

THE SAFETY DATA IMPROVEMENT PROGRAM 2011–2012 BIENNIAL REPORT TO CONGRESS

Pursuant to Section 4128 of the
Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
Public Law 109-59
March 2014

INTRODUCTION

Section 4128 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) authorized the Secretary of the U.S. Department of Transportation (DOT) to make grants to States through the Safety Data Improvement Program (SaDIP) for projects and activities to improve the accuracy, timeliness, and completeness of commercial motor vehicle (CMV) safety data. SAFETEA-LU also directed the Secretary to transmit a biennial report to Congress on the activities and results of the program and any recommendations the Secretary determines to be appropriate. The *Safety Data Improvement Program 2009–2010 Biennial Report* was transmitted to Congress on June 5, 2013. Section 32603 of the Moving Ahead for Progress in the 21st Century Act authorized continuation of SaDIP.

BACKGROUND

The Federal Motor Carrier Safety Administration (FMCSA) is responsible for regulating the safety of interstate large truck and bus travel in the United States. Since FMCSA was established in 1999, large truck and bus fatalities have declined from 5,620 in 2000 to 4,018 in 2011 (the most recent year for which crash data are available). In 2000, the fatality rate from crashes involving large trucks and buses was 0.205 per 100 million total vehicle miles traveled (VMT) on the Nation's highways. By 2011, that same rate had decreased to 0.136, a 34 percent improvement. Additionally, the injury rate from crashes involving large trucks and buses decreased from 3.94 per 100 million VMT in 2000 to 2.49 per 100 million VMT in 2011, a 37 percent overall improvement. With roughly 1,100 employees, FMCSA oversees an industry comprised of more than 525,000 interstate and hazardous materials motor carriers and approximately 5.7 million active commercial drivers. FMCSA relies on strong partnerships with its stakeholders to achieve its safety mission.

FMCSA is a data-driven organization. Therefore, timely, accurate, and accessible data are critical to the success of the Agency's safety programs and the development of its regulations. FMCSA uses data collected from motor carriers, Federal and State agencies, and other sources to monitor motor carrier compliance with the Federal Motor Carrier Safety Regulations and Hazardous Materials Regulations. Data are also necessary to evaluate the safety performance of motor carriers, drivers, and vehicle fleets, and to help Federal safety investigators focus their enforcement resources by identifying high-risk carriers and drivers. Timely, accurate, and complete crash and inspection reporting is one of the five national program elements of the Motor Carrier Safety Assistance Program, and the collection of data is a core component of a successful enforcement program.

FMCSA maintains the Motor Carrier Management Information System (MCMIS), which contains registration, crash, inspection, safety audit, and investigation data for carriers. Access to the system is provided to designated employees in each State through SAFETYNET. SAFETYNET is an automated information management system that supports FMCSA programs by allowing designated users to upload safety performance data on interstate and intrastate commercial motor carriers to MCMIS. Once entered, the data are available to States and other entities for further analysis. Additionally, motor carrier companies, insurers, shippers, safety researchers, advocacy groups, and a variety of other entities use the MCMIS database.

Prior to SAFETEA-LU and the Motor Carrier Safety Improvement Act of 1999 (MCSIA), deficiencies in the data were revealed through periodic audits of MCMIS crash data by FMCSA. Data on crashes involving large trucks and buses were incomplete, and many eligible crashes were not reported. Section 225 of MCSIA addressed the lack of complete, timely, and accurate CMV crash data through the creation of the Commercial Vehicle Analysis Reporting System (CVARS) program. CVARS was developed to address deficiencies in data quality and the lack of data reporting. Under CVARS, FMCSA initiated several efforts including continued State funding to improve the collection and analysis of truck and bus crash data, State Safety Data Quality (SSDQ) performance measures development, and other initiatives to assist the States in improving data reported to FMCSA. Under MCSIA and the CVARS program, DOT provided more than \$21 million in discretionary grants and cooperative agreements to 34 States between 2002 and 2005.

STATE SAFETY DATA IMPROVEMENT PROGRAM

SaDIP is the successor to the CVARS program. SAFETEA-LU authorized \$11 million for Fiscal Years (FY) 2006 through 2009 (\$2 million for FY 2006 and \$3 million annually for the remaining years) to award grants to States for projects and activities to improve data reported to FMCSA. SAFETEA-LU, as amended under Public Law 111-117, 124 Stat. 71, 49 U.S.C. §§ 31102-31104, provided \$3 million each year for FY 2010 through FY 2012. Requests for SaDIP grants exceeded the available funds each year from FY 2008 through FY 2012. Since FY 2006, FMCSA has awarded 85 SaDIP grants to 34 States, totaling more than \$20 million.

Additionally, in FY 2006, FMCSA established specific guidelines to better assess State proposals for SaDIP grants; better prioritize funding requests received from the States; and provide greater uniformity in evaluating, ranking, and awarding funds to States. Evaluation criteria for awards have been clearly defined and posted publicly at www.grants.gov for any potential grant applicant to review and consider prior to submitting an application. FMCSA has integrated the availability of SaDIP grants into an agency-wide *Federal Register* Notice of Funding Availability since FY 2009. All eligible applications for SaDIP funds were received from States via www.grants.gov. Technical review panel members evaluated grants, and awards were disbursed before the close of each fiscal year for all years since the inception of the SaDIP program. These grant life cycle enhancements were made in response to agency-wide grants management policies and initiatives as well as in response to the November 2005 Government Accountability Office report entitled *Further Opportunities Exist to Improve Data on Crashes Involving Commercial Motor Vehicles*. Table 1 shows the distribution of SaDIP grants to the States since FY 2006.

Table 1. SaDIP Funding Distribution FY 2006 to FY 2012

State	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Alabama	\$300,000.00		\$240,000.00	\$500,000.00	\$350,000.00		\$443,001.00
Alaska	\$160,384.00			\$335,479.20	\$94,416.00	\$120,049.00	\$127,758.00
Arizona		\$112,800.00	\$129,350.00				
California		\$400,000.00					
Connecticut				\$25,600.00	\$45,600.00	\$280,345.00	\$258,343.00
District of Columbia	\$209,337.60						
Florida						\$440,000.00	\$353,250.00
Georgia					\$200,000.00		\$54,136.00
Idaho	\$26,400.00		\$300,000.00				
Indiana		\$408,740.00	\$316,000.00	\$99,902.33			\$111,281.00
Iowa			\$300,000.00		\$350,000.00		
Kansas	\$415,957.00	\$640,000.00	\$420,000.00	\$240,288.16			
Kentucky			\$256,000.00				
Louisiana		\$188,482.91		\$270,746.40		\$298,305.00	
Maine	\$243,656.64	\$101,408.00		\$205,708.67	\$193,619.00		\$182,587.00
Maryland		\$154,400.00		\$288,000.00		\$318,642.00	
Massachusetts	\$201,578.00		\$299,664.00	\$215,981.64	\$90,447.00		
Michigan			\$230,810.00		\$350,000.00	\$290,000.00	
Mississippi	\$249,994.00						
Missouri				\$68,250.00			

State	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Nebraska				\$299,923.20			
Nevada			\$8,640.00				
New Hampshire	\$125,790.54						
New Jersey		\$116,120.00			\$104,244.00	\$204,739.00	\$204,739.00
New Mexico			\$180,000.00		\$82,755.00		\$102,640.00
North Carolina		\$425,153.00 ¹	\$291,520.00	\$450,120.40	\$72,175.00	\$697,920.00	\$187,232.00
North Dakota							\$35,000.00
Oklahoma		\$80,729.09 ²			\$350,000.00		
Pennsylvania							\$147,869.00
Rhode Island	\$44,000.00	\$72,000.00			\$54,944.00		
Tennessee			\$28,016.00		\$311,800.00		
Utah							\$336,164.00
Virginia			\$300,000.00 ³		\$350,000.00		\$456,000.00
Washington		\$300,170.00					
Wisconsin						\$350,000.00	
Total⁴	\$1,977,097.78	\$3,000,003.00	\$3,300,000.00	\$3,000,000.00	\$3,000,000.00	\$3,000,000.00	\$3,000,000.00

¹ Two FY 2007 SaDIP grants were awarded to the State of North Carolina: \$200,000 to the NC State Highway Patrol and \$225,153 to the NC Department of Transportation.

² Two digits were transposed on the obligation documents in FY 2007, resulting in an additional \$3.00 being obligated to the State of Oklahoma. The grantee did not expend the additional funds and the extra amount was de-obligated.

³ \$300,000 of Commercial Vehicle Information Systems and Network funds were awarded to the State of Virginia in support of an FY 2008 SaDIP grant. This reprogramming exceeded the appropriated amount for SaDIP and triggered a deficiency, which was reported to the Government Accountability Office and to the U.S. Congress on April 29, 2013.

⁴ The following States have not received a SaDIP grant: Arkansas, Colorado, Delaware, Hawaii, Illinois, Minnesota, Montana, New York, Ohio, Oregon, South Carolina, South Dakota, Texas, Vermont, West Virginia, and Wyoming. Of these States, the following received CVARS grants or cooperative agreements prior to FY 2006: Colorado, Minnesota, Montana, New York, Ohio, South Carolina, South Dakota, Texas, Vermont, and West Virginia.

Using these grants, States have undertaken the following primary activities:

- Reduced the backlog of data not yet entered into State-level databases by hiring contractors and State personnel to create more complete State crash data files.
- Developed and implemented electronic data systems for collecting and processing crash data in a more timely, accurate, and consistent manner.
- Provided training and educated law enforcement officers and State traffic records personnel on the definitions and criteria for CMV crashes and how to create more accurate and consistent data.
- Analyzed existing data and State crash data collection forms to identify insufficiencies or inaccuracies and develop plans for addressing them.

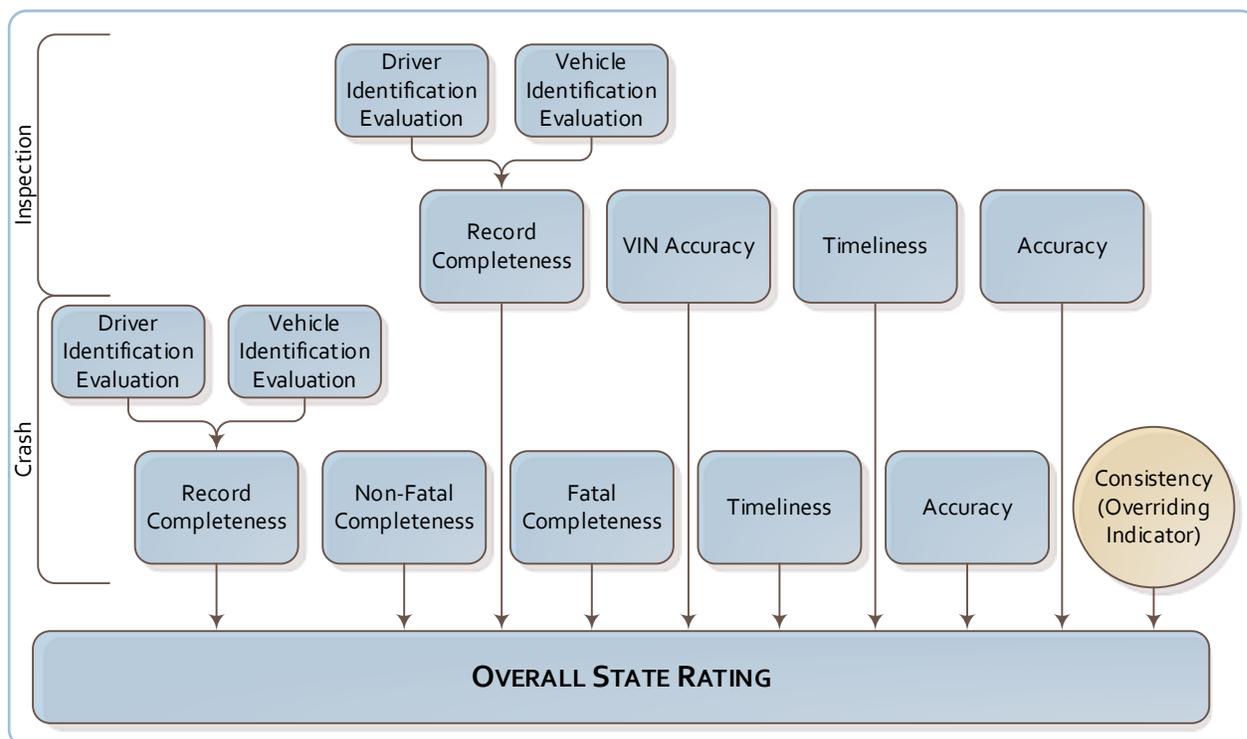
Awards for activities supported by SaDIP and its predecessor, CVARS, have resulted in significantly improved data reported by the States to FMCSA. Since there is variability among States in the reporting of safety event data used by FMCSA to evaluate State safety programs, an SSDQ methodology was developed to evaluate the completeness, timeliness, accuracy, and consistency of State-reported data. In addition to meeting the eligibility requirements established by SAFETEA-LU, successful SaDIP grant applicants must address their performance against the SSDQ methodology in their grant proposals. The section below describes the methodology against which States are rated. The SSDQ Map (Figure 2) provides a pictorial representation of the States' performance against the SSDQ methodology.

COMPREHENSIVE SSDQ PROGRAM

On January 3, 2002, the Office of Management and Budget issued Government-wide Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information disseminated by Federal Agencies under Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-554), effective December 2000. These guidelines were implemented and made effective for all information released by FMCSA as of October 1, 2002. The DOT Office of Inspector General (IG) 2004 report, *Improvements Needed in the Motor Carrier Safety Status Measurement System*, recommended that FMCSA focus on improving data quality. FMCSA developed a comprehensive data and information quality plan that supports the DOT data quality guidelines and addresses the specific recommendations put forth in the IG's report. The following components are included in the plan.

Methodology for State Safety Data Quality: The SSDQ evaluation uses a 12-month timeframe that ends 3 months prior to the MCMIS snapshot for each measure, unless otherwise stated in the rating description. When first developed in 2004, the methodology consisted of five performance measures and one overriding performance indicator. In October 2007, FMCSA introduced two additional performance measures focused on the completeness of the crash file. The methodology was modified again in October 2010 and now consists of nine performance measures (five crash and four inspection measures) and one overriding performance indicator, as depicted in Figure 1.

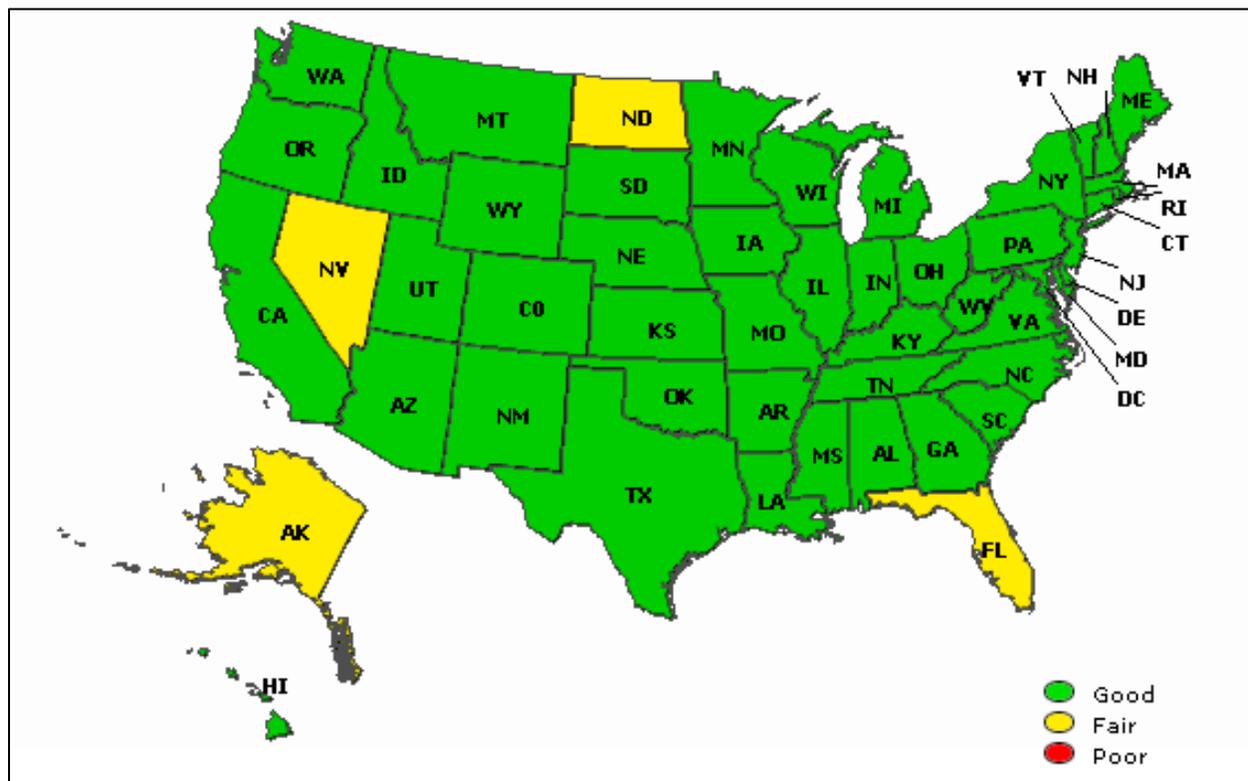
Figure 1. Diagram. State Safety Data Quality Evaluation Methodology



Monthly SSDQ Evaluation and the SSDQ Map: The SSDQ evaluation is updated monthly to reflect improvements in crash and roadside inspection reporting. Evaluation reports are released to the public each month and are available on the Analysis & Information website at <http://ai.fmcsa.dot.gov/DataQuality/dataquality.asp>.

States receive a rating of “Good,” “Fair,” or “Poor” for each SSDQ measure and for an overall rating of data quality. FMCSA developed the color-coded SSDQ map as a visual tool for States to use in improving crash and inspection data reported to FMCSA. Figure 2 depicts the overall data quality rating for each State based on the following criteria: good/green for States with at least one good crash measure, one good inspection measure, and no poor measures; fair/yellow for States with no more than one poor measure; poor/red for States with two or more poor measures. Red-flagged States are automatically rated poor overall.

Figure 2. Map. SSDQ Map—Overall State Ratings, September 2012



SSDQ Continuous Improvement: The SSDQ performance measures have undergone continuous development, with new measures added and existing ones refined as part of an ongoing effort to improve State data quality. The States' data are improving continuously over time, as shown in Table 2.

Table 2. SSDQ Performance Measure Changes from FY 2004 to FY 2012

Overall State Rating	5 Measures + 1 Indicator		7 Measures + 1 Indicator		9 Measures + 1 Indicator		9 Measures + 1 Indicator (NFCC Modifications) ⁵	
	3/2004	3/2007	9/2007	8/2010	9/2010	8/2011	1/2012	9/2012
Good	24	40	21	40	36	44	39	46
Fair	13	8	20	9	12	6	10	4
Poor	14	3	10	2	3	1	2	1*

* District of Columbia

⁵ Non-fatal crash completeness measure was the most recent measure to be refined.

Technical Assistance: FMCSA currently funds three Technical Assistance (TA) Analysts to support State data quality improvements. Every State has one of the TA Analysts assigned to assist in the State's efforts to improve and maintain data quality. The TA Analysts monitor the States' data on a regular basis and provide their observations to the States. TA Analysts are also available to the State to spot trends and monitor progress, develop and analyze custom reports, suggest strategies for improvement, and provide connections to tools or other specialists.

Fatality Analysis Reporting System (FARS)/MCMIS Fatal Crash Record Matching Tool: The FARS/MCMIS Fatal Crash Record Matching Tool is designed to help reconcile differences between the FARS and MCMIS databases. A methodology was developed to "match" fatal large truck and bus crash records between the FARS and MCMIS databases. The methodology defines a "matched record" between the two databases as a crash that involved at least one fatality, involved a large truck or bus, and contains the same information in several key fields (e.g., county, date, time, VIN, and DOT number). The methodology has more than 40 unique matching combinations that can produce a single match between FARS and MCMIS fatal crash records.

State Police Accident Report (PAR) Analysis: Data elements included on the State PAR, instructions for completing the PAR, and State crash records are reviewed to determine the nature and extent of reporting. Recommendations for improving the PAR are provided to State agencies to ensure all data required to be reported to FMCSA are collected at the accident scene.

Training: State agencies are provided customized training and materials based on their State crash reports and truck and bus supplemental forms. FMCSA also provides training to SAFETYNET operators to improve the quality of the inspection and crash data input into SAFETYNET and uploaded to MCMIS. The training is designed to help SAFETYNET operators with the following: to improve the data used in the Crash and Inspection Record Completeness measure and the Crash and Inspection Accuracy measure; run queries in SAFETYNET; use the Driver Information Resource online tool to search past inspections and crashes in MCMIS; use Query Central to locate driver, vehicle, and carrier information; understand the different carrier types used in SAFETYNET; and resolve non-matches.

DataQs System: The DataQs System, established in February 2004, is an electronic means for filing concerns about Federal and State data disseminated by FMCSA. Through this system, requests for data review (RDR) are automatically forwarded to the appropriate office for resolution. The system also allows requestors to monitor the status of each RDR. The first edition of the *DataQs User Guide and Manual*, published in January 2011, describes standardized processes, techniques, and best practices to address and resolve RDRs submitted electronically by commercial drivers, motor carriers, FMCSA and State agency users, and the public to FMCSA's DataQs website.

SUMMARY

SaDIP and the comprehensive SSDQ program contribute to the States' ability to continuously improve the quality, accuracy, completeness, and timeliness of their truck and bus crash and inspection data collection and reporting. The improvements enhance the ability of both Federal and State governments to make highway planning, investment, and safety enforcement decisions. However, more work remains to be done. FMCSA continues its support of States' data quality efforts in order to sustain this progress and increase the number of State participants working to improve the collection, analysis, and reporting of motor carrier crash and inspection data, with the primary goals of improving motor carrier safety and reducing fatal and injury crashes on the Nation's roadways.