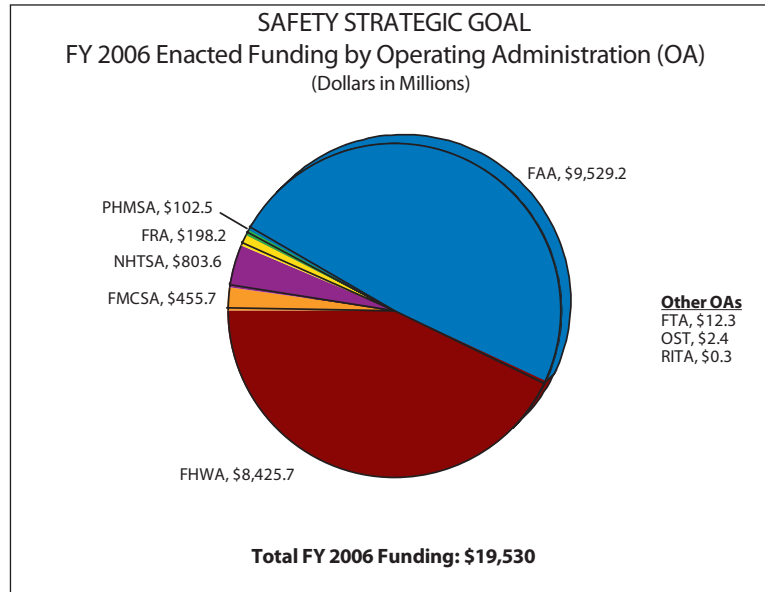




## SAFETY STRATEGIC GOAL

PROMOTE THE PUBLIC HEALTH AND SAFETY BY WORKING TOWARD THE ELIMINATION OF TRANSPORTATION-RELATED DEATHS AND INJURIES

FY 2006 ENACTED FUNDS: \$19,530 MILLION



### STRATEGIC OUTCOMES

- Reduction in Transportation-Related Deaths
- Reduction in Transportation-Related Injuries

### PERFORMANCE MEASURES

- Highway fatalities per 100 million vehicle-miles traveled (VMT).
- Fatalities involving large trucks per 100 million truck VMT.
- U.S. commercial fatal aviation accidents per 100,000 departures (last 3 year's average).
- Number of fatal general aviation accidents.
- Rail-related accidents and incidents per million train miles.
- Transit fatalities per 100 million passenger-miles traveled.
- Number of natural gas pipeline incidents and hazardous liquid pipeline accidents.
- Number of serious hazardous materials transportation incidents.



## HIGHWAY SAFETY

**FY 2006 ENACTED FUNDS  
\$9,668.6 MILLION**

Highway crashes account for 95 percent of all transportation-related fatalities and 99 percent of transportation injuries. There are a number of facts known about this leading cause of death for Americans age 4 through 34: about 60 percent of fatalities occur in roadway departure crashes and 59 percent of those happen on rural roads; 22 percent of fatal crashes occur at intersections; 18 percent of Americans, or about 55 million people, still do not use safety belts all of the time when driving motor vehicles; and alcohol is still the single biggest contributing factor in fatal crashes. Three Operating Administrations—the National Highway Traffic Safety Administration, the Federal Highway Administration, and the Federal Motor Carrier Safety Administration—contribute to the accomplishment of the Department’s highway safety goal by focusing on safer roads, safer vehicles, and safer driver behavior.

**NHTSA** After two consecutive years of decline in overall highway fatalities and impaired driving fatalities, and having achieved the lowest recorded fatality rate in history, fatality data revealed a setback in 2005 (latest data available). Total fatalities increased by 1.4 percent over 2004, to a total of 43,443 in 2005. The 2005 figure includes a minimal decrease in total alcohol-related fatalities by 0.2 percent to a total of 16,885. The increase in vehicle fatalities comes from the dramatic rise in the number of motorcycle fatalities and the increase in pedestrian fatalities over the previous year, which more than compensate for the slight decrease in motor vehicle occupant fatalities (-0.7 percent). Motorcycles continue to be of particular concern, with a 13 percent increase in motorcycle fatalities in 2005, to a total of 4,553. The number of pedestrian fatalities increased from 4,675 in 2004 to 4,881 in 2005, a 4.4 percent increase. All of this underscores the need for a renewed, aggressive and coordinated effort to make America’s roads safer.

**FHWA** Approximately 60 percent of fatalities occur in roadway departure crashes, involving a run-off-road in a single vehicle or a head-on or sideswipe collision with another vehicle. The FHWA continues to concentrate efforts on reducing the number of fatalities in three types of crashes: roadway departures, crashes at or near intersections, and collisions involving pedestrians. Roadway departures fatalities in 2005 (latest data available) were 25,388, a slight decrease from 2004. Fatalities for intersection-related fatal crashes in 2005 were 9,188 and 4,881 for pedestrian-related fatalities. Both figures represent slight increases from 2004. The FHWA safety-related programs yielded multiple benefits for communities across the United States, including a reduction in the number of specific types of crashes and improvements in system conditions and operations. Highway construction programs contributed to safety by improving unsafe roadway design and operations, improving the condition of bridges, and removing roadway hazards. The continued use of Road Safety Audits assisted communities with safety improvements during the construction of new roadways and reconstruction of existing roadways. FHWA influenced decisions to increase staffing, funding, and coalition partnerships for safety initiatives in Maine, Illinois, Minnesota, and States along the I-95 corridor.



**FMCSA** Based on preliminary estimates for 2006, the number of deaths in crashes involving large trucks has decreased by almost 20 percent from its all-time high in 1979. In addition to the low rate for crash-related fatalities, the rate for crash incidence is the lowest in decades. Preliminary projections for 2006 suggest that FMCSA will be able to maintain this historic low. Currently, about 8 million large trucks are registered to operate across the Nation, traveling over 230 million truck miles.

**2006 Results.** DOT is not expected to meet the targeted highway fatality rate. The early projection for 2006 is a fatality rate of 1.44 per hundred million VMT, resulting in 43,463 fatalities. The rate continues to decline, but at a slower pace than anticipated. In 2003, the fatality rate was 1.48 per hundred million vehicle miles traveled (VMT) based on 42,884 killed in traffic-related crashes. With 42,836 fatalities in 2004, the rate declined to 1.45 per hundred million VMT. In 2005, there was a slight rise to 43,443 traffic deaths, resulting in a fatality rate of 1.47.

<b>Performance Measure</b>				
Highway fatalities per 100 million vehicle-miles traveled (VMT)				
	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
Target	1.4	1.38	1.38	1.38
Actual	1.48	1.45 (r)	1.47 (r) *	1.44 #
(r) Revised; * Preliminary estimate; # Projection				

DOT is reviewing trends and identifying the program factors that contribute to reductions in the average fatality rate to identify the States that appear to be on track to achieve substantial reduction in fatalities over the next few years. With the new Highway Safety Improvement Program established in SAFETEA-LU and continued implementation of existing programs, the current trends can hopefully be reversed. The FHWA, NHTSA, FMCSA, FTA and FRA, as well as external safety advocates and partners including the American Association of State Highway Transportation Officials, will continue working together to develop effective approaches and countermeasures.

**FY 2007 Performance Forecast.** It is unlikely that the target will be met in FY 2007.





**2006 Results.** DOT did not meet the target. Preliminary data for 2006 shows that the actual large truck fatality rate is 2.32 fatalities per 100 million truck VMT, while the target was no more than 1.85 fatalities per 100 million truck VMT. This constitutes an estimated shortfall of .47 fatalities per 100 million truck VMT; based on the projected mileage for 2006.

Performance Measure				
Fatalities involving large trucks per 100 million truck VMT				
	2003	2004	2005	2006
Target	2.19	2.07	1.96	1.85
Actual	2.31 (r)	2.29 (r)	2.31 (r)	2.32 *
(r) Revised; * Preliminary estimate				

Despite the lowest incidence of truck crashes and fatalities in decades, it has become clear that our gains have reached a plateau, and further reductions in the fatality rate are becoming harder and harder to attain. In response, beginning in FY 2005, FMCSA launched major initiatives to reexamine and reengineer core safety activities. The Comprehensive Safety Analysis (CSA) 2010 project is examining the foundation of all of FMCSA's safety programs, exploring new enforcement regimes, and revisiting many existing practices and procedures to increase and sharpen the agency's focus on improving safety. In FY 2007, FMCSA will launch important research and development cycles for CSA 2010 concepts and in FY 2008 the Agency will begin initial testing and evaluation of the CSA 2010 projects through pilot tests in multiple states. In FY 2007, FMCSA will renew its focus on the role of drivers in preventing crashes. An increasing body of research shows that influencing driver behavior is the biggest factor in crash prevention. This is an important area for the Agency to look at for future gains in safety.

**FY 2007 Performance Forecast.** The Department will likely fall short of the Secretary's goal of 1.75 fatalities per 100 million truck vehicle-miles traveled.

## IN-DEPTH ACCOMPLISHMENTS PROMOTING HIGHWAY SAFETY

### NHTSA

#### Safety Belts

In the past five years, safety belt use has increased steadily from 71 percent in 2000 to 82 percent in 2005 (latest data available). NHTSA has found safety belt use is statistically lower in States with secondary belt enforcement laws than in States with primary laws, and even lower in rural areas than in urban or suburban areas. Primary enforcement allows law enforcement officers to issue a citation any time they observe an unbelted driver or passenger. Secondary enforcement only allows officers to issue a safety belt citation if the officer has stopped the vehicle for some other reason. To date, 25 States, the District of Columbia, and Puerto Rico have enacted primary safety belt use laws. SAFETEA-LU provides real incentives for States to enact stronger belt use



laws. It is already seeing benefits; since the beginning of 2006 three more States—Alaska, Kentucky, and Mississippi—have enacted primary safety belt use laws in direct response to the SAFETEA-LU incentives.

In May 2006, NHTSA conducted one national Click It or Ticket (CIOT) campaign, while encouraging States to continue to conduct periodic high-visibility safety belt law enforcement mobilizations during the summer months. The agency continued demonstration projects to increase safety belt use among high-risk populations such as drivers in rural areas, pick-up truck occupants, 8-15 year olds and teens. NHTSA continued to work with organizations representing these populations to try to raise their lower-than-average safety belt use rates. This year's CIOT campaign was accompanied in 18 States by an additional campaign, Buckle Up in Your Truck, to encourage improved safety belt usage in pickups.

### Impaired Drivers

NHTSA made available more than \$118.3 million to the 50 States, the District of Columbia and Puerto Rico for alcohol-impaired driving countermeasure laws or programs, such as administrative license revocation laws and graduated licensing programs, or to meet certain performance criteria based on their alcohol-related fatality rates. Within this program, the ten States with the highest impaired driving fatality rates received extra funding under SAFETEA-LU. NHTSA will work closely with these ten States to facilitate implementation of effective programs, including periodic and sustained high-visibility enforcement efforts and media campaigns. NHTSA initiated the new national advertising campaign delivering the message “Drunk Driving: Over the Limit; Under Arrest.” As part of this campaign, States conduct impaired driving enforcement crackdowns during the Labor Day weekend and the December holiday season.

### Safer Vehicles

Under NHTSA's New Car Assessment Program (NCAP), the agency tested approximately 80 percent of new vehicles in order to provide consumers with frontal and side crashworthiness information. The agency has published a new regulation, effective November 2006, to require the placement of NCAP safety ratings on vehicles at the point of sale by September 1, 2007.

The agency also rated 99 child safety seats for ease of use from 14 different manufacturers for 2006. According to the annual ratings, the newest models of child safety seats are easier to use than their predecessors. Of the 99 seats rated, 85 received an overall score of “A”. In 2005, 74 percent of rated seats received an overall score of “A”. Clearer labels and instructions accounted for most of the improvements in 2006.

Rollover ratings for 2006 model year sport utility vehicles (SUVs) show a marked improvement over 2005. The rating results also point to an unprecedented number of SUVs with electronic stability control (ESC) in 2006. For the 2006 model year, 39 SUVs (42 percent of those rated)



earned four stars in NHTSA's rollover rating program. In 2005, 34 percent received four stars. For the 2006 model year, 57 SUVs (69 percent of all SUV models) offer ESC as standard equipment, up from 43 percent in 2005. Earlier research by NHTSA documented the potential life-saving benefits of ESC, reducing single vehicle crashes by 63 percent for SUVs and 30 percent for passenger cars.

## **FHWA**

### Roadway Departure

In 2006, FHWA continued to actively pursue improved roadway departure safety through a multi-faceted approach. FHWA worked closely with State highway engineers and safety specialists, law enforcement personnel, and safety researchers to identify appropriate engineering countermeasures for high-risk locations on existing roads and to incorporate state-of-the-practice design features on new roads. This effort includes promoting greater use of improvements such as upgraded guardrails and other roadside features to current standards, encouraging expanded use of pavement grooves as warning devices (i.e., rumble strips), and greater use of retro-reflective signs. To minimize the impact of a crash when a vehicle leaves the roadway and strikes objects such as trees or guardrails, an educational CD that addresses the need to balance roadside aesthetics with safety was widely distributed to State highway departments.

### Intersection Safety

To improve intersection safety, the FHWA worked with its partners to develop engineering and technology improvements, provide training and technical assistance for State and local safety officials, develop a sample intersection safety action plan for use by States, and evaluate the effectiveness of intersection safety countermeasures. As a result of these efforts, FHWA provided information to State and local officials on intersection safety, including novel or non-traditional intersections. FHWA continues to develop Intelligent Transportation Systems technology-based systems that might significantly reduce intersection crashes in the future, such as a Cooperative Intersection Collision Avoidance System, which has the potential to significantly reduce intersection crashes by enabling the vehicle to communicate with the highway to help drivers avoid potential crashes.

### Pedestrian Safety

To counter the serious issue of pedestrian fatalities, FHWA continued to partner with State and local agencies to target high crash locations in those States with the highest pedestrian fatalities. FHWA developed a comprehensive guide to help State and local agencies to develop and implement a pedestrian safety action plan. FHWA delivered 37 courses on *How to Develop a Pedestrian Safety Action Plan* and *Engineering for Pedestrian Safety in States* with pedestrian safety



issues. In addition, FHWA developed bilingual educational materials designed to provide native Spanish speaking audiences with important information related to pedestrian and bicycle safety issues in the United States.

## **FMCSA**

### **Compliance and Enforcement**

During FY 2006, FMCSA continued to place a high priority on enforcement and compliance operational activities. FMCSA obligated over \$250 million to States for motor carrier compliance and enforcement activities to complement Federal operations. During FY 2006, FMCSA completed over 15,398 federally conducted safety compliance reviews, 2,577 conditional carrier reviews, 10,057 federally conducted new entrant safety audits, 186,389 federally conducted Southern border vehicle/driver inspections, 737 federally conducted border safety audits, and 3,032,625 roadside inspections. In addition, the Agency completed 501 motorcoach compliance reviews, 15,867 motorcoach inspections and 15,513 border motorcoach inspections. FMCSA also worked with State partners to ensure their completion of over 5,161 compliance reviews, 28,863 new entrant audits, 138 motorcoach compliance reviews, 8,871 motorcoach inspections, 499 border motorcoach inspections, and 537,124 southern border vehicle/driver inspections.

### **Education and Outreach**

FMCSA, in partnership with NHTSA, completed a project known as TACT (Ticketing Aggressive Cars and Trucks), the first demonstration pilot project of its kind. The project demonstrated the effectiveness of using high visibility enforcement, education, media and evaluation to raise public awareness to reduce fatalities resulting from other vehicles cutting off, tailgating, and speeding near and around large trucks. The results of the project showed that drivers of passenger vehicles understood the message and learned how to drive more responsibly around trucks.

FMCSA began developing a Non-Entrant Education and Outreach Program to identify interstate motor carriers and shippers throughout the country who have not registered with FMCSA and educate them about their responsibility to register and receive formal operating authority. The program will also educate them on their responsibility to comply with the Federal Motor Carrier Safety Regulations and Hazardous Materials Regulations, and the penalties for non-compliance.



## RESEARCH, TECHNOLOGY AND SAFETY INFORMATION

FMCSA's Research and Technology programs continue to provide advances and innovations to improve commercial motor vehicle safety. In FY 2006, FMCSA evaluated a lane departure warning system that would monitor the position of a vehicle within a roadway lane and warn a driver if the vehicle deviates or is about to deviate outside the lane. The Agency also began developing recommended practices for other on-board safety technologies, including collision warning systems, adaptive cruise control, and stability systems.

FMCSA is also constructing a prototype and testing countermeasures to alert drivers if their vehicle is following too closely to a commercial motor vehicle. The Agency initiated the design and prototype of an Employer Notification Service system that will allow carriers to register their drivers so that they are notified in a timely manner of any convictions or citations that may disqualify a driver from holding a commercial driver's license.



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FMCSA also began the development, testing and evaluation of a prototype Drowsy Driver Detection System. This project will develop a prototype drowsy driver and distraction monitoring feedback system for commercial motor vehicle drivers using two or more proven sensors. The Agency also commenced Phase 3 of the North American Fatigue Management Program which will provide training and tools for fleet managers, schedulers, drivers and their families. This comprehensive program is currently being tested at one U.S. and one Canadian trucking company to provide fatigue management and awareness training for the different audiences using classroom instruction and DVDs.

### AVIATION SAFETY

**FY 2006 ENACTED FUNDS  
\$9,529.2 MILLION**

Commercial aviation is one of the safest forms of transportation. Although rare, aviation accidents can have catastrophic consequences, with large loss of life. The public demands a high standard of safety and expects continued improvement. General Aviation (GA) is also an important element of the U.S. transportation system and the U.S. economy. While the majority of aviation fatalities have occurred in this segment of aviation, there has been a gradual trend downward in the number of general aviation accidents since 1988. Progress, however, has not been steady.





**2006 Results.** DOT did not meet the commercial aviation fatal accident rate. In late August 2006, the commercial aviation industry experienced the tragic loss of a commuter jet with 49 fatalities in Lexington, Kentucky. Earlier in the fiscal year, three fatal accidents occurred on the ground. Each of these fatalities is a sober reminder of the need to continue to work on safety.

<b>Performance Measure</b>				
U.S. commercial fatal aviation accidents per 100,000 departures (last 3-years' average)				
	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
Target	.033	.028	.023	.018
Actual	.024	.021	.017 *	.020 *
* Preliminary estimate				

Despite these losses, this remains one of the safest periods in aviation history. Since 2001 there have been 50 million successful flights. This represents 2.7 billion passengers who have flown on commercial jet aircraft in the United States without an onboard fatality – nine times the population of our country. The National Airspace System operates 32,000 scheduled commercial flights daily. Accidents involving passenger fatalities have a rate of about one every 18 million departures.

To further strengthen aviation safety, the FAA continued to aid the movement of aircraft throughout the system through the use of required navigation performance (RNP). RNP is performance-based and not dependent on a specific piece of equipment. RNP is not new hardware for the cockpit or new navigation aids. It is a statement of navigation position accuracy necessary for operation within a defined airspace. It establishes highly refined parameters for aircraft airspace containment and ensures aircraft containment 99.9 percent of the time. The accurate, repeatable path, integrity and continuity ensure procedures will be flown in the same manner by all aircraft. Controllers can then expect aircraft to be at a specific position with a high degree of confidence, thus maximizing safety and the efficient flow of aircraft through airspace.

While maintaining its regulatory and enforcement role, FAA continues to partner with the aviation community in improving safety, which is reflected in three basic long-term strategies: (1) prevent accidents by addressing recurrent causes; (2) improve certification and surveillance; and (3) share safety data and information with aviation partners. These strategies are at the heart of most of FAA's significant and long-term safety programs.

**FY 2007 Performance Forecast.** DOT will not meet its FY 2007 Commercial Air Carrier fatal accident target.





**2006 Results.** FAA met the target this year for reducing General Aviation (GA) Fatal Accidents. Although most people are familiar with FAA's role in commercial aviation, they may not be aware that it also oversees the safety of almost 300,000 general aviation aircraft in the United States. These aircraft include single-seat home-built airplanes, rotorcraft, balloons, and highly sophisticated extended-range turbojets. General aviation activities include student training, crop dusting, fire fighting, law enforcement, news coverage,

sightseeing, industrial work, on-demand air taxi service, corporate transportation, as well as personal use and recreational flying. In FY 2006, personal, agricultural, and amateur-built operations showed especially sharp improvements.

FAA worked with various members of the GA community during FY 2006, including aeromedical evacuation, charter services, and other members of the community to promote education and training on night landings, weather, and other areas of concern.

Performance Measure				
Number of fatal general aviation accidents				
	2003	2004	2005	2006
Target	374	349	343	337
Actual	366 (r)	340	354 (r) *	297 *
(r) Revised; * Preliminary estimate				



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**FY 2007 Performance Forecast.** DOT expects to meet the FY 2007 General Aviation safety performance target.

## IN-DEPTH ACCOMPLISHMENTS PROMOTING AVIATION SAFETY

Creating safe flying conditions is a complex interplay of many activities but FAA has learned that by addressing the precursors to accidents – operational errors and runway incursions – safety is enhanced. Therefore, the agency spends considerable time and resources to reduce operational errors and runway incursions.

### Runway Safety

A runway incursion is any occurrence at an airport involving an aircraft, vehicle, person, or object on the ground that creates a collision hazard or results in a loss of separation with an aircraft taking off, intending to take off, landing, or intending to land. Reducing runway incursions lessens the probability of accidents that potentially involve fatalities, injuries, and significant property damage.



The number of serious runway incursions has been reduced by more than 50 percent from five years ago. In FY 2006, there were 231 (preliminary estimate) of the most serious runway incursions. This equated to an estimated rate of .458 per million operations, a significant improvement over the FY 2006 target rate of .551. Ongoing activities to reduce the risk of runway incursions include improvements to air traffic controller, pilot and vehicle driver awareness, as well as to airport infrastructure and technology enhancements. In FY 2006, the FAA completed crew resource management training designed to help the controller detect and correct controller and pilot mistakes before they result in operational errors or collisions.

### Operational Errors

One of the fundamental principles of aviation safety is separation—the need to maintain a safe distance from other aircraft, terrain, obstructions, and restricted airspace. Air traffic controllers employ rules and procedures that define separation standards for this environment. An operational error (OE) occurs when controllers fail to apply or follow these procedures that enforce separation and allow aircraft to end up too close to each other or to an obstruction.

The performance limit for FY 2006 was set not to exceed a rate of 4.27 operational errors per million activities. The FY 2006 preliminary estimates indicate 4.09 operational errors per million activities, tracking slightly below the year-to-date projected performance limit. The FAA continues to implement performance management and communications initiatives focused on operational awareness. To ensure an accurate severity classification of an operational incident, FAA is refining the process used to describe the seriousness of an operational error.

### Alaska Accidents

FAA has continued to work proactively to meet its goal to reduce accidents in Alaska for general aviation and all smaller aircraft. Because of the challenges weather and terrain present in Alaska and the broad use of general aviation as a means of transportation, FAA's Flight Plan focuses specifically on reducing general aviation accidents in Alaska. The goal is to reduce Alaska accidents from the 2000—2002 average of 130 accidents per year to no more than 99 accidents per year by FY 2009. The FY 2006 target is 115.

There were 102 accidents in Alaska versus a not-to-exceed ceiling of 115. Based on preliminary data, Alaska experienced a total of seven fatal accidents this year. As a percentage of total accidents, Alaska continues to have one of the lowest proportions of fatal vs. non-fatal accidents, 6.8 percent. From 2000 through 2005, the national percentage of fatal accidents to total accidents was 19 percent. Alaska is at nine percent for those five years, with 65 fatal accidents out of 699.



The introduction of new technology has significantly improved the General Aviation operating environment. Pilots in Alaska can now conduct Global Positioning System approaches using sophisticated on-board equipment at runways that are normally not accessible in low visibility and bad weather conditions.

Also, FAA's continuing development of the Automatic Dependent Surveillance Broadcast (ADS-B) technology holds promise for this region. Unlike conventional radar, ADS-B works at low altitudes and on the ground so that it can be used to monitor traffic on the taxiways and runways of an airport. It is effective in remote areas or in mountainous terrain where there is no radar coverage, or where radar coverage is limited.

## RAIL SAFETY

**FY 2006 ENACTED FUNDS  
\$159.1 MILLION**

In May 2005, the Secretary announced the Department's National Rail Safety Action Plan to improve the safety of the Nation's freight railroad operations. Substantial progress has been made in FY 2006 to implement the plan's many components.

For example, the National Inspection Plan has been adopted for all five FRA safety disciplines (track; signal and train control; motive power and equipment; operating practices; and hazardous materials). Although data are preliminary for the fiscal year, the plan is having an immediate impact as it makes better use of available inspection resources and accident data to identify safety "hot spots" before an unsafe condition arises.

Other highlights completed during the plan's first year include: the demonstration of vehicle-mounted photo-imaging technology to identify hard-to-detect cracks in rail joint bars; the testing of wireless communications technology to monitor when track switches are left in the wrong position in non-signaled (or dark) territory; a pilot project to ensure emergency responders have accurate and timely information about train accidents involving hazardous materials; and assistance to States to reduce collisions and fatalities and highway-rail grade crossings.

**2006 Results.** Preliminary results indicate that FRA met its FY 2006 target. In attempting to evaluate the success of the National Rail Safety Action Plan, a review of nine months of accident data is not particularly useful or meaningful. The plan is comprehensive and will require some time for its various components to take hold in the industry;

Performance Measure				
Rail-related accidents and incidents per million train-miles				
	2003	2004	2005	2006
Target	N/A	17.49	17.14	16.80
Actual	19.4 (r)	18.95 (r)	17.62 (r)	16.14 *
(r) Revised; * Preliminary estimate				



however, some results in FY 2006 appear positive. Although preliminary, the 16.14 rate of rail-related accidents/incidents is considerably lower than its goal of 16.80, and the rates of many of its components are lower than their safety performance goals.

For example, the rate of train accidents caused by human factors is 23 percent below its goal for the year, while those of accidents caused by track, equipment, and signal defects are below their goals by 3 percent, 21 percent, and 5 percent, respectively. These comprise four of the five key safety disciplines addressed in the plan, with the benefit to the public of fewer accidents and casualties. The plan targets the most frequent, highest-risk causes of accidents, thereby helping to protect the public and nurture a safe railroad environment.

Although FRA did not meet its targeted accidents/incidents rate in FY 2005, it did reduce its rate by seven percent over FY 2004, and this improvement was accomplished while the overall number of train-miles nationally rose almost three percent. The rail industry also saw a 4.3 percent decrease in accidents during that period, from 14,496 to 13,875. Unfortunately, disasters like Hurricane Katrina late in the fiscal year may have kept us from reaching our goal.

**FY 2007 Performance Forecast.** The FY 2007 target will be met.

## IN-DEPTH ACCOMPLISHMENTS PROMOTING RAIL SAFETY

Track-caused accidents comprised almost 35 percent of all train accidents over the last five years. Roughly an equal amount is attributable to human factors. The remainder is divided between equipment and signal defects. Some of the leading track causes of train accidents are very difficult to detect in normal railroad inspections. Broken joint bars, for example, are a leading cause, but the kinds of cracks in those bars that foreshadow a derailment-causing break are very hard to spot with the naked eye. Similarly, broken rails account for some of the most serious accidents, but the internal flaws that lead to many of those breaks can be detected only by specialized equipment.

To reduce rail-related accidents and incidents, FRA is developing an automated, high-resolution video, joint bar inspection system that can be deployed on a hi-rail maintenance vehicle that will detect visual cracks in joint bars without having to stop the vehicle. In October 2005, a prototype system that inspects joint bars on both sides of each rail was successfully demonstrated. Testing showed that the high-resolution video system detected visual cracks that were missed by the traditional visual inspections.



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In 2006, the system was enhanced with new developments to improve the reliability of the joint bar detection system and adding capabilities to include global positioning satellite coordinates for each joint for future inspection and identification. Additionally, software is being developed and tested to automatically scan the images, detect the cracked joint bar and send a message with the image to the operator.

## TRANSIT SAFETY

**FY 2006 ENACTED FUNDS  
\$12.3 MILLION**

Public transportation provides a flexible, safer alternative to traveling by automobile. Currently, transit is one of the safest modes of travel per passenger-mile traveled. According to the National Safety Council, passengers on the Nation's bus, rail, or commuter rail systems are 40 times less likely to be involved in a fatal accident, and 10 times less likely to be involved in an accident resulting in injury. The challenge is to further reduce the rate of fatalities and injuries even as the total number of people using transit increases.

**2006 Results.** DOT met the target for FY 2006. Strong growth in transit ridership and the continued expansion of transit service significantly increased the number of transit passenger miles traveled in FY 2006 over FY 2005. At the same time, using six months of data from FTA's National Transit Database and four months of Commuter Rail (CR) data from the FRA Rail Accident Incident Reporting System (RAIRS), FY 2006 safety figures show a decline in the number of fatalities and injuries. The resulting rates of fatalities and injuries per 100 million passenger miles traveled were well below the performance targets.

Performance Measure				
Transit fatalities per 100 million passenger-miles traveled				
	2003	2004	2005	2006
Target	.492	.487	.482	.477
Actual	.461	.467 (r)	.428 (r)	.344 *
(r) Revised; * Preliminary estimate				

To sustain and improve gains made in safety performance, FTA is working collaboratively with the public, the transportation industry, State departments of transportation, and the research and engineering communities to develop new programs to target and address safety and security concerns. FTA's strategy to keep fatality and injury rates low, in spite of significant increases in passenger miles traveled is: to implement policies and activities (such as research, training technical assistance, information dissemination, and oversight) that encourage transit decisions, practices, programs and operations that will have a direct impact on reducing these statistics; to improve and maintain the condition of the transit infrastructure (vehicles, track and facilities), which has a impact on overall system safety and performance; and to promote system safety in



the planning and design of a transit system from its inception. This approach also includes promoting emergency preparedness procedures which enhance the speed and effectiveness of responses to accidents and incidents that do occur.

The impact on the riding public is a reduction in transit related fatalities, injuries and incidents, and a reduction in the cost and damage to the transit infrastructure due to transit accidents. Also, there is a greater public perception and awareness of the safety of traveling by transit, which is one of the factors that may increase the attractiveness of transit as a mode of choice compared to other modes of transportation with higher accident and fatality rates.

**FY 2007 Performance Forecast.** DOT will meet the FY 2007 target.

## **IN-DEPTH ACCOMPLISHMENTS PROMOTING TRANSIT SAFETY**

In FY 2006, public transportation did not experience a single accident resulting in double digit fatalities such as the New York Staten Island Ferry incident in October 2003, or the Los Angeles Metrolink Commuter Rail collision, derailment and fire in January 2005. In FY 2006, FTA's strategy for further reducing the low rate of transit fatalities and injuries included:

- Continued investment in new, safer bus and rail vehicles, and improvements to track and transit facility conditions. Newer vehicles and well-maintained facilities are inherently safer than older, less dependable infrastructure.
- Collaboration with Federal, state, and local agencies to promote comprehensive approaches to the management of emergency incidents, including response and recovery activities. FTA developed and disseminates guidance documents to enhance transit system preparedness for dealing with safety and security related incidents and the deployment of critical resources.
- Technical assistance to help the transit industry understand and implement innovative safety and security strategies that reduce risks and mitigate consequences from acts of intentional harm against the transit infrastructure or its passengers and employees.
- Continued support for safety and security training. Over 11,000 transit employees were trained in FY 2006. Training courses included accident prevention and investigation, emergency management, industrial safety, alternative fuels, bus operator safety, and fatigue awareness.

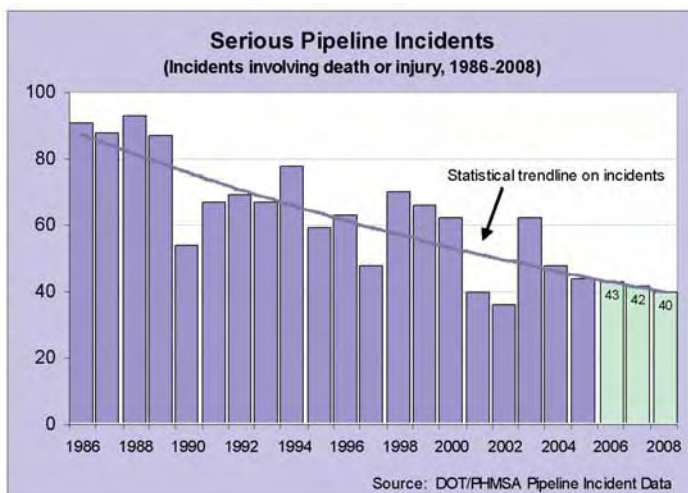


- Continued auditing of alcohol and drug testing programs. Nine years of audits conducted by FTA have shown that the drug and alcohol programs of grantees, sub-recipients, and their contractors have increased compliance with testing rules. An effective drug and alcohol program assists in the reduction of accidents. It is estimated that the drug and alcohol program has led to the direct avoidance of 817 accidents, saved six lives and avoided 718 injuries during the period 1996-2002. Fatalities resulting from accidents in which employees have positive drug test results, dropped from three in 1995 (first year of mandatory testing) to one over the period of 1999 through 2004.

## PIPELINE SAFETY

**FY 2006 ENACTED FUNDS  
\$54.1 MILLION**

While pipelines are among the safest modes for transporting hazardous liquid and natural gas, the nature of their cargo is inherently dangerous. Therefore, the Pipeline and Hazardous



Materials Safety Administration (PHMSA) has designed and implemented a strong risk-based systems approach to ensure the safety, security, and reliability of our Nation's pipeline infrastructure. Accordingly, this risk-based systems approach also ensures the secure and reliable transportation of our Nation's energy resources. To address risks, PHMSA develops and enforces standards, provides grants to assist states in managing pipeline safety programs, provides training and education, sponsors research and development,

develops plans for emergency response, and responds to incidents to reduce the risk to the public and the environment.

The pipeline safety record is good and improving. The long-term trend shows a general decline in the number of total pipeline incidents. But beginning in 2002, PHMSA saw three successive years of increasing incidents. About 25 percent of this increase can be attributed to recent increases in the price of natural gas (i.e. which escalate the value of product lost), while the reporting threshold has remained fixed at \$50,000. The number of serious incidents has declined markedly





over the past 20 years, and preliminary estimates for 2006 indicate a continuing decline. We believe this indicator provides a better overall measure of program performance than total reported incidents.

**2006 Results.** Based on preliminary data, PHMSA projects 407 pipeline incidents in 2006, which misses the performance target by about 11 percent. However, this projection, based on six months of reporting, indicates that the number of incidents in 2006 probably will be substantially lower than the previous two years. Data for 2003 and 2004 are revised slightly from earlier reports because operators have submitted new reports or amended old reports.

<b>Performance Measure</b>				
Number of natural gas pipeline incidents and hazardous liquid pipeline accidents				
	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
Target	326	310	295	365
Actual	370 (r)	440 (r)	490 (r)	407 *
(r) Revised; * Preliminary estimate				

Over the past 20 years, PHMSA has cut the risk of serious incidents—those involving death or injury—by more than half. The agency’s goal is to continue this trend, reducing serious incidents by 10 percent every three years. The risk of serious incidents is down for all three major industry sectors: hazardous liquid, gas transmission, and gas distribution pipelines. Integrity management has been the core of the agency’s approach over the past several years. PHMSA is finishing implementation of integrity management practices in the hazardous liquid and natural gas transmission pipeline systems and extending integrity management practices to gas distribution systems.

It is important to note that since 2004 about 14 percent of the total gas transmission and distribution incident reports submitted to PHMSA per year were reported on incidents that did not meet the reporting criteria in the regulations—death, injuries, or \$50,000 property damages (e.g., since 2002, reporting increased about 25 percent due solely to rapid escalation of natural gas prices and the cost of gas lost in incidents—an important component of property damage). We are working to reduce or eliminate non-reportable incidents from the data. As previously noted, PHMSA will shift its reporting to emphasize serious incidents. PHMSA is also developing a regulatory proposal to adjust the property damage criteria for incidents from a cost basis to a volumetric basis.

**FY 2007 Performance Forecast.** PHMSA does not anticipate meeting its FY 2007 target.



## **IN-DEPTH ACCOMPLISHMENTS PROMOTING PIPELINE SAFETY**

In FY 2006, the Government Accountability Office (GAO) conducted a study on the effect of PHMSA's integrity management program for gas pipelines on public safety. Early indications were that the condition of transmission pipelines is improving as operators complete assessments and related repairs of their pipelines. In its final report (GAO-06-946), GAO noted the "gas integrity management program is benefiting public safety by supplementing existing safety requirements with risk-based management principles that focus on safety risks in highly populated or frequented areas, referred to as high consequence areas." GAO found that the "gas pipeline industry, state pipeline agency and safety advocate representatives generally agree that the program enhances public safety, citing operators' improved knowledge of the risks to their pipeline systems that stems from systematic assessments as the primary benefit of the program."

As part of its continued implementation of the risk-based approach, PHMSA stepped up the oversight of the new natural gas transmission operator requirements, completing over 75 percent of inspections of the high consequence area mileage covered under the transmission natural gas integrity management rule.

PHMSA issued a new final rule for gas gathering lines in 2006. Through this rule, rural and non-rural gas gathering lines are regulated using a risk-based approach. For the first time, high-risk rural lines are protected under DOT standards, while standards are reduced or eliminated for previously regulated non-rural lines that pose a low risk to public safety.

## **HAZARDOUS MATERIALS SAFETY**

**FY 2006 ENACTED FUNDS  
\$106.7 MILLION**

The Pipeline and Hazardous Materials Safety Administration (PHMSA) formulates, issues, and revises Hazardous Materials Regulations (HMR) under the Federal Hazardous Materials Transportation Law. The HMR cover hazardous materials definitions and classifications, hazard communications, shipper and carrier operations, training and security requirements, and packaging and container specifications. PHMSA uses risk management principles and security threat assessments to understand, communicate, and reduce dangers inherent in hazardous materials transportation. PHMSA partners with other modes within DOT and the Department of Homeland Security in developing new regulations and enforcing the provisions of HMR within the hazmat community.

PHMSA focuses its enforcement and outreach resources on hazmat packaging manufacturers, retesters and reconditioners, and commercial shippers of hazardous materials, such as petrochemical companies, large retailers and hospitals. Hazmat carriers are regulated by their respective modes.



**2006 Results.** PHMSA shares authority to enforce the HMR with other DOT modes—FAA, FMCSA and FRA—as well as the US Coast Guard. PHMSA expects to achieve its serious incidents target this year. PHMSA has implemented practices and software to better track incidents as it learns about them in the press or other sources and aggressively follows up with companies that do not submit a report in a timely manner. The agency believes it is now getting reports that it would not have gotten without the new, more aggressive tactics. In addition, during 2006, PHMSA invested heavily in a prototype information system that will allow modes to share company-specific compliance information, to better identify high-risk hazmat carriers and shippers and plan interventions to limit those risks. The agency intends to invest heavily in this system development during FY 2007 and 2008.

Performance Measure				
Number of serious hazardous materials transportation incidents				
	2003	2004	2005	2006
Target	515	509	503	
Actual	472 (r)	490 (r)	482 (r) *	432 *
(r) Revised; * Preliminary estimate				

**FY 2007 Performance Forecast.** PHMSA expects to achieve the re-baselined serious incident target in FY 2007.

## IN-DEPTH ACCOMPLISHMENTS PROMOTING HAZMAT SAFETY

PHMSA is leading the development of the Hazardous Materials Intermodal Database, a new information system that consolidates all company-specific records across all DOT hazmat programs. The system will be used by hazmat inspectors in all modes to produce reports on facilities' compliance records, including their involvement in incidents, penalties imposed by DOT inspectors, and special permits held. This system will focus DOT enforcement resources on the highest-risk hazmat shippers and carriers, thus enhancing safety efficiently. PHMSA also continues to work in tandem with the Department of Homeland Security to implement rules that protect the Nation from the intentional release of hazardous materials.

During FY 2006, PHMSA revised transportation requirements for infectious substances, including regulated medical waste, to adopt new classification criteria, new exceptions, and packaging and hazard communication requirements consistent with revised international standards and to clarify existing requirements to promote compliance. These revisions will ensure an acceptable level of safety for the transportation of infectious substances and facilitate domestic and international transportation. PHMSA is also working with FRA to enhance rail transportation security for hazardous materials shipments.

