Performance Goals - Safety

STRATEGIC GOAL: SAFETY

Promote the public health and safety by working toward the elimination of transportation-related deaths and injuries.

We Aim To Achieve These Strategic Outcomes:

- Reduce the number of transportation-related deaths.
- Reduce transportation-related injuries.

Safety is our most important strategic goal. Transportation enables the movement of people and goods, fueling our economy and improving our quality of life. However, transportation exposes people, property and freight to the risk of harm. We strive to improve the benefits of transportation while constantly reducing the risk to health and well being. The FY 2003 budget proposes $7.7 billion for safety programs to maintain our progress in reducing transportation-related fatalities and injuries.

A general discussion of overall transportation safety, a summary performance report, and a detailed analysis of our 2003 strategies follow.

Performance Goals

Highway Safety
[With alcohol-related fatalities and seat belt usage goals in NHTSA Performance Plan.]

Aviation Safety
[With runway incursion and air traffic operational error goals in FAA Performance Plan.]

Maritime Safety
[With recreational boating fatality and passenger vessel fatality goals in USCG Performance Plan.]

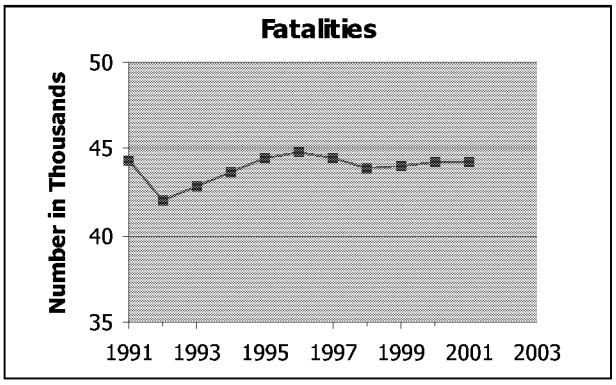
Rail Safety
[With rail fatality rate goal in FRA Performance Plan.]

Transit Safety

Pipeline Safety
[With natural gas transmission pipeline failure goal in RSPA Performance Plan.]

Hazardous Materials Safety

Overall Transportation Safety

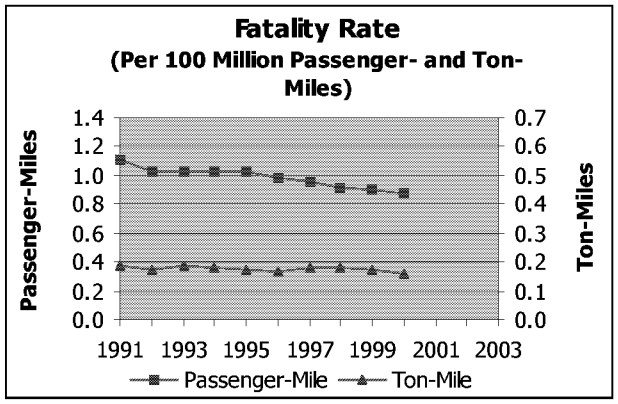


Fatalities:

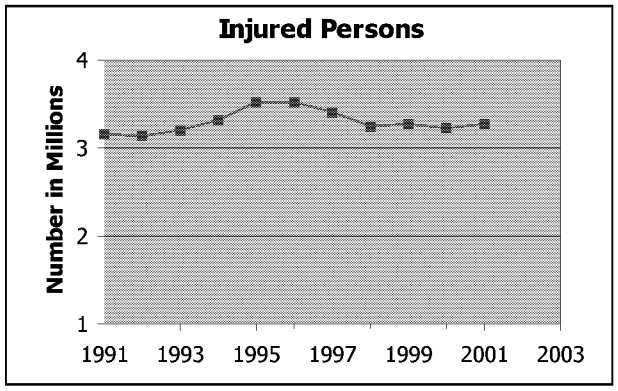
After several years of decline, the overall number of transportation fatalities grew from 1992 to 1996, then trended downward through 1998. Based on projections from preliminary data for 2000, transportation fatalities rose slightly from 2000 (44,164) to 44,208. (Preliminary estimates for 2001 are available only for the number of fatalities and the number of injured persons. Data for transportation-wide fatality and injury rates and for transportation incidents will be available by the end of 2002.)

A slight rise in highway fatalities in 2001 of 44 (with highway fatalities accounting for approximately 94% of all transportation fatalities) explains the direction of overall fatalities. The increase is small, but it is in the wrong direction.

Economic growth and changing mobility needs have fueled growth in passenger-miles traveled. Deaths per 100 million passenger-miles have shown a downward trend from 1996 through 1998, following a relatively constant level from 1992 to 1995. Again, this aggregate measure is significantly influenced by the highway fatality rate. The continued decrease in 2000 meets the strategic outcome goal of reducing the rate of transportation-related fatalities, measured against passenger-miles. Achieving further reductions in fatality rates will require changes in personal behavior (such as seat belt use, reduction in alcohol-related crashes, or consumer choice of the safest modes of transportation) and improved transportation technologies.



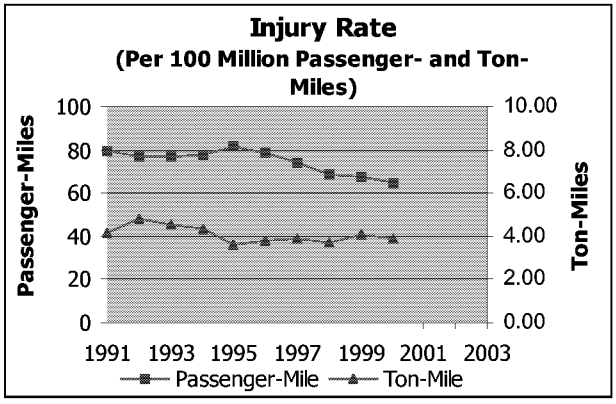
The fatality rate per ton-mile of freight has followed a similar pattern, and again decreased in 2000. This decrease also meets the strategic outcome goal of reducing the rate of transportation-related fatalities, in this instance measured per ton-miles.



Injuries:

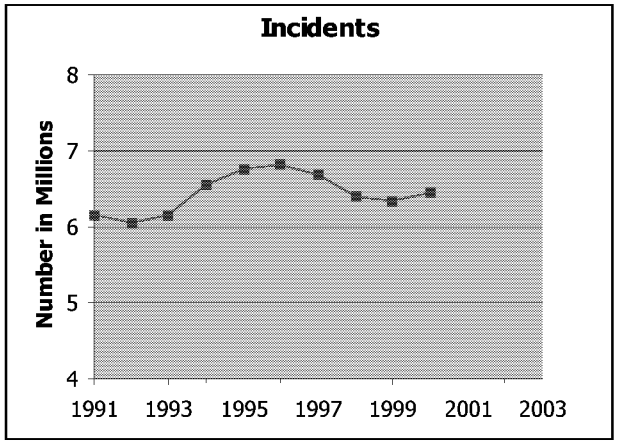
While fatality measures tend to receive more public attention, transportation injuries are a significant burden on individuals and on our society as well. Although injuries rank below fatalities in severity, they exact a societal cost in hospitalization and medical costs and lost productivity, to say nothing of pain and suffering. Like fatalities, this trend is dominated by trends in highway crashes, which account for 99% of the transportation-related injuries and have an estimated cost of $150 billion annually. Over the last eleven years, the number of injured people appears to have peaked in 1996, followed by a decrease for the last several years. Although the number of injured persons remained virtually the same from 1998 to 2000 (based on preliminary data), the overall trend since 1996 meets the

strategic outcome goal of reducing the number of transportation-related injuries. Again, this was a particular challenge given the fairly steady rise in travel.



Also like the transportation fatality rate, the injury rate per 100 million passenger-miles has been declining for the last several years, after a peak in 1995. This continued downward trend in 2000 meets the strategic outcome goal of reducing the rate of transportation-related injuries, as measured against passenger-miles.

The transportation injury rate per 100 million ton-miles of freight has also been generally downward in the last decade, and based on projections from preliminary data in 2000, injuries per ton-mile decreased from 1999 to 2000, after slightly increasing last year.



Transportation Incidents:

Transportation incidents (crashes, system failures, spills, releases, etc.) are precursors to injuries and fatalities, providing a key indicator for managers. Reducing the number and rate of crashes is the best way of reducing fatalities and injuries.

Transportation incidents have been decreasing since 1996, after steadily increasing since 1992. From 1999 to 2000, incidents increased by about 11,400, which is a worrisome increase from the past several years' downward trend.

Performance Report: Safety

	1995	1996	1997	1998	1999	2000	2001	2001 Target	Met	Not Met
Highway fatalities/100 million VMT	1.7	1.7	1.6	1.6	1.6	1.5(r)*	1.5*	1.5	✓	
Highway injured persons/100 million VMT	143	140	131	121	120	116(r)	116*	113		✓
Fatalities involving large trucks	4,918	5,142	5,398	5,395	5,380(r)	5,211(r)	5,307*	4,830		✓
Injured persons involving large trucks (000's)	117	129	131	127	142	140(r)	142*	122		✓
Recreational boating fatalities	888	770	857	864	778	742	742*	749	✓	
Passenger vessel fatalities	31	16	15	28	29	17	7	22	✓	
% of all mariners in imminent danger rescued	85(r)	84(r)	84.0	84(r)	87.5	82.7	84.2	85		✓
Rail-related fatalities/million train-miles	1.71	1.55	1.57	1.48	1.31	1.30	1.35*	1.23		✓
Transit fatalities/100 million PMT	.564	.520	.545	.564	.530	.499(r)	.445	.497	✓	
Transit injured persons/100 million PMT	132.8	127.3	118.3	118.9	114.9	111.7(r)	107.3*	120.7	✓	
% highway fatalities alcohol-related	41	41	39	39	38	40*	N/A	34		
% front occupants using seat belt	68	68	69	70	67	71	73	86		✓
Grade crossing accidents divided by the product of million train-miles and trillion VMT	2.87	2.57	2.27	1.98	1.83	1.80(r)	1.69*	1.39		✓
U. S. commercial fatal aviation accidents/100,000 departures	.043	.051	.077	.009	.059	.032	.017*	.043	✓	
[Last three years' average]	.058	.051	.063	.046	.051	.037	.037*			
Fatal general aviation accidents (FY)	435	382	378	396	364	347	357*	379	✓	
Operational errors/100,000 activities	.52	.51	.49	.56	.57	.683(r)	.7	.5		✓
Runway incursions (FY)	227	268	301	311	330	405(r)	407*	243		✓
Natural gas transmission pipeline failures	4,767	4,964	4,871	4,160	4,467	2,750(r)	3,000*	4,375	✓	
Serious hazardous materials incidents in transportation	408	466	423	430	377	494(r)	367*	401	✓	

* Preliminary estimate
(r) Revised
N/A Not available

HIGHWAY SAFETY: Highway crashes cause 94 percent of all transportation-related fatalities and 99 percent of transportation injuries, and are the leading cause of death for people ages 4 through 23. Alcohol is the single biggest contributing factor to fatal crashes. About 12% of all people killed in motor vehicle incidents are involved in a crash with a large truck, yet trucks represent only 4 percent of registered vehicles and about 7 percent of the vehicle-miles of travel. About 27 percent of Americans (or about 85 million people) still do not use seat belts when driving or riding in motor vehicles. DOT seeks to abate a major public health problem and avoid much pain, suffering, and economic loss to the nation by preventing highway crashes and mitigating the effects when crashes do occur.

Performance Goal:

Reduce the highway fatality rate to 1.0 per million vehicle-miles traveled in 2008, from 1.7 in 1996.

Reduce large truck-related fatalities by 50 percent from 5,374 to 2,687 in 2009.

2003 Performance Plan:

Performance measures:

Fatalities per 100 million vehicle-miles of travel (VMT).

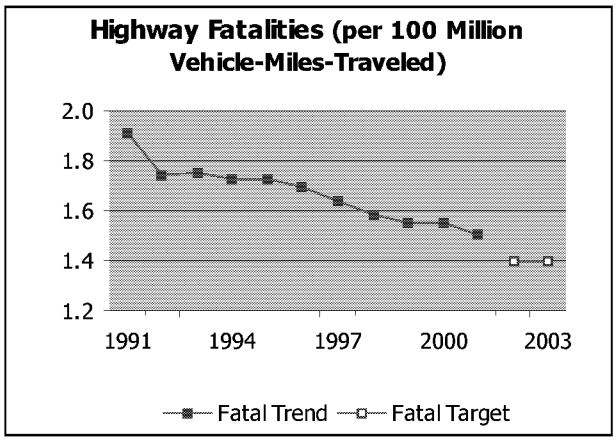
	1999	2000	2001	2002	2003
Target:	1.6	1.5	1.5	1.4	1.4
Actual:	1.6	1.5(r)	1.5#		

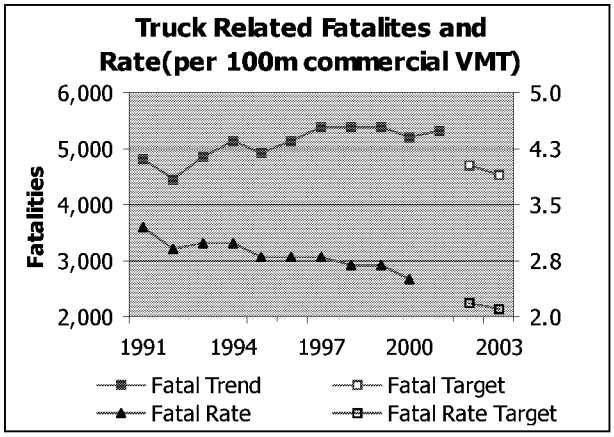
Number and rate (per 100 million commercial VMT) of fatalities in crashes involving large trucks.

	1999	2000	2001	2002	2003
Target:					
Number:	N/A	4,934	4,830	4,710	4,540
Rate:	N/A	N/A	N/A	2.2	2.1
Actual:					
Number:	5,380	5,211(r)	5,307#		
Rate:	2.7	2.5(r)	TBD		

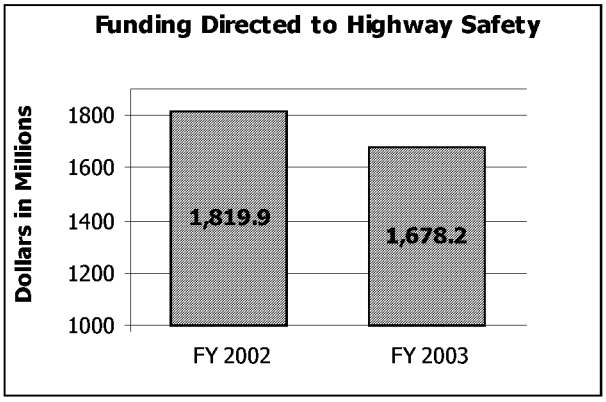
(r) Revised; # Preliminary estimate.

External Factors: Vehicle travel has increased more than 2 percent per year for the last decade. The most accident-prone population groups - older drivers and drivers ages 15 to 24 - are growing at faster rates than the overall population. Shifts in the amount of travel, population growth, and employment status have a large influence on traffic crashes. Competitive pressures for commercial vehicle operators and shipping firms are likely to persist due to the continuing productivity trends in American industry toward manufacturing materials or inventory-in-motion, just-in-time delivery to customers, and shifting patterns in truckload volume and travel.





Strategies and Initiatives to Achieve 2003 Target: DOT resources attributable to these performance measures are depicted below:



NHTSA's safety programs include research and rulemakings to prevent and mitigate effects of automobile crashes, consumer information educational and other outreach activities, and grants to States to ensure that post-crash response efforts are more effective.

FMCSA conducts research aimed at reducing crashes involving large trucks and buses, sets standards and oversees State commercial driver licensing programs, inspects motor carriers and individual trucks for compliance with safety rules and carries out a wide-ranging motor carrier safety grant program to help States conduct their motor carrier safety programs.

FHWA conducts research on safer highway infrastructure design, and undertakes outreach efforts with States to share best design and operational practices for pedestrian, bicycle, highway, and at-grade rail crossing safety.

Research, regulatory and data programs:

NHTSA rulemakings will address upgraded side impact protection; child safety, school bus and motor bus safety; rear impact protection; crash test dummy improvements; glare from headlamps and daytime running lights, heavy truck tires and braking systems, and implementation of new child restraint and dynamic rollover consumer ratings.

FMCSA will:

- continue the comprehensive crash causation study to determine factors contributing to commercial motor vehicle crashes and countermeasures to prevent future crashes.
- continue the Information Systems and Safety Strategies Initiatives (ISSSI) which include: development of the Unified Carrier Register and New Entrant requirements; improving collection and distribution of commercial vehicle safety data to Federal and State offices; Commercial Vehicle Analysis Reporting System (CVARS), which provides data on all truck and bus crashes involving a fatality, injury, or towed vehicle; and the Performance Registration Information and Systems Management (PRISM) program, which provides States with a direct link between carrier safety performance and vehicle registration information.

Compliance and enforcement:

FMCSA's new Border Enforcement Program will maintain a strong Federal and State safety enforcement presence at the U.S.-Mexico border to ensure Mexican trucks entering the U.S. are in compliance with both Federal Motor Carrier Safety and Hazardous Materials regulations. The program will support comprehensive Federal and State inspections of Mexican trucks at the border, to ensure no compromise to motor carrier safety as the Administration maintains its commitment to the North American Free Trade Agreement (NAFTA).

NHTSA will support the biannual *Operation ABC (America Buckles Up Children) Mobilizations*. The number of law enforcement agencies supporting this effort has also grown dramatically: from 1,000 agencies in 1997 to over 10,000 agencies during the November 2001 *Mobilization*.

A DOT rule mandating drug testing for transportation service providers is another important element of the national effort to reduce both the demand for illegal substances, and the inappropriate use of a legal substance (alcohol) that are precursors to impaired driving.

Education and outreach:

NHSTSA will focus on: 1) publicizing the dangers of drunk and impaired driving and the benefits of using seat belts; 2) reducing fatalities and injuries associated with drowsy or distracted drivers by developing and deploying educational programs on the safe use of in-vehicle technology; 3) developing and implementing educational programs and material for older drivers and their health care professionals; 4) reducing motorcycle, bicycle and pedestrian accidents (which account for 13 percent of fatalities) in concert with FHWA and other partners to integrate pedestrian and bicyclist safety considerations in highway planning

and design; and 5) educating motorists about blind spots around large trucks and buses.

Impaired driving: Studies indicate that performance results for alcohol-related fatalities should improve as additional States implement new .08 BAC laws. Due to the DOT FY 2001 Appropriations Act provision establishing a sanction if States fail to adopt a standard of .08 BAC, the number of States with .08 laws has increased from 19 to 29 in addition to the District of Columbia and Puerto Rico. With State and local partners, DOT will implement countermeasures targeting high-risk drivers, including youth 21-34 year olds, and repeat offenders. NHTSA's impaired driving counter-measures operations and research programs ($11.5 million) will focus on reducing alcohol and drug use associated with driving.

Seat belts: NHTSA will continue its seat belt use outreach to high-risk populations – African-Americans, Hispanics, rural and youth populations -- those having traditionally lower than average seat belt use rates and higher fatality rates – and continue to encourage States to embrace "Click It or Ticket" as the message or theme for their Buckle Up Campaigns. Focus group testing has shown that "Click It or Ticket" resonates well with the hard-core non-user of seat belts.

The Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act requires NHTSA to implement child restraint education initiatives for the public, including the following: provide consumer information on the physical compatibility of child restraints and vehicles, establish a child restraint safety rating consumer information program, initiate and complete a booster seat effectiveness study, and develop a five-year booster seat education plan to reduce deaths and injuries in the four-to-eight-year-old-age-group by 25 percent. NHTSA developed a comprehensive internet application that shows common compatibility problems between vehicles and child restraints and provides solutions to obtain the best fit. NHTSA began implementing the five-year strategic booster seat education plan during FY 2002.

Run-off-road crash reduction: FHWA will distribute an Interactive Highway Design Model for two-lane rural roads; develop a four-lane model; complete a final rule on retroreflectivity; and continue developing crashworthy roadside hardware designs.

Intersection safety: With States, FHWA will develop a road safety audit program for intersections, provide best practices and guidance for intersection safety, and conduct research including the Intelligent Vehicle Initiative, to improve intersection safety.

Work zone safety and speed-related crashes: FHWA will develop user guides to aid in States' use of variable speed limits in work zones, rational speed zoning, and expert systems for setting speed limits.

Reducing car-truck crashes: FMCSA will work with the FHWA, NHTSA, and State highway safety authorities on the *Share the Road Safely* and *No-Zone* campaigns, which educate motorists about blind spots around large trucks and buses.

Grants:

$99.4 million is available to States that enact and enforce .08 BAC laws; an additional $40 million are available to States that implement strong laws and programs to combat alcohol-impaired driving. On October 1, 2002, a State that has not enacted and is not enforcing an Open Container or Repeat Offender law will have 3 percent of certain of its Federal-aid highway funds transferred to its State and Community Highway Safety grant program for each non-complying law. The funds thus transferred must be used for impaired driving programs or hazard elimination.

$101.2 million is available for incentive and innovative grants to increase seat belt use. An additional $20 million is available for incentive grants to States that implement stringent occupant protection laws and programs. Mini-grants will be provided to State/local affiliates of key organizations to implement programs that support law enforcement initiatives.

The Motor Carrier Safety Assistance Program (MCSAP) makes available $165 million in grants to fund State-conducted motor carrier 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.

Other Federal Programs with Common Outcomes: NHTSA works with agencies and

organizations with complementary goals -- HHS, Center for Disease Control and Prevention (CDC), the Office of National Drug Control Policy, and the Justice Department -- to reduce societal demand for alcohol and illegal drugs, and to reduce the incidence of drinking and driving crashes. NHTSA and HHS work together on several public health issues, such as drinking and driving, child safety, and emergency medical services. A CDC effort to develop a community injury prevention guide will features impaired driving and occupant protection programs. NHTSA will continue to work with a large number of Federal agencies to ensure that seat belt use increases.

FMCSA coordinates border control efforts with the U.S. Border Patrol, U.S. Customs, and Immigration and Naturalization Service. With the Customs Service, INS, and the Food and Drug Administration, FMCSA is developing and pilot testing the ITDS (International Trade Data System) to consolidate information on motor carrier border crossings to serve safety, commercial, law enforcement, and national security missions.

FHWA coordinates safety programs with the National Park Service and the Bureau of Indian Affairs.

The National Academy of Sciences, primarily through the Transportation Research Board, supports key programs through the use of expert panels and committees that offer essential perspective and advice.

Both DOT and NTSB strive to understand the causes of transportation incidents and to reduce the number of highway-related fatalities and injuries. NTSB investigates significant crashes, helps provide information on causes and potential solutions, helps identify infrastructure enhancements to improve highway safety, and provides recommendations on program improvements.

Performance Report:

NHTSA and FMCSA supplementary performance measures*:

Injured persons per 100 million vehicle-miles of travel.

	1999	2000	2001	2002	2003
Target:	127	116	113	111	*
Actual:	120	116(r)	116#		

Number (000s) and rate (per 100 million commercial VMT) of injured persons in crashes involving large trucks.

	1999	2000	2001	2002	2003
Target:					
Number:	N/A	125	122	121	118
Rate:	N/A	N/A	N/A	56	52
Actual:					
Number:	142	140(r)	142#		
Rate:	70(r)	68(r)	TBD		

Percentage of highway fatalities that are alcohol-related.

	1999	2000	2001	2002	2003
Target:	36%	35%	34%	33%	*
Actual:	38%	40%(r)	TBD		

Percentage of front occupants using seat belts.

	1999	2000	2001	2002	2003
Target:	80%	85%	86%	87%	*
Actual:	67%	71%	73%		

(r) Revised; # Preliminary Estimate;

** After 2001, these goals will be operating administration performance goals and will continue to be tracked by NHTSA and FMCSA. Results will be discussed in the context of this performance goal. Alcohol-related fatalities will be measured after 2001 by the rate per 100 million VMT.*

2001 Results: Based on preliminary information, DOT met the highway fatality rate target, and did not meet the highway injury rate, truck-related fatality and injury, and seat belt usage rate targets. Alcohol-related fatality data is not yet available for 2001. While DOT is making some progress in achieving long-term performance goals, substantial progress still needs to be made.

Seat belt use in 2001 increased to 73 percent. This was well below the target of 86 percent for 2001. Over the past several years, NHTSA has been converting approximately 8.5 percent of the non-seat belt users each year to seat belt users. Following the success of the *Click it or Ticket* initiative in North Carolina, a similar campaign involving media saturation and highly visible enforcement was implemented in South Carolina in November 2000. As a result, seat belt use increased from 66 percent to 74 percent during

the campaign. Similar campaigns were implemented in the Southeast (NHTSA Region IV) in spring 2001, with encouraging results. Kentucky, for example, experienced a 10-percentage point increase (from 60 to 70 percent) during its campaign in May 2001.

Seat belt use targets have been based on an overly ambitious goal of 90 percent by 2005, which appears unattainable by then, but can be attained by 2008. Therefore, the 2003 seat belt use target has been adjusted to 78 percent. Although this target is lower than the one set for 2001, in view of performance trends and an analysis of individual State seat belt goals for 2003, this is a reasonable target. Current seat belt use saves 12,900 lives and prevents 290,000 injuries every year. For each percentage point increase in seat belt use, 2.8 million more people buckle up, saving approximately 265 lives and preventing over 6,400 injuries each year. Achieving the 2003 target will result in 13 million more people buckling up, save 1,193 more lives, and prevent 48,100 additional injuries.

In 2000 (the last year for which NHTSA has alcohol data), the rate of alcohol-related fatalities was 0.61 fatalities per 100 million VMT (16,653 people were killed in alcohol-related crashes).

NHTSA published Notices of Proposed Rulemaking (NPRM's) for: an upgrade to head restraint requirements for passenger cars, multipurpose vehicles, light trucks and buses; a tougher standard to reduce the chance of post-crash vehicle fires; a new requirement for tire pressure monitoring systems (TPMS); and improvements in tire labeling. Final rules were published to require that all passenger cars with trunks have a release or other automatic system inside to allow children or adults to escape; to streamline the regulatory process for modifiers who adapt passenger vehicles for use by people with disabilities; and to improve radiator cap performance. A final rule also was published that established safety requirements for electric-powered vehicles.

FHWA continued its safety efforts in technology, awareness, public involvement, and regulatory guidance. It developed:

- an improved quantitative model for planning and design of roadside safety features that brings State DOT's quicker highway engineering and design results at a smaller expense than through crash testing;
- *The Safer Journey* – an interactive pedestrian safety awareness CD-ROM, which takes the user through various everyday pedestrian safety scenarios;
- new guidance on improved highway signage to address the needs of an aging population.

FHWA undertook several awareness and outreach efforts such as *Stop on Red Week* to increase awareness of red light running at intersections, *National Work Zone Awareness Week* to promote highway work zone safety and awareness among new drivers, and *Put the Brakes on Fatalities Day* to promote a reduction in crash-related roadway fatalities and increase driver awareness.

FMCSA continued its enforcement, research, and information operations and initiatives. These included:

- conducting FMCSA's safety enforcement program of motor carrier inspections and compliance reviews. Nearly 14,000 compliance reviews and 2.6 million roadside inspections were conducted by federal and State authorities in 2001.
- motor carrier safety research and technology aimed at reducing crashes involving large trucks and buses.
- advancing the motor carrier crash data improvement program, the commercial driver's license improvement program, staffing FMCSA's 24-hour safety telephone hotline, and expediting Federal oversight of CDL activities.

FY 2002 Performance Plan Evaluation: DOT does not expect to meet the 2002 highway fatality and injury, seat belt use, and alcohol-related fatality performance targets, and will be challenged to meet truck-related fatality and injury performance targets.

Management Challenge – Motor Vehicle Safety (IG)

The IG made three findings related to motor vehicle safety: (1) Despite the combined efforts of Federal, State, and local governments, seat belt use rates have remained relatively constant, ranging from 66 to 70 percent since 1993. Preliminary 2001 seat belt use rates are at 73 percent nationwide, below the rate needed to attain 90 percent use by 2005; (2) Early identification of defects by NHTSA's Office of

Defects Investigation (ODI) can be improved. During the hearings on the Firestone tire recall, Congress questioned the preparedness of ODI to handle information that may contain early warning signs of product defects; and (3) the TREAD Act requires NHTSA to conduct 10 rulemakings in the areas of defects, tires, rollover tests, and child restraints. Six of the 10 rulemakings must be completed in 2001 or 2002. Since the IG found that it takes DOT an average of 3.8 years to complete a rule, significant management effort will be required to issue these rules in the time frame required by the Act.

NHTSA Actions:

Strategies to increase seat belt use and reduce alcohol-related fatalities are discussed above. NHTSA actions to address TREAD issues include:

- issuing a final rule on Standards Enforcement, Defect Investigation and Noncompliance Reports Records Retention by June 30, 2002.
- issuing a final rule to improve tire labeling by June 2002.
- completing a rulemaking to revise and update tire safety standards by June 2002.
- completing a rulemaking to improve the safety of child restraints and creating a child restraint safety ratings program by November 2002.

Management Challenge - Large Truck Safety (IG/GAO)

GAO's concerns extend to staffing in FMCSA; truck safety data quality and causal analysis; adequacy of FMCSA's resources; and safety rulemaking.

The IG identified motor carrier safety at the U.S.-Mexico border and improving oversight of the CDL program managing the security implications of open borders; strengthening oversight and reducing fraud in the CDL program; and improving U.S. motor carrier safety enforcement as major challenges.

In FY 2002-2003, FMCSA will continue to respond to these challenges by:

- conducting security sensitivity visits and implementing new commercial driver security checks of those hauling hazardous materials.
- maintaining a strong Federal enforcement presence and ensuring compliance reviews are conducted on high-risk carriers;
- expanding oversight of Mexican motor carriers, and increasing staff and improving facilities and equipment at the border;
- working on additional rulemakings related to drivers' hours-of-service regulations, operating authority for Mexican motor carriers, and commercial driver's license improvements;
- developing, evaluating, and deploying advanced safety technologies;
- working on additional rulemakings related to the Motor Carrier Safety Improvement Act of 1999, including new entrants' safety records and certifying safety auditors;
- deploying PRISM and CVISN in additional States.
- completing operational tests of advanced commercial vehicle safety technologies.
- NHTSA will investigate approximately 500 crashes involving large trucks in the Large Truck Crash Causation Study (LTCSS).
- NHTSA will begin pilot testing a commercial motor vehicle crash data collection system (CVARS) with FMCSA and the States.

AVIATION SAFETY: Commercial aviation is one of the safest forms of transportation. While fairly 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; however, the majority of aviation fatalities have occurred in this segment of aviation. Since 1988, there has been a gradual trend downward in the number of general aviation accidents, but progress has not been steady. DOT is working with the GA community to achieve further improvements in safety.

Performance Goal:

By 2007, reduce the commercial aviation fatal accident rate per 100,000 departures by 80 percent, from a three-year average baseline (1994 through 1996 - 0.051 fatal accidents per 100,000 departures).

Reduce general aviation fatal accidents.

Performance Plan:

Performance measures:

Fatal aviation accidents (U.S. commercial air carriers) per 100,000 departures.

	1999	2000	2001	2002	2003
Target:	.048	.045	.043	.038	.033
Actual:	.059	.033	.017#		
3-year average:	.051	.037	.037#		

 # Preliminary estimate

Number of fatal general aviation accidents.

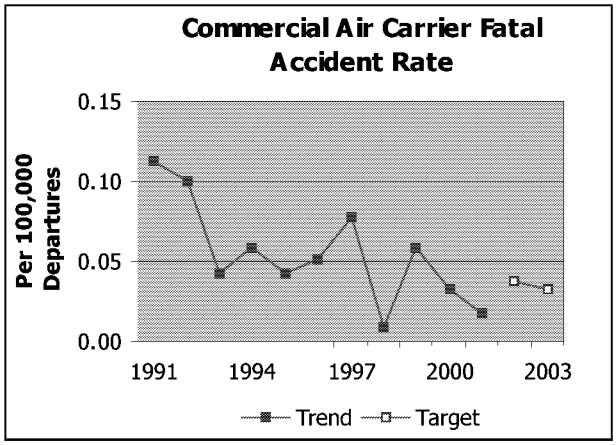
	1999	2000	2001	2002	2003
Target:	N/A	379	379	379	374
Actual:	364	341(r)	357		

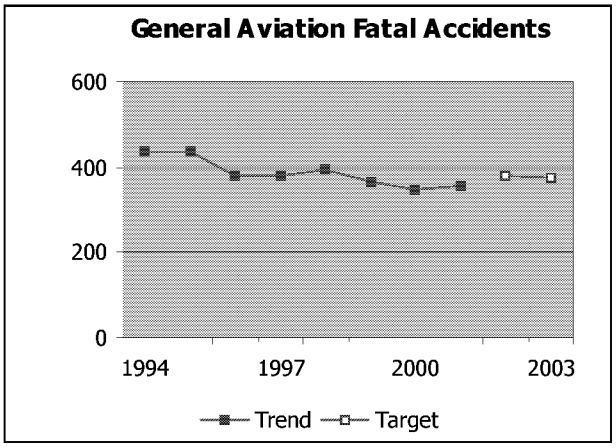
(r) Revised.

Note on data: Since the 1970's NTSB has not include fatal crashes caused by criminal or terrorist actions in calculating the commercial fatal accident rate, and DOT follows NTSB methodology in quantifying our performance in commercial aviation safety. Therefore, the commercial fatal accident rate for FY 2001 does not include the four fatal crashes that occurred on September 11, 2001. Obviously, if the terrorist incidents were included, the Department would not have met this target in 2001. In 2003, DOT will begin a better way of reporting performance against annual commercial aviation fatal accident rate performance targets – using an average of the past three years' accident rates.

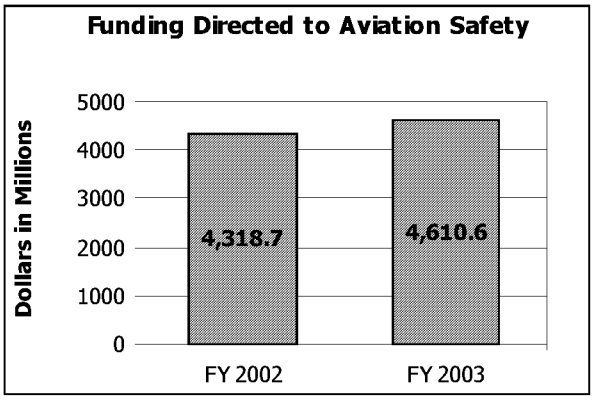
External Factors: As demand for commercial air transport continues to grow back to pre-9/11 levels and beyond, government and industry must continue to meet the new challenges present every day to maintain and improve the current level of safety in this mode of transportation.

General aviation (GA) aircraft range from single-seat home-built aircraft to rotary wing craft, balloons, and extended-range turbojets. Levels of risk are highly variable within this aviation segment, and regulatory oversight varies considerably. Some elements of general aviation operate in hazardous environments, such as agricultural application, external-load operations, fire fighting, and pipeline/power line patrol.





Strategies and Initiatives to Achieve 2003 Targets: DOT resources attributable to this performance goal are depicted below:



As part of the FAA's Safer Skies initiative, FAA and the aviation industry formed a Joint Steering Committee to link safety improvement efforts, focusing on particular causal factors common to commercial aviation: controlled flight into terrain, loss of control, runway incursions, weather, aeronautical decision-making, and survivability. The Committee completed accident and incident data analysis in the categories of controlled flight into terrain (CFIT) and weather, settled on an appropriate set of interventions, and devised and initiated detailed implementation plans. Implementation will continue through FY 2005.

Current high technology aircraft, such as the Boeing B-777 and the Airbus A320, have the capability of using advanced approach procedures. Carriers using such aircraft are developing these new procedures at their own expense under FAA's Special Operations Specifications. This procedure allows for a stabilized vertical decent to all runway ends at certificated airports thus reducing the risk of CFIT accidents. The new procedure, called Required Navigation Performance (RNP), is unique to each airport. The process uses information from several sources, thus preventing one data source from confounding onboard equipment. The increased precision will allow pilots to land even in zero-visibility weather at airports with no instrument landing systems. As soon as standard criteria are developed for this new approach procedure, the FAA will take over the approach procedure and publish the criteria for use by the operators of all aircraft equipped to use the procedure.

General aviation is one of the four primary focus areas of the Safer Skies Initiative. The primary strategy for improving GA safety is a collaborative working relationship between the FAA and the GA community to identify problems and implement solutions. FAA will continue to work with the aviation community and other government agencies to identify causal factors of accidents and intervene accordingly to prevent future accidents.

FAA, in concert with the aviation industry, will:

- continue to identify and implement Safer Skies interventions, monitoring progress in achieving the expected accident reduction goals in the areas of uncontained engine failure, controlled flight into terrain, approach and landing, loss of control, and runway incursion.
- develop a System Approach for Safety Oversight (SASO). This new approach will integrate safety information systems for the purpose of enhancing the FAA surveillance program to forecast, identify, and target areas where surveillance best addresses critical safety issues.
- deploy the production version of the Internet Airmen Certification and/or Rating Application (IACRA) to provide timely certification service to aviation industry users and enhancing the Online Aviation Safety Inspection System (OASIS) to provide more accurate data, timely access, and reporting of enterprise level information leading to improved safety-related decision-making.
- work on aging aircraft systems, fuel tank safety, and flammability.

FAA's regulation and certification program establishes aviation safety standards, monitors safety performance, conducts aviation safety education and research, issues and maintains certificates and licenses, and manages rulemaking.

FAA's aviation medicine research program works to enhance cabin safety factors and is developing guidelines based on accident research, toxicological findings, and analyses of information from the aeromedical consolidated database to help prevent aircraft accidents, injuries, and death.

FAA's research in safety technology supports the regulatory program, which sets safety standards for aircraft design, operation, and maintenance. Areas studied include fire-resistant materials for cabin interiors, fire detection equipment, inspection and maintenance of aging aircraft, human factors contributing to unsafe flight deck and maintenance practices, and prevention of engine failure.

GA controlled flight into terrain (CFIT) will focus on:

- improving pilot education and awareness through revision of practical test standards, knowledge tests and associated training materials to train and test knowledge of CFIT awareness and avoidance.
- developing and implementing a national media campaign for pilot CFIT awareness and risk mitigation training.

Inadequate pilot decision-making regarding weather is a major cause of GA accidents, and over 80% of weather-related accidents are fatal. Intervention strategies for General Aviation regarding weather will focus on:

- developing guidance for operators, airmen and inspectors to evaluate the application of advanced weather products for operational use.
- providing better training of pilots to avoid and cope with weather hazards through improved training materials and enhanced continuing education programs to disseminate these materials.

One of the major approaches to reducing operational errors is to provide a common understanding of procedures and policies among controllers and users. Training for controllers is central to this approach and will continue to be the focus of FAA's safety strategies in this area. Training will be enhanced by an aggressive identification of causal factors of operational errors. Technological improvements such as deployment of modern displays, new decision support tools, and improved communication systems will support better determination of aircraft location and reduce miscommunication between pilots and controllers. FAA will:

- investigate the use of the prototype conflict probe, User Request Evaluation Tool (URET), to provide controllers with advance notification of potential conflicts and reduce operational errors.
- investigate use of the newly-deployed Controller Pilot Data Link Communications (CPDLC) for improved communication between pilot and controllers.
- address and reduce repeat incidents by individuals through meaningful individual skill enhancement/remedial training. This will be accomplished by better identification of causal factors and refresher training on procedures for avoiding common types of operational errors.
- continue to identify and correct controller performance deficiencies prior to an operational error or deviation and resolve performance deficiencies through corrective training.
- establish risk categories for all operational errors.

FAA will continue key runway safety initiatives already underway:

- emphasizing situational awareness in air traffic controller on-the-job training and pilot and vehicle operator training courses;
- continuing the Runway Incursion Technical Evaluation Teams, which comprehensively assess all potentially safety-enhancing technologies and products;
- expanding data link usage for communications between air traffic controllers and pilots;
- studying whether to require pilots to receive specific clearances for crossing any runway,

and whether, absent affirmative clearance, pilots must hold short of the runway;

- encouraging airports' use of Airport Improvement Program funds for installing and maintaining security fencing, signs, markings, and lighting at all airports, and promoting use of perimeter roads; and
- identifying underlying causes of human error, and developing standard human factors investigation and analysis methods for all aviation incidents and accidents, including runway incursions.

In addition, the FAA will:

- include a regional and local focus in the Runway Safety Action Team process, increase the number of airport visits, and obtain "best practices" from each line of business.
- conduct additional regional workshops designed to raise awareness and report on progress and conduct a national Human Factors Workshop on Runway Safety to share lessons learned and recommend more ways to reduce runway incursions.
- continue to implement the recommendations of the *National Blueprint for Runway Safety*, which contains a multi-pronged effort of outreach, training for pilots and controllers, improved standards for runway signage and markings, and technology for better situational awareness of ground movement operations.

Other Federal Programs with Common Outcomes: Building upon the Memorandum of Understanding between the FAA and NASA, in FY 2000 the agencies finalized and began implementing the FAA/NASA Integrated Research Plan. The purpose of this plan is to effectively leverage FAA and NASA safety research and development resources to achieve a common goal of an 80 percent fatal aviation accident reduction.

Performance Report:

FAA supplementary performance measures*:

Operational errors per 1 million activities.

	1999	2000	2001	2002	2003
Target:	4.96	4.86	5	*	*
Actual:	5.7	6.83(r)	7		

Number of operational errors where less than 80 percent of required separation is maintained.

	1999	2000	2001	2002	2003
Target:	N/A	N/A	N/A	568	*
Actual:	570	610	674		

Number and rate (per 100,000 operations) of runway incursions.

	1999	2000	2001	2002	2003
Target:					
Number:	263	250	243	*	*
Rate:	N/A	N/A	N/A	*	*
Actual:					
Number:	330	405	407#		
Rate:	.485	.584	.615#		

Number and rate (per 100,000 operations) of highest risk runway incursions.

	1999	2000	2001	2002	2003
Target:					
Number:	N/A	N/A	N/A	53	*
Rate:	N/A	N/A	N/A	.08	*
Actual:					
Number:	69	67	53#		
Rate:	.10	.10	.08#		

(r) Revised; # Preliminary estimate.

** After 2001, these goals will be operating administration performance goals and will continue to be tracked by FAA. The runway safety and operational errors measures were changed in 2002 to the number and rate per 100,000 operations of highest risk runway incursions; i.e., those which require emergency or timely maneuvers by pilots to avoid collisions; and the number of operational errors in which less than 80% of required aircraft separation was maintained. Both changes were made to focus the measures on the highest risks associated with runway and in-flight operational safety and to focus results on the most serious violations. These results as well as all runway incursions and operational errors will be discussed in the context of this performance goal.*

2001 Results: DOT met the general aviation fatal accident and the commercial aviation fatality rate targets (see note on data above), but did not meet the operational errors and runway incursion performance targets.

FAA's "Safer Skies" effort has identified the following six accident categories in commercial aviation: controlled flight into terrain (CFIT), loss of control, uncontained engine failure, runway incursion, approach and landing, and weather. Identifying and implementing corrective actions in these areas will positively impact the fatal accident rate in the future. For uncontained engine failure, FAA issued an Advisory Circular incorporating enhanced inspection methodology into FAA's engine design approval process. To prevent approach and landing accidents, FAA is better training safety inspectors, Check Airmen, and Designated Examiners on the use of advanced precision approach procedures. Several projects are under way to prevent CFIT accidents through increased flight crew and air traffic controller situational awareness. To complement new Terrain Avoidance Warning System (TAWS – Enhanced GPS) avionics, new training packages and precision instrument approach procedures have been developed. Boeing and the Flight Safety Foundation developed the CFIT Training Aid used by pilots and air traffic controllers.

In March 2001, a requirement was fully implemented for U.S. airlines to install fire detection and suppression systems on the commercial fleet not already equipped with such systems. Another rule related to aircraft fires was issued in FY 2001 as a supplement to existing regulations governing fuel tank safety. "Partnership for Safety Plans" were completed with the four major aircraft jet engine manufacturers. These broad-based agreements concern the use of the new Certification Process Improvement initiative. In addition, three of 12 "Partnership for Safety Certification Plans" were completed. These particular partnership plans concern specific projects under development by the signatories to the Partnership for Safety Plans.

The primary strategy for improving GA safety is a collaborative working relationship between the FAA and the GA community to identify problems and implement solutions. In 2001, the Biennial Flight Review Advisory Circular (AC 61-98A) was revised to enhance awareness of controlled flight into terrain among the GA community and will be published in early 2002. In addition, the GA Joint Steering Committee revised its charter to incorporate the monitoring of progress and the effectiveness of approved interventions. Guidance for pilots in the use of advanced weather products was developed for inclusion into the 2002 addition of the Aeronautical Information Manual. Finally, a Joint Safety Analysis Team has been chartered to begin work on aeronautical decision-making.

FY 2002 Performance Plan Evaluation: DOT anticipates that it will meet performance targets in 2002.

Management Challenge – Commercial and General Aviation Safety (Operational Errors and Runway Safety) (IG/GAO)

The IG and GAO have stated that the FAA must take steps to reverse the trend in known safety risks such as runway incursions and operational errors, strengthen oversight and rulemakings, and manage the aviation safety and air traffic control workforce strategically over the long term. The IG stated that safety must take priority over the impact of increased demand, new technologies and budget cuts. Several safety issues that the FAA needs to address were listed by the IG.

FAA faces many challenges in promoting aviation safety in a dynamic industry. FAA will determine the feasibility of expanding Air Transportation Oversight System (ATOS) beyond currently covered large air carriers to smaller commercial air carriers and complete system safety and risk analysis training for all ATOS-assigned field inspectors. The FAA will continue implementation of the Continuing Analysis and Surveillance System (CASS) improvements to address deficiencies in aircraft maintenance programs at some major air carriers through development and publication of advisory circular guidance to clarify 14 CFR §121.373, CASS Requirements, and to deliver updated FAA policy and procedures and training courses to the inspection work force.

Despite significant management focus, FAA has been unable to reverse the upward trend in runway incursions. The IG has indicated that reversing the sharp increase in runway incursions is a critical management challenge for DOT. FAA is pursuing a number of initiatives to solve this problem, and, as the IG states, is identifying and evaluating technologies that can be quickly put to use in high-risk airports.

This goal page addresses the IG's discussion of operational errors and runway safety.

MARITIME SAFETY: Recreational boating is a popular activity in America, and the popularity of personal watercraft (PWC) continues to be strong. There are about 78 million recreational boaters in the United States - and most operators involved in accidents have had no boating safety training. The number of recreational and commercial vessel users continues to increase as more Americans move to coastal areas and global and domestic waterborne trade grows. Operating in a remote, unforgiving environment, many mariners lose their lives, many more are injured, and billions of dollars of property are at risk. Also, large numbers of Americans commute to work in ferries and enjoy leisure activities at sea in cruise ships.

Performance Goal:

Reduce the number of fatalities at sea by minimizing risks for passengers and crew and by responding to distress calls by those in danger.

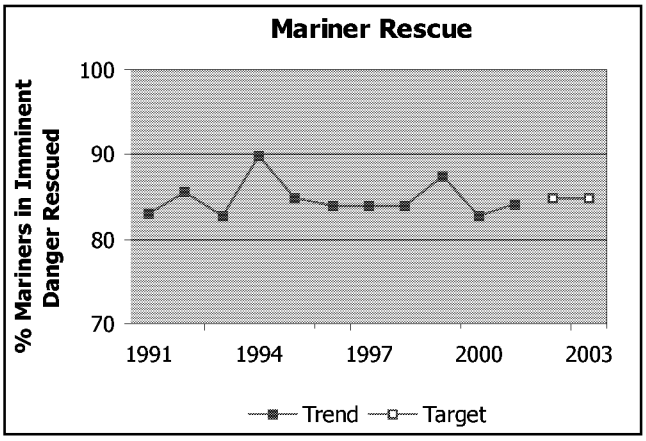
Performance Plan:

Performance measure:

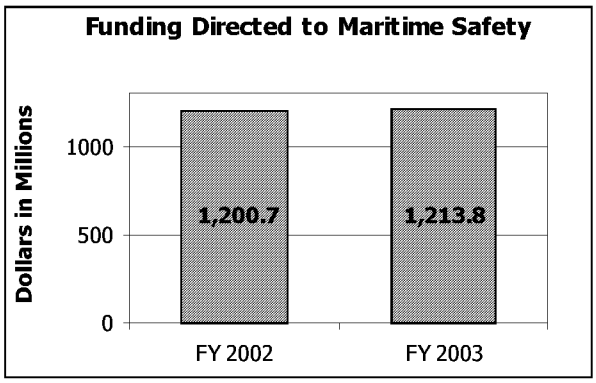
Percent of all mariners in imminent danger who are rescued.

	1999	2000	2001	2002	2003
Target:	N/A	N/A	85%	85%	85%
Actual:	87.5%	82.7%	84.2%		

External Factors: As newer passenger vessels are put into use with much higher capacities and speeds, risk exposure rises.



Strategies and Initiatives to Achieve 2003 Targets: DOT resources attributable to this performance goal are depicted below:



DOT aims to save as many lives as possible by a combination of prevention and response activities.

Prevention: developing and enforcing compliance with safety standards for recreational boats and passenger ships and equipment; promoting lifejacket wear; improving boater skills and knowledge; increasing enforcement of boating-under-the-influence statutes; and conducting vessel safety checks and boating education courses to promote safe operation and use of safety equipment.

Three strategies highlight the Coast Guard's efforts toward further reductions in passenger vessel deaths:

- The first involves addressing the potential gaps in domestic and international laws and regulations stemming from advances in vessel designs and higher capacity vessels.
- The second strategy involves cooperative efforts to ensure passenger survivability in the event of a major passenger vessel casualty. Particular attention has been focused upon the ability of the crew to respond to life-threatening emergencies. Coast Guard inspectors regularly drill the crews of both large and small passenger vessels during scheduled inspections, as well as during

impromptu boardings.

- The third strategy focuses on ensuring that there are a sufficient number of competent and qualified marine inspectors and boarding officers. The Coast Guard is aggressively training inspectors and overhauling personnel assignment policies so that critical expertise is focused on critical areas.

The Coast Guard will continue partnership initiatives with industry such as the QUALSHIP 21 program. QUALSHIP 21 encourages a high degree of compliance with international and domestic laws and regulations by rewarding superior industry partners with public recognition, and showcasing their commitment to safety.

The Coast Guard also continues to work with States to reduce boating fatalities through safety grants and by:

- developing and enforcing compliance with safety standards for recreational boats and equipment;
- promoting life jacket use;
- intensifying enforcement of boating-under-the-influence statutes; and
- improving boater behavior, skills and knowledge by conducting Coast Guard Auxiliary Vessel Safety Checks and boating education courses to promote safe operation and use of safety equipment.

The Coast Guard will continue to work with its national stakeholder partners (National Association of State Boating Law Administrators, USCG Auxiliary, U.S. Power Squadrons, National Safe Boating Council, and National Water Safety Congress) in advocating the educational principles of "Operation BoatSmart."

Response: operating fleets of cutters and aircraft, and rescue stations; and requiring mariners to use survival gear, distress notification, alerting, and locating equipment.

A number of projects are underway that will ultimately impact the Coast Guard's ability to plan and respond to maritime distress incidents.

Improved search planning tools are being developed, as well as upgrades to current tools. In addition, additional self-locating datum marker buoys will be employed. These improvements will help planners better define search areas, resulting in more efficient and effective search efforts. Improved incident management practices will provide watch standers with the ability to rapidly record and share information.

The National Distress and Response Modernization Project (NDRSMP) will greatly enhance the Coast Guard's ability to assist mariners in distress. The modernized system will improve communications coverage and reliability, provide better position localization and add immediate voice recording and playback capability.

Additional personnel will help the Coast Guard to achieve a 68-hour workweek at Coast Guard small boat stations and additional funding for the Coast Guard Auxiliary will better equip Coast Guard Auxiliary's assistance to the boating safety and Search and Rescue efforts. Safety equipment funded in the budget will enable better fire fighting capability and crew safety onboard Coast Guard ships and aircraft.

A capital project will begin the effort to replace the Coast Guard's existing Search and Rescue boat fleet, which is rapidly approaching the end of its service life.

The response capability of the Coast Guard will be enhanced with the deployment of the Global Maritime Distress and Safety System. This technology will automate the Coast Guard's ability to sort, evaluate, and identify distress alerts, including automatic plotting on electronic chart displays to help take the "search" out of search and rescue.

Other Federal Programs with Common Outcomes: The Coast Guard coordinates with the Occupational Safety and Health Administration in developing vessel health standards that reduce the risk of accidents. OSHA is free to regulate worker safety on vessels not subjected to the Coast Guard's inspection regime. The Coast Guard investigates all reportable marine accidents, and works with the National Transportation Safety Board to investigate major maritime accidents. Both organizations use investigation results to develop better safety strategies. The Coast Guard works with the International Maritime Organization to improve the level of safety standards on a worldwide basis.

The U.S. Army Corps of Engineers and the National Park Service manage many recreational

lakes that are used by boaters, and cooperate with the Coast Guard and States in managing safe boating programs.

The U.S. Navy and Air Force have search and rescue capability, primarily for their own vessels and aircraft. An interagency Search and Rescue coordinating group establishes responsibilities and cooperative efforts between organizations that have search and rescue capabilities. The Air Force is the lead agency for land-based search and rescue; the Coast Guard is the lead for maritime search and rescue. Each assists the other depending on resources available for a particular search effort. Information is shared through formal search and rescue schools, and at search and rescue conferences and forums held worldwide. The Air National Guard also provides search and rescue capability.

Performance Report:

USCG supplementary performance measures*:

Number of recreational boating fatalities (Calendar Year).

	1999	2000	2001	2002	2003
Target:	763	763	749	742	*
Actual:	778	742	742#		

Fatalities and rate (per million passenger capacity) aboard passenger vessels.

	1999	2000	2001	2002	2003
Target:					
Number:	N/A	N/A	22	N/A	*
Rate:	N/A	N/A	N/A	2.5	*
Actual:					
Number:	29	17(r)	7		
Rate:	4.1	1.9	1.0		

 # Preliminary estimate; (r) Revised;

** After 2001, these goals will be operating administration performance goals and will continue to be tracked by USCG. Results will be discussed in the context of this performance goal.*

2001 Results: DOT did not meet the mariner rescue performance target, but met the recreational boating fatality and passenger vessel fatality targets.

The Coast Guard answered more than 39,000 calls for help, saving 4,180 lives –- 92.7% of those mariners that the Coast Guard was notified were in distress. The number of missing persons remains high (335, plus 173 more missing persons who were illegally attempting to migrate to this country and thus were attempting to evade detection). If these cases were added into the overall measure of lives saved, they would reduce the result to 76%. This lower number reflects a clearer indication of our overall performance, and indicates shortcomings primarily in search efforts.

Recreational boating fatalities are slowly trending downward but the fatality rate per million registered boats has significantly decreased over the past decade. This is encouraging news as the number of registered boats continues to increase each year. Drowning deaths have sharply declined, which suggests that outreach and awareness campaigns encouraging boaters to wear a life jacket are having an impact in saving lives.

The FY 2001 passenger fatality data showed a marked decrease in actual number of passenger deaths. Analysis of the small number of fatalities yields no discernable pattern suggesting a new focus for the Coast Guard's fatality prevention efforts.

FY 2002 Performance Plan Evaluation: DOT expects steady or slightly improving performance results in search and rescue. DOT also expects to achieve 2002 performance targets for passenger deaths and for recreational boating fatalities.

Management Challenge – National Distress Response System (IG)

The IG has stated that funding for the Coast Guard's National Distress and Response System could be at risk in a limited capital acquisition budget. Deficiencies in the Distress and Response System have existed for at least 10 years, and the National Transportation Safety Board has criticized Coast Guard's interim fixes as insufficient. The major task for Coast Guard is to present a specific system modernization plan that details what assets need to be acquired or modernized, how it will be done, what it will cost, and when funding will be needed. (For a discussion of DOT plans, see the Management Challenge box regarding the Coast Guard Capital Acquisition Budget on the Coastal and Port Security goal page.)

RAIL SAFETY: Approximately 50% of the fatalities were trespasser-related, and more than 45% occurred at highway-rail grade crossings. To reduce rail fatalities, FRA is forging safety partnerships with the rail industry, strengthening educational outreach, and rigorously emphasizing compliance with safety standards.

Performance Goal:

Reduce the rate of rail and grade crossing accidents to preclude fatalities.

Performance Plan:

Performance measures:

Grade crossing accidents divided by the product of: 1) million train-miles and 2) trillion vehicle-miles traveled.

	1999	2000	2001	2002	2003
Target:	2.19	1.57	1.39	1.39	1.30
Actual:	1.83	1.75(r)	1.69#		

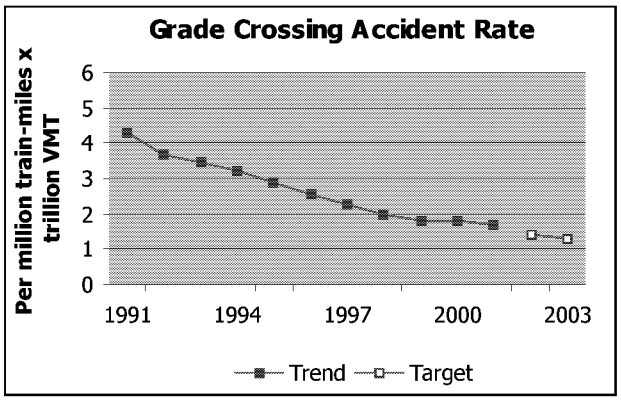
Train accidents per million train-miles.

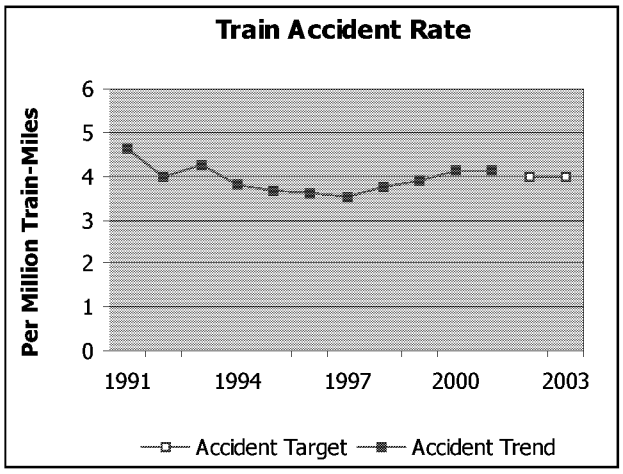
	1999	2000	2001	2002	2003
Target:	3.44	3.44	3.35	4.00	4.00
Actual:	3.89	4.13	4.11		

(r) Revised; # Preliminary estimate.

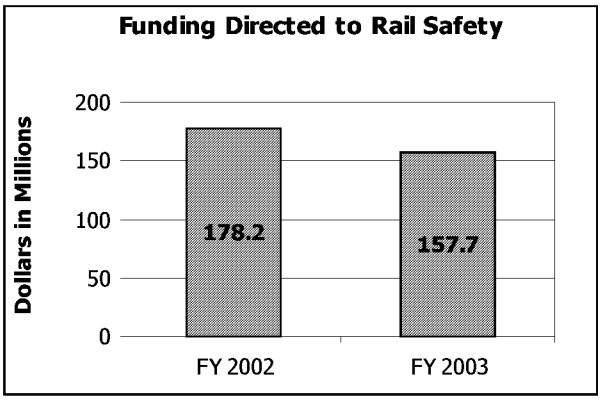
Note on data: Because trespassing occurs on private property, it is always difficult for FRA to have more than marginal success in reducing the number of trespassing fatalities. Trespasser fatalities account for almost half of total rail-related fatalities, so DOT will use the train accident rate as the primary measure for rail safety, along with the existing measure for grade crossing safety.

External Factors: Railroad train-miles have grown continuously each year since 1991, until 2001, when there was a 2 percent decrease from the previous year.





Strategies and Initiatives to Achieve 2003 Target: DOT resources attributable to this performance goal are depicted below:



FRA regulates rail and highway grade crossing safety to reduce crash risks between trains and road traffic.

In 2003, FRA will:

- Add 20 safety positions that will directly or indirectly support DOT's initiatives to reduce rail fatalities and accidents.
- Continue and expand track measurement and rail flaw detection analysis.

- Continue safety-related Research and Development projects, and address factors causing train fatalities and accidents.

Other Federal Programs with Common Outcomes: None.

Performance Report:

FRA supplementary performance measure*:

Rail-related fatalities per million train-miles.

	1999	2000	2001	2002	2003
Target:	1.57	1.30	1.23	1.20	*
Actual:	1.31	1.30(r)	1.35#		

(r) Revised; # Preliminary estimate.

** After 2001, this goal will be an operating administration performance goal and will continue to be tracked by FRA. Results will be discussed in the context of this performance goal.*

2001 Results: DOT did not meet the performance targets for rail fatalities and grade crossing accidents.

Based on preliminary data, the number of rail-related fatalities increased 2.6 percent to 961, compared with 937 fatalities for year 2000. The increase is attributed to a 9 percent rise in trespasser fatalities (which represent approximately 47 percent of the total). Trespasser fatalities had been fluctuating throughout the 1990's, with a high of 536 in 1998 and a low of 471 in 1996. FRA will continue to work with the rail industry and the law enforcement and judicial communities to address trespasser safety issues.

The increase in the fatality rate was also influenced by the decrease in the overall number of train-miles for 2001. Train-miles fell by almost 2 percent, from roughly 723 million to 710 million.

It should be noted that while trespasser fatalities increased for the year, those at grade crossings dropped 1.88 percent (425 vs. 417), and employee deaths were reduced from 24 to 22. FRA has been actively working with industry and labor representatives to promote rail employee safety awareness in yard operations. In addition, FRA issued the first comprehensive regulations for two-way end-of-train devices, passenger equipment safety, and passenger train emergency preparedness. FRA also revised and enhanced regulations for track safety standards, locomotive engineer certification, accident/incident reporting, railroad communications, and steam locomotive inspections.

FY 2002 Performance Plan Evaluation: DOT will be challenged in meeting the 2002 targets.

TRANSIT SAFETY: Public transit provides a flexible alternative to automobile and highway travel, offering a higher degree of safety as well. Public expectations for safety are much higher for transit than they are for highway travel.

Performance Goal:

Reduce the rate of transit fatalities.

Performance Plan:

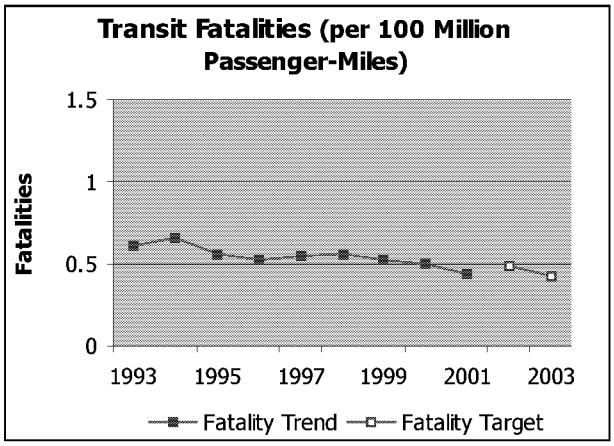
Performance measures:

Transit fatalities per 100 million passenger-miles traveled.

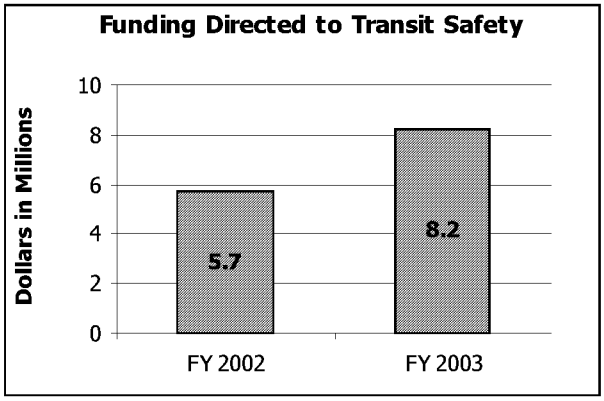
	1999	2000	2001	2002	2003
Target:	.507	.502	.497	.492	.431
Actual:	.530	.499(r)	.445		

(r) Revised.

External Factors: As the population grows, the use of public transit can also be expected to increase.



Strategies and Initiatives to Achieve 2003 Targets: DOT resources attributable to this performance goal are depicted below:



Through Formula Grants, Capital Investment Grants, and the Job Access and Reverse Commute Program, FTA invests in the public transit infrastructure. Most of these funds improve transit safety by replacing older bus and rail systems with newer, safer public transit and improve the condition of tracks and transit facilities. For new projects, safety is a design consideration from the beginning. FTA works with States, local transit authorities, and the transit industry to develop technology, provide training, and supply technical assistance that advances safety. FTA provides oversight of State rail safety programs, alcohol and drug testing programs, and transit security programs. FTA also provides oversight and guidance to transit properties on the direct safety features and safety implications of becoming compliant with the Americans with Disabilities Act.

FTA also conducts research and generates valuable data on safety and security, standards programs, and transit accident causal factors, which will be used by FTA and States and local transit agencies to improve safety.

In FY 2003, FTA will continue the activities that have had an impact on the decline in transit fatalities and injuries. Investment in safety and security training for transit professionals will continue. FTA will continue to collect, analyze and disseminate transit safety and security data, and data on drug and alcohol test results. FTA will focus additional resources on bus system safety, an area of emphasis recommended by the National Transportation Safety Board. FTA also will continue to evaluate and disseminate information on the impact of new vehicle and infrastructure technologies on transit safety and research on innovative grade crossing technologies and transit crime prevention technologies.

The Safety and Security Program provides $13.2 million in FY 2003 Transit Planning and Research funds, which will be used to:

- develop technology and system designs that will improve the security of the riding public;
- develop new safety and security training courses, and train 4,000 transit professionals on a wide variety of topics such as system safety, accident prevention, emergency management, industrials safety, alternative fuels safety, bus operator safety, and fatigue awareness; and
- provide technical assistance to States and local agencies to improve the safety and security of public transit. This will include activities such as safety and security emergency preparedness planning and drills and updating FTA's emergency management guidelines, including those on natural disasters and terrorist attacks. This will also include the maintenance of up-to-date information in the Transit Safety Clearinghouse/Websites, which can be accessed and used by transit decision makers in areas impacting the safety and security of transit systems.

Other Federal Programs with Common Outcomes: None

Performance Report:

Transit injured persons per 100 million passenger-miles traveled.

	1999	2000	2001	2002	2003
Target:	123.2	121.9	120.7	109.4	*
Actual:	114.9	111.7(r)	107.3		

(r) Revised.

** After 2001, this goal will be an operating administration performance goal and will continue to be tracked by FTA. Results will be discussed in the context of this performance goal.*

2001 Results: DOT met both performance targets.

FY 2002 Performance Plan Evaluation: DOT expects to meet both performance targets.

PIPELINE SAFETY: A network of two million miles of pipelines transports natural gas to 60 million residential and commercial customers. While pipelines are among the safest modes for transporting liquids and gases, the nature of the cargo is inherently dangerous. Pipeline failures can pose an immediate threat to people and communities. Excavation damage causes 39% of pipeline failures for all types of pipelines. Corrosion also causes on average another 20% of all pipeline failures. Incorrect operation, construction/material defects, equipment malfunction, failed pipe, and other miscellaneous causes account for the remaining 41% of pipeline failures.

Performance Goal:

By 2003, reduce excavation damages to all types of pipelines by 10% from 2000.

Performance Plan:

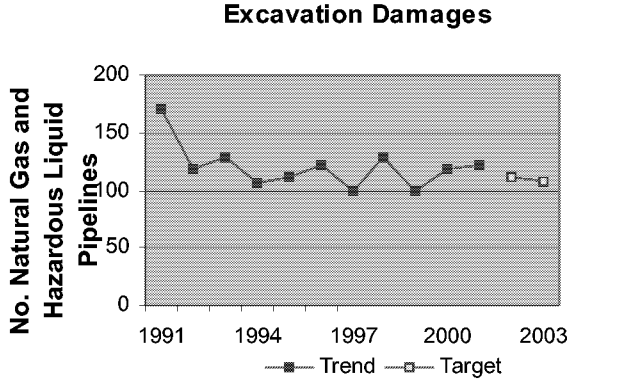
Performance measure:

Number of excavation damages to natural gas and hazardous liquid pipelines.

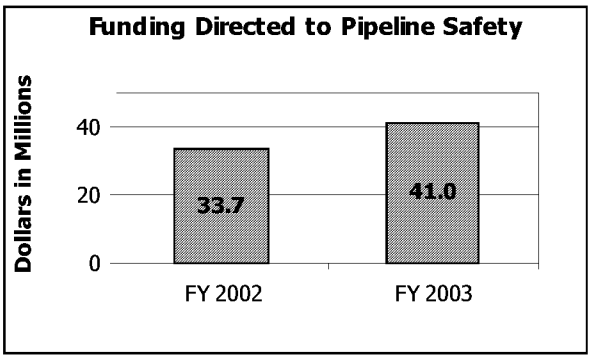
	1999	2000	2001	2002	2003
Target:	N/A	N/A	N/A	111	107
Actual:	100	119	121		

Note on Data: DOT is changing this performance measure from covering failures from any cause for only natural gas transmission pipelines to excavation damages for all pipelines, since that is the predominant failure mode for all pipelines, and the failure mode most associated with pipeline related fatalities. After RSPA fully institutes its pipeline integrity management program, DOT will reexamine whether to expand this measure to include corrosion failures in addition to excavation-induced failures.

External Factors: An expanding economy brings an increase in new housing starts. The related construction activity adds more risk of distribution pipeline excavation damage.



Strategies and Initiatives to Achieve 2003 Targets: DOT resources attributable to this performance goal are depicted below:



In the past 10 years, there have been 24 fatalities annually, that are related to natural gas or hazardous liquid pipeline failures. DOT works to reduce the risk of pipeline failures by establishing safety regulations and assuring compliance. RSPA's Pipeline Safety program impacts both Safety and the Environment. Safety programs based only on compliance with the regulations can result in a piecemeal approach to identifying and controlling risks, sometimes overlooking the subtle relationships among failure causes, and the benefits of coordinated risk control activities. Having operators implement systematic and integrated approaches to assure pipeline integrity and address the most important risks offers the greatest opportunity to improve the industry's performance. For this reason, RSPA is promulgating integrity management requirements for pipelines in high consequence areas that include populated areas, commercially navigable waterways, and locations unusually sensitive to environmental damage and that might be impacted by a pipeline failure.

Because natural gas and hazardous liquids have different physical properties and pose different risks, RSPA will implement integrity management

requirements for gas and liquid operators in stages, with requirements for large hazardous liquid operators. RSPA will:

- conduct integrity assessment, rulemaking, enforcement, research, and information dissemination efforts. Focus will expand and improve RSPA's ability to assess the integrity of an operator's system.
- improve data integration which will better enable analysis of a pipeline's location and safety performance. This will allow RSPA and its State partners to target pipelines for inspection that can impact a high consequence area, enhance RSPA's energy supply analytic capabilities, and improve RSPA's ability to assess the integrity of an operator's system.
- improve operations, control, and monitoring technologies to enable better corrosion detection, to validate direct assessment techniques for unpiggable pipelines, and to produce better pipeline coatings. Better corrosion detection technology and direct assessment will allow operators to detect pipeline defects before a release occurs. Improved pipeline coatings will better protect pipelines from corrosion.
- improve damage prevention and leak detection by use of in-line inspection tools and locating technologies to detect pipeline defects, especially in unpiggable pipelines; improve remote and real-time monitoring for encroachment, unauthorized excavation, and pipeline damage; and enhance directional drilling to avoid damage to underground utilities. Improved inspection tools and other technologies to reveal defects in currently unpiggable pipelines will improve an operator's ability to identify and eliminate pipeline defects. Enhanced pipeline location technologies, remote and real-time monitoring, and direction drilling is expected to reduce excavation damage.
- make educational materials available for use by operators, one-call centers and other interested groups, support efforts of the Common Ground Alliance to offer *"Dig Safely"* training sessions around the country for groups interested in implementing the program, encourage participating operators to improve accuracy in locating and marking facilities, and continue evaluation of one-call system education best practices.

Improved material performance will lead to improved pipeline materials that can better withstand third party damage, corrosion, and cracking; better welding techniques; and improved models for corrosion assessment and remaining pipe strength. Better pipeline materials and welding techniques will increase the strength and integrity of the pipeline. Improved models for corrosion assessment and remaining pipe strength will allow operators to better identify pipeline segments at higher risk of failure and to take corrective action.

RSPA will continue working with States to improve States' ability for oversight on outside force damage, as well as any other issues of local concern, such as accident investigation and new construction, for interstate pipelines within their borders. RSPA will offer a 50% grant match to cover costs of that State oversight.

Other Federal Programs with Common Outcomes: RSPA is moving forward with the National Pipeline Mapping System with the Federal Energy Regulatory Commission, the National Oceanic and Atmospheric Administration (NOAA), the Department of Energy, the U.S. Geological Survey, and others. The system will help analyze risks to environmentally sensitive and populated areas. RSPA participates jointly with the Environmental Protection Agency (EPA), the Department of Agriculture, the Department of the Interior and NOAA to collect data on the location of environmentally sensitive areas and is co-funding with EPA, efforts at the national and State levels to populate digital data banks.

Performance Report:

RSPA supplementary performance measure*:

Failures of natural gas transmission pipelines.

	1999	2000	2001	2002	2003
Target:	4,528	4,451	4,375	4,301	*
Actual:	4,467	2,750(r)	3,000#		

(r) Revised; # Preliminary estimate

** After 2001, this goal will be an operating administration performance goal and will continue to be tracked by RSPA. Results will be discussed in the context of this performance goal.*

2001 Results: DOT met the performance target. There were on average about 24 annual pipeline-related fatalities in the last 10 years (79% of fatalities occurred on natural gas distribution pipeline incidents, 12% on natural gas transmission pipelines, and 9% on hazardous liquid pipelines) with excavation damage as the leading cause of all pipeline failures. Excavation damage rates for all pipeline types reduced thirty percent over the last decade, despite a 57% increase in new housing starts, according to U.S. Census data.

In 2000, RSPA helped establish the Common Ground Alliance, a nonprofit organization that works to protect all underground utilities, including pipelines and is working with the Alliance to expand the effectiveness of the organization, including efforts to encourage best practices in damage prevention and determining data needs. RSPA is also working with industry and the public to provide education about the need for reducing excavation damage hits to pipelines.

RSPA, Battelle Memorial Institute, the Southwest Research Institute and Iowa State University are working together to determine how in-line inspection technologies may be used for early detection of mechanical damage such as dents, gouges and metal movement, which are precursors to later corrosion failures.

FY 2002 Performance Plan Evaluation: DOT expects to meet the 2002 performance target.

Management Challenge – Pipeline Safety (GAO)

GAO's recommendations to RSPA for improving pipeline safety included improving pipeline safety standards, strengthening enforcement of pipeline safety laws and regulations, enhancing Federal-State partnerships, providing the public better information and opportunities to participate, and supporting research and development of innovative pipeline safety technologies.

- RSPA is progressing on finalizing actions required by Congressional mandates. RSPA will complete rulemakings that address all mandates by the close of calendar year 2002.
- RSPA completed reporting changes for natural gas transmission pipeline operators.
- RSPA increased oversight of accident reporting by operators and implemented revised procedures to examine accident reports submitted by pipeline operators. RSPA uses a new "open" and "closed" concept for accident reports that will address erroneous and incomplete report information by keeping accident reports "open" until all information is finalized and complete. New tracking procedures identify which operators are non-compliant. RSPA is pursuing enforcement action on operators found to be non-compliant with reporting requirements.
- In FY 2001, RSPA finalized a rule to require hazardous liquid pipeline operators to provide better information on causes of failures. Also in 2001, RSPA proposed rules requiring hazardous liquid pipeline operators to file an annual report needed to improve trend analyses.
- In FY 2002, RSPA completed training for Federal inspectors. In FY 2003, this training will be expanded to State pipeline inspectors.
- In FY 2003, RSPA will continue research on "smart pig" technology to detect excavation-related damage. RSPA is co-funding research on real-time monitoring technologies that detect and prevent construction damage and is funding a study that examines direct assessment of pipelines, including those that cannot be readily pigged. Additionally, RSPA is co-funding leak detection research. RSPA is also working with DOE and other stakeholders to develop a nationally coordinated pipeline research plan.

HAZARDOUS MATERIALS SAFETY: Many of the materials used in manufacturing and many of the retail products people buy include hazardous materials. There are over 800,000 shipments of hazardous materials (hazmat) each day in the United States. These range from flammable materials and explosives to poisons and corrosives. Release of these materials during transportation could result in serious injury or death, or harm to the environment.

Performance Goal:

By 2004, reduce hazardous material transportation incidents by 5 percent from the level of such incidents in 2000.

Performance Plan:

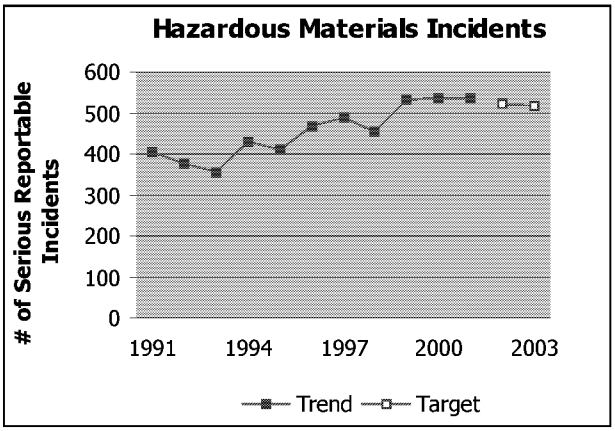
Performance measure:

Number of serious hazardous materials incidents in transportation.

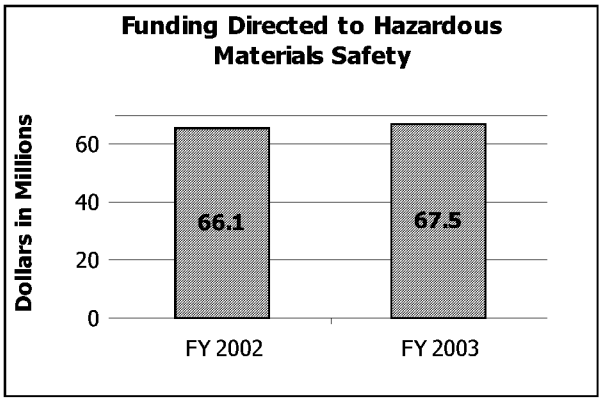
	1999	2000	2001	2002	2003
Target:					
Original:	430	411	401	391	N/A
Revised:	N/A	N/A	N/A	523	515
Actual:					
Original:	377	494(r)	367#		
Revised:	532(r)	539(r)	538#		

(r) Revised; # Preliminary estimate

Note on Data: The definition of serious hazardous materials incidents has been revised to better measure the hazmat program's impact on the transportation system. The new definition includes: a fatality or major injury caused by the release of a hazardous material; the evacuation of 25 or more employees or responders or any number of the general public as a result of release of a hazardous material or exposure to fire; a release or exposure to fire which results in the closure of a major transportation artery; the alteration of an aircraft flight plan or operation; the release of radioactive materials from Type B packaging; the suspected release of highly infectious biological material (Risk Group 3 or 4 infectious substances); the release of over 11.9 gallons or 88.2 pounds of a severe marine pollutant; and the release of a bulk quantity (over 119 gallons or 882 pounds) of a hazardous material. Measuring performance in this way provides a better gauge of the performance of the intermodal hazmat safety program.



Strategies and Initiatives to Achieve 2003 Target: DOT resources attributable to this performance goal are depicted below:



DOT develops regulations and standards for hazmat packaging and shipping, and enforces those standards for every mode of transportation. DOT will continue to emphasize human factors involved in hazmat spills. RSPA will continue to work with the industry and State and local partners to prioritize risk factors, permitting better focus of resources on highest risk areas.

- RSPA will continue its inspections of shippers, packaging manufacturers and cylinder retesters. We will measure the success of these efforts on the rate of non-compliance

when those facilities are reinspected. We will achieve and maintain a reinspection non-compliance rate at 15% or less.

- RSPA will address human errors by continuing its intensive effort to reach the hazmat community through training, technical assistance and customer service to ensure it understands how to comply with Federal safety requirements. RSPA will prioritize compliance initiatives on a risk and human factors basis, based in part on shippers' incident histories. RSPA will work with international organizations to promote consistency between national and international hazardous materials requirements to improve the safe and efficient transportation of hazardous materials.
- Coast Guard will continue to enforce hazmat shipping regulations aboard U.S. ships and foreign ships in U.S. ports, as well as at port facilities. USCG will continue to manage and operate the 24-hour National Response Center for all reporting of hazardous materials releases.
- FAA will continue its focus on improving compliance among manufacturers, distributors, retailers and reshippers before their cargo reaches airports.
- FMCSA will continue its Compliance Reviews and, when necessary, take enforcement action against motor carriers that pose a greater hazardous materials risk, focusing on incidents/crashes, vehicle and driver violation occurrences, and company safety management breakdowns.

Other Federal Programs with Common Outcomes: In developing regulations for the transportation of hazardous materials, DOT works with the Environmental Protection Agency (EPA); Department of Labor's Occupational Safety and Health Administration; Department of Health and Human Services (HHS); the Treasury Department's Customs Service and Bureau of Alcohol, Tobacco and Firearms; Nuclear Regulatory Commission (NRC); and the Consumer Product Safety Commission.

DOT is also a member of the National Response Team (NRT). The NRT is responsible for coordinating Federal planning, preparedness, and response actions related to oil discharges and hazardous substance releases.

In coordination with the Federal Emergency Management Agency (FEMA), the NRC, the EPA, the Departments of Labor, Energy, and HHS, and the National Institute of Environmental Health Sciences, DOT periodically develops and updates a curriculum consisting of a list of courses necessary to train public sector emergency response and preparedness teams in dealing with hazardous materials incidents.

Performance Report:

2001 Results: Based on preliminary information, DOT met the performance target. Highway incidents continue to dominate the overall number of serious hazardous materials incidents, and increased from 78% of total serious incidents to 80%. Serious rail incidents decreased from 19% to 17% of the total.

Industry appears to be increasingly focused on safety improvements through improved packaging and better operational and response procedures. The continued drop in package failure incidents may partially reflect that effort, and suggests at least one aspect of system risk reduction.

FY 2002 Performance Plan Evaluation: DOT will be challenged in meeting its 2002 performance goal.