Fiscal Year 2002
Performance Plan

March 2001

I. INTRODUCTION

The Federal Motor Carrier Safety Administration (FMCSA) was established in January 2000 by the Motor Carrier Safety Improvement Act (MCSIA) of 1999, P.L. 106-159. The mission of FMCSA is to save lives and reduce injuries by preventing truck and bus crashes. To achieve this mission, the agency focuses the majority of its resources, working with the States and other partners to: 1) target the enforcement of the Federal Motor Carrier Safety Regulations on high-risk carriers; 2) support State commercial vehicle safety programs; 3) conduct safety research and technology transfer activities; 4) fund improvements to Commercial Driver's License programs; and 5) collect and disseminate national commercial motor vehicle safety data.

The primary goal of FMCSA is to reduce the number and rate of crashes, injuries, and fatalities involving commercial motor vehicles. In 1999, the U.S. Department of Transportation (DOT) committed to reduce large truck-related fatalities 50 percent by the end of 2009. Earlier, the DOT also committed to reduce large truck-related injuries 20 percent by the end of 2007. FMCSA is the lead agency in the DOT with the responsibility for achieving these safety goals.

II. PROGRAM NEED

Thousands are killed in highway crashes every year. In 2000, 5,307 Americans died and an estimated 145,000 were injured traffic crashes involving large trucks. Large trucks represent only about 4 percent of the registered vehicles and account for 7 percent of travel volume on our Nation's highways. However, large trucks are over-represented in fatal crashes.[1] Of all the people killed in motor vehicle crashes, 13 percent died in crashes involving a large truck. While these numbers are unacceptably high, the fatality rate for large truck crashes dropped 28 percent and the injury rate decreased 30 percent from 1990 to 2000. These rates, which are calculated based on the number of commercial vehicle-miles-traveled, declined even as the number of motor carriers doubled and their travel mileage increased 38 percent during the last decade.

There were about 62,000 crashes in 1999 involving commercial passenger vehicles, including intercity motor coaches.[2] However, commercial passenger vehicle-related crashes accounted for less than 1 percent of all traffic-related fatalities. While there are fewer fatalities in crashes involving commercial passenger vehicles than for large trucks, intercity motor coach safety continues to be a national priority. (Intercity motor coaches include scheduled service providers, charter or tour buses, large vans, and other commuter vehicles.) Given the number of potential passengers, the results of a crash can be catastrophic. For example, in 1999, a single crash involving an intercity bus resulted in 22 passenger fatalities.

[1] FMCSA defines a large truck as a motor vehicle with a gross vehicle weight greater than 10,000 pounds.

[2] FMCSA defines a commercial passenger vehicle as a motor vehicle designed or used to transport more than 8 passengers, including a driver, for compensation.

III. PERFORMANCE GOALS AND MEASURES

Two performance measures are used to monitor agency progress towards the desired safety outcomes: 1) number of fatalities in large truck-related crashes, and 2) number of injured persons in large-truck related crashes. A more detailed description of these measures is provided in Appendix I.

The actual number of fatalities, 5,362, in large truck-related crashes in 1999 decreased slightly from 1998 even as the total number of fatalities in all motor vehicle crashes increased. The number of injured persons, 142,000, in large truck-related crashes, reflected an increase of approximately 12 percent. These trends continued in 2000. While the final 2000 numbers were not available at the time this plan was written, the preliminary estimates are 5,307 fatalities and 145,000 injured persons. There was a small decrease in the number of fatalities, but the number of injured persons increased slightly between 1999 and 2000. The annual targets and actual as well as preliminary numbers of fatalities and injuries are presented below.

1. Reduce the number of fatalities in crashes involving large trucks 50 percent by the end of 2009, using a 1998 baseline of 5,374. Figure 1.

	Target	Actual
1998	n/a *	5,395
1999	n/a	5,362
2000	4,934	5,307 **
2001	4,830	
2002	4,710	
2009	2,687	

** Baseline of 5,374 established*
*** Preliminary estimate*

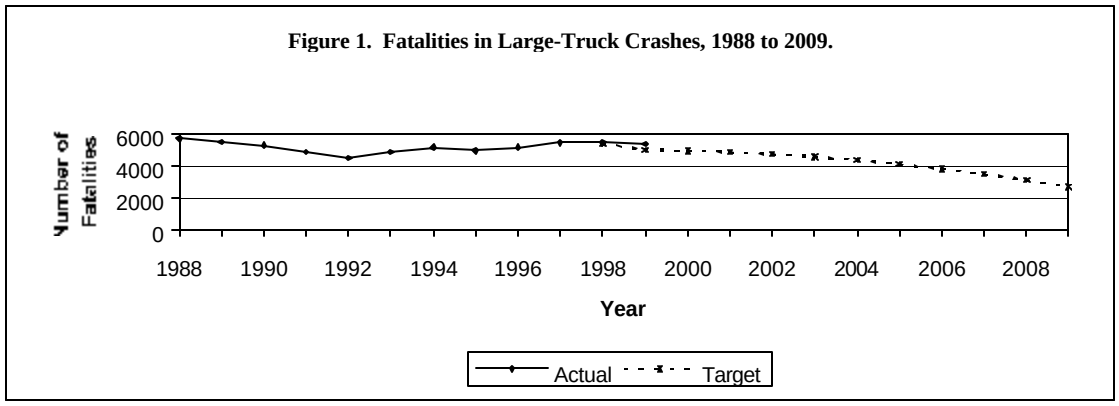


Figure 1. Actual and Targeted Fatalities in Large Truck- Related Crashes (1988 to 2009)

2. Reduce the number of persons injured in crashes involving large trucks 20 percent by the end of 2007, using a 1998 baseline of 127,000. Figure 2.

	Target	Actual
1998	n/a *	127,000
1999	n/a	142,000
2000	125,000	145,000 **
2001	122,000	
2002	121,000	
2007	102,000	

** Baseline of 127,000 established*
*** Preliminary estimate*

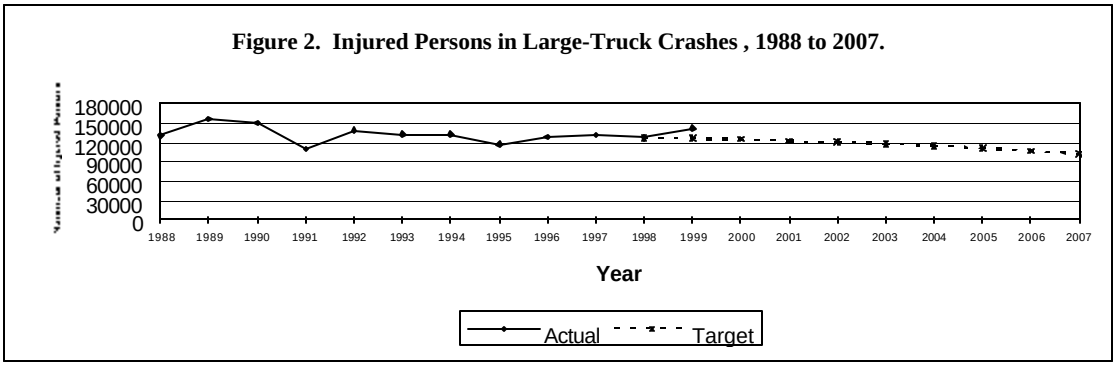


Figure 2. Actual and Targeted Injuries in Large Truck-Related Crashes (1988 to 2007)

Two additional performance measures are used to monitor progress towards the safety outcomes: 1) rate of large truck-related fatalities, and 2) rate of large truck-related injuries. A more detailed description of these measures is provided in Appendix I.

The rate is expressed as per one hundred million commercial vehicle-miles-traveled (VMT). Based on preliminary estimates for 2000, the rate of fatalities declined from 2.7 in 1999 to 2.6 in 2000 while the rate of injuries increased slightly from 71 in 1999 to 72 in 2000. The reduction in the fatality rate reflects the slight decline in the number of fatalities even as truck travel mileage continues to increase. However, substantial progress still needs to be made. The annual targets and actual fatality and injury rates are presented below. The annual target rates are calculated using preliminary estimates of annual vehicle-miles-traveled for the next two years.

3. Reduce the rate of large truck-related fatalities per 100 million commercial vehicle-miles-traveled (VMT). See Figure 3.

	Target	Actual
1998	n/a	2.7
1999	n/a	2.7
2000	2.5	2.6 *
2001	2.3	
2002	2.2	

** Preliminary estimate*

Figure 3. Large Truck Fatality Rates, 1988 to 2002.

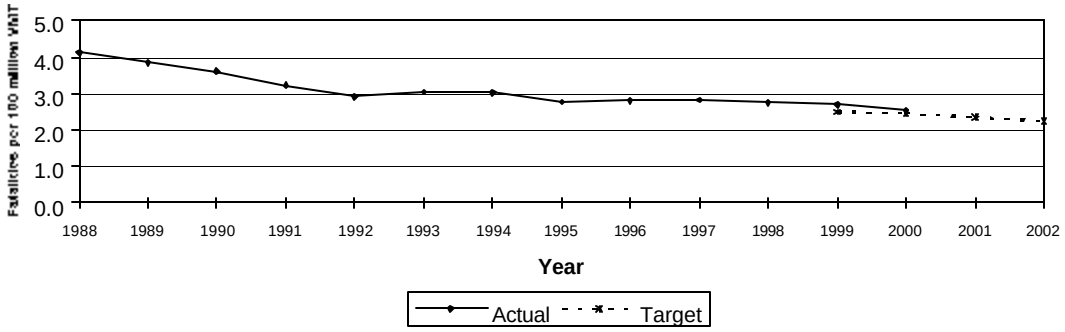


Figure 3. Actual and Targeted Large Truck-Related Fatalities (1988 to 2002)

4. Reduce the rate of persons injured in crashes involving large trucks per 100 million commercial vehicle-miles-traveled (VMT). See Figure 4.

	Target	Actual
1998	n/a	65
1999	n/a	71
2000	62	72 *
2001	59	
2002	56	

** Preliminary estimate*

Figure 4. Large Truck Injury Rates, 1988 to 2002.

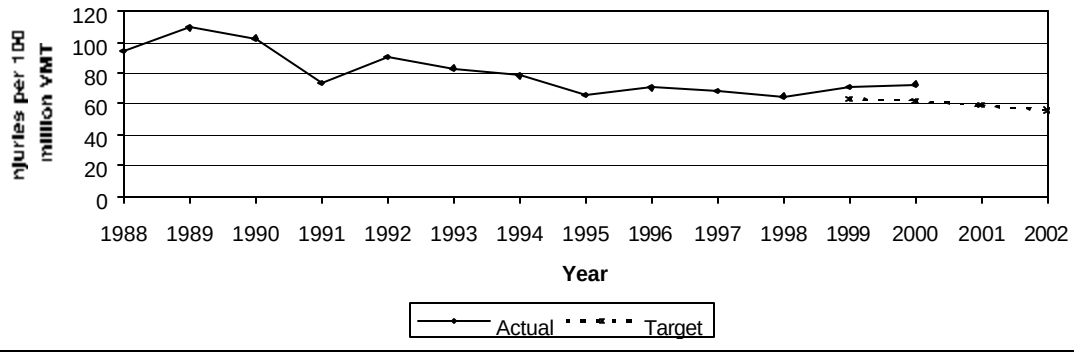


Figure 4. Actual and Targeted Large Truck-Related Injuries (1988 to 2002)

IV. SPECIAL CHALLENGES

A crash involving a large truck or bus is often due to multiple and interrelated factors, rather than a single cause. Federal and State governments are able to influence some of these factors through the introduction of safety policies, regulations, and programs. The challenge to FMCSA and its partners is to better understand the crash problem and develop countermeasures that address the underlying factors. In the following paragraphs, some important dimensions of the crash problem are discussed.

Industry Trends

In recent years, there was an unprecedented increase in business activity in the American economy that is reflected by the growth in truck travel demand. The potential exposure of a large truck or bus to a crash, expressed as commercial vehicle-miles-traveled, increased by 38 percent between 1990 and 2000 (based on preliminary estimate of commercial VMT in 2000). Truck travel volume is expected to increase approximately 20 percent over the next decade. These travel demand trends will likely continue.

The number of interstate motor carriers increased by more than 50 percent during the last decade. At the same time, the makeup of the carrier industry is changing. The truckload carrier industry is consolidating, and the number of less-than-truckload carriers is expected to increase. The future challenge for FMCSA is to ensure that new and existing carriers adopt and use management practices that improve truck and bus safety.

Cost pressures on the commercial trucking industry are likely to continue to exist due to the need for real-time monitoring of the location of freight shipments, just-in-time delivery requirements of customers, and the shifting patterns in truckload volume and travel. Another important trend is the growth in e-commerce. As a result, an increase in small shipment lots and more commercial truck deliveries in residential areas is forecast. Under these pressures, the challenge is to ensure that the safety practices of commercial carriers are not compromised.

The number of commercial driver's license holders has increased 38 percent since 1993 to over 9 million today. Commercial drivers must meet more demanding schedules. Continued turnover and local shortages are placing more inexperienced drivers on the road. The challenge is to ensure that commercial vehicle safety is not compromised by these work conditions and the presence of a less experienced workforce.

Crash statistics suggest that errors by the other driver are a significant contributing factor in many car-truck crashes. The challenge is to improve the driving performance of all drivers, commercial and non-commercial, in situations when cars and trucks are in close proximity on the highways and roads.

Organizational Challenges

The limitations on existing data, and the lack of some crash and motor carrier data, hinder efforts to design and implement effective countermeasure strategies. Information on commercial motor vehicle crashes that can be used to assess the cause of crashes is incomplete and not always available. Intrastate carrier data is not readily available. Driver conviction data is not available in all circumstances. The census of motor carriers, an inventory of interstate carriers, has not been regularly updated.

Because of its limited resources, FMCSA conducts compliance reviews on only a small portion of the motor carrier population that are rated by the agency as the highest risk. In addition, FMCSA has limited resources available to ensure that foreign carriers entering the United States meet safety regulations.

The agency adheres to statutory and administrative requirements that make the rulemaking process more open but longer, particularly if the rulemaking is complex. FMCSA will continue to look for opportunities to reduce the length of time required for completing rulemaking actions, while meeting or exceeding the requirements for public participation.

V. STRATEGIES

The MCSIA of 1999 directed FMCSA to pursue the following strategy:

- Increase the number of inspections and compliance reviews to ensure that all high-risk commercial motor vehicles, operators, and carriers are examined;
- Eliminate, with meaningful safety measures, the backlog of rulemakings;
- Improve the quality and effectiveness of data bases by ensuring that all States and inspectors accurately and promptly report complete safety information;
- Eliminate, with meaningful civil and criminal penalties for violations, the backlog of enforcement cases;
- Provide for a sufficient number of Federal and State safety inspectors, and provide facilities and equipment, at international border areas.

During FY 2000, FMCSA continued to follow the policies and strategy adopted in 1999, when the organization was established as an independent agency within the DOT. Soon after the agency was established, the FMCSA *Safety Action Plan 2000-03* was released. The plan describes FMCSA's priorities, which are identified under four main challenges: 1) increasing enforcement; 2) increasing safety awareness; 3) improving safety information and technology; and 4) improving standards for operations and equipment. FMCSA's major accomplishments during fiscal year 2000 are summarized in the following paragraphs.

FMCSA's highest priority continues to be increasing the enforcement of the Federal motor carrier safety regulations. This approach will reduce the number of unsafe drivers and carriers who operate on our highways and roads. When compared to FY 1999,

FMCSA increased the number of Federal compliance reviews conducted by 68 percent, initiated 39 percent more enforcement cases, eliminated its backlog of enforcement cases, increased the average fine per enforcement case, limited the negotiation of enforcement penalties, and instituted progressive sanctions for repeat offenders. A Final Rule for the implementation of motor carrier safety assistance programs (MCSAP) was released. An additional 6 States signed up to participate in the Performance Registration Information System (PRISM) program.

To increase safety awareness among both commercial and non-commercial drivers, as well as carrier owner-operators, FMCSA expanded its public education and industry outreach efforts by participating in over 25 national events, reoriented its Share the Road initiative to include all highway users, and partnered with industry associations on several safety initiatives.

To make improvements in safety information and technology, FMCSA initiated a five-year crash causation study with the National Highway Traffic Safety Administration, made more motor carrier safety data available to the public, and streamlined operations by providing services through the Internet. The number of States in the design and deployment stages of the Commercial Vehicle Information Systems and Networks (CVISN) program increased from 30 to 34.

To improve Federal motor carrier safety standards, the agency completed Final Rules with stronger enforcement provisions against motor carriers, brokers, and freight forwarders for failure to pay safety fines, and provisions to shutdown motor carriers that are unfit and fail to correct safety deficiencies. FMCSA continued to work on several Notices of Proposed Rulemaking (NPRM) actions for CDL improvements, new entrants, and driver training standards. A NPRM for driver hours-of-service regulation was released. In last fall's Appropriations Act, Congress prohibited the Department from implementing a final rulemaking action on this regulation during FY 2001.

In FY 2002, FMCSA will continue to implement the short-term strategy and priority activities outlined in the *Safety Action Plan 2000-03*, with added emphasis on strengthening U.S./Mexico border operations. Moreover, the FY 2002 budget request provides for an immediate Federal presence at the southern border by adding a mix of 80 border inspectors and safety investigators to perform enhanced inspections and safety monitoring processes on commercial vehicles entering the United States. Funds were also requested for Federal and State infrastructure construction at the border crossing sites, and for increased State grants to support State border operations.

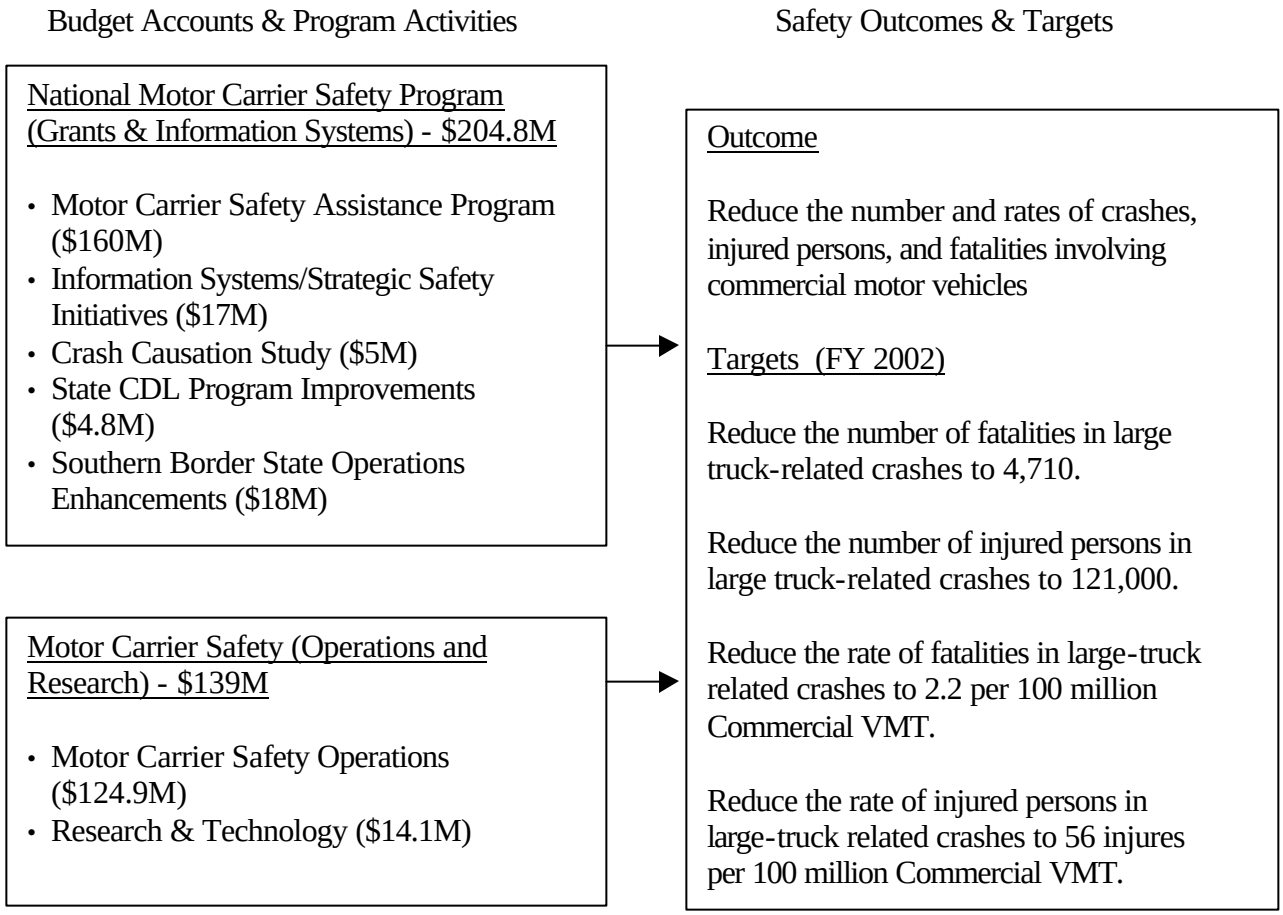
FMCSA released a draft long-term safety and organizational strategy in January. The final report will describe the agency's future safety and organization goals, objectives and priority strategies, program needs, and a performance monitoring and evaluation plan. Over 100 partners and stakeholders submitted comments on the draft report. When submitted to Congress later this year, the final report will provide a framework for FMCSA's annual performance plans and performance agreements beginning in fiscal year 2003.

VI. ACTIVITIES AND ASSOCIATED RESOURCES

Program activities are funded through the Highway Trust Fund. In the FY 2002 budget brief, the activities are described under two accounts: 1) National Motor Carrier Safety Program (Grants and Information Systems) - $204.8 million; and 2) Motor Carrier Safety (Operations and Research) - $139 million. A more detailed description of these activities is contained in FMCSA's fiscal year 2002 budget submission.

The key program activities that directly contribute to the goal of reducing crashes, fatalities, and injuries in large truck crashes are identified in Table A.

Table A. Key Program Activities that Support the FMCSA Safety Outcome Goal



National Motor Carrier Safety Program (NMCSP) – See Table B.

Motor Carrier Safety Assistance Programs ($160 million)
The NMCSP program supports a broad range of comprehensive commercial vehicle safety programs through direct grants to States. The program funds State-conducted vehicle inspections and compliance reviews, hazardous materials training, State enforcement efforts including border crossing programs; drug interdiction; public education; and the maintenance of an enforcement data collection and reporting system.

Information Systems and Strategic Safety Initiatives ($17 million)
Funds provide Federal and State improvements in information systems and data analysis.

Crash Causation Study ($5 million)
Section 224 of MCSIA authorized $5 million to determine the factors contributing to crashes that involve commercial motor vehicles.

Revenue Aligned Budget Authority ($22.8 million)
Funds will be used to continue implementation of the State CDL program improvements directed by the MCSIA of 1999. FMCSA will also provide States with additional funds to support commercial vehicle safety-related activities at the U.S.-Mexico border.

Table B. National Motor Carrier Safety Program

Motor Carrier Safety Assistance Program	
Basic MCSAP Grants	$130.6
Performance Incentive Grants	$ 11.4
Border States Assistance	$ 8.0
High Priority Initiatives	$ 8.0
State Training & Administration	$ 2.0
Subtotal	$160.0
Information Systems and Strategic Safety Initiatives	
Information Systems	$ 3.7
Motor Carrier Analysis	$ 2.3
Performance Registration Information and Systems Management (PRISM) Program	$ 5.0
Driver Programs	$ 1.0
Truck & Bus Crash Data Collection	$ 5.0
Subtotal	$ 17.0
Crash Causation Study	$ 5.0
Revenue Aligned Budget Authority	
State CDL Improvement Program	$ 4.8
Southern Border State Operations Enhancements	$ 18.0
Subtotal	$ 22.8
Total	$204.8

Motor Carrier Safety (Operations and Research) – See Table C.

Operations ($124.9 million)
The FMCSA operations budget will increase to ensure necessary administrative services are performed in FY 2002. The total number of personnel resources will increase from 770 FTE in FY 2001 to 899 in FY 2002, including 90 FTE over the annualized current services level of 809. This account also includes a funding increase of approximately $14 million that will enable FMCSA to improve and expand its safety oversight, outreach, and enforcement activities; and improve safety data collection. An additional funding increase of $13.9 million is included to expand Federal enforcement efforts at the U.S.-Mexico border, including hiring an additional 80 Federal enforcement personnel. Operations funding will also support the BTS Safety Data Action Plan aimed at improving the accuracy, timeliness, and comparability of safety data.

Research & Technology ($14.1 million)
The research and technology program will continue to support ongoing research and technology efforts in the areas of driver, both commercial and non-commercial; carrier; and vehicle. Additional funding, $4.3 million over the FY 2001 level, will support several new starts as well as accelerate technology testing and deployment.

Table C. Motor Carrier Safety (Operations and Research)

Operations	
Border Enforcement & Safety Initiatives	$ 13.9
Motor Carrier Safety Operations Program	$ 5.0
Crash Data Collection	$ 5.0
24-hour Telephone Hotline	$ 0.4
State CDL Improvement Program	$ 5.2
Motor Carrier Safety Operations	$ 86.4
BTS Safety Data Improvements	$ 9.0
Subtotal	$124.9
Research and Technology	$ 14.1
Total	$139.0

Border Infrastructure Improvements

To ensure the safety of trucks and buses crossing the U.S.-Mexico border, $56 million is requested from Federal Highway Administration's Revenue Aligned Budget Authority for construction of State and Federal inspection sites at the U.S./Mexico border. Advancing these projects will be the joint responsibility of FMCSA, FHWA, and the States.

VII. PROGRAM EVALUATION

In FY 2000, FMCSA completed an evaluation of the Top Ten States project. A summary of the results of the Top Ten States evaluation is provided here. In 1996, funds were provided to 10 States, in which nearly 50 percent of all large truck-related fatal crashes occur, to establish innovative crash avoidance and severity reduction measures.[3] The final report highlighted the results in two of the States, Michigan and New York, and recommended a further evaluation of selected countermeasures. In the follow-up evaluation, successful State programs were examined: 1) Michigan's Fatal Accident Complaint Team (FACT) program; 2) New York's program to increase Level 3 inspection training for the New York State police; and, 3) a detailed large truck crash data analysis in New York. The key recommendations from the evaluation study were that FMCSA should: 1) continue to fund States to collect and analyze large truck crash data in order to better target their commercial motor vehicle safety programs; and 2) reinstate, on a limited basis, the grants to States for a sustained, aggressive enforcement effort tied to targeted public information and education campaigns along the identified high-crash corridors.

In addition, work began on the Safe Miles and Compliance Review Impact Assessment study that is to be completed in FY 2002. Initial program impact models were developed for the roadside inspection and compliance review programs in 1999. The premise of the *Safe-Miles* model is that the roadside inspection program has both direct and deterrent effects, each of which reduces crashes. The *CR Impact Assessment* model is based on the before and after changes, both individual and cumulative, in safety performance of carriers that received a compliance review. In addition, a new model is currently being designed to measure the impact of the MCSAP-funded traffic enforcement activity on fatalities, and another model will be designed to measure the overall effects of the FMCSA safety programs and their interactions. The agency also initiated the five-year Commercial Motor Vehicle Crash Causation Study, as directed by Section 224 of the MCSIA of 1999. The study is aimed at identifying data requirements and collection procedures, reports, and other measures that will improve both FMCSA and the States' ability to evaluate future crashes involving commercial motor vehicles; monitor crash trends and identify causes and contributing factors; and develop effective safety improvement policies and programs. Preliminary results for this study will be reported in FY 2002.

VIII. OTHER FEDERAL PROGRAMS WITH COMMON OUTCOMES

FMCSA coordinates its activities with agencies in the Departments of Treasury and Justice to enhance commercial vehicle safety at the U.S. borders. An example project is the development of an International Trade Data System with U.S. Customs. FMCSA is also a participant in the 21st Century Truck Initiative research program involving the DOD, DOE, DOT, and EPA.

[3] States that participated in the program included: California, Florida, Michigan, Illinois, New York, North Carolina, Ohio, Pennsylvania, and Texas. The tenth state, Georgia, opted out of the program.

IX. CONCLUSION

In its first performance plan, FMCSA forecast a 10 percent reduction in large truck-related fatalities between 1998 and 2001. In 1999, there was a decline of less than one percent in large truck-related fatalities and an increase in injuries. The preliminary estimate for 2000 is that fatalities in large truck-related crashes will decline by another one percent from the 1999 level. In order to meet the original forecast, a more significant decline must be achieved in 2001.

The increase in the number of injured persons between 1998 and the preliminary estimate in 2000 is a trend that requires more analysis. Based on the preliminary estimate, there was another slight increase in the number of injured persons between 1999 and 2000. Substantial progress must be made in order to meet the original forecast.

FMCSA and its partners took significant steps last year to strengthen Federal and State enforcement efforts, while also raising industry and public awareness of the truck and bus safety problem. However, a more sustained and broader effort will be needed in the next few years to achieve the national safety outcomes. Strong leadership that fosters greater participation by all parties, the introduction of more innovation in safety practices and technologies, and improved performance in Federal and State programs designed to address the safety problem will be needed. The key to success is to understand the causes of truck and bus crashes, develop and deploy suitable countermeasures, and evaluate the effectiveness of national policies and programs in reducing both the incidence and severity of crashes involving commercial motor vehicles.

X. ADDITIONAL INFORMATION

This plan represents a brief summary of the policies and programs that FMCSA will undertake in FY 2002. For further information about the program activities and funding, please review other sections of this FY 2002 budget estimate, or write to the FMCSA Chief Safety Officer at the address below:

Ms. Julie Anna Cirillo
Acting Deputy Administrator
Federal Motor Carrier Safety Administration
Room 6316, 400 Seventh Street, S.W.
Washington, D.C. 20590

This plan was written by the Strategic Planning and Program Evaluation Division, Office of Policy, Plans, and Regulations. For further information about this document, please contact Woody Stanley at 202-366-2572. Copies of this plan will also be available on the Internet at www.fmcsa.dot.gov on or before May 1, 2001.

APPENDIX I. DESCRIPTION OF PERFORMANCE MEASURES

Table I-A. Large Truck-related Fatalities

Measure:	**Number and rate of fatalities involving large trucks.**
Scope:	The measure includes all fatalities (e.g., drivers and occupants of passenger cars, motorcycles, large trucks, or pedestrians) associated with crashes involving trucks with a gross vehicle weight rating of 10,000 pounds or more. The number of fatalities comes from NHTSA's Fatality Analysis Reporting System (FARS) data, a census of fatal traffic crashes within the 50 States, D.C. and Puerto Rico. Thee fatal crash rate is the number of fatalities per 100 million vehicle miles of large truck travel (VMT).
Source:	NHTSA's Fatality Analysis Reporting System (FARS) provides fatality data. The VMT data are derived from the Federal Highway Administration's (FHWA) Highway Performance Monitoring System (HPMS).
Limitations:	FARS data elements are modified from year to year to respond to emphasis areas, vehicle fleet changes, and other needs for improvement. Large truck VMT reported to FHWA by each State is based on a sample of road segments and is not a census. In addition, the methods used to calculate total VMT may vary from State to State. The methods used by the States to estimate the VMT contribution from rural and urban minor collectors are unknown.
Statistical Issues:	The fatality counts in FARS are generally quite accurate. The major sources of error are underreporting by some precincts and inconsistent use of the definition of a truck. Based on 1993-1999 data, the chance variation in a given year has a regression standard error of approximately 126 fatalities. Because the VMT data provided to FHWA from each State are estimates based on a sample of road segments, the numbers have associated sampling errors. The methodology used by each of the States to estimate VMT is not known and may introduce additional non-sampling error. Although States provide VMT estimates on an annual basis, they are only required to update their traffic counts at all sampling sites once every three years. Thus an annual VMT estimate from a particular State may be based, in part, on data collected during a previous year. Based on 1993-1999 data, the chance variation in a given year in the number of fatalities per 100 million vehicle miles of large truck travel has a regression standard error of 0.05.
Verification/ Validation:	Fatality data are reviewed and analyzed by NHTSA's National Center for Statistics and Analysis. Quality control procedures are built into data collection and data processing. A study using samples of 1989-1990 FARS cases was completed in 1993 to assess the accuracy of data being reported. FHWA routinely works with State data providers to modify reported VMT values that do not appear reasonable before incorporating them into its final master file.
Comment:	The FARS data have been around for many years and are generally accepted as a good source for describing fatal crashes on the Nation's highways. The large truck VMT data used to calculate fatal crash rates have both sampling and non-sampling (i.e., bias) error associated with it. The impact of these errors on FMCSA's estimates of large truck crash rates is considered to be minimal.

Table I-B. Large Truck-related Injured Persons

Measure:	**Number and rate of injured persons involving large trucks.**
Scope:	The measure includes all injured persons (e.g., drivers and occupants of passenger cars, motorcycles, large trucks, or pedestrians) associated with crashes involving trucks with a gross vehicle weight rating of 10,000 pounds or more. The number of injured persons is derived from NHTSA's General Estimates System (GES). The injury rate is the number of injured persons per 100 million vehicle miles of large truck travel (VMT).
Source:	NHTSA's General Estimates System (GES) provides injury data. VMT data are derived from the Federal Highway Administration's (FHWA) Highway Performance Monitoring System (HPMS).
Limitations:	GES data are obtained from a nationally representative sample of 60 sites. The results provide only national data, not State-by-State data. Large truck VMT reported to FHWA by each State is based on a sample of road segments and is not a census. In addition, the methods used to calculate total VMT may vary from State to State. The methods used by the States to estimate the VMT contribution from rural and urban minor collectors are unknown.
Statistical Issues:	The GES data have a standard error of 7.9% for injuries from truck and automobile crashes (cf. Appendix C of *Traffic Accident Reports*). They are less accurate than the corresponding fatality counts. Based on 1993-1999 data, the variation due to random chance in the number of injuries, which includes sampling variability, has a regression standard error of approximately 7,890. Because the VMT data provided to FHWA from each State are estimates based on a sample of road segments, the numbers have associated sampling errors. The methodology used by each of the States to estimate VMT is not known and may introduce additional non-sampling error into the estimates. Although States provide VMT estimates on an annual basis, they are only required to update their traffic counts at all sampling sites once every three years. Thus an annual VMT estimate from a particular State may be based, in part, on data collected during a previous year. Based on 1993-1999 data, the chance variation in a given year in the number of injured persons per 100 million vehicle miles of large truck travel has a regression standard error of 5.29.
Verification/ Validation:	Injury data are reviewed and analyzed by NHTSA's National Center for Statistics and Analysis. Quality control procedures are built into data collection and data processing. FHWA routinely works with State data providers to modify reported VMT values that do not appear reasonable before incorporating them into its final master file.