOT Office of Environmental Management

Lock that load!

Citizens share a responsibility to keep North Carolina's roadways clean and green. Though you may not intentionally litter, if you do not secure the items in your truck bed, you are contributing to roadside litter.

Take the time to secure your load.


- Bumps, turns and sudden stops can dislodge improperly secured loads. Don't rely on an item's weight to keep it in place during travel.
- In addition to securing loads, pickup truck bed covers improve fuel economy as well as keep loads dry, clean and safe.
- Toolboxes and other built-in containers can be used to hold trash until it can be placed in a garbage can. Additionally, trash or recyclables can be placed in sturdy bags and covered with a tarp or cargo netting.



"In North Carolina, half of all litter is blown, not thrown."
Mecklenburg County Solid Waste and Recycling 18-702386

It doesn't take much time, effort or money to make sure your load is properly secured. Driving with a secure load enhances roadway safety for you and other motorists.

If you throw it Here, You are throwing it Here!



Help reduce roadside litter and increase safety by using tarps, cargo nets and tie-downs to secure loads.

Source: North Carolina Department of Transportation.

Appendix V: "Secure Your Load" Educational Materials for Non-Commercial Vehicles

Figure 6: Washington State Department of Ecology

MARIA'S STORY



Just before midnight on Sunday, Feb. 22, 2004, Maria Federici was driving home from work.

She was in the southbound lanes of I-405 at Renton near Northeast 30th, when an entertainment center fell from the back of a trailer in front of her. A 2- by 6-foot piece of particle board flew through her windshield, hitting her in the face.

The other driver did not stop.

She was critically injured and taken to Harborview Medical Center in Seattle. Doctors told her mother her injuries were so severe that her survival was hopeless.

Miraculously, she survived. However, Maria has permanently lost her eyesight and has had to endure a complete facial reconstruction, multiple surgeries, and hours upon hours of grueling physical therapy.

If you don't think litter can hurt, just ask Maria.

Please secure your load!

For more information on Maria, you can visit her website at <http://www.mariasmiracle.com>



Washington State
DEPARTMENT OF
ECOLOGY

Solid Waste & Financial Assistance Program
Publication Number 05-07-028
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If you need this publication in an alternate format, please contact the Solid Waste & Financial Assistance Program at 360-407-6900. For persons with a speech or hearing impairment call 711 for relay service or 800-833-6388 for TTY.

Litter and it will hurt.

For More Information visit
www.ecy.wa.gov/programs/swfa/litter

NOTICE: This document is intended for information purposes only. Nothing in this document constitutes professional advice, nor does any information in this document constitute a comprehensive or complete statement of the issues discussed or the laws relating thereto. The Department of Ecology will not be liable for any loss or damages, including loss or damages resulting from implementation of methods or procedures described in this document.

Q:
HOW LONG DOES IT TAKE TO SECURE YOUR LOAD?



A: A few seconds more than it takes to destroy someone's life.

HOW CAN YOU SECURE YOUR LOAD?



Tips For Securing Loads

When using any vehicle or trailer to haul material, take a few minutes to secure the load.

Tie down with rope, bungee cords, netting, or straps. Tie large items directly to your vehicle.

Consider covering the load with a sturdy plastic or canvas tarp or a net.

Lighter goes lower. Put lighter weight things at the bottom of the load.

Don't Overload. Keep material level with truck bed or trailer unless tied down, netted, or tarped.

Always double-check your load.

Become familiar with local laws. Some communities have ordinances that require loads to be covered, not just secured.

WHY SHOULD YOU SECURE YOUR LOAD?

1 IT SAVES LIVES

Stories like Maria's are all too common. Across North America, road litter, either dumped on purpose by motorists or accidental fall-outs from unsecured loads, causes 25,000 accidents every year, nearly 100 of them fatal. Road litter poses a serious hazard here in Washington too. On average, there are 350 accidents involving road debris on state highways each year. (Source: Washington State Department of Transportation)

2 IT'S THE LAW

No vehicle shall be driven or moved on any public highway unless such vehicle is... loaded as to prevent any of its load from dropping, shifting, leaking, or otherwise escaping. (Source: RCW 46.61.655) State law specifically refers to "secured" loads. **Please be aware that your community may have a local ordinance that goes beyond the state law and requires loads to be covered.** Please check with local authorities to be sure you are in compliance.



3 IT COSTS MONEY

The fine for transporting an unsecured load is currently \$194. If an item falls out of or off of your vehicle and causes bodily injury, you will be charged with a gross misdemeanor, which carries a penalty up to \$5,000 and may include jail time. If the item causes property damage, you'll be facing a misdemeanor. The fine for littering something as small as a piece of paper is \$103 and can go up to \$5,000 for bigger items such as a mattress or other piece of furniture. Covering or securing your load will keep money in your pocket.

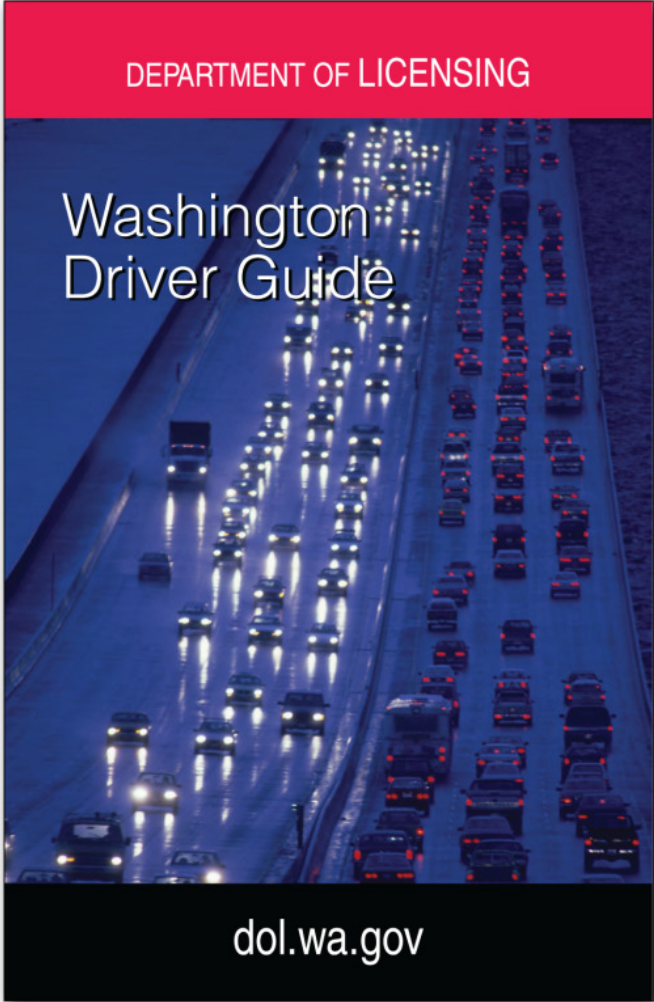
4 IT PREVENTS LITTER

No person shall throw, drop, deposit, discard, or otherwise dispose of litter upon any public property in the state... whether from a vehicle or otherwise. (Source: RCW 70.93.060[1])

34% of the litter-related violations issued by Washington State Patrol in 2003 were for a failure to secure a load and an additional 22% were issued for debris escaping from those loads. It is estimated that unsecured loads cause up to 25% of roadside litter. (Source: www.ci.seattle.wa.us)

Source: Washington State Department of Ecology.

Figure 7: Washington State Department of Licensing



The image shows the cover of the 'Washington Driver Guide' from the Department of Licensing. It features a night-time photograph of a multi-lane highway with traffic. The text 'DEPARTMENT OF LICENSING' is at the top in a red banner. Below that, 'Washington Driver Guide' is written in large white letters. At the bottom, the website 'dol.wa.gov' is displayed in white on a dark background.

Secure Your Load

You must secure any load you transport in your vehicle or trailer before driving on public roadways in Washington State. Secure both the load and any items used to cover or secure it so they won't become loose and hazardous to other road users. By taking the time to make sure your load is properly secure, you can prevent harm to others and save yourself a costly fine.

To secure the load in your vehicle or trailer:

- tie it down with rope, netting, or straps.
- tie large objects directly to your vehicle or trailer.
- consider covering the entire load with a sturdy tarp or net.
- don't overload your vehicle or trailer.
- always double-check to make sure it's secure.

Local laws may be more restrictive, so be sure you know the rules for your area.

Source: Washington State Department of Licensing.

Appendix VI: GAO Contact and Staff Acknowledgments

GAO Contact

Susan Fleming, 202-512-2834, FlemingS@GAO.gov

Staff Acknowledgments

In addition to the contact named above, Judy Williams-Tapia (Assistant Director), Margaret Bartlett, David Hooper, Maren McAvoy, Maria Mercado, Amy Rosewarne, Beverly Ross, Kelly Rubin, and Andrew Stavisky made key contributions to this report.

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